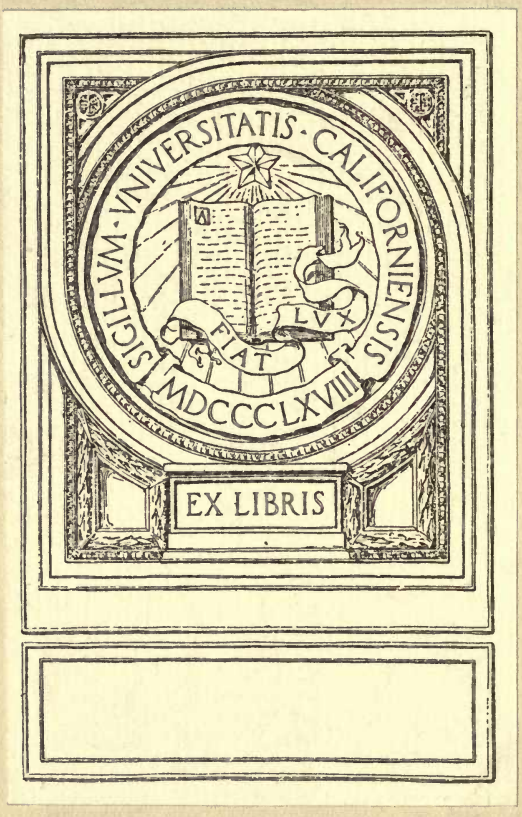

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The American Flower Garden

By

NELTJE BLANCHAN

Planting Lists by LEONARD BARRON

ILLUSTRATED
WITH NINETY TWO FULL-PAGE
PHOTOGRAPHS



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UNIV. OF
CALIFORNIA

TO MY HUSBAND

BUT FOR WHOM

NONE OF MY BOOKS WOULD EVER

HAVE BEEN PUBLISHED

250778

"'What is a garden?' It is man's report of earth at her best. It is earth emancipated from the commonplace. It is man's love of loveliness carried to excess — man's craving for the ideal grown to a fine lunacy. It is piquant wonderment; culminated beauty that, for all its combination of telling and select items, can still contrive to look natural, debonair, native to its place."

—JOHN D. SEDDING.



AN ABANDONED STONE QUARRY, TRANSFORMED BY THE SUBTLE ART OF THE GARDENER, WHICH ALMOST DEFIES DETECTION, INTO A NATURALISTIC ROCK GARDEN

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THE PARTNERSHIP BETWEEN NATURE AND ART

"*Laying out grounds may be considered a liberal art, in some sort like poetry and painting.*"—WORDSWORTH.

THE AMERICAN FLOWER GARDEN

CHAPTER I

THE PARTNERSHIP BETWEEN NATURE AND ART

WITH praiseworthy zeal men devote their lives to depicting nature with paint on canvas; other men as patiently toil to reproduce her beauty of form in bronze or chiselled marble; and, if they possess the vision of genius, all the world concedes both to be artists, however artificial the media for expressing their ideals, however lifeless their finished productions.

But what of the man who no less faithfully devotes his days and nights to the study of nature and collaborates with her in the production of living pictures? The landscape gardener, by uniting his imagination, artistic impulse and will to nature herself, utilising natural media for the expression of his artistic feeling, would seem to have gone a step beyond either the painter or the sculptor, yet why is the term artist so rarely, so grudgingly applied to him? Is it not that, in the perfection of his art, he well-nigh obliterates the trace of it? For

> "This is an art
> Which doth mend nature, change it rather, but
> The art itself is nature."

Even Shakespeare, with the majority, forgets to give the gardener his due, ascribing all praise to his silent partner.

In the Metropolitan Museum of Art, New York, are paintings and statuary by artists whose names are household words in all civilised lands. Surrounding the museum is a great pleasure

ground of exceeding beauty where millions of people find recreation and delight without even having heard the name of Frederick Law Olmsted. Few indeed suspect that they are indebted to his imagination and trained artistic sense for Central Park. By entering into a working partnership with nature he was enabled to transform a tract of unlovely land, interspersed with swamps, barren rocks and rubbish heaps, the last resort of squatters and goats, into scenes of non-natural but wholly naturalistic beauty; and the belief of the enraptured multitude that nature created them so, should be rightly interpreted as the triumph of Olmsted's creative art. Surely, the man who has wrought out on a vast scale so clear an artistic ideal with living pigments should be as fully entitled to recognition in the ranks of artists as the painter of a landscape on canvas that hangs within the museum walls. There is a small but increasing number of critics who count Olmsted the greatest artist America has yet produced.

Who remembers that Raphael, Giulio Romano and Michelangelo, among other great masters of the Renaissance, in the exuberance of their artistic genius, lavished it without stint upon the gardens of Rome and northern Italy? Not content with designing palaces and churches and decorating them with carvings, paintings, frescoes and statuary within and without, not a few great Italian artists planned and embellished gardens which, after centuries, still remain masterpieces. But as gardeners these artists are well-nigh forgotten.

Like all creative workers, the gardener of the first rank must be endowed with a great imagination that can see clearly the ideal, which at first exists only in his brain. In planning the modest home grounds, as well as a vast estate or public park, he must peer far into the future, anticipate many years of toil and growth,



A HAPPY COMBINATION OF NATURE AND ART, ILLUSTRATING SOME FUNDAMENTAL PRINCIPLES OF LANDSCAPE GARDENING: EFFECTIVE MASS PLANTING WITH OPEN STRETCHES AND VISTAS THROUGH IT; DIVERSITY OF PLANTS SUBORDINATED TO UNITY OF COMPOSITION; SKY LINE AND EARTH LINE OF PICTURE EQUALLY PLEASING, AND, ABOVE ALL, HARMONY WITH THE NATURAL LANDSCAPE



TO LENGTHEN DISTANCE AND ADD TO THE APPARENT SIZE OF ONE'S GROUND WITHOUT INCREASING TAXES, A VISTA THROUGH TREES OR VINE-ENCIRCLED COLUMNS IS THE LANDSCAPE GARDENER'S EXPEDIENT

and, with the inner eye alone, see the finished picture which may be actually completed by his silent partner long after he himself has turned to dust. Art is long and life is short indeed, too short, perhaps, for the realisation of even the simplest of his ideals. He rarely lives to enjoy the mature majesty of the oak he has planted; yet, from its acorn babyhood onward, through every stage of its growth, he sees clearly in his mind's eye its ultimate aspect.

Nature waited patiently through the ages for a partner like Luther Burbank to select, hybridise and bring to perfection her fruits and flowers. Without the help of the trained scientist her own latent possibilities would never have been realised. "Nature," said Aristotle, "has the will but not the power to realise perfection." That ideal is left for man to realise only by working in partnership with her, in harmony with her eternal laws. At last we begin to understand the paradox: she is commanded only by obeying her. Where nature and the scientific horticulturist leave off, the artistic imagination of the gardener takes up their work and composes pictures that are an emphasised revelation of natural beauty to eyes that have not the gift of the seer; living pictures of nature *in perfecto* which, but for his art, would never have found expression.

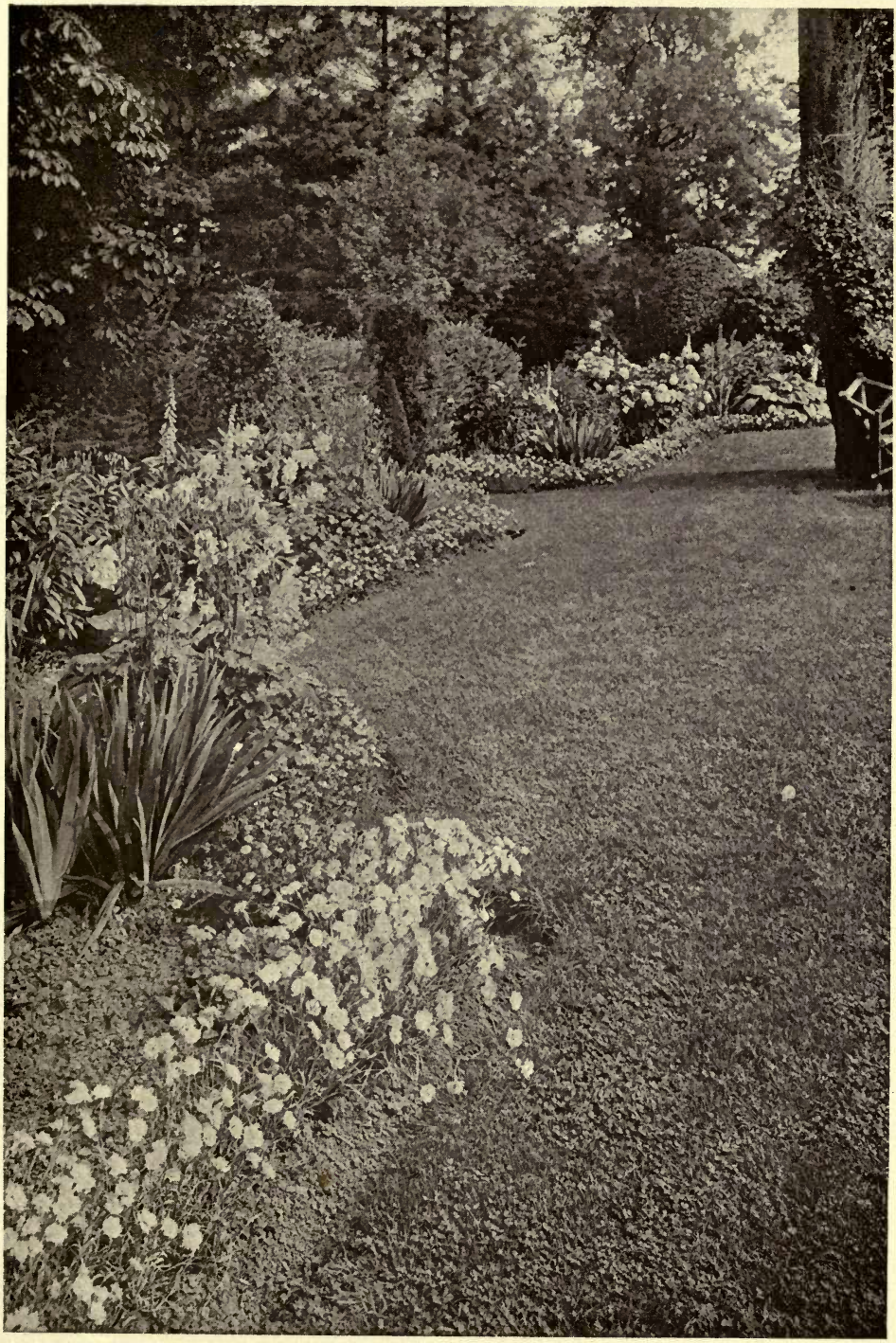
But unbridled imagination, without a true sense of proportion to hold it in check, might easily run away with his greatest opportunity. In his student days especially, and indeed throughout his life, he cannot study nature too closely; yet it may be that he will never find a single scene, however lovely in itself, that could be copied exactly and fit in with any of his plans. Detached from its large environment its beauty might be lost, its proportion destroyed by other surroundings; or the cost of reproducing it

might be prohibitive, even if it were artistically possible. The gardener has first to familiarise himself with nature's "excellences," which she has scattered broadcast, and not less with the excellences of his art; to find his inspiration in them and then select from his storehouse of knowledge, eliminate, adapt, adjust, harmonise, and recreate, not only to the scale of his design, but to the measure of his own personal ideals, before he tries to produce either a large park-like, panoramic landscape or a little garden. His task is to create beautiful pictures, not to copy them. True art is never an imitation of nature, notwithstanding a popular belief to the contrary. Many landscape gardeners, headed by "Capability" Brown, have failed as artists because they could not perceive this fact. There is a vast difference between truth to nature and a servile copying of her.

The temptation to attempt too much is ever with the artist partner. Nature herself is so prodigal that a rich imagination, teeming with ideas, finds it difficult to reject her alluring example. Only a cultivated sense of proportion can save one from the common error of sacrificing the simplicity, unity and strength of the design as a whole to the embellishment of unrelated parts. Which is to say that no garden, no matter how charming in detail, is really good that is not good as a whole.

Especially are amateurs prone to set out only their pet plants without reference to the general effect, to select haphazard from the enticing catalogues such plants as are most cleverly described or illustrated, without reference to a well thought-out garden design. One part of the home grounds, having no relation whatever to another part, the main idea, on which more than half of the beauty of a place depends, is gradually frittered away on trivialities. Strange to say, a general working plan is the last thing most novices

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FOR UNITING A BOUNDARY BELT OF TREES TO A LAWN, THE INTERMEDIATE SHRUBBERY AND LOW-GROWING, FLOWERING FOREGROUND MAKE A SOFTLY FLOWING LINE OF DESCENT



NO SINGLE FEATURE SO SUCCESSFULLY TIES A HOUSE TO THE SURROUNDING LANDSCAPE AS A FINE OLD TREE

think of. Additions to the garden are made impulsively, and merely happen to be right or wrong. Every architect can tell you harrowing stories of how clients have quite spoiled the effect of some of his best houses through inconsistent, haphazard furnishings within and planting without. So every landscape gardener cherishes resentment against certain of his clients who, not having the knowledge or the inclination to look after their own gardens, turn over the care of them to ignorant labourers, whose power to spoil the best garden picture ever devised is practically unlimited. He justly complains that he is rarely permitted to retouch the picture after the first planting. Nature, however, never ceases trying her utmost to obliterate all trace of his art and the hired man does his worst; while the owner usually either leaves all to them or indulges in an annual orgie among the catalogues.

"Perhaps, I don't know good art," said a self-complacent lady at the Royal Academy exhibition, "but I know what I like."

"Madam," replied the withering Ruskin, "even the beasts of the field know that."

It is as necessary in the art of gardening as in theology to have a reason for the faith that is in us. Anyone may at least learn the principles of art out-of-doors and the technique of it, although, without the gift of imagination and a sense of proportion, form and color, one may never hope to become a great artist. But these gifts are by no means commonly possessed by the landscape gardeners of the present or any other day, much less monopolised by them. Expensive horrors are too often perpetrated on innocent soil by trained men who should know better. And it is conversely true that some delightful little gardens have been made by untrained amateurs, who nevertheless possess the natural artistic gifts. However, ignorance is never a help but a hindrance in any

profession or calling, and poverty or self-conceit can be the only excuse for not getting the benefit of expert advice.

Special emphasis needs to be laid upon the gardener's sense of proportion for the very practical reason that a design, no matter how excellent artistically, can give little pleasure to its owner unless it be carefully proportioned to the size of his purse. It is distressing to see neglected trees, starved shrubbery that cannot bloom, worm-eaten roses, weedy lawns and degenerate flowers because their owner, in attempting to do too much, could not afford to care for them properly. Better a well tended little flower bed than an acre of disheartening failures. But is it not equally distressing to see palatial houses set in the midst of cramped, confined and ugly grounds that have little money and no taste expended upon them? Long ago Lord Bacon observed: "A man shall ever see that, when ages grow to civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

In democratic America it has come to be thought an indication of social selfishness when much is spent upon the interior of a home, for the gratification of the family, to the exclusion of worthy adornment of the home grounds, in whose beauty every passer-by may share. A well-known architect, who is also an expert landscape gardener, stipulates, before taking a contract, that at least one-tenth of the cost of a suburban or country house shall be expended upon its proper setting. He argues both from the artistic and the altruistic points of view. Certain it is that the modest small homes and gardens which are his special delight possess rare unity and charm. He executes a picture complete in itself before he leaves his task.

The true artist out-of-doors must needs have a well developed

sense of form. He appreciates, as well as a Greek classicist, the value and the beauty of a line. His eye follows joyfully the contour of a range of hills, the flowing curves of a little river meandering through a meadow, bold masses of woodland and wild shrubbery, the sky-line broken by tree tops, a winding road climbing the hill-side, the bare beauty of an elm in winter, the jagged outline of a rock, the slender swaying stem of a reed. These he studies and adapts for a naturalistic garden.

But the study of art has also taught him the beauty of the circle and the ellipse in a classic garden, of straight avenues of trees and of clipped hedges, of vistas through long, parallel rows of vine-encircled columns, of the fountain, the mirror-like pool, the direct paths that do but emphasise the formality of the design, the broad velvety terraces, the box-edged parterres of gay flowers, the stately, columnar trees; and he knows that, if by employing these he can produce a picture in harmony with the architecture it surrounds and still gratify the æsthetic sense, he has fulfilled what Taine, in his "Philosophy of Art," declared to be art's mission.

In Japan there is a saying: "Let no one use the word 'beautiful' until he has seen Nikko." No Occidental should ever use the word, in connection with a garden at least, until he has seen the old classic gardens of Italy. Here, in this new country, where art out-of-doors is only beginning to be understood and appreciated, where there are so lamentably few standards of artistic excellence and where so many crimes are committed in the name of Italian gardens, it is small wonder that a popular prejudice against them exists. Without a proper sense of form on the maker's part, even a naturalistic garden becomes a chaos and a void.

There is a well-known American artist who has every quality essential for greatness except the colour sense. Indeed he is colour-

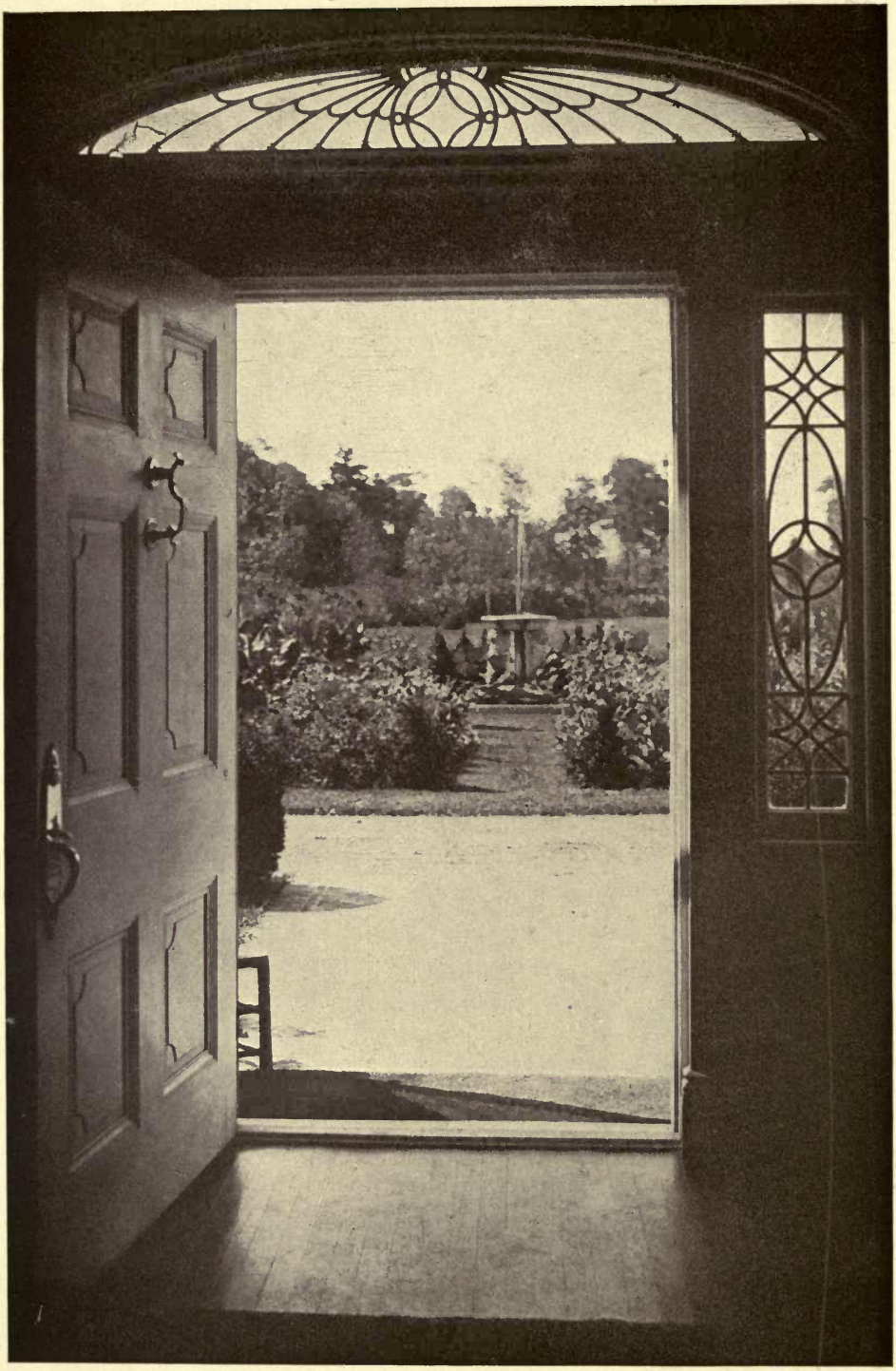
blind. A master draughtsman of imagination and power, his work in black and white is at once his triumph and his limitation. With a passion to paint in colours, he dares not trust himself to use them lest they be the undoing of his reputation. Would that many gardeners similarly afflicted might exercise his self-restraint!

Some people there are, not artists, who have an instinctive colour sense, which, when applied to garden making, gives pleasure beyond any other gift. Celia Thaxter was one of these. Poppies, as she grew them in her garden by the thousand, outlined against the summer sea, were a vision of beauty that no one who saw them can ever forget. She had an unerring instinct that told her not only where to sow her seeds broadcast over the little island garden in the Isles of Shoals, but what coloured flowers, blooming in rapid succession and in crowds throughout the long summer, would so combine as always to make an harmonious whole. Childe Hassam's paintings of the lovely pageant have fortunately preserved the spirit of the sea-girt garden, which was as wild and free as the sea itself, and also the colour for which it is chiefly memorable.

It is not a simple matter to so plan a garden as to have no clash of colour in it any day of the year. The pink phlox, that should have finished blooming before the orange marigolds next it opened a bud, perhaps prolongs its bloom because of unseasonably cool weather, and the eye with a sensitive colour nerve behind its lens turns quickly from the sight. Flaming Oriental poppies do not always have an acre of greensward separating them from the June roses. It should be impossible to include both at a glance. The eye that can tolerate a magenta petunia anywhere will doubtless not object to it in an iron vase next to a scarlet geranium where it usually appears; nor will such an untrained eye weep when a purple Jackman's clematis spreads its royal bloom against a red



AN EMBELLISHED BUT NATURALLY BEAUTIFUL PIECE OF LAND. RHODODENDRONS HAPPILY NATURALISED NEAR WATER. THE APPARENT HEIGHT OF THE HILL INCREASED BY TALL TREES ON ITS SUMMIT. NOTE THE ALLURING LINE OF THE ROAD'S DISAPPEARING CURVE



THAT IT MAY GIVE THE MOST PLEASURE TO BUSY PEOPLE, THE GARDEN SHOULD BE CONVENIENTLY NEAR THE HOME. ONLY BY LIVING WITH IT ON INTIMATE TERMS CAN ITS BEAUTIES BE FULLY REALISED IN DIFFERENT LIGHTS AND ATMOSPHERES

brick house, or when masses of reddish purple bougainvillea blossoms fairly scream at the scarlet poinsettias in a tropical garden. But, by careful selection in the first place, by instant removal where two colours in juxtaposition offend, by the introduction of green and white peacemakers among the warring flowers, harmony can be maintained and it must be else there is no repose, no "content in a garden."

SITUATION AND DESIGN

"There is no such thing as a style fitted for every situation; only one who knows and studies the ground well will ever make the best of a garden and any 'style' may be right, where the site fits it. I never see a house the ground around which does not invite plans for itself only." — W. ROBINSON.

"All rational improvement of grounds is, necessarily, founded on a due attention to the character and situation of the place to be improved; the former teaches what is advisable, the latter what is possible to be done; while the extent of the premises has less influence than is generally imagined; as, however large or small it may be, one of the fundamental principles of landscape gardening is to disguise the real boundary." — REPTON.

CHAPTER II

SITUATION AND DESIGN

ONE reason why English gardens are so wonderful to us Americans is that successive generations, perhaps for hundreds of years, have been lovingly and intelligently at work upon them, each striving to adorn the main design in some new detail before passing over the inheritance to the next heir. At the sight of the surpassing beauty of Old World country estates, as contrasted with our raw, new, mushroom homes, that are rarely lived in by two generations, one is almost persuaded against his better judgment that inheritance through primogeniture and entail must be the proper method. Perhaps we may be wise enough some day to achieve the same ends by more just means, consistent with republican, not monarchic, conditions. Instead of endowing our oldest sons, the heirs-apparent to our little thrones, we may endow the homestead itself — who knows? — just as we endow hospitals and colleges to insure their future maintenance. Happy the children who are brought up in a little world of beauty and who may one day hope to inherit it all — the well grown trees, the velvety lawn, the established vines and shrubbery — all the cumulative results of love's labour. Certainly, unless one may work for permanence in the garden there can be little incentive in this country toward the best art out-of-doors.

It is, of course, expecting too much that the site of the house should be chosen solely with reference to the best conditions for its garden. We place our homes, as a general rule, not where there is good, rich loam, not where fine trees are already established and

the situation is sheltered, but where the house will be convenient to the railroad station, the school, our friends, or the golf links; or where a special bargain in real estate may be had, or where the greatest number of windows will command the finest views, or where the prevailing summer breezes will sweep through the living-rooms, or where they will be protected from winter winds, or where the sunshine may pour health into them, or where perfect drainage and a water supply are best assured. These and a hundred other practical reasons may dominate the selection of a building site. Relying upon the bounty of nature to provide embellishments for every spot on earth man has yet decided to live upon — and she has plants for every place and purpose — we have been too apt to ignore the garden's claims until the eleventh hour and to concentrate all our thought, oftentimes all our money plus a mortagage, upon the house itself, leaving little or nothing for the setting of the home picture, in which, after all, the house should be merely the most important detail.

But if there is to be a union of the house and the landscape into which it obtrudes — a happy marriage between the house and the garden — the help of the artist-gardener is needed most of all before the house is started, I had almost said before the land is bought. For it is the design of a place as a whole that is the main thing, whether the size of the picture that is to be wrought out is reckoned in miles, acres, or square feet. If the home-maker cannot afford to execute the whole plan at the outset, it is all the more reason that he should possess such a design and proceed methodically to do what he can, year by year, to execute it permanently, rather than waste his money on costly experiments. A rich man can afford mistakes; a poor one cannot. Moving soil, for example, is surprisingly expensive. A cart-load of it dumped

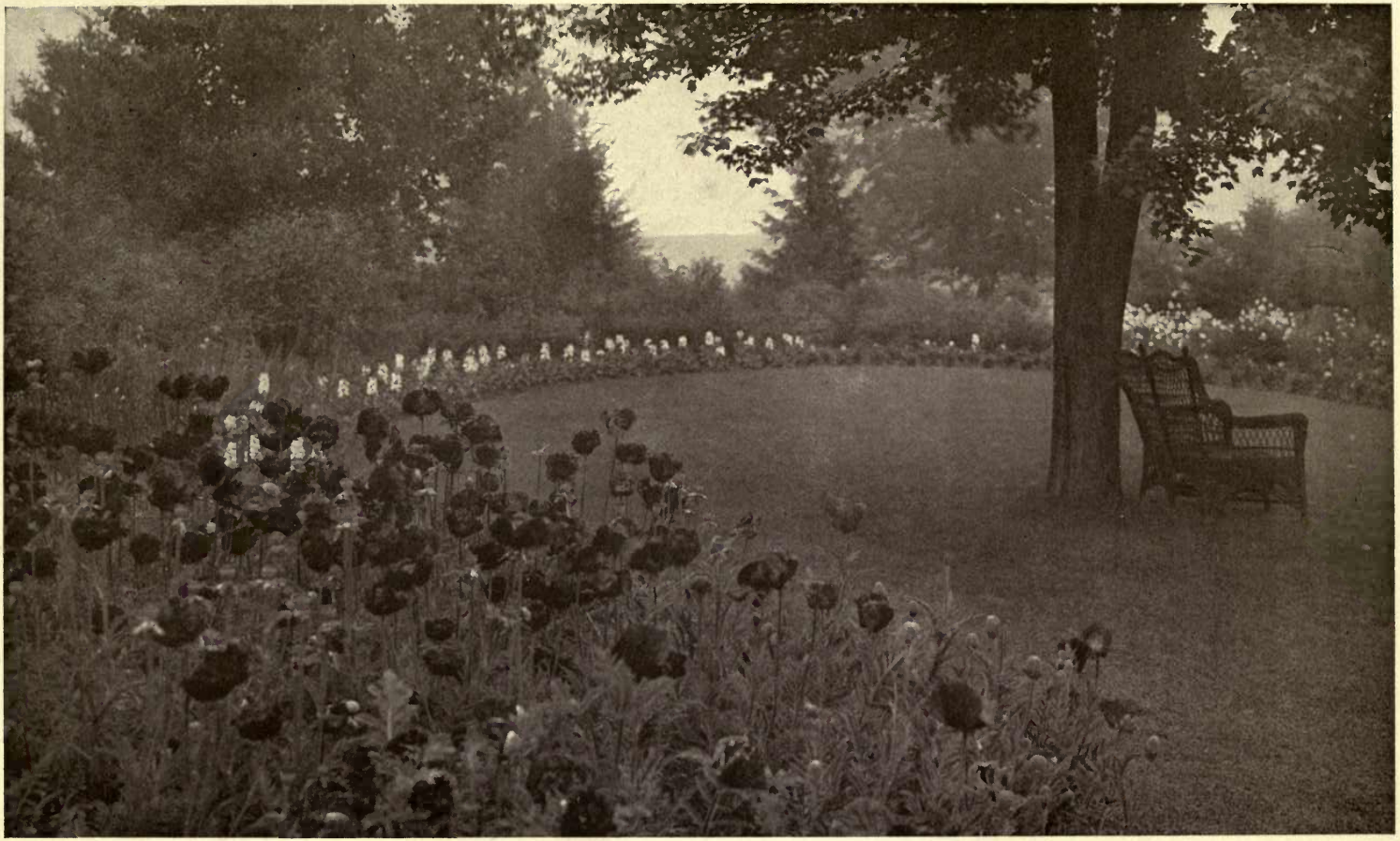
on a lawn looks but little larger than an ant-hill, and the equivalent of a landscape architect's fee might be easily wasted in an unintelligent disposal of the top soil alone. A plan which involves annual upheavals and repeated efforts upon the same piece of land and the incessant care of a skilled gardener, is a very poor plan indeed for a man of modest means. Skyrocket effects of coleus, geraniums and other bedding plants from the florist are rarely desirable in any case, but usually the novice's first undirected efforts are to get them. All plants require some attention, but not necessarily annual attention; certainly not annual renewal. A permanent planting of hardy shrubs and perennials has all the artistic qualities and the practical ones as well. Since it takes years for newly planted trees to look thoroughly at home, delay in setting them out means a needless prolonging of the raw, unfinished state of the place. The era of vanity — or was it parsimony? — when every man presumed to be his own lawyer, his own doctor, or architect, or garden designer, is happily being superseded by an age of specialists whom the wise consult more and more.

It goes without saying that the professional gardener to be chosen should be practical as well as an artist — one who has had too much experience with growing things to advise planting elms on a dry, sandy hill-top or tea roses near Quebec. Enormous sums have been wasted on rhododendrons alone, through attempting to grow in this country imported foreign hybrids which soon give up the struggle for existence in our uncongenial climate; whereas lasting and equally beautiful effects may be produced from hardy hybrids of our native rhododendron race. Costly mistakes are made annually in planting yews and certain other European evergreens. Manchuria and Siberia, with climatic conditions similar to our own, are likely to yield far more valuable treasures for the

lawn and garden than the continent of Europe, where we have looked too long, not only for models of design, which may be sometimes desirable, but for the plants to execute them, which most often are not.

Where is that nurseryman's catalogue so frankly honest that the novice may learn from it what *not* to buy? It is safe to say that millions of dollars worth of plants die for the lack of intelligent selection, planting, or care. Decidedly, for economic reasons as well as artistic, we Americans are sorely in need of more disinterested, expert advice. But beware of the adviser who has an axe to grind. There are some excellent men connected with nursery establishments of the highest class, but the frequent tendency is to retain "landscape gardeners" of little or no artistic training whose real business is to sell plants for their employers. Naturally the temptation is to load the client with as much stock as possible, regardless of its value to the general effect of his place. "Plant thick; thin quick," is a popular saying in the trade. The disinterested professional, with no commercial connections, makes it his business to secure for his client the best stock that may be purchased anywhere in the open market and at the lowest price. Likewise beware of the landscape gardener who does not insist upon studying the garden problem on the land where it is to be worked out; who would attempt to furnish a design from a few photographs of your grounds at his office desk, or copy another garden that he made successfully elsewhere. Ninety-nine chances out of one hundred it will not suit your place; perhaps not a single feature could be transferred to advantage. It is easier to copy than to originate, but rarely satisfying either to the æsthetic or to the moral sense.

The architect of the house, who very often essays the rôle of



PRIVACY, SHADE AND A DISTANT PROSPECT WITHIN A RING OF FLOWERS. THE MAGIC FIRE OF ORIENTAL POPPIES IN THE FOREGROUND



"SOME FLOTSAM AND JETSAM OF BLOOM, LIKE THE SAND-LOVING PORTULACA AND SEA PINKS, EXTEND ALMOST TO THE WAVES"

designer of its surroundings, that the effect of his work may not be spoiled by his client, usually lacks a knowledge of plants, without which there can be no lasting success. Such knowledge can be had only by years of special study and experiment, quite beyond the attainment of most professional architects. The landscape gardener on the other hand, very often lacks the needful knowledge of design, apart from the naturalistic treatment of very large park-like areas. He may know a great deal about plants, how to choose and how to grow them, but usually he knows very little about the principles of art and design, or how to treat the land adjoining buildings. The natural landscape he understands, and his usual endeavour is to bring its purely informal lines right up to the purely formal lines of a building, with disastrous results from the artistic view-point. Happily there are not a few well-rounded men, however, trained in design as well as horticulture, who are lifting the art of gardening in this country to a higher plane than it ever before attained here. And more will be forthcoming when their value is more generally appreciated.

But if, for any sufficient cause, one may not employ disinterested, expert advice, one may at least proceed in the artistic spirit along reasonable lines, acquiring by patient study of one's own peculiar problem the knowledge necessary to solve it, and so enjoy one's self all the fun of garden making. Then, indeed, the garden becomes one's very own and best beloved. It is not, or should not be, a matter of capricious taste, but a matter of reason and the affections. Principles of composition govern its making, it is true, as surely as they do a painting in oils; nevertheless the application of those principles to each individual garden problem should be as various as the gardens themselves that each may possess its own distinctive features and charm. Personality

reflected in a garden may be its chief attraction. Better a craving for the ideal carried to a "fine lunacy" than the coldly correct, impersonal art of an unimpassioned hireling. It were happiness indeed if, when the time for garden making comes, Art

> "shall say to thee:
> 'I find you worthy, do this thing for me.'"

Before daring to proceed with a single detail on the place, study your piece of land as a whole from every point of view. Map it out on a large sheet of tough paper. Draw it to scale, if possible. Show its elevations and depressions and respect these as far as may be when you come to grade rather than attempt the expense and achieve the ugliness of reducing the land to a monotonous level like a billiard table. Every plot of ground, like every human face, has an individuality to be emphasised rather than obliterated. If your place is not a small one, divide the map into several enlarged sections for special study and treatment. This book can help you with only one section, the area to be pictorially treated. It concerns itself with the flower garden only, not with forestry, road-making, the vegetable garden, orchard, vineyard, poultry yard, or any other utilitarian subject, however important, that may engage the home-maker's attention. But the flower garden, of many types, is broadly interpreted to include the lawn and the trees and shrubs suitable for it, because these contribute so immeasurably to the garden picture that no really good one can be made without them. In the succeeding chapters the artistic principles that should govern each style of garden and the directions for its making will be given for the benefit of the novice with aspirations.

On the chart of the garden area put arrows to indicate the direction of objects of beauty or interest, such as a fine view, a vista through the trees, a gigantic pine, or a mirror-like lake toward

which attention should be directed. Put crosses where unsightly objects need to be screened or planted out; but first make very sure that what you have considered an eye-sore may not be transformed into an object of beauty. Consider deepening the dismal swamp into a pond for a water garden; covering the dead tree with a mantle of vines instead of chopping it down; making an alpine garden among the rocks instead of blasting them out.

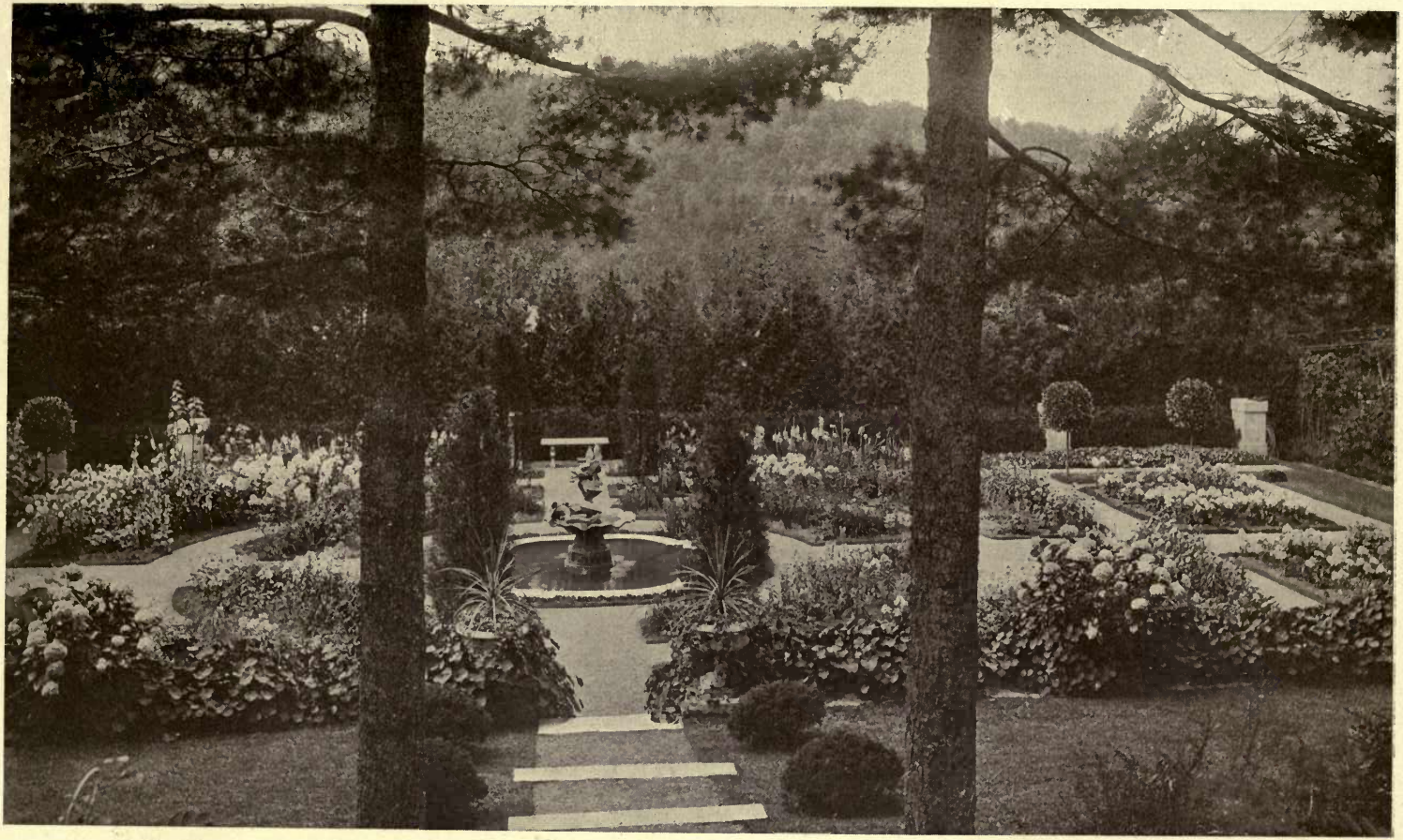
Think well before locating the house, even on paper, and include the drive or path by which it is to be approached in your calculations. Many a house has been completed before it was discovered that the only route left to it approached from the worst possible point of vantage, or spoiled the chances for a good broad lawn, or necessitated too steep a grade, or cut the garden picture in half.

Oftentimes considerable planting may be done on larger grounds than suburban lots before the house is built, but only on the area outside of the building operations, where the carpenter's, plumber's and painter's horses will not feast upon the tender new growth or strip off the bark from your favourite possessions. As soon as the design of your place has been mapped out, a list of such trees, shrubs and hardy perennials as will be needed to execute it may be made. Do not try to collect a museum of plants; avoid freaks of variegated foliage, exclamation points of colour, strange exotics that look out of place in our American landscape, and the beguiling novelties of the catalogues. Personally visit several reliable nurseries if possible, make your own selections and see them tagged with your name. Choose well-grown, vigorous stock at a fair price rather than the puny disappointments that, alas! are what tempt so many because they are erroneously considered cheap. Many a man, intensely practical in his own business, will give his order to the

lowest bidder among competing nurserymen and waste years looking at sickly, struggling or dying trees, shrubs and perennials about his home rather than invest a little more money and get satisfaction and joy from the start. Poor stock is dear at any price.

In an out-of-the-way corner of your place prepare the ground for a little nursery of your own by deeply ploughing the soil, enriching it well, and lightening it, if it be heavy, with sand, leaf-mould from the woods or humus from the compost heap. Plants make very slow growth in clay soil. A rich, sandy loam, cool and moist with much decomposed vegetable matter through it, favours the rapid growth that the owner of a new place so greatly longs for. As soon as the stock arrives, set it out in rows, with room to spread and with sufficient space between the rows for cultivation with the wheeled hoe. A mulch of stable litter or leaves will protect the roots from drying out in summer and from winter frosts. Perhaps a greater percentage of nursery stock dies for the lack of mulching before it becomes well established than from any other cause. If the house is not to be built for a few years, this little nursery will yield a very high rate of compound interest, for the small stock, which it pays the nurseryman best to sell you, was comparatively cheap, but it would be sadly ineffective on a new place; whereas the larger, older stock you now possess, which is disproportionately costly and difficult to buy, gives delightful, quick results. Be sure you know just the tree or shrub for a given spot on your place before buying it. One can no more plant one's grounds in a hurry than one can successfully furnish a house outright in a week. One must feel one's way along, and realise the need of a certain plant for a certain place before proceeding to get it.

Near the place chosen for the garden, its jealous guardian



A GARDEN OVERLOOKED FROM AN ENTRANCE DRIVE. THE HIGH WOODED HILL MAKES AN IDEAL BACKGROUND AND WINDBREAK; THE DARK PINES, JUNIPERS AND BAY AFFORD AN EFFECTIVE FOIL FOR THE FLOWERS



A HARDY GARDEN BORDERING A LAWN. WELL-GRADUATED PLANTING

angel will save every precious ounce of top soil and sod that comes from the site of the house and the cutting of drives and paths. There will be no wasteful burning of leaves in the autumn. What are not needed as a mulch will form the basis of a rich compost heap piled up with broken sod, cut grass, manure, and wood ashes. The merest novice must know that there can be no success in a garden without a careful study of the soil, and the needs of the various species of plants that are to draw their sustenance from it.

Some situations there are, a very few, where a house may be placed in the midst of wild scenery, so surpassingly beautiful in itself, that any garden artifice attempted seems a profanation. But even a camp in the wildest Adirondacks, without some planting about it to simulate Nature's garden coming to its very doors, appears to spring impertinently from the soil like a Jack-from-the-box. The very act of building a house anywhere destroys nature's balance, and man's best endeavours are required first of all to restore harmony. Whether the situation demands a wild garden or a formal one, the matter of fundamental importance is to establish the right relationship at the outset between the house and its environment.

A bit of wild tangled woodland is very beautiful, but it is not a garden, and the moment a man thrusts a spade into the earth or fells a tree, or sets out a plant where one did not grow before, that moment he becomes responsible for the effect of the land he subverts to his will. A garden should be "man's report of earth at her best."

There are those ardent lovers of unspoiled nature who consider any house a pimple on her face. Salve it over with vines, veil it heavily with trees and shrubbery, still it is a blemish to be apologised for, if not concealed. Surely a well-designed house, pure in style

and restrained in treatment, needs no apology for its existence. Beauty of architecture is its own excuse for being. In this day of well-trained architects there should be no excuse, except the untrained client, for building an ugly house. Unhappily, mongrel architecture is still in our midst — "the pug-Newfoundland-poodle-hound-style," a famous architect calls it — but it is passing, and a distinguished Englishman who recently revisited this country after an absence of fifteen years declares that in no direction have the Americans made more rapid advance than in the building of beautiful homes. We have learned the wisdom of consulting the best architects before attempting to build. As a people, we have not yet learned to seek advice of a similar artistic grade when it comes to the treatment of that most important piece of land in all the world — the area, be it large or small, around the home; which is why one may see a dozen good houses before one can discover a single beautiful, satisfying bit of art out-of-doors. Every architect, let us hope, will one day have a professional gardener associate in his office. Their work is largely interdependent. The advantage of frequent conferences between them would be immeasurable to the client.

The style of architecture best adapted to the climate, natural situation and purse of the owner having been decided, the next problem to present itself is how to tie the bald new house to the landscape into which it suddenly obtrudes. Obviously the solution must vary in every case. The Colonial type of house would lose its dignity if surrounded by woods and a wild garden like a log camp, and the unpretentious little seaside vacation cottage be made ridiculous by an Italian garden on a terrace. A Spanish house needs palms, yuccas and other tropical or semi-tropical garden accessories under Southern skies. Each style of architecture and

no style of architecture demand a different setting. While the stately, perfectly proportioned Georgian type requires a formal, balanced treatment of trees and shrubbery masses immediately about it, and implies the box-edged parterres filled with old-fashioned flowers as a central feature of the garden design, the house of nondescript architecture, which might well be called the Predominant, may be treated electively, and sometimes most informally. Even the house that is "Queen Anne in front and Mary Ann behind" may have some of its ugliness mercifully concealed. It is a mistake to suppose that design can concern formality only. Where the architecture is not pure, vines, shrubbery and trees, judiciously placed, may perhaps conceal the defects, which is one of the many things to be said in favour of the informal treatment. Although such a house may have shrubs and flowers all about it, it may possess no special spot that might properly be called a flower garden at all. However, there are very few houses indeed that are not improved by a formal touch about them somewhere. Most houses, of whatever style, are benefited through carrying the principles of architectural design out to their immediate surroundings. Not every Elizabethan house was set on a bowling green above a hedged and knotted garden, nor need it be to-day; but surely no one with the artistic spirit would try to unite it to the landscape by a Japanese garden. Yet a newly rich lady, whose architect had achieved a Tudor triumph in stone and half timber, surrounded it with a poor imitation of a Japanese landscape in miniature within six weeks after the architect's back was turned.

"I can never forgive you," wrote the outraged designer.

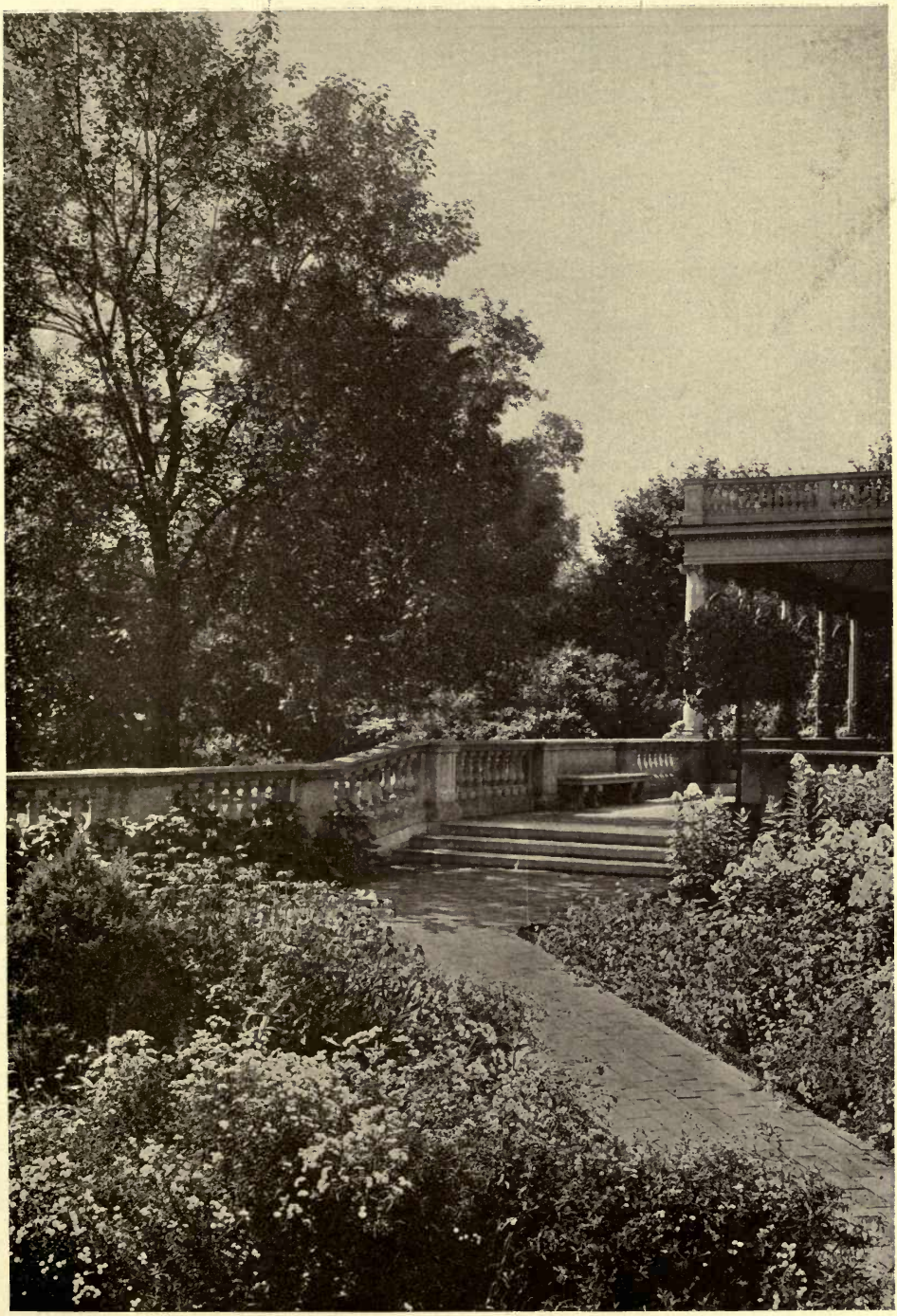
"What concern is it of yours? Is n't your bill paid?" replied the complacent parvenu, who, that very day, was arranging for

the Japanese water-garden of many storks, stones and bridges, to be fed from an old Florentine fountain on the other side of the house. The idea of giving her Elizabethan house a suitable setting in which the shades of Lord Bacon or Shakespeare himself might feel at home, could not enter such a head unaided by a tactful professional gardener.

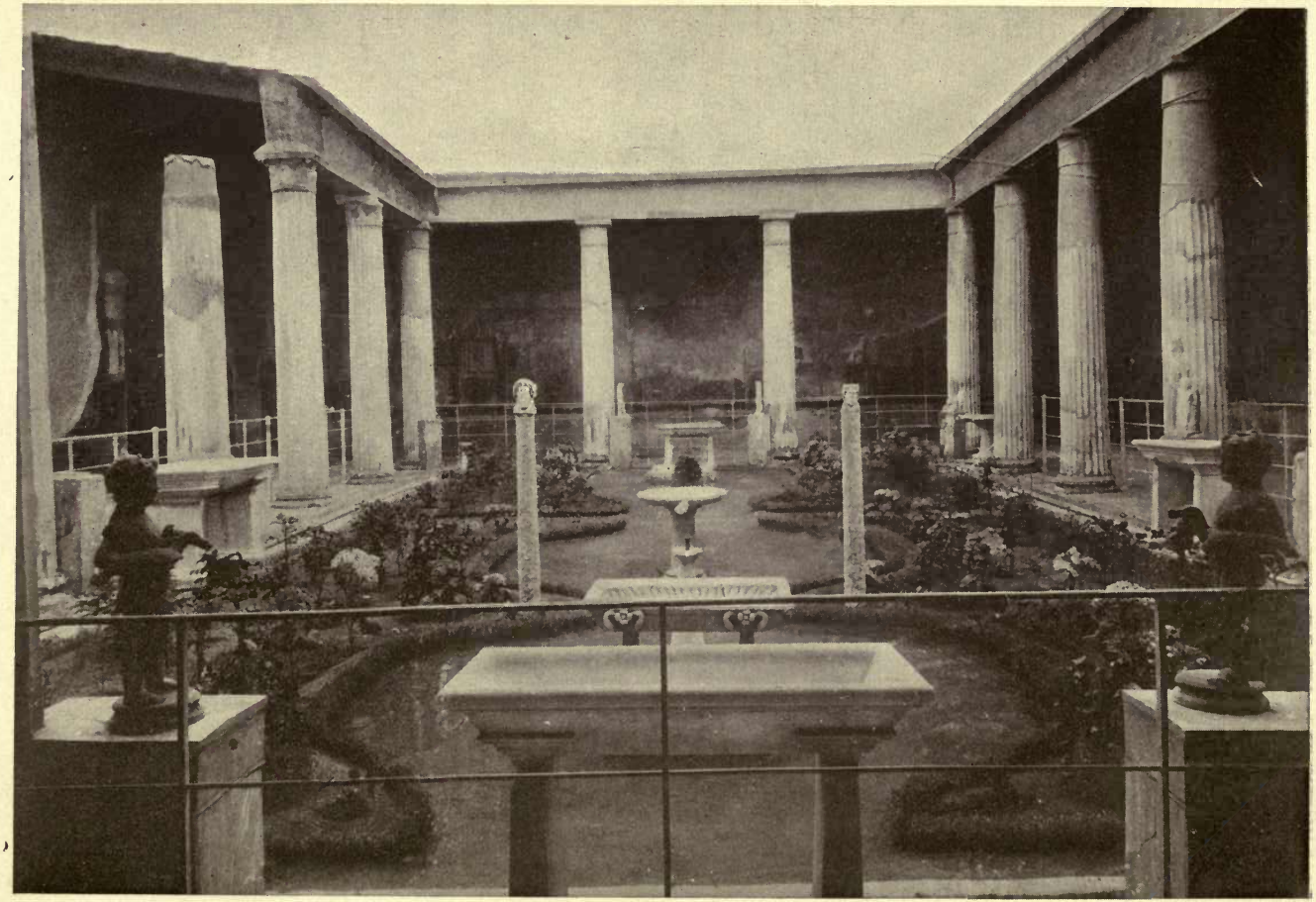
The style of architecture of the house may be a limitation or a great opportunity, whichever one is pleased to consider it. Infinite variety is possible with the historic method. It is not necessarily stereotyped.

There are cases, perhaps, where a better architectural effect may be had by bringing an unbroken stretch of lawn to the very foundations of a house where vines and a fringe of shrubbery might be their only screen; but in order that it may give the most pleasure, the garden should be conveniently near the dwelling. Then it may be lived with and lived in, enjoyed without effort, seen from the windows by busy workers indoors, tended with the least trouble, quickly robbed of some of its wealth for vases by the mistress of the house, its interests safeguarded by every member of the family, as well as the hired man. Only by living with one's garden can its beauties be fully realised, for every passing cloud changes the effect of light and atmosphere — the most potent factors of beauty out-of-doors. A garden by moonlight becomes a new revelation. Then every defect is concealed, glaring colours recede into nothingness, and only the white flowers — the long fragrant trumpets of nicotine, spires of foxgloves, tall white lilies, a Milky Way of cosmos stars, snow balls of phlox and peonies or a foam of boltonia — have their loveliness enhanced by the night.

If we must walk through wet grass to a distant part of the



FOR A HOME OCCUPIED IN SUMMER ONLY, FLOWERS CLOSE ABOUT IT ARE DELIGHTFUL IF ARRANGED FOR COLOUR HARMONY AND UNINTERRUPTED SUCCESSION. WINTER HOMES NEED LOW EVERGREENS AND BRIGHT-BERRIED SHRUBBERY ABOUT THEM FOR CHEERFULNESS WHEN FLOWER BEDS ARE BARE AND UNSIGHTLY



RESTORED GARDEN IN THE HOUSE OF THE VETTII, POMPEII. THE PROSPEROUS ROMAN HAD EVERY ROOM OF HIS HOUSE OPEN UPON A COURT CONTAINING A FOUNTAIN AND FLOWERS. WATER STILL SPOUTS INTO THE MARBLE BASINS FROM THE BILLS OF DUCKS HELD IN THE ARMS OF BRONZE FIGURES OF LITTLE BOYS. PATIO HOUSES IN AMERICA ARE BUILT ON THIS PLAN

grounds on a hot day, perhaps to an end of the vegetable garden devoted to flowers, before the eyes may feast upon them, or a few blossoms may be gathered for the dinner table, immeasurable pleasure is lost, as well as a decorative adjunct to the house. What would the little cottages of England look like without the gay gardens around every doorstep? How much a well composed garden may add to the beauty of the house itself by extending lines that end too abruptly, by softening sharp angles, by broadening the effect of a house that is too high for its width with masses of shrubbery or hedges on its sides, by nestling around a house on a hill top, or by reconciling another to a plain! The house and garden should seem to be inseparable complements each of the other.

It is conceivable, however, that not every desirable building site would permit a garden near the dwelling, that is, not a garden of definite boundaries. A cottage perched on a cliff overhanging the sea, for example, could not have flower beds and specimen trees and shrubs on the rocky ledges, nor would they be desirable; but the storm-resisting native pines and hardy stunted shrubbery — bayberry, barberries, St. John's wort and broom — would grow there and perfectly fit the landscape. A tide of flowers might surge around the rocky base of the promontory, and some flotsam and jetsam of bloom, like the sand-loving portulacca and sea-pinks, extend almost to the waves. Where nature left off and art began it would be impossible for any one but the maker of that garden to say. Every region has its own wealth of native plants which should be drawn from much more freely than it is. The laurel was quite without honour in its own country until after it had become a favourite in Europe, thanks to its introduction by Peter Kalm, when we could actually import it from European nurseries more conveniently than we could dig it from the woods at home.

A garden is no less a garden because it defies all limitations and conventions. And the artistic spirit likewise refuses to be bound by the fads and fancies of the gardener's craft. Art out-of-doors is universal, like nature herself, and knows no predilection for Italian gardens above wild gardens, for informal or naturalistic ones rather than for the prim, box-edged flower beds of our grandmothers, for the water garden in the humid East above the cactus garden of the desert. Fitness and beauty suffice. Happily every garden site is a law unto itself to which the gardener must submit. No two gardens, no two human faces, were ever alike. Both have individuality as their chief charm.

But it is generally conceded that every garden picture is improved by a frame. The sea, a wood, a tree-girt lawn, a lake, a hedge, a wall, a court yard, a pergola, a terrace, a hillside, or the house itself, any or several of these, and some other boundaries, natural and artificial, may set off the garden's own peculiar beauty to the best advantage. The needs of plants are so various that their loveliness can best be shown in a variety of situations and settings.

THE FORMAL GARDEN

"From the intimate union of art and nature, of architecture and landscape, will be born the best gardening compositions which Time, purifying public taste, now promises to bring us." — EDOUARD ANDRÉ.

CHAPTER III

THE FORMAL GARDEN

SINCE orthodoxy was ever "my doxy," it need surprise no one but the merest tyro in gardening to learn that this, the most peaceful of the arts, has the greater part of its devotees divided into two bitterly hostile camps. The "spirit of sect," so heartily deplored by Turgot in matters of politics and religion, is rife even in their midst, and there would seem to be no more likelihood of a truce between them now than in the days when the affected, complacent Addison made admirable copy in the *Spectator*, and Pope, that most artificial of jingling rhymesters, amused his generation by poking fun at formal gardens generally, and not alone at the errors which undoubtedly disfigured much of the "Italian" gardening in the England of his time. Pope, while he professed to abhor hedges, pleached walks and statuary in gardens, and to adore nature unadorned, nevertheless went on piling up rocks and shells into grottos at Twickenham, making cascades, bridges, miniature torrents and wild, mountainous impossibilities in a pastoral landscape until he had, in much condensed, compendium form, a sample of every kind of scenery his fertile brain could conjure, and all within five acres.

These two literary men, Addison and Pope, with not a little help from Walpole, neither artists nor yet gardeners, who knew not what they were undoing, must be held largely responsible for bringing about the radical reaction in garden methods which swept away with axe, plough and grubbing hoe most of the tree-lined avenues like cathedral aisles, the ancient evergreen hedges, the

broad terraces and box-edged parterres that had been the glory of the old English estates, influenced by the Renaissance. The saying that nature abhors a straight line was construed to warrant the destruction of every line of oaks and elms, every direct road and path on English country places. People professed to travel cheerfully, in the name of reform, twice the distance in meaningless serpentine twists and turns to reach either their entrance gate or the kitchen garden. The planting of trees and shrubbery was supposed to be ridiculous if wild nature were not copied literally. Hence the logical step was presently taken of setting out an occasional dead tree in English parks. Devotees of the so-called natural school went so far as to refuse to clip their lawns — those wonderful velvet lawns which are the very heart of the English garden. Quite as many crimes were committed in the name of nature by the unintelligent followers of Repton and "Capability" Brown as had been done in the name of art by the formal gardeners who had reached the baroque period of decadence before Addison's day.

For the novice who turns for inspiration to Robinson's "The English Flower Garden," one of the most delightfully infectious books on gardening ever written, is to be taught that the formal garden is most unlovely and absurd. Robinson is an enthusiastic horticulturist who simply cannot see the architectural point of view. On the other hand, let the novice take up Blomfield's "The Formal Garden," or Sedding's exquisitely written "Garden Craft," and he will get the notion that the naturalistic method of making a garden or treating a landscape is unworthy to be called an art at all.

"The question at issue is a very simple one," says Blomfield, who is Robinson's special *bête noire*. "Is the garden to be considered

in relation to the house, and as an integral part of a design which depends for its success on the combined effect of house and garden; or is the house to be ignored in dealing with the garden as a part of nature? The latter is the position of the landscape gardener in real fact. There is some affectation in his treatises of recognising the relationship between the two, but his actual practice shows that this admission is only borrowed from the formal school to save appearances, and is out of court in a method which systematically dispenses with any kind of system whatever."

And so the battle of words comes down to the present day in England, from whence our training in garden tactics has been largely derived. Not until quite lately have we had any garden literature of our own, and even now England continues to supply most of the text books. To the dispassionate observer it is quite plain that ammunition for both sides of the conflict has been gathered, not from the best examples of the formal or the naturalistic school of gardening, but from the poorest examples of the other's work that the partisan devotees of each could find.

Where did the formal garden originate? Wherein lies the magic that draws men to it in every age?

Maspero, in his "Dawn of Civilisation," tells of an Egyptian nobleman who lived over four thousand years before Christ, whose splendid fruit, vegetable and flower garden, formally laid out, was described upon his tomb. When various forms of art spread from Egypt to other lands, no doubt the art of gardening was widely copied. Even the sea-roving Phœnicians had fine gardens, and we feel sure that the famous hanging gardens of Babylon, from the very nature of their site, could have been nothing but formal. Greek gardens, which, like the Egyptian, were a combination of the utilitarian and the decorative, were laid out with

cold precision, purely in keeping with the classic severity of the architecture they surrounded. They must have been too severely formal to be enjoyed and lived in as the Romans enjoyed and lived in theirs, which they, in turn, derived from the Greeks.

On the Roman and Alban hillsides, where the patricians had their villas, the terrace, which was cut at first as a necessity to prevent wash-outs on the steep slopes, was soon cleverly utilised as a pictorial feature. A terraced hill, of course, necessitated steps and balustrades for convenience and safety, because the Romans, who lived much out of doors, entered their homes through their gardens. Pliny, in his letters, describes two of his villas, but so far no antiquarian has been able to identify them with the remains of any that are now known. In the house of the Vettii at Pompeii we may see to-day a delightful little garden in the central court, faultlessly restored, where every room of the house opens upon it. The inmates of that home, whose bodies have been dust for nearly nineteen centuries, heard these very fountains splash their refreshing waters among the flowers. How near us does that little garden bring the everyday life of Pompeii!

With the delightful use of gardens as outdoor living-rooms, the utilitarian features — vegetable patches, fruit trees, and vineyards — were banished either to a distant part of the Roman's estate or to an outlying farm, and the garden now came to be recognised as an adjunct to the house, partly architectural and wholly decorative. Accordingly, no pains were spared to make it so. The same principles of design which governed the house were extended to the grounds immediately surrounding it, and there they left off abruptly. Such weather-proof embellishments as the Roman patrician, connoisseur, and collector had inside his dwelling — beautiful statuary, sculptured seats and vases of marble — were taken to his open-air

living-room for their greater enjoyment. Can we doubt that their chaste beauty was less appreciated when set on balustrades and terraces against the dark background of olive, ilex, and cypress?

But with the growth of luxury in the Empire decadence began; the topiary gardener did his worst, and innocent trees, frivolously clipped into the forms of impossible birds and beasts, with much else that was absurdly artificial, marked the decline of art in the Roman's once simple and dignified pleasure ground. After the fall of Rome, when the darkness of the Middle Ages settled down over Europe, gardening, with all her sister arts of peace, slumbered for centuries. The mediæval garden, where it existed at all, we learn from old, illuminated missals, was merely a monastery's patch of "simples" or vegetables tended by a monk, or an enclosure within the castle's precincts, where herbs grew around the well and fruit trees were espaliered against the walls.

Inevitably, a great awakening would come to artistic Italy with the cessation of wars, holy and unholy, and the return of prosperity to the land. In those days of marvellous artistic activity which we call the Renaissance, when men delved among the archives of their Roman ancestors for inspiration in all the arts, the classic garden was rediscovered with acclaim. Restored in all its splendour throughout Italy, but given new breadth and freedom of treatment at the hands of some of the greatest artists of all time, Michelangelo and Raphael among them, the Italian garden of Lorenzo de Medici's day has become synonymous in the artistic world with garden craft carried to its highest degree.

Where lies the secret of its excellence? Doubtless in the discovery of the landscape. Heretofore the garden had been regarded merely as a circumscribed architectural extension of the castle or villa, as rigidly formal as the walls of a room. But the master

architect of the Renaissance, looking forth from the terraced hillside to the distant view, realised that his art might be fused with nature in the making of a picture where the imagination would enjoy a freedom of expression hitherto unknown. He knew, none better, the importance of adapting the garden to the lines of the house it joined — so did the Egyptian, the Greek, and the Roman. He realised the importance of adapting the garden in every case to the uses to which it would be put, providing accessible, shady paths, sheltered resting places in the most lovely spots, fountains to refresh the dweller in that hot, dry climate, and cascades down the terraced hillsides from the overflow of the aqueducts, bowling greens on the *tapis vert*, parterres, plantations of roses and fruit orchards for the enjoyment of his patron's family — in the union of beauty with the practical he surpassed all his predecessors. But his genius lay first in discovering that the landscape lying beyond the house and garden should be the ultimate goal of his tributary art; and secondly, in seizing on the great and varied beauty of the Italian landscape, and fitting it into his design with an art which concealed itself. His scenic sense remains a marvel.

Whether one studies the Villa Lante gardens at Bagnaia, the incomparably beautiful Villa d'Este at Tivoli, the superb old estates at Frascati, the sumptuous pleasure grounds of the prelates in Rome itself or the charmingly simple Colonna garden of flowers on a hill-top in the very heart of the city, one sees masterpieces of composition in the large and in detail, calculated to inspire a nation of painters.

"I can't abide Italian gardens," a young architect once startled me by saying, for he had an uncommonly artistic eye.

"Did you ever see one — a real one in Italy?" I asked.

"No, I have never been there," he frankly admitted. "I have



A GARDEN ARRANGED WITH FLOWER-FILLED PARTERRES, AFTER THE ITALIAN METHOD, BUT SLIGHTLY MODIFIED BY ENGLISH, DUTCH OR FRENCH COLONISTS, IS KNOWN HERE AS THE COLONIAL OR OLD-FASHIONED GARDEN. NOT SINCE ITS INTRODUCTION IN THE SEVENTEENTH CENTURY HAS IT BEEN IN GREATER FAVOUR THAN IT IS TO-DAY



ONE OF THE BEST MODERN AMERICAN FORMAL GARDENS, WHOSE ARCHITECTURAL FEATURES ONLY TIME CAN MELLOW

in mind only American 'Italian gardens,' I am afraid — geometric patterns patched on to the lawns of new estates, with little clipped trees set along the borders at exact intervals, and stiff, prim asters in rectangular beds, or a row of urns on a concrete balustrade with perhaps a few meaningless relics of Italian sculpture from some antique shop in New York, to make the garden convincing of its expense.

"Apropos, I must tell you a story," he went on. "Once I was dining in the house of some very rich people, where the lady on my right insisted upon talking about her imposing earthly possessions. Her Italian garden, of the type I have described, she dwelt upon in detail, telling me how much the marble work had cost, how expensive the topiary effects were to keep up, and every other painful particular. At last, unable to endure her prattle about a sarcophagus she had decided to use as a garden seat, I surprised her by saying: 'My wife, too, has an Italian garden.' 'Indeed?' she asked incredulously, knowing perfectly well that we live in a small suburban cottage. 'Yes,' I replied; 'it took two Italians three days to dig it.' Then she changed the subject."

In translating the Italian garden cult to America, *via* England, France and Holland, and after long subjugation there, the fundamental principles of the best formal garden making have been so far lost sight of in the great majority of cases that it has become well-nigh a travesty to call most of our meaningless imitations Italian gardens at all. It may be claimed that Italian ideals cannot be translated into our terms; that the garden magic of the Renaissance is dependent upon age, the peculiarity of the Italian climate and landscape, the wealth of deep-toned evergreens, the cheapness of labour, the social usages of an age of splendour, the Italian genius for artistic expression.

Age undoubtedly enhances the beauty of a garden planned on noble lines, but it can completely obliterate the poorly planned one that is dependent upon constant care; and after centuries the best Italian gardens have preserved their charm. Our summer skies are as blue as the Italian, and our spring and summer climate is not unlike that of Italy. We have our choice of a score of evergreens and a hundred flowers for every one that was known to the garden designers of the sixteenth century. Pyramidal junipers and other columnar evergreens may be used in the Eastern United States, and the less hardy yews and cypresses in the South, as the tapering shafts of cypress were used in Italy; Lombardy poplars thrive here as well as there; retinisporas, magnolias, rhododendrons, laurel, boxwood, bay, and a host of other possibilities are perfectly adapted to our needs. Certainly, there is no lack of wealth at the disposal of American home-makers, nor can it be spent in a better way to bring health and pleasure to a family than upon a garden. Many kinds of labour-saving devices, unknown in Europe three centuries ago, now help to lessen the expense of garden-making and maintenance. Fountains, sundials, garden seats, balustrades, steps, and other garden accessories are by no means essential to a lovely garden, but if one wants them, and cannot afford stone or marble, excellent reproductions in a special preparation of cement may be had at a small fraction of the cost of classic models. Thus a man of very moderate means may enjoy a duplicate of the fountain of lions at the Vatican; and the birds that come from the woods to his very door to bathe in the spray and drink from the basin, where goldfish play hide and seek under the lotus and lily leaves, show constant appreciation of his taste.

It is painfully true that we Americans, like the English, are too Teutonic to be an artistic people. Yet here and there among

us arises an artist capable of making far more beautiful pictures on the landscape than he is the better content to paint on canvas; and so the limitation of art by the artists themselves continues to be a fruitful source of our artistic poverty. Very few excellent models inspire the garden makers in this new land. For nearly a hundred years garden making went out of fashion. The worthy formal gardens here can be counted on the fingers of one hand. But art out-of-doors shows encouraging signs of waking from its long sleep, and the few really competent designers are meeting with refreshing encouragement at last.

Perhaps it would be as futile as it is undesirable to servilely copy even the best Renaissance gardens, nevertheless we may, with the greatest profit, learn from them how a house and garden may become an integral part of the landscape, whether it be situated in Italy, New England, Illinois, or California, for happily the principles of their making are of universal application. What we chiefly need is the informing spirit; with it alone shall we learn how to meet our problems as successfully as the Italians met theirs. Even in Italy methods were necessarily adapted to various situations. The Roman's pleasaunce, overlooking the broad Campagna, was given a majestic breadth and simplicity of treatment in harmony with its environment, whereas, farther north, where the landscape is less imposing, compensations were offered in the wealth of garden details. The designer invariably took the cue for treatment of a place from the adjoining landscape. So must we learn of him.

A room that is not lived in never possesses the charm of one that is, however correctly furnished it may be. And so our gardens will never be what they might easily become until we make of them outdoor living-rooms after the good Old World custom.

Piazzas, pleasant as they are, have doubtless retarded the adoption of the custom here; so has the tendency to do away with walls, tall hedges, and screen planting, so exposing to the gaze of every passer-by the intimate family life spent under the open sky.

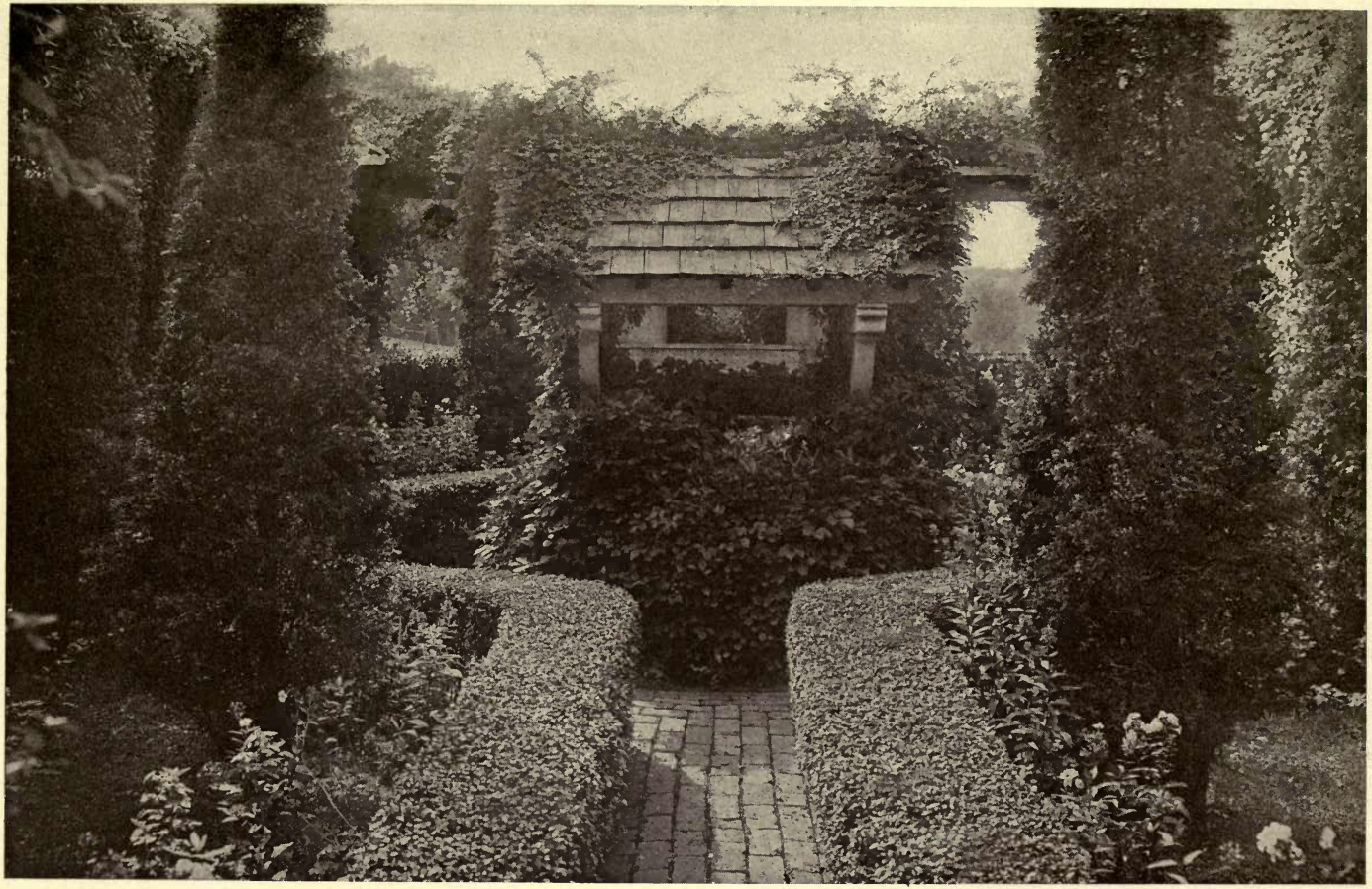
The Renaissance garden maker planned the hedged-in, vine-clad, walled enclosures, sheltered from the winds and sun, for the family's comfort and convenience, as carefully as he did the rooms of the dwelling. Broad paths through pergolas, arbours or wooded alleys led from one subdivision of the garden to another, and so, by easy and almost imperceptible transition, the formal lines nearest the house flowed more freely and more informally into the naturalistic the farther one walked away from the house, until the stroll brought one out face to face with nature herself. Here was infinite variety in perfect unity. No "method" was despised by the artist designer to gain the end desired. The terraces, the stone work, the fountains, the sundial, the ilex walks, the parterres, the bowling green, the open sunny spaces, the shaded retreats, the rushing cascades down the hillsides, the mirror-like pools, the groups of trees, the converging lines of a straight-hedged path, the irresistible invitation of a disappearing curved one, the distant vista alluring the eye to the beauty of a distant panorama — all had a deeper harmony underlying them than the uninitiated observer could suspect. A glance at one of the old garden plans astonishes one. The design drawn on paper shows a rigid formality, perfect balance and intricacy of line comparable to Chinese fretwork. The finished garden seems to be a naturally perfect picture wherein the design is frequently lost to sight, and one is conscious only of harmony on every hand. Another matter for astonishment to the American is that the beauty of a Renaissance garden may be entirely independent of flowers. These were

used lavishly in many gardens, it is true, while in others they were scarcely necessary at all, and were added, as Corot might have added a touch of colour to one of his landscapes, which, even without the pleasing detail, would form a well-nigh faultless composition.

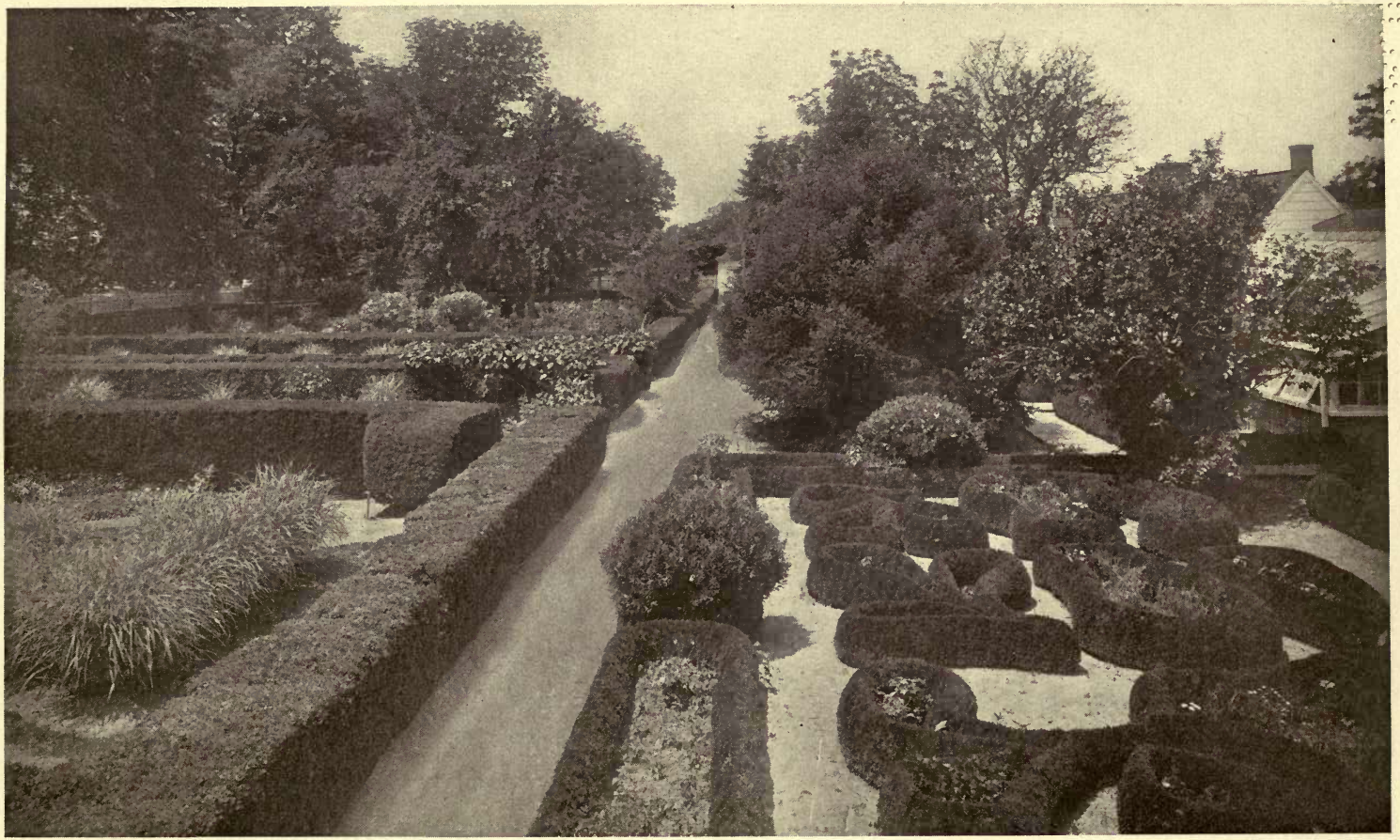
Our simple democratic society has no need of imitating the great gardens of Italy, where Church and State vied with each other in the splendour of their open-air functions, or the excessively formal pleasure grounds of the French court to which Le Notre devoted his genius; but it is a mistake to assume that the formal garden may not serve our day and generation. What are the "old-fashioned" gardens around our Colonial homesteads, with their box-edged parterres and vine-covered arbours but an evidence of the Italian fashion in vogue in England, France, and Holland when our forefathers first came to these shores? We feel no prejudice against our grandmothers' formal gardens — quite the reverse — but that there is a decided modern prejudice against the formal treatment for anything but the large estates of the newly rich Americans one cannot deny. Our Teutonic blood prejudices us, as a people, toward a more general love for nature than for art; our training, derived from English text books, inclines us toward the naturalistic method; and our ignorance of the best examples of the formal school, which may scarcely be found outside of Italy, might easily account for the scorn which Americans generally feel for formal gardens.

The refreshing truth is that nowhere so well as on a small place, where the house is the dominating object in the home picture, is the formal or architectural treatment of the grounds so well adapted. How much of the charm of the simple, dignified Colonial house, on the elm-lined village street in New England was due to the box-hedged path leading directly from the front gate to the

front door, and the neat, trim parterres filled with flowers and herbs conveniently near, which preserved harmony in the yard of the perfectly balanced dwelling! In its modest way it was as satisfying an artistic composition as the Villa Medici, for our "Colonial" architecture, adapted after Palladio, and "Colonial" gardening were twin children of the Renaissance.



A CHARMING SMALL GARDEN, INEXPENSIVE TO PLANT AND TO MAINTAIN, WITH A WELL FOR ITS CENTRAL FEATURE. PRIVET HEDGES, JUNIPERS, HARDY PERENNIALS AND VINES GROW LUXURIANTLY ENOUGH TO SOFTEN ITS LINES WITHOUT OBLITERATING THE PROPORTIONS OF THE PLAN



THE GARDEN, MOUNT VERNON, SHOWING FRENCH INFLUENCE, PROBABLY LE NOTRE'S. IN WASHINGTON'S DAY THE PARTERRES OF INTRICATE DESIGN, EDGED WITH LOW BOX, NOW OVERGROWN, UNDOUBTEDLY HAD THEIR HARD LINES SOFTENED BY OVERSPREADING PLANTS

THE OLD-FASHIONED GARDEN

"Pleasures which nowhere else were to be found
And all Elysium in a plot of ground." — DRYDEN.

"The art of gardening has its root in man's enthusiasm for the woodland world. See how closely the people of old days must have observed the sylvan sights of nature, the embroidery of the meadows, the livery of the woods at different seasons, or they would not have been capable of building up that piece of hoarded loveliness, the old-fashioned English garden." —JOHN D. SEDDING.

CHAPTER IV

THE OLD-FASHIONED GARDEN

VOLUNTARY exiles in a wild land, whether for conscience's sake, like the Puritans and Huguenots, or for the bettering of their earthly fortunes, like the Virginians and the Dutch, all the early colonists seem to have brought with them the love of gardens so characteristic of the people of the Old World. Little packages of seed must have been tucked away among the few indispensables brought over by the Pilgrims in the hold of the *Mayflower*.

It is good to think of the homesick, lonely and overworked women on the stern New England coast comforting themselves with patches of herbs and flowers. The latter might have been concessions to sentiment, but surely simples were a necessity in a primitive settlement where the good wife had to rely solely upon them in concocting doses for every ill that flesh is heir to. She felt compelled to keep an apothecary shop in her own door yard and follow George Herbert's quaint advice to impecunious parsons: "Know what herbs may be used instead of drugs of the same nature . . . for household medicines are both more easy for the parson's purse, and more familiar for all men's bodies. . . . As for spices, he doth not only prefer home-bred things before them, but condemns them for vanities, and so shuts them out of his family, esteeming that there is no spice comparable for herbs to Rosemary, Thyme and savory Mints, and for seeds to Fennel and Caraway. Accordingly, for salves, his wife seeks not the city but prefers her gardens and fields before all outlandish gums."

At this late day one can but pity the writhing children into whom copious draughts of bitter, nauseous teas were poured every time they took cold, while a paternal hand, as relentless as that of Fate, held their little noses until the last drop was gulped down. Boneset, chamomile and tansy tea, well steeped, were perennial agonies to children of Colonial days. Onion syrup and "stewed Quaker," for hoarseness and sore throat, "Saffern" tea for biliousness, sarsaparilla for spring fever, basil to clear the wits — these were among the "potent medicines" so highly esteemed by Cotton Mather and his contemporaries, and still implicitly relied on by not a few old women in New England villages. Tansy must have come over the sea with some of the earliest settlers, for it had escaped from the gardens throughout the colonies and run wild down the lanes very commonly when Peter Kalm, the Swedish botanist, found it naturalised here in 1748; and by the roadsides leading to old homesteads we still find the shining yellow "bitter buttons," now reckoned as an American wild flower. The ox-eye daisy, which whitens our fields, was also imported for its alleged medicinal virtues. Scores of new plants were added to that parterre of Nature's garden we are pleased to call "ours" when runaways from our ancestors' garden patches reverted to wild ways in this free country. The hay used in packing the colonists' china and other fragile importations, contained seeds of weeds and wild flowers that now overrun the farmer's fields. Plantain is sometimes called "the Englishman's foot."

To add zest to the monotonous bill of fare, the Colonial housekeeper occasionally depended upon the garden at her door. Sage and thyme for the dressing of fowls and home-made sausage, mint for the lamb from the home flock, caraway for the "seed cakes"

that were made for the parson's coming to tea, must have been grown in every garden patch. Dried bunches of herbs for kitchen use as well as for dosing the family or an ailing neighbour, hung from the rafters in every well regulated attic during the long New England winters. It was considered not indecorous to chew medicinal herbs in church.

But we like to remember that the beautiful as well as the utilitarian had a place in the gardens of those hard times that tried men's souls: that hollyhocks stood like cheerful sentinels beside the cabin door in the Plymouth Plantation and Massachusetts Bay Colony; that roses looked in at the windows — probably the sweet brier or eglantine and the striped York and Lancaster roses brought from England; that gilly flowers, "fetherfew" and honesty, with its mother-of-pearl seed vessels for the winter bouquet, grew freely among the comfortable variety of simples, vegetables and pot herbs which the gossiping Josselyn found about the homes of the Puritans in 1672 when he published "New England Rarities Discovered." Doubtless most of the "pleasant flowers which English ayre will permit to be noursed up," as Parkinson quaintly puts it, were tested in American gardens: his favourite "daffodils, fertillaries, jacinthes, saffron flowers, lilies, flower-deluces, tulipas, anemones, French cowslips or bearseares, and such other flowers, very beautifull, delightfull and pleasant."

Not until considerable wealth had accumulated in the Northern Colonies and life had become a less severe struggle, were the New England gardens formally laid out in keeping with the modified classic architecture of the finer houses — a style we speak of as Colonial, but which is known in England only as Georgian. Such gardens followed the fashion then in vogue in England, France, and Holland, which was but a modification, in each country, of

the Italian method. Reduced to a small scale, in keeping with the simple living of frugal-minded Colonials, the classic garden here was but a contraction of the elaborate design of some European estate into the space of a small door-yard. It is said that the original Longfellow garden was laid out after Le Notre's designs for the parterres at Versailles. How much of the enduring charm of old Concord, Cambridge, Portsmouth, Hartford, Fairfield, Newport, and Kingston, among scores of other New England towns, was due to their broad straight street in the centre of the original village with the formal planting of trees on either side — a single or a double row of arching elms or maples!

In the good old days, when every busy housekeeper worked awhile among her flowers each day, and, without consciousness of cravings for capitalised Art, nevertheless achieved as much, perhaps, toward that end as her modern sisters who spend the summer on hotel piazzas embroidering sofa pillows or painting alleged decorations on china, the garden was necessarily close to the house — usually in front of it, next to the village street. Time to work in the garden had to be snatched from multitudinous household duties, for the care of the flowers almost invariably devolved upon the women of the family who most loved them. Little wonder that the hardy perennials or annuals that sow their own seed — plants that very nearly take care of themselves — were the prime favourites in the old-time gardens: fragrant rose peonies, sweet Williams, spicy little fringed pinks, flaming poppies, spires of blue larkspur, foxgloves, deliciously scented valerian, fraxinella with its penetrating, aromatic perfume, periwinkle, hollyhocks, pansies, Lancaster and York and damask roses, and Canterbury bells. Increased numbers of these popular favourites might be relied upon to come up year after year until the weeds



BOXWOOD HEDGES OVER A CENTURY OLD. PARTIAL SHADE HAS BENEFITED THEM. THE BIG CLUMPS OF BOX ON EITHER SIDE OF THE ENTRANCE TO THE HOUSE AND THE OLD ELM AND WALNUT TREES HELP TIE TOGETHER THE HOMESTEAD AND ITS GARDEN



A TANGLE OF BEAUTY AND LUXURIANCE: OLD GARDEN AND STONE HOUSE IN PENNSYLVANIA

themselves were fairly crowded out. The story goes that the first lilacs seen in New England were imported by that gay young scapegrace, Sir Harry Frankland, for Agnes Surriage's garden.

Not the least recommendation of the cleanly, aromatic box-wood that was almost universally used for flower bed borders, was the excellent place for bleaching homespun linen afforded by its flat trimmed top. Bricks set in herring bone pattern along the box-edged paths, or pebbles when the garden was near the sea, helped to clean the boots before a foot passed the threshold of the Puritan housewife's spotless dwelling.

Although every man of consequence in New England, including Governors Endicott and Winthrop, raised and sold fruit trees and plants, comparatively few varieties of flowers were found in the gardens before the Revolution. No one ventured into an exclusive nursery business where neighbourly women had the pleasant custom of exchanging slips of favourite plants, and letters from friends in England usually contained seeds that were doubly welcome, in that they revived cherished memories of the old home. Probably the first commercial nursery was established by Robert Prince, at Flushing, Long Island, about 1730, and for over a century it remained the most prominent one in America. Catering to the French Huguenots settled there, who were devoted horticulturists, it brought together the choicest trees, shrubs, and plants from abroad, including Chinese magnolias and the cedar of Lebanon. Probably more beautiful stock has gone forth from the various nurseries at Flushing than from any other single spot in our land.

But long before the establishment of any nurseries, the Dutch gardens had become famously fine. Ships of the Dutch East India Company brought floral treasures from the ends of the earth.

Governor Peter Stuyvesant, who had a large farm on the "Bouwerie" and a garden about his mansion, White Hall, at the Battery, kept forty slaves at work on his grounds, which apparently contained a greater variety of foreign and native trees, shrubs, and flowers than any other estate in old New Amsterdam. Such an estate was, of course, the rarest exception. The Colonists as a rule were poor, hard-working people and their own flower gardeners. When Manhattan contained barely a thousand inhabitants, Adrian Van der Donck observed: "The flowers in general, which the Netherlanders have introduced, are the red and white roses of different kinds, the cornelian roses and stock roses, and those of which there were none before in the country, such as eglantine, several kinds of gilly flowers, jenoffelins, different varieties of fine tulips, crown imperials, white lilies, the lily fritilaria, anemones, baredames, violets, marigolds, summer sots, etc. The clove tree has also been introduced, and there are various indigenous trees that have handsome flowers which are unknown in the Netherlands. We also find there are some flowers of native growth, as for instance, sun flowers, red and yellow lilies, mountain lilies, morning stars, red, white and yellow maritoffles (a very sweet flower), several species of bell flowers, etc., to which I have not given particular attention, but amateurs would hold them in high estimation and make them widely known." Gay gardens, these, of the Dutch vrouws! Either some of their old favourites are lost forever or they masquerade under new names on modern nursery lists, which, bewilderingly long as they are, mention no jenoffelins, alas, nor baredames, nor maritoffles.

The thrifty Dutch particularly favoured sunken gardens three or four feet below the level of the lawn and enclosed by a brick wall that served as a wind-break. Vegetables so protected

matured earlier than in the wind-swept open; flowers blossomed there in greater perfection as the soil held the moisture drained from surrounding land; and the large area of sun-baked brick wall, against which fruit trees and vines were espaliered, forced the pears, peaches, plums and grapes to yield earlier fruit of extra sweetness. But while the great advantage of a sunken garden in flat, windy Holland was quite apparent, the expense of its making was not so easily justified here, and it gradually disappeared.

With the rapid growth of strenuous, commercial, New Amsterdam, the quaint, formal Dutch gardens of intricate patterns outlined with box gave place to warehouses along the river banks, where comfortable homes had lately stood, to shops and residences crowded into solid rows. Even at Albany, where wealth and good living blossomed forth in the usual Dutch manner, not many old gardens now remain. But at Croton-on-the-Hudson, the Van Cortlandt Manor, built in 1681, still shows what a fine homestead was like when the Empire State was a Dutch province. Descendants of the original owners have lived in the dignified, comfortable old house continuously. The present mistress delights in keeping up the formal flower beds of the upper garden and the long, straight flower-bordered walk where the happy children of nine generations have raced and played, in preserving the noble trees, the velvety turf, the lovely old-fashioned shrubs, just as they were in her great-great-grandfather's time. How rarely indeed can such a home be found anywhere among our restless, roving people! Sentiment in a garden is the finest flower that grows there, after all.

Generously comfortable living, which the most orthodox of Friends did not pretend to despise, showed itself nowhere more than in well-stocked gardens. William Penn, who imported for his followers fruits, vegetables and flowers from the Old World,

encouraged the trial of many native to the New. Around about Philadelphia there are still extant a few lovely old flower gardens, their circles, triangles and parallelograms filled with gay flowers and box-bordered with scarcely an exception. These, apart from the kitchen garden, testify to "the pride of life" so innocently fostered by the Friends. At the time of the Revolution there were, perhaps, no finer gardens in the Colonies than were maintained by these worthies. Doubtless they felt the influence of John Bartram, the zealous Quaker botanist, who established in 1728 the first botanic garden in America, and both through his travels in this country and exchanges with foreign horticulturists introduced to the Philadelphians, first of all, the treasures of his quest.

In a country that then contained few homes more imposing than an Indian wigwam, a few English settlers along the James River established estates of enduring beauty — immense tracts of fertile, well cultivated land with a stately house and garden on the water front within calling distance of the private pier. Shiploads of brick to build the house and outbuildings, exquisitely carved columns, pilasters, wainscots, mantels, panels, fan-lights and pediments, paintings, silver, dainty china, rich furniture, the latest fashions in clothes, old wine, and every table luxury came to the very doors straight from England. Although nature did so much to adorn these Virginia estates, their luxurious owners laid out convenient gardens, such as they had been accustomed to in the Mother Country, and humoured their wives and daughters' fancy by importing quantities of plants when the ships that had carried tobacco to London, came back home. But throughout the South during Colonial days, gardens, like books, among the common people, were so rare as to be almost unknown.



AN UNPRETENTIOUS, HOME-LIKE LITTLE GARDEN IN WHICH A SEVERELY SIMPLE HOUSE NESTLES COSILY. CONSIDER THE EFFECT OF THE HARD, BARE WALLS WITHOUT THIS VERDURE



FRAXINELLA, THE FRAGRANT-LEAVED AND RESINOUS GAS PLANT, BELOVED BY OUR GRANDMOTHERS. THE FOAMY, WHITE "SPIRAEA" (*Astilbe Japonica*) IN THE FOREGROUND, ALTHOUGH COMMONLY GROWN UNDER GLASS, THRIVES IN THE HARDY GARDEN

They seem to have been considered a luxury for a few aristocrats only. The intelligence, wealth, and luxurious living ascribed to the Southern Colonies in the early days have been greatly exaggerated by our imaginative novelists.

One may never rightly judge a man, perhaps, until he has seen his home. How one's admiration for George Washington is increased by a visit to Mount Vernon! Fresh respect for the dignity and simple grandeur of his life comes with an exploration of the place by the most casual observer. A stroll through the lovely garden and cool bosquets, still affectionately, reverently tended, brings one nearer to the man and the gentle mistress of his home, than any amount of reading could ever do, nearer, somehow than the house itself, which they did not build; for the very trees that shaded them, the hedges too, that they set out, the boxwood borders of the paths they walked through, among the parterres of intricate patterns which they filled with their favourite flowers (whose lineal descendants flourish there to-day), are still alive — the living expressions of George and Martha Washington's personalities.

Although there were many other Colonial gardens in Virginia, Maryland, and the Carolinas, whose charms have not been wholly obliterated by time nor the ravages of war, let us take the well-preserved, familiar Mount Vernon garden, as fairly representative of the Colonist's pleasaunce, to note wherein the American type differs from the formal garden in vogue in Europe during the eighteenth century. On this side of the Atlantic the terrace practically disappeared with the retaining walls, steps, balustrades and other expensive architectural features which heretofore had been thought necessary accompaniments of the Italian style. American gardens were, therefore, laid out on flat spaces,

instead of on hillsides, as in Italy, or on artificial embankments, as in France and England, or in sunken enclosures, as in Holland. In the absence of topiary experts here to trim specimen evergreens and hedges into the startling forms abhorred by Pope, reliance for decorative effect happily came to be placed almost entirely upon flowers. The hedge, which usually took the place of an enclosing wall, was never very severely pruned, although the indispensable boxwood borders for the parterres within the enclosure were kept as neatly trimmed here as in the Old World. The broadest garden paths were not very wide; the narrowest ones allowed space for only one person. It was not considered good designing, or planting, for any path to be seen except the one that the observer was standing on. Hence the garden patterns were often as intricate as a maze; or, if the design were simple, tall growing flowers in the parterres might be relied on to conceal the opposite paths.

To the modern American the word alley has every unpleasant association, but what delight his English forebears took in their fragrant shady walks through leafy tunnels, the lovers of Elizabethan literature well known. A path that was "quite overcanopied with luscious woodbine" in Shakespeare's day still fills the printed page with its fragrance. Lord Bacon, in his oft quoted essay "Of Gardens," after enumerating "the flowers and plants that do best perfume the air," adds: "But those which perfume most delightfully, not passed by as the rest, but being trodden upon and crushed are three: that is, Burnet, Wild Thyme, and Water-Mints. Therefore you are to set out whole alleys of them to have the pleasure when you walk or tread."

These charming green alleyways, frequently paved or bordered with fragrant herbs, were familiar to every well born French and

English Colonist in his old home, but life on an unsubdued continent was much too work-a-day for such refinements except on a few estates of the wealthy. Pleached (braided) alleys were, however, attempted here with various trees — with holly, which promptly failed, then with apple and pear trees and cedars, which succeeded. By planting two rows of young trees opposite each other on either side of a path, bending the tops toward the centre and interlacing the branches where they met overhead, a series of symmetrical arches was formed on artificial supports at the outset. After a few years of pruning and interweaving the arches united into a leafy tunnel-shaped network. How deliciously cool were these verdant, pleached alleys on a hot day! Little wonder that they were an almost indispensable feature in the gardens of sunny Italy.

But vine-covered latticed arbours required less time to make and care for, and the hard worked, practical Colonist perceived that he might shade a walk by growing grapes over it. Beauty came to mean less and less for its own sake, without an ultimate utilitarian purpose, the farther time removed him and his wife from the culture of the Old World. However, the pleached walk was too beautiful a garden feature to become extinct. On the Lee estate, at Brookline, there is an alley of hornbeam trees, two hundred feet long and twelve feet wide. Another, on the Lorrillard place, at Tuxedo, is made of Judas trees, whose slender branches are etched by the sunlight in a delicate tracery on the path below.

Although formal in character, the Colonial garden was not always perfectly regular, yet any departure from a balanced, symmetrical plan was the exception rather than the rule. Nevertheless, when the garden overflowed with flowers, all outlines became softened and subdued, if not obliterated. Only an underlying

formality, however, would have produced the harmonious effect of the whole.

The favourite design in the Colonies North and South, was a great wheel with a fountain, a sundial or a bushy boxwood specimen in the centre of the circular garden where the hub should be, and radiating paths, like spokes, marking off the box-bordered parterres, and a hedge encircling the whole like a tire. On a hilltop screened from public gaze, but in the very heart of Rome, may be found at the present day, just such a wheel filled with flowers reflected in the pool at the centre — the charmingly simple little Colonna garden, which might just as fittingly adjoin a Georgian house in the Colonies. Italian ideas of garden making had thoroughly permeated Europe when the Colonists began to "build stately" and to "garden finely" on this side of the sea; but it is France, not Italy, that receives the credit for the influence upon our garden designs. Le Notre's work was familiar to all intelligent men. L'Enfant's splendid design for laying out the nation's new capitol was one of Washington's cherished ideals frustrated by a parsimonious Congress, even to this day. To the Marquis de Geradin, Jefferson was indebted for much help in planning Monticello and the beautiful University of Virginia; yet Italy had taught these Frenchmen, either directly or indirectly, all they knew.

The Best Survivors of Old-Fashioned Garden Flowers

Note.—The flowering time is given approximately for the neighbourhood of New York, and will be somewhat earlier or later to the South or North.

Aster, China (*Callistephus hortensis*). Single, white and red introduced 1731; blue, 1736; double red and blue, 1752; white 1753. More modern improvements of forms and colours than any other annual of the daisy family. Annual; July to September; 1½ feet. Does best when sown in the open.

Bachelors' Buttons. A name applied to many small globose, double, button-like flowers, such as Cornflower, Ranunculus or Fair Maides of France, Globe Amaranth (which see).

Balsam, Somerset, Somer-sots, Lady's Slipper (*Impatiens balsamina*). White, rose, red, and purplish. Double flowers from July to frost. Pods snap open and seeds turn somersaults before flying out. Favourite toy of children. Likes moist ground. Annual; 2 feet. Introduced from India.

Bellflower. See Canterbury Bells below, and list of Herbaceous Perennials.

Bluebell. See Harebell.

Candytuft (*Iberis sempervirens*). Best perennial candytuft for rockery or border; 6 to 8 inches; evergreen. White flowers in long racemes; clusters flattish at first. June. ——, Coloured (*I. umbellata*). Dark purple, purple, carmine, rose, lilac, flesh, and white. Flower clusters always remain flat. ——, Rocket (*I. amara*). White, like sweet alyssum, but not fragrant, and larger. Good for rockery or border. Common white candytuft. Clusters elongate in fruiting.

Canterbury Bells, Bellflower (*Campanula Medium*). Oldest and most popular of all campanulas. Blue, violet, pink, or white bell-shaped flowers, one and one-half inches across. June; 2 to 2½ feet; biennial. Sow August to October in frames for flowers the next year.

Carnations, Border (*Dianthus Caryophyllus*). Pink, white. August; 1 to 2 feet. Giant Marguerite blooms in twelve weeks from seed; Chabaud's Perpetual in six months, and will stand over winter, blooming next spring also. Give porous, gritty, well-drained soil.

Catchfly, German (*Lychnis Viscaria*). Red flowers one-half inch across in opposite short-stalked clusters. Petals two-notched. Sticky patches beneath flowers said to catch ants. Tufted plant. Annual; 6 to 20 inches.

Chrysanthemum, Annual (*Chrysanthemum coronarium*). Yellow. Gives yellow buttons one-half inch across from July to frost. Doubtless what the Boston seedswoman of 1760 meant by "Chrysanthemum." White chrysanthemum listed in Boston, 1760, could hardly have been the perennial flower so common to-day.

Cornflower, Ragged Sailor, Bachelors' Buttons (*Centaurea Cyanus*). Pure blue, singularly fringed trumpets, borne in thistle-like heads. In single varieties only. Also, white, pink, wine-coloured, lilac, and purple. Annual; 2 feet.

Crown Imperial (*Fritillaria imperialis*). Has a circle of pendant brown-red flowers each one and one-half inches long, topped by a tuft of leaves. Plant has onion-like odour. Put bulb six inches deep in rich soil having manure below that. Perennial; 3 feet.

Daffodil (*Narcissus Pseudo-Narcissus*). Yellow. April, May; 1½ feet. The old trumpet daffodil, single or double Van Sion. Very effective when naturalised. ——, Queen Anne's Double (*N. Capax-plenus*), pale yellow. The Jonquil is a round-leaved narcissus, 1 foot high, with rich yellow flowers less than an inch across; extremely fragrant.

Daisy, English (*Bellis perennis*). Pink and white. April, May. A rosette with flowers on three-inch stalks, making buttons about one inch across. This and the pansy best bedding plants April to May. After blooming in beds transplant for naturalising in moist, partially shaded spot.

Dame's Rocket, Sweet Rocket (*Hesperis matronalis*). See Rocket.

Day Lily, Lemon (*Hemerocallis flava*). Yellow trumpets, 4 inches long, borne in loose clusters on stems 4 feet high. Grass-like foliage, 3 to 4 feet long, arching. Divide clumps every four or five years. The lemon day lily is one of the oldest garden favourites, and has become naturalised in some places. Flowers in June; fragrant. ——, Orange (*H. fulva*), not fragrant; July, August; there is a double form of this. Both are absolutely hardy. (See also Plantain Lily.)

Fair Maides of France, Fair Maides of Kent, White Bachelors' Buttons (*Ranunculus aconitifolius*). White buttons one inch across, freely produced in May, June; 6 inches to 3 feet. The yellow ranunculus, or buttercup, once grown in gardens, is now a naturalised wild flower; the double form is the yellow bachelors' buttons.

Feverfew (*Chrysanthemum Parthenium*). White buttons about three-quarters of an inch across. Foliage yellow, with characteristic strong, bitter odour. Old favourite for edging. The single (wild) kind, like a small ox-eye daisy, was cultivated in old physic gardens.

——, Golden Feather (*C. prœaltum*, var. *aureum*). Yellow-leaved kind used for edging, a closely related species. Perennial.

Flower-de-Luce. See Iris.

Forget-Me-Not (*Myosotis alpestris*). Small blue flowers in racemes. June and all summer; 6 inches. Better adapted for summer bloom than the common forget-me-not, being suited to a dry soil. Also summer bloomer, with longer flowers and fragrant in the evening.

Four o'Clock, Marvel of Peru (*Mirabilis Jalapa*). Tuberous, tender perennial; also grown as an annual. Bright shades of red, yellow, striped, and white; long-tubed, funnel-shaped flowers that open in cloudy weather, early morning and late afternoon. 2½ feet high. Start indoors in March.

Foxglove (*Digitalis purpurea*). Purplish pink, white. June; 3 to 4 feet. Large, thimble-shaped flowers two inches long, in long spikes on long stems. Most refined white form is var. *gloxiniæflora alba*. Splendid for bold effects. Biennial, but August-sown seeds will flower late the next year. ——, Yellow (*D. ambigua*). Yellowish flowers, 1¼ inches long, spotted dark red inside. Ranks next to the common foxglove.

Fraxinella. See Gas Plant.

Fritillary, Snake's Head, Guinea-Hen Flower, Checker Lily (*Fritillaria Meleagris*). Tessellated green and purple nodding flowers, one inch across, borne singly on six-inch stems. May. Moist soil.

Garden Heliotrope. See Valerian.

Gas Plant, Fraxinella (*Dictamnus albus*). White, with pinkish purple variety. June; 2 feet. Whole plant lemon scented. Long lived. White variety prettier than rose-flowered, but less hardy. Will flash at dusk, on still summer eve, if a lighted match is brought near.

Globe Amaranth (*Gomphrena globosa*). Everlasting; purple, pinkish, white, or golden buttons borne well above the bush. India 1714. Sometimes called Bachelors' Buttons. Annual; 1½ feet or less.

Harebell, Bluebell (*Campanula rotundifolia*). Dainty purple bells half an inch across, on slender stems 6 inches long. Blooms more or less all the season in a moist, loose, shady spot. Frequently escaped from cultivation and now reckoned a wild flower. The

true bluebells of Scotland. Another "bluebell" that grows wild in British woods is *Scilla festalis*, or *S. nutans*, a sort of wood hyacinth.

HEARTSEASE. See PANSY.

HOLLYHOCK (*Althæa rosea*). Rose, pink, white, pale yellow, and madder purple. Single and double. On stalk 4 to 6 feet high. Individuals four inches across. Biennial, but makes offsets. Rich soil. One of the best tall herbaceous plants, but subject to disease. Spray with ammoniacal copper carbonate early in season. Sow in August in drills.

HYACINTH (*Hyacinthus orientalis*). White, shades of blue, red, and pale creamy yellow; 9 inches. April. Buy the modern varieties, as they have entirely displaced the old ones which had fewer flowers to a stalk. Plant the bulbs in fall well before the frost, in raised beds and in masses of one colour.

HYACINTH, GRAPE (*Muscari botryoides*). Dense heads of small blue flowers on stalks 4 to 6 inches long; April. Effective for window or shrubbery or in border. Hardy. Will endure shade after flowering period.

IMMORTELLE (*Xeranthemum annuum*). Purple, yellow, white. Large daisy-like heads. Annual. July, August; 2 feet. Showy part is the stiff bracts; as cut flowers they last all winter. Sow outdoors in spring, or start in heat for flowers in early summer.

IRIS, FLEUR-DE-LIS, FLOWER-DE-LUCE (*Iris hybrids*). The so-called German irises are among the most showy and satisfactory plants of old gardens, having great range of colours from blue to white and yellow, with purple brownish fringes. 3 feet; May, June. Will grow in any average soil, the clumps extending by creeping rhizomes. When planting, be careful not to bury the rhizome more than one-half. ——, ENGLISH (*I. Anglica*). Probably the oldest iris in cultivation. A bulbous kind; white, purple; June to July. Average rich soil moderately dry. Foliage appears in spring.

JOHNNY-JUMP-UP. See PANSY.

LADIES' DELIGHT. See PANSY.

LARKSPUR (*Delphinium grandiflorum, D. formosum, D. elatum*). Deep indigo blue and lighter shades to white. In long spikes. Perennial. June, July; 2 to 5 feet. Attractive leaves on long stems. Blooms again in the fall if first flowers are cut. Best of blue flowers for

border use. Improved varieties live only three or four years in America, being subject to blight. Dig dry Bordeaux about crowns or spray weekly with ammoniacal carbonate of copper. Modern hybrids great improvement over original stock. ——, ANNUAL (*D. Ajacis*). Same colours. May to August; 2 feet.

LILY, ANNUNCIATION, ST. JOSEPH'S (*L. candidum*). The oldest cultivated of all the lilies; quite hardy. May, June; up to 6 feet, bearing spikes of pure white flowers, individually four to six inches across. Extremely fragrant. Bulbs must be planted in August, as growth begins immediately. In order to prevent soiling of the flowers by the pollen, pull off the anthers when the flower is half expanded. Will grow in any good garden soil that is not water-logged. ——, BLACKBERRY, LEOPARD FLOWER (*Belemcanda Chinensis*). Orange spotted with red. June; 2 to 3 feet. Seeds like blackberries. Escaped from old gardens. Sandy loam in sunny place. Formerly used for winter bouquets with grasses and everlastings. ——, ST. BERNARD'S (*Anthericum Liliago*). Graceful raceme of ten to twenty white lily-like flowers, each one inch across. May, June; 1 foot. Has tuber-like rhizomes, and propagates by runners. Moist, partially shaded situation. Cover in winter. ——, ST. BRUNO'S (*Paradisea Liliastrum, Anthericum Liliastrum*). White lily-like flowers, eight to ten on a stem. June; 1 to 2 feet. Taller than St. Bernard's lily, and has fewer, larger flowers. (See also DAY LILY, PLANTAIN LILY, etc.)

LILY-OF-THE-VALLEY (*Convallaria majalis*). May; 9 inches. Fragrant, pendulous white bells, one-third of an inch across, in an arching raceme of utmost grace. Wants partial shade and deep, rich soil.

LONDON PRIDE, NONE-SO-PRETTY, ST. PATRICK'S CABBAGE (*Saxifraga umbrosa*). Evergreen edging plant, 4 inches high. White flowers in summer on foot-long stalks; one-half inch across, sometimes dotted red. Will thrive in cold shade of walls where few other things will live. Perennial. (See also RAGGED ROBIN.)

LOVE-IN-A-MIST (*Nigella Damascena*). Blue and white flowers followed by weird pods amid finely cut fennel-like foliage. Annual; June, July; 2 feet.

LUPIN, HAIRY (*Lupinus hirsutus*). Purple, rose, white. July, August; 3 feet. Largest flowered, self-coloured annual lupin in colours.

A robust, hairy plant. "Large blue lupine," listed in Boston, 1760. ——, YELLOW (*Lupinus luteus*). Yellow. June, July; 2 feet. Best lupin for garden bloom. Lupines have whorled cut leaves and pea-shaped flowers carried erect in grape-like clusters. Improves poorest soil.

MALTESE CROSS (*Lychnis Chalcedonica*). Scarlet flowers, the four petals with squared ends like a Maltese cross. An old-world favourite, possibly a hybrid of long ago. June; 2 to 3 feet; perennial. Also pink and white forms.

MIGNONETTE (*Reseda odorata*). Red, white and yellow, finely cut flowers borne in a dense spike, but otherwise not conspicuous. June to October; 9 inches. Egypt, 1752. Most popular flower grown solely for fragrance. Resents transplanting, and is subject to parsley worm.

MULLEIN PINK, ROSE CAMPION (*Lychnis coronaria*). Whitish, woolly foliage and glowing rose-crimson circular flowers one and one-half inches across, borne singly on ends of branches. 1 to 2½ feet; biennial or perennial. Good for bedding.

MYRTLE (*Vinca minor*). Evergreen trailing vine with dark-green shiny leaves. Invaluable for covering the ground in shaded places where grass will not grow. Flowers of rich blue in summer, one inch across.

PANSY, HEARTSEASE, JOHNNY-JUMP-UP, LADIES' DELIGHT (*Viola tricolor*). The wonderful range of colours, the velvety texture of the dark ones, and the quantity of flowers make this a universal favourite. Self-coloured pansies would be anachronistic in a real Colonial garden. Gives scattering bloom in summer if sown in spring, but best flowers produced in spring from August-sown seed. Rich, moist soil. Keep flowers picked; they deteriorate if seed forms.

PEONY (*Pæonia officinalis*). The most showy, largest-flowered plant for the herbaceous garden. May and June; 3 feet high, bearing only one flower to a stem. Dark crimson. ——, (*P. albiflora*). From white through rose and magenta to crimson. June; 2½ feet. Largest double-flowered hardy perennial. Favourite varieties: White, Alba Sulphurea, Duke of Wellington, Festiva Maxima; Blush, Delicatissima, Humei Carnea; Rose, Czarina; Crimson, Victoire Modeste Guerin. Shift peonies September to October. Divide every six years. Deep, rich, well-drained soil, with plenty of moisture.



THE SPIRIT OF THE COLONIAL HOME AND GARDEN AGAIN EXPRESSED IN THIS QUITE MODERN PLACE, ILLUSTRATING THE SURVIVAL OF THE FIT



POET'S NARCISSUS NATURALISED ALONG AN OPEN WOODLAND WALK, WHERE THEY REQUIRE ABSOLUTELY NO CARE. A THOUSAND BULBS COST LESS THAN FIFTY CIGARS

PHLOX, PERENNIAL (*P. paniculata*). The brightest and most varied range of colours in any hardy perennial. Peculiarly appropriate, since it is a native. Now to be had in white, pink, scarlet, mauve, and various combinations. Thrives anywhere. Propagate by seed, cuttings, or division. Five feet or less according to will. Give water in summer. By cutting back can be made to flower any time. Miss Lingard, best modern white variety for general use.

PINK, CHINESE, SNOW, OR STAR (*Dianthus Chinensis*). Prettiest annual variegated flowers of the pink family. Introduced about 1713. Had been highly developed in the Far East. Seeds best started indoors in March. Excellent for edgings. Single or slightly double. A fragrant fringe along old garden paths. June; 1 foot. ——, GARDEN, SCOTCH, GRASS, PHEASANTS' EYE (*D. plumarius*). Blooms in spring and early summer; 1 foot. Fragrant fringed flower, originally pink or purplish, the petals fringed for about one-fourth their length. Needs perfect drainage, and is likely to die in winter if grown on a level. ——, FRINGED (*D. superbus*). Summer and early autumn; 1 foot. Petals lilac, fringed for more than half their length. Winter kills in rich soil. Prefers plenty of sand and grit. Easily raised from seed. ——, MAIDEN (*D. deltoides*). Small, one-half to three-quarters of an inch across, deep-red flowers, with notched petals and a dark crimson eye. Spring and early summer; 1 foot. Easiest of the small-flowered species of Dianthus for level-ground cultivation, forming a perfect mat. Does not suffer from wire worms. (See also CARNATION.)

PLANTAIN LILY, WHITE (*Funkia subcordata*). ——, BLUE (*F. ovata*). Often erroneously confused with the day lily (Hemerocallis). July, August, September; 2 feet. Leaves broad, ribbed like the common plantain, but eighteen inches long. Begins growth early in the spring; multiplies freely, making large clusters, perfectly hardy. Will naturalise in moderately rich, partly shaded places. Variegated forms. Flowers four to six inches long in loose racemes carried well above the foliage.

POPPY, CORN (*Papaver Rhœas*). Scarlet with black spot. Summer; 1 foot. Gorgeous weed that glorifies the grainfields of Europe. Parent of Shirley poppy. Sow where intended to flower; poppies will not generally bear transplanting. ——, OPIUM (*Papaver somniferum*).

White, dull purple, red, single and double, five inches across. Nodding buds. Glaucous foliage. A most gorgeous annual; 3 feet. Allow one foot space to each plant.

PYRETHRUM (*Chrysanthemum coccineum*). Crimson, magenta, rose, white, daisy-like, single and double. June to July; 3 feet. Must have perfect drainage to avoid crown rot, especially in winter. If foliage rots in summer after heavy rains, cut some away.

RAGGED ROBIN, LONDON PRIDE (*Lychnis Flos-cuculi*). Double red or rosy flowers, the petals cut in four strips. Perennial; blooming all summer; 1 to 2 feet. "Flos-cuculi" means cuckoo flower. Very common in old gardens and now naturalised. ——, EVER-BLOOMING (*L. Flos-cuculi*, var. *plenissima*). Has extraordinary number of flowers over exceptionally long season; lasts a long time when cut.

RAGGED SAILOR. See CORNFLOWER.

ROCKET, SWEET ROCKET, DAME'S ROCKET (*Hesperis matronalis*). Magenta, mauve, or white. July; 3 feet. Long spikes of small four-petalled flowers which are most fragrant at evening. Select a plant with good lavender colour and propagate that, or plant the white kind. Double forms. Perennial.

ROSE CAMPION. See MULLEIN PINK.

ROSE OF HEAVEN (*Lychnis Cœli-rosa*). Rosy flowers one inch across all summer. Petals slightly notched; eyed, fimbriated and white varieties also. Annual; 1 to 1½ feet. Very floriferous. Likes sun.

ROSES of various sorts generally referred to as "old-fashioned" or "garden." These include the hundred-leaved (*Rosa centifolia*), damask (*R. Damascena*), the Pink Daily and the Old Cabbage, and the York and Lancaster with flowers sometimes all red or all white, or parti-coloured; also the Persian brier for its yellow flowers. All these do well anywhere, in good garden soil, flowering in June. The fragrant leaved sweetbrier or eglantine (*R. rubiginosa*) ekes out a struggling existence. It should be raised from seed sown in the fall. None of the all-summer bloomers having tea blood are admissible to the old-fashioned garden.

SWEET WILLIAM (*Dianthus barbatus*). One of the oldest garden flowers, and now run wild. Single and double. Flowers in dense, flat head, fragrant, various colours, chiefly red or reddish and white or pink.

Grown from cuttings or seed, flowering the second year. July, August; 1 foot; Rich soil.

TEN WEEKS' STOCK (*Matthiola incana*, var. *annua*). Clove-scented spikes of white, creamy, pinkish, or crimson flowers. Annual; 1½ feet; May to July. Sow in rich, warm soil, and transplant.

TULIP (*Tulipa suaveolens*). Parent of the small, early, and forcing Duc Van Thol varieties, and was known in red and yellow. *T. Gesneriana*, the showy scarlet, later garden tulip, with pointed petals, also varieties of this type. Plant in masses of one colour in fall for spring flower. Shallow rooting annuals may occupy same bed at same time.

VALERIAN, GARDEN HELIOTROPE (*Valeriana officinalis*). June; 3 feet. Minute pinkish-gray flowers in flat clusters, three inches across. Very easy to grow. Spreads rapidly. Spicy odour scents a whole garden. Perennial.

VERONICA, LONG-LEAVED (*Veronica longifolia*). Minute lilac flowers in long, narrow spikes. July to September; 2 to 3 feet. Often sold as *V. spicata*. Its purple-blue variety, *subsessilis* (Japan, 1871), is the best of all hardy veronicas, and is more robust than the type. Can be used instead.

VIOLET (*Viola odorata*). Violet. March; 6 inches. Only fragrant perennial of earliest spring. California is a large single variety. The Russian is double and hardier than common sorts. Get nursery-grown plants. Grow in the shade.

WALLFLOWER (*Cheiranthus Cheiri*). Yellow, red, brown, fragrant flowers, in spike six to twelve inches long. Biennial. Blooms all summer in partial shade if not allowed to seed; 2 feet. Must not dry out.

NOTE.—For the greater part of the facts contained in the above list credit is due to Mr. Wilhelm Miller.

THE NATURALISTIC GARDEN

"A dressed garden is Nature idealised — pastoral scenery put fancifully in man's way. A gardener is a master of what a French writer calls 'the charming art of touching up the truth.'" — JOHN D. SEDDING.

CHAPTER V

THE NATURALISTIC GARDEN

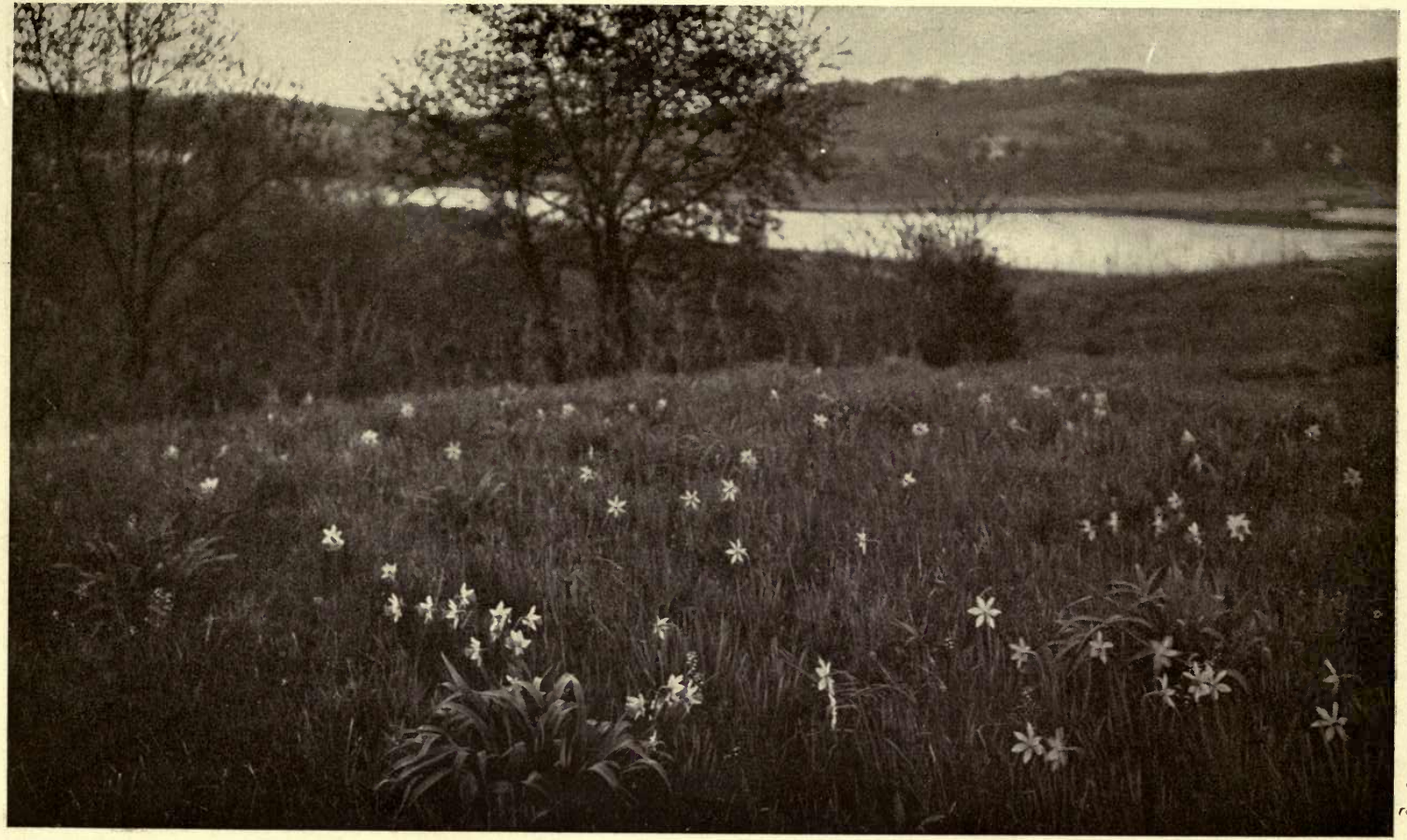
WHEN we commit ourselves to any one style of gardening, how much beauty must be sacrificed to ignorance and prejudice! Devotees of the bedding system who delight in planting their initials in parti-coloured coleus on innocent lawns, or casting a hopeful anchor of "dusty miller," edged with clam shells, against a terrace like a railway embankment, must find their gardens fearfully fixed. To such there can be no possibility of adding a favourite plant throughout the season or allowing a single one to grow in a natural way.

There are, at large, gardeners without number whose sole ideas of beauty out-of-doors are derived from the garish coloured pictures in seedsmen's catalogues. These they toil early and late to perpetrate on their employers' grounds and display them with a complacent, pardonable pride that is equalled only by their masters' total indifference to what they do. Many a woman who will weep bitter tears when the painter puts a jarring tint on the wall of a room, will blindly blink at the gardener's affronts in her most conspicuous door yard. When we remember that the masses of our population are but lately landed immigrants, it is scarcely surprising that crowds gaze with rapture upon a life-sized elephant, done in uniform cactus rosettes, on the greensward of a public park. But is it not astonishing when cultivated Americans, even those whose houses are furnished artistically and whose taste in pictures has been formed after years of study, are content

to let a day labourer compose what should be to them the most important picture of all — the home garden? The rule may have sufficiently rare exceptions to prove it, but I have never seen the gardener who, if left to his own devices, would not cut up a lawn into stereotyped flower beds of geometric exactness — circles, stars, triangles, squares and ellipses — and fill them with variegated coleus sheared to a level, or with cannas, or with prim rows of deep pink and purple china asters, or with screaming scarlet geraniums, or with very Dutch bulbs; the tulips or hyacinths invariably arranged in zones of sharply contrasting colours within the same bed. Such excrescences on a fair green lawn can be likened only to pimples on the face of Nature.

Even the large-minded Thackeray admitted that he liked to be observed by his friends when walking down Piccadilly button-holing a duke. Similar gratification seems to elate the gardener who has the proud privilege of serving a gentleman with an imitation deer on his front lawn. The man's ideas of elegance and his fellow gardeners' are completely fulfilled by the sight. But, as "the Monarch of the Glen" gazes upon the geometric floral horrors at his feet, no wonder his face wears a chronically startled expression. How far away from nature have men, in their ignorance, departed! And for how many crimes against art out-of-doors are not the seedsmen's catalogues responsible!

This chapter sings the charms of the naturalistic treatment of a place where unintelligent formality, stereotyped monotony and insincerity cease. It does not encourage the attempt to imitate wild nature on our lawns and about our houses, which would be absurd; but this is not to say, either, that this area may not be treated in the naturalistic spirit or that the wild and rough parts



AFTER THE YELLOW CROCUSES, BLUE SCILLAS, AND LONG TRUMPETED DAFFODILS, COME THESE STAR-LIKE NARCISSI IN THE WILD GRASS. NOTE THE TUFTS OF BROAD LEAF BLADES FROM WHICH ORANGE DAY LILIES WILL ARISE AT MIDSUMMER; ALSO THE BARE BRANCHES OF SUMACH BUSHES AND YOUNG LOCUST TREES IN THE BACKGROUND BEFORE LOOKING AT THE NEXT PICTURE

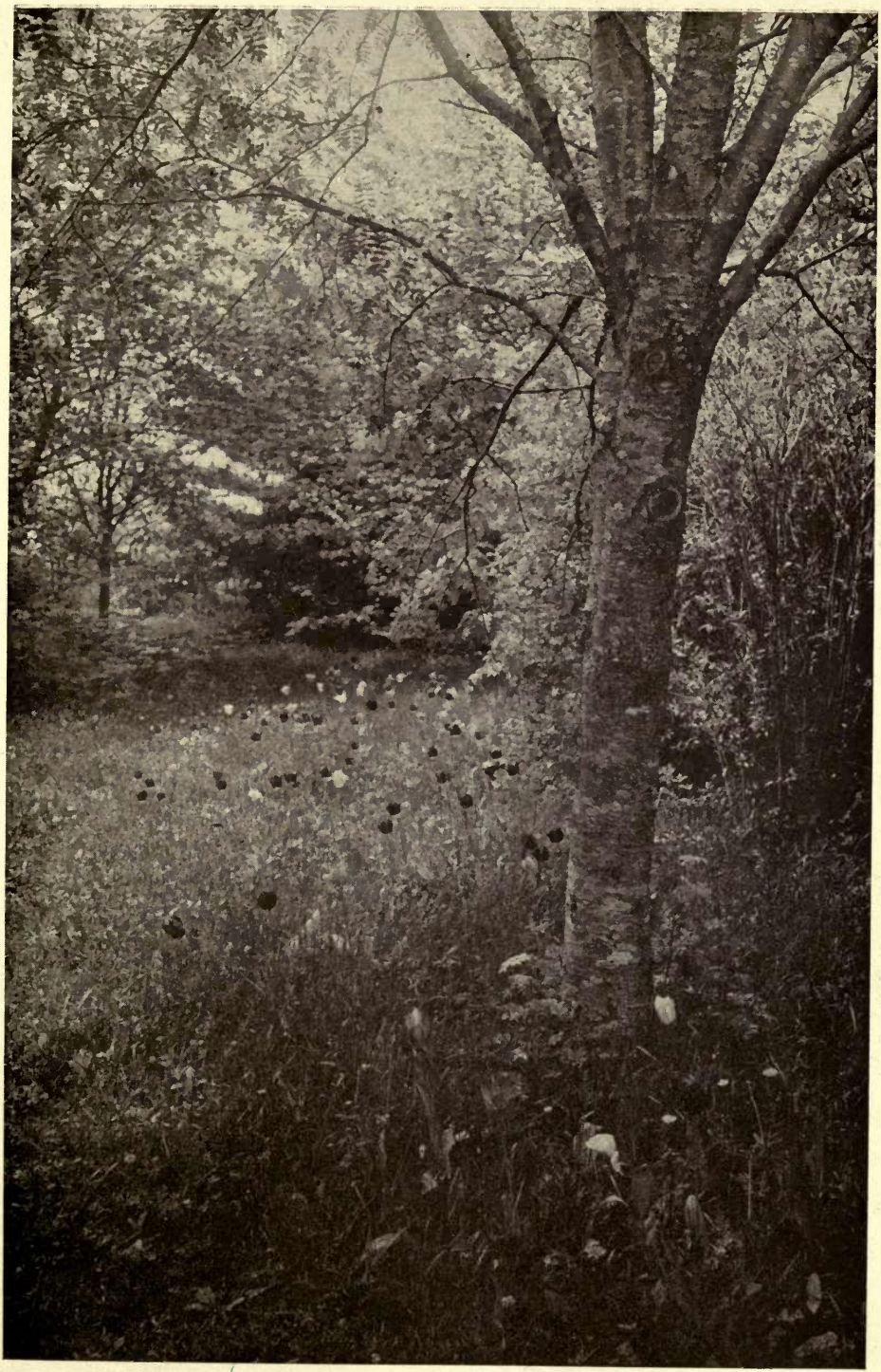


SECTION OF THE SAME BIT OF NATURALISTIC PLANTING SHOWN IN THE PRECEDING PICTURE. TAWNY ORANGE DAY LILIES AND YARROW NOW IN FLOWER. BLACK-EYED SUSANS AND THE BRILLIANT BURNT ORANGE UMBELS OF BUTTERFLY-WEED ARE BARELY VISIBLE IN THE DISTANCE

of the grounds may not be made the most interesting and beautiful. It must not be supposed for a moment, however, that a successful informal garden can be made haphazard. Not only must the place as a whole, be planned carefully, but each bit of planting, no matter how small, needs to be carefully thought out. Every one knows that more skill and a finer artistic sense are required by a landscape painter than by a mechanical draughtsman.

When the gardener, like the painter, studies the natural landscape, he learns how effectively nature breaks the sky line with tree tops; how she fringes her woodland with small trees and masses of high and low shrubbery in gently flowing outlines; how she clothes with kind verdure the raw banks and other scars of men's making, draping them with vines, scattering little bushes and plants over them until their ugliness is healed. Nature insists upon beauty. Her disciple learns that she has plants for every place and purpose, and that even on a small home area, he, too, may grow a great variety of them in a free and picturesque way, giving to each the situation where its peculiar needs may best be met and its beauty be displayed to the greatest advantage while adding to the effect of the garden picture as a whole. He cannot see a little stream without longing to plant a phalanx of Japanese irises along the edges, or clumps of feathery ferns or tufts of English primroses and daisies, or sheets of blue forget-me-nots on its banks. He knows that the deliciously fragrant clethra and white azalea bushes would be quite happy among the red-berried alder and elder flowers on the margin of his little lake where willows and white birches have already made themselves at home. A bit of well-drained land that has nothing to fear from cattle or a mowing machine, instantly suggests to his mind naturalising

poet's narcissus and yellow trumpeted daffodils among the grass; and he figures that a thousand of these bulbs can be bought for the price of a box of cigars. He will spangle his lawn with cheerful yellow crocuses that, unlike the daffodils here, really "come before the swallow dares." He delays the first cutting of the grass awhile to allow the bulbs to ripen their grass-like leaves. Porcelain blue scillas will be happily colonised too. He uses trees and shrubs to mark with unoffending outline the boundaries of his grounds and secures privacy with them rather than with fences or walls. Nature's open stretches of meadow land will have their counterpart in the unbroken stretches of his lawn whose borders only may be softened by the sweeping branches of a fringe of shrubbery or a sinuous border of hardy flowers. He would be as loth to put a bed of geraniums in the centre of a tree-girt lawn picture as he would to rouge his baby's cheeks. Weeping and freakish trees distress him as does shrubbery with variegated foliage suggesting a calico pony. If he be the joyful possessor of a bit of woodland, he will surely copy nature's method of planting flowering dogwoods and shad bushes along the undulating border with an occasional Judas tree, perhaps, if its vivid bluish pink blossoms do not offend his eye for colour; but by no possibility could a landscape gardener worthy the name, plant copper beeches or Japanese maples along a copse. A sense of fitness must be conveyed or trees and plants, however beautiful in themselves, may give positive offence in alien environments. The student of nature's effects will soon cover any unsightly old fences, not as nature does too often, with poison ivy, but with a fragrant tangle of sweet briar and clematis. He will see that a raw, newly cut bank is planted with honeysuckle or with the trailing Wichuraiana roses, whose shining dark, waxy leaves and myriads of delicate white or pink flowers in July will



TALL, LATE MAY GARDEN TULIPS (*Gesneriana*) NATURALISED IN A GRASSY BORDER IN FRONT OF SHRUBBERY:—LOSS TEN TO TWENTY PER CENT. ANNUALLY. *T. sylvestris*, A LOVELY, PALE YELLOW FLOWER, WITH LONG, POINTED PETALS, WOULD BE QUITE AT HOME HERE OR IN OPEN WOODS



TAWNY ORANGE DAY LILIES NATURALISED ALONG A DRIVE. THE DARK BACKGROUND OF TREES HELPS EMPHASISE THE RICH COLOUR OF THE FLOWERS

speedily transform it into a bank of beauty. Under the trees, along a walk or drive, the naturalistic planter will place pockets of soil, mellow and cool with leaf-mould, for the spreading masses of rhododendron and laurel that keep cheerfully green all winter, and for azaleas that include all the shades of sunset. Spires of white foxglove will ascend at the half-shaded entrance to his woodland cathedral aisles. He will sow poppies broadcast in his most informal garden and enjoy a waving ribbon of them along the sunny edge of a walk. He may even hope to naturalise them successfully among the grain and pasture grasses as one sees them growing in Europe. The enthusiastic garden lover ploughs a bit of waste ground early every spring and seeds it down with wheat and scarlet poppies that are a ravishing delight even if not commercially profitable. He scatters the portulaca's tiny seed in the driest, sunniest places where no other flower would grow, for he knows that a plant that is next of kin to "pusley" — most pestiferous of weeds — is not more easily discouraged by drought. I have seen it blooming luxuriantly on a sandy beach just beyond reach of the tide. Such old-fashioned common crowders of finer garden flowers as the tiger lily and the orange day lily, scorned by the pretentious, take on new splendour when naturalised among the tall grass of an unmowed meadow.

When the gardener of the landscape school comes to plant around a home his problem becomes more difficult, for here nature, who puts no houses in her pictures, cannot help him with designs. His best endeavours will be spent in attempting to reconcile nature to the house, by softening its angular outlines and doing what he can to divert the eye from its least attractive features, with the help of trees, shrubs, and vines, rather than essay the impossible task

of obliterating them altogether or the undesirable task of smothering the house with verdure. If a few fine old trees should happily be growing near his building site he already possesses the most reconciling features he could have. One very charming house I know has a gnarled, picturesque old apple tree to shade a porch that would have covered and killed it had not a deep brick well been built around the trunk to let air, light and moisture down to its roots. The treatment gave it a new lease of life. A rocky part of the land on another side of this unconventional house was chiseled to form the very natural looking steps of approach to it. Wistaria blossoms festoon the largest rocks in May after white and lavender mats of creeping phlox have carpeted them with bloom. Columbines dance on airy stems along the rocky ledges and stately white spikes of Spanish bayonets shoot up from crowns of blade-like leaves that seem to grow out of the rocks themselves. The fiery poker plants set the slopes ablaze in September. A surging mass of fine shrubs — Japanese barberry, mahonia, deutzias, spireas, white rugosa roses, and dwarf evergreens, break in waves against the foundation of that house which rises as if by a natural right from their midst. It is the foundation line which, in almost every case, should be planted out, no matter how much of the remainder of the house may be permitted to go bare.

What are the special claims for the naturalistic treatment of our home grounds?

It accords with our racial temperament; therefore it is destined to become the dominant style of gardening here, for the same reason that the English language prevails on this continent over every other tongue. People of Latin blood have carried art to the very highest perfection, but our strong Teutonic strain

predisposes us toward nature and naturalistic methods. A traveller in Italy can usually tell at a glance where English people are living in the villas there by the intrusion of landscape effects, with masses of shrubbery and herbaceous borders into the purely Italian plan of the estate. Features so entirely out of keeping with their environment have seriously marred the beauty of not a few fine old villas. But how fitting and altogether charming are the oaks and beeches that stretch their giant branches with picturesque abandon across the velvet of English lawns, the clumps of shrubbery that all but conceal the paths beyond its gently flowing curves, the irregular borders filled with old-fashioned perennials that are as characteristically English as Yorkshire pudding!

For the discerning few, who know when and how to apply Italian principles of garden design to some of our own problems, they must ever afford artistic satisfaction, which is not to say, however, that naturalistic treatment may not quite as thoroughly satisfy one's artistic ideals for other kinds of garden problems. But even where a house of classically severe architecture demands architectural planting immediately around it, formality should gradually emerge into more and more freedom of line, the farther away the planting recedes from the house until finally the naturalistic is lost in wild nature itself.

However great may be one's intellectual enjoyment of a faultless piece of formal garden composition, one is compelled to really love far better the little cottage garden where roses tangle over the doorway, hollyhocks peep in through the lattice, tawny orange lilies that have escaped through the white picket fence brighten the roadside, clematis festoons fleecy clouds of bloom over the unpruned bushes along a lichen-covered wall where chipmunks play hide and seek, and tall, unkempt lilacs send their

fragrance through the kitchen door. Herrick was not the last Anglo-Saxon to approve of "erring sweetness" or to take "delight in disorder," which, he frankly admits,

> "Do more bewitch me than when Art
> Is too precise in every part."

We Americans are an intensely practical people, and when we come to count the cost of our gardens, we happily find that the naturalistic treatment is the least expensive because it is permanent. Potted plants from the florist — and millions of geraniums and foliage plants are sold annually — give a quick, pyrotechnic display of flowers, it is true, but frost finishes them forever; whereas the price of these tender darlings of the gardener, if invested in a few good shrubs or hardy perennials, would yield far more real beauty and strike their roots into our home affections. Bedding plants mean money thrown away after a single season. Some gardeners change all the tender plants in a bed, not once, but several times in a summer to keep up a brilliant succession of bloom — a senseless extravagance when a more artistic pageant might be arranged with hardy flowers. Not the least claim for the free, picturesque, naturalistic method of planting, is the comparatively small cost of taking care of a place where floral features do not have to be annually renewed.

Hardy trees, shrubs, vines, plants and bulbs rapidly compound their beauty and value year after year. Ten dollars wisely spent upon a hardy garden will produce more beautiful effects, more variety, interest, pleasure and artistic satisfaction than a hundred dollars invested in bedding plants could ever do.

The garden that is planted permanently soon overflows its beauty into an entire neighbourhood. As its loveliness increases, so do the owner's friends, who fall heirs to the offshoots and



PERMANENT HARDY LILIES AND SHIRLEY POPPIES



DOUBLE ENGLISH DAISIES DISCARDED FROM FORMAL FLOWER BEDS MAY BE NATURALISED LIKE THESE IN THE GRASS ON THE SUNNY BANK OF A POND

seedlings which, without thinning out, would soon choke one another to death or at least cause deterioration of the stock. The salvation of a garden, as of a character, often depends upon giving. No miser ever had a beautiful garden.

And since the first cost of the garden that is planted on naturalistic lines is the only cost beyond its easy maintenance, every cottager in this country, as in England, may hope to have his door-yard gay with hardy perennials, and a few shrubs and vines, at least; and oh, how sadly our working people's most unlovely homes need cheerful little gardens about them!

Handkerchiefs, slippers and neckties are not the only useful Christmas presents. Why do we so rarely give trees, shrubs, bulbs, vines and perennial flowers to our friends? Many a large steamer that leaves the port of New York carries an enormous value of perishable cut flowers heaped up in its dining saloon, and these are often more of a nuisance than a pleasure to the voyagers. Do friends care any less for one another because they stay at home?

One bride I know received a cheque to cover the cost of making and planting a garden around her new home, and it is certain that all the cut glass and bric-a-brac she received will not give her a tithe of the pleasure during the rest of her life. For a wooden wedding present a young couple who had recently moved into a raw, new place received two maples that taxed the capacity of the nearest nurseryman's big tree movers. Another couple give each other living Christmas trees every year. Their young daughter, when asked by her father to chose her own Christmas present, handed him a list of hardy hybrid tea roses. These could not be enjoyed except in her mind's eye until the following spring, it is true, but by that time she had studied how to care for them, and now there is not a morning from June until frost when she

cannot pick a bud for her father's buttonhole, and roses for the library table.

The informal garden has the additional merit of not being made all at once, but of growing gradually, naturally, by small accretions, whenever one discovers the place where a favourite plant would feel at home or the colour of another is needed, or where a finer effect might be gained by introducing a new feature, or when one may afford a dissipation at the nursery. Every little excursion into the world is likely to yield some new treasure trove. In moving from a home whose garden was about to be swallowed up by the rapidly encroaching city, it was hardest to leave behind a sturdy maple tree, too big to transplant, that, as a tiny seedling, I had brought in the crown of my hat from the battlefield of Lexington. But I jealously removed to the new country home all the white phlox from my old garden. The casual observer sees only a snowy mass of flowers near my veranda, nothing more — but at the sight of it there flashes on my inner eye a picture of Hawthorne's cottage at Lenox overlooking the Stockbridge Bowl, where his adorable young wife set out the ancestral plants of this very phlox under his study window. Years after her death, when the phlox that had survived the burning of the cottage, had overflowed to the roadside, I brought home in a pair of overshoes all the roots they would hold. Whoever owns a garden that is not as full of associations and of sentiment as it is of flowers, misses its finest joy.

CHAPTER VI

THE WILD GARDEN

TO THE purist it may seem an impertinence to transplant the flora of other lands to any of those parterres of nature's garden we are pleased to call "ours" when so many of our native wild flowers offer delightful possibilities as yet little realised by American gardeners. But let him remember that the commonest wild flowers we have, for example, the daisy that now whitens the fields throughout the United States and Canada, was unknown on this continent until it smuggled its passage across the Atlantic in the hay used for packing the early Colonists' china. Very many other so-called weeds — the exquisite Queen Anne's lace or wild carrot, the dusty white yarrow, the buttercup that spangles our meadows, and "succory to match the sky" — to name only a few among many — are merely naturalised foreigners, not natives, that thrive far better here, however, than they did at home, just as the Irish and Italian immigrants do. When nature does not fix sectional limitations, why should we?

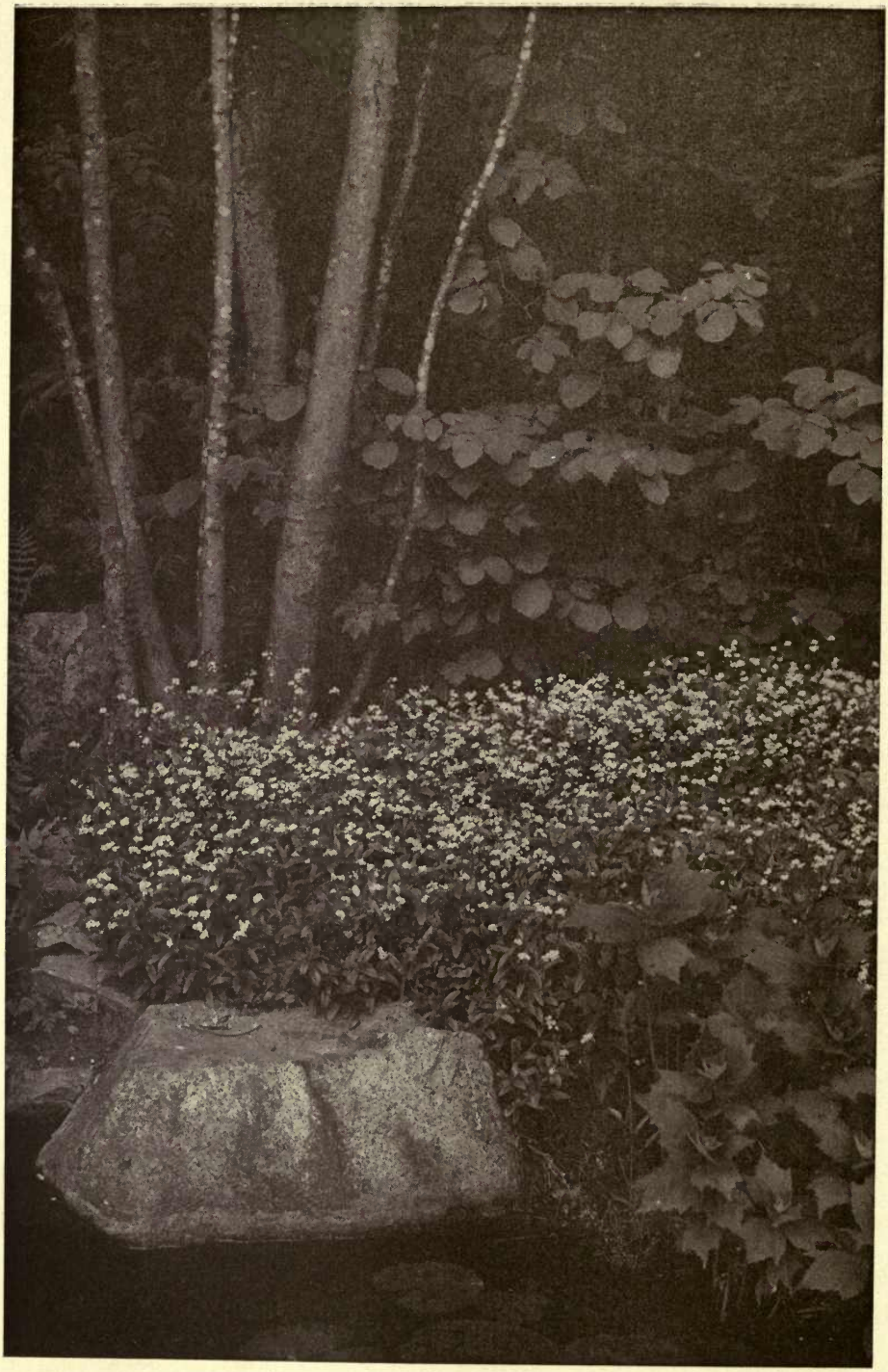
Along the roadsides leading to old homesteads, we commonly find the European tansy's shining yellow "bitter buttons" suggestive of the time when tansy tea was supposed to cure most of the ills that flesh is heir to. Bouncing Bet, another European, ran away long ago from the New England women who used to make a cleansing, healing lather from the leaves of this soapwort; and now the white or pinkish blossoms swell the small list of "our" fragrant wild flowers. Tawny orange lilies, that once had their

passage paid across the ocean, have escaped from their keepers through many fences and are now on a triumphal march to freedom. So are the small, speckled red blackberry lilies that originally came from China. Escaping from gardens here and there, they have already attained the respectable range from Connecticut to Georgia westward to Indiana and Missouri. How many beautiful flowers, commonly grown in our gardens here, but which, of course, are the wild flowers of other lands, might become naturalised Americans were we only generous enough to lift a few plants, scatter a few seeds over our fences into the fields and roadsides — to raise the bars of their prison, as it were, and set them free! Most of them are doomed to stay forever in prim, rigidly cultivated, cell-like flower beds. Some, like the blue corn flower, are waiting only until a chance to bolt for freedom presents itself, and away they go. Lucky are they if every flower they produce is not plucked before a single seed can be set. Each plant has some device for travelling, however slowly, or for sending its offspring away from home to found new colonies, if man would but let it alone. Better still, give the eager traveller a lift!

Not alone is the prophet without honour in his own country. A century before the lovely mountain laurel was appreciated here, Peter Kalm had sent specimens to Europe, where it immediately became a garden favourite. Even to this day numbers of nursery kalmia plants, as well as our native *Rhododendron maximum* and *Catawbiense* and their hybrids, the best azaleas evolved from our bare-stemmed Pinxter flower, the pure pink *A. Vaseyi*, the deliciously fragrant white azalea of our swamps, and the gorgeous flame-coloured azalea from the Carolina mountains, return to us by way of Europe. What comfortable little fortunes that might easily have been earned by Americans, now stand to the credit of the



OUR NATIVE BLOODROOT DELIGHTS IN HAVING ITS ROOTS IN A COOL, ROCKY CREVICE



SHEETS OF BLUE FORGET-ME-NOTS OVERSPREAD THE BANKS OF A WILD GARDEN NEAR WATER, WHERE THEY ARE AT HOME

Dutch, Belgian and English growers of these plants alone! "American gardens," with these splendid representatives of the heath family as a basis, have been features of not a few fine English estates for many years. It gives the American traveller food for reflection to see not only American rhododendrons, laurel and azaleas, but New England asters and other members of that starry tribe, the tall Canadian goldenrod, the burnt orange umbels of butterfly weed, wood and field lilies, rose mallow from New Jersey tidewater meadows, fleecy spired clethra, flowering dogwoods and viburnums, trilliums, bloodroot and meadow rue, and even our despised velvety mullein among many other cherished plants from home, blooming contentedly on the ancestral soil of a British peer.

Strange as it may seem, quantities of our wild flowers, including the shy little orchids, are exported annually by American specialists, who rarely receive an order, however, without a foreign postage stamp on the envelope. As a rule, even we few Americans who delight in wild gardening have not learned to buy plants from nurserymen who grow them from seed, rather than despoil the woods and roadsides about our homes. Impulsively we dig up plants, whenever or wherever we find them, usually when they are in bloom, often when no place has been prepared to receive their dry roots and fainting forms, and yet we feel discouraged when they die. Who can resist the pure white blossoms of the bloodroot, the speckled yellow bell of the little trout lily or adder's tongue, and the lavender blue hepaticas? The temptation to dig up the plants at once rather than in August when they are resting, too often proves irresistible. Few of us have the patience to drive marked stakes beside the flowering plants that we may wish to lift, and return, perhaps months afterward, to transplant

them during their dormant season, and then only when we have holes and soil prepared to receive them, water and mulch at hand, canvas or paper to hold a generous ball of soil around each root, and a waggon to rush them to their new home. Not many people study a plant's natural habitat and attempt to give it a similar one in their wild garden. We learn only by sad experience that the great white trilliums which were so beautiful in the rich, moist woods die on a dry upland where barberries, butterfly weed and black-eyed Susans would feel more at home; that to expose the fine, fibrous roots of laurel, rhododendrons or azaleas to the sun and wind, or plant them in an unprotected situation, is even more fatal to them than to the dogwood; that the arbutus rarely lives after transplanting, no matter how carefully it may have been moved, and that wild roses, not vigorously pruned before they are lifted in early spring, generally refuse to put out a leaf. It is usually wiser, and certainly far less trouble, perhaps even less costly, to buy wild plants trained for travelling by a reliable grower, who will ship them properly packed at the right season and answer all our cultural questions, than to risk failure and heartbreak through experimenting. But oh! what fun one misses!

Your true gardener is not to be cheated out of those excursions to the woods and meadows that are his chief joy. He, as well as the nurseryman, learns by observation, study or inquiry what are the fixed requirements of his favourite plants, and these he spares no pains to meet. If ferns are his hobby, he will soon find a moist, shady corner, sheltered from the wind, for the maiden hair, rocks for evergreen spleenworts and polypodies, a northern slope for a variety of shield ferns, a home among rhododendrons for the royal fern and the fragrant, finely cut fronds of Dicksonia.

If other rock-loving plants delight him, he will place pockets of rich, light loam between the crevices of boulders and lesser stones to nourish happy colonies of columbine, bloodroot, true and false Solomon's seals, Pinxter flower, hawkweed, shooting star, Virginia cowslip, blue bells, daphne, violets, St. John's wort, wild geranium, and blue phlox among the foreign saxifrages, rock-cresses and other Alpine plants, without which was a rock garden ever complete?

Only the enthusiast with a deeper pocket than any among his rocks can buy rhododendrons by the freight-car load, though the poor nature lover may know as well as he their delightful possibilities when lavishly planted. Grown in bold masses, under trees along an entrance drive or beside a brook or on the bank of a small lake, their beauty is majestic. Laurel may be grouped in the foreground at their feet, tall auratum, superbum and Canada lilies may shoot upward from their midst, or their heavy dark foliage may serve as a background in damp situations for the incomparable red of the cardinal flower or the stately form of Japanese iris. With leaves as decorative as a rubber plant's and blossoms that form a bouquet complete in itself, the rhododendron, either in the wild garden or in the formal garden, reigns supreme among evergreen plants.

But this is not said to discourage the use of many other native shrubs of varied loveliness. What a wealth of beauty exists in the viburnum tribe alone — in the high bush cranberry and arrow wood whose broad white panicles are only less attractive than their bright fruit! How impoverished should we be without the dogwoods, without the shad bush, the Judas tree, the sumachs, the glossy leaved, blue-berried mahonia, and the bright red-berried holly! The fragrant button ball, the creamy cups of

sweet bay (*Magnolia glauca*), the white azalea that fills the air with a spicy fragrance as delicious as the clethra's, the black alder whose dark twigs, stuck with red berries, make a cheerful punctuation point in the autumn landscape, the elder, whose flat white blossoms come with the wild roses, the shrubby cinquefoil, the fuzzy pink steeple bush, the meadowsweet and the ninebark, equally attractive in flower and in fruit, will not be missing from the wild garden planted in moist ground.

Indeed, a low lying piece of land affords more possibilities of establishing colonies of plants that may be trusted to take almost entire care of themselves than any other site. Here the monarda, bee balm or Indian plume as it is variously called, will spread rapidly and invite humming birds to feast every midsummer day at the brimming wells of nectar in the ragged red tubes that are stuck irregularly around its globes. Here, in late summer, the vivid cardinal flower will continue their feast. Rose mallows that look like single pink hollyhocks, tall, feathery, meadow rue, superbum lilies, moccasin flowers, showy lady's slippers, the white fringed orchid and other orchids, trilliums, spring beauty, turtle head, and the blue fringed gentians, which may now, after long experimenting, be grown from seed, are only a few of the many native wild flowers that are happy where there is no possibility of dying out. In such a place the Virgin's bower clematis will hang fleecy festoons over the shrubbery and race with the bittersweet and wild grape up the trees. Tufts of English primroses and marsh marigolds and sheets of blue forget-me-nots delight to spread along the banks of a brook where serried ranks of blue and yellow irises and the pure white blossomed arrowhead stand with their feet in the water. It was Thoreau who called a swamp "Nature's sanctuary." Not until one enters it with an eye alert



WAXY WHITE INDIAN PIPES AND CREEPING DALIBARDA IN A MAN-MADE CORNER OF NATURE'S GARDEN



OUR NATIVE SHOWY LADY'S SLIPPER IN MOIST ALLUVIAL SOIL. THE MARVELLOUS MECHANISM OF THIS BEAUTIFUL ORCHID, WHICH SO DELIGHTED DARWIN, MAKES IT DOUBLY VALUABLE IN THE WILD GARDEN

for treasures for the wild garden does one realise how many lovely ones have their being where the human eye almost never sees them; yet most of them can be grown successfully in much drier places within easy access of one's home. The rose mallow from the swamps, for example, thrives in a flower garden under the same treatment given a hollyhock. Now that the cardinal flower is commonly offered in seedsmen's catalogues it has found its way into many flower beds, where, however brilliant the blossoms, its ill fitting environment robs it of half its charm.

It surprises most people to see how much a little cultivation improves many of our wild flowers. When their fierce struggle for existence may be relaxed, when every want is anticipated and the plants may devote their entire energy to developing all their latent loveliness, how fast it reveals itself! The blue wheels of succory double their size; the boneset, another cosmopolitan weed, spreads broader panicles of soft leaden white bloom than is its wont; its next of kin, the Joe Pye weed, rears fleecy flowers of dull Persian pink high above one's head; the evening primrose becomes a branching bush, asters multiply their stars, and the goldenrod, in well fertilised, cultivated soil, astonishes all beholders by the prodigal richness of its gold.

Not the least claim for the wild garden is that it may be had when the flower lover can afford no other. The rich man may send abroad for foreign plants to naturalise in the wild parts of his estate, or he may buy a freight-train load of native mountain laurel, as more than one American enthusiast has done, but nature knows no partiality. The poorest teacher in a rural school, without a penny at her disposal, may take all her boys and girls from their desks to nature's nursery in the woods and fields and bring home in a borrowed farm waggon treasures enough to beautify the

bare, unlovely school grounds whose care might well become one of the children's most important lessons. The bald ugliness of many a village schoolhouse, the hard lines of too many farmers' homes and the poorest people's cabins, the barren waste of most country graveyards, might all be mercifully adorned without money and without price if the possibilities of free flora were understood by indifferent, because unintelligent, people. The use of wild trees, shrubs and flowering plants does not necessarily mean a wild garden, but it does mean a far more beautiful, artistic, and economical kind of gardening than any that the masses of our people can afford. It is the garden for the million as well as the millionaire.

Native Plants For The Wild Garden

[See also, Laurel, Rhododendron, Clethra, and other desirable native shrubs on pp. 155-162 and 175-187.]

Plants marked thus (*) are suitable for situations surrounding the water garden.

Note.—The flowering season given is that for the neighbourhood of New York and varies earlier or later to the South or North.

Adder's Tongue. See Dog's Tooth Violet.

Adam's Needle, Spanish Bayonet (*Yucca filamentosa*). See Herbaceous Plants. (P. 229.) The best desert evergreen plant and for subtropical effects.

*American Senna (*Cassia Marylandica*). Yellow. July, August; 2 to 5 feet. Best yellow flower for clumps in moist, open situations and swamps.

Aster (*Various species*). Blue, mauve to white. August till frost; 6 inches to 4 feet. Daisy-like flowers of various sizes in loose panicles. Open meadows and woodland borders. These are the very best late flowers. *——, New England (*Aster Novæ-Angliæ*). Violet and purple; 3 to 8 feet. Moist ground. Much improved in cultivation. —— New York (*A. Novi-Belgii*). Pale blue; 2 to 3 feet. Wet, open banks. ——, Smooth (*A. lævis*). Sky blue. September, October; 2 to 4 feet. For dry soils and dry woodlands. Easiest way to naturalise is by scattering seeds.

*Baneberry, White (*Actæa alba*). ——, Red. (*A. rubra*). April, June; 1 to 2 feet. Rich soil in shade. Undergrowth. Most effective for the respective white and red berries that follow the flowers. Fruiting pedicels of the white baneberry are often red.

Bayberry (*Myrica cerifera*). For description see Wax Myrtle in Shrubs, p. 187. Naturalise along seashore and on sandy knolls.

Beard Tongue. See Pentstemon.

Bee Balm (*Monarda didyma*). See Herbaceous Plants, p. 217.

Black-eyed Susan (*Rudbeckia hirta*). Yellow with black centre. May, September. 1 to 3 feet. Dry and open ground anywhere. Naturalised freely in fields. The most showy daisy-like flower of summer.

*Black Snakeroot, Black Cohosh (*Cimicifuga racemosa*). White in elongated spikes. June, August; 4 to 6 feet. Moist, shady corners, woods, pond edges.

Blazing Star (*Liatris pycnostachya*). Purple. July, August. 4 to 5 feet. Light, well-drained soil. Long grass-like foliage, with flower heads in long spikes. —— (*L. scariosa*). 2 to 4 feet. Flowers August, September; bluish purple.

Bloodroot. See Tuberous Plants, p. 273.

Bluebell. See Harebell.

Blue Cohosh (*Caulophyllum thalictroides*). Flowers greenish purple. April, May. 1 to 2½ feet. Well-drained, shady, and dark corners. Moist hillsides. Fruits burst, exposing large blue, glaucous seeds. Foliage glaucous when young.

Bluets, Innocence (*Houstonia cærulea*). Pale blue, with yellow eye. May. 2 to 4 inches. Dainty little 4-petalled flower growing in tufts for open, moist or grassy places. Brightest dwarf flower of spring.

*Boltonia, False Chamomile (*Boltonia latisquama*). Lilac. August to October; 2 to 6 feet. For bold, wild effects. Moist soil in sunny place. *B. asteroides* has white, pink or purplish flowers. July, September.

*Boneset (*Eupatorium perfoliatum*). White, rarely blue. July, September; 2 to 5 feet. Wet places. Easily naturalised almost anywhere.

Butterfly Weed, Pleurisy Root (*Asclepias tuberosa*). Orange, rarely yellow. Heads flat. June, September; 1 to 2 feet. Open sun, well-drained soil. Easiest plant of its colour to naturalise in fields.

*Cardinal Flower (*Lobelia cardinalis*). Brilliant carmine. July, August; 2½ feet. The brightest flower of its kind. Often grown in the border, but is somewhat ragged. Best in shady places along banks of streams. Scatter seeds freely.

Celandine Poppy (*Stylophorum diphyllum*). Yellow or red. May, June. 1 to 2 feet. For a rich, loose soil, but with preference for partial shade. Plant has yellow juice. Leaves dark green, flowers quite showy.

Cinquefoil (*Potentilla fruticosa*). Bright yellow. All summer; 6 inches to 4 feet. Small flowers like single roses, one inch across. Prefers moist, rich soil, but thrives on dry, and even on rocks. Very useful for its long season of bloom, but may become a weed on favoured soil.

Clintonia (*Clintonia borealis*). Green, margined yellow in threes. May, June; followed by blue berries in autumn above the dark-green leaves; 1 to 2 feet. Cool, moist woods. Other species almost the same.

Columbine (*Aquilegia Canadensis*). Red and yellow. May, June; 8 to 20 inches. Excellent for rocky slopes. (See also Herbaceous Plants, p. 220.)

*Crane's Bill (*Geranium maculatum*). Light pinkish purple in several shades. April to August; 2 feet. In open sunshine, meadows, and in woods. A very common wild plant with flat flowers an inch and a half across.

Dog's Tooth Violet, Adder's Tongue, Trout Lily (*Erythronium Americanum*). Yellow. April to May; 10 inches. Flowers with the violet, and often found growing with it. Solitary nodding lily-like yellow flowers an inch long. Leaves marbled with brown and silvery gray. Plant 6 inches deep, in any light soil with partial shade. Several marked variations.

Dutchman's Breeches (*Dicentra Cucullaria*). Greenish white, tinged with pink. April; 8 inches. Delicate-looking plant, with finely divided leaves. Moist soil in partial shade. One of the first flowers of spring.

Dwarf Cornel (*Cornus Canadensis*). White. May to July; 6 inches. Large white bracts, followed by bright red berries in fall. Herbaceous. For shaded woods, as undergrowth, along driveways, etc.



A GRASSY PATH ON EITHER SIDE OF WHICH COLONIES OF WILD FLOWERS BLOOM FROM FROST TO FROST



FERNS AND WOOD ASTERS IN A SHADY PLACE

False Mitrewort (*Tiarella cordifolia*). White. May; 6 to 12 inches. Foamy masses of small flowers borne above the tuft of foliage. Cool soil and full or half shade. In effect the dwarf counterpart of the plume poppy.

*Forget-Me-Not (*Myosotis palustris*). Along streams. See Herbaceous Plants, p. 221.

Gentian, Closed (*Gentiana Andrewsi*). Blue, occasionally white. August to October; 1 to 2 feet. Flowers in a compact terminal cluster, large and usually quite closed. A strong-growing plant for rich, moist soil in partial shade. Excellent along banks of streams. ——, Fringed (*G. crinita*). Violet. September, October; 1 to 3 feet. Flower-tube about two inches long, with flat, expanded lobes, prettily fringed. A biennial, and in some places the seed is killed by frost. Sow fresh seed in moist woods and meadows; or in cultivation on a seed bed of sphagnum moss as first described in *The Garden Magazine* for December, 1905. Makes a tiny rosette the first year. ——, Narrow-Leaved (*G. linearis*). Blue. August, September; 6 inches to 2 feet. Similar to the closed gentian, but tipped with white. Profuse flowering. Perfectly hardy. Moist places in open sun and in bogs. The easiest gentian to naturalise.

*Goldenrod (*Species of Solidago*). Plumose, yellow. The most characteristic yellow-flowered plants of late summer and fall. ——, Woodland (*S. caesia*). August, September; 1 to 3 feet. For moist shade. ——, Field (*S. nemoralis*). July to November. ½ to 2 feet. Best low grower for dry, open places. ——, Canada (*S. Canadensis*). August to November. 2 to 8 feet. Best tall kind for open places.

Gold Thread (*Coptis trifolia*). White with yellow base. May to July; 6 inches. For carpeting moist, shady soils and on clay. Evergreen, shiny leaves.

*Grass Pink (*Calopogon pulchellus*). Purplish pink. June, July; 1 foot. Grass-like leaves in spring. Swamps and peat bogs, also sandy soil if moist. One of the brightest native orchids with 6 to 12 flowers to a stalk.

Harebell, Bluebell (*Campanula rotundifolia*). Blue, rarely white. May to July; 6 inches. Dark, shaded places, but open; also rocky crevices, and full sun in high altitudes only.

*Indian Turnip, Jack-in-the-Pulpit (*Arisæma triphyllum*). Greenish spathe, striped purple with a horizontal flap, followed by red berries. April to June; 1½ feet. Low, moist, rich woodlands. Leaves from early spring till autumn, in shady, moist places.

*Iris, Blue Flag (*Iris versicolor*). Blue and white. May to July; 20 inches. Wet places and along brooksides. More slender growing, flowering in May and June, is *I. prismatica* or *I. Virginica.* At home along the East Coast.

*Ironweed (*Vernonia Noveboracensis*). Purple. July to September; 3 to 5 feet. Flowers in large terminal clusters, very showy. Best effect in masses near water, making good supplement to the purple loosestrife, which is earlier. Also for open places.

*Jack-in-the-Pulpit. See Indian Turnip.

Jamestown Weed, Thorn Apple (*Datura Stramonium*). White. June to September; 2 to 5 feet. Any soil. Naturalised from tropics. An annual that has become a weed in the South. Use only in very wildest places.

*Joe-Pye Weed (*Eupatorium purpureum*). Purple to flesh colour, to almost white. August to September; 8 to 9 feet. The boldest, tall, rank-growing plant for low grounds. Easily naturalised. Foliage coarse. Var. *maculatum* is lower, with purple-brown markings on stem.

Lady's Slipper, Moccasin Flower (*Cypripedium acaule*). Rose-purple. May to June; 1 foot. Two leaves. Well-drained soil with leaf-mould. ——, Showy (*C. spectabile*). Pink-purple to pink. June; 2 feet. Several leaves. The easiest native orchid to grow and the showiest. Bogs or moist, partly shaded bed of peat or leaf-mould. Get large clumps, as of all orchids. ——, Yellow (*C. pubescens*). Yellow brown. May, June; 1 foot. Well-drained bed of leaf-mould and peat in moist shade. *C. pauciflorum* is smaller, but easier to grow in similar soil. Leave undisturbed.

*Lily, Red, Canada and Turk's Cap. See Bulbous Plants, pp. 277, 278.

Liverwort (*Hepatica triloba*). Blue, purple, pink. Earliest spring; 6 to 8 inches. Best and earliest flowering plant for massing in shady corners or open woods. In protected places flowers in the snow. Holds leather-like, three-lobed old leaves all winter and until after flowering.

*Loosestrife, Purple (*Lythrum Salicaria*). Bright purple. June to August; 2 to 8 feet. Best bright-coloured flowers for late summer, for swamps, and wet meadows. Flowers in lax terminal spikes.

Lupin (*Lupinus perennis*). Blue, pink, or white. May, June. 1 to 2 feet. Dry, sandy soils and banks. Pea-like flowers in loose racemes.

*Mallow, Swamp Rose (*Hibiscus Moscheutos*). Rose or white. August, September; 3 to 7 feet. For swamps and brackish marshes. Large, expanded flower, four inches across, sometimes with crimson eye. Best large, rose-coloured flower for wet places.

May Apple (*Podophyllum peltatum*). White. May; 1½ feet. Large, nodding flowers under bold seven and nine lobed leaves, almost round and peltate. Creeping root-stocks. Excellent for early spring effects in moist woodlands.

*Meadow Rue, Tall (*Thalictrum aquilegifolium*). White. July to September; 4 to 5 feet. Moist soils in open or along brooks. Light, feathery balls of flowers and gracefully cut fern-like foliage. Good for cutting too. *T. dioicum*, 1 to 2 feet. Purplish flowers in April, May. Woods.

*Meadow Sweet (*Ulmaria pentapetala*). Creamy white. June, July; 2 to 4 feet. One of the best free-growing plants for moderately moist soils. Showy terminal corymbs, borne on erect stems, naturalised in the East. One variety has leaves variegated with yellow. Also a double form.

*Milkweed, Swamp (*Asclepias incarnata*). Rose-purple in flat heads, rarely white. July to September; 1 to 2 feet. Swamps, where grasses fail, and along streams. Most showy, flat-headed plant for late summer in such situations. ——, Common (*A. Cornuti*). Dull, grayish pink. Earlier; much less showy; but grows on drier soils.

Milkwort, Fringed (*Polygala paucifolia*). Rose. May, June; 6 inches. For edges of moist, rich woods, in open places. Pretty purplish foliage and large-fringed flowers. Plant in clumps.

Ox-Eye Daisy (*Chrysanthemum Leucanthemum*). White with yellow centre. May to November; 1 to 3 feet. The common daisy of the fields, and invaluable for meadow effects. Parent of Shasta daisy (see p. 228).

Partridge Berry (*Mitchella repens*). Evergreen creeping vine. Dark green, with scarlet berries lasting all the winter. Woods.

*Pentstemon (*Pentstemon lævigatus*, var. *Digitalis*). White. May to July; 4 to 5 feet. Any well-drained soil in open places. Easily naturalised, and sometimes becomes a weed in meadows. Tubular flowers in lax panicles. (For Garden Pentstemon, see Herbaceous Plants, p. 217.)

Phlox, Wild Blue (*Phlox divaricata*). Gray-blue. April to June; 1½ feet. Along edges of moist woods. Valuable for its colour at its season. Short pyramids of flowers, faintly fragrant.

*Pickerel Weed (*Pontederia cordata*). Blue. June to October; 2 to 4 feet. Wet and swampy lands. Flowers in dense spikes borne above the foliage. Best strong-growing plant on stream and pond borders.

Prickly Pear (*Opuntia vulgaris*). See Herbaceous Plants, p. 227.

*Queen of the Prairie (*Ulmaria rubra*). Pink. June, July; 2 to 8 feet. Large panicles, slightly fragrant. Moist grounds and open meadows. Excellent for wild effects on large areas.

Rattlesnake Plantain (*Goodyera pubescens*). White. August; 1 foot. Leaves mottled with white. Flowers in a terminal spike. Easiest woods orchid to naturalise in ordinary loam, mixed with pine needles and twigs. Native in damp woods.

Rose, Prairie (*Rosa setigera*). Pink flowers, fading whitish. June, July; 6 feet or more. Best climber. For shrubby effects on dry ground *R. lucida*, 6 feet, with red stems and fruits showy all winter. On moist ground, *R. Carolina*,* 8 feet.

*Skunk Cabbage (*Symplocarpus fœtidus*). Bright, yellow green, bold foliage in earliest spring; 1 foot. Moist dells. Very effective.

Snakeroot. See White Snakeroot.

*Sneezeweed (*Helenium autumnale*). Bright yellow. August to October; 1 to 2 feet. Best large yellow, daisy-like flower for summer and fall. For swamps and wet meadows. Will also grow in open border. Var. *superbum*, 4 feet, with flowers 3 inches across.

*Solomon's Seal (*Polygonatum biflorum*). White flowers in arching sprays, with the leaves. June; 1 foot. Black berries in fall. Moist shade or rich soil in the open. ——, False (*Smilacina racemosa*). White. 1 to 2 feet. Flowers in terminal, foam-like sprays. Moist shade, preferably well drained.

*Speedwell, Great Virginian (*Veronica Virginica*). Pale blue or white. August, September; 6 feet. For rich soils fully exposed to the sun. Very free growing. The best tall blue flower of late summer for full sun.

*Spiderwort (*Tradescantia Virginica*). Blue. Moist, rich places in shade or sun. (See Herbaceous Plants, p. 229.)

Spring Beauty (*Claytonia Virginica*). Obscure pink flowers in summer. Spreading plant 8 inches high, with long, tapering leaves of bright green. Moist soils in rocky bottoms, and especially in moist leaf-mould in woods.

Sun Drops (*Œnothera fruticosa*). Yellow. June to August; 1 to 3 feet. Dry, exposed soil and sand. Common in New England meadows. A small, dense, bush-like shrub, covered with inch-wide flowers. Sometimes a weed.

*Sunflower (*Helianthus Maximilianus*). Yellow. August till after frost; 8 to 10 feet. Most desirable sunflower for naturalising because of its great height and extremely late season. Individual flowers are small. Grows anywhere not a swamp.

Sweet Fern (*Comptonia asplenifolia*). Dwarf, shrubby plant, with dark green foliage; 2 feet. Best plant for naturalising on sandy knolls for foliage effect. Deciduous.

Tansy (*Tanacetum vulgare*). Yellow; 2½ feet. Flat heads of small composite flowers. Common along roadsides, mostly escaped from gardens. One of the old-time simples. The flower head 4 to 6 inches across. July, September.

Trailing Arbutus (*Epigæa repens*). Pale rose. May. Creeper. A very difficult plant to naturalise, insisting on perfect drainage in a dry, sandy, loamy soil, in shade. On planting protect with an inch of light litter or leaves, to remain for a whole season. Do not attempt this plant unless you have the exact conditions.

Trillium. See Wood-Lily.

*Violet (*Viola cucullata*). Violet blue or purple in shades. April to June; 6 inches. Damp places, mostly shaded, but often does well in semi-open woods, etc. Best of all the native violets, with largest flowers, and very easy to naturalise by transplanting. Root tuberous.

*Virginia Cowslip (*Mertensia Virginica*). Blue. May, June; 1 to 2 feet. Moist soils in partial shade. Flowers nodding.

Wakerobin. See Wood-Lily.

WHITE SNAKEROOT (*Eupatorium ageratoides*). White. July to November; 3 feet. Profusely flowering in loose heads over very long season. Rich woods.

WILD GINGER, CANADA SNAKEROOT (*Asarum Canadense*). Curious brownish-purple flowers an inch or more across. April, May; 10 inches. Large kidney-shaped leaves. Flowers borne close to the ground. Rich, shaded woods, or with ferns. Leaves appear very early.

WILD INDIGO (*Baptisia tinctoria*). Yellow. June to September; 1 to 2 feet. Dry soils in sun or shade. Invaluable for naturalising on the coast. Flowers pea-like.

*WILD SWEET WILLIAM (*Phlox maculata*). White or purple. June to August; 3 feet. For moist woods or along streams and in open sun. Flowers in compact pyramids. (See also ROCK GARDEN, p. 110.)

*WILLOW HERB (*Epilobium angustifolium*). Rose-purple. July to August; 3 to 5 feet. For rich upland or well-drained soil in open sun. Flowers loosely borne in lax spikes at end of shoots, which also branch. One of the best plants for bold effects, spreading freely.

WINDFLOWER (*Anemone nemorosa*). White, tinged purple. April to June; 2 to 4 inches. Partial shade. Excellent for carpeting and woodland borders, and in the grass. Solitary flowers 1 inch across, like small single roses. —— (*A. Pennsylvanica.*) White; 12 to 18 inches.

WINTERGREEN (*Gaultheria procumbens*). White, followed by bright red berries. June to September; 2 to 6 inches. A low-growing evergreen, with bright green leaves. For woods. Berries last till next season. Difficult to naturalise. Treat like trailing arbutus.

WOOD-LILY, WAKEROBIN (*Trillium grandiflorum*). White. May; 8 inches to 1½ feet. For woods and shaded stream borders. The flower is two inches across, carried above 3-partite leaf on single stalk. Very easy to naturalise. Tuberous. The best early white flower for woods. Plant in masses. *T. erectum* has dark purple flowers.

*YARROW (*Achillea Millefolium*). White. Summer; 2 feet. Flat heads of very small composite flowers on erect stalk arising from tuft of very finely cut feathery leaves. Pungent odor. For open meadows and all sunny places. Var. *roseum* has pink flowers. Most showy plant for meadows.

YELLOW-FRINGED ORCHIS (*Habenaria ciliaris*). Indian yellow. August, September; 2 feet. Pyramids of fringed flowers. Bogs or moist meadows. Very easy to accommodate.

THE ROCK GARDEN

"An artificial rockery is usually a bit of frankly simple make believe. Nine times out of ten there is something about it half funny, half pathetic, so innocent, so childish is its absolute failure to look like real rocky ground."

. . . . . .

"I would have everything planted in longish drifts, and above all things it should be planted geologically; the length of the drift going with the natural stratification of the dell. In all free or half-wild garden planting good and distinct effect (though apparent and enjoyable to every beholder, even though he may not perceive why it is right and good) is seldom planned or planted except by the garden artist who understands what is technically known as "drawing." But by planting with the natural lines of stratification we have only to follow the splendid drawing of nature herself, and the picture cannot fail to come right."

— GERTRUDE JEKYLL.

CHAPTER VII

THE ROCK GARDEN

A PRETENTIOUS pile of rickety rocks propped with cobble stones, and a few sickly, sun-baked plants straggling over them in a meaningless manner — this would seem to be the prevailing idea of a rock garden in too many American dooryards. Yet a rock garden, treated in a naturalistic and practical way, and fitted into the surrounding scene as if it really belonged there, may be the most charming feature of a place. Moreover, it may become the refuge of many unique and interesting plants that would grow nowhere else, or of others, not alpine, yet that thrive best among deep, cool, moist pockets of soil between the rocks where one almost never sees them in our over-conventional gardens.

If there are no rocks on one's grounds, nor within easy hauling distance, not only is the cost of making a rock garden a serious matter, but the artificiality of it is likely to be so apparent as to make the effort scarcely worth while. Only the Japanese seem to have the selecting and placing of garden stones reduced to an art that defies detection. Lives there the American who would make long pilgrimages to the mountains to secure one weather-worn rock of just the right shape and tint to fit into his garden picture? Where some fine rocks in a desirable situation naturally occur on one's grounds, of course it is sheer waste not to use them, and painfully inartistic to create artificial rockwork unless it can be so skilfully added to what nature offers as to seem to be a part of her design. Immense sums of money and glorious opportunities for

beauty have been wasted in blasting and burying rocks on estates in Connecticut alone in order to make "gentlemen's country seats" conform with conventional methods of treatment elsewhere. Let no one deplore the possession of boulders, outcropping rocks, rocky seams, crevices, and ledges, for the trained imagination of a landscape gardener should find infinite possibilities of beautifying them at a fraction of the cost of reducing the land to a level commonplace. The opportunity to preserve the land's individuality, no true lover of nature or of gardening will neglect. One of the most beautiful estates in this country includes an abandoned stone quarry, now transformed by the subtle and sympathetic art of the gardener into the happy home of myriads of rock-loving plants. Your true gardener never spoils nature: he trains and develops her.

Since the situation of any kind of a garden should dominate the whole scheme of its development, few hard and fast rules for the making of a rock garden can be laid down. However, it is certain that the site needs to be selected with extra care, for most of the failures to grow alpines and other rock-loving plants in this country have resulted from attempting to copy the rockeries of England instead of adapting them to our drier, more sunny and more extremely hot and cold climate. But at last we have learned that rocks not screened from the sun by trees, or so situated on a northern slope that only the weaker rays of morning or afternoon sunshine slant upon them, are more likely to scorch or scald plants than to aid their growth. We may not attempt to naturalise in exposed and sunny situations around our homes those charming little cushions, rosettes, tufts and creeping plants from the cooler mountains above the timber line, where moisture-laden clouds and mists almost always envelop them. Nor will alpine plants, however

carefully guarded from our mid-summer sun and drought, thrive in a situation swept by the wind.

Evergreen trees make the best wind-break where a rock garden cannot be planted on a protected hillside, but they must be kept at a distance where the roots of the guardians will not rob their wards. In addition to the taller evergreens, hemlocks, pines, firs, and cedars, that are useful chiefly as a sun or wind screen in the background, we have learned to utilise the broad-leaved native evergreens for closer shelter — rhododendrons, laurel and bay, whose fine roots never forage far; and to punctuate points of greatest interest, or exposure, among the most sensitive plants, with those charming little dwarf pines, junipers, thuyas and retinisporas from Asia that nevertheless seem to belong to our rock gardens by every natural right. In the lee of a very small evergreen a choice alpine plant may be induced to live contentedly, whereas, without the shelter, it would as certainly die — a fact mentioned in this connection only to show how almost any desirable site, however exposed, may be utilised for a rock garden with the help of proper protecting plants and trees.

Rock gardens are not necessarily made on natural slopes to simulate a bit of wild mountainous scenery in miniature, although the best of them are. Some very successful ones have been created on what was once level land. What is known as an underground rockery is made by excavating an open passage down into the soil and banking up the earth on either side of the cutting as fast as it is dug, all the top soil having been previously removed and saved to spread over the banks when finally graded, and to place in pockets between the rocks where plants are to be set in. The width of several feet at the entrance to the passage may be varied and increased to fifteen or twenty feet farther on; and the depth,

gradually increasing as the cutting proceeds and then diminishing again toward the exit, will vary according to the amount of soil thrown up on the banks. After rocks have been added to the slopes, an excavation of only three feet may make a total depth of six. Of course, the cutting is not done in a straight line, but in a gently curving one, in the hope of creating an impression of naturalness as well as affording a variety of exposures to plants of varying needs. The marvel is that such an absolute fake as an underground rock garden can ever be convincing. Needless to say, it takes an artistic genius to make it so. Yet there is a rockery of this purely artificial type at Kew Gardens, London, which is a joy to all beholders; another good one, cut into a bank by the same underground method and executed by a former Kew man, thrives on the grounds of Smith College, Massachusetts. Many others are partly natural and more or less cut out underground; but never in this dry land of ours was a successful rock garden made on a sunny southern slope, where the rain runs rapidly away or evaporates, unless a cascading brook or water introduced by pipes among the rocks keeps up a never failing supply of moisture.

So much of the success of a rock garden, cultural as well as artistic, depends upon the placing of the stones, that one needs to proceed almost as cautiously as a Japanese extremist. Of course, the fundamental idea of a rock garden is to suggest a natural, rocky slope such as is seen on the mountain sides where alpine plants have their origin, but with its excellences condensed into a small area, its beauties emphasised by art and the number of its desirable plants greatly increased. Such a scene, however, will be of short-lived beauty unless the best possible situation and soil for every plant that one attempts to grow have been given it. It is better to devote one's first thought to providing a healthful home for the



A SUGGESTIVE ENTRANCE TO A ROCK GARDEN



A RIBBON OF CREEPING PHLOX ALONG THE BASE OF THE GRAY ROCKS BRIGHTENS THE WALK IN APRIL. NOTE THE POSSIBILITIES WHICH SUCH ROCKY PLACES OFFER FOR A DRAPERY OF VINES. LATER, THE LONG BARE STEMS OF THE WICHURIANA ROSES WILL BE COVERED WITH SHINY LEAVES AND MYRIADS OF WHITE AND PINK FLOWERS

plants and then reconcile it with the loveliest pictorial effect possible. The thoughtful gardener will never pile one stone upon another without a sufficient stratum of earth in the sandwich to nourish a stonecrop, creeping phlox, or hardy candytuft (Iberis) that hangs its snow-laden stems well over rocky ledges. He will see that every rock not only rests in deep good soil and within a generous area of it, but that a pocket of loam made rich, light and cool with decayed vegetable matter — not manure — is provided wherever a plant is to be set out. Rhododendrons, laurel, azaleas and orchids delight in a cool, moist, peaty soil, and so do most ferns and lilies; primroses want leaf-mould; true alpines crave crushed rock or gravel mixed with it; the cross-bearing tribe and composites make the most of any good loamy soil, for they are not fastidious; hardy cacti, sedums, mossy and starry saxifrages, live forever and other more or less succulent plants, whose deep roots enable them to endure the sunniest situations, may be given a rather sandy soil without offence. Stagnant moisture about its roots no plant will endure, but then the very nature of a rock garden usually insures good drainage. Not even a skunk cabbage will thrive in sour soil. Sweetness and light are more essential in a garden than in Matthew Arnold's essays.

Clinkers, shells, masses of scoriæ and masonry in a rockery could be tolerated only where the insensate owner would feel equal satisfaction in seeing a picket fence around it. In no other part of the home grounds, perhaps, is the suggestion of artificiality to be more studiously avoided. Walls, fences, lanterns, benches and other man-made objects should not be seen from it. Even a macadam road through it, if necessary, is deplorable. A formal path quite as effectually spoils a scene which should be entirely naturalistic, simple and picturesque. Flat, irregular stepping-

stones, sunk to the level of the surrounding soil, with ferns, mosses, or little creeping plants overgrowing their edges, make the ideal path. Pebbles loosely scattered over an earth walk of flowing outline keep the feet dry, and if the edges of the path are broken irregularly by rocks over which little creepers steal out into the open, they give no offence to a critical eye. Whenever steps are necessary — and broken levels that add so much to the charm of any garden have most reason to exist where rocks cause many uneven surfaces — let them be made, like the path, of flat surfaced stones deeply imbedded in the earth, or grouted in cement, if there be danger of frost throwing them out of position. Steps of cedar or locust logs, that will not rot on the ground for many years, are also harmonious, but these, like the rocky steps and stepping-stones in the path, should be unequally spaced and surrounded by good soil that will encourage little plants to grow close about them and partially conceal their outlines. One feature of a rock garden in a large public park which should serve as a warning to all beholders, is, unfortunately, mistaken for an example. Rows of sharply pointed rocks, like a gigantic set of false teeth, are set along the path with a profusion of mixed magenta and scarlet portulacas among them only adding to the horror. After a long series of eliminations from gardens, public and private, one finally learns at least what not to do.

Nearly every rock garden has too much rock in evidence. Plant it out! Allow only glimpses of it here and there, unless some fine great boulders, undraped by vines, or unclothed by polypodies, or unscreened by dwarf evergreens, add a touch of nobility to the too sweet beauty of the picture you are trying to create.

The trace of a cutting tool on rocks can easily destroy all

semblance of naturalness. Chiselled surfaces should never be exposed to view. Sandstone makes, perhaps, the most desirable setting for plants, but any rocks or boulders that belong to the region where the garden is situated are always the ones to use. Some will surely be chosen for the sake of the mosses and lichens upon them. Exquisite mosses can be cut in squares from the woods, like sods from a lawn, and successfully transplanted to carpet shady banks as if with deep green plush.

What shall be planted in the rock garden? That depends upon whether it is to be made in Maine or California, on a rich man's large estate or on the home acre of an impecunious plant-lover who is his own gardener. From the list that follows this chapter every one may make the selection best suited to his needs, but in a general way it may be said that the most expert gardener will find a fascinating hobby to tax his skill in attempting to grow the rarer alpine plants; that no better environment for many of our loveliest wild flowers, ferns, mosses, lichens and exquisitely tinted toadstools and fungi can be secured than that of a rock garden, where they properly belong; and that while many bulbs, such as scillas, chionodoxas, single narcissus and daffodils may fittingly be naturalised among the rocks, such prim, formal flowers as tulips and hyacinths look out of place in a purely naturalistic setting.

Water and rocks have been closely associated in people's minds since the miracle of Moses, and if they can be in the garden, too, the most charming results are possible. A brook, a pool, or a little cascade splashing its refreshing drops over the mossy rocks where harebells, ferns, irises, cardinal flowers, trilliums and marsh marigolds delight in them, would suggest the easy transition from earth-loving plants to those of the bog and to true aquatics. Such

a gradual transition, wherever there is the opportunity to have it, insures more varied loveliness than the unaided imagination can grasp. But that is another story.

Foundation Plants for the Rock Garden

The flowering season given is that of New York.

Adonis, Spring (*Adonis vernalis*). Yellow. April. Sun. (See p. 216.)

Anemone, Japan (*Anemone Japonica*). Rose, white. Single and double. August, October; 2 to 4 feet. For named varieties see trade lists. Flowers 2 inches across, like single roses. Best late flower for cutting. Partial shade. ——, Wood (*A. sylvestris*). White, flowering in spring, is similar. ——, St. Brigid (*A. coronaria*, var. *St. Brigid*). Various colours, except clear yellow. April; 6 to 8 inches. Finely cut foliage. Like gigantic double buttercups. Most valuable species for the garden. Responds to high cultivation. ——, Pasque Flower (*A. Pulsatilla*). Blue. April; 6 inches. Flower 1½ inches long, with numerous long brown hairs outside. Largest early blue flower for the rock garden.

Aster (*Aster Novæ-Angliæ*). Purple. —— (var. *rosea*). Rose. —— (*A. lævis*). White. Best daisy-like flowers for late bloom. Variable. Sun. 1 foot up. (See page 88.)

Baby's Breath (*Gypsophila paniculata*). White. August; 2 feet. Very small flowers in loose panicles. For shade or sun. Good soil. (See page 216.)

Beard Tongue (*Pentstemon barbatus*). Red. July; 2 feet. Sun. In loose panicles. Flowers 1 inch long. One of the best summer flowers. (See p. 217.)

Bellflower (*Campanula Carpatica*). Blue. July; 1 foot. Sun. ——, Bluebell (*C. rotundifolia*). Pale blue. Sun. 6 inches. These are among the very best of all the blue flowers. Easily grown, whereas the rock gentians are difficult. (See p. 217.)

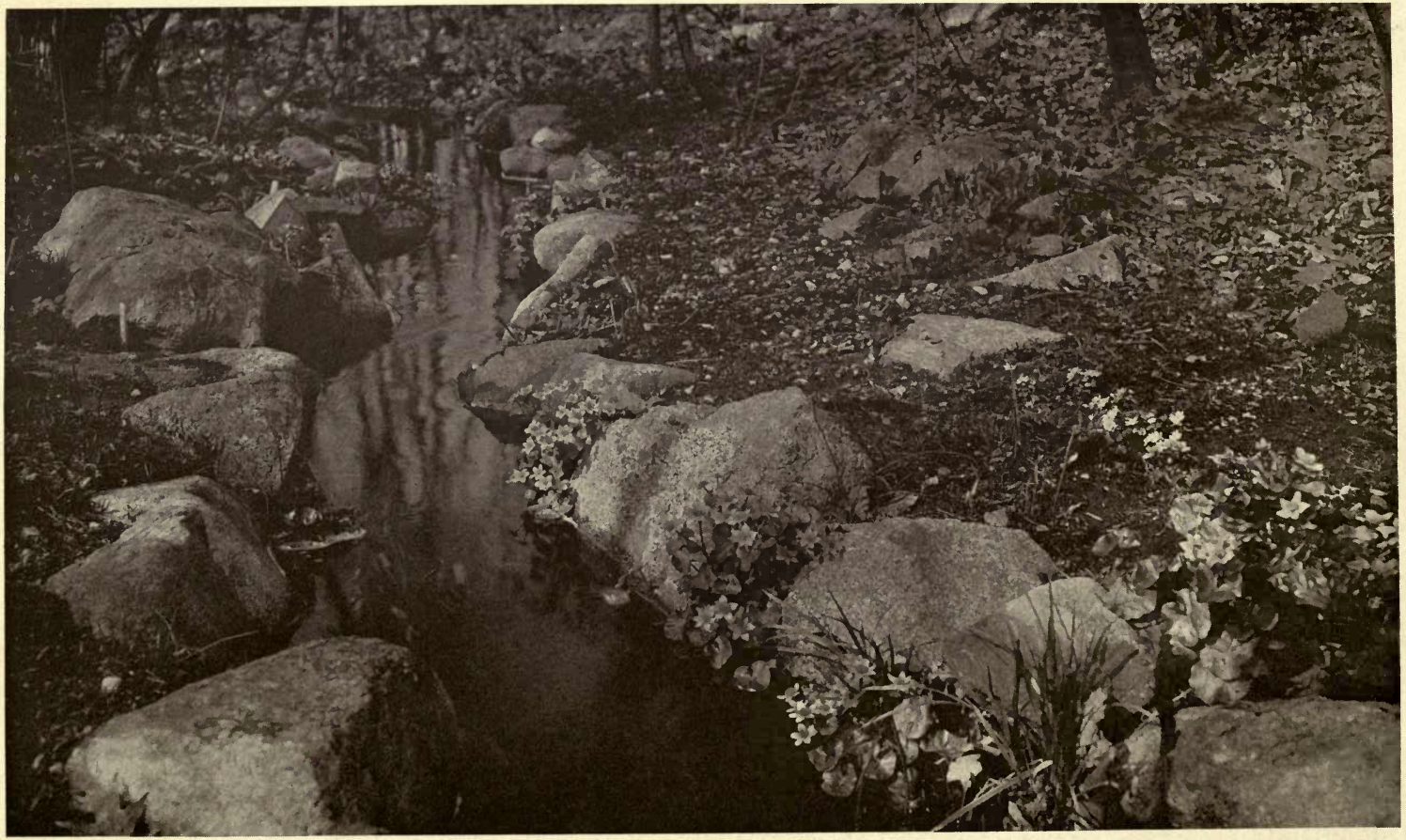
Bloodroot. See Bulbous and Tuberous Plants, p. 273.

Blue Bells (*Mertensia pulmonarioides*). Blue. April; 1½ feet. Shade. (See Virginia Cowslip, p. 230.)

Blue Leadwort (*Ceratostigma plumbaginoides*). Blue. September. Creeping. Sun. Best creeping blue flower of summer. Like a phlox. (See p. 224.)



YELLOW, ORANGE AND WHITE PERENNIAL ICELAND POPPIES OF TISSUE TEXTURE
ALONG THE STEPS THROUGH A ROCK GARDEN



ROCK GARDEN BESIDE A BROOK IN EARLY SPRING WHEN MARSH MARIGOLDS AND HEPATICAS ARE IN BLOOM. THEY ARE FOLLOWED BY ADDER'S TONGUE, TRILLIUMS, AND SPRING BEAUTY. HIGHER, DRIER SITES ON THE BANK ARE THE HOME OF HAREBELLS, COLUMBINES AND MANY OTHER ROCK-LOVING NATIVE PLANTS

BLUE SAGE (*Salvia azurea*). Blue. August, September; 1 to 5 feet. Sun. Flowers varying to white. Light, sandy soil. Protect in winter.

BUGLE-WEED (*Ajuga reptans*). Blue. May. Sun. Rich soil. (See p. 218.)

CANDYTUFT (*Iberis sempervirens*). White. April; 4 inches. Sun. Makes tuft of dazzling white in early summer after phlox. (See p. 57.)

COLUMBINE (*Aquilegia Canadensis*). Red. April; 8 to 10 inches. Sun and rocky slopes. Invaluable. ——, FEATHERED (*Thalictrum aquilegifolium*). Pink. July; 6 inches to 2 feet. Sun. Rich, moist soil. Daintily cut foliage, with foam-like flowers. (See p. 220.)

CRANESBILL, MEADOW (*Geranium pratense*). Light purple. April, August. 1 to 2 feet. Shade. ——, RED (*G. sanguineum*). Red. August; 1 to 2 feet. Sun. ——, SPOTTED (*G. maculatum*). Pink. May; 1 to 2 feet. Shade. Flat flowers; 1 to ½ inches across. Common wild plants.

CROCUS, AUTUMN (*Colchicum autumnale*). Purple. September; 4 inches. Sun. Invaluable for late flower. Blooms without leaves. (See p. 274.)

DAFFODIL (*Narcissus Bulbocodium*). Yellow, lemon. April; 4 inches. Sun. This is the hoop-petticoat. Other very small-flowered species of Narcissus may be used, but are difficult to handle.

EDELWEISS (*Leontopodium alpinum*). Yellow. June, July; 4 to 12 inches. Sun. Small woolly flowers in star-like clusters, with very hairy bracts. Leaves also densely covered with white hair. Well-drained, medium-light soil, in full sun. Raise from seed.

EVENING PRIMROSE (*Œnothera Missouriensis*). Yellow. June; 18 inches. Sun. (See p. 221.)

FALSE GOAT'S BEARD (*Astilbe Japonica*, var. *compacta*). White. May; 1 foot. Shade. (See pp. 222, 229.)

FORGET-ME-NOT (*Myosotis palustris*). Blue. April; 6 inches. Sun. The most pleasing small blue flower, with long season. Any soil. (See p. 221.)

FOXGLOVE (*Digitalis purpurea*). Purple. June; 3 feet. Shade. Rich, loose, moist soil. ——, PERENNIAL (*D. ambigua*). Yellow. June. Shade. Not nearly as beautiful as the common.

GOLDENTUFT (*Alyssum saxatile*). Yellow. April, May. Most prolific small yellow flower of spring. Blooms intermittently all season. Self sows. Avoid heavy clay soil. Sun.

HORNED VIOLET (*Viola cornuta*). April till frost. Violet. Tufted plant. Flower like small pansy. Any good soil. Sun or half shade.

JACOB'S LADDER (*Polemonium reptans*). Light blue. May; 1 foot. Shade. Flowers half inch across in loose panicle. Much attacked by snails, especially in winter. Raise from seed in fall. Rich, deep, loamy soil.

LILY-OF-THE-VALLEY (*Convallaria majalis*). White. May. Shade. (See p. 278.)

MIST FLOWER (*Conoclinium cælestinum*). Blue. September, October; 1 to 2 feet. Sun. Flat-topped clusters on leafy stems. Any soil. Protect slightly.

MOSS PINK, CREEPING PHLOX (*Phlox subulata*). Rose, lavender, white. April, May; 2 inches. Cheapest and showiest carpeting plant for spring bloom. Rocks or soil, sun or shade. Named varieties have refined colours. The common wild form is a harsh magenta.

MOTHER-OF-THYME (*Thymus Serpyllum*). Pink. May; 4 inches. Sun. Fragrant foliage. For dry, poor soil. Evergreen.

MOUNTAIN SPURGE (*Pachysandra procumbens*). White to purplish. May, June; 6 to 12 inches. Shade. Shrubby. Large, dark-green leaves. Excellent for carpeting under trees. Any soil.

PLANTAIN LILY (*Funkia cordifolia* and *subcordata*). White, blue August. Shade. (See p. 63.)

POPPY, ICELAND (*Papaver nudicale*). White, yellow, orange, red. May; 1 foot. Sun. Raise from seed where it is to flower. Well-drained soil in sun. —— (*P. alpinum*). Similar. (See p. 227.)

PRICKLY PEAR (*Opuntia Rafinesquii*). Yellow. June; 4 inches. Sun. Exposed rocky ledges. (See p. 227.)

PRIMROSE, ENGLISH (*Primula vulgaris*). Pale yellow. April; 4 inches. Shade. Cool, moist, but thoroughly drained soil. Protect in winter. ——, COWSLIP (*P. officinalis*). Bears smaller flowers in a cluster on a long stalk. Slightly darker. ——, POLYANTHUS (*P. polyantha*). Like the true primrose, but in great variety of colours.

Rock Cress, White (*Arabis albida*). White, fragrant. May; 4 to 6 inches. Cheapest and showiest spring-blooming white-flowered plant for carpeting the ground. Do not confuse with alpina, having smaller flowers and otherwise inferior. ——, Purple (*Aubrietia deltoidea*). Purple. June, July; 3 inches. Moist or dry places. Best in rich soil in pockets to keep roots cool. Unusual colour. Needs slight protection.

Saxifrage, Pyramidal (*Saxifraga Cotyledon*). Great silvery rosettes of leaves and pyramidal inflorescence 20 inches high, of small white flowers. May, July. Largest and showiest of the family. To get the largest specimens remove the offsets. Excellent for rockeries. ——, Thick-Leaved (*S. crassifolia*). Pink. April; 6 to 8 inches. Sun. Massive coarse foliage and flowers in dense, branching heads; 3 to 4 inches long. (See also London Pride, p. 61.)

Sea Lavender (*Statice latifolia*). Lavender. June; 18 inches. Sun. Any soil. Very effective. Small flowers in profuse spreading spikes. For background. Do not disturb. Deep soil.

Sea Pink (*Armeria maritima*). Pink. May, June; 3 to 6 inches. Sun. Flowers in dense heads above tufts of evergreen foliage. Any soil. Propagate by seed or division.

Self-Heal (*Brunella grandiflora*). Dull purple. June to July; 8 to 12 inches. Half shade. Flower heads carried above the mass of foliage. Avoid dry soil. Also for carpeting.

Shooting Star (*Dodecatheon Meadia*). Pink. April; 1 foot. Shade. Cluster of flowers surmounting long stalk. Open, well-drained soil, moderately rich. Give northern or eastern aspect.

Showy Sedum (*Sedum spectabile*). Pink. August; 18 inches. Sun. One of the best summer flowers for dry, shallow soil. (See p. 228.)

Silvertuft (*Alyssum argenteum*). Yellow. April and all summer; 1 foot. In clustered heads. Sunny places with deep soil.

Snow-in-Summer (*Cerastium tomentosum*). White. June; 8 inches. Smothered with flowers 1 inch across. Silvery foliage attractive all season. Fine for edgings and naturalising on rocks or in strong grass. Drought resister.

Stoke's Aster (*Stokesia cyanea*). Blue. August. ——, (var. *alba*). White. Largest thistle-like flower for rockeries; 6 inches. Sun.

Stone Crop (*Sedum hybridum*, and others). Yellow. July; 3 inches. Sun. Succulent plants making rosettes of thick, fleshy foliage. For shallow ledges, growing in almost no soil at all. —— (*S. album*). White. July. ——, Love-Entangle (*S. sexangulare*). Yellow.

Sweet Alyssum (*Alyssum maritimum*). White; 4 inches. Easiest white flower to grow for carpeting and edging. Blooms all summer on lengthening stems. Rocky ledges.

Sweet William, Wild (*Phlox divaricata*). Blue. May; 1 to ½ feet. Sun. Moist and well-drained soils. (See p. 96).

Toad Lily (*Tricrytis hirta.*) Brownish. Half shade. September; 1 to 2 feet. Flowers on erect, leafy stems. One of the latest bloomers. Light, sandy loam; well drained. Var. *nigra* blooms earlier.

Woolly Woundwort (*Stachys lanata*). Pink. July; 6 inches. Sun. Valuable for the silvery foliage edging. Ordinary soil.

Yarrow (*Achillea Millefolium*). White; var. *roseum* pink. September; 1 to 2 feet. Sun. Good soil.

THE WATER GARDEN

"The opportunity to introduce such elaborate fountains and combinations of pools and cascades as are seen abroad does not often occur in this country; and where water is used, some regard must generally be paid to the presence of the water-metre. A pool or basin of standing water, as in the old Egyptian gardens, will, however, serve to grow aquatic plants, and to add that touch of life to the scene which can best be given by reflections from the surface of a pool. Indeed, the charming effects that can be obtained at comparatively slight expense by the judicious use of a small basin make water one of the most useful accessories of the garden." — GUY LOWELL.

CHAPTER VIII

THE WATER GARDEN

WATER in a landscape is as a mirror to a room—the feature that doubles and enhances all its charms. Whoever may possess a lake, a pond or a pool to catch the sunbeams, duplicate the trees and flowers on its bank, reflect the moon, and multiply the stars, surely will. A distinct and delightful class of plants may then be added to one's place.

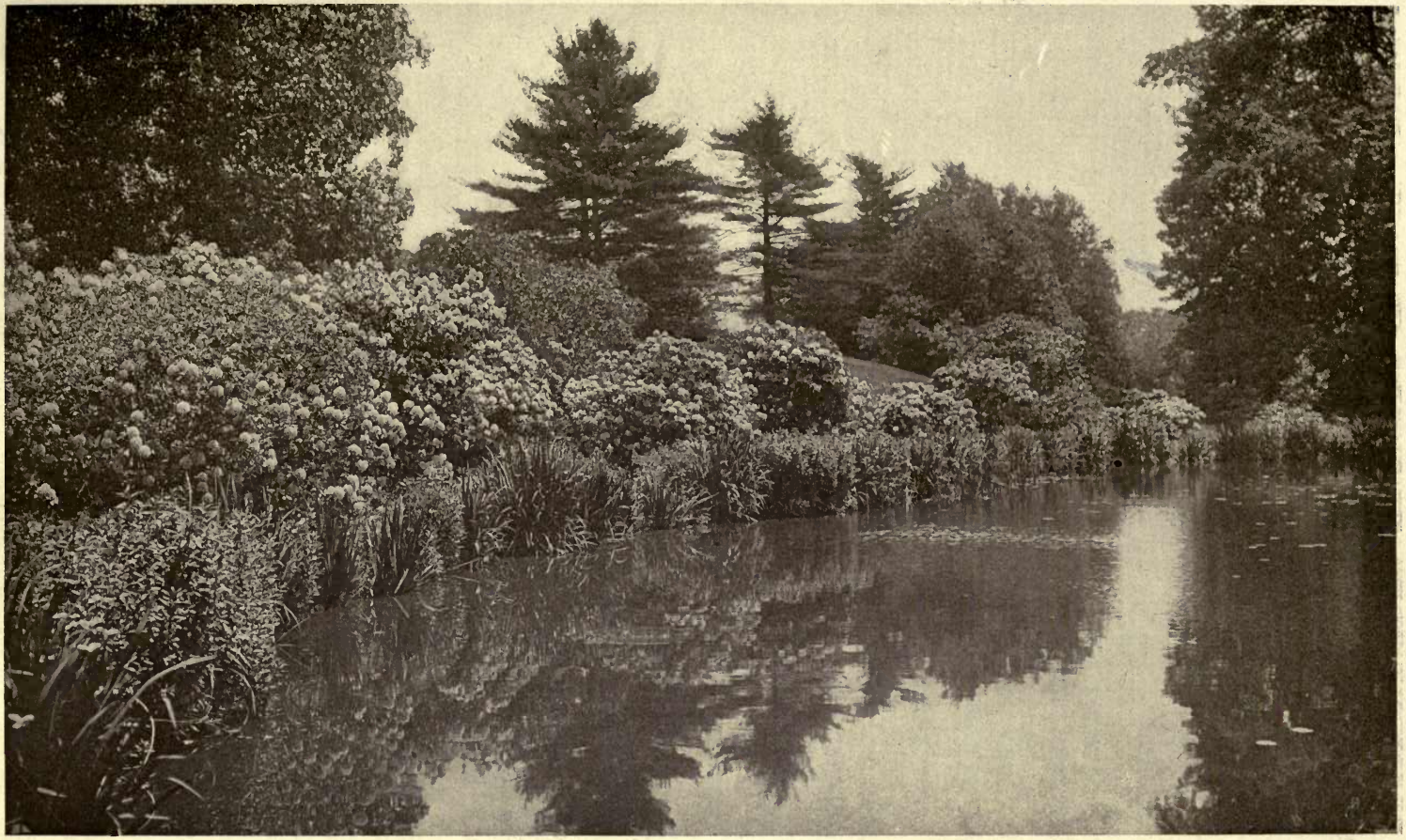
Where may one hope to have a water garden? Anywhere! For a wash-tub, sunk in a city back yard, would hold at least one of the pastel-tinted water-lilies. Even a rain barrel under the water-spout of a farm house has grown quantities of water hyacinths that sent up spires of porcelain-blue blossoms throughout the summer; but only this plant that can anchor its peculiar roots firmly enough to resist the sudden downpour of thunderstorms and has vigour enough to choke the river Amazon should be chosen for such a place.

One charming little water garden was planted in kerosene oil barrels. First they were sawed in half, then set fire to within, presently turned open end downward on the ground to extinguish the flames after the oil was consumed, and then sunk to their depth in the earth at different intervals and levels in a sheltered, sunny spot; the perfect circle of their basins concealed by irregularly placed stones with the everywhere useful creeping phlox, candytuft, the dwarf bamboo and Japanese iris growing between them. And the whole ten tubs, each slowly dripping its overflow into another through little concrete gutters cleverly hidden under the stones, were

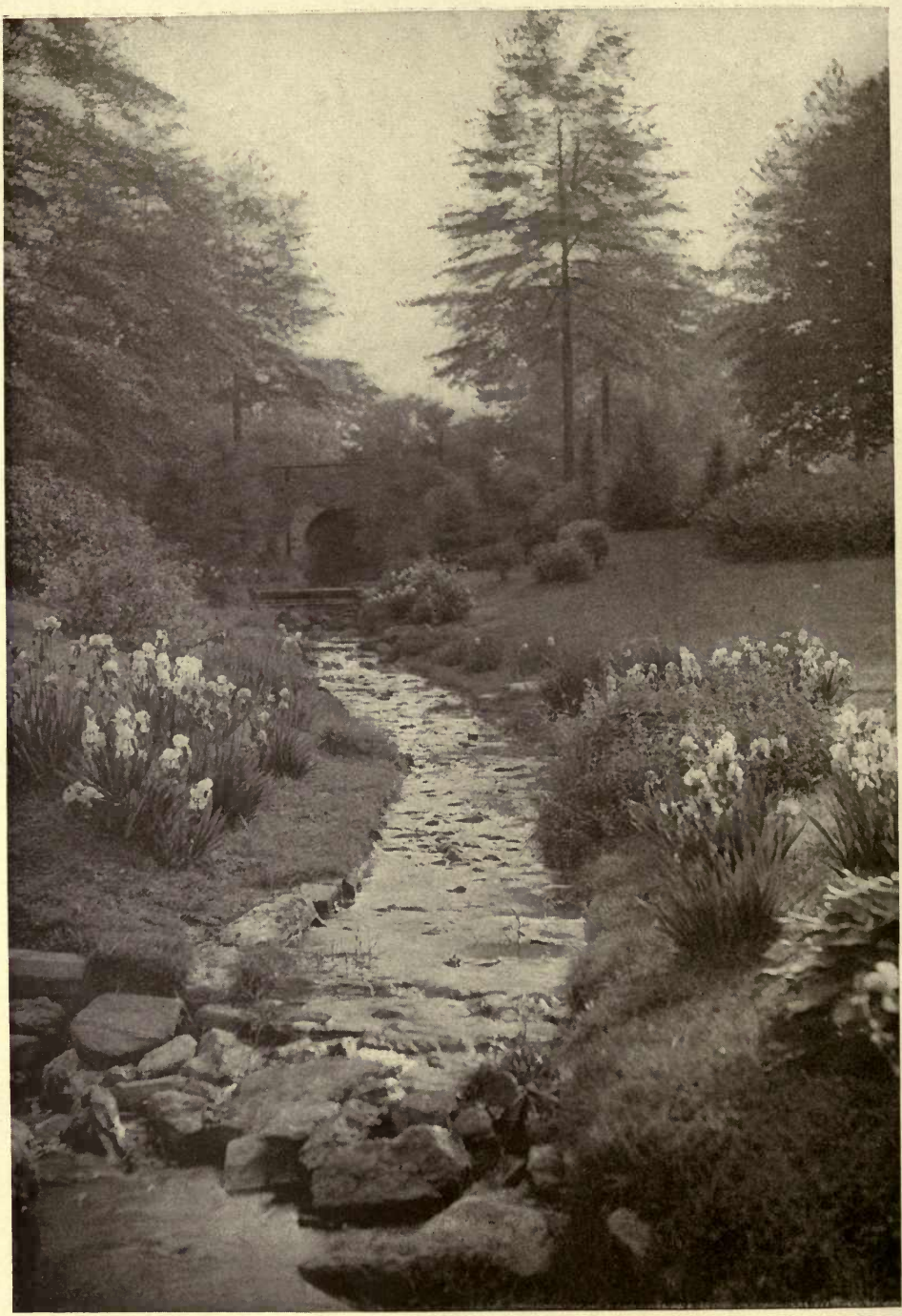
supplied with a stream of water smaller than a lead pencil, from the house main. The zealous amateur who a few years ago proudly displayed in her oil barrels some of the choicest Marliac water lilies, of as varied tints as a debutante's party dresses, her brilliant water poppies and the feathery papyrus plant of the Egyptians, now invites your admiration of her superb pink Indian lotuses that thrive in six half-hogsheads. If she might sink the hull of the *Great Eastern* in her little sunny lawn and grow the *Victoria regia* therein perhaps her ambition would be still unsatisfied.

Even where the smallest stream of running water cannot be had — and constantly running water is not desirable except in large ponds — there is no danger of mosquitoes breeding in tubs and barrels if these are flushed out with a hose once a week. But, of course, the ideal spot for a water garden is an otherwise worthless, boggy piece of low land through which a sluggish stream finds its way. Nothing remains but to clear the land of stumps, brush and the rankest weeds, to dam the stream and plant your pond. Nature has been working for you during the centuries.

Your true landscape gardener will cherish the alder bushes, osier willows, tulip trees, tamarack and swamp maples on the banks, magnolia, wild azalea, meadow sweet, button-bushes, superbum lilies, boneset, yes, and even the tall, stalwart "cat tail" bulrushes. Like wild rice, arrow-head, pickerel weed, wild iris and sedges, the rushes, that rise in phalanxes on the margins of the pond, are content to stand either on the shore or with their feet in water. Study the work of the best Japanese artists if you would realise the decorative value of such plants. Politely but firmly will the landscape gardener, who has not mistaken his calling, overrule his patron's suggestion to have a shaven lawn come down to the water's edge, knowing that it would strike as false a note of



"WATER IN A LANDSCAPE IS AS A MIRROR TO A ROOM — THE FEATURE THAT DOUBLES AND ENHANCES ALL ITS CHARMS"



A BROOK, FALLING DOWN THE SWARD BETWEEN TREES AND BUSHES AND CLUMPY GROWTHS, MAY BE INDUCED BY A DAM TO OVERFLOW A BIT OF LOW-LYING MEADOW AND BECOME THE PRINCIPAL FACTOR IN A WATER GARDEN

artificiality in a naturalistic picture as a concrete curb. Nor may the man who merely pays indulge a fancy for little dumpy islands that would give an effect something like a fly-specked looking-glass to the mirror-like surface of the pond. One might think that rhododendrons would look well anywhere, but perhaps no other plant is so unsuited to small islands, which they seem to transform into dumplings.

Oftentimes the beauty of plants already growing about the site of a proposed pond should determine the shape of it. How well worth while to let a little promontory jut out into the water in order to save a fine clump of white birches backed by hemlocks; to leave as an island, if the pond be large enough, the colony of clethra and andromeda bushes where Maryland yellow-throats have had their happy home for generations; to indent the shore where the water of a little bay might refresh trilliums, spring beauties, marsh marigolds, Virginia cowslip and royal fern (Osmunda) that would certainly perish through too drastic draining. An indented shore line increases the apparent size of a pond, besides affording more margin for planting. In any case, a flowing, irregular outline is always preferable to the perfect ellipses and circles suggesting geometry problems writ in water.

One of the most delightful by-products of a pond — to use a commercial phrase — may be a bog garden. "Nature's sanctuary," it will be remembered, was Thoreau's name for the swamp about Walden pond where he found some of her loveliest treasures hidden. There is the ordinary bog of plain black muck, semi-fluid and bottomless, yet not without its gifts of cardinal flower, viburnum, silky dogwood, blue lobelia, Joe Pye weed, elm-leaved goldenrod, convolvulus and hosts of other lovely wild shrubs and flowers; but it is in the sphagnum bog, where for ages the moss

has grown and decomposed, slowly piling layer on layer, that the interesting insectivorous plants have their home — pitcher plants, Venus's fly-trap, butter-wort, sundew, and many of the shyest, loveliest orchids. Water in a sphagnum bog is the purest of the pure, containing no bacteria, and as its moss is so poor in nitrogen we now understand why some of its denizens must either get that element through an insect diet, or, like the bog-loving members of the heath and orchid families, secure their nourishment from decaying organic matter. Which is to say that they, in common with the ghoulish Indian pipe, pine sap and mushrooms are what botanists call "partial saprophites"— a far more respectable class than out and out parasites to which the murderous mistletoe and dodder belong.

In the making of a wholly artificial pond of any considerable size that is desired to have the appearance of a natural sheet of water, so much digging and grading will be necessary, so much mixing of cement or puddling of clay to make a water-tight layer on the bottom and sides of it, so much preparation of good, rich, heavy soil for planting in, that only the most zealous lover of aquatic plants should attempt one; only a rich man can afford one, and no one less than a genius can give an entirely artificial water-garden the semblance of sincerity and perfect naturalness. A natural hollow in the land, deep enough to allow the addition of more than a foot of rich soil, will save an excavator's bill; a spring or any water supply in the vicinity that will prevent a plumber's longer bill for piping is a boon, and the presence of a bed of pure clay for puddling the pond will also save dollars that one would so much more gladly give for shrubs, hardy flowers and water lilies than for cement.

After the gently curving outline of an artificial pond has been

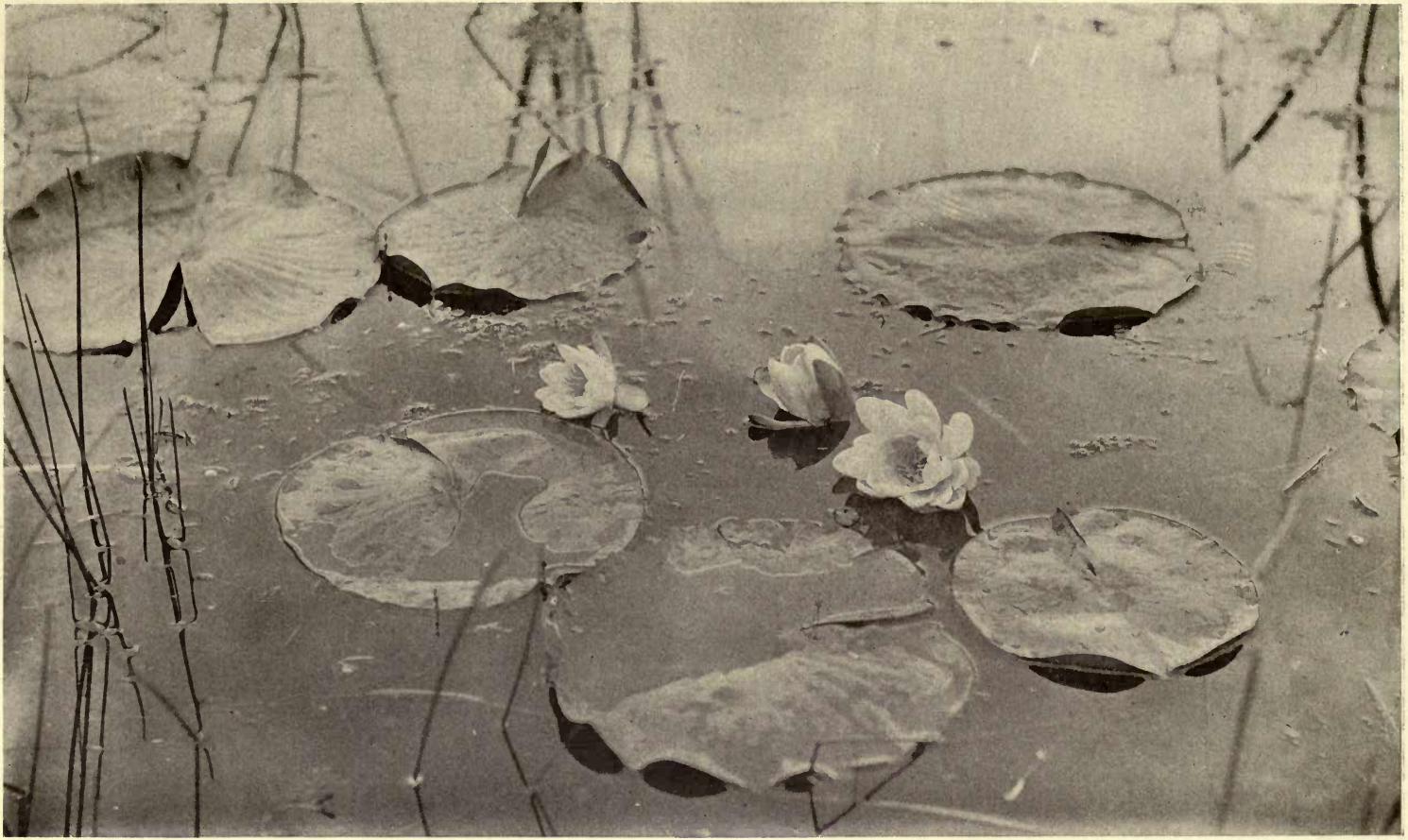
staked out, it will probably be necessary to use a spirit level and straight edge to fix the grade for levelling the bottom; perhaps a surveyor's instrument may be needed if the pond is to have a greater diameter than a hundred feet. Small water gardens can have charms out of all proportion to their size and expense, let it be remembered. As the roots of water lilies must never be allowed to freeze, the depth of the pond they are to be planted in will be determined by the thickness of the ice, if any, that is likely to form over it. It is certainly desirable that the water should be as shallow as possible, usually not deeper than two feet, not only because the sun will keep it warmer, but because much digging will be saved. Then, too, the rubber-booted gardener should be able to wade out to every plant in case of need. For this reason the practical person will advocate the planting of water lily and lotus roots in tubs or boxes and sinking them, rather than setting them out in the enriched bottom of the pond itself where they may spread at will. If the entire bottom of a pond be covered to the depth of fifteen or eighteen inches with rich, heavy soil, the cost is naturally considerably greater than when only the small area planted, or the tubs that contain the tubers and rhizomes of aquatic plants, need be supplied with it. Moreover, the rubber boot is sure to damage roots that roam at large, and, by stirring up muck and rubbish from the bottom, it fouls the water.

Since much water is necessarily lost from a pond every day by evaporation and the transpiration of the plants, it is essential that little or none should be lost by leakage, particularly if the water supply be not abundant. An ordinary day labourer can mix pure clay in a mason's shallow, wooden mortar-box, chop it with a spade if it be lumpy, sparingly moisten and then pound it with a wooden maul until it is of the proper consistency to be beaten on to

the sides and bottom of the pond to the depth of three or four inches. After it has been well tamped, let him tamp it yet again. A coating of beach sand and pebbles over the clay bottom is desirable where they may be had. Spread over the soil in the bottom of any pond, natural or artificial, they prevent the manure and other rubbish from rising through the water, which should be clear as a mirror always.

Cement will be used where there is no clay available for lining the artificial pond, especially where the soil is naturally sandy and mixed with gravel, through which Niagara itself would drain through to China. For the pools and wide canals of frankly formal gardens concrete is indispensable. After a carpenter has made the wooden frame for the circle, ellipse, square or whatever shape is desired for the pool, it is a simple matter for the village mason to pour mixed cement and sand into it. Some very beautiful effects have been obtained with aquatic plants in artificial basins, notably at the great expositions in Chicago and St. Louis; but generally speaking, lotuses, water lilies and their associates are best adapted to the naturalistic method of treatment on home grounds.

From the artistic standpoint, the artificial pond is usually sadly handicapped, but from that of the practical grower of choice aquatics there are undeniable advantages in having cultural conditions under control — in being able to regulate the water supply with a spigot, to drain off the water, if necessary. For the little sluggish brook that looks so innocent at midsummer, when you make your delightful plan, may swell into a raging, obstreperous torrent next spring, tear away your wild garden and rockery, scour a devastating course through your ineffably precious bog garden, undermine the banks and the dam of your pond, and actually



WHAT WATER GARDEN WAS EVER COMPLETE WITHOUT ITS GOLDEN-HEARTED PASTEL-TINTED WATER-LILIES FLOATING ON THE SURFACE AMONG THEIR DISC-LIKE LEAVES OF BRONZE, COPPERY GREEN AND MAHOGANY?



FLOATING WATER LILIES AND THE INDIAN LOTUSES STANDING WITH THEIR LEAVES AND PINK FLOWERS WELL ABOVE WATER. ALMOST EVERY GARDENER WILL MISINFORM YOU THAT THIS IS THE TRUE EGYPTIAN LOTUS. THE SEED OF THE INDIAN LOTUS, WHICH IS GOOD TO EAT, IS THE SACRED BEAN OF PYTHAGORAS

cause the death of your pet aquatics by drowning them. One cannot prepare too carefully against such a disaster. A dam of the most solid construction is the first essential. Open ditches and ample drains that are really adequate outlets for the water as fast as it enters in time of flood must be provided for a pond that is supplied by a brook, but even an artificial pond needs to have an outlet for the water which will become stagnant and unhealthful if there is not some movement of it at times, however slight. The perfectly balanced aquarium is not made on so large a scale.

Aquatics insist upon a very rich and rather heavy soil — about one-third cow manure to two parts of well rotted sods is not too hearty a diet for these voracious feeders. It has been noted that flowers of especially fine colouring are produced where there is an intermixture of pure clay with the soil. Wild water lilies may fare well enough on decayed leaves and other vegetable matter in the mucky bottoms of natural ponds, but the best results are not obtained when this simple diet is offered the pampered darlings of the French and American hybridisers. Lotuses withhold their queenly flowers unless they are abundantly fed. Water poppies, papyrus, flowering grasses, bamboo and other companions are not so fastidious, but they, too, enjoy good living.

In autumn, after the canvas for the picture has been prepared, as it were, for the painter's brush, begin the planting by setting out such hardy deciduous trees and shrubs as have been chosen for a background. Evergreens, however, which make the most effective windbreak, would better wait until late spring. At the risk of harping too much upon one string, let it be said yet again that the trees and shrubs that grow naturally in the neighbourhood, and so fit in well with the surrounding landscape, are always the

best to use. Don't plant Colorado blue spruces on the north bank of your pond if you live in Massachusetts, nor dwarf Japanese maples of brilliant reds and yellows, nor shrubs with variegated leaves, nor other exclamation points, in what should be a reposeful, naturalistic composition. In any case, don't set out tall growing trees where they will shade your pond, which needs all the sunshine possible. You may plant much or little on the gently sloping banks, but the real test of the artistic treatment of any water garden is the softening or effacing of the line where land and water meet. Grindling Gibbons spent two years carving a frame for a mirror. Nature bestows her most deft and delicate touches upon water margins. She has a large class of exquisite amphibious plants for her mirror frames — the flowering sedges, irises, marsh marigolds, rushes, meadow-rue, forget-me-nots, fringy ferns, the white-blossomed arrow-head and the blue spiked pickerel weed, water-clover, the great blue lobelia, next of kin to the gorgeous cardinal flower, jewel weed, boneset, elm-leaved goldenrod, eupatorium, a swamp wild rose (*R. Carolina*), and a host of others. Whoever possesses an old pond, with its own precious edge fringed with the luxuriant growth that springs out of alluvial soil, has more done for him than he who need not attempt to imitate it can realise. Although he may add to nature's list of plants for his special section the decorative Eulalia grasses, erianthus, the stately Japanese irises and aquatic plants from the five continents, it is doubtful if he add thereby to the artistic result. Only where the pond adjoins a garden do the ordinary garden flowers look well about it — poppies, foxgloves, larkspurs, and their familiar associates, boldly planted. Just as in the Latin language an adjective must agree with its noun in gender, number, and case, so must a garden, aquatic or otherwise, agree with its environment. It would be as futile to attempt a

naturalistic pond in the centre of a smooth shaven lawn as to place a classic Roman Nymphæum in the midst of a wild garden.

But what water garden was ever complete without its golden-hearted, waxy-white and exquisitely tinted water lilies floating on the surface among their disc-like leaves of bronze, copper, and mahogany? To secure flowers of the hardy Nymphæas the same season, plant as early in the spring as the rhizomes show signs of growth, or at any later time until September to establish plants whose bloom is not expected until the following year. No matter in what depth of water a plant has grown previously, its hollow, rubber-like stems readily adapt themselves to new conditions, and although submerged two feet when set out, it will send up its leaves to the sun and air on the surface in an incredibly short time. Where it is possible to control the supply of water, increase the depth of the pond gradually and so keep it warm, thereby insuring a more rapid growth for the plants.

Lotuses (Nelumbo) should not be put in a small pond where choice water lilies are growing unless the latter, at least, are confined within tubs or partitions separating them from the greedy lotus tubers ever pushing about through the soft rich muck seeking what they may devour. The great round lotus leaves held up high above the surface would as effectually keep off the sun from the water lilies as so many big green umbrellas. It is sometimes necessary to anchor the roots of both water lilies and lotuses with bricks or stones before growth starts, lest they rise from their soft muddy bed and float away.

In the Northern states lotus tubers are often started indoors, and the tubs or hogsheads are dropped into the pond several weeks, perhaps, after the more hardy Nymphæas were planted out; but, once established, lotuses withstand very severe winters, provided

their roots do not freeze. Of all aquatic plants, perhaps they most resent being transplanted and interfered with. Where water is drained out of ponds and basins in winter, a thick covering of stable litter and autumn leaves, confined with branches, gives them and the water lilies all necessary protection. Tender tropical water lilies may never be trusted in the open until settled warm weather would make it quite safe to set out begonias. They, too, may be started indoors, preferably in the tubs or crates where they are to grow through the summer, and stored in a cellar or greenhouse during the winter. Where one has a pond large enough to grow the gigantic *Victoria regia*, it may be planted out at the same time as the tender Nymphæas after it has made a good start under glass. Not even a gypsy camp in a neighbourhood will attract more visitors.

Although the lotus was sacred to the ancient Egyptians, it is only about fifty years ago that it, or indeed any aquatic plants, began to find their way into our affections and our gardens, and very slowly at first It was not until the magnificent display at the World's Fair, Chicago, that people realised what a great wealth of beauty lies within our easy reach. Even now, many have quite erroneous ideas concerning them — for example, that only the rich may enjoy them, that artificial heat is necessary for all, and that deep, warm running water and an expert gardener to look after them are among their numerous wants. As a matter of fact, the hardy aquatics are as easily grown as potatoes. The booklets given away by the reliable dealers who make a specialty of aquatics furnish all necessary information concerning their simple culture. Even the tender, tropical water plants are less troublesome than many popular favourites — show chrysanthemums, for example. Lively times with trap and gun may be in store

for the grower of water lilies and lotuses before he has conquered their most troublesome foe, the water rat. Aphides may sometimes leave the rose bushes to suck the juicy young lotus stems, but strong spraying with a hose washes them off and kills many. If they are very persistent, however, it will be necessary to powder the plants with tobacco dust which, it is true, makes them unsightly for a time. If there is a small boy in the family who can be hired to collect lady-bugs and pasture them upon the aphides, for which they have an insatiable desire, it is an easy solution of what, at its worst, is a small difficulty. Frogs and water snails should be encouraged wherever aquatics are attempted.

As for gold fish, they are indispensable. Hardy enough to live out in our northern ponds that never freeze to their total depth, the beautiful fish multiply astonishingly with no care whatever. The feathery submerged part of the water hyacinth is a favourite place for depositing their spawn. With the larvæ of the mosquito that can develop only in water and which gold fish devour by the million, they eradicate the last reasonable objection to having a water garden near one's home. Without them on constant patrol, it might readily become a resort for the malaria-spreading pest. They are our foremost allies everywhere — even in rain barrels — against the mosquito. Carp in pools near castle, monastery and palace, were favourite pets of feudal lords, monks and kings in mediæval days. Gold fish, the carp's rich relations, may be tamed even more readily to eat from the hand.

A water garden, however small, is worth having if only to attract the birds near one's home. How they delight in it! How they sing! Many visitors must travel miles for a drink on a hot day.

But perhaps they enjoy a splashing bath on the lily pads even more. From matins until evensong there is not an hour of the day when you cannot enjoy the visits of robins, catbirds and thrushes that are perhaps the most appreciative bathers among your many less familiar and more shy bird neighbours to whom water is the surest means of introduction.

Where a single Indian lotus might lift its great round leaves high above the water, catching the rain drops that roll about on them like so many balls of quicksilver; where its big pink, pointed buds might expand into golden-hearted flowers of Oriental splendour, and later, when the odd seed vessels might appear, I wonder how any one could forego so much beauty, even if only a tub at one's doorstep might be its humble habitation.

What Are Best of the True Water Lilies

Brydon's (*Nymphæa James Brydon*). Red. Strongest growing plant among the hardy red water lilies. Day bloomer. Good for cut flowers. Very early and floriferous. Sterile.

Cape Cod Lily (*N. odorata*, var. *rosea*). Even pink. Flowers 3 to 7 inches. Opening 6 A.M., closing at noon, but sepals remain open. Shy bloomer. Does not thrive south of Philadelphia. 2 to 4 feet of water.

Chinese Pigmy Water Lily (*N. tetragona*). White. Smallest growing hardy water lily. June, September. Opens noon, closes at five o'clock. Flowers 2 inches across, star-like. Leaves dark green with dull red beneath. 1 to 3 feet of water.

Dazzling White Lily (*N. alba*, var. *candidissima*). Snowy white. Nearly odourless. June till frost. For depths 2 to 5 feet where the common pond lily cannot grow. Exceedingly strong and hardy. Day bloomer. Sterile.

Devon (*N. Devoniensis*). Red. Best night-blooming water lily of its colour. Petals ovate 4 to 5 inches long. Not so expanded as O'Mara's. Very free blooming. Produces a number of lateral crowns. A single plant may cover two hundred square feet.

GLADSTONE'S (*N. Gladstoniana*). White. Hardy, day bloomer. Scentless; 8 inches in diamteer. Petals forming a glistening sphere from early morning till 3 P.M. Enduring four days. Not very free flowering, but quite hardy and strong growing. Must have three or four shoots for continuous bloom. 1 to 2 feet of water.

GRACILIS (*N. flavo-virens*). The *N. gracilis* of the American trade, but differing from the plant of that name in the European trade. Dull white, star-shaped; narrow pointed petals. Sepals pure green. Sweetly scented, opening three successive days from early morning till six at night. 1 foot above the water. Easily raised by seeds or tubers. The commonest and best tender white day bloomer.

HUSTER'S (*N. George Huster*). Best very dark red night-blooming. Tender. Deeper flower than the Devon lily; 8 to 10 inches across. Otherwise like O'Mara's. Strong growing. Free bloomer.

LAYDEKER'S (*N. Laydekeri* varieties). For small spaces, 2 to 4 feet square, and for very shallow water. —— (var. *fulgens*). Magenta. —— (var. *lilacea*). Rosy lilac. —— (var. *purpurea*). Purplish. opening after nine o'clock. —— (var. *rosea*). Pink; most floriferous small pink. None of this class produces seed.

MARLIAC LILIES (*N. Marliacea* varieties). —— (var. *albida*). White, similar to Gladstone's lily; rank growing. Leaves and flowers often carried above the water. —— (var. *carnea*). Light pearly pink and var. *rosea*, deep rose, are both of identical habit. —— (var. *ignea*). Flowers deep red with cardinal stamens, floating, leaves blotched brown, deepest coloured hardy red. —— (var. *chromatella*). Most floriferous yellow, hardy, very double; early flowering. All these are good for small water gardens. Chromatella is the hardiest and most satisfactory of all the hardy lilies. June till frost. Leaves and flowers grow above water if crowded. Also good for cut flowers.

O'MARA'S (*N. Omarana*). Brilliant purple red. Glowing in the sunshine. Narrow white stripe in each petal. Flowers 1 foot across. Stamens brownish red. Blooms July till frost. Leaves bronzy red. The most splendid night-blooming water lily. Flowers 1 foot above the surface. Good for cutting.

Pink Pigmy (*N. Laydekeri*, var. *rosea*). Pink. Similar to Chinese white pigmy in size, habit, and leaf. Free flowering. More cup shaped. Colour deepens with age from shell pink to carmine rose. Very shallow water.

Pond Lily (*N. odorata*). White. Unequalled for fragrance, but not so free flowering as some others. For large ponds. Hardy. Day bloomer. Flowers 2 to 5 inches. Good for cutting. ——, Southern (var. *gigantea*). White. Strongly scented, 3 to 6 inches across. For water up to 8 or 10 feet. Leaves 1 foot; round. A large odorata. ——, Lesser (var. *minor*). White. A diminutive odorata. The best water lily for shallows, and will even stand complete drying. Flowers 1 to 3 inches. ——, Yellow (var. *sulphurea*). Best hardy yellow for shallows. Opening from 7 to 8 A.M. Best for cutting.

Red Gracilis (*N. flavo-virens*, var. *rubra*). Deep pink, approaching red. Petals narrow, tapering. Flower star-like. Tender. Day blooming. Best tender red day bloomer. 1 foot above water.

Richardson's (*N. tuberosa*, var. *Richardsoni*). Most double of all the white water lilies. Odourless. Does best in about 3 feet of water. Flowers form a very delicate rosette. Floating.

Robinson's (*N. Robinsoni*). Red. Outer petals yellowish. Flowers floating and leaves with a notch on border of the sinus. Oldest and best known of the yellow-red water lilies. Free flowering but not spreading rapidly. Hardy. Good for cut flowers.

Seignorette's (*N. Seignoretti*). Excellent companion to Robinson's water lily but with flowers standing six inches above the water and leaf not notched.

Sturtevant's (*N. Sturtevantii*). Bright pink, with brownish orange stamens. Night blooming. Requires high temperature. Most massive in both flower and foliage. Flowers 1 foot in diameter. Leaves becoming bronze with age.

Victoria, or Giant Amazon (*Victoria Cruziana*). The largest of all aquatics, leaves 6 feet across; flowers 1 foot; white, becoming pink on second day. Needs a warmed pond, but has borne seed outdoors at Philadelphia. Better than the more tender *V. Regia*, which it closely resembles. Needs special pools. Raise annually from seed.

White Night (*Nymphæa dentata*). Pure white; 8 to 10 inches across. The petals make a ring at right angles to the petiole with central erect yellow stamens. Curiously stiff looking, like a short yellow candle in a white saucer. Var. *grandiflora* with wider petals, var. *magnifica* largest of all, var. *superba* with more numerous petals.

White Pigmy. See Chinese White Pigmy.

Yellow Pigmy (*N. tetragona*, var. *Helvola*). Yellow. Similar to the white pigmy, but leaves are heavily blotched with reddish brown. Hardy at Washington. Shy bloomer. 3 feet of water.

Zanzibar (*N. Zanzibariensis*). Royal blue. Tender. Day bloomer. Flowers 10 inches across; 8 to 10 inches above the water on stout stalks. Broad, blunt petals, anthers golden. Opening from three to five days 11 A.M. to 5 P.M. The best of all the water lilies, adapting itself to all sorts of conditions, flowering even in a small pot. July till frost. Var. *azurea* sky blue; var. *rosea* rose pink. Under sides of the leaves are coloured similarly to the flowers in each case.

Desirable Adjunct Plants for the Water Garden

(Swamp Mallow, Loosestrife, Cardinal Flower, Meadow Rue, and many other plants named in the list of Natives for the Wild Garden and suitable for moist and wet soils can be used on the margins of the water garden. Reference should also be made to many plants enumerated in Herbaceous Perennials. They are indicated by (*) in both lists.)

The flowering season is given as for New York, generally, and will of course vary North or South.

Bladderwort (*Utricularia purpurea*). Submerged leaves bear bladders which trap insects. Purple flowers, quite showy in early summer. ——, Common (*U. vulgaris.*) Yellow flowers. Floats freely near the surface. Both require very still water.

Bog Rush (*Juncus effusus*). Round dark-green stems. For marshy places. 2 to 4 feet.

Brooklime (*Veronica Americana*). Creeping plant for edges of brooks and ponds, making sheets of pale blue flowers. April to September. Leaves rounded. 4 to 6 inches high.

Bulrush, Cat-tail (*Typha latifolia*). 2 to 4 feet. For pool margins and still waters. Flowers borne in dense brown spike 6 inches long. For massing plant 2 feet apart. The best plant of its kind for this purpose. Summer.

CABOMBA (*C. Caroliniana*). Submerged. Luxuriant plumes 1 to 2 feet long. Hardy in two feet of water at Philadelphia. Commonest plant for aquaria.

CALLA, SPOTTED (*Richardia albo-maculata*). For margins; 2 feet. Leaves dark green with silvery spots. Flowers creamy yellow. 2 inches wide. Best spotted leaved plant.

FLOATING HEART (*Limnanthemum lacunosum*). Floating, ovate. Blotched or mottled. 2 inches broad. Attractive quite regardless of the white flowers borne all summer. Pools and still water. 2 feet deep.

FORGET-ME-NOT. See HERBACEOUS PLANTS, p. 221.

GIANT REED (*Arundo Donax*). Boldest tall growing grass for semi-wild and tropical effects. 15 feet and, rarely, up to 30 feet. Looks like a giant corn. Variegated form less hardy than the type and dwarfer. Var. *macrophylla* is glaucous. Will grow where pampas grass is not hardy. Propagate by ripe canes laid on wet moss in winter.

HORN FERN (*Ceratopteris thalictroides*). For shallow water. Sterile fronds feathery, light green, 10 to 15 inches. New plants produced wherever these fronds fall into the water. Annual. Propagate by spores in water.

IRIS, YELLOW (*Iris Pseudacorus*). Yellow, long strap-like leaves. May-July; 2 feet. For marshes and banks. ——, JAPANESE (*I. lævigata*). Excellent for big floral effects. See also HERBACEOUS PLANTS, page 223.

LOTUS, AMERICAN (*Nelumbo lutea*). Creamy white, 10 inches in diameter; 3 to 4 feet above water. July, August. Excellent for wild waters; roots spread freely. Rich earth under 4 to 12 inches of water. Enclose roots in brick tank. Transplant in spring. ——, PINK (*N. nucifera*, or *speciosum*). Similar in all respects to the foregoing, except in pink flowers. There are many varieties of this: *rosea*, deep rose, single and double; *Shiroman*, white double; *Kinshiren*, dwarfer, double. Species is more hardy than the varieties.

MARSH MARIGOLD (*Caltha palustris*). Bright yellow. May; 12 to 15 inches. Good for sun or shade, on banks or in brooks up to 4 inches deep. Plant 1 foot apart. Double form and dwarf form.

PAPYRUS (*Cyperus Papyrus*). Soft and grass-like leaves a foot long on top of each stalk, like a large umbrella plant. Tender; take up after first frost in autumn to warm well-lighted tank; 4 to 6 feet above.

PARROT'S FEATHER (*Myriophyllum proserpinacoides*). Slender feathery plumes, very finely divided; 6 to 8 inches long. Roots in the earth at the margin, and makes the brightest green tuft over the water. Winter by putting a few pieces in a bottle of water.

PICKEREL WEED (*Pontederia cordata*). Blue. 8 to 12 inches above the water. In water 1 foot deep. See also NATIVE PLANTS, page 94.

PITCHER PLANT (*Sarracenia purpurea*). 6 to 8 inches, with flower stalk 18 inches. Leaves tubular, pitcher-like, and curved; greenish with reddish purple veins. For very wet borders. Flowers deep purple.

SWEET FLAG (*Acorus Calamus*). For shallow lake, or wet places. 3 feet high. Light green leaves. Flowers yellow. Leaves die at the top after spring growth, sometimes giving a very ragged effect. *A. gramineus* and var. *variegatus*, similar but dwarfer.

THALIA (*Thalia divaricata*). Broad oval leaves 1 foot long resembling canna leaves; 6 feet above. Will grow in a tub. Winter in warm tank or half dry in a cool house. Flowers insignificant.

UMBRELLA PLANT (*Cyperus alternifolius*). 3 feet. Similar to the common umbrella plant of the greenhouses, which is in truth a smaller variety. Easily propagated by division of the roots or by the leaf cut off and inserted in water.

WATER ARUM (*Calla palustris*). For banks. 6 inches. Mulch with sphagnum moss. Resembles common calla.

WATER ARUM (*Peltandra Virginica*). Arrow-shaped calla-like leaves. 6 inches long. Green spathe 6 inches long in May, June; 1 foot above water. Green berries when ripe. Plant in mud under one foot of water.

WATER CLOVER (*Marsilea quadrifolia*). For pond edges. Growing in the earth or floating. Looks like a four-leaved clover. Useful for hiding pond margin.

WATER CRESS (*Nasturtium officinale*). For margins of clear streams 6 to 8 inches. Flowers white, small, all summer. Easily raised from seed or cuttings. Good cover to keep fish cool.

WATER HYACINTH (*Eichhornia speciosa*). Floats, or in water up to 2 feet. 18 inches. Leaves 5 inches in diameter with inflated stalks. Flowers violet in spikes 8 inches long. Spreads rapidly, must be restricted by wooden pen. A weed South.

WATER POPPY (*Limnocharis Humboldti*). Yellow. All summer; 6 inches. Floating leaves 3 inches across. Flowers borne singly, as big as the leaves, and above, last one day. Resembles California poppy. Tender. Plant in shallow water.

WATER SHIELD (*Brasenia peltata*). Floating. Leaves entire, 1 to 3 inches, broad, greenish, or purplish. Flowers dull purple appearing above the surface. Plant in 1 to 6 feet of water.

NOTE.—The experiences of leading growers and students have been drawn on in compiling the foregoing, viz.: Prof. H. S. Conard, H. Hus, W. Tricker, and P. Bisset.

TREES

"We find our most soothing companionship in trees among which we have lived, some of which we ourselves may have planted. We lean against them and they never betray our trust; they shield us from the sun and from the rain; their spring welcome is a new birth which never loses its freshness, they lay their beautiful robes at our feet in autumn; in winter they stand and wait, emblems of patience and of truth, for they hide nothing, not even the little leaf-buds which hint to us of hope, the last element in their triple symbolism." — Dr. O. W. Holmes

CHAPTER IX

TREES

WHAT place have trees in a flower garden? Will they not rob the lesser plants of food and drink, stifle them with shade, and ultimately strangle them to death?

At the outset, it must be confessed that few trees could be admitted within the garden proper, only those smaller ones which, like the boxwood, the bay, the laburnum, the lesser magnolias and dwarf evergreens, have a decorative value not overbalanced by their destructiveness to flowering plants. But in a larger sense the garden picture includes both its background and its frame, and as it would be difficult indeed to make a really good one without trees which serve most effectively for both, perhaps no apology for including them in this book is necessary. To break the sky line, to give diversity of outline and colour at different seasons, to increase the interest of the home grounds, to unite the house and its garden with the surrounding landscape, to form windbreaks and boundary belts, to afford shelter and shade, to screen off unsightly places, to emphasise the height of a hill top, to draw the eye toward a lovely view, to improve the quality of the atmosphere around a dwelling, to furnish masses of bloom, to attract birds that will keep insect pests in check and sing while they work for you, to make a place comfortable and beautiful in winter as well as in summer —these ends are not by any means all that may be accom-

plished by intelligent tree planting. And nothing about a home fosters quite so much sentiment as a tree.

> "Let dead names be eternised in dead stone,
> But living names by living shafts be known:
> Plant thou a tree whose leaves shall sing
> Thyself and thee each fresh, recurring spring."

It is a pleasant custom for each member of the family and the dearest of the family's friends to set out trees on the home grounds. To right-thinking people they stand for something far finer than so much nursery stock. In public parks trees are planted by distinguished men who visit the city and often acquire historic value as the years go by. A patriotic citizen recently paid over a thousand dollars to an expert to prolong the life of the splendid old "Liberty Tree" at Annapolis by pruning it, chiselling out the decayed wood, filling its enormous cavities with tons of cement, and supplying the exhausted soil around it with fresh nourishment. Sentiment persists in clinging to a tree like moss to its bark.

From the practical and the pictorial points of view we have been slow in learning that the evergreens, as a class, are the most useful. We shall never be able to live out of doors the greater part of the year, as the Europeans live in their gardens, until the value of trees that keep their leaves all winter is far more generally recognised. The old gardens of Italy are not only the most beautiful in the world, but the most comfortable at all seasons, because trees and shrubs that are permanently green and sheltering are their basis. And yet, with a far greater variety of them at our disposal than any Old World garden maker had four centuries ago, we are only just beginning to utilise them as we might for wind-breaks, screens, and hedges. Of course, trees with dense foliage should never be set out in the path of the prevailing summer



WHAT WOULD ONE NOT GIVE TO POSSESS SUCH AN OAK — THE VERY EMBODIMENT OF STRENGTH AND NOBILITY?



STRONG MASS PLANTING OF TREES AND SHRUBS ALONG AN ENTRANCE DRIVE WITH EVER-CHANGING VISTAS THROUGH THE OPEN STRETCHES OF LAWN

breezes; but many a house that is bleak and draughty in winter might be made quite comfortable, and with an actual saving of fuel, if evergreens suited to the conditions were planted on the north and east exposures or wherever the keenest blasts come from. And if they make for comfortable living indoors in winter, how much more enjoyment may be had out in the home grounds where they are freely planted! Some day we shall be wise enough to use evergreens as wind-breaks even for our cow and poultry yards, that the stock may live more comfortably and healthfully in the open air.

In the lee of a group of evergreens the superb large flowered magnolia of the South has attained great size so far north as Long Island, but it becomes deciduous there. The late Charles A. Dana grew to perfection at Dosoris many rare and beautiful exotics that would certainly have been winter-killed without the protection of evergreen guardians. No plant, however hardy, can attain its best if whipped and lashed by the wind. Even a vegetable garden will bear almost a fortnight earlier if an evergreen hedge surrounds it. Tall spruce, hemlock, arborvitæ, juniper or other evergreen hedges serve best to partition off an out-of-door living-room open to the zenith, into which sunshine pours, and the purest air, made actually warmer because of the trees, circulates to every corner without causing a draught. The comfort of such a cosy enclosure would astonish one who had never tested it. Now that the fresh air cure is being prescribed for most of the ills that flesh is heir to, worn and weary people will enjoy more and more the seclusion and comfort and fragrant purity of such living-rooms. They are ideal playgrounds for children. The baby that spends most of the time between sunrise and sunset in the open air, snugly sheltered from wind and cold,

makes the best possible start in life. Long ago we might have learned the value of evergreens from the birds that prefer them to all other trees as sleeping and nesting places.

In an emotional moment of "civic improvement" we were advised to take down our front fences and hedges, throw open our lawns and share with the public all the beauty of our home grounds, or be branded as selfish and undemocratic. The family life that should be lived as much as possible under the open sky, when rudely exposed to public gaze, must become either vulgarly brazen or sensitively shy, in which latter case it withdraws to the vine-enclosed piazza or to the house itself. There is a vast difference between the Englishman's insultingly inhospitable brick wall, topped with broken bottles, and an American's encircling belt of trees around his home grounds, or the tall hedge around his garden room to ensure that privacy without which the perfect freedom of home life is no more possible than if the family living-room were to be set on a public stage. The busy mistress of the house needs every encouragement to run out and work a while among her flowers without feeling that her unfashionable dress and tucked up petticoat are exciting the comment of passers-by. Thanks to the shielding evergreens, the young people may have rough and tumble play on the lawn, the father may feel free to don overalls and paint the garden chairs if the humour seize him, and the entire family, safely sheltered from curious eyes, may frequently enjoy a meal out of doors with perfect freedom and naturalness. The plainest fare has zest when eaten *al fresco*.

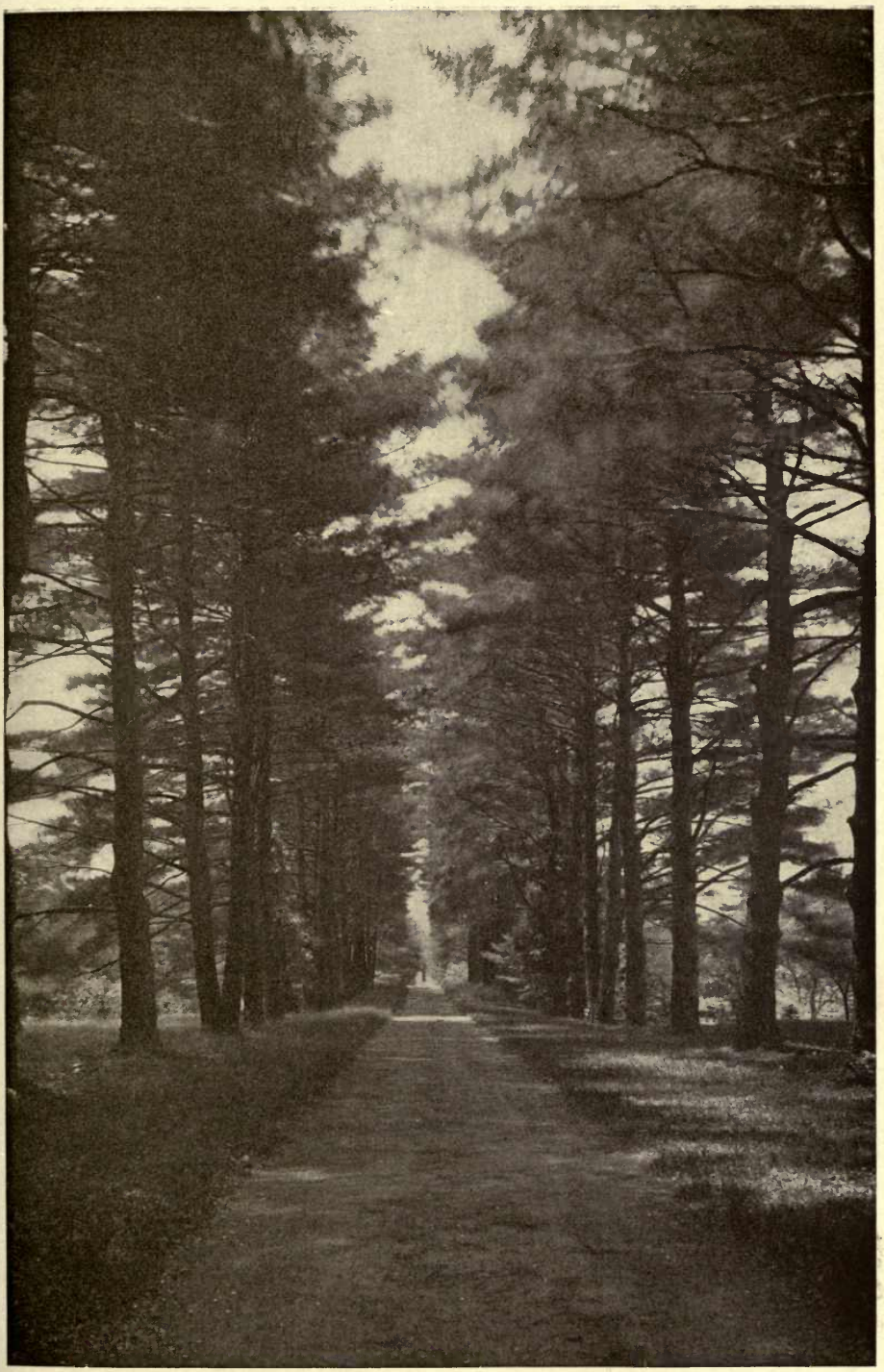
If suburban and country houses and stables are not to look bare and cheerless and ugly after the deciduous trees and shrubs have shed their leaves, as so very many do, evergreens need to be freely used in the boundary planting, on the lawn, and

for hedges and screens around the drying ground and service departments. Everywhere they are the main stay, the basis for content.

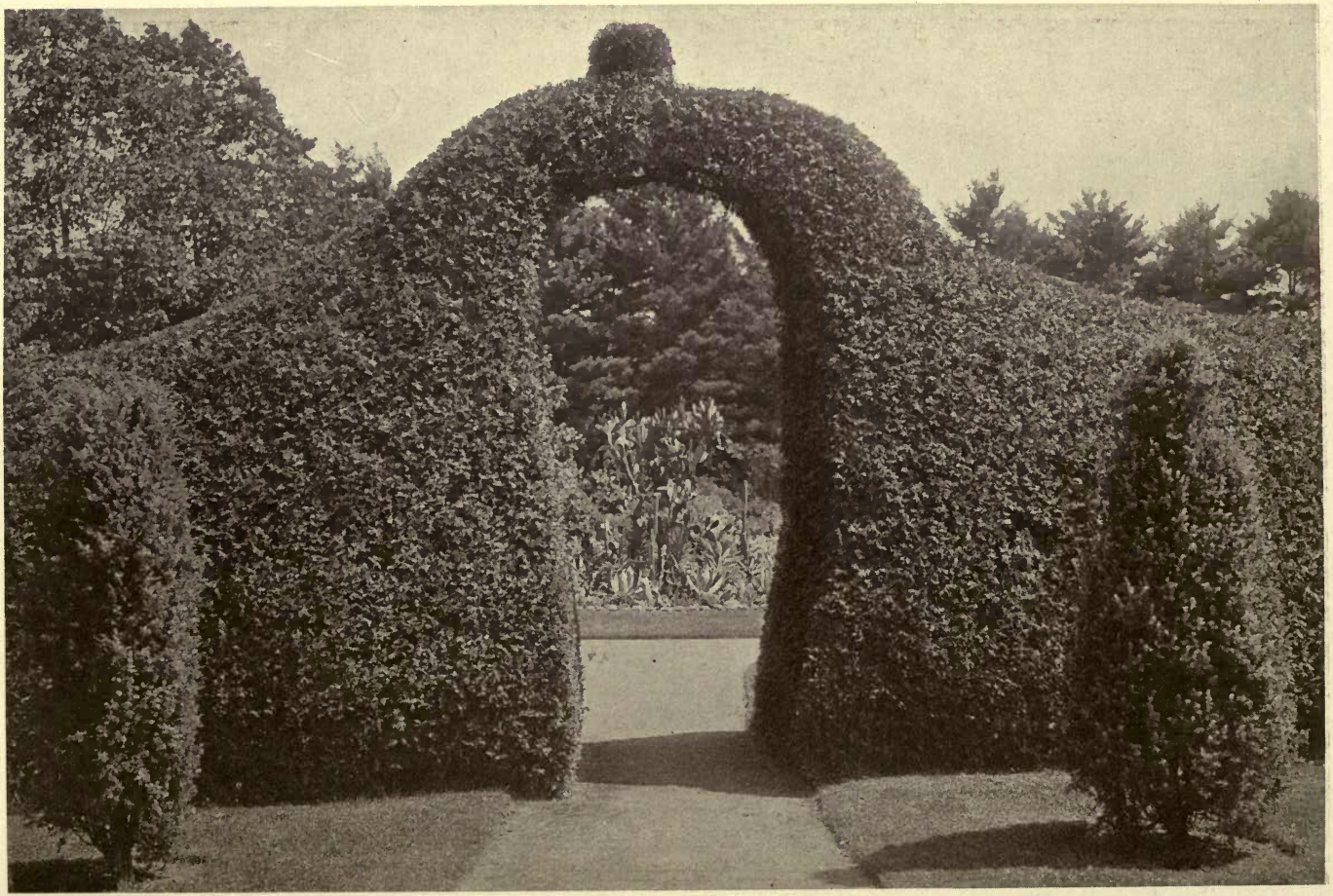
But trees, like people, have their good and bad points, and one cannot be too discriminating when it comes to choosing either for near neighbours. In those melancholy Puritanic days when cheerfulness was deemed akin to sin, there was a certain fitness in planting sombre evergreens in the dooryard where they shut out from the house the weak sunshine of a New England winter. For this position the Norway spruce, among the first trees imported, was usually chosen. It is good-looking only in its youth. Presently its lower limbs begin to die off, it becomes thin, ragged, unhappy, depressing, and in this condition it is undoubtedly responsible for much of whatever prejudice against evergreens exists. The vigorous white spruce, on the other hand, forms a broad-based, conical tree, densely clothed with cheerful bluish-green, short, sharp needles from its tapering tip to where its spreading branches sweep the ground. So hardy is it that in mass planting it may be used as a bulwark against storms, even along the sea coast. One might think that a spruce which is hardy in one place might be equally so in another. Not so. The Douglas spruce, of softer texture and more graceful outline than the white spruce, making it more desirable for a lawn specimen, was killed to the snow line when imported from France after having lived through six moderate winters; but the same species, brought from the higher altitudes of Colorado, never lost a leaf in the severe winters of 1903–4. It is important to know the source of the stock you buy. The glaucous silvery sheen of the Colorado blue spruce, that sprang so suddenly into public favour, looks as if the trees were covered with hoar frost when the exquisite new growth

scintillates in the sun. To light up a dark corner of the lawn, to run up the colour scale of a group of darker spruce and firs to a high, accented note, this tree strikes, perhaps, the most effective crescendo. But how sadly misused it is! Sometimes one could almost wish that it, like the over-planted crimson rambler, had never been introduced. These few spruces named illustrate how important it is to really know various members of even the most familiar tree tribe, their defects and merits, their uses and abuses, before installing them as neighbours about your home.

If the yew and holly are the best evergreens for England because, being native, they thrive there to perfection, so our spruce, hemlock, arborvitæ, pine and junipers are best for us to use as a basis for other planting. On the solid foundation of our native trees we may build the lighter superstructure and embellish it, according to fancy, with details from the ends of the earth; but let us not forget the enormous sums of American money wasted on European evergreens — on English yews alone. After exhausting the possibilities of our beautiful native trees, our hope lies in those from lands with climatic conditions, similar to our own, notably Siberia, China and Japan. The Korean yew (*Cephalotaxus pedunculata*, var. *fastigiata*), the Japanese yew (*Taxus cuspidata*) and their varied forms, with rich, dark, lustrous, dense, almost solid foliage that withstands intense cold and the brightest sun, promise to be the valuable ones for our landscape work years after the English and Irish yews, once so extensively planted, have perished miserably almost everywhere except in a few favoured places in the Middle South. We have to thank the Orient for most of the charming little retinisporas, the green and gold lace and embroidery among trees, that we most enjoy when planted close to the foundations of our houses, massed in corners, in



AN AVENUE OF WHITE PINES WHOSE FAR-FLUNG, HORIZONTAL BRANCHES HUNG WITH NEEDLES SHRED THE WIND INTO MUSIC LIKE AN AEOLIAN HARP WHILE SUBTLY ROBBING IT OF ITS POWER



GARDEN ENTRANCE THROUGH A DENSE HEDGE OF ARBORVITAE (*Thuya occidentalis*) ON AN ESTATE

carriage turn-arounds, and along the edges of groups of taller evergreens on the lawn.

A mixture of incongruous growths is apt to be the worst mistake of the tyro who choses the novelties of the nurseryman's catalogue so beguilingly described and then tries to reconcile the trees to the requirements of his place. Very rarely does he think of reversing the operation. After the experienced landscape gardener has drawn to scale a plan of the area to be beautified, he makes an inventory of what nature offers in the region, not only because the native trees will thrive best, but because they most fittingly tie a new place to the surrounding landscape, making it an integral part of the region at once. These will be the first on his list when he visits nurseries to select and tag stock. But not a tree will be ordered whose place is not already assigned on his drawn and redrawn plan. It is so much easier to rectify mistakes, and so much less expensive to shift tree belts, hedges, screens, masses of trees and fine isolated specimens on paper than with gangs of Italians and big tree-movers. The knowledgeable gardener with taste, who plants trees with a careful consideration for each of soil, situation, and climate, is an indispensable economy to the inexperienced patron. Even comfortably poor people cannot well afford not to consult him if they did but realise their own limitations and his worth.

For formal touches, no other hardy evergreens will reproduce in this country the effect of the Italian cypress so well as the red juniper, or so-called cedar (*Juniperus Virginiana*), and the artist-gardener uses hedges, screens, and arches of it as well as the tall, tapering, spire-like specimens that pierce the sky. In another locality the columnar arborvitæ, the true white cedar of the Northern States (*Thuya occidentalis*, var. *pyramidalis*), might serve

to repeat the classic lines of pilasters and columns. He may wish to make comfortable and beautiful a bleak hill-top where it is advisable to place the house for the sake of a superb view, and he will probably mass there the tall white pines whose far-flung, horizontal branches, hung with needles, will shred the wind into music like an Æolian harp, while subtly robbing it of its power. Or he may group the Nordmann's fir, Veitch's and the white fir (*Abies concolor*), all worthy of honourable place, knowing that a variety of trees of the same genus usually gives greater satisfaction than a collection of unrelated species. But he would never put in an exposed, high, dry, windy situation the feathery, graceful hemlocks that demand exactly opposite conditions to develop their finest possibilities. For rock work and ground carpets he uses prostrate junipers and dwarf pine.

After the foundations of comfort and beauty, as it were, have been laid on a place by means of evergreens, there will be bewildering opportunities to use deciduous trees for filling in the boundary belts, lining drives and paths, shading the tennis-court and beautifying the lawn. Shall large trees be bought or young nursery stock? Unfortunate indeed are the people who take possession of a new home without a few well-grown trees upon it. The desperate hurry, the nervous restlessness of the times in which we live give little encouragement to planting for posterity; therefore we have devised big tree movers to shift specimens to our grounds from anywhere within hauling distance. This is work for experts only, who must be employed at considerable expense and at no little risk. Perhaps the gambling element that is involved in such an enterprise only adds to its fascination. So great is the shock of root-pruning and adjusting itself to a new environment that my fine large pin oak, after struggling against the odds and living in a

half-hearted way for two years, finally gives up the struggle, in spite of thinning out its branches, wrapping its trunk with straw, watering, mulching and every other kind of coddling an anxious owner can devise; while your oak, bought at the same nursery and planted under exactly the same conditions, may never know it was moved. For giving a softening touch, a settled look to a bald new house, reconciling it at once to the landscape, nothing is so helpful as a good sized tree. The one that can be planted very near a dwelling, and not exclude the light and air from its living-rooms, is the high-arching elm. How well our forefathers understood the use of this most graceful tree!

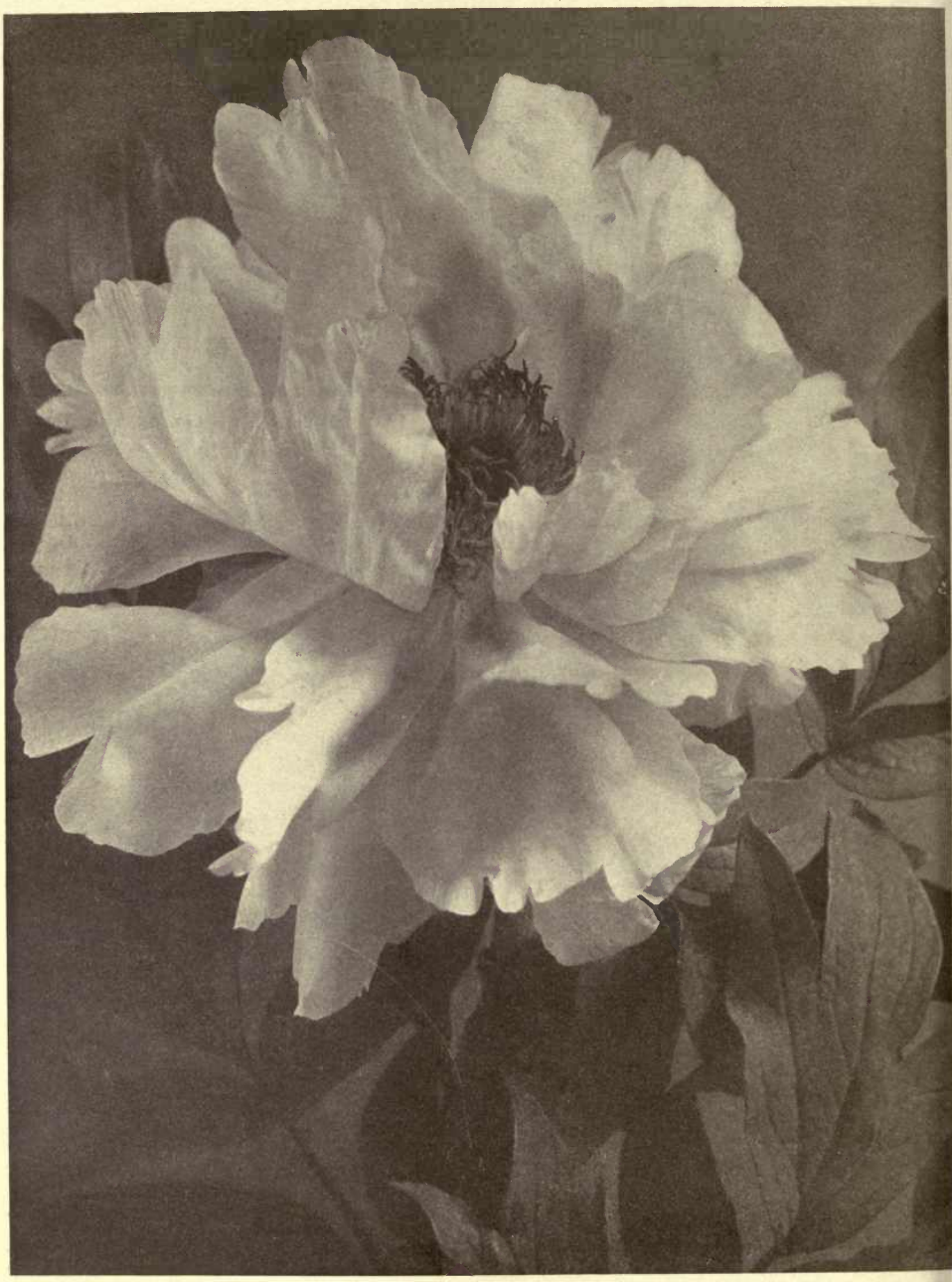
On large estates it pays to own the apparatus for moving big trees; or, neighbours and improvement societies may well combine to buy one. One enthusiastic amateur has reduced the percentage of loss to less than 5 per cent. of all the trees he moves, and, so daring has he grown, that he no longer root-prunes a tree before lifting it, nor hesitates to transfer a horse chestnut in full bloom from one part of his estate to another. When he already owns the trees, he estimates that it costs him twenty dollars apiece to move specimens for which a nursery that grew them would be obliged to charge several hundred dollars. Tree bargains may be picked up from neighbouring farms if a moving apparatus can be hired. Willows and poplars adapt themselves to new environment with alacrity, maples quite readily, oaks less willingly and beeches and white birches sulkily unless transplanted in youth. Owing to the enormous weight of the balls of earth that must be lifted with evergreens, it is not possible to move such large specimens as may be safely attempted among deciduous trees from whose roots the soil may be shaken out. Even for them, however, it is better to lift part of the ball of soil if possible.

When one cannot afford to move big trees, recourse may be had to the fast growing kinds, trees that skim the surface cream of the soil, as it were, rather than delve for a living deep down in it. Mulching, feeding and frequent watering will cause them to make rapid growth, but note how many willows, locusts and poplars are uprooted by storms, how many branches of the silver and other soft-wood maples are broken by ice and riddled by borers. However necessary it may be to include such trees for swift returns on a new place, it must be recognised that their tenure is temporary. Permanent satisfaction is derived from the sturdy oaks, the hard maples, the lofty, Gothic-arched elm, the beeches, graceful, clean and strong, the straight-shafted tulip tree, the lemon-scented silver linden, and other trees of slower growth but more lasting beauty. The red oak will grow as fast as the sugar maple.

Some trees will be chosen for their blossoms alone. Who would forego the loveliness of the dogwood, whose horizontal, leafless branches, starred over with large white flowers, thrust themselves out from the woodland border in May with abandoned grace; or, symmetrically trained by the nurseryman, reconcile themselves to a conventional lawn? But long before the dogwood blossoms whiten the landscape, the lovely tribe of magnolias begins its unrivalled floral effects that may be prolonged three months — from March to August — in the vicinity of New York. The Reverend Mr. Hall, a missionary returning from China many years ago, brought with him several specimens of a low-growing magnolia with exquisite, star-like, narrow-petalled, delicately fragrant white flowers, that he offered to many nurserymen in this country if only they would pay the transportation charges. All declined, until finally the late Mr. Parsons, of Flushing, took them



HORNBEAM TREES FORMING A PLEACHED ARBOUR SUCH AS EXISTED IN OLD ENGLISH GARDENS AND ON THE CONTINENT IN QUEEN ELIZABETH'S TIME, AND DURING THE NEXT CENTURY ON THIS SIDE OF THE SEA. PEAR TREES, JUDAS TREES AND OTHERS OF SUITABLE SIZE AND HABIT ARE BEGINNING TO BE USED AGAIN FOR LEAFY TUNNELS HERE



A TREE PEONY, WHICH BLOOMS EARLIER THAN ITS HERBACEOUS RELATIVES

off his hands, propagated a stock from them, and introduced to the Western world Hall's magnolia (*M. stellata*), the earliest showy flower we have and one of the loveliest. This low-growing bush-like tree must not be confused with the Yulan magnolia (*M. conspicua*), whose large pure white cups are set on the leafless branches of a tree that sometimes attains the height of thirty feet. It also blooms in early spring. Against a background of evergreens, where all trees that flower before their leaves come show to the best advantage, these magnolias are especially beautiful. Even the peculiar purplish pink of the Judas tree, not a lovely colour of itself, almost acquires charm if backed by hemlocks. So exquisite are the hybrid varieties of flowering fruit trees — the cherry, peach, and crab apple, whose every twig is a garland and whose masses of pink and white bloom most adequately express the exuberant beauty of spring — that no one with a dollar to invest in pure joy would forego one of them. "Sure ye can't see the tree fur the flowers on it," said an Irish gardener of Professor Sargent's favourite flowering crab.

If you would attract birds to your grounds, plant the service berry (Amelanchier) that happily diverts them from the strawberry beds in June; the Russian mulberry, whose cloying sweet fruit they have the bad taste to like better, perhaps, than any other; the fleecy white-flowered, bird-cherry tree, for whose racemes of blackish bitter little pills flocks of cedar-birds, especially, will travel many miles; the spiny, large leaved Hercules club (*Aralia spinosa*) sought by the hungry juncos as soon as they arrive from the North; the red-berried dogwood and hawthorns, whose flowers one would not willingly forego in any case.

How to make the best use of trees with variegated, weeping and freakish foliage is one of the most difficult planting problems,

albeit the first which the untrained novice usually essays. Probably the very worst way to use them is to dot isolated specimens about on a lawn — the worst way to plant any kind of tree or shrub — but mixed masses of unrelated colours, a Joseph's coat effect in foliage, can be awful too. One weeping willow looks well overhanging a little lake, but not fifty willows there. Trees with pendulous branches have a special grace, but the deformed freaks of the catalogue can spoil any garden picture. Because golden retinisporas are beautiful in themselves is no reason for buying them unless you have a group of evergreens into whose rich colour scale an accented tone is desired, or a dark corner that needs lighting up. No foliage is more exquisitely fine nor more richly coloured than that of the low-growing, shrub-like Japanese maples, yet one never sees them used in American gardens so artistically as in the little gardens of Japan, among rocks and stunted pines and miniature waterfalls, each small tree in perfect harmony of form and colour with its environment. Here we are too apt to lose the fine gradations in their colour scale, the charming individuality of each, when we make masses of maples of many hues in shrubbery borders. A noble specimen of dark copper beech may be the most beautiful ornament for a lawn, but even there it need not be wholly unrelated to every other colour on the place. Keyed into harmony with dark firs or other deep-toned evergreens, the splendour of its mahogany tints is but the more rich. "I have never seen a purple plum tree where it did n't stand out like a sore thumb," confessed a well-known landscape gardener. Nevertheless, he has learned to use it most effectively as a background for flowering peaches, crabs, and blossoming almond and fleecy white spireas, for it looks especially well with white or pink

flowered shrubs; but it must be confessed that after their bloom is past, his old objection to this little dark-leaved tree, so universally planted, holds good.

The brilliant autumnal colouring of trees is as the gift of genius in families — one can never be certain where it will appear. In a long row of sugar maples at the nursery you may search in vain for one of such glorious colouring as any Vermont farmer may have beside his door. A red oak tree that is marvellously rich one year may disappoint us sadly the next, when the glistening leaves of the scarlet oak dazzle one with the lambent brightness of flame. Whoever revels in colour, as even the most primitive savage does — and who, indeed, does not? — will not forget to include in his planting list some trees for the sake of their greater glory after the flowers are gone. The pepperidge tree and star-leaved sweet gum would be desirable if for no other merit than their gorgeous autumnal tints. One is grateful to the rugged, sturdy oaks that hold their rich mahogany red and russet leaves late into the new year — sometimes until the new growth pushes them off. Although the larch, a less vigorous relative of the pines and firs, does not retain its needle-like leaves after they turn yellow in autumn, the feathery light green of its new growth that one touches with a caress, and its delicate curving twigs, strung in winter with little cones, are so effective against the sky that there are at least two excellent reasons for planting it. One never fully appreciates the paper whiteness of the birch, the most spirituelle of all trees, until it is seen without a leaf to cover it, chaste and purely lovely against a background of evergreens. When is the beech tree most beautiful — when its fresh green, crinkled and varnished leaves burst from their brown pointed sheaths in May, or when one looks up through the shining yellow of their gold to a clear, deep-blue

October sky; or when the smooth, silvery gray trunk and branches are softly etched against the snow?

The Best of the Ornamental Deciduous Trees for Lawns and Gardens

Ash, Weeping (*Fraxinus excelsior*, var. *pendula*). 50 feet. Best tall canopy tree. Round-spreading top, forming an ideal shady arbour or summer house. Grows rapidly, spreading 50 feet. Give ample room for development. Unsuitable for small gardens. Attacked by a fungus, but not seriously injured by it.

Bay, Sweet, Swamp, or White. See Magnolia.

Beech, American (*Fagus ferruginea*). ——, European (*F. sylvatica*). 80 feet. The former makes the largest tree, long-lived, with smooth, light-gray bark, and remarkably pretty yellowish foliage in the spring. Edible nuts. The European beech is more compact, slower in growth, and has many varieties: ——, Fern-Leaved (var. *heterophylla*). Foliage finely cut. The most deeply cut of all the beeches; leaves divided clear to the midrib. Young leaves tendril-like. Plant in open, where outline is seen against the sky. Also desirable near dwelling houses. ——, Rivers's (var. *purpurea Riversi*). Dark purplish maroon. The best dark-leaved tree. Absolutely hardy, while the paler, purple beech is not. Branches low down. Grand lawn specimen tree, with symmetrical head. Colour varies, so select dark-coloured specimens, which are the hardiest. ——, Weeping (var. *pendula*). 50 feet. Pendulous, irregularly odd-looking, but not freakish. Branches have billowy effect. Slow-growing and long-lived. Can be planted in conspicuous places.

Birch (*Betula alba*). 80 feet. Small, light-green foliage; silvery, almost white, bark. One of the most picturesque trees, but needing a background, preferably evergreens; rapid grower even in thin, dry soil. Most effective medium-sized tree in the spring. ——, Cut-Leaved (var. *pendula laciniata*). 65 feet. Most graceful of the cut-leaved trees; slender, pendulous branches. The full character of this tree is not seen for several years. Leader always erect, giving spire-like outline.



LONGFELLOW'S HOME FRAMED BY WELL-BALANCED PLANTING. THE GRACEFUL HIGH-ARCHING ELM IS THE BEST TREE TO HAVE CLOSE TO A HOUSE, AS IT EXCLUDES NEITHER LIGHT NOR AIR FROM THE LIVING-ROOMS



THE FRAGRANT NATIVE MAGNOLIA OF THE SWAMPS AND WET, OPEN WOODS, USEFUL FOR WILD GARDEN EFFECTS IN LOW GROUND.
MAGNOLIAS, AS A CLASS, ARE THE MOST DECORATIVE AND BEAUTIFUL FLOWERING TREES WE HAVE FOR LAWN AND GARDEN

CATALPA (*Catalpa speciosa*). 50 feet. White tubular flowers in large, showy panicles. June. Quick growing, with clean, furrowed bark and large, heart-shaped leaves. Hardy wherever apples grow. Flowers after horse chestnut. The long seed pods, looking like pencils, scatter seeds in winter. Not so showy as *C. bignoniodes*, but a better-habited tree. Leafs out late.

CHERRY, FLOWERING (*Prunus avium* and *Cerasus hortensis fl. pl.*). 20 feet. White and pink; flowers an inch and a half across in clusters. Among the most graceful of the second-early flowering trees, the foliage beginning to develop as the flowers burst open. Will thrive under conditions that suit the fruiting peach or cherry. Double varieties, resembling little roses, last longer than the singles.

CHESTNUT, HORSE (*Æsculus Hippocastanum*). 90 feet. Covered with pyramids of flowers in June. Big varnished winter buds; tent-like leaves. Always dropping scales, flowers, fruit, or rusty leaves. Too dense for streets, and an untidy tree on trim lawns.

CRAB, BECHTEL'S (*Pyrus Ioensis*, var. *fl. pl.*). 30 feet. Pink. May. Best of double-flowered ornamental apples; flowers 2 inches across. When out of flower looks like an ordinary crab. Needs as much spraying as fruit trees. ——, FLOWERING (*P. floribunda*). 15 feet. May. Most floriferous, early flowering small tree, or sometimes a large shrub. The arching branches are strings of rose-coloured flowers, seen with leaves. Plant in masses against dark background of taller trees. Fruits make good jelly. Spray for scale and woolly aphis. For San José scale the surest remedy is spraying with the lime-sulphur mixture prepared by mixing 15 to 25 pounds of unslacked lime, 15 pounds of sulphur, and 50 gallons of water, combining with heat and spraying on the plants immediately. More convenient, but a little less efficacious, are special preparations of lime-sulphur and of miscible oils, which are merely diluted with water and are then ready for use. Several special preparations of this character are offered under proprietary trade names; they are practically the same. For all ordinary scales, the whale-oil soap solution is satisfactory. Use one to two pounds of the soap to one gallon of hot water.

CUCUMBER TREE (*Magnolia acuminata*). One of the best pyramidal trees for lawns. (See MAGNOLIA.)

Cypress, Bald (*Taxodium distichum*). 60 feet. A comparatively narrow, tapering tree, deciduous although coniferous; native of swampy lands, where it throws up characteristic knees from its roots; but will grow in dry lands. Particularly well adapted to the South. A good tree for narrow streets.

Dogwood, Flowering (*Cornus florida*). 30 feet. Big white bracts, making flower-like displays in May; particularly showy in wood foregrounds. Blooms with magnolias; scarlet berries and foliage in fall, also young twigs crimson. Particularly valuable for partially shaded as well as fully exposed spots. Var. *rubra* has bracts of varying intensity, from pink to red.

Elder, Box, Variegated (*Acer Negundo*, var. *argenteo-variegatum*). 60 feet. Green and white. Best conspicuously variegated-leaved hardy tree; rapid grower; little seen. So markedly distinct that it is usually used in small sizes only. Not advisable for landscape effect.

Elm, American or White (*Ulmus Americana*). 100 feet. Best of our native shade trees. Arches high over street or house, leaving good space above roof for air and diffused light. Rich bottom land preferred. Seriously attacked in certain regions by gipsy moths and elm beetles, which defoliate it in August. In regions where the elm-leaf beetle is a pest the trees should be sprayed with arsenate of lead, which can be prepared thus: Take soda arsenate 4 ounces; lead acetate, 12 ounces; water, 16 ounces. Dissolve each salt in half the quantity of water; mix, and let stand twelve hours. The precipitated arsenate of lead is then mixed with 50 gallons of water, and is ready for use. This adheres well to the foliage. Spraying should be done in May and August. ——, Camperdown (*Ulmus scabra*, var. *pendula*). Usually grafted at 8 feet. Canopy-like head forms a perfect hollow, dome-like tent, spreading to 30 feet. Very free grower. Plant as an isolated specimen on the lawn, where it can be used as a summer house or children's playhouse.

Empress Tree (*Paulownia imperialis*). 100 feet. Unique, gloxinia-like flowers, with vanilla fragrance. Violet. May, before Catalpa. Rapid grower. Leaves a foot across. Sprouts from roots. Flower buds killed by severe winters North. Seed vessels look ragged. Flowers having no background are poorly seen against sky. Hardy to New York.

GINKGO. See MAIDENHAIR TREE.

HAWTHORN, ENGLISH (*Cratægus Oxyacantha*). 30 feet. White, pink to red. June. Perfectly hardy; thrives on dry soil. Stands severe trimming. Many varieties, single and double, which are referred to another species, *C. monogyna*, by the hair-splitting botanists. Red berries, relished by birds. Clothed with sharp thorns. Very slow growing after 10 feet high. Spray for scale. See CRAB.

HERCULES CLUB (*Aralia spinosa*). 40 feet. Huge, handsome pinnate leaves. Flowers fleecy white, in large, broad, clustered panicle, followed by dark purple berries in heavy clusters, relished by migrant birds in autumn. Blooms in midsummer. One of the most showy native trees, except in winter, when its spiny, club-like trunks without branches, alone remain. ——, CHINESE ANGELICA (*A. Chinensis*). Similar, with leaves 2 to 3 feet long, and flowering a week earlier.

HICKORY (*Hicoria alba*). 100 feet, or less. Adapted to great range of soils. Slow growing and difficult to transplant. Characteristic shaggy bark. Open mantle of foliage makes broken shade.

LABURNUM (*Laburnum vulgare*). 20 feet. Yellow. May. Flowers in June like a yellow wistaria. Clean, smooth bark. Equally good on all sorts of soil, including lime. Poisonous in all parts, especially fruits. Not quite hardy north of New York. Seedlings crop up all around. Give abundance of water. The laburnum is at its best in rainy Ireland.

LAUREL, GREAT. See MAGNOLIA.

LINDEN (*Tilia Americana*). 90 feet. Dense, round head when young. Rapid grower. White fragrant flowers attract bees. Needs no attention after planting. Very variable and much confused with European species, *T. petiolaris*, which is smaller, and has leaves hairy beneath.

LOCUST, FALSE ACACIA (*Robinia Pseudacacia*). 80 feet. White. Fragrant pea-like flowers in May, June. Quick growing when young. Makes a moderate spread with irregular outline. Attacked by a borer, spreads freely by seeds, and suckers badly.

MAGNOLIA (*Various species*). These embrace the largest-flowered and most conspicuously ornamental deciduous trees; some evergreen, some deciduous, and some are shrubs. Besides being the largest flowered, they are also among the most fragrant. The deciduous species are reasonably hardy, and in sheltered positions may be

planted as far north as Massachusetts, some running even above that. Excepting *M. glauca*, which thrives in swampy situations, the whole family prefers sandy or peaty loam, moderately moist. Transplanting is difficult on account of the thick, spongy roots, and is to be done as growth starts. Propagation is by seeds or layers. Plant with evergreens for background ——, CUCUMBER TREE (*Magnolia acuminata*). 60 to 100 feet. Leaves slightly hairy, light green beneath. Flowers greenish yellow; 3 inches across. May, June. Fruit conical, pink. The hardiest species. Foliage yellow in the fall. The most inconspicuous in its flowers. ——, LARGE-LEAVED (*M. macrophylla*). 30 to 50 feet. Of slender growth, making a broad, round head. Leaves up to 30 inches long; bright green above, silvery white below. The flowers 10 to 12 inches across, white, with a purple centre. May, June. Highly decorative with the cone-like fruit becoming bright red. Hardy to Boston. The largest-leaved magnolia. Should be given a sheltered position. ——, FRASER'S (*M. Fraseri*). 30 to 40 feet. Usually with a leaning trunk. Flowers cream-white, 8 to 10 inches across. June. Fruit rose red, 5 inches long. Distinguished by the peculiarly eared leaf. Almost as hardy as the cucumber tree. ——, GREAT LAUREL (*M. fœtida*). 50 to 80 feet. Leaves 5 to 8 inches long, dull green. Flowers April to August. White, 6 to 8 inches across. Cup-shaped, solitary. Hardy to Philadelphia. Cut branches used for winter decoration. ——, HALL'S (*M. stellata*). See SHRUBS, p. 181. ——, SOULANGE'S (*M. Soulangeana*). 30 feet. May. White-pink blossoms, six inches long, appearing before the leaves. Plant against dark backgrounds; small specimens two to three feet high will bloom. The largest-flowered, small hardy tree; transplant only in spring. A number of garden hybrids of extreme beauty are allied to this. ——, SWAMP BAY (*M. glauca*). 50 to 75 feet. Sometimes a shrub. Though evergreen in the South, deciduous in the North. Leaves smooth, lustrous, bright green with silvery lining. Flowers 2 to 3 inches across; creamy white, fragrant. The best magnolia for general cultivation, thriving from New York south. More floriferous when cut back and treated as a shrub. ——, YULAN (*M. conspicua*). 30 feet. White, fragrant flowers expanding to six inches. May. The largest white-flowered tree that is hardy farther north than Long Island.

MAIDENHAIR TREE (*Ginkgo biloba*). 80 feet. Singular habit; erect, pyramidal, with curiously horizontal branches. Leaves wedge-shaped. Singular, but not freakish looking. Free from insects and fungi. Perfectly hardy. Ripe fruits have foul odour. Kernels eaten by Chinese.

MAPLE, JAPANESE (*Acer palmatum*). Low specimens up to 20 feet. The most delicately foliaged small tree. Usually used as a shrub. Numerous varieties variously cut, and some coloured red or purple. Plant in well-drained, rich soils, and partial shade. Handsome for foregrounds and near the house, and in the rock garden. ——, RED (*A. rubrum*). 90 feet. Earliest blooming of the large trees; rounded head of small scarlet flowers. Should be planted against evergreen background. Seed pods bright red in summer; leaves brilliant orange and scarlet in fall. Makes a tall, rather upright tree. Does not thrive on hillsides or other dry land, and is the only maple for wet and swampy sites. ——, SILVER (*A. saccharinum* or *dasycarpum*). 80 feet. Quickest growing of all the maples, but soon breaks down, and is very liable to insect attacks. Much used for street planting, unfortunately, but can be improved by persistent pruning to a single stem. ——, STRIPED (*A. Pennsylvanica*). 40 feet. Peculiarly attractive on account of the bark of the trunk and of larger branches being striped with white or yellowish lines on a green ground. An excellent lawn tree, not growing too large. Valuable for winter effects. ——, SUGAR (*A. saccharum*). 100 feet. Moist soil preferred. The best shade and street tree among the maples. Long enduring; bright red and yellow foliage in fall. Transplant when young. In some regions attacked by the leopard moth and other borers. When young, makes numerous shoots that need thinning. ——, NORWAY (*A. platanoides*). Much like the preceding, but denser, clear yellow in fall, and flowers yellowish green in spring. ——, WIER'S CUT-LEAVED (*A. saccharinum*, var. *Wieri*). 100 feet. Casting very heavy shade. Vigorous, upright habit, with long, arching, pendulous branches. Silver-green leaves, deeply cut on youngest branches. Best in young specimens, as old trees become prey to insects and are broken by storms.

MOUNTAIN ASH (*Sorbus Americana*). 30 feet. Spreading. Pinnate leaves. White flowers. May, June, but chiefly valued for clusters

of bright red berries in August, September. ——, EUROPEAN (*S. Aucuparia*). Thrives in extreme North. Very brilliant fruits; edible. Many garden forms of this.

MULBERRY, RUSSIAN (*Morus alba*, var. *Tatarica*). 40 feet. Fastest-growing, long-lived tree for the West. Stands drought well, and also shade. Grows twenty feet in ten years. Gets winter-killed in the Dakotas and Kansas. Needs pruning as a shade tree. Edible fruits litter ground.

OAK, ENGLISH (*Quercus Robur* or *pedunculata*). 120 feet. Stout, spreading branches and broad, round-topped head. Foliage dark green above, and pale bluish-green beneath. 2 to 5 inches long. Remains green until winter. Extremely variable. The historical oak of England, but thrives poorly in America with the exception of California. The following kinds are much to be preferred. ——, MOSSY CUP (*Q. macrocarpa*). Distinguished by the huge shaggy receptacles for the large acorns. 80 feet, but sometimes twice as much. Spreading branches, and broad, round head. Deeply furrowed, light brown bark. Leaves bright green and shining above, whitish beneath; 6 inches long. A strong-growing, stately tree. Very picturesque in winter. Transplants with difficulty, so always buy young nursery stock. ——, PIN (*Q. palustris*). 80 to 120 feet, with large, spreading branches. Pyramidal head. Foliage, bright green above, light green beneath. Very handsome when young. The most rapid-growing oak. Useful for streets and avenues. Transplants easily. Prefers moist soil. Foliage scarlet in fall. ——, RED (*Q. rubra*). 80 to 150 feet. Stout, spreading branches, and round-topped head. Leaves dull green above, light green beneath. Nearly as rapid growing as the pin oak. Foliage dark red in fall. The best oak for dry uplands and rocky soils. ——, WHITE (*Q. alba*). 100 feet. Stout branches with round, open head. Bark light gray. Leaves bright green, becoming violet-red or violet-purple in fall. One of the best trees for park effects in the North. It prefers moist soil. Does not transplant easily. Get young nursery stock. ——, WILLOW (*Q. Phellos*). 50 to 80 feet. Slender branches and conical head. Leaves bright green and glossy above, light green beneath, becoming pale yellow in fall. The best medium-sized oak. Prefers very moist, almost swampy soil. Oaks as a group are shallow-rooting trees, and the longest-

lived of all; generally easily transplanted, excepting those of the white oak group. This peculiarity seems to be related to problems of symbiotic fungi on the roots, a subject that is as yet little understood. In transplanting care should be observed to avoid violent changes of conditions.

PEACH, FLOWERING (*Persica vulgaris*, var. *fl.-pl.*). Up to 30 feet, but usually seen in much smaller specimens. Bright, rosy pink. Flourishes wherever common peach will grow. Should be pruned closely, and given rich soil. Flowers nearly an inch across, very double, appearing when the fruiting peach blooms. Also a white variety which is not so effective.

POPLAR, CAROLINA (*Populus Caroliniana*). 100 ft. Dry soil preferred. Fastest growing of all shade trees; best for most crowded parts of large cities. Good in arid states. The silky pappus shed in summer and driven by the wind becomes a nuisance. Soft wood, and easily broken. ——, LOMBARDY (*P. nigra*, var. *Italica*). 60 feet. Tall, columnar tree of most distinct and striking habit of any tree suitable for the North, but not long-lived in the northernmost states. So singular that it should be planted with care. Excellent for formal planting, also to give effect of height on a plain, or to add to effect of a low cliff or ledge. Suckers from root. ——, TULIP (*Liriodendron Tulipifera*). 120 feet. Yellow tulip-like flowers in May, June. Fastest-growing, longest-lived soft-wood tree of the East. Splendid lawn specimen. In perfection New York southward.

PLANE, ORIENTAL (*Platanus orientalis*). 80 feet. Good for all soils, even water side, and as a street or avenue tree; wide-spreading, making regular-formed head with better outline than the Western or American plane (*P. occidentalis*), which is subject to disease. The two can hardly be distinguished in the young state. The shedding of the bark in winter makes the trees peculiarly attractive.

PAGODA TREE (*Sophora Japonica*). 60 feet. Loose panicles of white, pea-like flowers in July (or September in Massachusetts); something like a white acacia. The peculiar method of branching makes it a most interesting winter tree. Not hardy far north. One of the most graceful-looking large trees.

RED BUD, JUDAS TREE (*Cercis Canadensis*). 30 feet. Purplish-pink pea-like flowers wreathing the branches. Blooms with magnolia

and shadbush before the leaves. Best planted in spring. Isolate from other colours. Evergreens for background most effective.

SHADBUSH (*Amelanchier Canadensis*). 20 feet. Mass of small, white, plum-like flowers in very early spring; berries May to June, red, relished by nesting birds. Hardy in extreme North, and becoming a tree 60 feet in the South. Most effective white-flowered tree along woodland borders in the spring before the dogwood. Flowers with red bud.

SORREL TREE (*Oxydendrum arboreum*). 60 feet. Attractive all the year. Terminal clusters of white flowers in June. Foliage changes to crimson in the fall. Conspicuous seed pods remain white for a long time. Young wood has crimson bark. Stands shade.

SWEET GUM (*Liquidambar styraciflua*). 50 feet. Characteristic tree in the South, but not thriving north of New York. Hard to transplant. The ivy-like leaves become beautifully yellow and red in the fall. Seed balls and corky wings on the branches give character in the winter. Does well near water.

TAMARACK (*Larix Americana*). 60 feet. Deciduous, coniferous tree; needle-like leaves, pale green, fading to golden yellow in autumn. Grows on any soil, and is better than the larch (*L. Europea*), which demands well-drained soil.

TULIP TREE. See POPLAR, TULIP.

TUPELO, SOUR GUM (*Nyssa sylvatica*). 75 feet. Picturesque, bold-looking tree, valuable for distant effects. Bright scarlet foliage in autumn. Winter character peculiarly desolate because of drooping limbs. Does not transplant well.

VARNISH TREE (*Kœlreuteria paniculata*). 60 feet. Yellow flowers, June and July, followed by ornamental curved seed pods 2 feet long. Foliage finely divided, becoming rich crimson in the fall. One of the handsomest of the Japanese trees.

WALNUT, BLACK (*Juglans nigra*). 125 feet. Preferred soil, fertile hillside and bottom land. Especially suited to the West and even on alkali lands. Requires wide space to develop. In the East, often disfigured by large webs of the webworm, which should be burned off with torches on poles. Drops its leaves rather early in the fall.

WILLOW, WEEPING (*Salix Babylonica*). 40 feet. Branches pendulous. Most rapid-growing "weeper" thriving in average soils. Olive-

green bark in winter; var. *aurea* has yellow bark. Best effect when planted on margins of water. In extreme North, plant var. *dolorosa*. The upright willows look much alike, but are good for quick effect as screens to be cut out later. ——, Pussy (*S. discolor*). 20 feet. Thrives equally on wet or dry ground. ——, Rosemary (*S. incana*). With narrow leaves, white underneath, giving gray effect. Grafted on hardy stock is an effective small lawn specimen, usually used as shrub.

Yellow Wood (*Cladrastis tinctoria, Virgilia lutea*). 50 feet. White. June. Fragrant flowers, like a white wistaria, lasting several days. Sought by bees. Hardy in Canada. Gray beech-like bark. Shy and intermittent bloomer except in South. Fruits hang on all winter.

Yulan. See Magnolia.

Decorative Evergreens for Garden Use

Adam's Needle (*Yucca filamentosa*). See Herbaceous Plants, p. 229.

Andromeda. See Rosemary, Wild, and Fetter Bush.

Arborvitae (*Thuya occidentalis*). Up to 40 feet. Best ornamental evergreen of moderate height. Excellent as hedge, screen, windbreak, or specimen. Foliage brownish green, becoming darker with winter. Give good soil and not too dry. The Siberian variety, (var. *Wareana*,) is narrower, denser and better coloured in winter. There are many varieties, the most important being "George Peabody," orange yellow, useful for bedding, and var. *globosa*, dwarf, less than two feet high. Bright green.

Azalea, Showy (*Azalea amœna*). 2 feet. Low, dense bush. Leaves become rich bronze in winter. Somewhat resembling boxwood, the leaves being of same size. Flowers rosy purple, completely obscuring foliage. May. Isolate. The most floriferous evergreen. Useful for hedges or for massing with rhododendrons that do not bloom at same time. Peaty soil. Give protection from severe winds.

Bay, Bull (*Magnolia grandiflora*). 80 feet. Pyramidal habit. Leaves thick, leathery, glossy dark green, reddish brown underneath. Most important evergreen tree of the South. Doubtfully hardy

north of Philadelphia, but reported in favoured situations on Long Island, where, however, it is deciduous. Immense white, fragrant flowers 1 foot across. Transplants badly. ——, SWEET (*Laurus nobilis*). The most popular formal evergreen for formal gardens, terraces and vestibules, etc. Not hardy, but largely used in tubs and pots for summer decoration, and always in artificially trained forms, pyramid, standard, and so forth. Must be stored over winter in a frost-proof cellar.

BOXWOOD (*Buxus sempervirens*). 20 feet, but usually much smaller. Very slow growing. The box of old gardens. (See HEDGE PLANTS, p. 188.) ——, DWARF (var. *suffruticosa*). Similar, but never growing tall. Best for formal edging to beds, etc. ——, ORIENTAL (*B. Japonica*). 6 feet, with more rounded leaves, nearly as hardy; is very desirable for hedges from Philadelphia southward. Var. *microphylla* is a decided dwarf, often prostrate shrub.

CEDAR OF LEBANON (*Cedrus Libani*). With peculiarly tabled horizontal branches, dark, dull green. Not hardy North of New York. 70 feet. A recent form now under trial at the Arnold Arboretum promises to be quite hardy. ——, MT. ATLAS (*Cedrus Atlantica*). 120 feet. Leaves less than an inch long. The hardiest of the cedars growing near New York with shelter, on well-drained loamy soil. Graceful feathery, slightly drooping branches in young specimens. Var. *glauca* has bluish foliage. ——, RED (*Juniperus Virginiana*). Up to 100 feet. The best tree of the cedar type for American gardens. From Nova Scotia to Florida. A symmetrical, often columnar tree, dense and dark coloured. Valuable for formal gardens, windbreaks, and seaside planting. Adapted to every kind of soil. Extremely variable in outline and colour.

COTONEASTER, BOX-LEAVED (*Cotoneaster buxifolia*). Low spreading shrub with dark green persistent leaves resembling boxwood. Flowers small, white. May, June. Followed by bright red fruit. —— (*C. microphylla*). Similar, with brighter foliage.

CRYPTOMERIA (*C. Japonica*, var. *Lobbi*). Useful only when quite young. Up to 8 feet. Very pretty, light green, wiry but drooping branches. There is a plant of the type 40 feet high at Dosoris, L. I., but is not usually considered hardy. The var. *Lobbi* is probably the quickest growing short-leaved conifer that is hardy at New York.

CYPRESS, JAPANESE. See RETINISPORA. ——, LAWSON'S (*Chamæcyparis Lawsoniana*). The most beautiful and probably the tallest of the American cypresses attaining 200 feet in Northern California. Ascending branches with drooping tips giving graceful plumose effect. Very rapid grower when young. Great merit is that it does well in the mountains toward the South, but is not reliably hardy in New England. Very variable. It is to the South what the retinisporas are to the North.

EUONYMUS (*E. Japonicus*). 6 feet; upright-growing shrub, with glossy dark-green leaves. 1½ to 2 inches long. Does best along the coast. Not quite hardy in the North, except in shaded, protected situations. Several variegated forms. ——, CREEPING (*E. radicans*). (See VINES, p. 333.)

FETTER BUSH (*Pieris floribunda*). Dense growing bush with dull, deep-green foliage. Flowers in drooping, terminal tassels. White. April, May; 2 to 4 feet. The conspicuous flower buds all winter make this plant particularly decorative for bordering drives, etc. ——, JAPANESE, or ANDROMEDA (*P. Japonica*). Similar to the foregoing, but larger and with looser habit of growth.

FIR, BALSAM (*Abies balsamea*). 50 to 80 feet. A slender tree. Foliage dark green and lustrous above, pale below. The common fir of eastern North America, giving Canada balsam. Foliage fragrant in drying. Loses its beauty early in cultivation. Thrives on a variety of soils and where other evergreens would fail. ——, NORDMANN'S (*A. Nordmanniana*). Most ornamental and stateliest fir. 100 to 150 feet. Glossy dark foliage. Broadly conical outline. Leaves remain on the trees for eight years. Thicker and wider than most conifers. Uninjured by salt spray. Large specimens transplant badly. Said to winter-kill in some spots near Philadelphia, but is uninjured much farther north. ——, RED. See SPRUCE, DOUGLAS. ——, WHITE (*A. concolor*). The best fir in the North, withstanding heat and drought. Very hardy. 250 feet. Rapid grower, and the most ornamental fir for the East. Needles bluish, curved and with feathery effect. Conical habit, and with little pruning makes a very compact tree. *A. lasiocarpa* is similar, but more compact.

GARLAND FLOWER (*Daphne Cneorum*). With trailing branches. Dark green linear leaves. Flowers in clustered heads. Purplish pink.

Fragrant. April, May, and again in the summer; 1 foot. The most fragrant low evergreen. Prefers deep, rich peaty soil. —— (*D. Blagayana*). With ascending branches. Flowers white or yellowish, April, May. Grafts die without apparent cause.

HEMLOCK (*Tsuga Canadensis*). Most ornamental Eastern evergreen. Has general character of the Norway spruce, but more graceful and lighter, brighter colour. Endures shade and valuable for bordering woodlands, but will not stand salt spray. Also the best evergreen hedge plant, standing trimming well. See also, HEDGES, p. 188.

HOLLY, AMERICAN (*Ilex opaca*). Dull green, spiny leaves, with bright red berries in winter if staminate tree is planted among pistillate ones. Up to 50 ft. ——, ENGLISH (*I. Aquifolium*). More lustrous than the American, but not so hardy. Grows near New York in moist, drained soil with shelter. Numerous varieties cultivated in Europe. ——, JAPANESE (*I. crenata*). Resembles boxwood in foliage, but plant is more irregular in outline. Comparatively new. Thrives perfectly in Bronx Park, New York, but is winter-killed nearby.

INKBERRY (*Ilex glabra*). Upright. Much branched. Profusion of black berries all winter; 2 to 4 feet. Best broad-leaved evergreen for full sun in the North. Mature plants resemble old boxwood.

JUNIPER, COMMON (*Juniperus communis*). The English and Irish junipers are forms of this one, the latter being columnar. Not desirable in eastern North America, being extremely short lived.

LAUREL, MOUNTAIN (*Kalmia latifolia*). 10 feet. Valuable native for mass planting and for hedges (see p. 189). Flowers in large clusters. Pink, rose, and white. May, June. With the rhododendron is the most valuable flowering evergreen. ——, NARROW-LEAVED (*K. angustifolia.*) Smaller leaves and rosy purple flowers. June, July; 3 feet. ——, GREAT. (See *Rhododendron maximum.*)

LEUCOTHÖE (*Leucothöe Catesbæi*). Trailing plant. Flowers lily-of-the-valley like; creamy white, fragrant. May. Should be used as ground cover in groups. Long arching sprays of dark glossy foliage becoming claret-coloured when exposed to sun. Thrives with rhododendron.

MAHONIA (*Berberis Aquifolium*). Yellow flowers and bluish-gray fruit. (See ASHBERRY, in HEDGE PLANTS, p. 187). ——, CREEPING (*Berberis repens*). 1 foot. Leaflets pale glaucous green and dull. Flowers yellow. May. Fruit an oblong blue berry. Useful for carpeting. Hardy in the North. ——, JAPAN (*B. Japonica*).

5 to 10 feet. Like a magnified mahonia or ashberry. Leaves holly-like, more than a foot long. Fruit black. Hardy in New York with shelter. The *B. Japonica* of gardens is *B. Nepalensis*, not so tall, with fewer spines but more leaflets.

MYRTLE, TRAILING, or PERIWINKLE (*Vinca minor*). See VINES, p. 335.

PINE, AUSTRIAN (*Pinus Laricio*, var. *Austriaca*). Rapid grower, succeeding on a variety of soils. 125 feet. Hardy. Of dark, sombre aspect, hence called black pine. Short branches with stiff, long needles. Stands wind and salt spray. Keeps its colour all winter. Begins to deteriorate when about twenty-five years old. Used as a temporary windbreak. ——, DWARF MOUNTAIN (*P. montana*, var. *Mughus*). The best dwarf pine, eventually becoming 10 feet high. Invaluable for roadbanks, terraces, massing at entrances, also as lawn specimens. Makes an almost globular bush with characteristic pine growth. Leaves bright green. Does well on variety of soils if well drained. ——, PITCH (*P. rigida*). Horizontal spreading branches, making an open, irregular pyramid. 80 feet; leaves 2 to 5 inches long. Very hardy and of rapid growth when young. Easily raised from seed. Useful on dry and rocky sterile soils. Sprouts readily from stumps. Very picturesque when old. ——, RED (*P. resinosa*). One of the best of the hardy conifers, thriving up to the far north. 100 feet. Medium green, long leaves, grows upon any drained soil. Particularly picturesque when aged. A good tree for garden use, as it stands cutting and trimming. One of the best for screens, hedges, and windbreaks. ——, SCOTCH (*P. sylvestris*). Similar to Austrian pine in all respects except that foliage is blue-green and shorter. ——, UMBRELLA (*Sciadopitys verticillata*). Unique in character, having long narrow leaves of a lustrous green, in whorls. 100 feet. A narrow compact pyramid; rather slow growth. Hardy to Maine. Thrives in moderately moist loam and also clay. ——, WHITE (*Pinus Strobus*). Most useful conifer for general planting, and tallest evergreen tree of Eastern America. 150 feet. Thrives anywhere except on wet clay subsoil. Needles long, and brighter green than most conifers. Very picturesque and rugged with age. Makes annual growth of 2 feet. Horizontal branches in whorls. Easily injured by winds until 10 or 12 feet high. Often attacked by mealy bug and woolly aphis when young; spray with kerosene emulsion.

RETINISPORA, JAPAN CYPRESS (*Chamæcyparis pisifera*). Usually 3 to 6 feet. The most decorative of all the conifers. Only the young plants are in cultivation. The mature trees are never used for garden planting, having totally different habit and appearance. Beautiful feathery foliage. Slow growth. Usually used in ornamental groups or as lawn specimens. Var. *filifera* has long drooping branches and thread-like branchlets; foliage, light green. Var. *plumosa* has short branches with feathery effect. Var. *plumosa aurea* is similar, but golden yellow. Much used for bedding. Var. *squarrosa* is silvery blue. —— (*C. obtusa*). Differs from the preceding in having dark green arborvitæ-like branches. Var. *nana* is much trained in dwarf forms by the Japanese. All the retinisporas want very rich soil to do well.

RHODODENDRON, ROSE BAY, GREAT LAUREL (*Rhododendron maximum*). Large shrub or small tree. Up to 35 feet, but usually seen about 6 feet. Without exception the most important broad-leaved evergreen for massing. Planted by the carload. Very hardy through the coldest winters. Leaves whitish beneath, 4 to 10 inches long. Flowers white or pale pink with greenish spots inside. June, July. Demands open soil, well drained, but not over dry. Shows a distinct dislike of lime, but can be grown in limestone soils in beds excavated for several feet and filled in with fresh compost, largely peat and leaf-mould. Hardy into Canada. Transplant by preference from a turfy soil. ——, CATAWBA (*R. Catawbiense*). Shrub. Usually 6 feet; rarely 20 feet. Less hardy than maximum. Leaves, glaucous beneath, 3 to 5 inches long. Flowers lilac-purple. June. An important shrub for massing south of New England. ——, HYBRIDS (*R. Catawbiense* and *R. Ponticum*, a tender species). Among the most beautiful conspicuously flowered evergreens. There are numerous varieties offered. Large globe-like trusses of flowers appearing in May, June. Some of the most popular varieties are: Delicatissimum, blush white, tinted pink; Everestianum, rosy lilac spotted and fringed, the most popular of all the hybrids; Caractacus, purple crimson; C. S. Sargent, bright scarlet; Roseum superbum, light rose; Charles Dickens, dark scarlet; Gloriosa, bluish white; Album elegans, white; H. H. Hunnewell, dark crimson.

ROSEMARY, WILD (*Andromeda polifolia*). Narrow, leaves, 1½ inches long, with revolute margins, whitish beneath. Flowers nodding.

White and pink. June; 6 inches to 2 feet. Very variable. In terminant umbels. Peaty or sandy soil, with rhododendrons and azaleas. See also FETTER BUSH.

SAVIN (*Juniperus Sabina*). A prostrate shrub, with long, stiff, straggling dark green branches, but free method of growth. 3 to 5 feet.

SPRUCE, BLUE (*Picea pungens*, var. *glauca*). The best-coloured coniferous evergreen. Beautiful steel-blue. Most imposing in early summer. Slow grower, attaining 75 feet. Hardy, but comparatively short-lived, the base becoming ragged at 35 years. Many forms of this in the trade. The highest coloured of all is known as Koster's. Also drooping and weeping forms. ——, DOUGLAS (*Pseudotsuga Douglasii.*) Rapid grower, almost too fast for garden growth. 200 feet. Colorado trees are hardier than those from California. Transplants readily. Rich dark green foliage with faint blue sheen beneath. ——, ENGELMANN'S (*Picea Engelmanni*). Somewhat resembling the blue spruce in tone of colour but less brilliant. Needles not so long but softer and flexible. Perfectly hardy. 80 to 100 feet. ——, NORWAY (*P. excelsa*). The fastest growing conifer. 100 feet. Also one of the hardiest and withstanding strong winds. Sombre, dark green. Does best in moderately rich soil with good feeding. Otherwise loses its beauty early, before the white pine. Graceful branches, drooping. Needs ample space for full development of individual character. Branches to the ground, making a perfect cone. ——, ORIENTAL (*P. orientalis*). Most refined of all spruces. Ascending branches with pendulous branchlets. Rich, dark foliage. Makes a beautiful lawn specimen when old enough to bear cones. The staminate flowers a brilliant carmine, standing erect like candles on a Christmas tree. Slow growing and, though discoloured by spring frosts, is hardy. ——, WHITE (*P. alba*). The hardiest native spruce, and ranking next to the white pine in rapidity of growth. Usually 70 feet, but occasionally 150 feet. Light glaucous green foliage. Dense tree, regular conical shape. Excellent windbreak. Will grow right down to the water's edge.

SPURGE, MOUNTAIN (*Pachysandra terminalis*). Excellent cover plant thriving in the sun or shade in any ordinary soil, making a carpet about 6 inches thick. Flowers white, followed by white berries in winter. Leaves lightish green and thick.

THORN, EVERGREEN (*Pyracantha coccinea*). Spring shrub with roundish, glossy, deep-green leaves becoming bronze in winter. Umbels of white flowers in May, followed by clusters of very brilliant orange fruits in fall and winter, which are much sought by birds. 6 feet. Var. *Lalandi* is more vigorous, with slender branches, and hardier; suitable for covering walls, and probably is the more commonly grown.

YEW, CANADIAN (*Taxus Canadensis*). Creeping undergrowth shrub with pretty red berries. Extremely hardy. Invaluable for carpeting in the colder regions. Easily transplanted when young and may be raised from seed. ——, JAPANESE (*T. cuspidata*). The best substitute for the English yew, 15 feet high, 21 feet wide. Perfectly hardy, where as the English (*T. baccata*) is too delicate, needing winter protection. ——, DWARF JAPAN (*T. cuspidata*, var. *brevifolia*). 3 feet high with spread of several feet, is a reliable dwarf. Foliage dark green.

SHRUBS

"That is best which lieth nearest;
Shape from that thy work of art." — LONGFELLOW.

"It has been the office of art to educate the perception of beauty. We are immersed in beauty but our eyes have no clear vision." — EMERSON.

CHAPTER X

SHRUBS

TREES grow above the height of one's eyes; flowering plants below it; but shrubs that are on the eye level, like well-hung pictures, occupy the most important space in the garden gallery. Do they justify so conspicuous a position? Evidently, for their popularity steadily increases, a thousand being sold in the United States this year for every one that was bought a generation ago; but then, it should be considered that our interest in all kinds of planting has increased by leaps and bounds. Many old estates that have a fine growth of trees lack shrubbery that indicates any appreciation of its pictorial value in landscape gardening. Lilacs, mock orange, strawberry shrub and the spicy flowering currant were usually grown near the house for their fragrance and not for their value in the landscape composition.

The present generation is using a great variety of shrubs and for many purposes. People who live on small suburban places, where there is room for only a few trees, find that tall shrubs planted as a boundary belt make an effectual screen from the eyes of the passers-by; and even on large estates an undergrowth of shrubbery for the boundary trees is usually planted where low-branched evergreens are not used. Whoever has walked through woods from which all the natural undergrowth has been cleared away by an over-tidy owner realises that they have lost half their charm. Shrubs are the natural complement of trees, filling in the gap between their branches and the ground. Almost every important

group of them is improved by more or less shrubbery about its base. Artists talk much about the sky line of pictures, but the artistic gardener, realising that the earth line is at least as important, diversifies and adorns it with blossoming shrubs wherever he can, learning from nature how to plant. Her woodland borders, which draw the eye gradually from the earth to where the tall tree-tops seem to rest against the sky, are fringed with viburnums, cornels, alder, chokeberry, shad bush, elder, sumac, wild roses and a host of other shrubs that not only fill the intermediate spaces but supply the intermediate tones in her colour scale. What beauty springs up along the old fence rows where nature is left free to plant them as she will!

Shrubs grow so readily that they are the main dependence for quick results. It would take years for trees unaided by them to make a new place homelike. No one cares to wait half a lifetime to screen his grounds, shut off the service end of his house and conceal the drying ground and outbuildings, when a hundred hardy blossoming shrubs, that are good enough for mass planting and that can be bought for twenty dollars, will quickly hide unsightly places. While it never pays to buy inferior stock, however low in price, many a lovely shrub is so easily propagated that it can be sold at a profit for the price of a cigar. For a single choice specimen, however, one that merits isolation to display its charms, who would grudge a dollar? Where only a small sum can be spent for planting a place, the list will surely include a preponderance of shrubs, because with them greater diversity of form, colour and texture, more lasting beauty and abundance of bloom may be had at a low cost than from plants of any other class.

Trees cannot well be planted next a house without robbing it of light and air, but tall shrubs as a background for lower ones



"SURE, YE CAN'T SEE THE TREE FOR THE FLOWERS ON IT." THE FRAGRANT, FLOWERING CRABAPPLE



FOR FILLING IN THE ANGLES OF A HOUSE, FOR RELIEVING THE HARDNESS OF THE FOUNDATION LINE WHERE HOUSE AND LAND MEET, FOR SCREENING OFF THE SERVICE END AND FOR MAKING A HOUSE APPEAR TO BE SETTLED COSILY IN A NEST OF GREEN, WHAT SHOULD WE DO WITHOUT SHRUBS?

grouped around them take off the sharpness from corners, and let sunshine stream in at the windows. Banked in front of foundation walls, they relieve the hardness of the line where house and land meet. The home seems to nestle cosily in a nest of green instead of springing suddenly from the lawn like a Jack from a box. For filling in the angles of a house and the corners between its steps and side walls, for extending architectural lines that end too abruptly, for helping to conceal faulty design, for softening hard, uncompromising masonry such as high retaining walls and buttresses, for making entrances inviting and taking the curse off wire fences and red brick enclosing walls, what should we do without shrubs?

Technically, the difference between a tree and a shrub is a matter of one stem or many stems from the root, but some species there are that do very much as they please, to the confusion of classifiers. The shad bush, the dogwood, the starry magnolia and the laburnum, for example, may be either bushes or trees. Much top-shearing of the boxwood may cause several stems to spring from the root around its central trunk, thus changing it by the mere act of pruning from a tree to a shrub. Because some shrubs that are top-pruned make dense growth at the bottom, they are especially desirable for hedges. Such is the over-planted but indispensable privet which, if left to its own devices, becomes tall and leggy. Sheared of its new growth, on which ill-scented blossoms would form in a natural state, it devotes all its splendid energies to making stems and foliage near the ground until a green wall, apparently solid, is formed by a hedge of it.

For most purposes there is a bewildering array of shrubs to choose from, but what should we do for formal hedges without the ubiquitous privet and box? Yet the last place to find monotony

should be in a garden. High hopes of the Japanese ilex filling a long-felt want are entertained, but it has not yet been fully tested by time, and it is still expensive. Italian and English gardens owe much of their beauty to an ilex that will not live here, to several species of laurel that we cannot have, and to other evergreen shrubs of which, unhappily, we have no counterparts. It is true that the hemlock and some other of our evergreen trees make beautiful hedges, but the evergreen shrubs that thrive on this side of the sea are lamentably few, and not all of these will endure the pruning shears. For informal evergreen hedges, however, nothing could be finer than rhododendron or laurel. Among bushes that lose their leaves in winter, but compensate us with a prodigal wealth of spring or summer bloom, are the spireas, deutzias, lilacs, altheas, rugosa roses, Japanese quinces, weigelas, and some others, any one of which is effective used for an informal, unclipped hedge not required for defence. The barberries, north of Philadelphia, and the hardy thorny orange south of it make good defensive hedges. Mixed hedges rarely, if ever, satisfy the artistic eye. If hedges of any and every sort ever come to be as commonly used here as they are in England, we may make kindling of the fences that now disfigure our land and sing pæons of joy for the deliverance. How did it happen that a people, with all their gardening and other traditions derived from the Old World, could have so far departed from them as to substitute the wooden and wire fences for the green, impenetrable, permanent hedge that requires little mending and no paint?

As it is actually cheaper, oftentimes, to plant a bank with shrubbery than to grade and sod it, a concavity on a steep side hill will sometimes be filled in with prostrate privet (*Ligustrum Ibota* var. *Regelianum*) or other shrubbery that will bind the soil and

prevent it from slipping and washing. Many a house set on a narrow ridge of hill-top would appear to be less in danger of falling off the edge if the slopes around it were broadened by shrubs. How narrow and sharp would the cones of many mountains appear were it not for the trees that pad their sides!

The kinds of shrubs to plant anywhere will necessarily depend upon the peculiar conditions of each place, the climate, the soil, the situation and the personal preference of the owner governing the selection of them, it might go without saying. However one may admire camellias, hibiscus and oleanders in Southern and Californian gardens, one may not hope to grow them except under glass at the North. A stiff clay soil would prove a cemetery for any of the fine, fibrous-rooted heath tribe; therefore azaleas and laurel must be stricken from the list unless one is able to prepare for them the light loam, made cool and mellow with humus, that is their necessity. A bleak, windy side of a house one need not expect to beautify permanently with the holly-leaved Mahonia. Books and the carefully prepared catalogues of high-class nurseries may help the novice in deciding what to plant, but if he cannot afford to employ an expert landscape gardener to direct his choice, he is likely to learn far more from studying what nature uses most effectively in her garden that lies about him. Let him select the shrubs native to his region as a basis for other planting, not only because they are most likely to thrive, but because they, like the indigenous trees, will prevent his place from looking like an island in the landscape, wholly unrelated to its natural environment. Unless one's time is worth nothing, it is actually cheaper to buy the native stock, improved and strengthened by cultivation in a nursery, rather than to dig it oneself from the woods. A shrub from Japan may easily cost you less than one from a

neighbour's thicket. Every town in America needs a well planted public park, if only to serve as an object lesson in beautifying the home grounds of its citizens. It could be the best of teachers, but how rarely one is!

For Canada, New England and the Central states, East and West, the main body of shrubs chosen will not be wild cornels, viburnums, spice bush, elder, laurel, azalea, sumac, alder, witch hazel, button bush, clethra, white thorn, or whatever grows naturally round about one's county, for the sufficient reason that there are not enough species in any given locality to fit every place and purpose on the cultivated grounds about one's home. After exhausting their possibilities, reliance must be placed on the trusty, time-tried favourites that need no coddling, such as the lilacs — and is any bush more beautiful than the old-fashioned, fleecy-plumed white lilac? — the heavily scented mock-orange (Philadelphus); the floriferous spireas (except Anthony Waterer's magenta nerve shocker); the lovely deutzias; the Tartarian and other bush honeysuckles; the healthy, fluted-leaved Japanese snowball (not the old-fashioned bush, ever sickly from aphides) and those other members of the viburnum tribe that are doubly decorative in flower and fruit; the Japanese quinces shading from flame to peachblow; the low-spreading Japanese barberry whose exquisite drooping, thorny stems are laden in winter with bright red berries, making it a joy to the eye the year around; the weigelas, the best and worst shrubs we have, for the deep purplish pinks of some of them are as awful as those of the rose of Sharon (Althæa), whose single white, shell-pink, hibiscus-flowered and lavender-blue blossoms are nevertheless delightful; the forsythia's burst of earliest spring sunshine, the snowberry and the white or pink Japanese roses (*R. rugosa*), but pray not the magenta ones!

However reliable all these may be as general purpose shrubs, others will be wanted for special purposes. First of these in public estimation is the large white-flowered hydrangea (*H. grandiflora*, var. *paniculata*), planted by every one who owns a twenty-foot lot. Severely pruned, well enriched, and copiously watered at flowering time, it furnishes great drooping heads of snowy bloom in late summer, when it has the shrubbery stage to itself. How may so conspicuous a shrub be artistically used in a landscape garden? Certainly the way not to plant it or any other startling bush is to dot it around a lawn — the usual practice. A good rule to follow is to plant nothing anywhere that is not connected with the construction lines of a place. A lot of unrelated details, however beautiful in themselves, are always bad art out of doors. The great hydrangea, massed with a not far distant background of evergreens or other low-branched trees, or where its drooping panicles may hang in the foreground of heavy shrubbery, gains rather than loses by its position. A purple, golden or variegated-leaved shrub, if isolated on a fair green lawn, detached from all connection with the composition lines of planting, is all the more a distracting sight because so common. Such special purpose shrubs fulfill a distinct destiny in enlivening masses of shrubbery which, without them, might easily be monotonous. They add emphasis, richness and variety of tone. Colour may be the chief charm or the greatest offence to the eye, so wherever applied it must be used as sparingly and artistically as in a living-room. In the garden, especially, it is apt to be overdone. The dwarf horse chestnut, that sends up great spires of fleecy white flowers above masses of healthy foliage in July, after the pyrotechnic display from the spring shrubs has ended and before the hydrangea, the blue spirea and the altheas begin to bloom, serves the special purpose of

filling in a gap. For massing in the foreground of groups of shrubbery its rather coarse habit makes it strongly decorative when viewed from a distance. The forsythia, whose growth in summer is rather loose and straggling, needs the support of its fellows to be effective. So does the red-stemmed dogwood bush, glowing above the snow. Most shrubs require special consideration for the best display of their charms.

The ungrammatical advice, "Plant thick, thin quick," it is sometimes well to follow. If allowed to crowd one another, shrubs lose their individuality, their identity becomes lost in the mass, they starve and deteriorate. There may be sometimes a doubt as to which should have preference, the artistic or the cultural treatment of shrubbery, but in all, except very rare cases, neither need conflict with the other. It is not necessary to sprinkle shrubs about a place, one specimen here, another there, in order to give each all the room it really needs to display its charms. Its individuality can be respected, whether in the shrubbery border or in an isolated position of honour; but no shrub, however beautiful in itself, should be so planted as to spoil the garden picture as a whole. In mass planting the danger is lest the shrubs become so crowded that the characteristics and charm of each are lost, for the sake of the general effect. In specimen planting the greater danger is lest a number of unrelated spots will spoil the unity of the design of the place as a whole. The novice will have no little difficulty in steering his course between Scylla and Charybdis.

Since the value of a shrub may easily lie less in its bloom than in its general character of form and habit — its personality — care must be taken not to shear it away. Bushes are usually headed back when they are received from the nursery, or if they grow too tall and spindling, but the reprehensible habit of trimming off all

shrubs every winter until they are as flat-topped as a hedge is so common a fault of gardeners that special caution needs to be spoken as often as the pruning season comes around. And when is that? Shrubs that set buds in the fall should be trimmed immediately after flowering, or, better still, while they are in bloom, as a justification for robbing them of the long sprays that so adorn a house. If for no other purpose, one wishes an abundance of shrubs to supply the home with its most decorative cut flowers. A jar filled with forsythia sprays, although set in a north room, brightens it like sunshine. Vases of bridal wreath and long whips of blossoming almond give an air of festivity to a simple living-room that no florist's bouquet can out-do. Happily florists themselves are recognising the decorative value of shrubs and now offer in mid-winter branches of lilacs that have been forced to bloom with ether, azaleas, spireas, snowballs, pussy willows and other darlings of the spring. Shrubs that bloom on the new wood made in spring or summer — the hardy hydrangea, for example — should be pruned in winter. One keen gardener, who is a law unto herself, does all pruning between December and March, for the reason that her bushes, which are benefited by the surgery, supply her at that lean season with flowers for the house and table. The best of the cuttings she places in pails of water in the sunny windows of an unused upper room, and carries downstairs triumphantly from time to time sprigs of forsythia, yellow jasmine, bush honeysuckle, the starry magnolia and cherry blossoms, which most quickly repay her, apple, peach and quince blossoms, deutzia, dogwood, almond and scarlet maple.

Whoever spends the winter in the country will choose many shrubs besides the barberry, cotoneaster, snowberry, dogwood, bush cranberry and euonymus, if only for the bright cheer of their

fruit. And because the broad-leaved evergreens, the majestic rhododendron and the lovely laurel delight one after every other shrub is bare, their popularity steadily increases. People with deep purses buy them by the freight car load to mass along drives, under trees where other shrubs would be unhappy, around ponds and along brooks. Drying out of their fine fibrous roots is as fatal to them as to the azaleas, their cousins. Where water cannot prevent the catastrophe, much leaf-mould mixed with the peaty soil they are planted in helps avert it, but a mulch of leaves or grass cuttings from the lawn over their roots keep them cool and moist in summer when there is most danger of their drying out, and from the alternate freezing and thawing in winter or very early spring from which so many evergreens perish.

Nature covers her plants with a light mulch every autumn as the leaves fall, and the Japanese learned from her long ago the warmth of many layers of light material, which ward off scorching heat as well as cold. In burning piles of leaves, as many do, we rob our gardens of their warmest blankets and the compost heap of a contribution for which the costly laurel, rhododendron and azalea often pine to death. Our home grounds are apt to be fatally tidy. We don't realise that for the lack of a mulch, in summer as well as in winter, more fibrous-rooted and newly transplanted stock dies than from perhaps any other cause. Indeed, it is almost hopeless to bring to perfection any of the heath tribe without mulching. Among them are the costly and lovely azaleas, with a range of colour from purest white and pink to buff, yellow, salmon, orange and flame — all the glory of a sunset being included in their marvellous tints. Many earthly possessions seem paltry indeed when compared with them. A walk along a path bordered by azaleas is like a stroll through a gallery where there is a beautiful

picture at each step. The woman who denied herself a new spring hat for the enduring joy of a clump of the great rhododendron under her window had the right idea.

Deciduous Shrubs of Special Merit

Acacia Rose (*Robinia hispida*). Rose colour. May, June. 2 to 8 feet, Hairy in all parts except the flowers, which are pea-like in large clusters. Suckers freely from the roots and may become a nuisance. A valuable screen. Useful on banks. Increased by division.

Almond, Flowering (*Prunus Japonica*). Spreading. The commonest flowering almond of old gardens. Flowers rose coloured. May, June. 5 feet. Only the double form is in cultivation. Good garden soil. Leaves smooth; otherwise like flowering plum.

Althea. See Rose of Sharon.

Arrow Wood (*Viburnum dentatum*). Upright, but bushy. Flower cymes 3 inches across. May, June. 15 feet. White. Fruit bluish black. Excellent for moist soil. Leaves lobed.

Azalea, Pinxter Flower, etc. These are among the earliest large-flowering shrubs, the majority blooming before the leaves appear. ——, Ghent (*A. Gandavensis*). The most showy early flowering shrub, April. 2 to 4 feet. Largest orange and salmon coloured flowers of spring. ——, Japan (*A. Sinensis* or *mollis*). Flame coloured and yellow. Every shade like a sunset. ——, Carolina (*A. Vaseyi*), purest pink, 1½ inches across. 4 feet. ——, Pinxter Flower (*A. nudiflora*). Pink veined with crimson lake. For wild garden. 3 to 5 feet. ——, White (*A. viscosa*). 2 to 4 feet. Plant near water. Also some evergreen species. All the azaleas demand open, loose soil, well drained. Preferably with humus. See also Rhodora and Evergreens, p. 155.

Barberry, Common (*Berberis vulgaris*). 6 feet. Bright scarlet berries, half inch long, last till spring. Var. *atropurpureus* has dark plum-coloured foliage, valuable as foil to brighter-leaved plants. Perfectly hardy. ——, Japan (*B. Thunbergi*). Best low ornamental shrubbery plant. Dense, compact growth, small shiny branches. Red berries all winter. Foliage is brilliant scarlet in fall. Quick grower on rich soils, but thrives anywhere. 4 feet. Invaluable for shrubbery or specimens. Propagate by seeds.

Bladder Nut (*Staphylea trifolia*). Greenish white flowers in nodding panicles. April, May; 6 to 15 feet. Sharply toothed leaves slightly hairy. A strikingly pretty shrub with three-foliate leaves. Any soil and position, but best in rich, moist loam partly shaded. —— (*S. Colchica*). 12 feet. 5 leaflets. Has more conspicuous flowers. Pods of both much inflated in summer.

Bladder Senna (*Colutea arborescens*). Flowers yellow. July to September. To 15 feet. Rapid growing, free flowering. Valuable for lightening the shrubbery with its pale green foliage. Large inflated pods in late summer. Not quite hardy North. Any soil, with preference to fairly dry and sunny. Propagate by seeds in spring, mature wood cuttings in fall.

Blue Spirea (*Caryopteris Mastacanthus*). Conical flower spikes with lavender-blue flowers. August, September. The only blue-flowered shrub of late summer and fall. Extremely attractive to bees; flourishes well along the seacoast. Cut down to the ground annually by frost, but makes a good growth and blooms every season. Blue flower spikes suggest a larkspur.

Buckthorn (*Rhamnus cathartica*). Sturdy shrub with spring branches. Oval leaves, flowers white. May. 10 feet. Fruit a black berry, large. Very hardy. Garden soil, rather dry. ——, Alder (*R. Frangula*). Has fruit red, changing to black in September. 12 feet. Moist soil. ——, Sea (*Hippophaë rhamnoides*). Best grayish-green foliage for seaside and sandy soils; used for binding. Also grows well in garden soils. On poorest land sometimes as low as two feet. Staminate plants more upright than pistillate. Berries orange-yellow. September; 10 feet, sometimes a tree 20 feet. Yellowish flowers in May.

Buddleia (*Buddleia Lindleyana*). June, July; 3 to 6 feet. Racemes of purplish violet flowers 6 inches long. Not quite hardy in the North, but flowers on new growth from the root. Worth growing for its colour. Light, well-drained soil, sunny position. Propagate by greenwood cuttings in spring, or hardwood cuttings in fall kept away from frost.

Bush Clover (*Lespedeza Sieboldi*). Small pea-like flowers in rosy pink clusters in September; up to 6 or 8 feet, but usually much smaller from winter-killing. Hardy in central New England. Valuable for its late season. Any soil. Propagate by division.



A FRINGE OF GRACEFUL DEUTZIAS (*D. gracilis*) BACKED BY TALLER SHRUBS TO FILL IN THE GAP CAUSED BY LOST LOWER BRANCHES OF THE SPRUCES



THE BRIDAL WREATH, A FAVOURITE IN OLD GARDENS, AND STILL THE MOST POPULAR MEMBER OF THE LOVELY SPIRAEA TRIBE

Chaste Tree, Monk's Pepper Tree (*Vitex Agnus-castus*). Narrow, pinnate leaves, grayish beneath. Flowers bluish lilac. July, September; varying height, generally 6 to 8 feet. Valuable for its late season. Not quite hardy in the North, where the less showy *V. incisa* survives. Any rather dry, sunny situation preferred.

Chokeberry (*Aronia arbutifolia*). Flowers April to May; 6 to 12 feet. White or tinged red. Numerous pear-shaped berries, a quarter inch across, bright or dull red, September. ——, Black (*A. nigra*). Similar, but with black berries. Both perfectly hardy and among the most beautiful fruiting small shrubs. Any soil.

Clethra. See Sweet Pepper Bush.

Coral Berry (*Symphoricarpos vulgaris*). Like the snowberry, but having smaller and purplish or reddish berries, persisting all winter. 5 feet. Foliage turns red in autumn. Native to the Middle States, but escaped from cultivation in the East. Also a variegated form.

Cornel, Bush Dogwood (*Cornus candidissima*). One of the best white blooming shrubs of June, followed by white berries on coral stems. Any soil. ——, Silky (*C. Amomum*). Dark green leaves, whitish beneath. White flowers in June; 3 to 10 feet. Particularly valuable for its blue and bluish white fruit persisting in winter. Vigorous growing. Moist or dry soils. The cornels and dogwoods are among the most valuable of all shrubs, because of their many-coloured fruits for late summer and fall effects, and bright-coloured barks in winter, growing well in shade or exposed and in any soil. Flowers white in the species named here. Propagate from mature wood cuttings or seeds.

Cornelian Cherry (*Cornus Mas*). Flowers yellow before the leaves. March to April in umbels; 20 feet, sometimes a small tree. Oblong, edible fruit, ¾ inch long, bright scarlet. A very valuable larger shrub, attractive both spring and fall. Propagate like other cornus and cornel.

Cranberry, High Bush. See Snowball.

Currant, Flowering (*Ribes aureum*). Flowers yellow, spicy fragrant. A favourite in old gardens. May; 4 feet. Bright green foliage, adapted to any good soil. Very effective among dark foliaged plants.

Daphne (*Daphne Mezereum*). April; 3 feet. Reddish lilac, fragrant. Thick clusters of red berries in the summer. The earliest warm-

coloured shrub that flowers before the leaves. —— (*D. Gwenka*). 3 feet. The best lavender and nearest approach to blue among the shrubs flowering before the leaves. Not hardy North. Well-drained light soil, with partial shade for both kinds. Propagate by seeds, which germinate slowly, or layers in the spring. See also GARLAND FLOWER.

DEUTZIA (*D. Lemoinei*). June; 3 feet. A new hybrid with larger flowers than the popular Pride of Rochester, which is taller growing and has the handsomest habit; double flowers, but pink. —— (*D. gracilis*). Slightly arching branches making a low-spreading bush; flowers single, white. May. All are hardy and thrive in any well-drained soil, and are among the best of the white-flowered shrubs. Propagate easily by greenwood and hardwood cuttings, also by seeds in spring.

DOCKMACKIE (*Viburnum acerifolium*). Slender, upright branches. Flowers yellowish white. May, June; 5 feet. 3 inches across. Fruit black. Foliage pinkish in autumn, becoming dark purple. Thrives in dryish soils under trees. Very valuable shrub. Propagate by seeds.

DOGWOOD, RED TWIGGED (*Cornus stolonifera*). Best red-barked shrub for winter effects. Better than the European Red Osier dogwood (*C. sanguinea*) with purple or dark blood-red branches. For best effect, cut back every two or three years to induce new growth. ——, ROUND LEAVED (*C. circinata*). Purplish branches, fruits light blue and greenish white. (See also CORNEL.)

ELDER, COMMON (*Sambucus nigra*). Useful for pond borders and wild gardening. ——, GOLDEN (*S. nigra*, var. *aurea*). 12 feet. The largest-leaved yellow shrub, especially for wet soils. Makes growth annually 10 feet. For lightening dense masses of green shrubbery. Better coloured if cut back frequently. Grows well in the shade.

ELEAGNUS. See GOUMI.

FRINGE TREE (*Chionanthus Virginica*). White. June; sometimes a slender tree to 30 feet; usually a large shrub. Slender thread-like flowers in June, after most other trees have flowered. Pretty blue berries all winter. Prefers a moist soil and must be sheltered in latitude of New England. Propagate by seeds in fall, also layers.

GOLDEN BELL (*Forsythia suspensa*). Long, gracefully drooping branches of yellow flowers before the leaves. 6 feet. The most showy early

flowering shrub of its colour. Good for foreground of shrubbery borders and on banks. —— (*F. viridissima*). Somewhat similar, with more flowers, but rather greenish colour and smaller, but holds its foliage later in the fall. Plant against dark background. Any garden soil. Propagate by cuttings any time, or seeds.

GOUMI (*Eleagnus longipes*). Whole plant covered with silvery scales. Reddish brown branchlets. Flowers yellowish white, inconspicuous but fragrant. April, May; 6 feet. Very showy scarlet fruit ¾ inch long on long stalks and covered with scales. Acid; edible. (For soil and progagation see OLEASTER.)

GROUNDSEL BUSH (*Baccharis halimifolia*). 3 to 12 feet. Flowers in large panicles; dense, coarsely toothed foliage one to two inches long. One of the best seashore plants. Most effective in late summer when the silvery silken pappus on pistillate shrubs only is very conspicuous. Grows in any well-drained soil in sunny position. Propagate seeds or cuttings under glass.

HONEYSUCKLE, FRAGRANT (*Lonicera fragrantissima*). Creamy white. March to May; 8 feet. Foliage half evergreen. Most fragrant of the very early shrubs. ——, JAPAN BUSH (*L. Morrowi*). White, changing to yellow. May, June; 6 feet. Bright red, sometimes yellow, fruits August till late fall. ——, MANCHURIAN (*L. Ruprechtiana*). White, changing to yellow; 8 to 12 feet. ——, TARTARIAN (*L. Tatarica*). May; 8 to 10 feet. Not changing to yellow. Most fragrant of all the early summer shrubs, especially at dusk. Flowers pink; several varieties red or white. Plant in shrubbery where its presence is made known by the odour. Valuable as a low screen on seaside. Fruit red or orange. Propagate seeds in fall or ripe cuttings. Any good garden soil with sun. Prune in winter.

HORSE CHESTNUT, DWARF (*Æsculus macrostachya*). Flowers like a diminutive slender horse chestnut. July, August; 4 to 20 feet. One of the handsomest for distant lawn clumps; flowers being borne erect on the top of the dome-like mass of foliage. Moist, loamy soil. Can be increased by root cuttings, layers, seeds.

HYDRANGEA (*H. paniculata*, var. *grandiflora*). September; 8 feet as generally grown. Immense conical flower heads of white bracts lasting into winter and becoming pink, then greenish, but white all through September. Most conspicuous white shrub in the fall for shrubbery hedge and lawn. Prune severely in winter for quantity

of flower; less so for larger trusses. Give rich soil and feed well. Propagate summer cuttings. The type or species sometimes attains 30 feet. More feathery, lighter heads of flower. ——, WILD (*H. arborescens*). Flat flower head. Creamy white. June, July; 8 feet. Sterile form is Hills of Snow. ——, HORTENSIA (*H. hortensis*). 8 feet. Flowers in large cymes without bracts. White, bluish, or pink. Few, or all, sterile. The greenhouse hydrangea; also for planting out in favoured situations. Will not usually stand much frost. An enormous number of varieties of this are offered in the trade. (*a*) JAPONICA Group: Cymes flat, sterile and fertile. (*b*) HORTENSIA Group: Cymes globose. Practically sterile; includes variety Thomas Hogg, the hardiest and best for outdoors. (*c*) STELLATA Group: Flowers with narrow sepals. The blue colour of the flowers in these groups depends upon soil conditions, and may usually be induced in the following year by watering with a solution of alum (one ounce to three gallons) all the preceding summer while growth is being made.

INDIGO, BASTARD (*Amorpha fruticosa*). Fine feathery foliage and spreading habit. 5 to 20 feet. Dark violet-purple flowers in racemes 3 to 6 inches long. Adapted to small shrubberies, dry sunny situations. Propagate by hardwood cuttings; also layers, suckers.

JAPAN QUINCE (*Cydonia Japonica*). May; 8 feet. Earliest, bright scarlet-flowered shrub. Useful also as a hedge. Plant as specimen. Slow growing. Subject to San José scale. Don't plant near decorative fruit trees or orchards unless systematically sprayed. Stands close pruning. Pink, salmon-pink, dark red, and white varieties.

KERRIA (*Kerria Japonica*). Flowers yellow, like single roses. May, June; 4 feet. Best graceful yellow-flowered shrub. Slender, pendulous branches, which remain bright green and effective all winter. Any garden soil. Double form and variegated form and dwarf with striped branches. Good as a specimen. Sometimes winter-kills in extreme North. Best in partial shade. Propagate cuttings, layers, or divisions. ——, WHITE (*Rhodotypos kerrioides*). 4 to 5 feet. White, less profuse and later. Black berries retained all winter.

LILAC, COMMON (*Syringa vulgaris*). May; 20 feet. Very fragrant lilac, white, or purple flowers. Grows anywhere, even in partial shade. Spray with potassium sulphide for mildew in August, September. Do not permit suckers to develop. Prune for form only. Most

popular old-fashioned summer flowering shrub. Transplant in autumn. ——, HUNGARIAN (*S. Josikæa*). June; 12 feet. Violet. More compact panicle. Less handsome, but larger, more club-like blooms. ——, CHINESE (*S. Pekinensis*). June; 15 feet. Handsome foliage retained late in fall. Young plants do not flower well. ——, PERSIAN (*S. Persica*). Most profuse bloomer. May, June; 5 to 10 feet. Loose, broad panicles; pale lilac, white. ——, ROUEN (*S. Chinensis*). May; 12 feet. Arching branches; purple, lilac, red, white. Hybrid of the Persian and common. Many named modern varieties of lilacs are offered in the catalogues: Marie Le Graye, best white; Ludwig Spaeth, dark purple; Belle de Nancy, pink with white centre, double. The named varieties are usually grafted on common privet, which has a tendency to sucker unless planted very deeply. Deep planting may result in the lilac ultimately getting on its own roots.

MAGNOLIA, HALL'S (*Magnolia stellata*). Most fragrant and showiest white-flowered shrub blooming before the leaves. April; 10 feet. Very fragrant. Differing from the other magnolias by having star-like instead of cup-shaped flowers. Blooms from 2 feet high. Rich soil, moderately moist. Difficult to transplant. Best done in spring. Propagate seeds or layers.

MAPLE, JAPAN (*Acer palmatum in many varieties*). 4 to 12 feet. Most important variously coloured and as variously cut deciduous small trees, but used as shrubs. Many named varieties in catalogues, as *atropurpureum*, *sanguineum*, *aureum*, *dissectum*, etc., which names also describe them. (See page 151).

MOCK ORANGE, SYRINGA (*Philadelphus coronarius*). May, June; 10 feet. The most fragrant summer-flowering white shrub. Flowers 1½ inches across. Several named varieties in the trade. This is the most fragrant species, but somewhat stiff in habit and not so showy as some others. The crushed leaves often have the odour of cucumbers. —— (*P. Lemoinei*). Very graceful with arching branches covered with flowers. Many varieties of this, differing in size of flowers. —— (*P. Gordonianus*). Large flowers, but scentless. 12 feet. ——, GOLDEN (*P. coronarius*, var. *aureus*). Bright yellow. 10 feet. The most popular golden-leaved shrub, keeping its colour the whole season. Compact habit. Effective as an accent close to the house, or on the "points" of a shrubbery border. —— (*P.*

Falconeri). Arching, oblong, pointed petals. June; 8 feet. —— (*P. inodorus*). Flowers in clusters of 1 to 3. May, June. Less floriferous than others and is sometimes not quite hardy North.

MULBERRY, FRENCH (*Callicarpa purpurea*). Flowers pink, in July; 3 to 4 feet. Grown for lilac-violet fruits which persist in dense clusters all along the stem into winter. Hardier than the native species, *C. Americana*, having more handsome violet-coloured fruits. Springs up from the roots and flowers the same season. Prefers sandy loam and heat. Full sun. Propagate by cuttings in spring or fall; also layers, seeds.

MULBERRY, TEA'S WEEPING (*Morus alba*, var. *Tatarica pendula*). Grafted at 4 feet. A small tree with severely pendulous branches with fairly deep-lobed leaves. Spreads a few feet only. For small gardens where some special character tree is wanted. Good for covering steep banks. Best small weeping tree for lawns.

NANNY BERRY. See SHEEP BERRY.

NEW JERSEY TEA (*Ceanothus Americanus*). July to September; 3 feet. One of the freest flowering and latest blooming shrubs. White. Excellent for shaded places, dry woods, etc. Propagate by seeds and soft wood cuttings in spring, mature wood in autumn.

NINEBARK (*Physocarpus opulifolius*). Spreading, arching branches. Flowers in corymbs, greenish white, followed by bright red fruit; very effective in late summer. 8 to 10 feet. One of the best hardy native shrubs. Any garden soil and situation. Propagate by seeds or cuttings.

OLEASTER, RUSSIAN OLIVE (*Eleagnus angustifolia*). 20 feet. Handsome foliage with silvery under sides. Inconspicuous flowers, followed by ornamental fruit. June. Fragrant. Berries yellow. Also coated with silvery scales. Branches sometimes spiny. Any well-drained soil, including limestone. Propagates by seeds and cuttings very easily; also root cuttings and layers.

PEARL BUSH (*Exochorda grandiflora*). May; 8 feet. White flowers 2 inches across, with large green disc. Like a giant-flowered spirea, but blooming a trifle later. Very useful in shrubbery, best massed with other shrubs; especially effective with *Forsythia suspensa* in foreground. Grows in any good soil. Propagate seeds, cuttings, layers. Only old plants produce fruits.

PINXTER FLOWER. See AZALEA.

PLUM, FLOWERING (*Prunus triloba*). Pink flowers, double, appearing just before the leaves. May, June; 4 to 5 feet. Own root plants best by layering. Often grafted on plum as a standard, but then short lived. Much like flowering almond, but hairy. ——, PURPLE (*P. Pissardi*). Grown for its purple foliage. Flowers pale pink, small.

PRIVET, REGEL'S (*Ligustrum Ibota*, var. *Regelianum*). June, July; 8 feet, but usually a much smaller plant. The only privet worth growing for its flowers. Borne in pendant tassels on almost horizontally spreading branches. Valuable on banks. ——, GOLDEN (var. *variegatum*). 8 feet. Green and yellow. The quickest growing variegated shrub that can be sheared with impunity. For small edgings or borders to walks and for formal effects. Use judiciously in all cases. Not absolutely hardy, but usually safe. Propagated easily by cuttings. See also HEDGES, p. 189.

RASPBERRY, FLOWERING (*Rubus odoratus*). 3 to 5 feet. Strong growing with shreddy bark. Leaves like a large maple. Flowers rose-purple, 1 inch across. Good for semi-wild effects. Isolate from other colours.

RHODORA (*Azalea Canadensis*). Flowers rose-purple in clusters of five to seven. A common native plant throughout Eastern North America. April, May; 1 to 3 feet. The earliest flowering hardy azalea. Best on loose, peaty soil.

ROSE OF SHARON, ALTHEA (*Hibiscus Syriacus*). The best (or maybe the worst) August and late summer flowering tall shrub. 12 feet. Starts to leaf very late in the spring. Valuable for screens. Plant very early in the fall, but best in spring. Flowers on old wood. Variegated form. Many varieties with single and double flowers ranging from white through pink to magenta and purple; also variegated foliage; 18 feet. The single white, pure pink and lavender-blue varieties are very lovely, but some harsh hued altheas and weigelas are the ugliest shrubs in common cultivation. —— (*H. Syriacus*, var. *fl.-pl. foliis variegatis*). 15 feet, leaves green, edged light yellow. Sturdiest late-flowering variegated shrub. Quite hardy, stands shearing. The purple flowers are double and not showy.

ROSE, RUGOSA (*Rosa rugosa*). 3 feet. The only rose that makes an ornamental shrub. Dense mass of dark green foliage with large flowers produced at intervals all summer; fragrant. Magenta to pure white. Fruits very ornamental like small apples, orange-yellow.

Best hybrids: Blanc double de Coubert, white; Conrad Ferdinand Meyer, silvery rose. All soils, including seaside. Do not prune. Propagate by seeds or named varieties by hard wood cuttings.

Sheep Berry, Nanny Berry (*Viburnum Lentago*). White flowers. May, June, 30 feet. In cymes followed by clusters of oval bluish black fruit with bloom, which endure till spring. Sometimes a tree.

Senna. See Bladder Senna.

Siberian Pea (*Caragana arborescens*). Pale or bright yellow pear-like flowers. May and June; up to 20 feet. Sometimes a tree. Variety pendular with weeping branches is very beautiful. Any soil, but sandy preferred. Sunny position. Propagate by seeds, fall or spring, root cuttings and layers. Best yellow flowered shrub of its season.

Smoke Bush (*Rhus Cotinus*). Small flowers in loose panicles becoming profusely plumose in June, July; 10 to 12 feet. Very effective as lawn specimens. Leaves nearly round, dark green. A very characteristic shrub, common in old gardens. Attacked by borers.

Snowball, Common (*Viburnum Opulus*, var. *sterile*). Large balls of white flowers. May, June; 9 feet. Old-time favourite. Ragged habit and subject to plant louse. Deep moist soil. The fertile form of this shrub is the Highland cranberry, having scarlet fruit in July till following spring. ——, Japan (*V. tomentosum*). Is a much better shrub, especially for specimens. Flower heads more rounded, cleaner, leaves crinkled and deeper green, brown on the reverse. Blooms a little later. The best white large flowered summer shrub. May be trained on walls. Propagate by cuttings.

Snowberry (*Symphoricarpos racemosus*). Clusters of large snow white berries, at intervals along the slender branches. An old-time favourite. Grows anywhere. Flowers pink but inconspicuous. May, June; 5 feet. Berries from late June till after frost. Spreads rapidly by suckers.

Silver Bell, Snowdrop Tree (*Halesia tetraptera*). White. May. 10 feet. Bewildering cloud of white flowers before the leaves. The most conspicuous of the early white flowering trees. Any good soil. Habit twiggy and pendulous.

Spice Bush (*Benzoin odoriferum*). 6 to 15 feet. Leaves oblong, finely ciliate, bright green. Flowers yellow, before the leaves, in rosettes. One of the earliest flowering shrubs with aromatic bark. Fruit

crimson, spicy. Foliage bright yellow in fall. Peaty and sandy soils. Propagate by greenwood cuttings under glass or by seeds. See also STRAWBERRY SHRUB.

SPIREA (*Various species of Spiræa*). White or pink. May, June; 4 to 6 feet. The most generally popular flowering shrubs of light, graceful habit for early summer, as lawn specimens, hedges, or in shrubbery. ——, BRIDAL WREATH (*S. Thunbergii*). Perhaps the most popular lawn shrub; profusion of small white flowers, feathery effect; May; finely cut bright green foliage all summer, turning to shades of red and yellow in fall; wood slender; makes excellent hedge. ——, VAN HOUTTE'S (*S. Van Houttei*). June; 6 feet. The most showy of the spireas; flowers in umbels two inches across. Handsome foliage all summer. Plant in conspicuous place with ample room. Cut out flowering wood in summer. Thrives anywhere. ——, ANTHONY WATERER (*S. Bumalda*, var. *Anthony Waterer*). July; 3 feet. The only shrub of its period. Flowers magenta-red produced successively for six weeks. Used for edging. Prune off old flower head as soon as withered if second crop is wanted. ——, PLUM-LEAVED (*S. prunifolia*). Slender branches, slightly hairy. Flowers in small umbels. Pure white, $1\frac{1}{3}$ inch across. May; 6 feet. The double form (var. *flore pleno*) with little white buttons, particularly showy and most commonly grown. Foliage not shining. Bright orange in fall. —— (*S. arguta*). White. May; 6 feet. The most free flowering and showiest of the early kinds. A hybrid from Thunberg's and quite hardy. The other parent (*S. multiflora*) blooms a little later, but otherwise similar. ——, STEEPLE BUSH (*S. tomentosa*). Flowers in dense narrow panicles. Pink. July, September; 4 feet. Does not sucker like others of this section. Specially valuable late blooming shrub. ——, MEADOWSWEET (*S. alba*). Similar, but with white flowers, somewhat looser. June, August. See also GOAT'S BEARD, in PERENNIALS, p. 222.

SPIREA, BLUE. See BLUE SPIREA.

STAGGER BUSH (*Pieris Mariana*). Nodding flowers, in clusters, on leafless branches of the previous year. Pinkish white. April, May; 2 to 4 feet. Moderately moist, well-drained porous soil, in partial shade. Avoid limestone and heavy clay. Plant with rhododendrons. Propagate by layers or cuttings in heat.

Storax (*Styrax Japonica*). Often a tree. Flowers white, ½ inch across in tassels, profusely strung all over the young growths. Hardy to Massachusetts. One of the most beautiful summer shrubs. June, July; up to 30 feet. —— (*S. Obassia*). Larger fragrant flowers. Light porous soils. The best white tassel flowering summer shrub.

Strawberry Bush (*Euonymus Americanus*). Very attractive in fall, with expanded capsules showing pink berries. Flowers inconspicuous in June; 8 feet. Grows anywhere. Easily propagated.

Strawberry Shrub (*Calycanthus floridus*). An upright shrub with somewhat coarse leaves. Deep red-brown flowers with pungent, spicy odour. May; 6 to 10 feet. Propagate by division or layers. Any garden soil. An old favourite.

Sumach, Stag Horn (*Rhus typhina*). Velvety, hairy foliage. Flowers in dense panicle, followed by red fruit masses. July, August; usually 10 to 12 feet, sometimes 30. One of the best for fall colour. Adapted to driest soils in wild or semi-wild situations. Var. *laciniata* has deeply cut foliage. ——, Smooth (*S. glabra*). 10 to 15 feet. Similar, but not hairy, very commonly planted in dense masses. There is a cut-leaved variety (var. *laciniata*). ——, Poison (*R. venenata*). 10 to 20 feet. Usually a tree. Very effective with red petiole and midrib with pinnate leaves. Shiny leaves, fruit white. Moist ground. Very beautiful, but poisonous.

Sweet Pepper Bush (*Clethra alnifolia*). July, September; 3 to 10 feet. Fleecy spires, white flowers with spicy fragrance; much visited by bees; excellent for late summer blooming, mixed shrubberies. Best for naturalising along streams and ponds. Moist peaty or sandy soil. One of the best late flowering shrubs, adapted to a variety of situations.

Syringa. See Mock Orange.

Tamarix (*Tamarix Gallica*). Delicate pink plumes. May, July; 15 feet. Foliage very fine and plumy also. Unexcelled for salty and alkaline soils. Grows right on the sea side. Can be cut back severely. Flowers produced on old wood but in the variety Narbonnensis on the new wood. The best hardy shrubs for feathery effect in wind-swept places. (See p. 191.)

Tree Peony (*Pæonia Moutan*). May, June; 3 to 6 feet. Immense rosy, magenta, crimson, pink or white flowers 1 foot across. The largest flowered early shrub. An immense number of varieties are

offered; the best are grafted on common magenta stock which should not be allowed to develop. Give rich garden soil. Easily raised from seed.

VIBURNUM. See SNOWBALL, DOCKMACKIE, ARROWWOOD, NANNY BERRY, WAYFARING TREE, HIGH BUSH CRANBERRY.

WAX MYRTLE (*Myrica cerifera*). 3 to 6 feet. Dark green leaves, berries bluish white, coated with wax, with aromatic odour, and much sought by birds. Good for semi-wild effects.

WAYFARING TREE (*Viburnum Lantana*). Flowers white in cymes 3 inches across with seven showy white rays on the margin. May, June; up to 20 feet, sometimes a tree. Excellent for dry situation and limestone soils. Fruit bright red, changing to black.

WEIGELA (*Diervilla florida*). June; 6 feet. Showiest shrub of midsummer. Following the lilacs. Flowers pink, white, red, claret-crimson to magenta. Best flowering shrubs under big trees. Can be planted where other shrubs fail. Free from insects and disease. Cut out old wood to the ground. Many varieties, as: Abel Carrière and Rosea, carmine changing to red; Alba, changing to pink; Eva Rathke, dark wine red; Candida, pure white; Nana variegata, dwarf, variegated leaves.

WITCH HAZEL (*Hamamelis Virginiana*). Flowers yellow and brown. September, October, followed by conspicuous fruits which, brought indoors in winter, will explode and scatter seed; 25 feet. —— (*H. Japonica*). Flowers February to April. Foliage bright yellow, orange, or purple in fall. Moist, peaty and sandy soil. Most valuable shrub of early winter.

YELLOW ROOT (*Xanthorrhiza apiifolia*). Flowers small, purplish. April; 1 to 20 feet. In drooping racemes. Any good soil but best in moist and shady places. Suckers freely in spring. Golden yellow in autumn. Stems and roots bright yellow. Not quite hardy North.

THE VERY BEST TREES AND SHRUBS FOR HEDGES

[In the following list are included only such plants as will stand shearing, for obviously any moderate growing shrub of low stature can be utilised for hedge purposes. Such may be selected from the list of Deciduous Shrubs, p. 175, and Evergreens, p. 155.]

ASHBERRY, HOLLY-LEAVED (*Berberis* or *Mahonia Aquifolium*). Evergreen and hardy, but foliage sometimes burns in winter. Tassels

of golden yellow flowers in May, followed by black purple berries with heavy bloom. 3 to 4 feet.

BARBERRY, JAPAN (*Berberis Thunbergii*). The best low ornamental defensive hedge plant. Foliage brilliant scarlet in fall; graceful arching twigs strung with red berries, persistent through winter; 3 to 3½ feet; quick grower; thrives North and South. ——, COMMON (*B. vulgaris*). Taller, not so neat, but hardy and decorative.

BEECH (*Fagus sylvatica*). Slow growing, very long lived, carrying foliage nearly all winter. Excellent screen. Plant very early. Valuable as a windbreak where evergreens are not suitable. Prefers dry, sandy loam or limestone soil.

BOXWOOD (*Buxus sempervirens*). The ideal hedge and edging plant for formal gardens. Dense habit. Evergreen. Moderately rapid grower. Can be sheared freely. There are several varieties (see page 156); the tree box attains a height of 30 feet; dwarf box, 3 to 4 feet; others differ in size and form of leaf. Needs winter mulch at the North.

BUCKTHORN (*Rhamnus cathartica*). The best strong hedge, as dense and tight as honey locust, but not so high; 6 feet. Thorny, never ragged, moderate grower. Spray with kerosene emulsion for hop louse. Old hedges that are out of condition are easily recovered by cutting back.

CONIFEROUS EVERGREEN. In the North the coniferous evergreens are by far the most satisfactory hedge plants for all purposes. Of these the native hemlock is best, thriving everywhere. Young growth extremely feathery and whole plant lively green all the winter.—Norway spruce, somewhat similar but stiffer and blacker.—White pine, long needles of light gray green.—Arborvitæ is best small-foliaged dense-growing plant, making very compact hedge up to 20 feet. Stands shearing. Excellent for low soils and swamps. Plants from dry soils transplant badly.—Siberian arborvitæ is greener in winter.—Yew: unfortunately this favourite European hedge plant is unreliable in America unless potected in winter from strong wind and sunshine. For hedge purposes the hemlock is its substitute. (For full descriptions see EVERGREENS, pp. 155 to 162.)

HOLLY (*Ilex opaca*). The native American holly, an excellent slow-growing evergreen which stands moderate shearing. Will grow

throughout the Atlantic Coast. Best hedge plant for sandy soil. In the South *Ilex Cassine*, with small arbutus-like leaves and brilliant red berries all winter, is better.

HYDRANGEA, HARDY (*Hydrangea paniculata*, var. *grandiflora*). Best flowering hedge for late summer. Immense white cones of bloom. August, September. (See p. 179.)

LAUREL, MOUNTAIN (*Kalmia latifolia*). For tall and broad screen up to 10 feet. Must not be sheared. Pinkish white flower clusters in May, June, are highly decorative. Well-drained soil, succeeding even in rocky places in New England. Evergreen.

LOCUST, HONEY (*Gleditschia triacanthos*). For a strong, high defence. The thorniest of all. "Bull strong, horse high, and pig tight." Perfectly hardy, fast and vigorous grower; suckers. Plant thickly and prune severely. Mice girdle in winter. Spring trimmings must be burned. Needs strict control.

MAGNOLIA (*Magnolia glauca*). Excellent south of New York. Large glaucous leaves becoming evergreen in the real South. One of the best for windbreaks. Beautiful in flower. *M. conspicua* and *M. Soulangeana* make most striking ornamental flowering hedges. (See TREES, p. 149.)

MAHONIA. See ASHBERRY.

OSAGE ORANGE (*Toxylon pomiferum*). Grows in any soil. Makes a dense defensive high hedge as far north as Massachusetts. Unless regularly trimmed, the top branches will spread. Will exhaust soil on each side for some feet.

ORANGE, TRIFOLIATE (*Citrus trifoliata*). Best medium height, impenetrable hedge for the South, where it is evergreen. Deciduous in the North. Foliage yellow in fall. Not reliably hardy north of Philadelphia. White flowers in May, followed by small yellow fruits, make it ornamental also. Set one foot apart and cut back to 8 inches. Give two trimmings annually.

PRIVET, AMOOR (*Ligustrum Amurense*). Evergreen except in extreme cold situations; more spreading habit than California privet, and darker green. A valuable hedge plant, especially in the South, enduring both heat and cold and on any soil not an actual swamp. In rich soil will give good hedge in two years. ——, CALIFORNIA (*L. ovalifolium*). For shelter. Fastest growing. Stands salt spray.

Good soil binder. Stands severest pruning and can be trained high or low. Most popular hedge plant in modern gardens. Free from disease and stands shearing with impunity. Almost evergreen. Foliage bright green in summer, becoming bronze in winter. Occasionally winter kills to the ground in the North. Set 6 inches deeper than in the nursery and cut back to 6 inches or less. Set 12 inches apart, or up to 2 feet in very rich ground. ——, Regel's (*L. Ibota*, var. *Regelianum*). Low growing, denser habit with spreading, drooping branches clothed with white tassels in June; 8 feet. Useful as a border hedge to plantations and along roadways. Should not be planted as a protection. The best of the flowering privets. Lower, denser habit than Ibota.

Quince, Japan (*Cydonia Japonica*). Most showy defensive hedge of spring. Bright scarlet flowers in May. Spreading spiny branches making strong low defence, growing six feet high. Do not prune too close. Subject to San José scale. Best defensive hedge for flower gardens.

Rose, Rugosa (*Rosa rugosa*). Best rose for hedge purposes growing right on the seaside. Much used in Newport, R. I. Flowers magenta to pure white, slightly fragrant, produced all summer. Large apple-like fruits. Grows three feet high and does not need shearing. (See p. 183.) Other roses for effect are Marie Pavie and other polyanthas. (See Roses, p. 309.) The native rose, *R. lucida*, is excellent for low border hedge, carrying fruits till winter. Should be cut back entirely every few years.

Rose of Sharon (*Hibiscus Syriacus*). Sturdiest and largest flowered hedge. Leafs late in spring. Blooms in August, September. Select good pink or white varieties. Prune in winter for profusion of flowers. Do not permit the plants to run up, leaving the base bare. Set 3 feet apart.

Spindle Tree (*Euonymus Japonicus*). South of Washington one of the best hedge plants, and does well in the North with shelter. The bright pink and orange fruits recall the bittersweet. A climbing variety (var. *radicans*) is an excellent evergreen vine and is hardy in New England. There are various colour variations in the foliage.

Spirea, Van Houtte's (*Spiræa Van Houttei*). Best white-flowered hedge. Handsome foliage all summer. Good informal hedge and

also especially suitable for formal gardens, as it does not run riot. Prune out old wood in summer immediately after flowering. (For other spireas see p. 185).

TAMARIX (*Tamarix Gallica*). Unexcelled for saline and alkaline soils, growing on the salt water's edge where nothing else will. Flowers feathery, pink, on old wood in the type; but on new wood in variety Narbonnensis. Foliage fine and feathery. (See p. 186.)

PERENNIALS FOR A THOUGHT-OUT GARDEN

"I. Whatever is worth growing at all is worth growing well.

"II. Study soil and exposure, and cultivate no more space than can be maintained in perfect order.

"III. Plant thickly; it is easier and more profitable to raise flowers than weeds.

"IV. Avoid stiffness and exact balancing; garden vases and garden flowers need not necessarily be used in pairs.

"V. A flower is essentially feminine and demands attention as the price of its smiles.

"VI. Let there be harmony and beauty of colour. Magenta in any form is a discord that should never jar.

"VII. In studying colour effects, do not overlook white as a foil; white is the lens of the garden's eye.

"VIII. Think twice and then still think before placing a tree, shrub, or plant in position. Think thrice before removing a specimen tree.

"IX. Grow an abundance of flowers for cutting; the bees and butterflies are not entitled to all the spoils.

"X. Keep on good terms with your neighbour; you may wish a large garden favour of him, some day.

"XI. Love a flower in advance and plant something every year.

"XII. Show me a well-ordered garden and I will show you a genial home."

— GEORGE H. ELLWANGER.

CHAPTER XI

PERENNIALS FOR A THOUGHT-OUT GARDEN

FLOWERING plants that live or perpetuate themselves from year to year, giving one a high rate of compound interest as their numbers and beauty naturally increase, commend themselves to us more and more until, happily, they are coming to be regarded again, as they were in our grandmothers' day, as the very basis of a good garden. We may be sure that pioneer gentlewomen, who were their own gardeners chiefly, and who had to cook, churn, spin, weave and sew by hand all the clothing for large families, nurse them and dose them with home-made medicines, make quilts, candles, wine, and a thousand other things which would stagger the pampered modern woman, learned which plants rewarded a minimum amount of care with a maximum amount of flowers. A few moments snatched from multitudinous household cares from time to time sufficed to keep our grandmothers' gardens gay from earliest spring to frost, and it is little wonder that their favourites have stood the test of time. We still love their peonies, hollyhocks, and phloxes. Some fraxinella in an old New England garden has outlived great-grandmother, grandmother, mother and daughter. One plants perennials for beauty that is permanent. They are for the affections, too.

Compared with tender annuals, whose seeds must be sown every spring, many of them indoors or under glass, their seedlings transplanted to the open ground at the busiest time of the garden year, how refreshingly easy of culture the perennials are!

After all one's care bestowed on annuals, it gives positive pain to witness their death, root and branch, with the first frost; whereas the hardy herbaceous plants merely go to sleep in autumn preparing for a more glorious resurrection in the spring. Several weeks before the earliest annual is ready to open a bud out of doors, the hardy garden is lovely with snowdrops and crocuses, creeping phlox, myrtle, English daisies, pink and white saxifrages, daffodils, sweet rocket, bleeding heart, lily-of-the-valley, columbines, clove pinks, narcissus, peonies and iris, some of which began to bloom before the last snowdrift melted. We welcome them joyfully, like old friends returned. It is an eventful day when some pet plant pushes its way back to sight through the lately frozen earth. If old flowers are kept cut, and no seed is permitted to form, the well-regulated hardy garden will afford a constant succession of bloom from the earliest snowdrop until the Japanese anemone, chrysanthemum and Christmas rose finally succumb to inexorable winter.

Annuals are seemingly cheap because the seeds come in five-cent packages, and few consider that they have to be annually renewed or calculate the value of the time consumed in transplanting the seedlings from boxes or hotbeds to the open ground. They leave the ground in autumn as bare as it was in spring, the entire investment of money and labour having disappeared. But long after the first frost some perennials bloom and others continue growing, even in winter, whenever the temperature rises; and either by virtue of their own hardy constitutions, or of creeping roots that will send forth new crowns in spring, or of self-sown seeds, they all insure perpetuation and increase.

Perennials are usually offered in the catalogues as well-grown plants at a cost of from one dollar to three dollars or more a dozen;

and one who has taken the pains to count the surprising number of plants in even a modest little garden might well be appalled at the price of a new one composed entirely of nursery stock. But when it is remembered that the first cost of a perennial is its only cost, that a large stock can be speedily worked up from small beginnings, that the gaps in the new beds or borders may be filled in with annuals for a few years until the hardy plants have sufficiently increased to overspread the bare places, that many perennials grow from seed as readily as annuals, and that patience, rather than money, is required to establish home-grown vigorous stock, the argument for economy must be decided finally in favor of permanent plants. Otherwise, how could every cottager in Europe contrive to have his little dooryard bright with them? They are secured at practically no cost, the castaways from large estates supplying the workmen on them with gleanings from which their neighbours profit in time. When the old-fashioned garden gave place to geometric patterns of tender bedding plants on the fair lawns of England in the Victorian era of ugliness, many choice perennials would have perished from the land had they not been treasured by the humble, who were able to propagate plants from their old stock and restore them to the gentry of the parish when the hardy garden happily came into vogue again later in the nineteenth century.

Winter is the best time to make a garden which, in any case, should be prepared on paper, to be pored over and dreamed about months before a spade is struck into the earth. What visions of beauty flash upon the inner eye! What bliss of solitude comes to the garden lover planning his plots before a wood fire after the winter crop of catalogues has been gathered into his library! His imagination compasses all joys, but no difficulties. There will

be flowers for tender association's sake in his dream garden, flowers to give away by the armful, larkspurs for the Sunday evening tea-table when the old Nankin china is used, gaillardias to fill the Indian baskets on his bookshelves, bee balm and columbine to attract humming birds next his porch, phloxes to help him add to his butterfly collection, Madonna lilies for the church altar, roses for the June brides, white flowers in abundance that his garden may be lovely after dark when all other colours are absorbed into the night, clove pinks for fragrance, irises for stately form, hollyhocks for bold effects, candytuft whose snow is not melted by sunshine, love-in-a-mist and honesty because they have pretty names, Iceland poppies for their wealth of exquisite orange, yellow and white tissue flowers from May to October, London pride that grew in his mother's garden on the old farm, and a miscellaneous assortment of other flowers because they are beguilingly described or temptingly cheap — no Chinaman's opium dream in the Flowery Kingdom was ever more kaleidoscopic.

After an orgie among the catalogues which, needless to say, is the worst possible way to begin a garden, albeit the most popular method, the dreamer must realise that the section of the home grounds where perennials are to be grown needs to be drawn to scale and planned even more carefully than other parts of the place, for there colour, the most subtle and perplexing of problems, becomes the principal factor of success. The border, the old-fashioned or the formal garden, or wherever the problematical plants are to be set out, will be charted and divided into twenty-foot units of space, and the position of every plant indicated by a number corresponding to the number assigned each flower on the dreamer's list. This planting list should indicate not only



COREOPSIS AND LARKSPUR ALONG A GRASSY PATH. THE ARRANGING OF COMPANION CROPS OF PERENNIALS IS A FASCINATING HOBBY

the colour of the flowers, but their season of bloom, the height of the plant and its preferences for soil and situation. Three charts are necessary to show the effect of the planting in spring, summer and autumn. If a section that is glorious in May should be barren of bloom a month later, another group of plants must be introduced. If the colours of eighteen and nineteen conflict, it is far easier for the gardener and better for the plants to move one of them on paper than if it were rooted in the earth. Eighteen may be the very plant needed to reconcile seven to six. Five may be most lovely next nineteen. If all the permanent plants needed for a border cannot be afforded at the outset, or if no desired perennial will supply a crying need for a certain colour at a certain season, recourse may be had to annuals for quick results.

Restraint in a garden, as at a feast, is preferable to excess. It is a safe rule to limit one's list to the indispensables at first, and never to buy a plant whose need is not realised in one's saner moments after the spring garden fever subsides. Fitting flowers to suit one another, the climate, the soil and exposure, it may be inferred, is an intricate scientific and artistic feat. The foreign firm who make a speciality of hardy herbaceous borders arranged for continuous bloom and harmonious colour effects for English gardens, fill a want deeply felt by the inexperienced on our side of the sea. All the plants needed to fill a border one hundred and twenty-five feet long by eighteen feet wide, as indicated on a spaced and carefully marked chart, are supplied for about four hundred and sixty dollars. Few Americans take their perennials so seriously. Nor are many of us willing to miss the fun of blundering along through many mistakes, if need be, toward an ideal which ever eludes attainment as it rises higher and higher, year by year, with the growth of the critical faculty. Every zealous amateur

has a dark past to look back upon, and realises that his task is in active evolution. A ready-made garden, no matter how correct, could no more be tolerated by a true lover of the gentle art than the ready-made library which Silas Lapham bought to match his upholstery.

If ready-grown stock is to be ordered, be sure it comes from a reliable nurseryman who is not colour blind. The best plants are cheapest in the end; indeed, they are the only ones that it pays to buy. Strange to say, few dealers in the world guarantee seeds and plants to be as represented in their catalogues, and the purchaser who, having ordered one variety receives another, has, in most cases, no redress. Perhaps the most reliable firm in the United States give "no warranty, express or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs or plants" they send out, and they will not be "in any way responsible for the crop." What other class of merchants could hope to sell goods on such terms?

If the plants themselves are a disappointment, how much more exasperating is it to sow seeds of perennials that will not flower for two years and then to find that few, perhaps not any, have come true to name! The hollyhocks that should have borne single flowers of crepe-like texture and pastel tints produce stalks heavily freighted with tight wads of crude-coloured shaving paper, apparently. The old-fashioned single hollyhock, beloved by artists but rarely listed now, has suffered much at the hands of the modern hybridiser with a passion for multiplying petals until the natural form of this most decorative old flower is almost lost through alleged improvements. Out of the fifty Japanese irises of "crystalline whiteness like moonlight on snow" that you order from a specialist with a genius for poetic description, forty-

three, perhaps, will be purple or mauve. Peonies that should be "exquisite silvery pink" blush to reveal themselves a vivid magenta. Larkspurs described in the catalogue as of that celestial light blue known by the Chinese as "the sky washed by rain," prove to be double, club-shaped flowers of such deep, dark indigo as only a Chinese laundryman knows the value. Plants not hardy north of Philadelphia are frequently listed without reference to that fact in catalogues sent by the thousand into the New England States and Canada.

But a polite note dispassionately stating one's grievance to the head of the firm will usually bring forth in him fruits meet for repentance — there will be an offer to exchange the plants you did not order for those you did, express charges paid. The time lost cannot be refunded, it is true, but you are mollified until the next blooming season comes around, when it is quite likely that the second attempt to fill your order correctly proves to be no more successful than the first. After three fruitless efforts to get my favourite larkspur from a perfectly honest but careless or colour-blind nurseryman who makes a specialty of hardy flowers, after seeing a twice-planted hedge of altheas, supposed to bear single white flowers, produce double magenta and lilac ones, after suffering eye strain from deep purple, Hoboken pink, indigo, puce and other herbaceous horrors that have to be dug up and consigned to the compost heap to save the garden from a nightmare of ugliness, thereby losing over a third of all the stock purchased and a year of time, I would warn the reader that his only safety lies in visiting the nursery when the plants desired are in bloom and labelling them then and there. Apparently there is the grossest carelessness, even among leading nurserymen, about segregating stock to fit the descriptions given

in the catalogues, and there is no generally accepted colour scale as a guide. The standardising of colours is the most crying need in the trade. What is a "lovely rosy purple" to the Dutchman may be an excruciating magenta to you or me. French dealers, apparently, have a truer eye for colour, and their enlightened republic publishes a chart of standardised colours. The lamentable truth is that, as yet, an insignificant number of cultivated Americans take a sufficiently keen interest in their gardens to insist that they reflect their own taste, not the nurseryman's nor the gardener's. Very few complaints are received when orders are not filled accurately; a phlox is a phlox to the vast majority of people who have not learned to discriminate between the washy pink-purples of old stock that is trying to revert to the type and the brilliant orange scarlet of the Coquelicot, the finest red yet known, the great white snowballs of the Queen that blows later than the lovely Miss Lingard, and the soft chamois rose and salmon tints of new hybrids. Indeed, many catalogues merely offer hardy phloxes of assorted colours at so much a dozen, with no attempt at a description. Yet an indiscriminate collection of perennial phloxes is, perhaps, the most excruciating of all eye shockers.

The cheapest way to grow many of the perennials and biennials, and usually the surest method of getting only those you want, is to grow them from seed collected from friends. One of the most beautiful hardy gardens I ever saw was in England, and the hundreds of vigorous plants had actually cost the owner, the rector of a village church, less than ten shillings. Specialising at the outset on a strain of superb larkspurs grown from seed given him by a parishioner, he had worked up a stock for exchange with specialists in other perennials until, after eight years, he

owned a remarkable collection of the choicest flowers in a little garden of his own tending that people drove miles to see. Two hours a day were all he permitted himself to spend upon it, yet it was in faultless order, and there were always flowers for every visitor to carry away and flowers for every room in his charming little house. When Wordsworth lived in Dove Cottage with his sister Dorothy, on an income of eighty pounds a year, she contrived to have a hardy garden, some of her precious daffodils and perennials persisting there to this day. Charles Kingsley's favourite plants which he raised in the garden at Eversley are still cherished there by his daughter.

Seed that is kept long out of the ground loses much of its vitality, which is why it is well to plant it as soon as possible after it ripens. It is a safe precaution against slow germination to soak it over night. In any case some seeds take weeks to sprout. Long after you have counted them dead they may rise to glory. Every place requires a seed bed, large or small, according to the demands made upon it. Perhaps no gardener ever thought he had land enough for his vegetables, intense cultivation and scientific rotation of crops being meaningless phrases to the average man with the hoe. But, in spite of his protests and possible grudge, it is well to sacrifice a few carrots and cabbages, if need be, to a plant nursery. Is not "the beautiful as useful as the useful"? Few perennials or biennials bloom the first year, and their unadorned infancy should be passed in the seclusion of a nursery near the water supply in the kitchen garden.

In July, or as soon as some early crop like peas, radishes, or lettuce has been gathered, deeply fork the ground that was well enriched in the spring, and thoroughly rake it again and again to pulverise the soil. If the ground be heavy, lighten it

with sand and rotted sod fibre or leaf-mould, and sift soil enough to spread over the top of the bed to the depth of one inch. Tender young rootlets cannot push their way through clay or heavy soil or stones as they are so often expected to do. The seeds, previously soaked, should be shaken up lightly in a little earth to separate them, and then sown in the sifted soil at a depth proportionate to their size — the tiny seeds of hardy poppies, for example, on the surface of the bed, larger ones relatively deeper. Then all must be pressed down firmly with a board or the palm of the hand to bring the earth in contact with the first hair-like roots that will reach out in search of food. Probably more seeds fail to grow through having air spaces around them than from any other cause. The danger is lest seeds, however carefully planted, may dry out, which is why some people go to the extra trouble of sowing them in shallow boxes placed on their piazza floors where they can sprinkle them with a whisk broom frequently rather than put them in a seed bed away from the house where they may be forgotten. Seedlings started in boxes will need to be transplanted to the open ground within a few weeks.

Every evening, when there has been no rain, the bed should be watered through a fine nozzle; a heavy downpour from a hose or the sprayless spout of a watering can would wash away the soil from the seedlings' roots. As the plants increase in size the nightly watering may be gradually discontinued, except during drought, if the surface of the ground be kept well stirred with a hoe between waterings.

Many weeds that the hoe dare not touch will necessarily be pulled by hand, and seedlings, too, if you have made the usual mistake of sowing too many seeds to the foot. Don't crowd the bed. It is no work to give each seedling all the room it needs



THE RHODODENDRON IS OUR BEST EVERGREEN SHRUB. GROUPS OF TALL EVERGREEN TREES BEHIND RHODODENDRONS SERVE AS A WINDBREAK AND MAKE AN EFFECTIVE FOIL FOR THE FLOWERS



A HAPPY COLONY OF THE CHRISTMAS ROSE (*Helleborus niger*) NATURALISED IN PARTIAL SHADE

at the outset, and it is some work to transplant it. After frost, cover the bed with coarse stable litter, well shaken out, or autumn leaves kept from blowing off by criss-crossed pea brush laid over them. The thickness of the blanket will depend upon the severity of the climate. If manure that has lost its heat be used for protection — and none other should be spread — see that it does not cover the crowns of foxgloves, hollyhocks, sweet Williams or other plants that hold their leaves all winter, for it will cause them to decay. Crown rot is the frequent cause of failure with these plants of the easiest culture. Established plants that have successfully weathered their second summer need no covering south of Washington.

If one has a coldframe to start seedlings in at midsummer, so much the better; for the protection of the sashes in winter insures a longer period of growth and a larger crop of flowers the next season in consequence. Young plants, started in late summer and compelled to endure a long winter in the open, are not likely to bloom well the first season, which is why people who live in Canada and the northern tier of states, and who have neither coldframes nor hotbeds, do well to plant their biennials and perennials in the open ground as soon as the earth dries out and becomes warm in the spring, when, however, there is apt to be so great a rush of other work that the seedlings' simple but insistent wants of weeding and watering cannot always be met. If they are, the gardener is rewarded by a crop of well-established, vigorous plants when the long, cold northern winter must be endured. Some growers prefer to start their perennials in a hotbed with the tomato plants and tender annuals in February or March, but little is gained by the two months of extra labour, as very few will bloom the first summer in any case.

Thinning out and transplanting seedlings should be done in the late afternoon or on a cloudy day. Always water them before and after moving. Baby plants become the objects of one's keenest concern. They are the pets of a place. Their sturdy growth is a matter to boast about. When a new garden is to be filled most economically, when bare spots in the border need beautifying, when you want to give a friend some of your favourite plants, when there is a chance to secure from a neighbour some coveted new perennial in exchange for a few seedlings, how joyfully you seize a trowel and lift the big, healthy youngsters into a basket with something akin to parental pride! Miss Mitford was not the only one to delight in having "a flower in a friend's garden." A young amateur grew over two hundred lusty plants of exquisite tall white columbine from seed stalks that had been cut to be thrown away in a neighbour's border. The same quantity of less sturdy and fresh plants, if bought from a commercial dealer who had not only to grow, but to catalogue, advertise and pack them, would be cheap at fifteen dollars. For the best effects in perennial planting one needs a quantity of each kind of choice plant, rather than a sample of many inferior kinds.

Well-stocked gardens need thinning out every year if the plants are not to choke one another to death. Degeneracy and death ensue in a miser's garden. Perennials conduce to friendliness. There is often a chance to almost stock a new border from the overflow from an old one in the neighbourhood; and, usually, the owner is only too glad to find an appreciative recipient. No matter how rampant one's sweet Williams or coreopsis become, who can bear to consign their multitudinous offspring to the compost heap? By dividing with a sharp spade the roots of peonies, irises, violets, lilies-of-the-valley and other plants that

are resting in August, and the roots of phlox, rudbeckia, golden glow, the pearl, day primroses, pentstemons, boltonia, day-lilies, bee balm, chrysanthemums, Japanese anemones, and other plants that grow in clumps as soon as they show above ground in the spring, there is little danger of checking their bloom; and by lifting some of the self-sown seedlings of foxgloves, Canterbury bells — two indispensable biennials that give a charm to any garden — of gaillardia, hollyhocks, anemones, Oriental poppies, coreopsis, and columbines, one may benefit immeasurably a well-established garden while giving away plants enough to stock another. Fill in all cavities from which roots have been lifted with fresh soil made extra rich with well-rotted black manure. The pit back of the cow barn is the best one to rob for the flower garden. Plants given away are never missed, for what are left show their relief from crowding by greatly increased vigour. Some gardeners advocate lifting all perennials every four years, carting away the exhausted soil in which they grew, and replacing it with fresh earth heavily enriched in which to reset them. So great a labour is quite unnecessary if the bed has been deeply and thoroughly prepared in the first place, and if one will be generous annually, or even every two years.

Perennials, as a rule, are such gross feeders that they soon extract the available food within their area. Phloxes and peonies, especially, must be either lifted into replenished earth every four or five years or be liberally fed annually. The practice of spading or forking in the manure that has covered a garden all winter as soon as growth starts in early spring is responsible for a deplorable loss of or injury to cherished plants. Never be guilty of it. Some forgotten treasures not yet started are sure to be buried; others, with brittle new shoots like ferns, bleeding-

heart and peonies, to be broken, and countless insignificant seedlings to be sacrificed. Lightly lift off the coarser cover from the plants on a dull, flat potato fork, leaving on only the fine, short part of the manure. Most of the substance washes away into the soil. Plants will quickly push their way through what is not dissolved by rain and overspread it until it is quite concealed. The light mulch is found to be beneficial when hot, dry weather comes. In June, after all the plants are well above ground, some voracious ones may require a trowelful of coarse, slowly soluble bone meal mixed through the soil about them, or a few draughts of weak liquid manure just before blooming time. When perennials are covered in winter with litter or leaves which supply no food, it is well to lightly fork in some very old short manure about the roots, where they will not come immediately in contact with it, after all the plants are up in late spring.

During prolonged drought, when it would be impracticable to soak the whole garden at one time, divide it into sections and thoroughly water one of them each evening at sundown. It is better to give every plant a deep, satisfying drink once a week than to sprinkle them all every night. Sprinkling encourages roots to form near the surface where they are likely to bake. A plant should be induced to root deeply and so become drought resistant. Plants like Japanese irises, larkspurs, chrysanthemums, Canterbury bells, meadow rue, mallows, ferns, and superbum lilies probably never get all the water they really need for their best development in our sun-baked, torrid gardens. Feeding and watering are the essentials of success with perennials.

Where shall they be planted? Everywhere! Imitate nature and "paint the meadows with delight" if you have no garden. Parkinson societies are greatly needed in our new land to beautify

raw roadsides and waste places. The old-fashioned garden, now happily in vogue again, is composed almost exclusively of hardy perennials. Its box-edged parterres overflow with them. Even the modern formal garden fittingly employs such plants as hollyhocks, foxgloves, larkspurs, Canterbury bells and lilies, whose tall, straight spires of bloom repeat the lines of pillared porch and pergola. It needs a more riotous profusion of growth and bloom in it to soften the architectural severity that is usually too apparent. But, generally speaking, perennials are informal in character, and many kinds are better adapted to naturalistic than to formal treatment.

Plants of especially coarse or vigorous habit like the hardy sunflowers, golden glow, boltonia, day primroses, orange day lilies and hollyhocks, are often set out in bold masses among the shrubbery where, for a time, they are strikingly effective. Their flowers, which appear after the shrubs have finished blooming, keep the shrubbery gay until frost. But shrubs and perennials, both voracious, soon deplete the soil, and unless an extra amount of food be supplied, both deteriorate. Nevertheless it would be a thousand pities never to use them together. Shrubs are so dark and rich a foil for flowers blooming earlier or later than they, that they make a most effective background, especially when used to take off the curse from an enclosing fence on a suburban plot or to partially border a lawn. Do not place the shrubs in a straight line at the back of the border only, but in dense and light groups, some of the lower kinds running out to the front of the irregular edge of the border and flush with it, some receding almost to the fence, and so giving variety of setting and exposure to the perennial flowers in the graceful, sinuous outlines of the tall and low shrubbery. The green wall of a

sheared privet or evergreen hedge also admirably displays gay flowers sharply contrasted against it; formal gardens are frequently enclosed by such a border. But from the cultural view-point the planting of perennials next shrubs and hedges is not desirable unless the roots of the stronger can be prevented from trespassing upon the weaker's preserves. English gardeners, to whom the mixed border is indispensable, sink planks in the earth as a partition; yet, in a land where lumber is costly, a narrow trench filled in with coal ashes is quite as discouraging a barrier to pilfering roots. If no obstruction be put in the way of them, only the most vigorous perennials should be left to struggle fiercely for survival with the shrubs. Properly partitioned, almost any perennials you please may be grown in a mixed border, but pray not a large assortment dotted about in a meaningless way! The border is usually viewed from a distance and bold masses of one kind of flower in a given area are most effective. Indeed, no plant appears at its best unless given adequate space to display its charms either between or in front of the shrubs. Scattered about with no relation to the height, foliage and colour of their surroundings, perennials can be more distracting than delightful in mixed borders.

Whoever thinks it a simple matter to plan an artistic, hardy border that will contain masses of harmonious bloom from early spring until late frost with no clash of colour in it at any time, no bare spaces, no untidy tangled effects, no confusion of dissimilar foliage, no spotty groups not blended with their surroundings, can never have tried to make one. Because it is one of the most difficult garden feats attempted, albeit the first one the novice is apt to try his 'prentice hand upon, we rarely see thoroughly satisfying perennial planting. The border is too often regarded as



LUPINES ARE FLOWERS OF THE SWEET-PEA TYPE, ARRANGED IN VERY TALL VERTICAL CLUSTERS; THEIR FINGER-SHAPED LEAVES HAVE INTERESTING HABITS OF SLEEPING AND WAKING. THE SHOWY FLOWERS ARE ESPECIALLY EFFECTIVE WHEN MASSED APART IN A SETTING OF RICH, DARK-GREEN FOLIAGE. THE PLANT IS RATHER COARSE FOR THE FLOWER GARDEN



WHITE PHLOX, SHELL-PINK SINGLE HOLLYHOCKS AND BEE LARKSPUR BLOOMING SIMULTANEOUSLY IN A HARDY GARDEN

a catch-all for hardy plants. Favourites are set out side by side with little reference to their effect in the composition as a whole. Miscellaneous mixtures suggesting a crazy-quilt are the models that everywhere greet the eye. A woman with such dazzling daubs of colour in her parlour would go distracted. Proportion, form and colour need to be as carefully considered as in painting a picture on canvas when one plants for permanence.

The intricacies of planting perennials so as to get the most lovely effects from them require exhaustive study for each place; but there are certain self-evident propositions which perhaps may be helpful to the inexperienced amateur:

When perennials only are used to border a path or to frame a little lawn, set the tallest ones at the back in an undulating line, and let the height of the plants gradually diminish toward the front until the fringed pinks, creeping phlox, candytuft, arabis, saxifrage, Russian violets and other low growers form the irregular flowing edge. Occasionally let a phalanx of irises or other taller plants run out to the edge of the border to relieve its flatness.

Use billowy masses of one kind of plant or colour to give dignity to the planting, but be careful not to have them so large as to be wearisome. However, the tendency is just the reverse, and the effect of many small groups is scarcely as reposeful as a garden should be. When a long border along a path or drive is most often seen from end to end, the foreshortening of the masses requires that they be given an extra breadth. In any case, longish drifts of planting are preferable to roundish spots. Happily, perennials soon spread into irregular, flowing groups preferable to any that the hand of man can form. Groups with harmonious flowers may have foliage that necessitates their separation. For example, Japanese eulalia and similar tall grasses

look well with hardy bamboos and poker plants, but out of place next low-growing, broad-leaved day lilies.

Try to have no more than two or, at the most, three, harmonious colours flowering in the perennial border at one time. Many shades of the same colour may be introduced for variety. Harmony is always more desirable than sharp contrasts. It saves trouble and clashing to group together in the same section of the bed plants whose flowers are of approximately the same colour, and so chosen as to follow each other in an overlapping succession throughout the season. For instance, a yellow and white section might begin its display with snowdrops, crocuses, tulips, daffodils and narcissus, arabis, yellow alyssum and white creeping phlox in the low foreground; continue with the gray-white Florentine and yellow irises, columbines, candytuft, peonies, yellow brier and white rugosa roses, foxgloves, garden heliotrope, hollyhocks, coreopsis, day primroses, the pearl, white, lemon and orange day-lilies, Shasta daisies, phlox, meadow rue, and so on through the rudbeckias, sunflowers, boltonia and golden glow of late summer to the chrysanthemums and Japanese anemones of autumn. The yellow might be intensified to orange and flame with Oriental poppies, lychnis, butterfly weed and poker plant if one desires to pass by gradual transition to a scarlet, red and crimson section. Or, all the stronger tones may be omitted, and paler yellows only retained with the cold whites that lead by easy transition to blue, lilac and purple flowers if there are no pink or red ones blooming in any part of the border at the same time.

From the early pink creeping phlox and tulips of April to the tree and herbaceous peonies of May, the damask roses, pink poppies and pyrethrums of June, the mallows, hollyhocks, and phloxes of July, and so on to the late pink chrysanthemums, is a lovely

progression, too, when one may run up the scale through crimsons to the dark, velvety carnation, sweet Williams and herbaceous peonies of richer hue than Jacqueminot roses, or down to the pinkish gray-white of garden heliotrope (Valerian) and the warm white of the fleecy meadow sweet, fraxinella and immortelle.

Or, the border may have a complete change of color every month or six weeks, as when a pink phase succeeds a blue one; but this is difficult to manage because of the perversity of plants. The larkspurs unexpectedly prolong their bloom because of cool weather and frequent rains, perhaps, whereas they should have given place in early July to rosy hollyhocks that marshal in the pink group which, in turn, may linger long enough to swear at its successor. However, cutting off the larkspur spires merely insures a second crop of flowers in the fall; nipping the heads off phloxes that may rush inopportunely into bloom insures flowers from the lateral shoots when they are wanted. Companion crops have undeniable fascinations. Each gardener has some pet combination. One will plant blue spirea to conceal the rusty peonies that dry off in the fall; another will hide the long shanks of his crown imperials behind Shasta daisies. Canterbury bells swing where columbines lately were in another garden. Chrysanthemums conceal the downfall of pentstemons and monkshood.

Another way to secure harmony in a garden is to devote certain spaces in it to certain seasons — one part of the home grounds for spring bulbs and plants, one for early summer effects, one that shall be bright during the drought and dog-days of midsummer, and another section for autumn. Indeed, one authority declares it to be the only way to secure the finest effects, arguing that if a given area be expected to produce flowers from early spring to late frost there are sure to be flowerless spaces in it

much of the time, and that such plants as are in bloom will look like isolated patches of colour among the foliage. The plan has advantages for people who live in the country for only a few months, when a garden might be planned to put forth concentrated loveliness then. It certainly is unreasonable to expect a plant to bloom longer than three months; some reward our pains for not more than as many weeks; but masses of clean, healthy foliage are not objectionable, surely, and the flowers need not look spotty if secondary tints are grouped around stronger colours and the whole toned down with synchronous plants. For example, a long mass of flowers that run the gamut from deep purples to pale blues had around its flowing outlines the common catmint, whose cool, grayish foliage made an easy transition to the greens in the herbaceous border. Green often divides groups, it is true, but isolation is precisely what is needed in many cases. Even screamingly opposed colours are rendered inoffensive by broad green stretches between them, although it is sometimes better art to tone them down with the weaker secondary tints of the same colour until they gradually merge into the neutral ground of green or white.

White is the great peacemaker among warring flowers. Blue lengthens distance and adds depth to shadows, just as yellow, on the contrary, foreshortens the garden picture. Bright red is always an exclamation point; it punctuates space and defines its own position so insistently that the usual devices of grouping secondary tints about it to bring it down to the colour scale of its neighbours is not often successful. Usually it needs isolation to reveal its splendour. The brilliant scarlet of Oriental poppies, for instance, is sure to clash with the contemporary June roses and pink peonies, or to totally eclipse other flowers. War rages

where all should be peace. But planted in the foreground of a copse, a mass of dwarf evergreens or a border of shrubbery not in bloom, how glorious the great poppies are! Another special-purpose plant is the cardinal flower, now tamed by the commercial dealer who sells its easily grown seed. Pitifully out of place among the host of garden flowers, its vivid beauty is best displayed in nature's garden, where it rises beside a stream that reflects it like a mirror. Here it gives one a keener prick of pleasure than in any other setting. Association counts for much. Foxgloves are charming garden flowers, yet the best effect produced with them that I ever saw was where a great group of their white spires ascended in the foreground of a vista through deep woods. Some stumps had been grubbed out, and the owner of the place had sprinkled foxglove seeds from the garden, which he promptly forgot. Two years later he happened upon them unexpectedly and was overjoyed at the sight. What he called "a happy accident" was, of course, no accident at all, for unconsciously, perhaps, the picture had flashed on his inner eye before he dropped a seed into the earth. Lupines are especially effective when massed apart in large groups in a setting of rich, dark green foliage. Indeed, many lovely perennials that would not bear neglect through naturalising, may be cultivated in a naturalistic way where their effect is apt to be far more artistic than in a garden.

Everywhere perennials are the artist's flowers and are used by him as colours are on a palette to make a picture. We have been wont to mistake the daubs on the palette—a lot of unassorted colours set out in a meaningless way — for the picture itself. Flowers may be left to jar the nerves of the sensitive or so arranged as to produce constantly changing visions of beauty. "It seems to me," says Miss Jekyll, "that the duty we owe to our gardens

and to our own bettering in our gardens is so to use the plants that they shall form beautiful pictures; and that, while delighting our eyes, they should be always training those eyes to a more exalted criticism; to a state of mind and artistic conscience that will not tolerate bad or careless combination or any sort of misuse of plants, but in which it becomes a point of honour to be always striving for the best. It is just in the way it is done that lies the whole difference between commonplace gardening and gardening that may rightly claim to rank as a fine art."

Perennials for the Herbaceous Border

Plants marked (*) thus are suitable for situations surrounding the water garden.

Note.—The date of flowering given is that for the neighbourhood of New York, and will of course vary, earlier to the South, later to the North, in most cases.

Aconite, Autumn (*Aconitum autumnale*). Blue, lilac, whitish. September to November; 3 to 5 feet. Valuable as a successor to the aconite or monkshood, which flowers earlier. Flowers not so open. Of easiest cultivation, thriving under same conditions as monkshood.

Adonis (*Adonis Amurensis, A. Davurica*). Yellow. March; 1 foot. Earliest flowering, long-lived spring-blooming perennial, easily grown in full sunshine. Plant early (March 15th), or early September, or get pot-grown plants.

Alum Root. See Coral Bells.

Anemone, Japanese (*Anemone Japonica*). Rose, white. September to October; 2 to 4 feet. More and larger flowers in late September than any other perennial. Blooms until hard freeze. Flowers 2 to 3 inches across. Best in partial shade, in cool, loose, moist and rich soil. Cover in winter. Generally dies if transplanted in fall. Single, double and semi-double named varieties.

Baby's Breath (*Gypsophila paniculata*). White. June, July; 2 to 3 feet. Very numerous minute flowers borne on a gracefully branched feathery stalk. Excellent for cutting and for giving lightness to other cut flowers, and for giving mist-like effects in borders. Fairly dry, open places, also good for rockeries. Cut stalks may be dried and used all winter.

Balloon Flower (*Platycodon grandiflorum*). Blue, purple, white. July to October; 1 to 3 feet. Largest bell-flower that can be easily grown. Flowers 3 inches across. Stake early, and don't cut stems in fall. Give good drainage. Divide early in spring when growth starts.

*Balm, Bee. Oswego Tea, Indian Plumes (*Monarda didyma*). Scarlet August; 2½ feet. More red flowers than any other herb. As easy to multiply as mint. Grand for massing in woods, or on sunny streams' sides. Attracts humming-birds. Fragrant foliage.

*Balm, Moldavian (*Dracocephalum Moldavicum*). Blue. August, September; 2 feet. Labiate flowers in whorls at intervals in long racemes. Do not plant in dry soils fully exposed to sunshine; does best in moderately rich, sandy loam, moist and shaded. Flowers small and soon fade. Increase by seeds or division.

*Beard Tongue (*Pentstemon barbatus*). Light pink to carmine. June to August; 3 feet. Flowers 1 inch long, borne in a loose, slender, foxglove-like inflorescence. Very beautiful in mass effect, but trivial otherwise. One of the best native perennials, growing in any garden soil. ——, Blue (*P. diffusus*). June, July; 2 feet. Similar, but with bluish purple flowers. Several other species also in cultivation. —— (*P. deustus*). Has pale yellow flowers. —— (*P. Cobæa.*) Purple to white. Parent of numerous garden forms in many colours.

Begonia, Hardy (*Begonia Evansiana*). Rose pink. June to August; 2 feet. Showy red stems and under side of leaf, which is green above. Flowers very freely, and multiplies by bulblets or tubers. Hardy on Long Island, in light, well-drained soil with humus, and easily grown anywhere with light winter protection. Worth more general cultivation.

Bellflower, Carpathian (*Campanula Carpatica*). Blue. June, July, and scattering later on; 1 to 1½ feet. Easiest to grow, and most permanent low-growing member of the bellflower family. Only bellflower that gives bloom all the autumn. Sow in spring in good, rich soil and give protection in winter. ——, Hairy (*C. Trachelium*). Purple or blue flowers less than one inch long. Lingers about deserted homesteads. Rough of leaf and unrefined in colour. Blue form is the best. ——, Peach-leaved (*C. persicæfolia*). Blue or white. Flowers 2 inches wide, 1½ inches long, and very characteristic leaves. Mid-June; 2 to 3

feet. The most beautiful of the old perennial bellflowers, and the next to the biennial Canterbury bells (see OLD-FASHIONED FLOWERS, p. 57) in size of flower. ——, WIDE-LEAVED (*C. latifolia*). Purple or dark-blue loose raceme about 8 inches long, containing 8 to 15 very large (2½ inches long) flowers. Largest and coarsest leaves. See also BALLOON FLOWER.

BLANKET FLOWER (*Gaillardia aristata*). Red, yellow. July to October; 3 to 5 feet. The very gay, daisy-like flowers last throughout summer if no seed forms. The only double-flowered variety is *splendidissima plena*. Best yellow is Kelway's King, even the disc being yellow. More flowers for cutting than any other hardy perennial. Drought and frost resister. Cut flowers as fast as they fade. Cover plants with litter after ground is frozen. Often grown as an annual.

*BLEEDING HEART (*Dicentra spectabilis*). Pink; 1½ feet. Early May. Heart-shaped flowers on long, gracefully arching sprays; long-lived. Often catalogued as Dielytra or Diclytra. Rich, moist soil preferred. Fragile looking, but quite hardy.

BOLTONIA. See FALSE CHAMOMILE, NATIVE PLANTS, p. 89.

BUGLE (*Ajuga reptans*). Creeper, with blue flowers in May. One of the best carpeting plants. Mint family. Dark-leaved forms best. ——, GENEVA (*A. Genevensis*). May. Cheapest and showiest spring-blooming, blue-flowered plant for carpeting. Fine for dry places, and for shady situations, where grass will not grow.

CAMPANULA. See BELLFLOWER.

CANDYTUFT. See OLD-FASHIONED FLOWERS, p. 57.

CARDINAL FLOWER. See NATIVE PLANTS, p. 90.

CATCHFLY, GERMAN (*Lychnis Viscaria*). Red, white. May, June; 6 to 20 inches. One of the best hardy perennials, growing in all soils. Profuse bloomer in sunny places. The small flowers are massed into a sort of head. Name comes from the sticky patches below the flower clusters, which often catch ants and crawling insects. Many varieties in various shades. See also LONDON PRIDE, p. 64.

CHAMOMILE (*Anthemis tinctoria*). Yellow. June to frost; 2 feet. Finely cut, dark-green foliage and immense quantities of golden-yellow, daisy-like flowers, 1 inch across. Good for cutting, but has strong, pungent odour of wormwood. Grows well in poorest soil. ——, DOUBLE SCENTLESS (*Matricaria indora*, var. *plenissima*).

White. June to September; 1½ feet. White buttons in loosely branched panicles. Very pretty growing or cut. Best free-flowering white flower of summer. ——, False (*Boltonia latisquama*). See Native Plants, p. 89.

Christmas Rose (*Helleborus niger*). White, fading pinkish. December, January; 1 foot. The only permanent border plant with evergreen foliage that flowers in winter — blooming even under the snow. Plant near the house where it can be seen. Get old, established stock in September. Often takes some time to become settled, not flowering well till the second or third year. Moist well-drained, rather open soil, in partial shade. Cut flowers make excellent table decorations if taken young; they become speckled with age. Individual flowers 2 inches across. Foliage very dark. Var. *altifolius* is the earliest flowering.

Chrysanthemum, Hardy (*C. Indicum* and *morifolium*). Practically all colours except blue and scarlet. September to November; 2 to 3 feet. Unquestionably the most important late-blooming plants of the garden, flowering profusely till frost. Always plant in spring; cuttings can be made from growing shoots all the year. (See Old-Fashioned Flowers, p. 57.) Great diversity of form, but ranging into several well-defined types: (*a*) Single, resembling a daisy, with rays surrounding a conspicuous disc. Excellent for cutting. Mary Anderson is a popular kind. (*b*) Double quilled, with rosette of involute petals. Example, Little Bob. (*c*) Double, with expanded rays. Example, Sœur Melaine. (*d*) Anemone-flowered. Like the single, but with tubular disc florets, much enlarged, forming a distinct cushion. Not offered by name in the American trade. (*e*) Reflexed. Double, with flat rays distinctly arched back toward the stalk. Example, Jules Lagravère. The large-flowered chrysanthemums, usually grown in greenhouses, are similarly classified, most popular types being: (*a*) Incurved. Long petals regularly curved toward the centre. Example, Colonel D. Appleton. (*b*) Japanese. Long petals, variously formed. Loosely and irregularly twisted more or less. The most popular decorative kinds. Examples, Golden Wedding, Glory of the Pacific, Madam Carnot. (*c*) Reflexed. Very rarely grown. Example, Cullingfordi. (*d*) Large anemone. Well-developed tubular disc florets, surrounded by expanded ray florets. Example, Garza.

CLEMATIS, AROMATIC (*Clematis aromatica*). Deep violet-blue. July to September. Solitary, fragrant flowers, 1½ to 2 inches across. Grows 4 feet high, or 6 feet if supported. ——, BLUE BUSH (*C. integrifolia*). Blue, purple, or white. June to August; 2 feet. Solitary blue flowers ½ inch long, covering bush 2 feet high. Var. *Durandi* taller, and has longer flowers with recurved sepals. ——, DAVID'S (*C. heracleæfolia*, var. *Davidiana*). Pale blue. August, September; 4 feet, but needs support. Flowers in clustered heads 6 to 15, and also singly. Larger leaves than any other cultivated clematis. ——, WHITE BUSH (*C. recta*). White. June to August. Fragrant flowers 1 inch across in dense corymbs. Plant 2 to 3 feet long, not climbing. The common bush clematis of Southern Europe. There is also a double form. Give deep, loamy soil, fairly rich. They are susceptible to injury by drought, and need water in summer. A little lime in the soil is an advantage. On dry, hot soils use cow manure, but on heavy soils use leaf-mould. Spray overhead in early summer.

*COLUMBINE (*Aquilegia vulgaris*). Violet, blue, white, red. May; 2 feet. Heavier, less graceful, but more permanent than the long-spurred kinds; less particular about shade and drainage; excellent for rocky ledges. ——, WILD (*A. Canadensis*). Red and yellow; 2 feet. Attracts humming birds. ——, ROCKY MOUNTAIN (*A. cærulea*). Blue and white. 1½ feet. Two last best for naturalising. Light, sandy soil, moist, with good drainage. Keep seed-bed moist. ——, YELLOW (*A. chrysantha*). 3 to 4 feet. May to August.

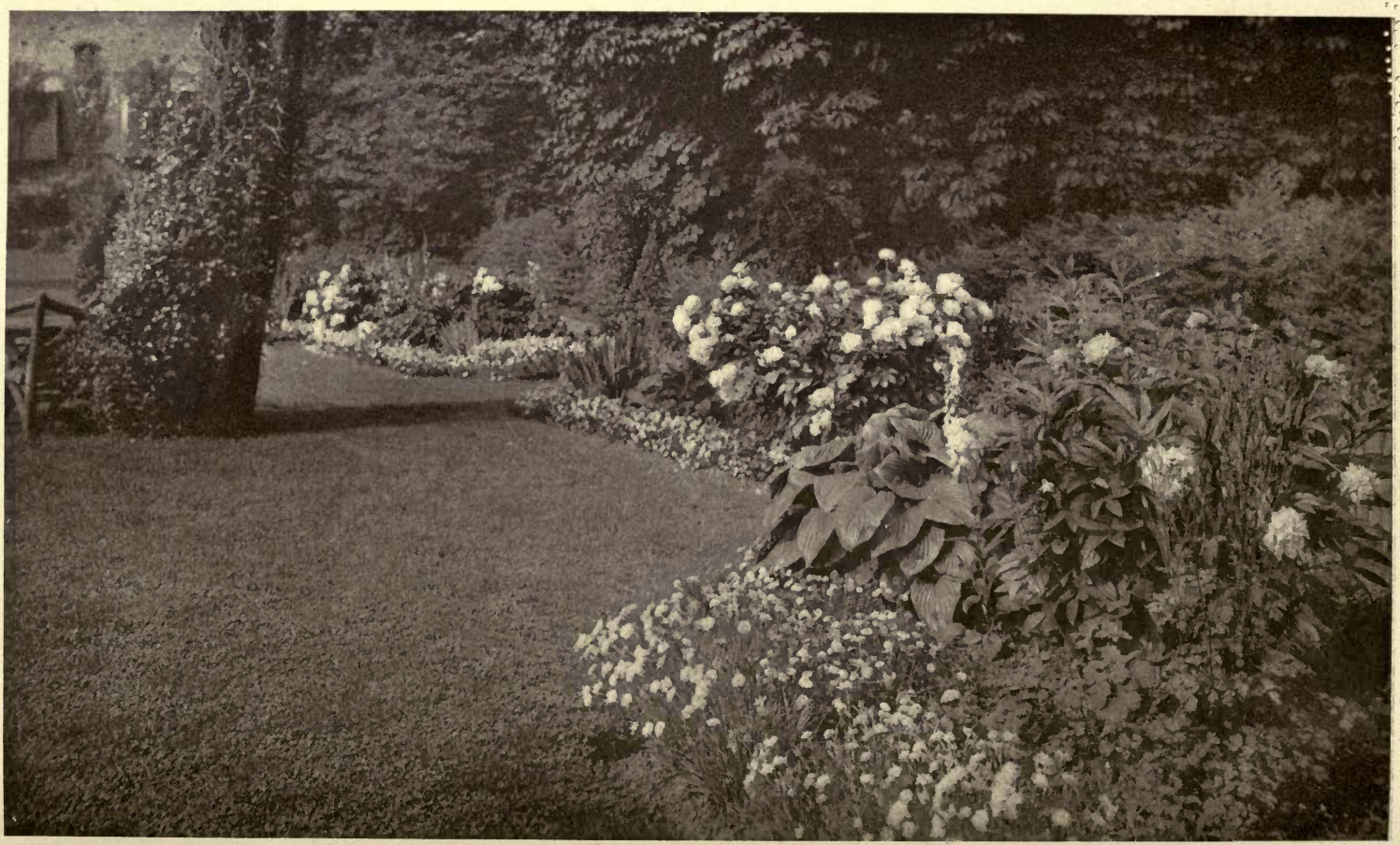
*COLUMN FLOWER (*Lepachys columnaris*). Yellow. June to September; 1 to 3 feet. A composite, 2 to 3 inches across, the dark disc formed into an elongated thimble-like cone, 2 inches or more long, and borne on long, wiry stalks. Excellent for massing, and good for cut flowers. Sow early indoors and transplant outside for succession the first season. Sometimes treated as an annual. Similar to cone flower.

CORAL BELLS, ALUM ROOT (*Heuchera sanguinea*). Coral red. July, August; 1 to 2½ feet. Long lily-of-the-valley-like spikes of dainty, coral-red flowers appearing intermittently all summer. Wiry stems. Likes sandy, well-drained, but not necessarily dry soil. Propagate by dividing roots after flowering.

COREOPSIS. See TICKSEED.



BOLTONIA — ONE OF THE BEST OF THE ASTER-LIKE PLANTS, ESPECIALLY THE TALL, WHITE VARIETY. THE FRINGY FLOWERS LAST A WEEK IN WATER



A PERENNIAL BORDER IN THE FOREGROUND OF AN ENCIRCLING BELT OF SHRUBS AND TREES WHOSE DARK FOLIAGE AND SHADOWS ADMIRABLY SET OFF THE FLOWERS. GERMAN IRIS, PEONIES AND WHITE CLOVE PINKS NOW IN BLOOM. EVERY GARDEN PICTURE NEEDS A BACKGROUND AND A FRAME

Cupid's Dart (*Catananche cærulea*). Blue. June to August; 2 to 3 feet. Like a blue daisy, 2 inches across. Excellent in light soils, but easily grown anywhere. Named varieties: *alba*, white; *bicolor*, blue centre with white margin. Used as everlastings when cut. Increase by seed or division.

*Evening Primrose (*Œnothera biennis*, var. *grandiflora*). Clear yellow. June to September; 5 feet. The flowers 4 to 5 inches across open suddenly at nightfall. Best yellow-flowered biennial for bold effects. Easily naturalised. Almost any soil. *Œ. fruticosa*, the Day Primrose, is described under Sun Drops in Native Plants for the Wild Garden, p. 95.

Flax (*Linum Lewisii*). Sky blue. July, August; 1 to 2 feet. Expanded flowers 1½ inches across, lasting a short time, but borne in rapid succession. Will flower first year from seeds sown in the open. Increase by seeds or division. Full sun, in open place. *L. perenne* is much like this, but has smaller flowers.

*Forget-Me-Not (*Myosotis palustris*). Bright blue. May, June; 6 inches to 1½ feet. The best all-purpose hardy plant of its colour for feathery and foreground effects. Best in moist, half shady places, but will do in open sun if soil be not dry. ——, Early (*M. dissitiflora*). Deep sky-blue. April to July; 1 foot. A biennial, but self-sows, and is generally the more useful.

*Foxglove (*Digitalis purpurea*). Purplish pink to white. Early June. Foxgloves and larkspurs and hollyhocks are the best flowers with spire-like clusters. Common old magenta form strongest for naturalising. Most refined form is Var. *gloxinioides*. Likes partial shade, and coolness at roots. Biennial.

French Honeysuckle (*Hedysarum coronarium*). Red. August, September; 2 to 4 feet. Pea-like flowers in crowded axillary clusters, fragrant. Light, open, well-drained soil in sunny place. Easily grown. Var. *album* has white flowers.

Gaillardia. See Blanket Flower.

Gas Plant (*Dictamnus albus.*) See Old-Fashioned Flowers, p. 59.

Globe Flower (*Trollius Europeus*). Yellow. May, June; 1 to 1½ feet. Globular flowers borne singly or in twos, like gigantic buttercups, 2 inches across on foot-long stems. Moist, heavy loam. Var. *Loddigesii* is deep yellow. —— (*T. Asiaticus*). Orange yellow; 1½ to 2

feet. April to October. Good for cutting. Give partial exposure to sun. Increase by division in September, or seeds. Seedlings grow slowly.

Goat's Beard, True (*Aruncus sylvester*). ——, False (*Astilbe decandra*). White. July, August; 4 feet. These two so closely resemble each other that they are commonly confused. Either one is worth growing for bold, massive, half-wild effects, especially for connecting the flower border with shrubbery. The plume-like clusters of flowers are 6 inches or more long. Foliage boldly three-lobed, and having quite a shrubby appearance. Either one may be planted. Very easily grown in any soil or situation. Propagate by division any time.

Golden Glow (*Rudbeckia laciniata*, var. *Golden Glow*). Clear yellow. August; 6 to 8 feet. Multiplies faster than any other desirable hardy plant. To kill red plant lice, dissolve any common soap in water, and spray on the insects. Cut back after flowering, to induce second crop. Divide roots any time.

Gout Weed, Bishop's Weed (*Ægopodium Podograria*, var. *variegata*). Yellow and green foliage. All season, 1½ feet. One of the most persistent of old-time variegated plants. Keeps its colour under all conditions, and thrives on all kinds of soil, also under shade or in the open sun.

Hibiscus, Sunset (*H. Manihot*). Pale yellow. July, August; 3 to 9 feet. One of the largest yellow flowers, 4 to 9 inches across, sometimes white, with large purple eye. Not hardy in the North, and roots must be lifted to warm, dry cellar. Raise from seeds; and started indoors early will bloom first year. See also Mallows.

Hollyhock. See Old-Fashioned Flowers, p. 60.

Honesty, Perennial (*Lunaria rediviva*). Purple to grayish purple. May, June; 1½ to 7½ feet. Flowers smaller and lighter coloured than in the annual species (*L. annua*), otherwise quite like it, but with elliptical pod. Grown for the persistent septum of the seed pod, which is silvery, and makes a pretty winter decoration. Easily grown in any soil. Increase by seeds or division.

Horned Poppy (*Glaucium luteum*). Orange, yellow. July to September; 6 inches. Flowers poppy-like, 2 to 3 inches across, and in profusion, but do not last long. Blooms till frost if seed pods are

constantly removed. Foliage glaucous blue, and striking. Give open, sunny situation. Short-lived, and best treated as biennial, but may be increased by division. Hardy.

INCARVILLEA (*Incarvillea Delavayi*). Rosy purple. June, July; 1 to 2 feet. Very showy, bignonia-like flowers, 2 to 3 inches long and wide. Tube yellow. Finest hardy, herbaceous perennial in the family. Large, bold foliage, 1 foot long, pinnate. Protect in winter. Deep, light, sandy loam, in sheltered, warm place. Propagate by division or seed.

*IRIS, FLAG (FLEUR-DE-LUCE), DWARF (*Iris biflora*). Violet-purple. April; 10 inches. Also white and yellow varieties. —— (*I. Chamæiris*). Yellow. Late April; 6 inches. Also white and violet varieties. —— (*I. pumila*). Lilac-blue. April; 6 inches. Best for permanent edgings. Told from the two preceding by the flower tube being two inches or more long. There is a brown and yellow form. Earliest large-flowered iris for general use. Flowers 3 to 4 inches across. Increases quickly. The best blue variety is *cærulea*. The best yellow, *luteo-maculata*. —— CRESTED DWARF (*I. cristata*). Pale blue. April, May; less than 1 foot. Earliest hardy iris for general use. Exquisite for edging. Flowers about 2 inches across. Plant when growth starts. ——, FLORENTINE (*I. Florentina*). The orris root of commerce. Flowers with the German Iris. Quite hardy. 2 to 2½ feet. Flowers, white tinged lavender, veined purple at the base. Early Var. *albicans*, pure white. Most common and easily grown. ——, GERMAN (*I. Germanica*). The great, purple-bearded iris. Perhaps the most generally cultivated. *I. Germanica alba*, so-called, is a companion to the white Florentine, both flowering in May. The so-called "German" irises of gardens are not varieties of *I. Germanica*, but a mixture of many species, and, consequently, show great range of habit. Among the best of these are Madam Chereau, white feathered and bordered blue; Aurea, golden yellow; Eugene Sue, creamy white with purple spots and stripes; Liabaud, yellow and maroon; Sappho, clear blue and indigo; Celeste, light lavender-blue. ——, ENGLISH. See p. 60. ——, JAPAN (*I. lævgiata*, or *Kæmpferi*). Many varieties from silvery white through lavender and magenta to purple, pure and in combination. July; 3 to 4 feet. Grows perfectly in an ordinary garden, if well supplied with

water during blooming season. Most decorative. Flowers 9 inches across. Too short-lived for a perfect cut flower, and will not stand shipment. It is useless to recommend named varieties here, as hardly any two lists offer the same. The names are Japanese, and merely generally descriptive. ——, SIBERIAN (*I. Sibirica*). May, June; 2 to 3 feet. Makes large, compact clumps of linear leaves from the centre of which rise tall stems of lilac-blue, beardless flowers.

JACOB'S LADDER (*Polemonium cæruleum*). Grayish blue. May to July; 1 to 3 feet. Expanded bell-shaped flowers, 1 inch across. Should be in every border because of its rare colour in midsummer. Easily adapted to any deep, rich loam, partly shaded, not very dry places. Raised from seed in the fall, also increased by division. Foliage has numerous finely cut leaflets, hence the popular name.

LARKSPUR (*Delphinium formosum*). Blue in all shades, to white. June; 4 to 6 feet. The best of all the tall-growing blue perennials. Should be in every border. (See OLD-FASHIONED FLOWERS, p. 60). Deeply prepared, cool, rich soil.

LEADWORT (*Ceratostigma plumbaginoides*). Cobalt blue. September, October. Showiest low-growing, hardy, blue-flowered perennial for mass effects in autumn. Blooms naturally then. Somewhat resembles phlox. Stems red. Any garden soil. Needs winter protection in the North. One of our most valuable plants. Propagated by cuttings. Frequently catalogued as *Plumbago Larpentæ*.

*MALLOW, MUSK (*Malva moschata*). Rose, white. July to September; 1½ feet. Flowers 1½ inches across, well expanded, and borne singly. Very showy, and one of the most easily grown of all plants in any situation or soil. Good for border or specimen. In places has escaped from gardens and naturalised. ——, SWAMP ROSE. See NATIVE PLANTS, p. 93. —— HYBRIDS. A new race arising from the native mallows of the North combined with some of the tropical species. These promise to be valuable for more or less wild effects. Not suitable for formal beds or borders. Slender, arching stems several feet long. Flowers in various colours, chiefly shades of pink and madder; 6 inches across; produced all summer.

MAN-OF-THE-EARTH, WILD POTATO (*Ipomœa pandurata*). White. May to September; 2 to 12 feet. Flowers like a morning-glory, with deep purple throat. One of the very hardiest tuberous vines. Useful

for covering unsightly objects, tree stumps, etc. Root weighs 10 to 12 lbs. Sometimes known as hardy perennial moonflower. Any soil.

*Meadow Rue. See Native Plants, p. 93.

Meadow Sweet. See Native Plants, p. 93.

*Monkey Flower (*Mimulus luteus*). Yellow. All summer; 1 to 3 feet. Flowers two-lipped, but expanded, with open throat, mottled brown. Usually treated as an annual because it is not hardy North. Self-sows, and grows anywhere; but especially with plenty of water. ——, Red (*M. cardinalis*). Red and yellow; 1 to 2 feet. Is hardy in Massachusetts with slight protection. Useful for moist soils and shaded places, or northern exposure. —— (*M. ringens*). Blue. A native plant.

Monkshood (*Aconitum Napellus*). Deep blue to white. July to August; 3 feet. One of the most beautiful of all blue flowers, having the general habit of the larkspur, but not commonly planted because of its poisonous character. Dangerous to children and pets. Grows in either sun or shade, and any sort of soil. The flower is curiously hooded, hence the name.

Mouse-eared Chickweed (*Cerastium tomentosum*). White. All summer; 6 inches. Invaluable for edging and foreground, and as foil to other colours in the mixed border. Individual flowers very small. Foliage woolly and quite decorative. Hardy.

Nettle, Variegated (*Lamium maculatum*, var. *variegatum*). Purple-red to white. May to July; 6 to 8 inches. A valuable, low carpeting plant, with pretty ornamental foliage, green blotched with white on the midrib. Grows everywhere. Flowers 1 inch long in clusters and tiers. Increases by division. This is the dead nettle of the Old World. Several varieties, varying in colour of flower. The type has plain green foliage. Runs wild in places.

Pansy (*Viola tricolor*). Blue, yellow, white, reddish brown, and intermediate shades. All summer; 6 inches. Probably the most popular of all dwarf hardy herbaceous plants, but usually treated as a tender annual for bedding. Does best in cool, deep loam, with partial shade. ——, Tufted or Bedding (*V. cornuta and varieties*). Blue, yellow, white, etc., in variety. June, July. Flowers smaller than pansies, but plant is better habited and more hardy blooming

over a longer season. After July, cut back, manure heavily, water often, and they will make a fine show in September. All pansies like a cool, moist atmosphere. For early bloom sow seeds in August in frames or outdoors, giving light protection over winter. Spring sowings give late bloom. Usually treated as annuals.

PEA, PERENNIAL (*Lathyrus latifolius*). Rosy magenta. August; 4 to 8 feet. A sprawling, rampant growing vine, with many flowers in a cluster. Thrives anywhere, even in poorest soils, and improves from year to year. Root a tuber, and dislikes removal. White, dark purple, and striped varieties offered. —— (*L. grandiflorus*). Similar, but with larger flowers, two together; less vigorous; 4 to 6 feet.

PEARL ACHILLEA. See SNEEZEWORT.

*PENTSTEMON. See BEARD TONGUE.

PEONY (*Pæonia officinalis* and *albiflora*). White, rose to deep crimson. May, June; 2½ feet. Probably the most useful hardy, herbaceous plant. Immense flowers like glorified roses, single and double, and handsome foliage. Old-time favourite. (See p. 62 for best-named varieties.) The real old kinds have been lost to cultivation under name, as modern introductions show continuous and great improvements.

PERIWINKLE (*Vinca minor*). Deep blue, pink, white. May, June. Creeping. Best carpeting plant for shady places. Grows where nothing else will. Leaves oval, 1 inch long, very deep, lustrous green. Flowers hidden under the leaves, 1 inch or more across. Often found escaped near old gardens.

PHLOX, PERENNIAL (*Phlox paniculata*). All colours but blue and real yellow. August, September. Largest flower clusters of any hardy perennial. Wide range of colours. Attracts more butterflies than any other garden flowers. White phlox, fragrant in evening. To prevent mildew divide every third year. Spray under sides of leaves with ammoniacal copper carbonate. Miss Lingard, white; Coquelicot, flame; Belvedere, salmon-pink; Richard Wallace, white with violet centre; Mahdi, deep violet-blue; La Vague, silvery rose, large; Crépuscule, gray-blue, flat head, are very distinct varieties at this writing, but with new introductions the standards are likely to change every year. ——, WILD BLUE (*P. divaricata*). Lilac-blue; best for naturalising in moist, rocky soil. ——, CREEPING. See MOSS PINK.

Pink, Miss Simkins (*Dianthus hyb. Miss Simkins*). White. May, June; 4 to 6 inches. This is by far the best and most popular of all the hardy pinks. Large, double flowers, and grows in any soil. Good for cutting; fragrant. Excellent for edging, the glaucous foliage persisting all the season. There are numerous other pinks referred to different species. (See Old-Fashioned Flowers, p. 63). ——, Scotch, Garden, Grassy (*D. plumarius*). Purple, magenta, white, pink, rose. May, June; 1 foot. Most fragrant of all hardy pinks, and has most double varieties. Clove odour. Needs perfect drainage. Best grown as edging for raised beds or borders. ——, Fringed (*D. superbus*). Lilac. July; 1 foot. Natural complement of garden pink, blooming until autumn if not allowed to seed. Mix plenty of sand and grit in soil for drainage.

Platycodon. See Balloon Flower.

Plumbago. See Leadwort.

*Plume Poppy (*Bocconia cordata*). Pinkish white. July. Flowers in fluffy masses. Leaves shaped like a fig's, but glaucous. Spreads rapidly by suckers, and makes glorious masses. Sometimes becomes a weed in rich, moist soil.

Poppy, Iceland (*Papaver nudicaule*). Yellow to orange red and white. April to June, and August, September; 15 inches. Better than the Alpine poppy for borders, growing well in moderately rich and light loam. Give full sun. One of the prettiest, low-growing perennials with the characteristic crinkled petals of the poppies. Sow seeds in fall where plants are to remain. Often treated as an annual. ——, Oriental (*P. orientale*). Scarlet, orange-red to deep pink and white. June, July; 3 feet. The most gorgeous red-flowered hardy perennial, and should be planted sparingly against green surroundings. Flowers 6 to more inches across, with black centre. The thistle-like foliage disappears in late summer. Altogether one of the most effective and boldest of plants. Transplant in August. Small pieces of root an inch long can be handled like seeds, and will produce new plants. Usually slow to establish, and should not be disturbed. Several named varieties, but the type is the most gorgeous.

Prickly Pear (*Opuntia vulgaris*). Yellow. June to September; 10 inches. The only cactus that can be grown in the border. Curiously jointed, flat, leaf-like stems, covered with spines in groups.

Has a sprawling, crab-like effect. Flowers at intervals during the season. Good for shallow soils, cool, and underdrained.

ROCKET (*Hesperis matronalis*). White to purple and magenta. June to August; 2 to 3 feet or more in rich soils. Flowers borne in dense spikes, like stock. One of the old favourites, and very effective in the border. Easily grown in any soil. Forms large clumps.

ST. JOHN'S WORT (*Hypericum Moserianum*). Yellow. July, August; 2 feet. Very showy, largest of all the St. John's worts. Great mass of long, thread-like stamens. Flowers 2 inches in diameter. Any garden soil, with preference for sandy. Propagate by seeds, suckers, cuttings.

SUN DROPS. See NATIVE PLANTS, p. 95.

SAGE, SILVER (*Salvia argentea*). White. May, June; 2 to 4 feet. The real value of this plant lies in its pretty white woolly foliage. The tallest hardy biennial or perennial of that character. The inflorescence is 2 feet long, and usually three-branched.

SEA HOLLY (*Eryngium amethystinum*). Blue. July to September; 2 to 5 feet. Thistle-like plant with large flower heads in cones, with finely cut bracts. Whole plant takes on a metallic blue sheen, especially in sandy soils, as the season advances.

*SEDUM, SHOWY (*Sedum spectabile*). Rose to crimson. August to October; 2 feet. Best hardy succulent for the border. Bold, fleshy foliage and flower heads, 3 or 4 inches across. Attracts butterflies. Any soil, but likes water. Propagate by division.

SHASTA DAISY (*Chrysanthemum Leucanthemum hybrid*). Very closely resembling the common ox-eye daisy, its parent, but larger and more floriferous. Flowers all season, but does not succeed everywhere in the East.

SIDALCEA (*Sidalcea malvæflora*). Purple. August, September; 1 to 6 feet. Flowers up to 2 inches across when expanded, and pink with satiny texture in Var. *Listeri*, "Pink Beauty." One of the most easily grown plants from seed. Quite hardy. Propagate by seeds or division.

SNAPDRAGON (*Antirrhinum majus*). Red and purple to white and yellow. July, August; 1 to 3 feet. Flowers 1 inch long, borne in spikes blooming from the bottom over several weeks; curiously formed like a rabbit's mouth, opening when pinched. Excellent

for cutting. One of the very best almost hardy plants. Give light protection in winter. Sow outdoors in May, or for spring bloom in frames in February. Can be forced and propagated from cuttings at all seasons.

*Sneezeweed. See Native Plants, p. 94.

Sneezewort (*Achillea Ptarmica, fl.-pl.*). White, button-like flowers in loose corymbs all summer; 1 to 2 feet. One of the most useful white flowers for cutting. Much like the yarrow, with finely cut leaves. Perfectly hardy.

Spanish Bayonet, Adam's Needle (*Yucca filamentosa*). Creamy white. June, July; ultimate height, 6 feet. Best desert plant for garden use. Bold, rigid foliage, 2 to 2½ feet, in dense rosettes. Flowers borne in towering spike, after which the old plant makes offsets. Good for massing and sub-tropical effects.

*Spiderwort (*Tradescantia Virginiana*). Blue, violet. All summer; 2 feet. Carpeting plant with rich green foliage that endures all the season. Invaluable for shaded and poor, wet soils, and for foreground to shrubbery. Also grows in dry soils. Various colour varieties in cultivation.

Spirea (*Astilbe Japonica*). White. June, July; 1½ feet. Feathery plumes borne above finely cut foliage. The florist's spirea, forced for winter. See also Shrubs, p. 185.

Stoke's Aster (*Stokesia cyanea*). Blue, white. August to October; 1½ feet. Large, flat, thistle-like flowers, 2 inches across. Well-drained, deep soil. The white variety quite new. Propagate by seeds in frames.

Sunflower, Maximilian's (*Helianthus Maximiliani*). Deep yellow. October, November; 8 feet. Leaves deeply grooved. Flowers 1½ inches. Latest of all the tall perennials, and will endure severe frosts; any soil. ——, Slender (*H. orgyalis*). September; 4 feet long. Pale yellow flowers above drooping leaves, 10 to 12 feet. ——, Double Perennial (*H. multiflorus*, var. *plenus*). August; 4 feet. Flowers 4 inches across, symmetrical. Best large, double flower of any perennial. Rich soil. Divide every four years.

Sweet William (*Dianthus barbatus*). Maroon, red, pink, white. Self-coloured, variegated. Trusses 4 inches across; fragrant, showy;

five weeks. One of the best variegated flowers. Best crop always second year from seed. Self-sows; transplant seedlings in late summer. (See p. 64.)

TANSY. See NATIVE PLANTS, p. 95.

*TICKSEED (*Coreopsis lanceolata*). Yellow. August till frost; 1 to 2 feet. Daisy-like flower, 2 inches across; brown centre. One of the very best of its colour, and easily grown. For border and for cutting. Perfectly hardy. Best to stake the plants, and when setting out from seed bed allow one foot distance. All soils, but repays good waterings in summer. Rich, damp soil in open places and near streams. Best long season yellow flower.

VERONICA (*Veronica longifolia*, var. *subsessilis*). Purple. August, September. Longest spikes of any autumn flower; long season of bloom. Spikes about a foot long. Responds to deep, rich soil and sunny position. Very striking for distant mass effects.

*VIRGINIA COWSLIP (*Mertensia Virginica*, or *M. pulmonarioides*). Blue. April to June; 1½ to 2 feet. The bell-like blossoms turn reddish with age. Sheltered position, but full sun and rich loam. Resents disturbance at the roots. Leaves die down after the flowering time. Best increased by seeds.

WALLFLOWER (*Cheiranthus Cheiri*). Red-brown to deep yellow and purplish brown. Quite distinct. May; 1 to 2½ feet. Very fragrant. Easily grown in cool, rich soil, with partial shade. Best sown in August for wintering in frames; biennial. Not quite hardy. Some early flowering forms like *C. annuus* are grown as annuals.

WINDFLOWER, SNOWDROP (*Anemone sylvestris*). Cream white, tinged with pink. April to July; 1 to 1½ feet. The spring counterpart of the Japanese anemone, and the largest flower of its kind in spring. The bright yellow centre is very striking. Grow in masses against shrubbery. Well-drained soil. There is a double variety.

WINTER CHERRY, STRAWBERRY TOMATO (*Physalis Alkekengi*). Showy red, bladdery calyx, 1 inch across, enclosing an edible fruit. Creeps under ground, and becomes troublesome. The modern *P. Francheti* is twice as big and brighter. The cut stalks furnish a welcome red for Christmas decorations.

NOTE.— Many of the statements in the above list are taken in part from the writings of Wilhelm Miller in *Country Life in America*, and from consultations with J. T. Withers and R. Cameron.

ANNUALS

"To succeed in modifying the appearance of a flower is insignificant in itself, if you will; but reflect upon it for however short a while, and it becomes gigantic. Do we not violate, or deviate, profound, perhaps essential and, in any case, time-honoured laws? Do we not exceed too easily accepted limits? Do we not directly intrude our ephemeral will on that of the eternal forces? . . . And the most modest victory gained in the matter of a flower may one day disclose to us an infinity of the untold."— MAETERLINCK.

"As Paradise (though of God's own planting) was no longer Paradise than the man was put into it, to dress and keep it; so nor will our Gardens . . . remain long in their perfection unless they are also continually cultivated."

— JOHN EVELYN.

CHAPTER XII

ANNUALS

FOR several reasons, every one who has a garden, large or small, will wish to grow at least a few annuals. Others may require an entire garden of them. Not every lover of flowers owns the land he lives on; and where it is rented for a short season only, and quick returns are required rather than future gain, a wealth of bloom, a pyrotechnic effect of colour, may be had with annuals for a small outlay. The best results with perennials come only after the second year, or when the plants are thoroughly established; but annuals, hardy or tender, put forth the supreme efforts of their exuberant lives in two or three months after their seeds are sown, and most of them have bloomed themselves to death in as many more. True, the garden of annuals only is bare until early summer unless seedlings have been started indoors or under glass and transplanted to the open when spring nights can be trusted not to pinch them; and the first frost of autumn obliterates all trace of the tenderest of them, of all except a few hardy ones like marigolds, nasturtiums and Drummond's phlox that eke out our meagre autumn bouquets. Light hoar frost can be endured by not a few, but black frost finishes them forever: they perish root and branch. Only the seeds of a few among the host can survive a northern winter in the open.

A plant that lives only one brief summer would be a poor investment of time and money, if one have a permanent home, unless the flower have some transcendent merit of fragrance, or exquisite form or lovely colour, like the sweet pea, for instance,

which offers three good reasons why every one grows it. Nevertheless, for one who rents a country place for only one season, or whose home is not occupied in early spring or late autumn, and a great show of flowers is wanted at midsummer only, when, it must be admitted, comparatively few perennials are at their best; when only a small initial outlay can be spared for a garden, or when there are gaps in the herbaceous border to be filled in with some special colour and timely flowers, annuals will be one's source of garden joy.

"Cut and come again" might be applicable to many annuals besides the old-fashioned plant that bore the name. If wilted blossoms are kept cut, and seed is not permitted to form, there would seem to be no limit to the bloom these most floriferous of plants can produce. One must grow some of them, if only in the vegetable garden, for cutting alone. The garden and house, too, may be kept gay with them. None, perhaps, displays so decorative a flower as the hollyhock's spire which, however, is useless for vases; none has the perfectly satisfying outline possessed by the iris, most beloved by the artistic Japanese; none can match the peony for superb size and style, the creeping phlox and the chrysanthemum for earliness and lateness of bloom; but for profusion of flowers and duration of them, for fragrance that very many of them possess, and for lavish display of colour, annuals certainly eclipse their long-lived rivals.

It is their very prodigality, however, that makes them difficult to manage in a garden which they too readily make gaudy. Modern hybridisers have been very busy upon them, multiplying new forms and tints. More flowers than foliage are seen on many of the plants. Especially do they need a background, and very rarely do they get one. Unless used with restraint and thoughtfulness

they are apt to look like so many patches of colour in a paint-box, or so many bright daubs on the artist's palette, rather than a picture complete in itself. Many gardeners, alas, mistake the pigments for the painting, and lay on crude, plain colours with a broad brush. However beautiful in themselves, a multitude of them, unrelated, can actually spoil the garden composition as a whole; and the same plants, thoughtfully arranged, can bring perfect content in a garden. Annuals, even if short-lived and cheap, should be chosen and placed with care. A garden is not worth having unless it represents loving thought and affords pleasure to the eye. One need not be deeply versed in art, or be able to talk a lot of nonsense about it, to distinguish the difference between discord and harmony of tint. Some people are gifted with a subtle colour sense; some who are born without it may acquire taste by patient striving; but until it is attained the most satisfying garden effects may not be had. "The first study in flower gardening should be Colour — not System, not Design, but Colour," says the author of 'The Perfect Garden.' "System and Design separate gardeners, Colour unites them. The study of colour is equally the privilege of the owners of large and small gardens. In it they meet on common ground. The same effects can be secured in gardens of varied area. By grouping plants, either on a large or small scale, in such a way that their hues blend, we get beautiful effects, whether the plants be represented by half dozens or by hundreds. Flower gardening for colour is almost a new study in gardens, and it is fraught with great possibilities." This quotation should be pasted in the crown of every gardener's hat. Masses of flowers thoughtlessly planted — a hodge-podge of warring colours — give scarcely more pleasure than a crazy patchwork quilt.

Needless to say, perhaps, seeds should be bought only from a reliable firm; but, even so, one must be prepared for some disappointments. Never buy them of a second-rate house merely because they seem cheap. Quality, size and cleanliness count for more than a penny or two per packet. A small quantity of inferior seeds, not half of which will germinate, ought to be sold for considerably less than a larger number of carefully grown ones from which a high percentage of vigorous stock may be raised. Beguiled by the descriptions and glowing pictures of cleverly advertised novelties, entranced by the possibility of growing quantities of "plants of the easiest culture," you indulge in many little packages of seed to sow in the garden of your dreams. The more expensive sorts, it is observed, are said to bear the largest, handsomest flowers, so you do not hesitate to try them. Although the "extra large white trumpets of a new petunia of surpassing beauty, exquisitely pencilled and elegantly fringed," for a few seeds of which you give a high price, shows on blooming that it has reverted to the vulgar type in spite of the hand labour of the hybridiser; although the "Persian pink" zinnias may prove to be an even grosser magenta; although half your Shirley poppy seed may be far too old to sprout, and the fat packets of nasturtiums prove to be mostly husks scorned by maggots, still, the proportion of disappointments is not so great as to totally discourage. Some of your dreams materialise; some results even exceed your brightest visions. Gardening is only a refined form of gambling, after all. Sometimes the odds are fearfully against us; sometimes we win; but once the passion seizes us we are the victims of its fascination for life.

Dream-gardening and plan-drawing are occupations for the winter, but as the days begin to lengthen we must come to earth



HOLLYHOCKS ARE ESPECIALLY EFFECTIVE IN THE FORMAL GARDEN BECAUSE THEY REPEAT THE VERTICAL LINES OF PERGOLA PILLARS, STANDARD BAY TREES, AND OTHER ACCESSORIES. LARKSPURS, LILIES AND FOXGLOVES ARE LIKEWISE EFFECTIVE THERE



TEMPORARY ASTER BORDER AROUND AN OAK. CULTIVATION AROUND THEIR ROOTS BENEFITS YOUNG TREES

from the rosy clouds, hurry off our list to the seedsman, buy fertiliser and attend to other practical preliminaries. All annuals may be sown in the open ground, even the tenderest of them, if one wait till settled weather to plant them, but in that case one must not expect flowers much before midsummer. If a hotbed, in which to start the tender annuals and such hardy ones as one wishes to begin to bloom earlier than they would if sown in the open ground, cannot be had, shallow wooden boxes, two or three inches deep, and of any convenient size, may be filled with very fine, rich, sandy loam and placed in the sunny windows of the house in February or March north of Philadelphia. The first of April is not too late to start seeds in the vicinity of Chicago. Sods that have been piled up to rot for several years, and then sifted until thoroughly mixed with old black manure and sand, make the ideal food for infants in the box nurseries. Soil from a spent hotbed is the next best, or any good garden loam may be substituted if need be. An intermixture of sand helps fine young roots to feel their way about in search of food more readily. A bath of boiling water poured over the boxes a day or two before the flower seeds are sown kills whatever insect life and weed seeds are in them. Boxes set in windows can furnish a limited supply of seedlings only. More flats may be placed in a greenhouse if you are the fortunate possessor of one. Flower-pots and even tin cans are pressed into service by the enthusiastic. In any case, sow every species more than once, indoors and out, to lessen the chances of failure, if not to prolong the blooming season.

Sooner or later every gardener feels the need of a hotbed, and proceeds to make one. If it can be placed with full southern exposure in a well-drained, sheltered spot, where the wall of a building, a board fence or even an evergreen hedge at its back

will shield it from northern blasts. so much the better. Concrete, in the ratio of one to seven parts of sharp sand, has come to be regarded as the cheapest and cleanest permanent wall for the bed. Any day-labourer can fill the moulds under intelligent direction. Brick makes a good retaining wall, too; but many people use planks to line the excavation, which should be two and a half feet deep. Dig out the pit at that uniform depth and make it as long as required. Hotbed sashes, as generally sold in the trade, are three by six feet, so the bed's length will be a number of feet divisible by three, inside measurement. Sashes glazed and painted cost less than three dollars each. It is desirable to partition off spaces three feet wide, not only to support the sashes, but to separate plants that require much heat from those that require a little. On top of the concrete, brick, or plank walls — and some people leave merely the earthen walls without any reinforcement — place a wooden frame eighteen inches high at the back and a foot high in front, which will give sufficient slope to the sashes placed upon it to shed the rain and to catch the sunlight. Cross-pieces for the sashes to slide on when one wants to open and close the frames are laid on top of the partitions.

Fresh horse-manure from the stables, added to one-third its bulk of litter or leaves for fuel, needs to be well mixed and packed down in a compact mass by tramping in order that fermentation may begin. In a few days the escape of steam from the hot heap will indicate that it is time to turn it over for a second fermentation, which will require two or three days more. The manure is now ready to be laid in layers well tramped down in the bottom of the pit to the required depth — about two feet. On top of it place two inches of fine, old black manure and six or eight inches of well-rotted and sifted sod prepared with sand and

fertiliser as directed for the seed boxes. Now put a thermometer in the hotbed and close the sashes. Not until the first heat has subsided, and the temperature falls to seventy degrees, is it safe to sow seeds. One sometimes sees hotbed plants, that have started thriftily, suddenly turn yellow just as they become well grown and ready to transplant. This indicates that their roots, having pushed through the too-shallow soil in search of food, have come suddenly in contact with the hot manure when the precaution of placing a two-inch layer of old, thoroughly decomposed fertiliser between it and the soil has been omitted.

To hasten germination, soak seed in tepid water over night. Fine seed, like the tobacco plant's or petunia's, need be only loosely sprinkled over the surface of a small square area and pressed into the soil with a smooth, flat piece of board about ten inches long and half as wide, having a handle like a stove brush on its upper surface. It is the work of only a few minutes to make this little tool, which will be found very useful in the garden, too, when one comes to plant poppies and other small seeds, which will not bear transplanting, in the open ground. A pointed stick for making straight little furrows to drop all but very small seeds in is another helpful trifle. Repeated sowings, either in the hotbed or out of doors, at ten-day intervals, will insure a prolonged succession of bloom. Most novices make five mistakes in planting seeds: first, in not working over the surface soil long enough to pulverise it and remove every lump and pebble; second, in burying seeds too deep; third, in not firming the soil about them so that the first feeble roots may come in immediate contact with their food; fourth, in sowing too thick; and fifth, in allowing the seeds, or seedlings, to dry out. The finest seeds should be scattered over the surface and merely pressed into the earth, as has

been said; larger ones, as a rule, need to be planted at a depth equal to their diameter; medium-sized seeds like the zinnia's and balsam's find an inch of soil over them sufficient, while sweet peas, which should be sown in the open ground as early in the spring as it can be worked, need to be dropped an inch apart in a trench six or eight inches deep, and have soil from the sides drawn over the young plants gradually as growth increases, if the vines are not to burn out during hot, dry weather. Leave no air spaces around any seeds. Newspapers laid over the earth in the hotbed where the seeds have been planted prevent them from drying out for the first week and encourage them to sprout.

When a number of varieties of one kind of plant — different shades of asters, for example — are sown in the hotbed, strips of moulding about the width of a lead pencil make good divisions. Without them and plainly marked labels at the top of each line, confusion is sure to arise. Tall plants like cosmos or castor bean will be put at the deep back part of the hotbed, so as not to screen the lower ones in front from the sun and burn their own heads off next the glass. Not until seedlings are well rooted is it safe to use a watering-pot to sprinkle them. Baby plants are apt to be washed out of the soil by a too-violent downpour from a can or hose. At first, partly submerge the flats that contain very tiny seeds, and use a rubber bulb with a fine rose spray, or a whisk broom dipped in tepid water and shaken over those in the hotbed at evening or when there is no sun on the glass. So long as the nights are cold, straw matting, strips of old carpet, or discarded bed quilts should be laid over the sashes after sundown, to keep the cosiness in. Young plants, like human babies, require plenty of fresh air every mild day. Raise the sashes at the back if the temperature in the hotbed rises above seventy-five in the middle

of the day, or if beads of excessive moisture form on them. When the sun is bright, but a cold wind blows, lay a strip of carpet along the open sash on the windward side. Vigorous growth depends upon each plant having room enough to develop and plenty of air and light. Weeding and thinning out are vitally important if the young plants are not to choke one another to death, and with the usual wasteful method of too thick sowing this should be done early. Many of the crowded seedlings may be transplanted and saved, but this is laborious, and labour is what makes gardening costly. As the plants rise high in the frames, there is some danger of their being scorched. Now remove the glass sashes when the sun is bright, and replace them during the day with screens made of laths which are nailed an inch and a half apart across strips of wood cut the length of each partition of the hotbed. If the nails are clinched and each screen is well braced it will last many seasons. Or a coat of whitewash on the glass may serve as a sun screen. Before the plants are removed to the open ground they need to be gradually hardened; and finally, even the lath screens will be left off. It will be observed that it is something of a nuisance to start annuals under glass. More and more we depend upon the hardier ones and perennials that may be grown in the open air.

But an old hotbed that has lost its heat has not lost its usefulness by any means. Perennial and biennial seed may be sown in it at midsummer for next year's blooming; foxgloves and Canterbury bells especially appreciate its shelter; the best pansy plants, although really perennials, are usually treated as annuals, and are started in August to make the spring garden gay; violets may be picked from the frames all winter; cuttings of roses, heliotrope, carnations, geraniums and begonias, among others,

root most surely if stuck into sand within the bed's protection; tea-roses and other tender plants may be stored in it all winter; tulips, narcissus, hyacinths and freesias will bloom before Easter if the bulbs are planted in the bed before Christmas.

A coldframe differs from an old, spent "hotbed" in that it never has had manure below the soil to supply heat. Frost is kept out by a frame of boards to which sashes are fitted. This is placed directly on the ground — no foundation walls being necessary — over a bed of prepared earth. Night covers of carpet, matting or quilts laid over the glass are kept on during severely cold days, also; and manure or earth is banked around the outside of the frame where it rises above the surface of the ground. Nothing that cannot survive a touch of frost should ever be trusted to a coldframe.

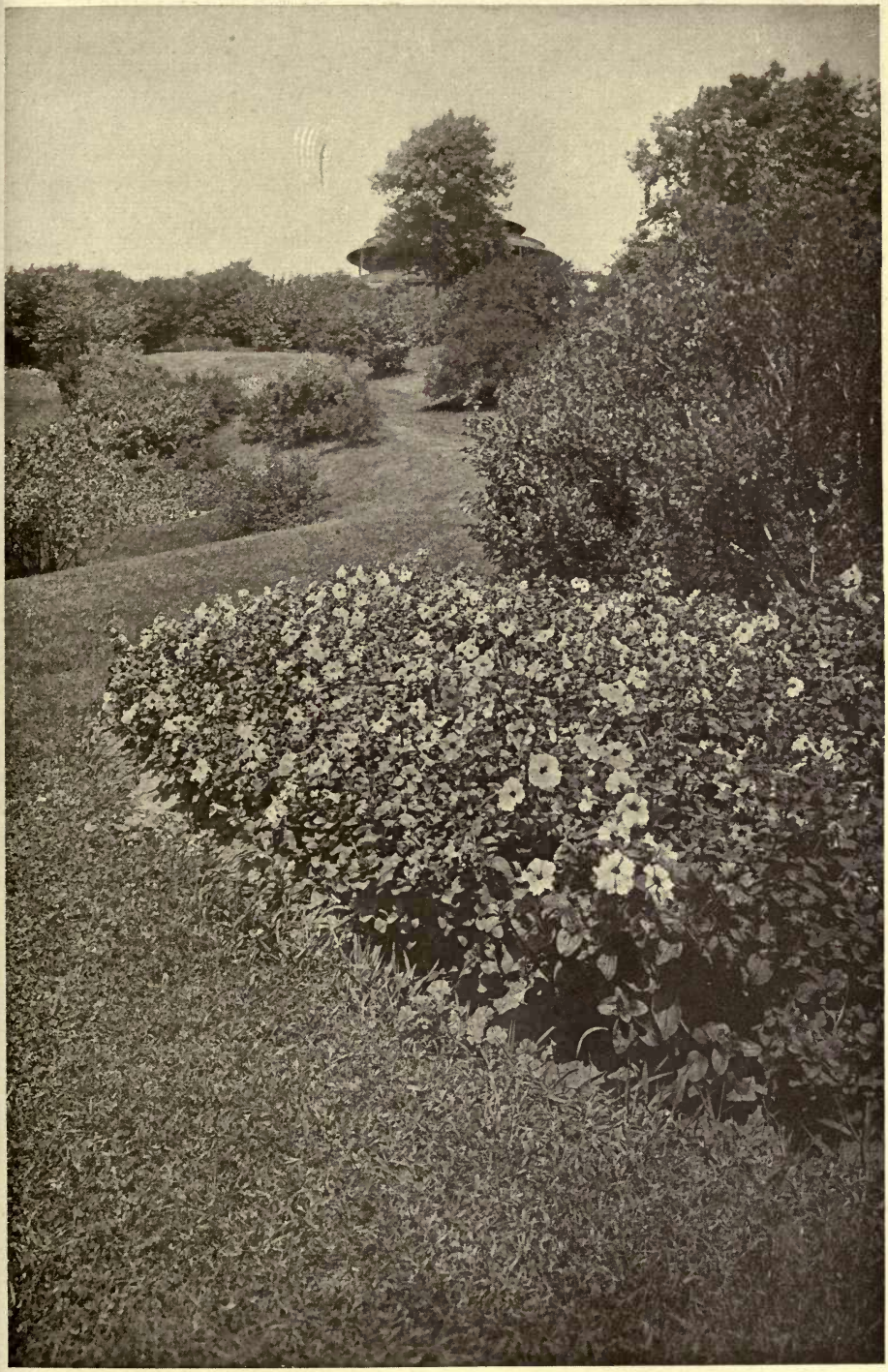
Tender annuals like the warmth-loving portulaca may not be transplanted from the hotbed, nor their seeds sown in the open garden until the ground is thoroughly warmed. Half-hardy annuals, such as the deliciously fragrant tobacco, the asters and petunias, may go out as soon as all danger from frost is over — about the middle of May in the vicinity of New York — when their seed, also, may be sown in the open ground; whereas the hardier annuals, among which are included feverfew, stock, marigolds, calendula, bachelor's buttons, calliopsis, poppies and zinnias, need not wait for fully settled weather. Indeed, many seeds of hardy annuals you will find have lived out through the winter where they were scattered in the garden by the parent plants the year before, and these self-sown seedlings will need rearranging early in the spring if the garden is not to look unkempt. Wet the plants before and after moving them at evening or on a cloudy day, and protect them from the sun with inverted

flowerpots, newspapers, umbrellas, or any improvised canopy before they begin to wilt. Calliopsis, sweet alyssum, cornflowers and poppies, to name a few lusty monopolists, will so quickly overrun their allotted plots and come up where they are not wanted that sometimes, alas! they must be treated with the discourtesy shown weeds. The usual trouble with some plants once started in a garden is not how to grow, but how to get rid of the charming things.

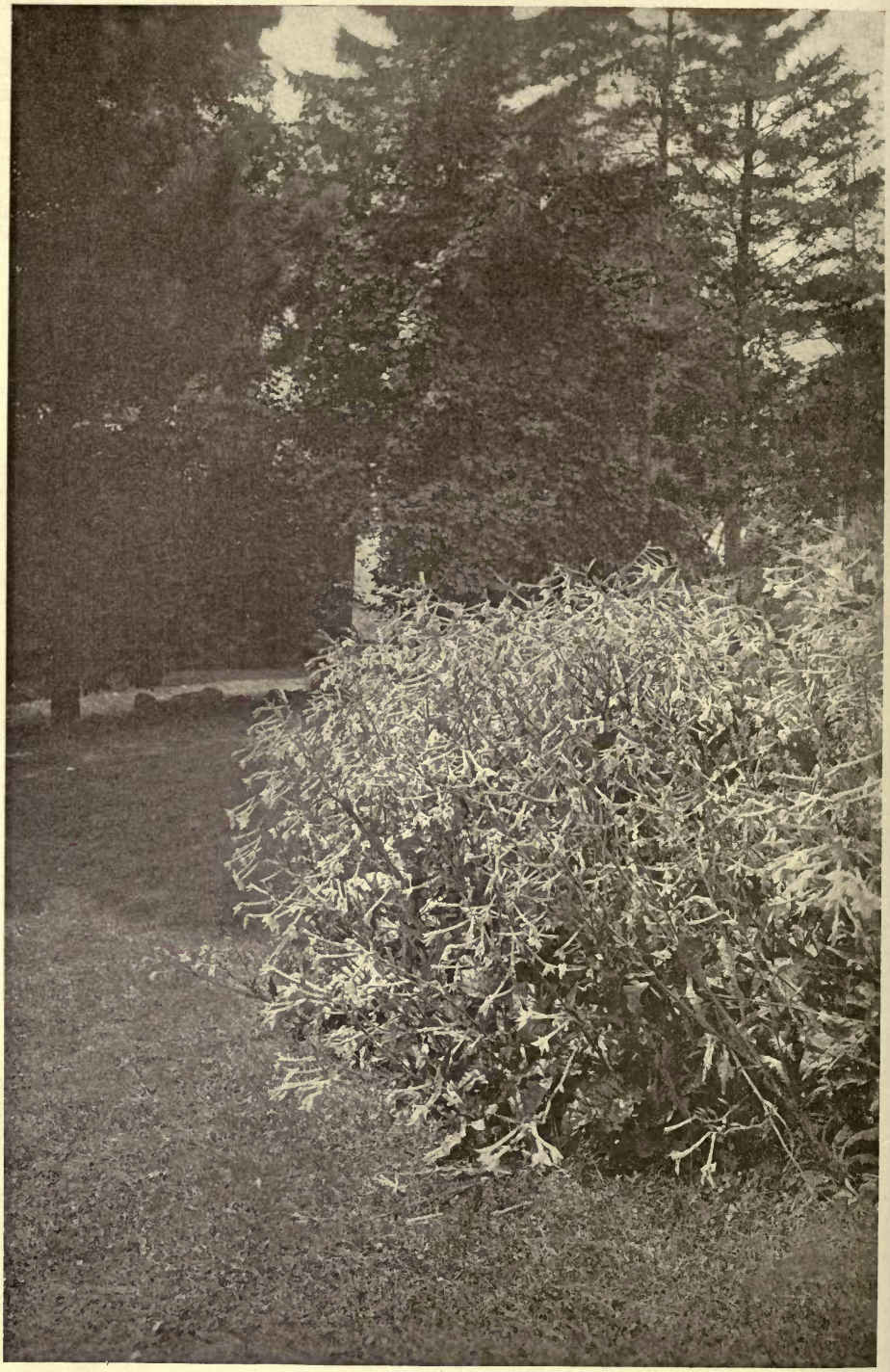
If the amateur gardener can think of no better way to grow annuals than to cut up a lawn into geometric beds, planting circles within circles, or row after row of ageratum, lobelia, coleus, cigar plant, geraniums, dusty miller, asters, and salvia, it would be better for the appearance of his place that he never grew a flower at all. A lawn may be framed by flowers, but cutting it up into beds not only contracts its apparent size, but spots it over with patches of unrelated colour that mean nothing but bad taste and hard work. Annuals may be most artistically displayed when disposed in much the same way that perennials are — planted in front of shrubbery or hedges that serve as a foil to their rich, high colours. Indeed, all that was said in the previous chapter about the arrangement of perennials applies to annuals as well. The two classes of plants admirably supplement each other when used together. Oftentimes annuals will supply just the tints needed to bring harmony into a perennial border. Or, they may be set out with punctilious nicety in formal parterres where a continuous performance, a vaudeville show of flowers, is required, one lot of plants being hustled into the ground after another as its beauty departs. But arranging annuals for rapid succession in the same beds throughout a season is work that the novice need not attempt. It implies a staff of skilled gardeners, and to all

except the superfluously rich would be scarcely worth while. From the box-edged plots of old-fashioned gardens certain of the hardy annuals were rarely absent. Our busy grandmothers naturally delighted in plants that sowed themselves. Some such old favourites may be started in the naturalistic garden where brilliant shimmering sheets of poppies are especially charming. Cornflowers may be naturalised in a pasture if sown in early spring with rye and timothy. Sprinkle poppy seed there, too. Seeds of a few annuals will be scattered among the rocks in the Alpine garden or in the damp rich soil beside a pond or brook. Now that the lovely wild-fringed gentian has been tamed, and the secret of growing it from seed has been disclosed, it may adorn the banks of our water gardens where it loves to see its vivid beauty reflected in a mirror. Like the cardinal flower, it looks out of place in a dressed garden.

Some annuals will be grown because they furnish a wealth of flowers for cutting — cornflowers not only because they match the Nankin china on the dining-table, but because they attract flocks of dainty goldfinches to feast upon their seed; marigolds and calendula for the glitter of their sunshine, not in the garden only, but in the house, where they take their turn with the indispensable nasturtiums in brightening dark rooms; the marvellously improved zinnias, some of whose lambent, glowing flowers look especially well in burnished copper bowls — every one has his or her favourites. If there is no better place to grow sweet peas, which are not lovely until myriads of butterflies seem to be fluttering over the pea brush or wire netting that supports the vines, let them scramble over it in the kitchen garden where their succulent, plebeian relatives would feel at home. When a regiment of tall Russian sunflowers is drawn up as if in battle



ARE NOT SINGLE WHITE PETUNIAS IN THE FOREGROUND OF SHRUBBERY PREFERABLE TO MAGENTA ONES IN IRON URNS NEXT SCARLET GERANIUMS? THEY AFFORD FRAGRANT AND LASTING FLOWERS FOR CUTTING



THE TOBACCO PLANT, WHICH LOOKS LIKE A FADED BALL-ROOM BEAUTY BY DAY, SHOULD BE VIEWED FROM A LITTLE DISTANCE THEN; BUT AT EVENING, WHEN THE FLOWERS OPEN AND BECOME BEAUTIFUL AND DELICIOUSLY FRAGRANT TOO, ONE WISHES THEM NEAR THE HOUSE. THEY ARE FLOWERS FOR THE COMMUTER

array along the fence, it makes a decorative screen, and after the seed is ripe enough to drop, the chickens are quite happy and presently wax fat. Even the new asters, with petals almost as long as a chrysanthemum's, are not too aristocratic to live in a vegetable garden, if necessary, with the ten weeks' stock, Chinese pinks, nasturtiums, marigolds and other flowers that one wants to cut from daily.

Those who have little time to devote to their flowers will grow the annuals that re-sow themselves in out-of-the-way corners that may be safely neglected a while, but not close to the house where no one cares to display untidiness. Certain annuals, calliopsis and gaillardia, for example, will be chosen for sunny places; others, like musk, godetia, pansies and nemophila for shady ones, where so few really fine flowers feel at home; some drought resisters, such as nasturtiums and zinnias, for dry places; others than the annual chrysanthemum and calendula because you have only heavy soil to offer them; still others because they like a cool northern climate which suits perfectly the wallflower, annual phlox, pansy, stock, marigold, cornflower, snapdragon, sweet alyssum and candytuft. These will bloom after frost. Many tender perennials and biennials are treated as annuals in this country. Every one wants mignonette for its fragrance, and sows it as near to the living-room windows as may be. The tobacco plant, that looks rather bedraggled by day, opens its white trumpets at dusk and makes the garden starry at night — but, like the evening primrose, which also resembles a faded ball-room beauty in broad daylight, it is best relegated to the background of the border where the datura may have been placed. Their fragrance will fill the air. Bartonia, sweet William, stock and alyssum, too, perfume the garden, which should be as fragrant as it is beautiful

and, if it is to be enjoyed at evening by tired commuters from town, let white and yellow flowers abound. These shine forth after all others have been engulfed by darkness. Really, the commuter should be far more considered than his wife, who has the whole day at home in which to enjoy the garden.

Probably the bedding-out system, once so popular, albeit a ridiculously expensive and troublesome treatment for annuals, marked the lowest point that our national taste in gardening will ever reach. It flourished when flowers for stiff pyramidal bouquets were mounted on wire and toothpicks, and it had much in common with this method. Here and there we still see geranium beds edged with dusty miller in the exact centre of little lawns, the name of a railroad station laboriously spelled out in particoloured coleus plants, or the initials of a newly rich owner of a country place displayed near its entrance where all who run may read. But public taste is rapidly improving: clam-shells and coleus are rapidly disappearing from American gardens.

Annuals That Everybody Can Grow

Plants marked thus (*) are vines, and useful for screens, etc. While the flowering date given is that of New York, it is also practically true for most sections.

Ageratum (*Ageratum conyzoides*). Purplish blue; 8 inches. Best blue hardy annual for edging; blooms 3 months. Start in heat in March for early flowers, or in the open in May.

Alyssum, Sweet (*Alyssum maritimum*). White. 8 inches. Average soils in sun. Fragrant. July till frost by cutting back or by successional sowings. Grows in cold regions and in heavy soils also. Sow in heat in March; outdoors April to September.

Amaranthus, Love-Lies-Bleeding (*Amaranthus caudatus*). Scarlet to yellow. Warm, sunny places. June; 3 to 5 feet. The best of the family, but too gaudy for dainty gardens. ——, Prince of Wales's Feather (*A. hypochondriacus*). Coarser, with purplish heads and foliage. Coarse, unlovely plants.

AMETHYST (*Browallia demissa* or *elata*). Blue, violet, white. All summer; 1½ feet. Treat as half-hardy annual, although it may be sown in open border. Grows in poorer soil than most others of a tender nature. Best planted out May 15 from heat. Will bloom till frost.

ASTER, CHINA (*Callistephus hortensis*). White to purple and red, not yellow. August; 1 to 2 feet. Best large flowered plant of the daisy type, with most colours and types. Sow in open for strongest plants; but for early bloom in frames and transplant. Subject to a subtle disease. Use rich soil and wood ashes.

BABY'S BREATH (*Gypsophila elegans*). White, sometimes rosy. May; 1½ feet. Loose, much-branched panicles. Open, rather dry places. Sow in succession.

*BALLOON VINE (*Cardiospermum Halicacabum*). Flowers inconspicuous. Inflated fruits an inch across, freely produced. Tender. 10 feet.

BALSAM (*Impatiens balsamina*). Red, white, yellow. July to October; 1 to 2 feet. Flowers borne in the axils of the leaves all along the stalk. Give rich, sandy loam in full sun, with abundant moisture. Sow outdoors in May. Indoors March, April. The summer-sot of old gardens.

BARTONIA (*Mentzelia Lindleyi*). Yellow. July to September; 1 to 3 feet. Flowers 2½ inches across. Fragrant in evening. Sow outdoors in May.

BELLFLOWER, LARGE-STYLED (*Campanula macrostyla*). Pale purple, solitary flowers, 2½ inches across, hairy within. Long, protruding pistil, which is brown and spindle shaped before opening. Plant 1 to 2 feet. Self-sown seeds sometimes take a year to germinate.

BLANKET FLOWER (*Gaillardia pulchella*). Yellow and rose purple; Summer; 1 to 2 feet. Flower on globose head. Give light, open, well-drained soil. The form known as Lorenziana has disc flowers all tubular.

BUTTERFLY FLOWER (*Schizanthus pinnatus*). Violet, lilac and yellow in combination. July; 2 feet. Very striking, and though hardy, usually grown in pots indoors. Good garden soil. Many named garden forms. One of the best variegated flowers.

CALIFORNIA POPPY (*Eschscholzia Californica*). Yellow. June; 1 foot spreading. Glaucous, finely cut foliage. Really a perennial; can be sown very early but does not transplant well. Sow in succession

in the open ground, and in fall for early spring. Most soils, including sandy.

CALLIOPSIS. See p. 253.

CANDYTUFT (*Iberis amara*). Red, white. June to September; 6 inches. Sow outdoors April to July every two weeks for succession, and in fall for early spring. Blooms after frost, Resists drought.

CASTOR BEAN (*Ricinus communis*). For subtropical foliage effect; 3 to 8 feet, enduring till frost comes. The large palmate leaves are the boldest among all the annuals. Plant seed where to grow, and give very rich soil for large development.

CATCHFLY (*Silene Armeria, S. pendula*). Red, white. July to October; 1 foot. Prefers sandy loam in full sun. The inflated calyx is quite a showy part of the flower. Good for edging and for rocky places. Sow in May.

CHRYSANTHEMUM (*Chrysanthemum coronarium* and *C. carinatum*). July to August; 2 to 3 feet. Former is white and yellow, purple disc; latter all pale yellow and dwarfer. Heavy soil. Good for cutting. Double forms. Good also for pot culture and bedding.

CLARKIA (*Clarkia elegans*). Purple and rose to white. June to October; 1 to 2 feet. Light soil in sun or half shade. Good for edging and massing. Blooms 8 weeks. Late sowings give flowers after frost. Sow in fall for early spring. One of the commonest plants.

*COBOEA (*Cobœa scandens*). Vine, 10 to 20 feet. Flowers greenish purple. A tender perennial, but usually treated as an annual. Sow seeds in heat or outdoors in moist, rich earth and edgewise.

CORN, JAPANESE VARIEGATED (*Zea Mays*, var. *Japonicus*). 3 to 4 feet. Grown for its strikingly variegated foliage, white and green in longitudinal stripes. Sow like ordinary corn.

CORNFLOWER (*Centaurea cyanus*). Blue. July to September, 1 to 2 feet. Thistle-like heads of richest blue. The best annual of its colour. Grows with the poppy and makes an excellent combination. Seed relished by goldfinches.

COSMOS (*C. bipinnatus*). White, pink, red, crimson. August to October; 7 to 10 feet. The best tall late annual, with daisy-like flowers. Sow as early as possible after frost, in not too rich, sandy soil. ——, YELLOW (*C. sulphureus*). Less tall, and smaller flowers. These are particularly valuable for late flowers. Stake early.

COTTON (*Gossypium herbaceum*). Pale yellow with dark eye. July; 3 feet. Large, bold leaves. Warm situations. Will not grow North. Rich soil.

*CYPRESS VINE (*Ipomæa quamoclit*). Flowers scarlet, white. June, July; vine 10 to 20 feet. A dark green, very feathery foliage, making dense mass. Scald seeds before sowing. Outdoors May; indoors March and April. Water freely.

EVERLASTING (*Helichrysum bracteatum*). Yellow to dull crimson and white. August; 2 to 3 feet. The semi-double daisy-like flowers endure indefinitely when cut and dried. This is the largest flowered everlasting. Others are *Helipterum roseum*, bright pink, flat; *H. Rhodanthe* or *Manglesi*, bright pink, long; *Xeranthemum annuum*, purple. All of easiest culture in any soil.

FLAX (*Linum grandiflorum*). Red. July; 1 to 2 feet. Colour varies, but the glossy appearance is very attractive. Flowers 1 to 1½ inches across. Only good in the border, fading as soon as cut, and killed by first frost. —— (*L. usitatissimum*). Blue. ½ inch across. Sow in open border in May.

GLOBE AMARANTH (*Gomphrena globosa*). Pink. July; 1½ feet. Numerous colour varieties in the trade, also dwarf and compact forms. Button-like heads an inch in diameter. Everlasting.

GODETIA (*Œnothera amœna*, *Œ. Whitneyi*). Red, white. July to October; 1 to 2 feet. Most showy large flowered annuals for shaded places. Flowers 1 to 1½ inches across and peculiar satiny lustre, larger in the latter species. Does also in sun. Any soil. Sow in May, or in heat in March for June flowers.

HARE'S TAIL (*Lagurus ovatus*). Tuft of leaves 8 inches high, covered with soft whitish down, and bending downward. Ideal edging plant. Flower head borne several inches above the foliage, in silvery white egg-like tufts an inch and a half long.

HEMP (*Cannabis sativa*, var. *gigantea*). Greenish flowers. August; 10 feet. A rough-looking plant for bold foliage effects or screen. Best to sow where wanted, but may be started in heat and transplanted. Rich moderately moist soil.

*HOP, JAPANESE (*Humulus Japonicus*, var. *variegatus*). August, a vine 10 to 20 feet. Foliage variously streaked and splashed with white and deeply cut. Sow seeds outdoors in May. One of the quickest growing annual vines. Self-sows freely.

*Hyacinth Bean (*Dolichos Lablab*). Purple or magenta and white. July; vine twining 10 to 20 feet. Resists drought. Flower spikes borne well out from the foliage and followed by similarly coloured fruits. Killed by first frost.

Ice Plant (*Mesembryanthemum crystallinum*). White. August to September. Trailing. Grown for its succulent thick foliage, covered with glistening glands. Thrives in dryest situations.

Job's Tears (*Coix Lachryma-Jobi*). 3 to 4 feet. "Seeds" make necklaces for children to cut their teeth on. The plant looks like a poor corn-plant when growing. Only curious.

Cockscomb (*Celosia cristata*). Crimson. 1 foot. The flower heads are grown into a monstrosity something like a rooster's crest 8 inches to 1 foot across. Used in floral beds as borders. Sow indoors and plant out in May. Give abundant water. Coarse, common plant.

Larkspur, Annual (*Delphinium Ajacis*). Eight colours from white through pink and turquoise to purest blue. August to September; 1½ feet. Sow indoors in September for flowers in July. Any good light soil in sun.

Lavatera (*Lavatera trimestris*). Rose. July; 3 to 6 feet. Most refined annual of the mallow family. Flowers 4 inches across. Its tender rose colour as fine as that of best pink hollyhocks.

Lobelia (*Lobelia Erinus*). Blue. All summer; 6 to 12 inches. One of the most popular plants for edging. ——, "Crystal Palace" (*L. Erinus*, var. *compacta*). Best of the species for edging. Good garden soil.

Love-in-a-mist (*Nigella Damascena*). White, blue. All summer; 2 feet. Flowers 1 inch across nestling in finely cut fennel-like foliage. Fruit a long capsule. Do not transplant. Sow for succession from early March and in early fall for spring bloom.

Marigold, African (*Tagetes erecta*). Rich orange to pale lemon. August to frost; 2 feet. Solid globes up to 2½ inches in diameter, on a freely branching shrub-like bush. Very pungent odour. ——, French (*T. patula*). Yellowish to red-brown. 1 foot. Darker foliage. Good bedder; useful for edging. Raise in open, or in pots to induce earlier bloom. Give rich soil.

Marigold, Pot (*Calendula officinalis*). Orange, yellow. July to October; 1 to 2 feet. The old-fashioned herb. Flowers in succession for

a long period. Used for flavouring soups. Grows anywhere, but delights in warm, rich soil. Sow in May. Self-sows usually.

MIGNONETTE (*Reseda odorata*). Greenish. July to October; 1 foot. Grown for its fragrance. Flowers in spikes. Does not transplant well. Should be sown in permanent place. Sow in succession from April to August, outdoors. Last sowing will give plants for winter flower.

MOCK CYPRESS (*Kochia scoparia*). Grown for foliage. A dense, much-branched, neat bush 2 to 2½ feet high, with linear branches, turning scarlet in late summer. Sow in open in May or indoors in April. Plant two feet apart in any good soil. Good for temporary hedges.

*MOONFLOWER (*Ipomœa Bona-nox*). White. August to September; 15 to 30 feet. Most rapid growing annual vine. Flowers open at night; 6 inches across. Sow outdoors May; indoors January to March. 2 inches deep.

*MORNING GLORY (*Ipomœa purpurea*). Purple, pink and blue to white. July to August; vine, 10 to 20 feet. Rapid growing, profuse flowering. Do not sow till ground is warm. Soak seeds in water first. Resows; sometimes becomes a weed.

MUSK (*Mimulus moschatus*). Yellow, mottled and dotted, splashed brown. July, August; ½ to 1 foot. A perennial creeper, but treated as an annual. Give cool, moist situation and shade, when it is one of the very best plants. Sow in May, on the surface and cover lightly.

*NASTURTIUM, TALL (*Tropœolum majus*). ——, DWARF (*T. minus*). Scarlet, yellow, maroon; July to October; 1 to 5 feet. Will not stand frost. Leaves used as salad. Good for screens, for rough places, and for cut flowers.

NEMOPHILA (*Nemophila insignis*). Pure blue; July, August; 1 to 1½ feet. The best blue-flowered annual, blooming over a long season, and having bell-shaped flowers an inch across. Moist loam in partial shade. Said not to succeed around Boston.

PANSY (*Viola tricolor*). Purple, blue, white, yellow. May to October; ½ to 1 foot. For early flowers sow in August and winter with protection. Sow outdoors from June onward; indoors January and February. Best spring bedder.

PETUNIA (*Petunia hybrida*). Magenta, claret, white. July to September; 1 to 2 feet. The most profuse bloomer and sweet scented, but the

type is a frightful colour and must be used alone. Resists drought. Rather weedy habit. Flowers saucer-like, 2 inches across. Sow on surface in May.

PHLOX, ANNUAL (*Phlox Drummondi*). Red, crimson, white, and primrose. July to October; 1 foot. Makes a spreading bushy tuft with a profusion of flowers ¾ inch across. Sow thinly in May and cut back after first flowers if in dry soil and water freely. Self-sows for succession.

PINK, CHINESE (*Dianthus Chinensis*, var. *Heddewigi*). White, rose, maroon. August; 1 foot. Flowers 1 inch across, fringed and variously variegated. Warm, well-drained soil. Sow outdoors March, April; indoors February for May bloom.

POPPY, CORN (*Papaver Rhœas*). Pink, scarlet, white. August, September; ½ to 2 feet. More refined varieties are the "Shirley Poppies." Sow thinly on cool soil; often self-sows, and then blooms early.

——, OPIUM (*P. somniferum*). 3 feet. Large flowers double or single in great variety of colours, not yellow. Bold glaucous foliage.

PORTULACA. See ROSE MOSS.

ROSE MOSS (*Portulaca grandiflora*). White, red, magenta. July to October; 6 to 9 inches. Very brilliant flowers 1 inch across, flourishing on dry soils. Leaves succulent, rounded. Single varieties bloom earlier than doubles. Scatter seeds on the surface when weather is warm. Most gaudy plants for very dry places.

SALPIGLOSSIS (*S. sinuata*). Shades of purple and blue through reds and yellows to creamy white, and variously veined and mottled. Summer; 1 to 2 feet. Tubular flowers, with large, flat expansion. Very effective and most singular. Treat as half hardy, sowing in heat. Any good soil.

SAGE, SCARLET (*Salvia splendens*). Scarlet. August; 2 feet. A tender perennial, but very commonly grown as a hardy annual. The spikes of scarlet, a foot long, are the hottest flowers of the hot season.

SENSITIVE PLANT (*Mimosa pudica*). 1 foot. Grown as a curiosity. Leaflets fold up and stalks drop when touched or shaken. Introduced from tropical America in 1638, but is easily grown from seed sown outdoors in May. Flowers a small ball of pink filaments.

SHELL FLOWER (*Molucella lævis*). White, pink tipped. Fragrant. June, July; 2 to 3 feet. Shell-like calyx in which four white seeds nestle like eggs. Gaping flowers. Self-sows. Any soil.

Stock, Ten Weeks (*Matthiola incana*, var. *annua*). White, pink, purple. July; 1 foot. Has strong clove fragrance. Flowers last well. Single and double forms; latter particularly useful. Sow outdoors in May, or in heat in March for June flowers.

Sunflower (*Helianthus annuus*). Yellow. August; 3 to 12 feet. Individual flowers from 6 to 14 inches across, like huge daisies. A valuable quick-growing screen plant, good on any soil. Plant seeds two inches deep.

Swan River Daisy (*Brachycome iberidifolia*). Pale blue or white, 1 inch across. 6 inches to 1 foot. Like an aster, but flowering earlier. Good for cutting. Start in heat for very early bloom.

Sweet Scabious (*Scabiosa atropurpurea*). Dark purple, rose, white. July to October; 2 feet. Like large double daisies. Good for cutting. Any soil.

Sweet Sultan (*Centaurea moschata*). Yellow, white, or purple; July, August; 2 feet. Musk-scented. Large heads like giant cornflowers. *C. Margaritæ*, pure white, is a famous modern strain. Does not transplant easily. Lasts 10 days. Sow outdoors in May.

*Sweet Pea (*Lathyrus odoratus*). Various colours; July to October; 3 to 6 feet. Most popular fragrant annuals for cutting. Modern improved forms greatly superior. Deeply trenched, heavy soil. Excellent in cooler climates. Make three sowings for succession, the last between the other two for shade. Sow in September for early flowers.

Tarweed (*Madia elegans*). Yellow. July to October; 1 to 2 feet. Best yellow annual for shaded places. Flowers open morning and evening. Plant has graceful open habit. Sow in May.

Tickseed, Calliopsis (*Coreopsis tinctoria*). Yellow rays with dark maroon base. June, July, and later; 1 to 3 feet. One of the best showy, easily grown annuals for cutting. Any soil.

Tobacco (*Nicotiana Tabacum*). Red, white. July, August; 3 to 5 feet. Most effective as a bold screen for its large leaves. Flowers 4 to 6 inches long, but not otherwise showy. —— (*N. alata*). Showy white flowers, fragrant, opening at night. —— (*N. Sanderæ*). Is similar, but in various colours, effective against dark background. Sow on surface in May.

WALLFLOWER (*Chieranthus Chieri*). Early blooming forms of this perennial are grown as annuals. May be grown easily in a moist soil with moderate shade.

WISHBONE FLOWER (*Torenia Fournieri*). Yellow, blue, purple. July to October; 6 inches. A low, bushy, floriferous plant for bedding and a good substitute for the pansy. Tender; sow indoors in March or April.

ZINNIA (*Zinnia elegans*). Red, scarlet, yellow, magenta and intermediate tints. July to November; 2 feet. Individual flowers 2 to 3 inches across. The best showy annual for very late bloom. Thrives in any deep, rich soil. Very effective for distant masses. Endures drought and some frost. Get well-selected strains for pure colours, avoiding magenta and greenish tinges. Sow outside in May; or indoors in March. Transplants easily.

NOTE.—The following true perennials may be treated as annuals blooming the first year from seed sown annually in March: Snapdragon, Cupid's Dart, Mouse-eared Chickweed, Perennial Tickseed, Larkspur, Sweet William, Scotch Pink, Moldavian Balm, Blanket Flower, Horned Poppy, French Honeysuckle, Rocket, Sunset Hibiscus, Man-of-the Earth, Column Flower, Flax, Honesty, Musk Mallow, Monkey Flower, Forget-me-not, Iceland Poppy, Polyanthus, Sidalcea.

BULBS, TUBEROUS PLANTS AND ORNAMENTAL GRASSES

"Nature will have none of your false systems. She is supreme, absolute as is her Author. She repudiates our foolishness, and rudely dispels our illusions. Work with her and she responds, aids, and rewards us in proportion to the worth of our endeavours; but if we would outwit her, coerce or restrain her action, and falsify her teaching, at once she gives us the lie by the sterility, destruction, and death of everything we have sought to create in defiance of her laws."

— LAMARTINE: *"Address to Gardeners."*

CHAPTER XIII

BULBS, TUBEROUS PLANTS AND ORNAMENTAL GRASSES

HERE are plants for every place and purpose — beauty for formal beds and borders, for the water garden, the rockery, the meadows, the woodland, and especially for the wild spots on our grounds, for wherever we would impose our ideals upon the land we control. Let us not be restrained by the definitions of the classifiers. The botanist would perhaps name a tulip as the most familiar example of a bulb, being "built up of a series of fleshy scales." He will tell you that the gladiolus grows from a corm, the canna from a tuber, and the iris from a rhizome, and has pity in his eye for you if you refer to any one of these as a root. But to the flower-lover, plants that store up in a bulb or any of these fleshy "roots" during one growing season the food that is to last them well through the next season of bloom, are a class by themselves, sufficiently distinct, in his mind at least, for all practical purposes.

Because they have so much latent beauty stored when we receive them from the dealer, and are so little dependent, at first, upon the expert skill of a gardener, bulbs of one kind or another are grown by every one. Some are of the simplest culture; some cost as little as three for a cent; some are among the most costly indulgences of specialists; others are more popular than any other plants in the trade.

Probably there will never again be a feverish craze for tulips such as once attacked the phlegmatic Dutch; certainly Americans are not wont to weigh gold in the balance for a Semper Augustus

or any bulb however choice. "La Tulipe Noire" is not much called for in our public libraries. But we grow tulips by the million, even if we don't mortgage our property to secure the rarest.

Not having to forage for food early in the spring before they can bloom — their larders having been filled after blossoming the previous year — many bulbs are prepared to rush into flower at the break-up of winter. Like friends in need, they come when most wanted. A flower may be insignificant in itself, but if it appear when trees are bare and winds are raw, when the earth is slushy and the muddy roads are fluid and bottomless, how much we prize it! The fragile little white snowdrop "with heart-shaped seal of green," nodding from its slender stem in the meadow, is not impressive, it is true; but because it is the very earliest flower cultivated — only the hepatica in Nature's garden being contemporary — it is dear to the hearts of the people. There is a so-called giant snowdrop (with petals nearly an inch long) which is more effective than its little sister of the snows, but it blooms no earlier than the crocus, and never will be so beloved as the first flower. Planted in colonies and left to care for themselves, snowdrops succeed best in partially shady places, being one of the few bulbs that will bloom under trees.

After the snowdrop comes the reign of blue and purple. In the new grass, Siberian squills, small flowers of an intense blue, like Meissen china, give one a thrill of pleasure the first day that there is a feeling of spring in the air. Glory-of-the-snow (*Chinodoxa*) makes spots of beauty on the earth where snowdrifts lately lay, when the first bluebird shows a glint of the heavenly colour, too, as he flies about the orchard looking for a nesting hole. Other early bulbs may be foregone, but purple, lavender, white

and yellow crocuses, everyone who has spring flowers at all must have. At three dollars a thousand, who would not spangle his lawn with them and "paint the meadows with delight"? "Bulbs have a mission in life," says Wilhelm Miller. "They seem to have been divinely appointed to entertain us from the moment when winter becomes too tedious for words until the trees leaf out and spring strikes high C."

Where shall the small early bulbs be planted? Flowers that must withstand buffeting spring winds do not erect themselves on tall stems only to be snapped off, but hug the earth. They appreciate shelter. Too inconspicuous and ineffective to be planted singly or even by dozens, but happily cheap enough to be used by the hundred or even by the thousand on large estates, snowdrops, scillas, crocuses, grape hyacinths, and the lovely little star of Bethlehem, a late bloomer, perhaps never look so well as when naturalised in the grass. They seem to require the green background. Seen against bare earth in the flower border they lose half their charm. Their narrow, pointed leaves, shaped like knife blades to cut the wind as it whistles harmlessly by, can scarcely be told from the surrounding grass. Later in the summer, after the bulbs have stored up potential energy and beauty for another year and prepared for a long rest, the leaves dry up and disappear. But woe betide the bulbs if a mowing-machine cuts off the leaves while they are still working! Whoever would see his lawn gay with crocuses in March must defer cutting it for a month. Even so, crocuses die out after a few years when planted among grass, whereas they multiply in a garden. On the other hand, the star of Bethlehem might run out the grass from a lawn and should never be planted in one. It spreads prodigiously. A gently sloping, half-shaded bank or

a patch of meadow will be covered with the thick mat of its white-ribbed green leaves and myriads of green-ribbed white stars. While we may scarcely hope to have such sheets of the lovely, misty, lavender-blue wood hyacinths (*Scilla festalis* or *nutans*) as Nature spreads in wild places throughout Europe, the bulbs are cheap enough to be tested in everybody's moist open woods and meadows. More intense effects of blue, lavender, and purple may be had from colonies of grape hyacinths, squills, chionodoxa, quamash, and crocuses. The grape hyacinth, known as "*Heavenly Blue*," makes patches of charming colour on a shady bank near a stream.

In October, when bulbs come from the dealer — and they deteriorate if left long out of the ground — stand in the centre of the bit of land where you would naturalise them, toss them from the bag in all directions, some near, some far, and plant them where they fall. Regularity, rows, completely spoil the effect. The smallest bulbs may lie only an inch or two inches apart. A strong tin apple corer will cut out holes to drop them in, or a dibber, made from an old spade handle whittled to a point, is often used. This, however, packs the surrounding earth hard, and each hole should be filled with good soil. A spud is convenient for the smallest bulbs only. For large ones a trowel is necessary unless one be the happy possessor of an English bulb-planting tool. Some gardeners turn back a bit of sod on the corner of their spade, drop the bulb in the opening and replace the sod, leaving no trace of their operations behind them until the flowers push their way through in spring.

How bare would the rock garden be without the cheerful spring bulbs! Whoever has one will fill its gray crevices with their brightness and secure a long succession of bloom by placing some in sheltered sunny places, under the lee of a sombre stone



CHEERFUL YELLOW CROCUSES GLITTERING ON A LAWN IN EARLY SPRING



EMPEROR DAFFODILS ALONG AN ENTRANCE DRIVE WHERE THE POET'S NARCISSUS WILL SPEEDILY FOLLOW AND REPLACE THEM. BULBS DISCARDED FROM A HOTHOUSE WERE USED

that acts also as a foil for their gaiety, some on cold northern slopes. Or, some of the earliest flowering bulbs may be planted between rows of tulips and hyacinths in a formal bed, for they have acted their little part and modestly withdrawn from the stage by the time those *prime donne* appear. Clumps of pansies and hardy violets, set out at intervals of two feet among the daffodils and tulips in the foreground of the perennial border in March, do not harm the bulbs, but soon spread and carpet the bare earth about them. Wherever there is room for a weed to grow we may hope to have a better plant.

It was William Wordsworth, exponent of the simple life, who first put the idea of growing daffodils by the multitude into our innocent heads:

> "Continuous as the stars that shine
> And twinkle in the Milky Way,
> They stretch in never-ending line
> Along the margin of the bay;
> Ten thousand saw I at a glance
> Tossing their heads in sprightly dance."

How can we content ourselves with less, having this inspiring picture ever in mind? Both the yellow, long trumpeted daffodil and the fragrant white narcissus quickly colonise from comparatively small beginnings. A thousand poet's narcissus may be bought for five dollars or even less. Does the masculine amateur think it worth while to sacrifice a box of cigars for their possession, if need be, or the feminine gardener to trim over her last year's hat and spend the price of a new one on permanent joy? There are many ways of reconciling delightful extravagances to one's conscience. Every gardener worthy the name has tried a few and thereby earned the right to be charitable in his judgment. Mohammed said: "He that hath two cakes of bread, let him sell one of

them — for bread is only food for the body, but the narcissus is food for the soul." Surely we cannot do less than the heathen? But if, after we have sold our bread, we have not enough coin in our purse to buy a quantity of daffodils at the regular rates, what then? Approach a florist who forces them under glass on a large scale for cut flowers only. He needs fresh bulbs for forcing, but the old bulbs that he is glad to sell you at a bargain, if put into the ground as early as it can be worked in spring, recover their strength and bloom gloriously the following year and probably ever after. There is a field in New Jersey where the daffodils that once surrounded an old garden have been multiplying without anybody's care for over a hundred years.

Three distinct types of narcissus, each class with seemingly innumerable representatives, bewilder the novice who would make a choice. First there are the hardy yellow daffodils, both the single long trumpeted ones and the double forms with many yellow petticoats overlapping; second, the white or yellow flowered, fragrant type to which the poet's narcissus and the sweet-scented campernelle and jonquil belong; and third, the Tazetta type, with many flowers on a stem, most commonly represented by the Chinese sacred "lily" grown by many Celestials in bowls filled with pebbles and water in their laundry windows. The class last named has not afforded hardy bulbs for the garden until recently. Now, both white and yellow flowered ones — true polyanthus narcissus — may be safely grown in the open ground so far North as Boston. The name narcissus, though the botanical title of the whole family, is popularly applied only to the small-cupped species; and the name daffodil, in popular parlance, has come to include all the members of the family with long or medium trumpets.

Naturalised, scattered colonies of these incomparable flowers beside little lakes, in meadows, along woodland borders, old stone walls and entrance drives would seem to be the ideal way of planting them, but in no situation, perhaps, could they be less than lovely. When left alone they will protect themselves against encroachment, even of quack grass, and steadily increase in quantity, sometimes even in quality, of bloom. Do not lift and divide the bulbs until the flowers show by deterioration that they are overcrowded. Planted in a shrubbery border where a flowing ribbon of daffodils at its edge is a cheerful sight indeed on an April morning, the bulbs need a top dressing of fertiliser now and then to replace nourishment stolen by the shrubs. Daffodils enliven the perennial borders, too, where, however, their presence is apt to be forgotten after their leaves die off, and injury may be done the bulbs if a fork be used among the plants. Moreover, they leave bare patches after them. Some gardeners sow sweet alyssum, mignonette or some other low-growing annual over them to carpet their area with flowers during the summer and autumn. A wreath of poet's narcissus around a fountain, where they peeped over the coping as if to see their exquisite reflection in the mirror-like pool, has reconciled the most skeptical unbeliever to their use in a formal garden. Why, our grandmothers' gardens were always filled with them! There were tufts of gay daffodils in the corners of the parterres, and lines of them drawn up, as if in battle array, behind the boxwood breastworks. Since ever they were known they have been beloved. Shakespeare delighted in them. There are rabid collectors in England to-day who give two thousand dollars or more for the exclusive ownership of a new choice variety represented by perhaps a half-dozen bulbs.

The hardy narcissus and daffodils will grow wherever grass

will. Some will be planted in out-of-the way corners in early and late situations for a succession of bloom to cut for house decoration. If skilfully selected and situated, daffodils may have their season extended over three months. Any good garden soil pleases them well, but they have a preference for deep, air-penetrated earth made cool with humus — never with manure — over a pervious subsoil where dampness will not remain to rot their roots, and where they have partial shade. If there be as much of a tree below ground as above it, so there is as much of a plant that we never see as there is to delight the eye, and we must not forget the fact in October when we drop bulbs into their permanent home. In average soil, a bulb will be buried to a depth equal to its circumference, which would bring a poet's narcissus or a trumpet daffodil about four inches below the surface. See that the soil is good to at least twice that depth below the bulb. In light, sandy soils six inches would be a safer depth to bury it. It is wise to plant bulbs deeply in any case, especially in cold climates or exposed situations. Their flowers come later than those of the shallow-bedded ones, it is true, but they are usually larger and of a stouter substance.

Dumpy, double Hobokenese hyacinths are as often made into floral patchwork, perhaps, as the long-suffering tulips. They are the stiffest of the bulbous flowers, but they come in some exquisitely delicate tints, and the single ones especially are undeniably lovely. In the garden their fragrance is delicious; in the house their heavy sweetness cloys. Within a spaced garden, formal hyacinth beds of one or at most two pure, harmonious colours are effective, but to cut up a lawn into geometric patterns laid on in gaudy colours is a misuse of bulb beauty that displays total ignorance of the laws of garden composition. For high-grade

bedding, hyacinth bulbs can be used only once, which makes them costly. In any case they should be lifted after they have ripened and be stored until autumn in a cool cellar.

In some of our public parks, planted by politicians to please the ignorant masses, one sees tulip beds that are amazing — with sharply contrasted zones of colour laid on in patterns that are about as decorative on a lawn as patches of gay oilcloth. Similar beds, intensified by chromo lithography, appear in the catalogues and serve as models, alas! for gardeners throughout the length and breadth of the land. Let it be remembered that it was the gentle Linnæus who dubbed double flowers "vegetable monsters." Among true tulip lovers the double forms, laboriously obtained by the hybridiser, find little favour. They have no authority from Nature for their abnormalities, whereas every line of the single, long-stemmed, pointed-petalled kinds is full of exquisite grace. They are the natural forms restored, perfected. Only single tulips can ever be fittingly naturalised — tulips whose clear colour, pointed petals, and dark spot at their base indicate nearness to the beautiful wild type. Gesnerianas may be had for fifteen dollars a thousand. The effect of that number of *majors*, of brilliant, rich red blotched with black at the bottom of their cup, is simply superb and, when naturalised among the lush May grass, cannot be rivalled even by the gorgeous Oriental poppies which sulk under such treatment. For naturalising in open woods and half-shaded places, try *T. sylvestris*, a pale yellow, pointed-petalled flower.

Early flowering tulips commend themselves not only because they come at the most ecstatic season of the year, and set the garden ablaze with rich colour when fires are still comfortable indoors, but because they have finished their show when it is time to transplant annuals from the hotbeds to the garden. The bulbs

may be lifted and replanted in an out-of-the-way corner to mature when their place in the beds is wanted for summer bloomers like asters and heliotrope. As has been pointed out, the bedding system means constant work, which spells expense. It implies skilled gardeners if a pyrotechnic display of flowers is to be kept up in the same beds of a large garden from frost to frost. Many gardeners, however, use companion crops of early tulips and some pretty shallow-rooted annual or perennial like forget-me-not in alternate rows. Masses of little turquoise-blue flowers overspread the withering tulips while the bulbs are ripening undisturbed below.

It was a happy day for gardeners when, in 1559, the showy late tulip was brought from Persia to Constantinople, from whence it was introduced throughout Europe. Innumerable beautiful varieties have arisen from the original form. Tulip seed produces only self-coloured flowers; but after seven to ten years of cultivation or, rarely, even longer, a wonderful change comes over them. Suddenly they assume entirely new colours which may be solid, or striped, or flamed, or feathered. Now the tulips are said to be rectified. For the most part they are as variegated as Harlequin. The pencillings of a flamed tulip extend from the margin of the petal to its base; in a feathered tulip the markings do not extend so far. However much we may admire the delicate shadings and traceries of an individual flower — and each rectified one is a special study — the self-coloured ones are more effective for massing. Large May tulips are better for hardy borders than the small early ones, not only because they are more effective, but because they may be left undisturbed in the ground for four or five years without deteriorating. And they furnish better cut flowers, for their stems are long and strong.

When arranging the stiff, upright tulips, daffodils, irises, gladioli, and other flowers for that matter, let us learn of the Japanese to simulate their natural attitude. Secure a flat ribbon of lead less than two inches wide from the plumber, cut it into ten-inch lengths, lay one on its edge in the bottom of a bowl and pinch the pliable lead around the stems of the flowers with a few leaves about them. Or, pebbles may be used to hold them upright. They appear to be growing in water. Invisible glass discs, perforated to hold flower stems, can be bought to place in the bottom of silver, glass or china dishes for the centre of the dining-table.

Darwins, many of them with stems two feet tall, are an aristocratic race of late tulips, mostly self-coloured and with a "tender bloom like cold gravy" overspreading and gently subduing them. They, too, may be left undisturbed for years. Bizarres have variegated colours, the markings generally brown or red on a yellow ground. Bybloemen tulips have violet or rose marking on a white ground. Parrots are wonderfully marked and fringed late tulips, with more or less green among their yellow or red streaks, and so large that the weak stems cannot hold the flowers erect. This is their lamentable defect. But they are curious and gorgeous. Never buy bargain lots of mixed tulips. Fewer named bulbs of a high grade give far more pleasure and satisfaction.

In every old-fashioned garden one used to see the fritillary or crown imperial erect its tall stem, bearing near the top a graceful umbel of red, yellow, or orange bell-shaped flowers with a tuft of foliage above them. Quaint old Gerarde praised its "stately beautifulness" and accorded it "the first place in the garden of delight." Why do we see it now so rarely? It thrives in any good light soil and need not be disturbed for years. It is quite

hardy; it is cheap; it blooms early, coming before the hyacinths in April and dying down in summer; its petals drip nectar; it wears an air of distinction; what virtue, except fragrance, doth it lack? Let us neglect it no longer! The perennial border especially needs so richly coloured and decorative a flower that blooms early.

A joyful garden might almost be made from lilies alone. Bulb beauty would seem to reach its culmination in them. Only the rarest kinds are costly, and large, heavy bulbs of, perhaps, the loveliest of them all — the hardy, easily grown white Madonna lily (*L. candidum*) — may be had for less than nine dollars a hundred to plant in parallel rows along a formal path or through the aisle of a pergola or pleached arbour. Formal treatment best suits this stately lily. It makes a delightful companion crop for light-blue larkspurs. Its pure white trumpets, shorter than the Easter lily's in the hot-house, fill the evening air with fragrance and lend a heavenly beauty to the garden by moonlight to refresh the weary eyes of the commuter. Let us more often think of him in planting our gardens! The superb gold-banded lily of Japan (*L. auratum*) seems really too good to be true. Each tall, stout stem hung with lilies of huge size, whose ivory petals have a golden stripe through the centre, is surprising; and where dozens rear their heads from among the rhododendrons the effect demands strong superlatives to express its splendour. Many other lilies may be grown among rhododendrons, and laurel and azaleas, too, for the conditions suit them perfectly — light, rich, peaty, moist, but well-drained soil in partial shade. Unhappily the gold-banded lily bulbs are sometimes attacked by a fungus disease either when we receive them from Japan, or shortly after. Dip them in a weak solution of formaldehyde such as would be prepared for seed potatoes, and sift



ONE OF THE LOVELIEST AND EASIEST WAYS TO BEAUTIFY A HALF-SHADY KNOLL OR A BIT OF OPEN WOODLAND IS TO PLANT THE STAR-OF-BETHLEHEM. IT GROWS IN GRASSY TUFTS ABOUT SIX INCHES HIGH, WITH NUMEROUS WHITE, STAR-LIKE FLOWERS IN LOOSE CLUSTERS. THE BULBS COST ABOUT SIX DOLLARS A THOUSAND, OR YOU MAY FIND THEM RUNNING WILD FROM AN OLD GARDEN



DOUBLE BORDER OF GERMAN IRISES ALONG A GRASSY PATH. THE BARE EARTH ON EITHER SIDE IS AN ARTISTIC DEFECT WHICH COULD BE EASILY OVERCOME EITHER BY ALLOWING THE IRISES TO GROW OUT TO MEET THE GRASS OR BY USING ALYSSUM, PINKS OR OTHER LOW-GROWING EDGING PLANTS

powdered Bordeaux on the soil above their crowns. But the most frequent cause of failure with imported lilies is that they come from Japan too late to become established before killing frost. Many bulbs do not reach us until December. If kept long out of the ground, they deteriorate or die. Late comers should be packed in sand and stored in a cold cellar until they can be safely planted out in spring. Never buy gold-banded or speciosum lilies that have been weakened by long exposure in a seedsman's shop. Indeed, no time should be lost in getting any bulbs into the ground after they leave the grower.

Beginning with the trout lily — the little yellow, speckled bell that nods in the wild garden and bears the misleading popular name of dog-tooth "violet" — with Jack-in-the-pulpit and the trilliums, white, pink and claret, a lovely pageant of native bulbs has already passed before our eyes are dazzled by the midsummer splendour of the glowing red wood lily and the tall stems of superbum, hung with perhaps a score of brilliant orange-red turk's caps that brighten the marshes. Nature never fails to give the flowers in her garden the setting that best displays their charms. So must we learn of her.

Lilies-of-the-valley, beloved by everyone, will carpet warm sunny and cold northern spots for early and late bloom — their season can thus be prolonged seven weeks in the open; fragrant lemon-yellow day lilies will perfume the old-fashioned garden two months before the white day lily, with big heart-shaped leaves, another old-time favourite, opens its pure chalices to woo with their fragrance the night-flying moths; pink and white speciosum lilies will rise among the royal ferns in a half-shaded place; and, if plants that cannot be killed are wanted, the novice will surely have tawny-orange day lilies. Whoever owns any will gladly

give away a barrelful of roots. With no cultivation whatever they thrive prodigiously and will readily choke to death every choice thing near them in a garden. But planted along an old stone wall, or naturalised along the edge of a copse in a meadow, the lilies, that are almost as richly coloured as the butterfly milkweed, rise on slender stems above the grasses with splendidly decorative effect.

After the pansies and early tulips have finished blooming, and lovely masses of colour are wanted to fill their beds throughout the summer, no plants can equal the tuberous begonias, which, like azaleas, reflect all the tints of sunset. Exquisite large waxy flowers appear in unwearied succession for months above the clean broad leaves. Start the tubers in shallow boxes of leaf-mould or cocoanut fibre in the hotbed in spring and set them out in rich, moist, cool soil where they are shaded from noonday sun. Not a breath of frost can they endure. Their tubers should be the first lifted.

What shall be done with cannas? They give bold, brilliant colour effects which are at once their glory and the despair of anyone who tries to reconcile the tropical-looking plants to the vegetation in a northern garden. Certainly they shall not be placed in a circular bed, with or without "elephants' ears" that so frequently accompany them, in the centre of a lawn where they form an island, a spot of colour, entirely unrelated to all other planting. Shall they intrude among the perennials? The effect of their big, broad leaves there is quite as bad. For a quick-growing screen they are admirable, but only if it be a necessary detail in a good planting plan; or for an isolated corner where tropical effects with bamboo, eulalias, and other tall, decorative grasses are wanted. Their rich bronze green or brownish maroon leaves are as valuable as their gorgeous flowers, haunted by hummingbirds that feast in the deep nectar-filled tubes.

Gladioli bloom opportunely when the garden needs lighting up. Their spikes of brightness especially help the perennial border which is wont to look weary at midsummer, before its autumnal revivification begins. Large-flowered new strains are a revelation to one who knows only the old sorts. Since they may be had in a great variety of colours, they need never clash with any permanent plants. Like cannas, elephants' ears, poker plants, tuberous begonias and dahlias, they must be lifted in autumn and stored in a cellar, but let no one forego growing them on that account. They are worth the little trouble they cost if only for cut flowers which last over a week in water — a cheerful fact for the busy housewife.

Dahlias may be introduced at the back of the perennial border, for they grow tall, require stakes, and do not produce their finest flowers until early autumn, and so ought not to be given a conspicuous foreground position anywhere on the grounds. But they require deep rich soil, being gross feeders, and will not bear crowding or pilfering from surrounding plants. The single kinds have the most graceful flowers that are splendidly decorative in the garden and that arrange well in vases from which the top-heavy, less lovely double kinds are forever falling out. Wonderful cactus dahlias can be grown by the merest novice who, if he have no other spot, will plant their tubers along the fence of his vegetable garden and deny himself a row of cabbages. He must be warned, however, that not all the superb dahlias seen at the exhibitions, where he learns of the widespread dahlia craze, have garden value because of the weakness of their stems. All the strength of some of them seems to have been forced into the flowers which hide their handsome heads in a mass of leaves. Only the single-flowered kinds grow on tall, slender stems, high above their foliage.

Among yuccas or ornamental grasses the flaming torches of the red-hot poker plant flare most effectively. Isolate such a blaze of colour if you would get the full value of its glory. Yellow, orange, scarlet and coral flame flowers or torch flowers glow with lambent fire in late summer and early autumn as if they would set the fast-fading garden ablaze.

One of the joyful possibilities in owning a pond or stream is the ability to grow to perfection a variety of beautiful grasses and sedges about its edge. The hardy bamboos, eulalia, reeds, erianthus, and phalaris, taken from the flower garden, where they invariably look out of place, and naturalised on the banks with the choicer native grasses, reeds and sedges for congenial company, not only hold their own, but their increased vigour is encouraging. The feathery plumes of the Japanese eulalia especially become a fresh revelation of grace. Wild rice, which should be sown as soon as it ripens, will attract many birds to feast—bobolinks, red-winged blackbirds and wild ducks among the throng. We are only beginning to realize the delightful uses of the hardy bamboos in the background of the perennial border, in the water garden, and for those tropical effects with pampas grasses and other exotics without which no "head gardener for a first-class gentleman" seems to be truly happy. Too long have we regarded all the bamboo race as impossible denizens of warmer climes. But there are at least a half-dozen hardy ones, among them the little pygmy bamboo, for carpeting rock gardens and wild places, and a broad-leaved, decorative bamboo (*Bambusa Metake*), the best of all, which grows higher than a man's head. Whoever wishes to achieve the effect of a gigantic ribbon grass will grow Fortune's bamboo along with the "gardener's garters," a variegated phalaris, and the striped or barred eulalias from Japan, but

one must almost wish he would n't! Freakish foliage is so difficult to manage in the making of garden pictures that few, indeed, ever use it aright. For lightening too-heavy masses of dark foliage, or for running up the colour scale to a high accenting note, however, it has too great value to the artistic gardener to be ignored.

After the flowering grasses and sedges have been cut for winter decoration indoors, the astonishing autumn crocuses (Colchicum) bloom by Thanksgiving, as if the year, before dying, had entered upon a second childhood.

The Select Among Bulbous and Tuberous Plants

The flowering period given is that of New York and allowances must be made north or south.

Aconite, Winter (*Eranthis hyemalis*). Yellow; March; 6 inches. Flowers before the leaves, one bloom to a stem. Quite hardy. Give half shade in border. Earliest bright yellow flower.

Anemone (*Various species of Anemone*). See Anemone, Windflower, etc., pp. 96, 216, 230.)

Bachelor's Button (*Ranunculus Asiaticus*, Centaurea and other flowers.) See page 57.

Begonia (*Begonia tuberosa*). Red, pink, white, yellow and mixed. All summer; 6 to 8 inches. Invaluable for summer bedding in shaded places. Flowers sometimes 6 inches across. The different strains vary greatly in form and colour. Peaty soil preferred. Lift tubers in fall and keep free from frost, planting in May, June.

Bleeding Heart (*Dicentra spectabilis*). Pink; May, June; 2 feet. (See Herbaceous Plants, page 218.)

Bloodroot (*Sanguinaria Canadensis*). White, tinged pink. April; 8 inches high. Appearing first before the leaves. Whole plant densely covered with white powder. Transplant late summer or spring. Valuable for rockery.

Butterfly Weed (*Asclepias tuberosa*). Orange, rarely yellow. June, September. (See Native Plants, page 89.)

Canna (*Canna Indica hybrids*). Red, pinkish, pale yellow, and nearly white. July; 2 to 6 feet. August till frost. Flowers in branching spikes, above large sheathing leaves. The most tropical looking

bedding plant for both foliage and flower. Roots tender and must be wintered in cellar. Give water in abundance; at home on pond edges. Modern varieties have flowers nearly as big as a man's palm.

CROCUS, AUTUMN (*Colchicum autumnale*). Purple, pink, white. Individual flower 4 inches across. September; 3 to 4 inches high. Plant in August. Divide in July, and do not disturb until crowded. —— (*C. Parkinsoni.*) Veins outlined in purple, giving checker-like effect. ——, CLOTH-OF-GOLD (*Crocus Susianus*). Yellow. ——, SCOTCH (*C. biflorus*). White striped lilac. ——, IMPERATI (*C. Imperati*). Purplish blue. ——, DUTCH (*C. Mæsiacus*). ——, COMMON (*C. vernus*). Varieties, white, lilac, purple; All 3 to 5 inches. The largest individual flowers and most effective of the dwarf spring bulbs. Of equally easy culture. Perfectly hardy. If planted in lawn, foliage must be allowed to mature before grass is cut. March. Best named varieties of the common crocus are Snow Queen, Queen of Purples, and Bleu Celeste.

CROWN IMPERIAL (*Fritillaria imperialis*). Brownish red. April. (See OLD-FASHIONED FLOWERS, p. 58.)

DAFFODIL. See NARCISSUS.

DAHLIA (*Dahlia variabilis*). All colours but blue and true scarlet; August, October; 2 to 6 feet. Easily raised from seed, flowering first year. Tops cut by first frost. Most important tuberous rooted plant and most effective of all the tall growing kinds for late flowers. Has most brilliant flowers and a greater variety of them, combined with greater diversity and form, than any other one group of plants. All the varieties in cultivation are forms of the one species. Plant the tubers in any good garden soil after danger of frost is past and give cultivation same as potatoes. Lift roots in November after tops have been cut off by first frost and store in sand or ashes in frost-proof cellar. It is best to divide old roots when replanting. Dahlias are classified according to the form and colour, as follows: *Show*, regularly quilled rays, self-coloured or lighter at the base. *Fancy*, regularly quilled rays darker at the base. *Cactus*, petals variously twisted and revolute, all colours. *Decorative*, a modern intermediate group with broad and flat petals, but generally useful for cutting. *Single*, daisy-like flowers with conspicuous disc and an outer rim and row of florets. *Peony-flowered*, most modern, irregularly formed sort of semi-double decorative type. Very large. The

Pompon group includes miniatures of the Show and Fancy and Single types. *New Century*, very large single flowers with rich colourings. *Collerette*, single or semi-double, with broad outer ray of florets and a row of tubular inner florets surrounding the disc. Not much esteemed. Examples in each case are: Frank Smith, maroon tipped white, fancy. Stanley, golden yellow, show. Katherine Duer, iridescent scarlet, decorative. William Agnew, carmine-red, decorative. Aegir, cardinal-red, much twisted, cactus. Mary Service, apricot shaded orange, cactus. Strahlen Krone, deep cardinal-red, cactus. Pèrle de la Tête d'Or, white, cactus. Twentieth Century and its varieties in various colours are best among the singles. Of the Pompons: Darkness, tipped velvety maroon; Snowclad, the finest white; Little Bessy, creamy white, quilled, are typical.

Dog's Tooth Violet (*Erythronium Americanum*). Yellow. April, May; 10 inches. (See Native Plants, p. 90.)

Dutchman's Breeches (*Dicentra cucullaria*). Greenish white, tinged rose; 8 inches. (See Native Plants, p. 90.)

Elephant's Ear (*Caladium esculentum*). Massive foliage heart-shaped, 2½ feet long. Corm is not hardy, but winters indoors if kept dry. Most massive subtropical foliage plant for summer bedding. Any soil.

Flame Flower. See Red-Hot Poker.

Gladiolus (*G. Gandavensis and other hybrids, as Childsii, Lemoinei, Nanceianus, Groff, etc.*). Pink, red, white, yellow and mixtures. July, September; 3 feet. In one-sided spikes. Extremely varied. Most showy summer bulbs. Lift after frost and store dry.

Glory-of-the-Snow (*Chionodoxa Luciliæ*). Sky-blue. March; 6 to 9 inches. White eye. —— (*C. Sardensis*). Dark blue. —— (*C. Luciliæ*, var. *grandiflora*). Larger and later. Largest blue flowers of early spring. Give sun.

Ground Nut (*Apios tuberosa*). Chocolate brown. July, August; 4 to 8 feet. Climbing. Flowers in dense short racemes. Any light soil in sun. Becomes a weed in rockeries.

Guinea Hen Flower. See Lily, Checkered.

Hyacinth, Bedding (*Hyacinthus orientalis*). Blue, red, white, primrose, single and double in various shades. Buy new bulbs each year for best results. Plant in solid colours. 12 to 18 inches. After

flowering lift in May. Offsets will take three or four years to develop. Dense spikes of bloom, giving stiff formal effect. Most fragrant of the spring bulbs. Many named varieties. Among the best are: Fabiola, single pink; Gertrude, single, dark rose; La Grandesse, single, white; Grandeur à Merveille, pale, blush-white, single; La Peyrouse, single, light blue; King of the Blues, single, dark blue; King of the Yellows, single, yellow. Of the doubles: Lord Wellington, red; Prince of Waterloo, white; Charles Dickens, blue. Roman Hyacinths are minatures of the foregoing and sold merely by colour.

——, Cape (*Galtonia candicans*). August; 3 to 5 feet. Bell-shaped flowers 1 inch long. In loose spike. Give slight protection in light rich soil in sun or half shade. Fragrant. ——, Grape (*Muscari botryoides*). April; 4 to 6 inches. Blue, white. Small bell-like flowers in dense spike 1½ inches long. Best variety, Heavenly Blue. Much larger. ——, Wood (*Scilla festalis*). Blue, white. Rarely pink. May; 1 foot. Looser and fewer flowered than the bedding hyacinth, but otherwise much like it. Naturalise in woodlands.

Iris (*Various*). See Herbaceous Plants, p. 223.

Ixia (*Various Species and Hybrids*). White, yellow, purple, ruby, blue, green, in lax panicles. Usually with black eye. Similar to sparaxis. Numerous named varieties. Give protection over winter, uncovering in April. Plant November. Lift in July, and dry off. The greatest range of colour of any bulb.

Jack-in-the-Pulpit. See Native Plants, p. 92.

Jonquil (*Narcissus Jonquilla*). Rich yellow. Very fragrant. Leaves round, rush-like. One flowered. May. Often confused with *N. odorus*, which has larger waved crown.

Lily:

African Blue (*Agapanthus umbellatus*). Blue, in umbels on long stalks. June; 2 to 3 feet. Resembling Clivia in all but colour. Nearly tender piazza plant. Dormant in winter; take into cellar. Water abundantly when flowering. Best in large tub. Apt to break pots.

Autumn Pink (*Lilium speciosum*). Pink, red, white. August; 2 to 3 feet. For permanent planting. Best in warm, sheltered shrubbery or beds. The favourite, *L. rubrum*, is a form of this. Flowers 6 inches across. Flatly expanded. Perfectly hardy.



THE GUINEA HEN FLOWER, ALTHOUGH ONCE COMMONLY GROWN IN GARDENS, IS BETTER ADAPTED TO FREE, NATURALISTIC TREATMENT IN MEADOWS AND HALF-WILD PLACES



TALL WHITE LILIES (*L. candidum*) GROWN IN A CIRCLE OF HARDY FLOWERS — A TURN-AROUND DRIVE — NEAR ENOUGH TO THE HOUSE FOR THEIR FRAGRANCE TO FILL THE AIR

BELLADONNA (*Amaryllis Belladonna*). Deep chalice form. Rose colour, varying to white and red; 2 to 4 feet. May. Tender, needing protection in winter, not easy to manage.

BLACKBERRY (*Belemcanda Chinensis*). Orange, spotted red. June; 2 to 3 feet. (See OLD-FASHIONED FLOWERS, p. 61.)

CANADA (*Lilium Canadense*). Chalice formed, 3 to 4 inches long. Yellow to yellowish red. July. Moist clay or sandy soil.

CHECKERED, GUINEA HEN FLOWER, SNAKE'S HEAD (*Fritillaria Meleagris*). May. (See OLD-FASHIONED FLOWERS, FRITILLARY, p. 59.) Likes cool, alluvial meadow land and shelter.

CORAL (*Lilium tenuifolium*). Scarlet, turban-like flower; inch across; 12 to 18 inches high; with slender foliage. Grow from seed.

DAY (*Funkia* and *Hemerocallis*). See OLD-FASHIONED FLOWERS, pp. 58, 63. ——(*Tigridia Pavonia*). Bright scarlet, to yellow, crimson, and white; 4 to 6 inches across. Flowers last one day, but are produced for two or three months. Plant in early spring, lifting the bulbs after frost and storing in dry cellar. Foliage ribbed, narrow. ——, DWARF ORANGE (*Hemerocallis Dumortieri*). Orange. June; 1 foot. Purer colour, earlier and more refined than the common orange day lily which is excellent for naturalising. Hardy in extreme North. Plant spring or fall.

GIANT INDIAN (*Eremurus robustus*). Light pinkish lilac. May, June; 8 feet. Individual flowers one inch across, in dense long spike. Very distinct. Large roots must not be moved. Mulch over winter. Several other species, differing but slightly.

GOLD BANDED (*Lilium auratum*). The most showy and largest flowered of the real lilies. Often a foot across. August; 4 feet. Pale yellow with golden centre band and crimson spots. Hardy, but appears to fail after a few years. Plant fall and spring.

HENRY'S (*Lilium Henryi*). July, 4 to 6 feet. Resembles *L. speciosum*, but is entirely cinnabar yellow. Very hardy and increases rapidly. Strong flower.

JACOBAEAN (*Sprekelia formosissima*). Red. 1 to 2 feet high. A solitary flower 6 inches long. Grown like an amaryllis, which it resembles. Half hardy.

JAPAN (*Lilium elegans*) July; 1 to 2 feet. Yellow, orange, red. Cup-shaped flower 5 to 6 inches across. Plant in full sunshine, 6 to 8 inches deep. The best of all the upright lilies.

MADONNA (*Lilium candidum*). White. May, June. Plant in August. (See OLD-FASHIONED FLOWERS, p. 61.)

NEAPOLITAN (*Allium Neapolitanum*). White. July; 3 to 18 inches. Needs protection. The most ornamental of the onions. Not pungent. Flowers in a dense umbel, each about ½ inch across. Good for cutting.

POWELL'S CAPE (*Crinum Powelli*). Pink. September; 3 to 4 feet. Largest-flowered autumn-blooming bulb. Hardy at New York if well covered in winter. Plant 8 inches deep.

RED (*Lilium Philadelphicum*). Red-orange, dark spotted with brown-purple. June, July; 1 to 2 feet. Any well-drained soil, sun or shade. Flower cup-shaped, erect.

SCARLET MARTAGON (*Lilium Chalcedonicum*). 3 to 4 feet. Nodding bright red flowers, unspotted. Sometimes yellow. One of the prettiest of small flowered lilies. Should become quite popular.

TIGER (*Lilium tigrinum*). Pale brick-red, dark spotted; August; 2 to 5 feet. Individual flower 6 inches. Easiest to grow of all lilies. Somewhat stiff and coarse looking, but a favourite in old-time gardens.

TURK'S CAP (*Lilium superbum*). 4 to 8 feet. Orange and orange-yellow. This is the best lily for gardens, but a great feeder and wants good moist soil 2 to 4 feet deep. Flowers turban-like, 2 inches across; numerous.

LILY-OF-THE-VALLEY (*Convallaria majalis*). White. May, June; 6 to 8 inches. Under shade of trees and along rich, partially shaded borders. Flowers are nodding bells borne along a stalk. Fragrant.

MEXICAN CORAL DROPS (*Bessera elegans*). Vermillion and white; 1 to 2 feet. Late summer. Very effective summer flowering bulb, sometimes throwing 6 to 10 scapes with 20 pendulous flowers in an umbel, cup-shaped. Plant in spring and lift when ripe.

MILLA (*Milla biflora*). White, waxy; 6 to 18 inches high. Fragrant; 2½ inches across. Plant in early spring. Lift September and October and store over winter. Flat star-like flower.

MONTBRETIA. See TRITONIA.

NARCISSUS:

The poeticus, and polyanthus (Tazetta) narcissus, the jonquil, and the large trumpet daffodil are varieties of different species in the one botancial genus Narcissus. The family is divided into three big

groups, called respectively, (*a*) *Magni-coronati* or large trumpet; (*b*) *Medii-coronati* or cup daffodil; (*c*) *Parvi-coronati* or saucer daffodil. The varieties of groups *a* and *b* are commonly known as daffodils, while those of group *c* are commonly known as narcissus, including of course the poet's and polyanthus groups. Group *b*, the *Incomparabilis* section, is composed essentially, and perhaps entirely, of hybrids between different species and varieties of groups *a* and *c*, and embraces every degree of difference between the two extremes. The large trumpet daffodils are varieties of *N. Pseudo-Narcissus.* The polyanthus narcissi (including the Paper White, Double Roman, etc.) are varieties of *N. Tazetta.* The Poet's Narcissus includes all the varieties of the species *N. poeticus;* the jonquil is a species known as *N. Jonquilla*, and differs from the recognised daffodils in having cluster flowers, and from the polyanthus narcissus in having rushlike leaves instead of flat; it is very fragrant and the flowers are of a very deep yellow colour. Selected varieties in each section or group follows:

All-Yellow Trumpets. Early: Ard Righ, large, does best in partial shade; Early Bird, has been had in flower in the open April 12th; Golden Spur, free, good for cutting. Midseason: Emperor, fine flower of much substance: Maximus, shy bloomer but of superb colour. Late: Glory of Leiden, the biggest and most lasting flower.

All-White Winged, or Bicolors. Early: Victoria, very large and of lasting substance. Midseason: Empress, large and fine, rich yellow trumpet; Horsfieldi, earlier than Empress; very handsome but is becoming diseased. Late: Madame Plemp; a large, bold flower; Grandee, for succession, dwarf, but free flowering.

All-White Trumpets. Early: Cernuus albicans; a very graceful "Swan's Neck"; Mrs. Thompson, strong, free flowering and large; Princess Ida, small, but curiously edged with yellow at the mouth. Midseason: William Goldring, with perianth overhanging the trumpet. Late: Madame de Graaff, most beautiful and largest.

Lesser Long-Crowned Daffodils. Johnstoni, a good naturaliser, thin, graceful flowers yellow. Cyclamineus, little yellow

cyclamen-like flowers three inches long. Bulbocodium, hoop petticoat-shaped flowers of white or yellow. Pretty in pots, or in rock work. Humei, Hume's (Dog-eared daffodils), small trumpet, with overhanging perianth like dog's ears. The tridymus group, a series of few hardy cluster flowered daffodils.

INCOMPARABILIS VARIETIES. Early: Sir Watkin, large and handsome, very free, full yellow. Midseason: Autocrat, every flower as perfectly formed as if cut with a die; full yellow; Stella Superba, white perianth and yellow cup; handsome as cut flower. Late: Beauty, large, handsome, yellow star-like flowers, crown edged orange-red; Gloria Mundi, large flower, cup heavily margined with red; the Barrii group, having trumpet edged with scarlet as: Conspicuus, large yellow flower, red edged crown; Flora Wilson, white perianth, yellow crown edged white; Sensation, white perianth, canary crown edged red. Especially suitable for naturalising and cutting are the varieties of the Leedsii group, all having white petals, etc.: Duchess of Westminster, large and beautiful; Katherine Spurrel, hooded, white perianth, cup canary yellow; Mary Magdalen De Graaff, broad, spreading, white perianth, cream crown, suffused terra cotta; Mrs. Langtry, pale creamy yellow, remarkably free flowering, and excellent for cutting.

SHORT-CROWNED OR SAUCER DAFFODILS. Midseason: Burbidgei Baroness Heath, yellow, orange-red cup; Crown Princess, cream-white, light yellow cup edged orange. Late: Sequin, glistening white, flat golden cup; Ornatus (midseason) and King Edward VII. are the two best varieties of fragrant, white poet's narcissus.

DOUBLE DAFFODILS. Most important is Telamonius plenus, popularly known as Van Sion. Others are: Cernuus plenus, double form of white Swan's Neck; Capax plenus, "Queen Ann's double daffodil"; Sulphur Phœnix, popularly known as "codlins and cream," rose-like flowers, interspersed petals of pale and golden yellow; Double Campernelle, grows 2 feet high, two to six flowers to stem, strong bulb throwing up two to six stems. Deep golden yellow, fragrant.

PEONY, EARLY (*Pæonia officinalis*). May, June; 3 feet. Crimson. Best planted in September. (See OLD-FASHIONED FLOWERS, p. 62.)

QUAMASH (*Camassia esculenta*). Blue, purple, whitish. May; 2 feet. In loose spike. Flowers star-like, 10 to 40. Perfectly hardy. Bulb used as food by the Indians.

RED-HOT POKER (*Kniphofia Pfitzeri*). Scarlet, orange. Early August to October; 3 to 4 feet. This is probably the most gorgeous of all the varieties. Foot-long cones of bright orange-scarlet tubular flowers, one hundred or more each, surmounting an erect stalk 4 to 5 feet. Hardy south of New Jersey, needs protection in Philadelphia, but must be lifted in the North. Give warm, well-drained place with dark background for the best effects. Other named varieties range from yellow to brick-red. One of the most startlingly effective plants. Leaves three feet long, narrow and grass-like. Often catalogued as Tritoma.

SNAKE'S HEAD. See LILY, CHECKERED.

SNOWDROP, COMMON (*Galanthus nivalis*). White. Earliest reliable spring flowers; 3 to 4 inches. For cold sheltered places as well as open. ——, GIANT (*G. Elwesii*). Var. *Whittallii* is best.

SNOW FLAKE (*Leucojum vernum* and *æstivum*). White; 1 foot. Like large snowdrops; *vernum* flowers in March; *æstivum* in April and May. Good border plants.

SQUILL, TWO-LEAVED (*Scilla bifolia*). Purplish blue. 4 to 6 inches. A week later than Siberian Squill but more reliable; Var. *Taurica* has 10 to 20 flowers ——, SIBERIAN (*S. Sibirica*), dark blue. Best true blue early bulb. March; 3 to 6 inches. For lawns, shrubberies.

STAR OF BETHLEHEM (*Ornithogalum umbellatum*). White with green veins and black centre. May; 1 foot. Escaped from old gardens. Flowers in loose panicles. Excellent for naturalising.

TRILLIUM See WOOD-LILY or WAKEROBIN in NATIVE PLANTS, p. 96.

TRITONIA, MONTBRETIA (*T. Pottsi*). Yellow, tinged red. *T. crocosmæflora*, orange-crimson; Lax spikes, star-like flowers. August, September; 1 to 2 feet. Hardy in well-drained but moist soil.

TRITONIA. See RED-HOT POKER (above).

TUBEROSE (*Polianthes tuberosa*). White. Very fragrant, August, September; 2½ to 3 feet. In foot long spike carried on end of erect stalk. Arching grass-like foliage. Plant in warm soil in early summer. Double variety preferred.

TULIP, BEDDING (*Tulipa suaveolens*). Great range of colours except blue. April; 12 to 16 inches. Buy new bulbs annually for best flowers. Old ones may be lifted and planted in the border. These are the most gorgeous of the spring bulbs. Young tulips raised from seed are called "seedlings" until they have bloomed. When they first flower they are called "breeders." These flowers are invariably of one colour throughout, although the seed may have been saved from variegated blossoms. After some years the petals of these hitherto self flowers become striped, and they are then said to "break," or "rectify." If the stripings are clearly marked and of good pure colours, the flowers are spoken of as having a "good strain." A "rectified tulip" is synonymous with a tulip having a good strain. These rectified flowers are divided into three classes: bizarres, byblœmens, and roses. The "bizarre" tulip has a yellow ground with shades of orange, brown, scarlet and crimson. The "byblœmen" has a white ground, marked with black, brown, lilac, lavender, etc. The "rose" has a white ground, variegated with shades of crimson, pink, scarlet, cerise. The various classes of rectified tulips have the petals either feathered or flamed. A "feathered" tulip has a dark coloured edge, gradually becoming lighter toward the centre of the petal. A "flamed" flower has a beam of colour running up the centre of the petal.

EARLY SINGLES IN SCARLET AND CRIMSON: Brutus, the earliest, very bright, with a very slight yellow feather on the edges; grows 8 inches high. Artus, brilliant dark scarlet, a few days later than Brutus. Grows 8 to 10 inches high. Belle Alliance, the best bright scarlet in the early flowering section. Grows about 10 inches high. The flower lasts well. Couleur Cardinal, rich, dark red, with a bright crimson edge, a little later than the foregoing varieties. An excellent tulip of rigid habit. Grows 10 to 12 inches high. Thomas Moore, rich orange-scarlet. Grows 12 to 15 inches high; sweet-scented. Keiserskroon, vivid red, with a broad deep yellow margin. Grows 15 inches high, lasts well. An excellent tulip in every respect.

PINK FLOWERED EARLY SINGLES: Rose Grisdelin, the dwarfest and best bright pink bedding tulip. Grows only 6 inches high.

EARLY YELLOW SINGLES: Chrysolora, the best early yellow bedder. A large and beautiful flower. Grows 10 inches high. Canary Bird, clear yellow. Grows 10 inches high; very early. Potte-

bakker, pure yellow. Grows 12 inches high. A well-known large flower. Yellow Prince, rich golden yellow, large and sweet scented. Grows 12 inches high; very early. Mon Trésor grows 10 to 12 inches high, large flower.

MAY-FLOWERING OR COTTAGE TULIPS (*T. Gesneriana* type). Most popular for the average garden, coming into flower from one to two weeks later than the early varieties. As cut flowers they are superior, lasting a week or more in water. Free and graceful habit, 18 to 24 inches high, bearing flowers of brilliant colourings on long, strong stems. They can be used with great effect in both borders and beds, either in solid colours or in combinations. Among the best of this section are: Giant Gesneriana, dazzling crimson-scarlet, with metallic blue-black centre. Grows 2 feet high. The showiest, tallest, and largest flowered of all tulips. Golden Eagle, deep yellow, similar, except in colour, to Giant Gesneriana. Bouton d'Or, deep, rich golden yellow, with dark centre. A small flower, but very effective; considered by many to be the finest yellow tulip. Nigrette (the black tulip), jet-black in colour, resembling in form Bouton d'Or. Shandon Bells, when opening the flowers are a delicate primrose flushed with pink, changing as they age to rosy carmine. Maiden Blush, or Picotée, beautiful white flower, the edges changing to clear pink. Very dainty in effect, and long lasting. Florentina, a very small bulb that bears one or two large, handsome yellow flowers on each stalk.

WHITE SINGLE EARLY: Pottebakker White, the best early white bedding tulip. Grows 10 to 12 inches high. White Hawk, a beautiful large pure white. Grows 10 to 12 inches high. La Reine, white, slightly tinted pink; 10 to 12 inches high. Excellent form; lasts well. L'Immaculée, one of the dwarfest and earliest of pure white tulips Grows 6 inches high.

MIXED COLOURS: Tournesol, red, with narrow edge of yellow. Grows 8 inches high. Titian, red bordered yellow, similar to Tournesol, but with larger yellow margin. Mariage de ma Fille, crimson and white, flaked and finely striped. Grows 12 inches high. Late.

DOUBLE FLOWERING: Equal to most of the singles in brilliancy, but are more lasting. The later flowering varieties are very effective

in beds and borders. The following are the best: Couronne d'Or, the best double yellow bedding tulip. Grows 10 inches high. Yellow Rose, a beautiful yellow, growing same height as Couronne d'Or; later and more fragrant. Tournesol Yellow, shaded with orange. Grows 8 inches high. Rex Rubrorum, similar in height and colour to Imperator Rubrorum, but flowers earlier. The best double scarlet. La Candeur, the best pure white double tulip. Grows 8 inches high, and when planted in combination with Imperator Rubrorum is very effective. Rose Blanche, pure white. Grows 8 inches high. Excellent for bedding. Earlier than La Candeur. Salvator Rose, deep rosy pink. Grows 7 inches high. Early. Murillo, the best light pink; long lasting. Grows only 6 inches high.

DARWIN (*T. Gesneriana, etc., in garden hybrids*). Breeder tulips, of vigorous growth, usually reaching more than two feet high. The many varieties cover a great range of self or solid coloured, finely formed flowers in the following shades: slate, heliotrope, mahogany, claret, cherry. They are especially desirable for the hardy border, and bloom late in May. Sold in mixtures. Naturalised in borders.

DUC VAN THOL (*T. suaveolens*). The varieties of this group form a distinct class of themselves. They come in scarlet, red and yellow, yellow, crimson, rose and white. They are grown because they are among the earliest to flower: the different colours come into bloom simultaneously, and the plants grow to the same height, 7 to 8 inches only. There are also double yellow and double scarlet forms. Sold by colour.

DRAGON OR PARROT (*T. Gesneriana*, var. *dracontia*). Late flowering; petals irregularly cut, and fringed in a variety of colours. They have a striking and showy effect in borders, where they propagate freely if left to come up year after year. Constantinople, red, striped orange, with black markings. Lutea, clear yellow, feathered with red and green; very large. Rubra Major, bright crimson, large flower, very rich in effect. Markgrave of Baden, yellow, framed with scarlet; very showy flower. Carmoise Brilliant, brilliant carmine.

GREIG'S (*Tulipa Greigi*). A vigorous growing tulip, attaining a height of 15 inches. The foliage is broad and green and

heavily spotted with brown; flower goblet shaped, orange-scarlet, from 4 to 6 inches in diameter.

LATE (*Varieties of Tulipa Gesneriana*).

MARIPOSA (*Calochortus luteus, venustus, Nuttalii*, etc). Three large petals and three smaller ones. The Mariposas have upright flowers like tulips. The star tulips, *C. albus* and others, have drooping flowers. All require partial shade. Will stand cold but not alternating freezing and thawing. Plant in fall in light loam with light drainage material added.

WAKEROBIN. See WOOD-LILY, NATIVE PLANTS, p. 96.

WAND FLOWERS (*Sparaxis tricolor*). Purplish, with yellow throat, variable; 1 foot. Few flowered lax spikes. August, September. Very graceful. Rarely seen. Treat like Tritonia.

WATSONIA (*W. iridifolia*). Pinkish. Resembling gladiolus. July, September; 3 to 4 feet. *W. Ardernei*, white, of the trade is *W. iridifolia* var. *O'Brienii*.

WOOD SORREL (*Oxalis Acetosella*). White, veined rosy. Summer; 8 inches. Flowers and leaves close at night. Rich, well-drained loam. *A. Boweii*, bright rose-red is much more showy.

YELLOW STAR-FLOWER (*Sternbergia lutea*). Yellow. September; 4 to 6 inches. Only yellow autumn blooming bulb worth growing. Plant four inches deep in stiff soil where sun strikes in summer. Give dry mulch over winter.

THE BEST ORNAMENTAL GRASSES

All the plants marked (*) are also recommended for planting in situations near to or surrounding the water garden.

*BAMBOO (Various species of *Bambusa, Arundinaria* and *Phyllostachys*, but generally called bamboos in the trade.) There are seven bamboos worth growing, and that are hardy in the North. They are among the most beautiful and dignified of the grasses. They require careful nursing and protection for the first few years. ——, BROAD-LEAVED (*A. Japonica*, or *B. Metake*). Best of all; largest and broadest leaved of the tall kinds; 6 to 10 feet. The large leaf sheaths almost cover the stem. ——, BLACK, (*P. nigra*). Stems become black in the second year; 10 to 20 feet high. This plant is the one from which bamboo furniture is made. Var.

punctata has yellow stems with black spots. ——, GOLDEN STEMMED (*P. aurea*). 10 to 15 feet. ——, RIVIERE'S (*P. viridi-glaucescens*), 10 to 18 feet. Very hardy; the most commonly grown. Peculiar zig-zag habit of growth. —— SIMON'S (*A. Simoni*). Tallest; 10 to 20 feet in the North. Starts growth late in the season. Thin out the weaker shoots. Leaves an inch wide, 1 foot long, tapering to a fine point. ——, PIGMY (*B. pygmæa*). Valuable for rockery, but spreads rapidly and may become a nuisance in a border. ——, FORTUNE'S (*A. Fortunei*). The only hardy variegated kind, and an old favorite; 3 to 4 feet high. Foliage striped with white. Give deep, rich, well-drained situation, with plenty of moisture, with protection from prevailing winter winds. Mulch for the first few years.

*BLUE FESCUE (*Festuca glauca*). Deep, silvery blue, in tufts. Flourishes in moderate shade. 6 to 12 inches. Worth growing for its colour.

*CANARY GRASS, RIBBON GRASS (*Phalaris arundinacea*). With whitish drooping spike-like panicles. Leaves narrow. 5 to 6 feet. For wild effects, spreading very freely by underground shoots. The variegated form (var. *variegata*) is the common ribbon grass. Leaves longitudinally striped with white. Grow in a sunken drain tile to prevent spreading.

*EULALIA (*Miscanthus Sinensis*). The prettiest lawn specimen grass; 4 to 9 feet. Long, narrow leaves, drooping most gracefully. Old clumps may be 5 or 6 feet through. —— (var. *variegatus*). Longitudinally striped yellow. ——, ZEBRA GRASS (var. *Zebrinus*). Banded yellow, not quite hardy. ——, JAPANESE RUSH (var. *gracillimus*). Very narrow leaves; ½ inch. Exceedingly effective for small gardens.

*PAMPAS GRASS (*Gynerium argentea*). The most beautiful of the taller grasses. Foliage long, narrow, drooping; 8 to 10 feet. Not hardy in extreme North, but may be wintered with slight covering. Beautiful white silken plumes in the fall, but in some varieties varying to carmine, violet and purple. Give light, rich soil, with moderate moisture. Will flower in two years from seed.

*PENNISETUM (*Pennisetum villosum*). Best dwarf grass. Valuable for edging; 1 to 2 feet. Leaves long, narrow, drooping. Not hardy, but may be raised annually from seed sown February or March. Old plants may be dug and stored away from frost. Flowers in feathery, brownish spikes, 2 to 4 inches long. ——, (*P. Ruppellii*). More graceful, but slightly taller, with longer spikes.

*Ravenna Grass (*Eriathus Ravennæ*). Ranks next to the great reed in beauty. 4 to 7 feet. For single specimens. Narrow leaves, gracefully arching. Plumes resemble pampas grass, but smaller. Prefers sunny situation, and is excellent for aquatic effects. Plumes first year from seed sown February or March.

*Reed, Great (*Arundo Donax*). 8 to 15 feet. Somewhat resembling a glorified corn plant. Broad leaves. Light green. Makes a huge clump when established. Var. *variegatus*, with yellow variegations, 4½ feet. Var. *macrophylla*, less hardy. Has glaucous blue foliage, very effective. These are the tallest and most stately of all the grasses.

Rush, Japanese. See Eulalia.

*Ribbon Grass. See Canary Grass.

*Spike Grass (*Uniola latifolia*). A native grass, worth growing in the gardens. Flowers in July. 2 to 4 feet. Spikelets large and thin, drooping when ripe, when it is most effective. Useful for winter bouquets.

Zebra Grass. See Eulalia.

THE ROSE GARDEN

"A garden is a lovesome thing, God wot!
Rose plot,
Fringed pool,
Fern'd grot —
The veriest school
Of peace; and yet the fool
Contends that God is not —
Not God! in gardens! when the eve is cool?
Nay, but I have a sign;
'T is very sure God walks in mine."

— THOMAS EDWARD BROWN.

CHAPTER XIV

THE ROSE GARDEN

NOT every one who loves roses and fain would grow a few has a garden for them exclusively, nor even any plot of ground that might properly be termed a garden at all. Happily, some roses will grow almost anywhere, and one need not put trust in riches to secure them, for, beyond all other flowers, the rose rewards her devoted, faithful lovers, however humble, rather than the indifferent spendthrift, with her smiles. "He who would have beautiful roses," wrote Dean Hole — than whom who should speak with greater authority? — "must love them well and always. To win he must woo, as Jacob wooed Laban's daughter, though drought and frost consume. He must have not only the glowing admiration, the enthusiasm, and the passion, but the thoughtfulness, the reverence, the watchfulness of love. With no ephemeral caprice, like the fair young knight's who loves and who rides away when his sudden fire is gone from the cold white ashes, the cavalier of the rose has *Semper fidelis* upon his crest and shield." Which is a pretty way of saying that a devoted cottager may easily have more beautiful roses than the indifferent millionaire. Indeed, many of the most wonderful roses exhibited at the shows in English cities are grown by workingmen. The head-waiter in a famous London hotel grows roses in his suburban dooryard that would put to the blush the best products of many American money kings, whose vaunted executive ability relegates to unimpassioned eye-servers the complete control of their gardens. It is granted at the outset that a cool, moist climate is the principal

factor of success with roses across the sea, but by a selection of varieties adapted to our hotter and colder and drier climate, and by a more intelligent care of them, we, too, may have roses of surpassing loveliness.

Ideals change from generation to generation, even in rose culture. We all know some old-fashioned rosarian who cuts for only a brief season hundreds of roses a day — mostly deep pink ones, shaped like cabbages and with finger-length stems lest a bud be sacrificed — which he conscientiously distributes among surfeited, embarrassed neighbours, and sends to the nearest hospital where the patients risk an epidemic of rose cold every June. Then the meteoric shower of his roses ends for a year. If we were now obliged to grow bushes for eleven months to secure roses in the twelfth only, and then to have a surfeit of riches that would enslave us until their prodigality suddenly ceased, rose culture would have little foundation in reason, and would be confined to the ultra-enthusiasts popularly called cranks. Comparatively few devotees are now content to expend all their energies upon the hybrid "perpetuals" (woefully miscalled) that were once almost exclusively grown. Looking to the Orient as well as to Europe for our roses, the present-day amateur is satisfied with nothing less than roses every day from May until November under the open sky in the latitude of New York, and for a longer season south of it. Since 1893, when the Wichuraiana rose was introduced from Japan by Mr. Jackson Dawson, of the Arnold Arboretum, since the Japanese rugosa rose came to bless us, and vigorous constitutions and floriferous character were supplied to the crosses with perpetual and tea stock, our gardens have been wondrously enriched. Too long we looked to Europe exclusively for roses, as we did for evergreens and much other garden material

quite unsuited to our climate. The present ideal is to girdle the year with roses as nearly as may be, to cut them every day from frost to frost, from vines on trellises, porches, pergolas, arches, fences, walls and trees; from banks and rocks cascaded with them, from hedges of rugosa and sweetbrier, from shrubbery roses naturalised along paths and drives, from the wild garden or the formal one, from any nook or corner that one may adorn with a rose.

Before the May tulips have extinguished their flames, the hardy, clean-leaved vermin-proof rugosas open and fill the air with the true rose odour. No taint of the steamy hothouse, reeking with tobacco fumes, such as the florist's winter roses have had, pollutes the pure, perfect perfume of these open-air flowers. There are single white rugosas and half-double ones which, like lovely Blanc Double de Coubert, bloom lavishly in May, intermittently through the summer and autumn, and in winter enliven the garden with their great red hips, which are almost as decorative as flowers. There are light-pink rugosas, too, and — admit it I must — deep-dyed, villainous magenta ones, that swear at almost every colour in the garden, but at none so violently as at their own seed vessels, for Nature, at least this once, surely has lost her colour sense. No apologist can reconcile reddish purple flowers and orange-red hips on the same bush. Even close by the sea, rugosas will thrive. For informal, unclipped hedges — they resent severe pruning, and only the oldest, bark-bound canes should be removed — for naturalising on banks, and along drives, where hybrids of the half-upright *R. setigera* make a most lovely effect in July, for longish plantations in the foreground of boundary belts of trees and shrubbery about a place, and for filling in considerable areas inexpensively, there are no roses to equal rugosas; but they make

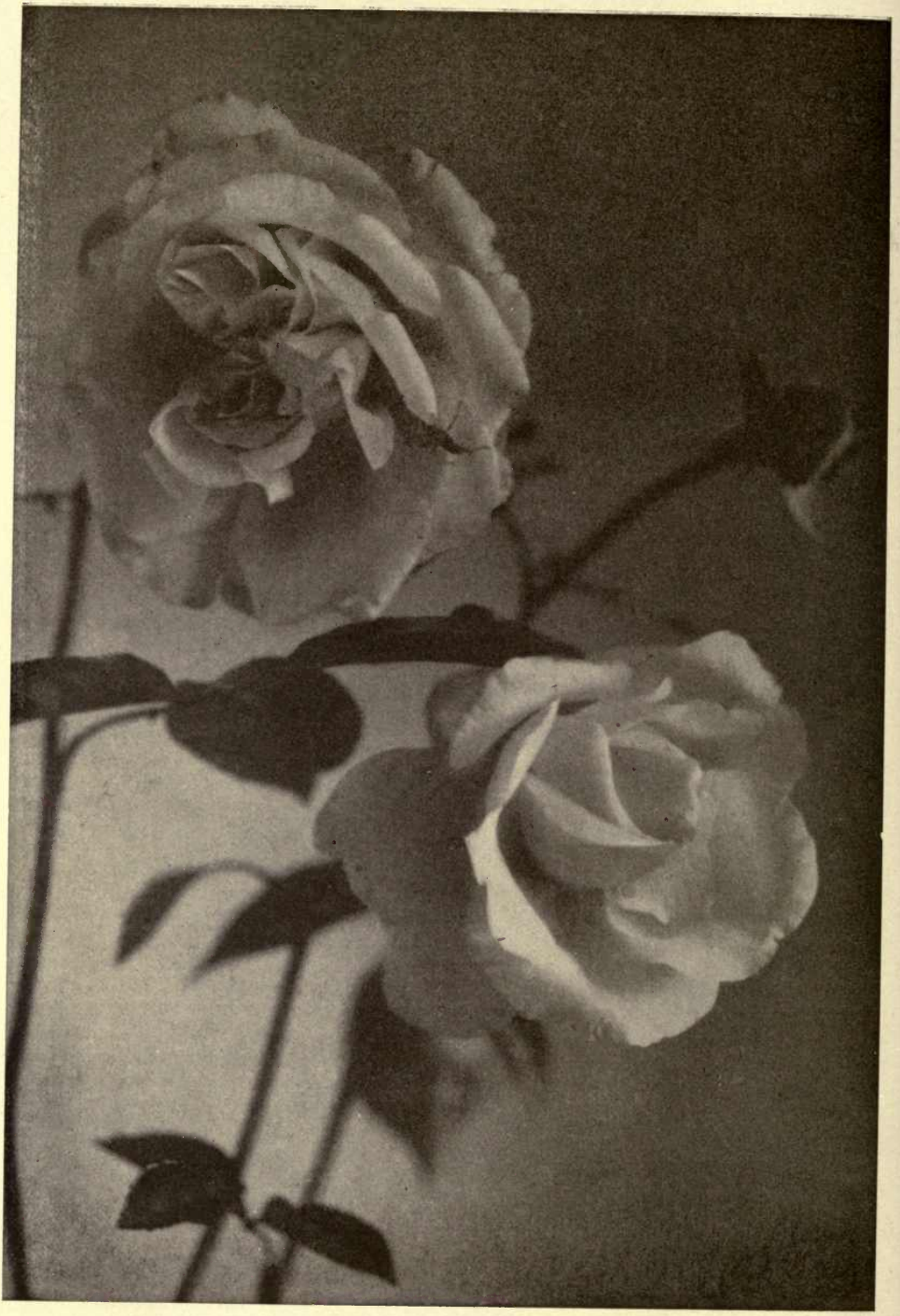
too many suckers for admission within the trimly kept rose garden. Some people reject the flowers for indoor decoration. Although the fragile petals of the single roses fall after a day, buds open continuously in water, just as our native wild rosebuds do, and the rugosa's value for cut flowers, each of which brings its own beautiful setting of dark green, glossy, crinkled foliage, free from insects and disease, is appreciated by the discerning.

These Japanese roses, wild and hybrid, have scarcely reached their high tide of bloom when the yellow briers bring us their one meagre but precious offering of the year. Except in old-fashioned gardens, one rarely sees Persian yellow, Austrian copper and Scotch roses now; nevertheless, if only for sentiment's sake, the modern garden will not lack these charming little roses beloved by our grandmothers. After a warm, gentle rain, what delicious incense arises from another favourite of theirs, the sweetbrier! The small-flowered, fragrant-leaved, wild eglantine of Shakespeare's day has benefited by many modern improvements at the hands of the hybridiser, and of the sixteen varieties of Penzance sweet-briers all are good. Some are exquisitely tinted. None responds encouragingly to high cultivation, however. Once planted in rich, heavy soil, about ten feet apart, all they ask is the support of a trellis or fence, and to be let alone. Tied upon pillars or arches in an attempt to tame these more than half-wild revellers, they never look so well as when the long, vigorous canes are allowed to follow their own sweet will.

June is and probably ever will be with us the month of roses, however much we may hasten and prolong their season. Then, and only then, are the hybrid "perpetuals" in their glory on American soil but in spite of their limitations, ignored in their name, they bid fair to remain for awhile the main stock of the rose



A LONG ISLAND GARDEN WHERE ROSES ARE GATHERED EVERY DAY FROM MAY UNTIL THANKSGIVING, WITH A TIDAL WAVE OF BLOOM IN JUNE



MARIE VAN HOUTTE—A TOO-TENDER TEA ROSE FOR SAFE CULTIVATION IN NORTHERN GARDENS

garden and the dooryard. Who that has a little strip of land to spare would forego the superlative white, pink, and deep velvety crimson beauty of Frau Karl Druschki, Baroness Rothschild and Prince Camille de Rohan? Soft-petalled, pink damask roses that fill the old-fashioned garden with a delicious attar scent — and no modern descendants have yet surpassed these ancient favorites — snowballs of Mme. Plantier, and French roses to dry for the potpourri jar, clouds of diminutive polyantha roses, pillar roses, bushes and trailers, intoxicate the senses with their varied loveliness in "June, dear June; now God be praised for June!"

In the South and in California tea roses abound in every favoured garden for many months, to the envy of rose lovers in colder climes, who are denied the charms of this lovely class except in hothouses. Occasionally an enthusiast in the North risks planting teas in the open, covers the plants completely in winter, coddles and coaxes them, only to find many of his precious pets lifeless after the ice thaws. But within a few years a wonderful new race of roses has been developed: roses with the hardiness of the hybrid perpetuals, the chaste form and the delicate, refined fragrance of teas, and, above all, their habit of blooming freely throughout the summer and autumn. Now, indeed, are rose gardens well worth while. Now is the long season of the rosarian's discontent made glorious with these peerless roses. Of the hundred and fifty varieties rapidly given by the hybridisers to a clamouring, grateful public, perhaps only a tenth are of permanent value to northern growers, but the chosen are roses of such surpassing loveliness that many an amateur fills his garden with them alone. Killarney's long-pointed, perfect pink buds that slowly expand and last for days indoors without dropping a petal on the mahogany that mirrors their satisfying beauty; Caroline Testout,

of bluer pink and more rounded form, but a charmer none the less; and La France, for its rich, oily, attar perfume, if no other pink ones, he must have; Kaiserin Augusta Victoria, a superlatively lovely, large, robust white rose; Alice Grahame; Bessie Brown; Antoine Rivoire; Mme. Ravary and Mme. Abel Chatenay, of exquisite, soft apricot tint, suggesting the tender tea Safrano; the vivid Liberty red; and the bushy Gruss an Teplitz, whose crimson roses, unstintedly produced well above the deep-toned foliage tipped with maroon, keep the garden bright when all others fail — the little list may be amended or increased by every rose-grower who, in his particular section and under different conditions, has discovered the merits of roses better adapted to them; but he will certainly test these. From May till killing frost he may rely upon cutting from his garden such roses from these bushes as in former years came only from greenhouses in the North. Midsummer heat and drought, it is true, somewhat diminish their numbers, but never more should there be famine in the well-cared-for rose garden.

And where shall that be made, and how tended?

A tree may be said to spread its roots as many feet from the trunk as it is high; therefore the rosarian will not place his darlings where their rich repasts will tempt greedy thieves. But roses, like all other flowers in the garden picture, need a background and a frame; and trees at a safe distance, encircling the rose plot or acting as a shelter on its coldest, most windy side — especially evergreen trees there — add greatly to its beauty and comfort. Into some of the trees rambler roses may climb and toss into the air sprays of pink and crimson. But the trees should not be so dense as to interfere with a free circulation of air, or there will be mildew and other fungous troubles to fight continually; nor should pro-

tecting trees stand near enough to the roses to shade their wards. Red roses that fade unpleasantly bluish in strong sunlight would better take back seats in the lightly shaded places, if there be any such. An enclosing hedge of hemlock, arborvitæ, or the ubiquitous privet about a rose garden protects it almost as well as a wall, and makes a far more effective foil for the flowers; but the roots of the evergreens should be kept from robbing the roses by partitions of concrete, boards or ashes, as explained in the perennial chapter.

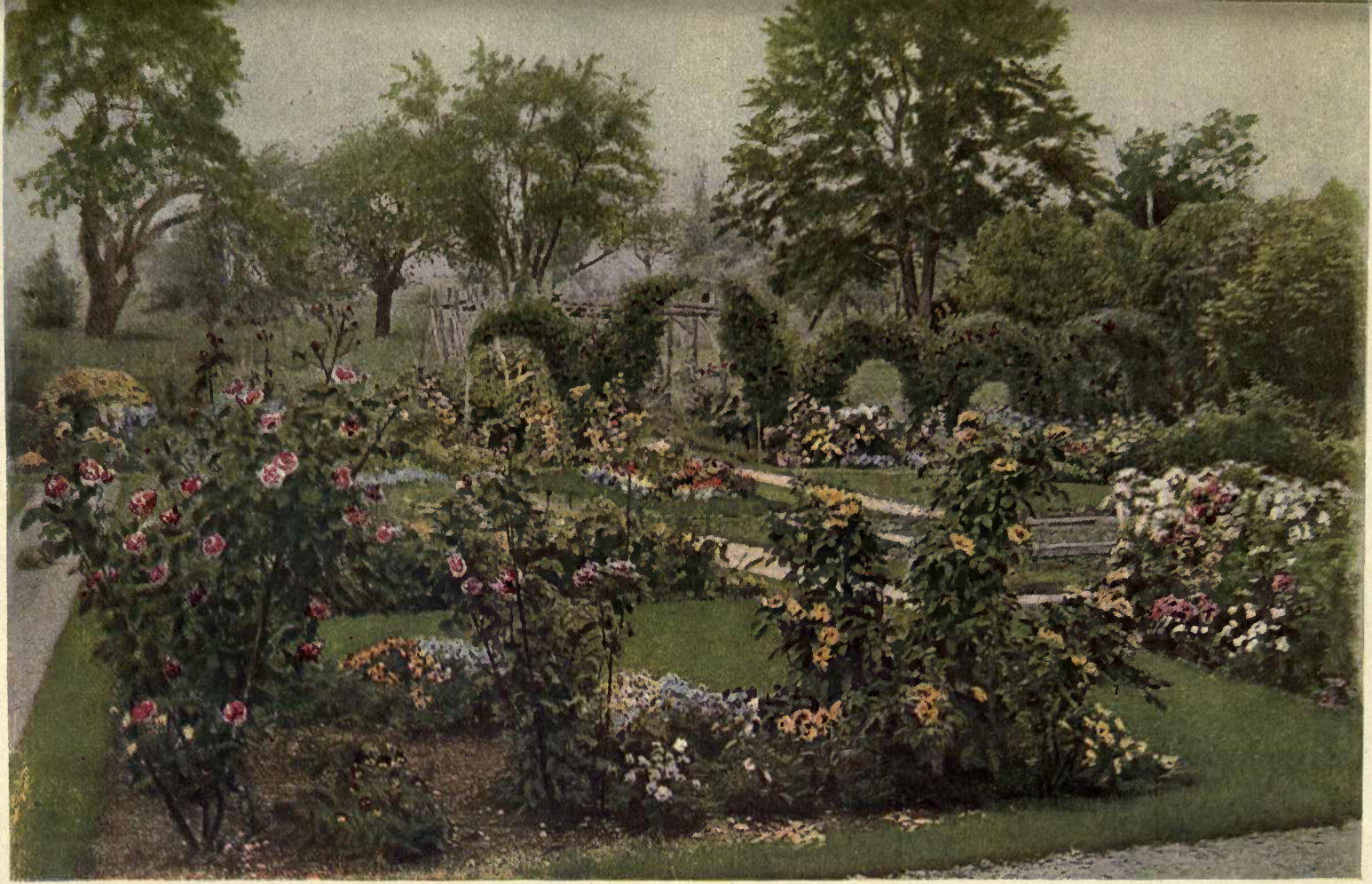
A wonderfully beautiful garden has a rose entwined and canopied pergola running entirely around its four sides and within a breast-high hemlock hedge. Here are easy chairs and tea-table, sewing-baskets and books in plenty, sunshine and shade, the sound of splashing water in the central fountain, the companionship of birds that come to bathe and to drink in the pool, the fragrance of roses inhaled with every breath, colour to delight one, and an entrancing picture from every seat in the open-air living-room. What a delicious place to rest! After centuries of running after false notions of what constitute home comforts, shall we not return to the Roman's idea of living in a garden — if not in the flower-filled courtyard of a house, as he did, then in a verdant enclosure near it?

The shape of the rose garden may depend upon the site available for it, but one that is formal in outline and the arrangement of its beds, yet with the curse of flatness and rigidity obliterated by arches, pillars and festoons of rose vines, has practical as well as artistic merits. It need not be large nor costly to make or to maintain. A fountain, an arbour, a sundial, a picturesque old tree with a circular seat around its trunk, a clump of big boxwood or a bed of especially beautiful roses, may be its central feature,

and around that the remaining space should be divided off into beds that can be easily reached at every point from a box-edged path. The favourite parallelogram running north and south need not have its subdivisions follow straight lines. Semi-circular or crescent beds at its four corners imply the partial curves of all other beds and the paths lying between them and the central feature. Or the parallelogram may have curved ends or sides to admit recessed garden seats set close against the evergreen hedge. Geometric designs seem forbidding when talked about or drawn on paper, but a well-balanced and thought-out rose garden, so fully planted that its formal lines are nearly lost in the verdure of rose bushes or softened by sprays of flowers, its paths over-canopied by luscious vines at intersecting points, its arches draped, its pillars or rustic lattices twined with roses, every vista ending in a beautiful picture, can give pleasure beyond the dreams of the unimaginative. To come upon such a garden unexpectedly, through an entrance that gives no hint of what is hidden within, is like suddenly entering Paradise. If a rose garden be forbidding, it is because there is too much design in evidence, and not enough luxuriance of growth to subordinate it.

No rose garden should be situated in low ground that holds water: perfect drainage is essential to its health. Yet, where a house is perched on a bleak hill-top, the roses are happier a little distance below. There are few lovelier sights from a terrace than a thriving garden lying under the lee of a hill. But roses will never be lovely if they have wet feet, and a low-lying garden may require either tile draining, or an eight-inch layer of broken stone, bricks, or gravel laid under the rose beds at a depth of three feet.

If possible, prepare the soil for your rose beds that are to be planted in the spring five or six months previous. Save at one



THIS SECTION OF AN OLD AND OVER-LARGE VEGETABLE GARDEN WAS TRANSFORMED INTO A HOME FOR HARDY ROSES, PARTICULARLY FOR HYBRID TEAS, WHICH FURNISH A COMFORTABLE SUPPLY OF FLOWERS — NOT A SURFEIT — THROUGH A HALF YEAR. PANSIES AND ENGLISH DAISIES ARE USED TO CARPET THE BEDS

side the sod and best soil below it, removing the subsoil, if it be poor, to the depth of three feet, and loosening the floor of the bed with a pick. Mix about equal parts of good soil and thoroughly decomposed cow manure for a deep layer that is spread over the bottom of the bed, then the sod well broken, the top soil and more old manure thoroughly intermixed, and finally a top dressing of good garden soil, unenriched. All the fertiliser should be incorporated with the soil in the lower two-thirds of the bed. No rose, newly set out, should have its roots within striking distance of manure, however old it may be. After the plant begins to grow in its new home it draws the rich moisture from below and appropriates it readily enough as the need arises. Beds that are piled a little higher than the surrounding land in autumn when they are made have usually settled by spring to the desired level — about an inch below the surrounding surface, which enables them to retain rainfall. They should never be so high as to dry out. Different roses like different soils: the hybrid perpetuals prefer heavy loam containing some clay and the humus furnished by well-rotted sod; hybrid teas, noisettes, Bourbons and ramblers a lighter, warmer soil, with sand and leaf-mould intermixed and added to the original compost in the proportion of one to four.

For practical as well as æsthetic reasons it is best to grow each kind of rose in a bed to itself — some rosarians separate types, others give each colour a plot of its own. For hybrid perpetuals a bed four feet wide suffices, as a double row of roses can be set out in it, the plants not directly but diagonally opposite one another, two and a half feet apart, where they will not interfere with the air and light of their companions. Almost all hybrid teas may be grown in beds three feet wide inside the boxwood or sod borders, the plants set out eight inches from the

edge and two feet apart; but an exception to the rule is the Gruss an Teplitz, for example, which quickly attains the size of a bush requiring a bed made on a more generous scale. Kaiserin Augusta Victoria, lovely creature, is a buxom beauty, vigorous and free. She, too, needs plenty of room to display her immaculate charms. Many rosarians set out pansies, English daisies, alyssum, mignonette or other low-growing plants between the roses to carpet the earth with bloom.

When buying roses, the general rule holds good: it is economy in the end to get only the best quality of stock from the most reliable dealer. The market is flooded with roses alleged to be cheap, but in reality they are very small, weak, inferior plants, not really worth half what is asked for them. A dozen such would not furnish the real joy contained in one large, healthy, superlatively fine plant that one need not sit up nights to coddle. Generally it is best to buy roses that have been budded on the vigorous Manetti stock. The brier stock, so popular in England, is not so well suited to our dryer, hotter climate. Only a few roses — Caroline Testout, Ulrich Brunner and Magna Charta among them — do so well on their own roots. Always plant the rose deep enough for the point where the bud was inserted to be well covered with soil — with a good three inches of it — otherwise Manetti suckers may develop. These wild shoots may be detected at once by the seven serrated leaflets instead of five to the leaf, and the minute prickles on the stem. Remove the earth around the shoot down to where it leaves the stock, pare it off close and so discourage any rare attempt that may be made to revert to the wild.

When the plants arrive from the dealer in the spring, as soon as severe frost is over, lay them flat in a hole and cover them entirely with soil for a day or two if they look shrivelled from long travel,

or if you are not quite ready to set them out with that leisurely carefulness that so well repays the rosarian. Examine each plant, and cut off with a sharp knife or pruning-shears all broken roots, bruised stalks, weak growth, long canes that may be whipped by the wind, and any eyes that can be detected below the bud on the Manetti stock, lest they develop later. Take from the hole where the roses have been heeled in, or from their protecting cover, only one plant at a time, and set it out immediately, lest its roots dry out in the wind and sun. Two pairs of hands are better than one when it comes to planting roses — one is needed to hold the plant in position while the other pair spreads out the roots horizontally, in such a way that they do not cross one another, and covers them with the finely worked soil, which should be firmly pressed down with the boot. Stamping will pack it none too firmly, for air spaces around the roots are fatal. Pot-grown roses for late planting must be set out just as their cramped roots leave the terra cotta prisons: they cannot be spread without endangering the rose's life. If many roses are to be planted, in no other way can they be set out so quickly as in a trench of the proper depth and width.

Over the raked surface of the rose bed spread enough light stable litter, short hay, leaves, or grass cuttings from the lawn to screen the sun from the soil and prevent it from baking. In every newly planted garden this mulch should be left on all summer. It is not pretty; it is rather troublesome to lift off and replace when the surface of the soil needs stirring with a hoe once a month; but the mulch increases the vigour if it does not save the life of every rose you set out; moreover, it keeps down weeds. Hybrid teas and teas are especially dependent upon it if they are to bloom at midsummer. Only well-established, deep-rooted roses can safely do without it during drought. It prevents much loss of moisture.

However, it does not lessen the necessity for showering the roses frequently with a light spray from a hose, which also keeps the foliage clean and healthy.

To stimulate growth, coarse, medium, or fine bone-meal stirred into the soil about roses is excellent, and slow or rapid in its effects in proportion to the size of the grains. Frequent wettings of weak manure water after buds begin to form — a pailful of old rotten manure from the cow barn or pigsty to a barrel of water supplies a tonic that looks like weak tea — are preferable to stronger draughts, which either over-stimulate or burn the plants. "Weak and often" is the safe rule. A half-gallon to each plant produces effects that are noticeable within a week. Do not besmirch the foliage with it, but apply it directly to the soil about the roots. A top dressing of wood ashes in the spring restores potash to the soil if it has been depleted by old plants. Light refreshments during the summer, and the feeding that results from a three-inch covering of rough manure during the winter, suffice to produce splendid roses; but no roses will be splendid unless they are liberally fed and watered. Also they must be protected from their enemies.

What are they? In sandy soil the most formidable is the rose-beetle; elsewhere it is less troublesome and in some favoured places does not exist. Soft-petalled flowers like the damask and Mme. Plantier are its special favourites, but none, perhaps, does it wholly ignore, and with diabolical wickedness it goes straight to the heart of the rose. Picking off the villains by hand and dropping them into a can half-filled with kerosene is even more effective than spraying with arsenate of lead which, however, is discouraging to the pest's posterity and therefore should not be neglected. On tender new shoots the little aphides or green flies, in countless

numbers, suck away the plant's vitality. Inasmuch as they, like the poor, are likely to be always with us, the rosarian will prepare half a barrelful of whale-oil-soap solution before their first appearance, and spray the pests regularly until they disappear. If the fight begin in time, a victory is easily won which, indeed, may be said of any warfare waged for roses. Enemies sometimes multiply a thousandfold in a single day. For the slugs which skeletonise the rose leaves use powdered white hellebore. Dissolve one heaping tablespoonful of the poison in a pailful of boiling water and after the decoction has cooled, sprinkle it on the under side of the leaves from a whisk broom. To get at them properly bend over the top of the plant until the hiding-place of the slugs is exposed. One application usually discourages them for the season. Old wood may attract the bark louse or white scale, which is best treated during the winter. Fifteen grains of the deadly poison, corrosive sublimate, dissolved in a pint of water, make a wash that they cannot withstand. Brush it over the woody old canes. So much for insect pests.

Bordeaux, powdered or in solution, and potassium sulphide are our staunch allies in the eternal warfare waged against mildew, rust, and the lesser evils of a fungous nature resulting from a wet, hot season. The more energetically one fights these at the outset, the less need one do later. Thrifty, clean foliage, the lungs of the plant and the setting for the roses, contributes very greatly to their health and charm. The results of our efforts are cumulative: well-tended, vigorous rose bushes have very few troubles indeed. Let not the doubting heart of the novice be afraid. All the possible evils that have been enumerated never come, perhaps, to the same garden, but any one might appear. Emphasis of the strongest kind is laid on the joy of growing healthy roses.

Except for the cutting back of the longest canes, lest the wind whip them and thereby loosen the roots, it is best to defer the pruning of roses until early spring, and then to begin on the hardiest of them, the hybrid perpetuals. For flowers of superior quality, cut out all weak growth, retaining only the most vigorous canes which require shortening in proportion to the plant's development. If the bush be big and strong, leave eight or ten inches of cane; if it be young or delicate, half that height will be enough for the roots to support. Cut cleanly, sharply through the cane a little above a bud, so as not to injure it, and choose for the top one a bud that is on the outside of the cane; for, if a bud that points inward be left at the top, the lusty shoot which presently develops from it shuts out air and light from the centre of the bush, the very part that should be kept open. Encourage growth on the outside of the plant; cut off cleanly the shoots that would grow inward. If quantities of flowers are wanted for their effect in the garden, rather than fewer roses superlatively fine, prune less drastically. But be it observed that the generous gardener, who cuts roses with long stems and never hesitates to sacrifice a few buds to complete the beauty of a spray, is the one who is rewarded with the finest flowers. Plants invariably produce more flower buds than their strength allows them to develop well. They would merely exhaust themselves in an effort that the wise gardener does not permit. Therefore, cut the roses, with their attendant buds, as long as they last. Whenever in doubt, cut. "Gather ye rosebuds while ye may," but as early in the morning as possible, before the sun softens the stems and petals. Roses that are laid in a bath of cold water for an hour before they are arranged in vases become firm and refreshed, which, of course, is as true of other flowers. From fifty bushes you should be able to half fill a bathtub every morning during the season.

While it injures no rose bush or vine to cut its blossoms, there are some roses which it pays to ignore during the spring pruning. Bourbon roses will not bloom on new wood — therefore the shears should be used very lightly on the old. Rugosas and briers, too, require little attention unless the old canes become bark bound. As for the pillar roses, their situation and use would best dictate their treatment, for on lattices their lateral shoots need encouragement to spread by shortening the top leaders, while on posts the laterals will be cut back to an eye or two as an inducement for the vine to lengthen and twine. Teas and hybrid teas resent hard pruning. Unless the shoots are very weak, do not remove them, but merely cut back their tops a little after the stems grow green and the dormant buds begin to swell in the spring. Not till then can one know how much dead wood needs to be cut away. Strong perpetuals need hard pruning.

There are those, perhaps, to whom the care that some roses require seems too great for the reward, but such captious critics can never have known the ineffable joy that comes to the amateur who grows to perfection the queen of flowers.

The Rosarian's Calendar

The following dates, based on an average season in the neighbourhood of New York, are by Capt. A. Ward. Allow four days for every hundred miles of latitude.

Use no insecticides or fungicides unless there be need.

March 15th — Finish pruning hardy roses already planted.

March 25th — Plant new hardy roses, pruning new plants rather more severely than those of the same varieties already established.

April 15th — Finish pruning the tender varieties as far as

possible without uncovering completely. Give to all the beds and to any neighbouring pear trees, grape vines, phlox, hollyhocks, or other plants subject to fungoid diseases, which are contagious, a thorough spraying of Bordeaux mixture as a preventive.

April 20th–25th — Uncover tender varieties. Plant any new ones received, giving these a light, protecting mulch. Give final touches to pruning. Before roses are in leaf, toward the end of April, spray them with whale-oil soap (one pound to eight gallons of water) to discourage the first insect pests.

May 10th — Leaves open. Spray with potassium sulphide (one-half ounce to one gallon of water) to prevent mildew. Repeat spraying a week later and perhaps again in a fortnight.

May 20th — Buds forming. Apply weak manure water. Second spraying of whale-oil soap, if necessary, to annihilate aphis or other survivors.

May 25th — Earliest roses bloom, rugosas, followed by the yellowbriers. Apply liquid manure to hybrid perpetuals.

June 1st — Hybrid perpetuals begin to bloom.

June 7th — Damask, Mme. Plantier, and perpetuals bloom in quantity. Watch for rose beetle and spray with arsenate of lead (five pounds to fifty gallons of water) if necessary, and at intervals of a week apply it again thrice. Three times apply liquid manure to hybrid teas and teas.

June 21st — Hybrid perpetuals and hybrid teas and tea roses bloom in quantity.

July 4th — As the hybrid perpetuals diminish, rambler and shrubbery roses, hybrid teas, and teas supply a wealth of bloom.

July 11th — Hybrid teas and teas in quantity. Spray with whale-oil soap if aphis persist. Rose bugs disappear. Commence regular weekly applications of sulphide of potassium

for black spot (if a wet season) or dilute Bordeaux mixture every three weeks, until the twentieth of August, if appearance of foliage indicates fungoid troubles such as mildew, black spot, yellow leaf, etc., all depending on the season.

July 20th — Have mulch on hybrid teas and teas by this date at the very latest. Earlier, if season be hot and dry.

August 30th — Second bloom of hybrid teas and teas begins, lasting until hard frost. Apply liquid manure as buds begin to form.

September 15th — Sparse second bloom, never plentiful, of hybrid perpetuals begins.

October 15th — Prepare new beds for next spring planting. Remove from old beds any of the mulch that cannot be forked in.

November 15th — Commence placing manure protection around roots; tenderest roses first. After a nip or two of sharp frost, cover up tender roses for the winter. Increase depth of protection for other roses. Hybrid tea buds, if covered before hard frost with little paper bags, such as are placed over bunches of grapes, will unfold lovely roses for the Thanksgiving dinner-table.

Roses For All Purposes

Note. — The following selection embraces the most reliable kinds and the greatest range of colour for the region of New York, and is based on a close study of the best collections. The amateur who wants the smallest number of varieties to give a comprehensive survey of the rose family will find those marked (*) to include the best representatives of all the types and colours, and covering the longest season of bloom. They would form a perfect skeleton, as it were, for a representative rose garden, giving flowers from May to November, in diverse types.

The classes are indicated in parentheses after the name, thus: (*T.*), tea; (*H. P.*), hybrid perpetual; (*H. T.*), hybrid tea, a blending of the *T.* and *H. P.*; (*Pol.*), *Rosa polyantha* of gardens, not of botanists; (*Hyb. Wich.*), a hybrid of which *R. Wichuraiana* is one parent, etc.

Other class indications are sufficiently obvious. The species itself is indicated by *R.*, for Rosa.

SHRUBBERY ROSES

For planting in mixed borders, for hedges, edgings, and in the less-cared-for parts of the garden.

*Blanc Double de Coubert (*Hyb. rugosa*). White. Large, double, with large, individual petals. Perfectly hardy. For hedges, town and country. Do not prune.

*Catherine Ziemet (*Pol.*). White, double. Free flowering. Dwarf habit. Excellent companion to Madame N. Levavasseur. Sometimes called the White Baby Rambler.

*Clothilde Soupert (*Pol.*). Flesh pink with darker centre. For bedding and massing. Profuse and continuous bloomer. Hardy. Erect habit. Prune by thinning. There is a climbing form of this.

*Conrad Ferdinand Meyer (*Hyb. rugosa*). Silvery rose. Double. Very vigorous. Hardy. Early flowering. For hedges or specimens. One of the very best roses. Do not prune.

*Damask (*R. Damascena*). Rose pink. June. Extremely fragrant. Semi-double. One of the oldest and hardiest. Foliage pale green. Very prickly. Often confused with *Rosa Gallica*, pale pink flowers, dark green foliage and few prickles. Var. *bicolor*, white and rose, variegated. The old York and Lancaster, pink flowers and white flowers on the same bush, is a Damask rose.

*Harison's Yellow (*Brier*). Golden Yellow. Double. Summer blooming. For garden specimens. Vigorous. Hardy. Flowering on old wood. Do not prune.

*Lucida (*R. lucida*). Light rose pink. For bush, hedge, and shrubbery. Foliage effective all summer. In garden borders should be cut down completely every year or two. Long fruits in winter. There is also a white variety.

*Madame Plantier (*Hyb. China*). White. Medium size, in clusters. Faint aromatic odour. Leaves slightly glossy. Profuse early bloomer. One of the best roses for untended places.

*Rugosa (*R. rugosa*). Purplish rose, and var. *alba*, white. Best rose for ornamental hedges, and especially for the seaside. Low, dense bush.



FOR SHRUBBERY EFFECTS, ROSES THAT PRACTICALLY TAKE CARE OF THEMSELVES, THAT ARE SIGHTLY AT ALL SEASONS, AND THAT HAVE SINGLE FLOWERS OF THE WILD TYPE, ARE THE BEST. *R. setigera* IS CHARMING FOR MASS PLANTING ALONG DRIVES AND IN THE FOREGROUND OF TALL SHRUBBERY BORDERS. RUGOSAS WOULD BE EQUALLY EFFECTIVE THERE



PERGOLAS ARE INDEBTED TO THE HARDY, CLEAN, VIGOROUS RAMBLER ROSES FOR MUCH OF THEIR CHARM. WILD GRAPE AND CLEMATIS HELP THE ROSE VINES TO DRAPE THESE COLUMNS AND THE CROSSBEAMS OVERHEAD WITH LIGHTNESS, GRACE AND SPRAYS OF VIVID COLOUR

The large single flowers are followed by showy, large orange fruits. Not subject to disease or insect. Grows anywhere. Do not prune.

*Sweet Brier (*R. rubiginosa*). Pale pink. Very vigorous. For bush, hedge, or pillar. Fragrant foliage. Flowers small in clusters. Do not prune. Hybrids of this are the Penzance Briers, which, although excellent for hedges in half wild places, are not as valuable as the Wichuraianas for pillars.

*W. C. Egan (*Hyb. Wich.*). Light pink. Large. Double. In small clusters. Foliage slightly glossy. Nearly always in bloom. Excellent for garden and shrubbery.

Bedding Roses of the Polyantha and Bengal Groups

These are the "old-fashioned" or "garden" roses, and mostly really old varieties, producing clustered flowers in profusion; not of value for cutting, but highly decorative in the garden, and often specially fragrant. Flowers rather small, flat, and petals short. Prune by thinning and only moderate cutting back.

Aurora (*Bengal*). Salmon yellow. Floriferous and pretty. Growth moderate.

Etoile de Mai (*Pol.*). Nankeen yellow in bud, yellowish white when open, fairly double. Dwarf.

Eugene Lamesch (*Pol.*). Little orange-yellow flowers in trusses of five to ten blooms. Fragrant. Dwarf.

Flocon de Niege (*Pol.*). Pure white in trusses. Very free flowering. Rather stronger growing than most of the type.

Frau Syndica Roeloffs (*Bengal*). Bright yellow, shaded coppery red. Semi-double. Moderate.

Leonie Lamesch (*Pol.*). Bright red, with golden centre. Blooms fairly freely. Very fragrant. Dwarf.

Madame E. Resal (*Bengal*). Bright rosy pink, shaded orange. Semi-double. Very floriferous. Moderate.

Mademoiselle Cecile Brunner (*Pol.*). Salmon-pink, becoming white. One of the "Fairy" roses, having miniature buds and flowers. Dwarf.

Marie Pavie (*Pol.*). White flowers with rosy centre. One of the largest of its class, and one of the best. Should occupy the central space if bedded with other varieties.

Mignonette (*Pol.*). Soft rose, changing to white. Flowers in small clusters. Very pretty and one of the lowest growing.

PERLE D'OR (*Pol.*). Nankeen yellow, with orange centre. Small and full. Dwarf.

PERLE DES ROUGES (*Pol.*). Velvety crimson, reflex of petals cerise. Very floriferous. Quite dwarf.

*MADAME NORBERT LEVAVASSEUR (*Pol.*). Popularly known as Baby Rambler. Cerise. Profuse flowering, in clusters. Very dwarf. Hardy. Continuous bloomer. Flowers on rooted cuttings. Prune very lightly. Moderate.

CLIMBING ROSES FOR PILLAR AND TRELLIS

*AGLAIA (*Pol.*). Yellow in bud, becoming white. Double. Slightly fragrant. The nearest to yellow among the ramblers. This, and all roses of similar habit, should be pruned merely by thinning out the old flowering canes.

*ALBERIC BARBIER (*Hyb. Wich.*). Creamy white, yellow in the bud. Semi-double. Medium sized. Fragrant. The best white pillar rose for size of flowers.

ARD'S ROVER (*H. P.*). Crimson, shaded maroon. Flowers equal to many of the regular H. P. varieties. Large. Fragrant. Blooms middle of June and early July.

BALTIMORE BELLE (*Hyb. setigera*). Double. Creamy white. Foliage light green. Blooms July. Also good for shrubbery.

*CARMINE PILLAR (*H. P.*). Carmine. Single. Three inches across. Early. The largest-flowered and deepest-coloured climber. Vigorous. Do not prune.

*CRIMSON RAMBLER (*Pol.*). Trusses of bright crimson flowers in profusion. For walls, pillars, trellises, etc. The most popular climbing rose. Very vigorous. Philadelphia is very like this, but flowers earlier, and not so liable to disease. Cut out old canes.

*DOROTHY PERKINS (*Hyb. Wich.*). Shell pink. Double. In many-flowered, loose trusses. Best pink climber. Closely resembling Crimson Rambler, but more elegant, and with glossy foliage.

*FARQUHAR (*Hyb. Wich*). Bright pink. Double. In clusters. Trailing. For banks, walls, pillars, etc. Cut out old canes. Similar to Dorothy Perkins in habit.

*Hiawatha (*Hyb. Wich.*). Bright crimson. Single, with showy yellow stamens. Free flowering in clusters.

*Leuchtstern (*Pol.*). Bright rose with white eye. Single in large clusters. Resembles Crimson Rambler in habit. The most effective bright-coloured single for pillar and trellis.

*Memorial (*R. Wichuraiana*). Climbing. Small white flowers. Very vigorous. Shining, almost evergreen foliage. For draping walls, banks, rocks, etc. Do not prune. Will self sow.

*Multiflora (*R. multiflora*). Pure white. Single, in many-flowered clusters. Very vigorous. The most showy white climber. Pillar, arch, hedge, and shrubbery. Do not prune.

*Pink Roamer (*Hyb. Wich.*). Bright pink. Fragrant. Single. ½ inch diameter. In large, dense clusters. Rampant, free-growing climber. Excellent for naturalising. Do not prune.

*Prairie Rose (*R. setigera*). Dull rose. Single. Large. In many-flowered clusters. Very late, end of July. Hardy. The only late single climber. Leaf is characteristic, hairy, and dull light green.

*Queen of the Prairie (*Hyb. setigera*). Rosy red, usually with white stripe. Large, light foliage. Later flowering than most other climbers, end of July. Unsurpassed for arbours.

*Single Musk (*R. moschata*, var. *alba*). Pure white. Single. Large, in few-flowered clusters. For trellises, pillars, etc.

THE TEA-SCENTED ROSES

Unsurpassed for delicacy of colours and fascinating shadings in pink, yellow, and coppery bronze; there are no really dark reds in the true teas. These are the tenderest of the family, and, except in the South and California, need protection. They are worth the effort, because of their continuous blooming quality. If heavily mulched like herbaceous plants they can be grown around New York.

Anna Ollivier (*T.*). Rosy flesh and buff, vigorous grower. Prune sparingly, that is, thin out, reducing the remaining canes slightly.

Madame Cheddanne Guiniosseau (*T.*). Canary yellow. Medium-sized flower. Beautiful in bud. Growth moderate. Prune well.

Madame Jean Dupuy (*T.*). Reddish yellow, centre rosy yellow, beautiful form. An abundant autumn bloomer. Strong-growing. Vigorous. The buds are long and carried on single stems. Prune sparingly.

Madame Jules Gravereaux (*T.*). Chamois-yellow, with rosy centre. Disbud freely. A cross between Rêve d'Or and Viscountess Folke-

stone; semi-climbing in habit. Vigorous grower; bud very long and pointed. Thin only; don't cut back.

MADAME WAGRAM COMTESSE DE TOURENNE (*T.*). Satiny rose shaded flesh pink. Of marked beauty and vigorous, semi-climbing habit. Blooms very large. Very good on a low trellis.

*MAMAN COCHET (*T.*). Pink. Most profuse blooming, and the hardiest of all the teas. Best formed bud of any rose. Growth spreading and rather low. Free flowering. Excellent for cutting. Prune sparingly. There is a white form which is tinged with yellow and pink; equally as good as the pink.

MARIE VAN HOUTTE (*T.*). Canary yellow; external petals and borders pencilled with bright rose. Free and continuous bloomer. Hardier than most teas. Growth vigorous. Prune sparingly.

NABONNAND (*T.*). Also known as GEORGE NABONNAND. Tender pink, shaded yellow. Blooms mostly singly. First rate, especially in autumn. Prune lightly.

REICHSGRAF VON KESSELSTADT (*T.*). White, distinctly edged and pencilled with bright pink. Medium size. Especially effective in autumn, as the growth is thin earlier in the season. Protect carefully. Growth moderate. Prune well.

SOUVENIR DE CATHERINE GUILLOT (*T.*). Orange-red, tinted carmine. One of the most striking flowers in appearance and colour. Floriferous, but thin, and not absolutely trustworthy in winter.

SOUVENIR DE PIERRE NOTTING (*T.*). Apricot yellow, mingled with golden yellow. A cross between Marèchal Niel and Maman Cochet. A fairly vigorous grower. Prune moderately.

WHITE MAMAN COCHET (*T.*). A sport from Maman Cochet, which it resembles except in colour. (See above.)

THE HYBRID TEAS

These are the mainstay and delight of the American rose amateur. A combination of the Hybrid Perpetuals and the Teas, they present the hardiness and colours of the one (to a large degree), and the beauty of flower and continuous blooming quality of the other. New varieties are continually being added, and any selection of varieties is likely to be largely superseded in a few years. As a group they will grow and flower without any special pruning. Attention need be given to the necessities of the individual case only.

ADMIRAL DEWEY (*H. T.*). Silvery pink. A sport from Caroline Testout.

AMATEUR TEYSSIER (*H. T.*). Creamy white in the early season, light

saffron yellow in autumn. An abundant bloomer and of excellent form. A sport from Souvenir de Mme. E. Verdier. A vigorous grower, and one of the very best of its class.

ANTOINE RIVOIRE (*H. T.*). Good grower, and very fine variety, especially in the early season. Rosy flesh. Cross between Doctor Grill and Lady Mary Fitzwilliam. Prune by moderate thinning and shortening the remainder.

BELLE SIEBRECHT (*H. T.*). An unusual shade of bright, light pink; strikingly beautiful. Long bud. Moderate grower. Known in England as Mrs. W. J. Grant. Too delicate to be seen at its best in our climate, except in the early season and sometimes in autumn. Unsurpassed by any rose of its colour. Prune fairly hard. The so-called Climbing Siebrecht is not a real climber, but is more vigorous, and will give better results generally than the parent.

*CAROLINE TESTOUT (*H. T.*). Pink, large, globular. Profuse bloomer. Slightly fragrant. Excellent for bedding. Hardier than La France. Free growing. Very thorny. Prune sparingly. One of the best known H. T.'s.

CLARA WATSON (*H. T.*). Creamy white, tinted rose. First-rate as a cut rose. Growth moderate. Prune sparingly.

ELLEN WILMOT (*H. T.*). Flesh white, with centre of rosy white. Fine long bud. Vigorous growth. Prune hard.

*ETOILE DE FRANCE (*H. T.*). Velvety crimson, centre cerise; blooms cupped in form and very large. Continuous and free flowering. Fragrant. The brightest-coloured of all the very dark roses. Cross between Mme. Abel Chatenay and Fisher Holmes. Stiff, vigorous growth. Prune moderately.

FRANZ DEEGEN (*H. T.*). Pale yellow, centre deep yellow. Buds long and pointed, on single stems. A moderate grower and good rose. Prune sparingly.

GRACE DARLING (*H. T.*). Creamy white, shaded peach. Especially good early in the season. Very distinct in colour. Growth good. Prune moderately.

GUSTAVE SOBRY (*H. T.*). Beautiful bright yellow flowers. Very floriferous. A moderate grower. Prune moderately.

*GRUSS AN TEPLITZ (*H. T.*). Deep bright crimson. The best of all the dark red roses for continuous and profuse bloom. Garden, bush,

or hedge. Prune by thinning. This is a Bengal hybrid, of a growth altogether too vigorous to find place in the ordinary rose bed. Planted in groups with the individual bushes about four feet apart, it produces a telling effect with its continuous bloom of bright clusters. As a contrast the equally vigorous Frau Karl Druschki (*H. P.*) is fine, with its unsurpassed beauty of white blossoms.

Innocence (*H. T.*). White, medium full and globular. Very floriferous. A good grower, and one of the best white H. Ts. Prune lightly.

*Kaiserin Augusta Victoria (*H. T.*). Yellowish white. Fragrant. Excellent form, and most lovely. Hardy. A splendid companion to Killarney. Prune moderately.

*Killarney (*H. T.*). Pure pink. The best rose of its colour; but thin, especially in mid-season. Long, pointed buds. Excellent for cutting. Free flowering. Growth vigorous. Prune moderately. There is a white form of this rose which is in every way the counterpart of its parent except in colour.

Koenigin Carola (*H. T.*). Silvery rose, upright in growth, on long, single stems; very large. One of the very best novelties. Cross between Caroline Testout and Viscountess Folkestone. Growth vigorous. Prune sparingly.

La Detroite (*H. T.*). Light pink, back of petals lighter. Of the distinct Testout type. A good constant bloomer. A very promising vigorous variety of American origin; a cross between Caroline Testout and Bridesmaid. Prune fairly hard

*La France (*H. T.*). Silvery pink, with paler reflex. Very fragrant. Has a tendency toward a bluish tinge. Excellent form. Large flower. Few thorns. Prune sparingly. This is the original "Hybrid Tea," and is still holding its own.

Lady Clanmorris (*H. T.*). Creamy white with pink centre. A fine variety, but requiring good weather to open properly. Vigorous grower. Prune lightly.

Madame Abel Chatenay (*H. T.*). Salmon-shaded rose. One of the best roses for cutting. Flowers full and of good size. Prune slightly.

Madame J. Grolez (*H. T.*). Bright rose; very distinct colour. Excellent bloomer both early and late. One of the best. Good grower. Prune lightly.

MADAME J. P. SOUPERT (*H. T.*). White with yellow tints. Very large. Bud beautiful in form. Excellent for cutting. Cross between Caroline Testout and Alice Furon. Vigorous growth. Prune lightly.

MADAME MELANIE SOUPERT (*H. T.*). Golden yellow, shaded carmine. Very large; about half full; petals broad. Buds of remarkable beauty. Floriferous. Upright, vigorous growth. Prune sparingly.

*MADAME RAVARY (*H. T.*). Deep apricot yellow. Large, globular, and nearly full. A decorative rose of great merit. Moderate growth. Prune moderately hard.

MILDRED GRANT (*H. T.*). Silvery white, edges bordered with pink. Probably the largest in the class. A very distinct rose. Plants slow to establish, but merit extra care. Moderate grower. Prune very lightly.

MONSIEUR JOSEPH HILL (*H. T.*). Pink, shaded salmon. Flowers very large. A floriferous and beautiful variety. Vigorous growth. Prune but little.

MRS. THEODORE ROOSEVELT (*H. T.*). Creamy white, centre rose. Bud long and of excellent shape. Flower fine in form. Growth vigorous. An American rose, first-class in every respect. Prune little.

*PRINCE DE BULGARIE (*H. T.*). Rosy flesh, shaded salmon and orange. Continuous bloomer both early and late. Good foliage One of the best all-round roses in the class. Prune lightly.

VISCOUNTESS FOLKESTONE (*H. T.*). Light rose with darker centre. Floriferous. Useful as a "garden" rose. Good perfume. An old favourite. Very good if freely disbudded. Growth moderate. Prune moderately.

HYBRID PERPETUALS

These embrace the great bulk of the most showy and gorgeous flowers of June, and are the hardiest and the largest-flowered roses. With few exceptions, however, they are not "perpetual" bloomers in America, flowering, as a rule, only in the early summer. The special exceptions are noted below by the (†) sign. The group is a nondescript one, embracing many sections, but conveniently considered as one culturally. All will stand severe pruning. For the (*) sign see Note on page 307.

ALFRED COLOMB (*H. P.*). Bright red. Flowers large, full and semi-globular, with high centre. Blooms rather late in June. Fragrant. A first-rate rose. Good grower. Prune back hard.

†Anna de Diesbach (*H. P.*). Synonym, Gloire de Paris. Beautiful shade of carmine. Very large and full. Growth vigorous and upright. Fragrant. Perpetual flowering. Prune hard.

Baroness Rothschild (*H. P.*). Pale pink. Flowers and foliage exceptionally fine. Globular. Scentless. Growth stocky. Prune fairly hard.

*Cabbage (*R. centifolia*). The hundred-leaf or common Provence rose. Strong, rosy pink. Vigorous growing. Very fragrant. For bush or shrubbery. An old-time favourite. Prune very hard.

Countess of Oxford (*H. P.*). Bright carmine. Bud very fine. Scentless. Smooth wood, and very handsome foliage. Flower cup-shaped, and one of the largest in this class. Growth vigorous.

Eclair (*H. P.*). Of the Jacqueminot type, but fiery red. Very distinct in colour. Globular in form. Fragrant. Growth vigorous.

Eugene Furst (*H. P.*). Jacqueminot race. Velvety crimson, shaded deeper crimson. Flowers late. Fragrant. Needs watching for mildew, but is one of the finest, if not the very finest, of the dark roses for New York.

Fisher Holmes (*H. P.*). Deep crimson-scarlet. Moderately full. Very floriferous. Fine imbricated form. Fragrant. This rose lasts longer under our hot suns of June than the majority of its colour. Growth medium. Prune moderately.

*Frau Karl Druschki (*H. P.*). Snow white. A cross between Merveille de Lyon and Caroline Testout, so hardly an H. P., though so classed. Growth remarkably vigorous, and for that reason unsuitable for ordinary rose beds. The plants should be at least three feet apart. They readily attain to a height of over five feet the first year. Flowers fairly full, very large, inclined to flat. Buds often 3 to 4 inches long. Opens well, and blooms off and on throughout the season. The very finest rose of its colour in the class. Look out for a tendency to mildew in continued damp weather. Prune moderately.

Gracilis (*Moss*). Pink; with characteristic mossy sepals enclosing the bud. The best of all the moss roses. Treat like any ordinary H. P.

Jean Liabaud (*H. P.*). Crimson-maroon, with gleams of scarlet. Full and large. Fragrant. Moderate growth. Prune fairly hard.

†Louis van Houtte (*H. P.*). Once fairly established, the deep red velvety blooms, shaded deeper crimson, are unique among the dark roses. Small foliage. If the plants do not get a good start it is useless to waste time over them. Very fragrant. Remarkably free from mildew for a dark rose. One of the best. Growth moderate. Prune fairly hard.

Marie Baumann (*H. P.*). Bright red, resembling very closely the later-blooming Alfred Colomb. Very fragrant. Reliable mid-June bloomer. Floriferous. Flowers well-shaped, semi-globular. Vigorous growth. Prune hard.

†Marie Finger (*H. P.*). Synonym Mlle. Eugenie Verdier. Bright silvery pink, deeper in centre. Not very fragrant. Good autumnal. Smooth wood. Handsome foliage. Growth moderate. Prune lightly.

†Marquise de Castellane (*H. P.*). Carmine-rose; not fading in the sun. Flowers full. Not fragrant. One of the most effective pinkish roses and a reliable autumn bloomer. Growth moderate, stocky. Prune moderately.

* †Mrs. John Laing (*H. P.*). Silvery pink. Continuous bloomer. Long stem. Fragrant. For groups, masses and cutting. The best quite hardy pink rose. Vigorous grower. Prune hard.

* †Mrs. R. G. Sharman-Crawford (*H. P.*). Deep rosy pink; outer petals shaded pale flesh. Quite distinct from all other H. P. roses. Almost a continuous bloomer, and reliable in autumn. One of the best roses grown. Vigorous. Prune hard.

*Paul Neyron (*H. P.*). Pink, with purplish tinge. Not specially pleasing in colour, but strong growing and the largest-flowered of all roses; almost equals a peony in size and form. Effective in masses, and useful in spite of its coarseness. Prune hard.

†Pride of Waltham (*H. P.*). Delicate flesh, shaded bright rose. Flowers opening well, and of good shape. A sport from Countess of Oxford. Very attractive. Vigorous. Prune moderately.

Prince Camille de Rohan (*H. P.*). Synonym, La Rosière. Deep, velvety crimson. Fragrant. A remarkably floriferous cool-weather rose, but liable to burn in the sun. Grow this rose in a bed where it will have some shade during the hot afternoons. Growth vigorous. Prune moderately hard.

†Souvenir de la Malmaison (*Bourbon*). Clear flesh, with flushed centre. Large and double. Most beautiful in bud. Growth rather low and spreading. Fine autumn bloomer. Prune lightly and by thinning.

Souvenir de William Wood (*H. P.*). Dark, blackish purple with reflections of red. Unsurpassed in intensity of colour. Fragrant. Must be watched for mildew (which applies to nearly all dark roses). Growth vigorous. Prune moderately.

*Ulrich Brunner (*H. P.*). Cherry red. Very large flower on long smooth stem. Vigorous grower. Perfectly hardy. Splendid form. Fragrant. Prune moderately. A seedling from Paul Neyron, and in every way, except size, superior to its parent. Not subject to disease. First class in every respect.

Victor Hugo (*H. P.*). Brilliant crimson. Floriferous. Fragrant. Most attractive. It well repays extra care and cultivation. Vigorous. Prune hard.

VINES

"When Epicurus to the world had taught
That pleasure was the chiefest good
(And perhaps was i' the right, if rightly understood),
His life he to his doctrine brought,
And in a garden's shade that sovereign pleasure sought."

—ABRAHAM COWLEY.

CHAPTER XV

VINES

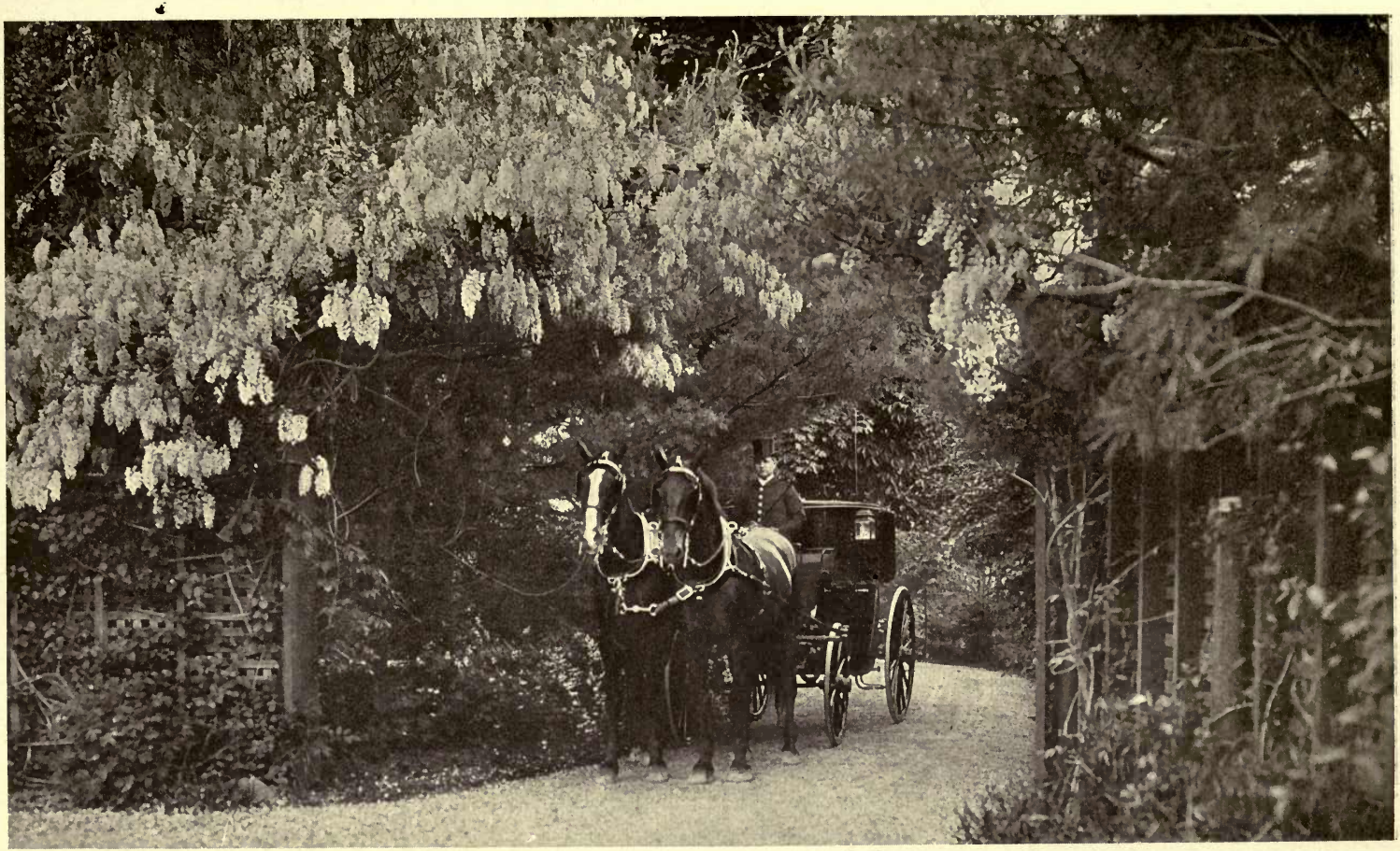
TO DRAPE, to mantle, to conceal, to screen, to frame, to cover, to shade, to protect, to beautify, to transform — how may not vines be used? How could beautiful garden pictures be made without them? Lacking their grace and mellowing touch, many buildings would be intolerable eyesores, but with soft drapery over them their crudities are mercifully concealed. Shady pergolas, leafy flowery arches, and pendant garlands from trees and over hedgerows make pictures complete in themselves.

The returned traveller from England misses the ivy, probably, more than any other plant. There, its dark lustrous leaves clothe walls, houses, chimneys, outbuildings, tree trunks, banks, even the earth itself, with permanent green, toning the colour scale of every scene in town or country into richer, deeper harmony, clinging, as it were, to the very hearts of the people on their historic ruins, their churches and their literature. If the ubiquitous ivy were to be suddenly exterminated, what a raw, glaring, red-brick England it would be! Only when we realise what the Mother Country might look like stripped of it, and how lavishly blessed she is with it, do we pity our own poverty with no reliably hardy indigenous evergreen vine to take its place. From the artist gardener's standpoint it is one of our greatest lacks. True, the ivy will grow here, but only under certain conditions, and not as if it were really at home and altogether happy. The bright sunshine of Northern winters sometimes proves more damaging than our hot, dry summers, and even on the shady side of buildings, where it is always safest to plant it, it may be

winter-killed after successfully reaching a chimney-top, won by ten years' climbing. While it seldom succumbs to frost in the Middle States, and never in the South, the protracted heat there curbs that half-wild luxuriance which characterises it abroad.

However, let us plant it much more freely than we do! Countless opportunities to use it pass unheeded, either because we do not rightly estimate its great pictorial value, or we too readily accept its limitations. If we cannot use it everywhere, as the English do, at least we can find a place for it somewhere about every home. But the almost universal painted wooden house in this country discourages the attempt to grow ivy on its walls. Brick, stone and stucco are its proper supporters; the coming building is to be made of concrete, we understand, and wherever one of these building materials occurs, there should the ivy cling. It does not make a house damp, for there is always a free circulation of air under the leaves; its aerial roots do not weaken walls, in spite of a popular notion to the contrary. In fact, the vine strengthens them. Many a ruin in England would have tumbled to the ground years ago had not the branching, tenacious ivy bound together the bricks or stones from which the mortar had crumbled away.

Protection from the sun in winter, such as widths of matting or braided straw tacked over them afford, would keep our ivies permanently green even in sunny places or on very cold northern sites where, in any case, their roots should be covered with leaves or stable litter. A mulch to keep the roots cool and moist in summer when they need to be encouraged to delve for food, rich in humus, placed below them by the thoughtful gardener when he planted them, will carry the vines triumphantly through heat and drought. They delight in moisture, too. For shrubbery borders, the ivy, clipped wherever it strays beyond a ten-inch limit, makes a most



WISTARIA — THE VINE OF MANY PURPOSES, MOST BELOVED BY THE ARTISTIC JAPANESE. IT DELIGHTS IN CLIMBING THROUGH TREES WITH WILD ABANDONED GRACE



HONEYSUCKLE VINES LIGHTLY TWINED ABOUT THE PILLARS OF THIS PORCH GIVE A SOFTENING TOUCH TO THE FRONT OF THIS INVITING OLD HOUSE

effective edging. Used as a carpet under trees where no grass would grow, it thrives in dense shade like that other charming evergreen trailer, the little purple-flowered periwinkle seen in every old garden. Fallen leaves and snow afford sufficient protection to the ivy where it grows prostrate on the ground. Special emphasis is laid on our only evergreen vine, except the creeping spindle, because, for people who live in the country the year around, the ivy's value is greater by far than any other's. And it is equally important for city dwellers, redeeming the sordid ugliness of many buildings; yet London probably contains more ivy than the whole North American continent.

So nearly evergreen that it might be almost counted as such is Hall's honeysuckle, well worth growing if only for its deliciously fragrant flowers and, on their account, it is one of the most popular climbers in cultivation. It needs wire netting or a lattice to twine about, which makes it a practical vine for piazza posts and painted houses, as the woven wire or other support may have its staples loosened at the top and be laid back on the ground when the biennial coat of paint goes on the house. Honeysuckle is cheap enough to plant at every post in the chicken yard and afford shelter and shade for the fowls as well as a screen for their not always sightly runs. It is one of the few vines that will thrive at the seashore, and it blooms all summer there because of the moisture in the cool air. Cold and want it can endure like a good soldier, but it well rewards a little care, especially thinning out of its old wood when the exuberant vine begins to smother itself with foliage. It is one of the best carpets we have for raw banks, and rooting as it runs along over the earth, as honeysuckle always does when growing wild, it is an excellent soil binder on steep slopes. Whenever it finds a supporting stem to twine around, up it goes into a bush or tree and tosses into the air long sprays of slender, tubular flowers set in pairs along

the stem that, on opening at evening, are pure white and especially fragrant, to attract the night-flying moths; but after fertilisation, the corollas turn pale yellow. "Quite over-canopied with luscious woodbine" was a reference to the honeysuckle, not to our five-leaved ampelopsis, in Shakespeare's "Midsummer Night's Dream." There is a coral honeysuckle, too, that caters to the ruby-throated humming-bird, which "likes any colour at all so long as it 's red." This vine is particularly beautiful over rocks.

Although not entirely evergreen either, the Japanese akebia opens its five-fingered leaves so early in the spring and retains them so late into the winter that one can hardly grudge it a resting time. Its early flowers are insignificant — small, curious, purplish, spicily fragrant affairs — and it seldom fruits in this country; but it is very hardy, it is free from the attacks of worms and caterpillars, it grows rapidly and its foliage is charming. One admirer of the vine, which is by no means so much used as its merits deserve, speaks enthusiastically of the delicate silhouettes that its palmate leaflets form against a moonlit sky where he sees them embowering his porch. I know an old red picket fence around a farmhouse that is surprisingly effective because of its akebia drapery. Native clematis flings white, fleecy festoons over the vines' dark background in autumn. It does not resent a near neighbour.

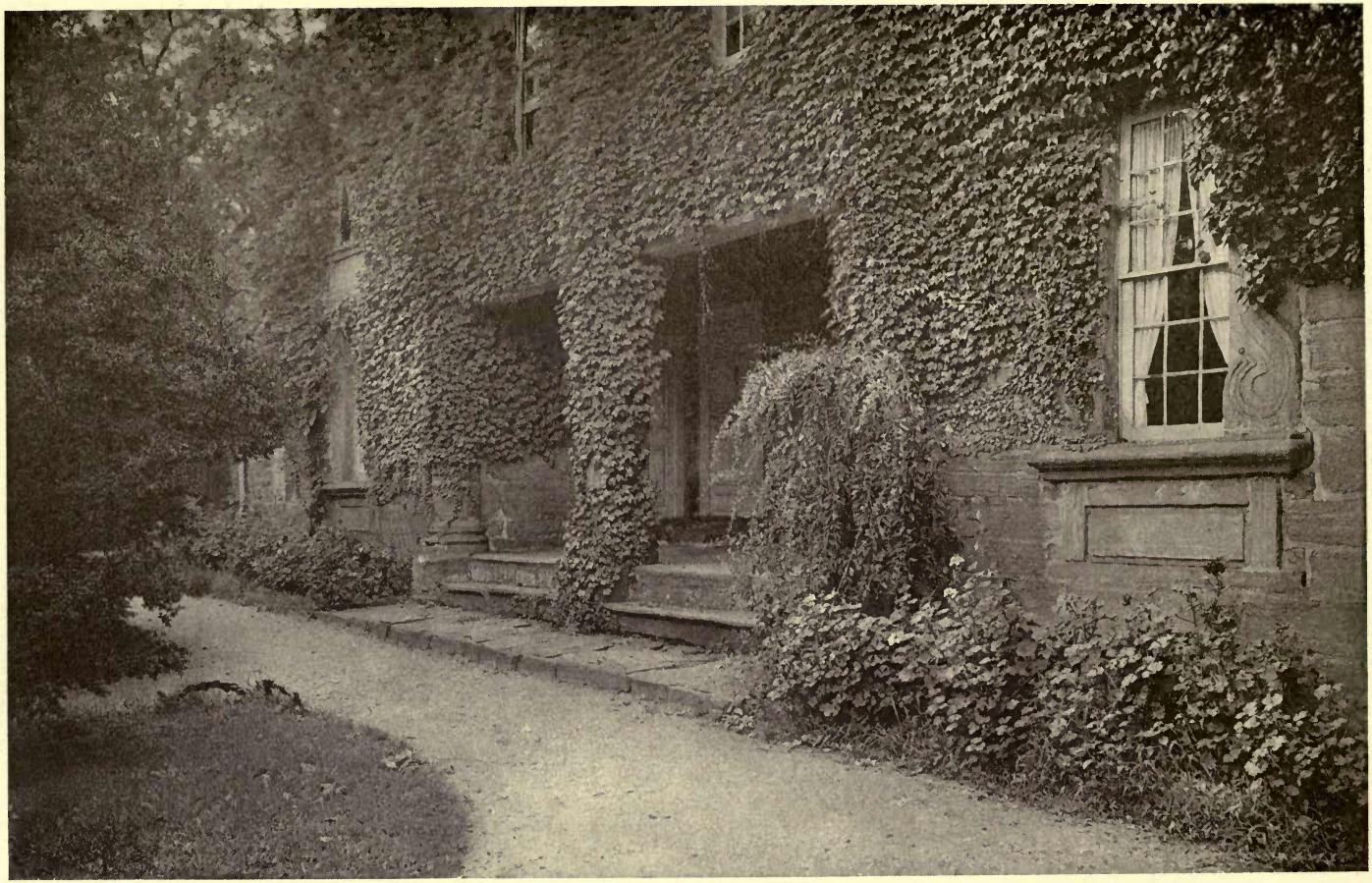
Exquisite airy grace characterises most of the lovely clematis clan. To frame landscape pictures seen from porches and cover trellis and pergolas with clouds of misty bloom in early autumn, no vine can outdo the variety paniculata. Flammula is choice, it is deliciously fragrant, its bloom at midsummer is most welcome, but its constitution is rarely robust. It usually seems like the fragile sister of the family. The brilliant red-cupped coccinea is never more effective, perhaps, than when used with the fleecy flowered

kinds. Until one's attention is called to it, no one would believe how common is the custom of planting the large-flowered purple Jackman's clematis against red-brick buildings. Yet, when it spreads its royal bloom over them, nothing in the great range of garden possibilities is more excruciatingly awful. On a gray-shingled house or among the lacy foliage of a bowery pergola, the blossoms have a chance to show how really handsome they are. One of the most beautiful effects with clematis is remembered by any European traveller who has had the good fortune to be in Normandy when sprays of the white, foamy flowers of the native wild species toss themselves from the sombre green of the pine trees in the coniferous forests. Our Virgin's bower rarely, if ever, climbs so high. But it flings out the right hand of good fellowship to every bush and low tree in the roadside thicket and hedgerow, and the feathery styles of its pistillate plants form hoary masses, more attractive than its flowers. Possibly the Japanese paniculata, which grows so luxuriantly here, could be induced to festoon our pines and hemlocks, but, so far as I know, the experiment has never been tried.

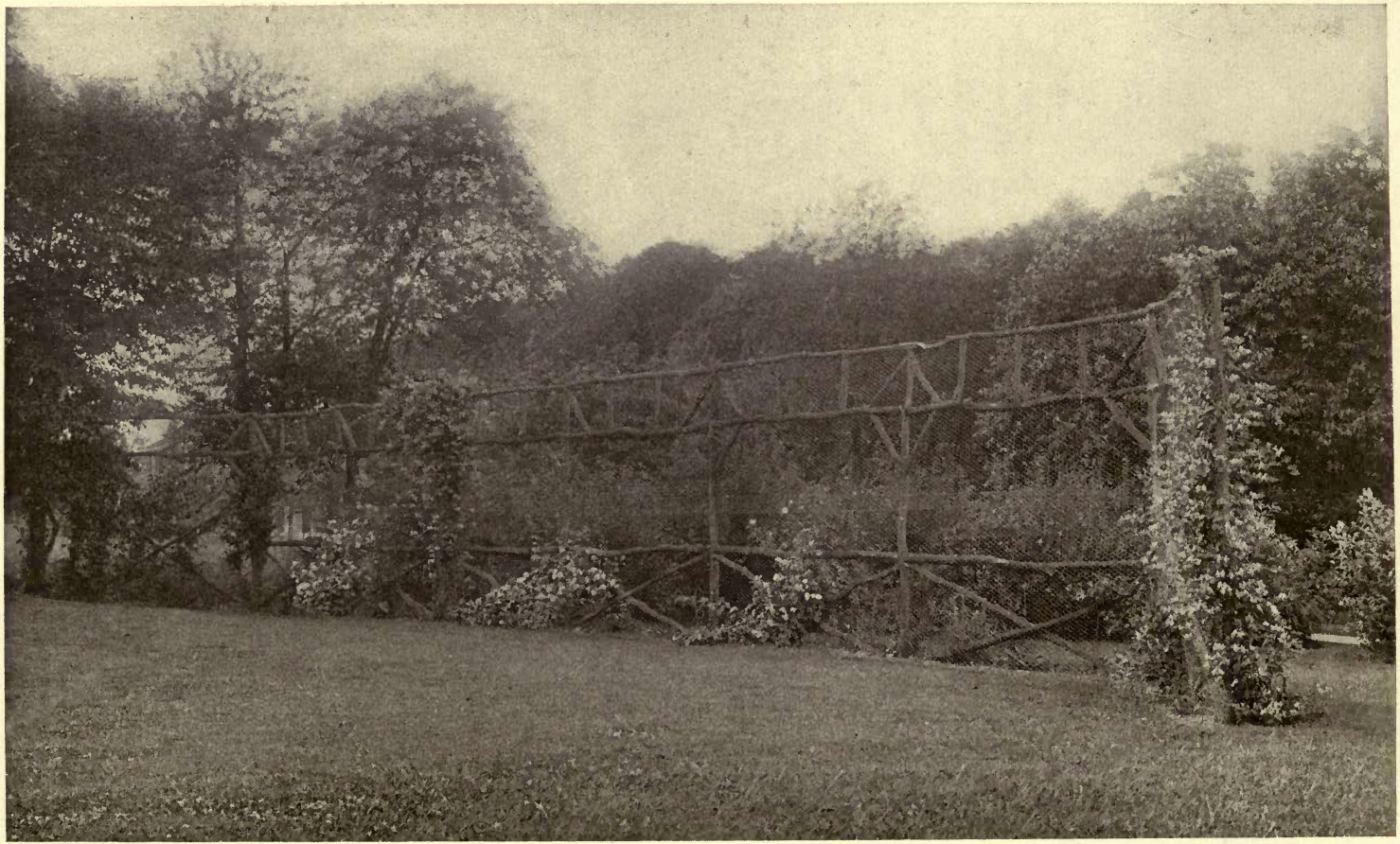
No one need be urged to use Veitch's ampelopsis, or Japanese ivy; already it is one of our most over-planted garden staples. The delicate traceries of its fresh young growth, clinging by little adhesive disks at the tips of its pink fingers to the sustaining wall, and its shining new leaves, that look as if they were covered with varnish, are undeniably pretty. The large overlapping leaves of older growth conceal, in time, any surface, rough or smooth, they may grow against, but the danger is lest they become too dense. Only when they occur on brick factories is one grateful if they do. Heavy and mat-like foliage effects are rarely wanted on dwellings, except on large ones, and chiefly about the foundations and lower walls of

those. A vine-smothered house is most attractive to those pestiferous bird neighbours, the quarrelsome, dirty English sparrows, which is a sufficiently good excuse, if an æsthetic reason were rejected, for keeping this vigorous creeper clipped within bounds. There would seem to be no limit to its aspirations: a single plant has covered a stone retaining-wall over one hundred and fifty feet long and twenty feet high in twelve years. Because it has lofty ambitions, the vine is admirably suited to climb tall and leggy trees whose lower branches have died. Trunk and limbs are speedily overspread with its green mantle, gracefully fringed where the young shoots sway in the breeze from the tips of the branches. Planted on unsightly telegraph and telephone and trolley poles that disfigure the modern landscape, it takes off their curse for six months at least. The ampelopsis is rampant, it is ubiquitous; but when autumn sets it aglow with superb colour, as brilliant as the maple's, few would deny that it is the best all-around vine we have. As it loses its leaves in winter, giving any possible dampness they may have gathered a long chance to dry, there can be no reasonable objection to using it anywhere. As a matter of fact the wood and paint that have had the protection of its leaves all summer are found to be in a fresher condition than the exposed parts, a popular belief to the contrary notwithstanding. Would that all our prejudices might be so easily disproved!

Instead of chopping down a dead tree on your grounds, try draping it with the native five-leaved ampelopsis or Virginia creeper, which delights to scramble over rocks, banks and bushes and up into trees, living or dead, wherever it grows wild in Nature's garden. Of looser, lighter, more graceful habit than its Japanese cousin, and better adapted to free effects, the naturalistic treatment best suits this vine that is much used on houses, nevertheless. It



THE VINE-CLAD FRONT WALL OF AN OLD STONE HOUSE ONCE OCCUPIED BY BARTRAM, OUR FIRST EMINENT BOTANIST



WHY SHOULD THE BACK-STOPS OF TENNIS COURTS USUALLY BE BARE AND UNSIGHTLY? THIS ONE, OF RUSTIC CONSTRUCTION, HAS CLEMATIS, HONEYSUCKLE AND DOROTHY PERKINS ROSES CLIMBING OVER ITS WIRE NETTING

does not suffocate, it is airy, and its pendant sprays that hang from a veranda give a softening touch to hard architectural lines. It makes the poor man's cottage or cabin picturesque, and it costs nothing beyond the labour of digging it. On the rich man's pergola its graceful sprays, swaying in the breeze from the beams overhead, are as effective as those of its relative, the wild grape, which is one of the very best vines we have for Italian arbours.

A climbing tree in itself is the wistaria, one of the greatest of the many treasures that have come to us from the Far East. Some superb old specimens in Japan have trunks two feet or more in diameter. To complete a picture of mellow age there is nothing comparable to a fine old vine. Its decorative effect means far more than mere ornament. As about seven years must elapse before a newly planted young wistaria will bloom, it is a great advantage to start with vigorous roots without a tangle which will produce wonderful growth if put in rich soil and given an abundance of water. A friend who transplanted a gigantic vine from an old house to his new one was convinced that what the wistaria chiefly suffers from is a lack of moisture, so he invented a novel method of supplying it. A bottle sunk in the earth and fed from a hose overflowed into the soil about the roots only as fast as the water seeped away or was absorbed by the vine, and no faster. The wistaria never knew it had been moved, although it was not brought up on the bottle until it had reached its second childhood.

Commonly trained around piazza and pergola pillars (which it sometimes weakens), over arches and fences and along walls — and it could not be less than charming anywhere — this best of flowering vines never appears to greater advantage than when grown to trail its way at will among trees, for it has a half-wild luxuriance that seems to call aloud for naturalistic picturesque

treatment. Of all the hosts on which it pensions itself, perhaps none is better suited to it than the locust tree. Before foliage appears on the locusts they are hung with long festoons of the wistaria's light lavender-blue racemes looped from branch to branch and from tree to tree in sweet profusion. A long line of such trees, such as one frequently sees along the boundaries of old Quaker homesteads on Long Island, where the locust abounds, is an enchanting sight. Later, as the wistaria begins to fade, the locust leaves appear, and by June the trees are again in bloom, but this time with white racemes of their own deliciously fragrant, papilionaceous flowers. As the wistaria and its host have similar pinnate foliage, it is difficult indeed to tell where the vine's leaves off and the tree's begins. When the white wistaria is used, even the blossoms on tree and vine are similar.

In planting the wistaria, or any vine, for that matter, to run up into a tree, do not set it close to the trunk, but at quite a distance from it, and layer the stem, letting several yards of it lie under ground before beginning to climb. Lay it in a trench filled with plenty of good food all its own. One could never hope to grow the wistaria among pines, as it tosses and tumbles with abandoned grace in Japan, lighting up the sombre trees until they fairly drip lovely colour and fragrant bloom, unless the vines were rooted beyond the harmful effects of the resinous pine needles.

Another hard-wooded vine from Japan is *Celastrus orbiculatus*, a relative of our less lusty bittersweet and, like it, best adapted to naturalistic effects on trees or hedgerows where its generous pendant clusters of coral capsules hang cheerfully all winter.

Among woody vines none, except the wistaria, is more valuable than the trumpet creeper. One wants it if only to attract hummingbirds to sip nectar continually from its deep orange-red tubes. How they dart and squeak among the flowers! But the seed that

they play an important part in fertilising should be kept cut if the vine is to have a long succession of bloom. Red is irresistibly attractive to the ruby-throat, and orange scarcely less so, perhaps for the sake of the red that is mixed with the yellow. Such flowers as need the tropical sprite to transfer their pollen wear his favourite colours, but even this delicate attention is not enough. He demands that his refreshment be served to him in tubes so deep or inaccessible that only his long tongue, which may be extended far beyond his rapier-like bill, may lick the last drop of nectar away from his rivals the humble-bees, butterflies and moths. First the long-spurred red and yellow columbine, the painted cup, the coral honeysuckle, the jewel weed, the Oswego tea and the native trumpet creeper feed him successively in Nature's garden; then the cardinal flower has the honour of catering to the exacting midget before he returns to the tropics. Such flowers as gladioli, cannas, honeysuckle, nasturtium and salvia keep him busy about our gardens until after frost.

There are some exquisitely tinted large-flowered hybrid trumpet vines whose aerial roots will not loosen the shingles on buildings as those of the more vigorous *Tecoma radicans* sometimes do. They are particularly beautiful grown over rocks. Like the wistaria, this vine is sometimes used as a lawn specimen by attaching a single leading stem to a stout stake, cutting away all lower, suckering shoots and pruning back the top of the leader to a height of three feet to insure strong lateral branches. Before the stake rots away, the woody vine will have developed a trunk of its own capable of self-support. To make a superbly effective informal hedge, set out a long line of vines thus attached to stakes set three feet apart in light, rich soil, and keep the wilful lateral branches pruned back and attached to galvanised wire strung from stake to stake until, in a few years, they become independently woody. As time goes on, the

hedge grows increasingly beautiful, a dense wall of clean, handsome foliage and gorgeous flowers. It is a heritage one is proud to bequeath to one's children.

But not every one who wishes for the transforming results of vines may plant for permanent effects; and, even when these are planned for on new places, it is desirable to use some annuals for quick results. On rented places a special vine may be needed for one season only. Even in the midst of permanent planting it is pleasant to have variety from year to year.

If a vine be wanted to cover a porch or a high board fence in the shortest possible time, try the Kudzu. It is a twiner and needs wire or strings. Given good soil and plenty of water and sunshine, it will grow fifty feet in a season. When a dense screen is needed on a kitchen porch that is not always so tidy as it should be, or one for a lattice around a drying ground, the Kudzu is invaluable.

Another very rapid grower is the cup-and-saucer vine (*Cobœa scandens*), that would climb to a tree-top before frost catches it if long enough strings might be supplied. Before its rather heavy-looking cups finally turn purplish plum colour they pass through green and lavender transitional phases. The San Salvador cobœa has many-lobed, light-green leaves, lying flat, that introduce a welcome colour note in the scale of greens. Seed should be sown at least three inches apart in the hotbed in order that the roots of young vines may not be needlessly disturbed when they are lifted on a trowel and transplanted to the open ground after settled warm weather comes.

Jack's beanstalk probably grew no faster than some of the gourds. All their astonishing growth must be accomplished between the frosts of spring and autumn, as not a breath can they endure. For covering unsightly outbuildings, fences and palings,

they accomplish wonders. Every old well used to have a gourd dipper hanging beside it; every housewife in the olden time darned stockings over a gourd. Some of the fruit grows to enormous size. Negro cabins in the Southern States often have large hollow gourds, with a side entrance cut in them, hanging from poles in the door-yard. Purple martins nest in these vegetable houses. The people know that where these handsome swallows once take up their abode the air is rid of innumerable mosquitoes, gnats and other insect pests caught on the wing as the birds dart and skim about in an ecstasy of flight.

Ash and garbage cans at the back door may be quickly concealed under a canopy of the wild cucumber vine's pretty leaves and feathery greenish white flowers. The Japanese hop skips and jumps up strings too, and its large, handsome leaves, splashed with white, are more decorative than some flowers. But if flowers are wanted, rich-coloured gay ones in greatest profusion, everyone plants the tall nasturtium. Rich soil is wasted on it, as it induces the vine to run to leaves. In cutting nasturtiums to brighten the house — and they light up north rooms like sunshine — do not be afraid to cut a quarter of a yard or more of stem. Branches grow again steadily and bloom till after frost if no seed be permitted to form. A mass of the gorgeous flowers alone is colour overdone — too much of a very good thing — but when nasturtiums are arranged just as they grow with stems, disk-like glaucous leaves and seed vessels attached, no spoils brought from the garden into the house are more decorative. They are lasting, too. Draped over stone walls the flower-decked vine shows to splendid advantage.

Let no one forego growing the perennial butterfly pea because it takes some trouble to start it. Seed should be soaked overnight in warm water to hasten germination before it is planted, three

inches apart, in a hotbed. After a good beginning the young vines may be given a permanent place in the garden, with a wire netting or pea brush to climb up. Or well-started vines can be bought from a nursery. They may attain a height of ten feet in rich, moist soil, and if mulched and well watered during hot weather they will be covered with exquisite flowers like so many little butterflies fluttering over them. Although hardy, the roots need some protection in winter. Planted in groups at the back of perennials in the hardy border, the peas look more sightly scrambling over brush, which they presently conceal, than over wire.

On the shady side of a house, in cool, rich soil, anyone who knows it will wish to grow the Alleghany vine, fumitory, or mountain fringe (Adlumia), as it is variously called, if not for the sake of the arching sprays of its delicate little pink flowers, like miniature bleeding hearts that have bled themselves almost white, then for its exquisite foliage, as finely cut as maiden-hair fern. It is a biennial, but when once established it sows itself, stooling the first summer and the next year climbing swiftly up string or trellis, which it festoons with lacy foliage of the tenderest green. But it is in the rock garden, perhaps, that the fumitory appears at its best. Planted in rich crevices in shaded places it drapes the stern boulders with delightfully contrasted delicacy and grace. Of all the vines, surely this is the daintiest.

Shrubby and Herbaceous Vines

The best of the annual vines, including Nasturtium, Sweet Pea, Cobœa, Hyacinth Bean, Morning Glory, Moon Flower, Balloon Vine, Cypress Vine, raised from seed each year, are described in the list of annuals. (See page 246.)

Akebia (*Akebia quinata*). Best deciduous shrubby vine where dense shade is not wanted. Five-partite leaves, rich deep green, with clusters of brownish purple flowers in May, June. Quite hardy and free from insects and fungi. Prefers well-drained, peaty soil.

ALLEGHANY VINE (*Adlumia cirrhosa*). Very quick-growing biennial. Flowering first season. Delicately cut foliage like maidenhair fern. Pinkish white flowers in profusion in summer. Give cool soil. Transplant in fall. A weakling, requiring attention in training.

AMPELOPSIS. See IVY, BOSTON, and VIRGINIA CREEPER.

BITTERSWEET, FALSE (*Celastrus scandens*). Best for bright fruit effects in winter, succeeding in shady or sunny position. Capsule bursts, exposing crimson seeds. Attains a height of 20 feet. Propagates easily by seeds sown in fall. ——, JAPANESE (*C. orbiculatus*). More vigorous, but fruits are hidden by foliage till late.

CANARY-BIRD VINE (*Tropæolum peregrinum*). Best annual yellow-flowered vine. Attaining 20 feet in hot, sunny location, and on dry ground. For bloom from July till frost sow indoors in March.

CINNAMON VINE, YAM (*Dioscorea divaricata*). Loose clusters of cinnamon-scented white flowers, borne profusely. July, August; 10 to 30 feet. Root a huge tuber, 2 to 3 feet long. Tubers produced in the leaf axils, and sown like seeds, will make root tubers in two years.

CLEMATIS, JAPANESE (*C. paniculata*). Best fall-blooming clematis for full sun. Profusion of white, fragrant flowers in September. Visited by bees. Prune severely in winter. ——, JACKMAN'S (*C. Jackmani*). Best purple-flowered vine. Blooms 4 to 6 inches across. June, July. Also numerous varieties, varying to white and red-purple. The best white form is *C. Henryi*. August, November. ——, RED (*C. Viorna*, var. *coccinea*). Carmine or scarlet sepals. June, August. Flowers globular, about 1 inch long. All the clematises need heavy feeding and abundant water and severe pruning. See also VIRGIN'S BOWER.

CREEPING SPINDLE (*Euonymus radicans*). Evergreen. Compact growing, self-supporting on walls, trees, etc. Resists smoke. Hardier than English ivy, but slower growing. Very variable in size and colouring. Grows to great heights.

CRIMSON GLORY (*Vitis Coignetiæ*). One of the best strong-growing vines, much like the fox grape, but becoming brilliant scarlet in fall. Best raised from seeds.

DUTCHMAN'S PIPE (*Aristolochia macrophylla* or *Sipho*). Best very large leaved vine for dense shade. Use for screens or arbours. Almost round leaves about a foot across. Flowers V-shaped, purplish-

yellow, not showy. Grows anywhere, and attains great length. Vigorous grower.

Fire Bean (*Phaseolus multiflorus*). The scarlet runner bean. Racemes of bright scarlet flowers in June, July. Fruits edible, and usually grown as a vegetable in Europe. A tender annual with us although normally perennial. Sow when ground is warm.

Gourds (*Various species of Cucurbita, etc.*). There are a great number of these grown for their brightly coloured and often fantastically formed fruits. They are all rather coarse, rank-growing annuals that will not endure frost at any time. Sow in rich ground after weather is warm. Give support. Good for quick screens and unsightly places.

Grape (*Vitis vulpina*). The river bank or frost grape. Most widespread native grape. Bright green, thin leaves. Good for pergolas. ——, Fox (*V. Labrusca*). Stronger growing, with hairy young shoots. Larger, thicker leaves, almost round, dull green; brown underneath.

Honeysuckle (*Lonicera Periclymenum*, var. *Belgica*). Most fragrant flowering deciduous vine for arbours and trellises. Flowers reddish all summer. The type blooms from June to September; yellowish white and less vigorous. Var. *serotina* blooms in the fall. ——, Hall's (*L. Japonica*, var. *Halliana*). Half evergreen. Flowers white, changing to yellow. The type blooms June, August; 15 feet. Naturalised in some places. —— (var. *aureo-reticulata*). Smaller leaves, netted yellow; sometimes used for ground cover, becoming a weed. Good for walls and fences.

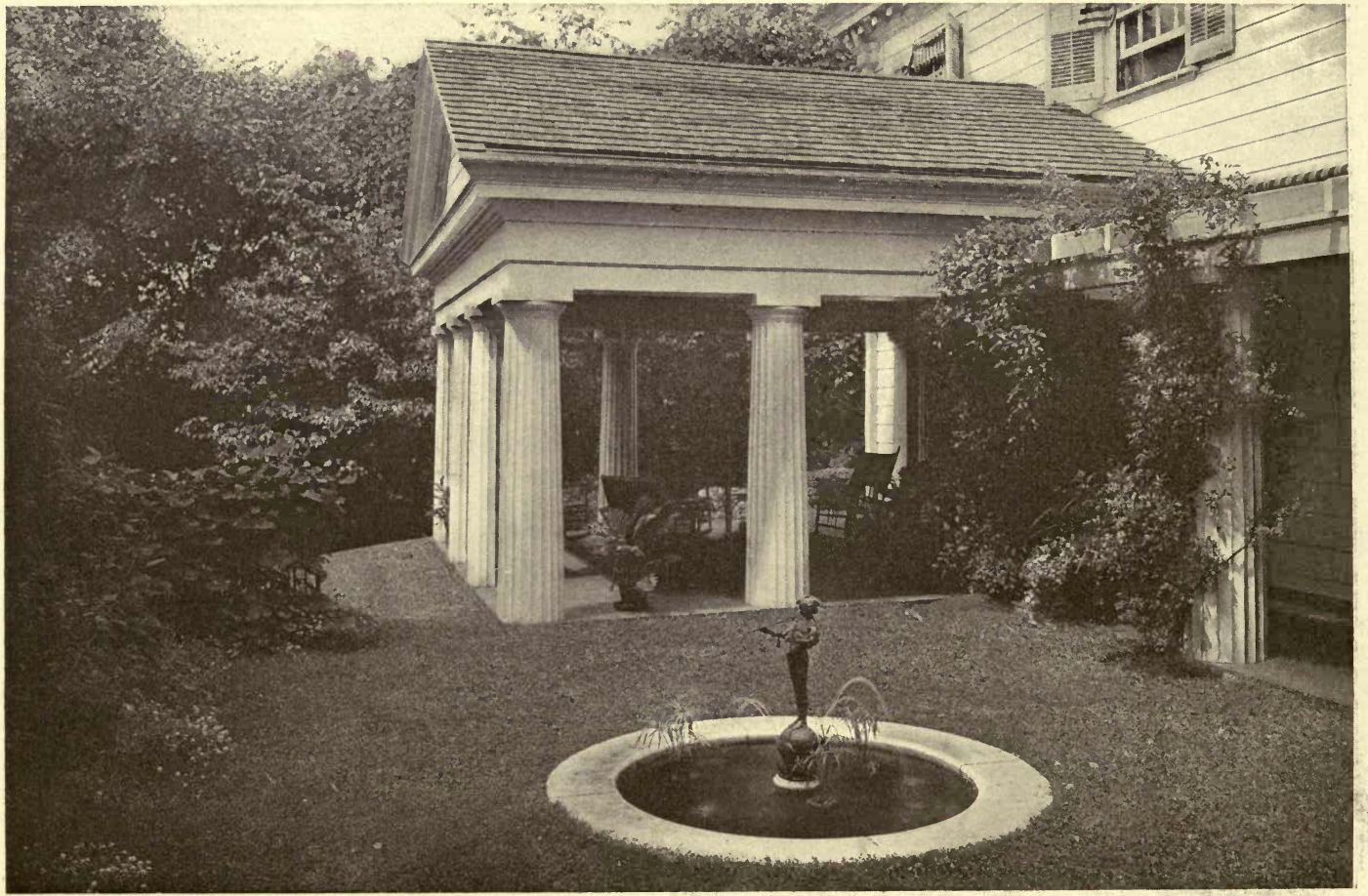
Hop, Perennial (*Humulus Lupulus*). Common hop, growing 15 to 20 feet. Effective when in fruit. Bold, palmate foliage, dark green. Herbaceous top, dying down annually. ——, Japanese (*H. Japonicus*). See Annuals, p. 249.

Hydrangea, Climbing (*Schizophragma hydrangeoides*). Flower white in large, flat clusters when fully exposed to the sun. May, June; 30 feet. Very showy, often confused with *Hydrangea petiolaris*. Clings by aerial rootlets. Hardy at New York. Rich, moderately moist soil.

Ivy, Boston or Japanese (*Ampelopsis tricuspidata* or *Veitchii*). Best deciduous clinging vine for buildings. Sometimes injured in winter when young. Very highly coloured in fall. Rapid growing. Leaves



ROSTRUM OF THE AMPHITHEATRE, ARLINGTON. WISTARIA VINES WHICH WILL GROW TO ENORMOUS SIZE IN TIME, SHOULD NEVER BE PLANTED ON SMALL, WEAK PILLARS



ONE OF THE ADVANTAGES IN HAVING A FOUNTAIN NEAR THE HOUSE IS THAT IT BRINGS BIRDS TO BATHE AND TO DRINK AT YOUR VERY DOORSTEP

normally entire, but occasionally three-partite. ——, English (*Hedera Helix*). Best evergreen foliage vine, but liable to winter killing in exposed places north; flourishes with slight shelter. Dense mass of foliage. Self-sustaining. Any soil. Numerous varieties, varying in size of leaf and colouring; some quite dwarf.

Jasmine, Sweet (*Jasminum nudiflorum*). Earliest flowering slender vine. Fragrant, large yellow flowers before the leaves. March, April. Not hardy North. Native in the Southern States. —— (*J. officinale*). White, in summer. Requires protection at Philadelphia.

Kudzu Vine (*Pueraria Thunbergiana*). Best very rapid growing foliage vine with herbaceous top. Will cover enormous stretches in a season. Makes a dense screen. Plant the tubers deeply. In the South the top becomes woody.

Matrimony Vine (*Lycium Chinense*). 12 feet. Ovate leaves, bright green, 3 inches long with scarlet fruits. Has been used as a hedge on a wire trellis. —— (*L. halimifolium*). Less vigorous, smaller, grayish green; fruit orange.

Moneywort (*Lysimachia nummularia*). Evergreen ground cover. Good for banks and rocks. Sometimes a weed in lawns. Light green, nearly round foliage, half inch across, with profusion of cup-shaped yellow flowers in summer.

Mountain Spurge (*Pachysandra terminalis*). Evergreen, with yellowish green, thick leaves, slightly toothed. Good for undergrowth in shrubberies. Flowers white, in small terminal spikes in May. Attractive to bees.

Myrtle. See Periwinkle (below.)

Partridge Berry (*Mitchella repens*). The only hardy evergreen that carpets the ground and bears bright red berries all winter, and lasting till June. Native to the woods, but can be bought from the nurserymen. Shady places.

Pea, Everlasting (*Lathyrus latifolius* and *grandiflorus*). See Herbaceous Perennials, p. 226.

Periwinkle, Trailing Myrtle (*Vinca minor*). Will hold steep terraces. Ideal ground cover in dense shade, and where grass fails under trees. Purplish blue flowers in spring. Evergreen. Escaped from cultivation, and plentiful near old-time settlements. Several varieties.

SCARLET RUNNER. See FIRE BEAN.

SILVER VINE (*Actinidia arguta*). Best arbour vine. Free from insects and fungi. Twining, not clinging. Leaves dark green, quite tough, with reddish petioles. Flowers greenish white in June, followed by yellow fruit with fig-like flavor. Easily increased by seeds, cuttings, or layers. —— (*A. polygama*). Flowering in July. Lighter green, often silvery, variegated above the middle. A pretty plant, but attracts cats.

SILK VINE (*Periploca Græca*). For arbours, trellis, and tree trunks. Fragrant flowers July, August, and retaining foliage to late in fall; 40 feet. Dark green, shining. Any well-drained soil in sun. Hardy even in Canada, on the ground, in sun, with light protection.

TRUMPET CREEPER (*Tecoma radicans*). Best orange-red flowered vine for arbours and rough places. Tubular flowers 4 to 6 inches long, in clusters. Will climb trees. Flowers only on parts exposed to sun. Beautiful varieties.

VIRGIN'S BOWER (*Clematis Virginiana*). For covering old stumps, hedgerows, etc. Fragrant, white flowers in profusion in July. Light, loamy soil and on limestone, but well drained.

VIRGINIA CREEPER (*Ampelopsis quinquefolia*). Most graceful deciduous vine for covering buildings, old trees and arbours. Perfectly hardy, thriving in any soil. Large, five-partite leaves. Usually needs training, but some forms cling. Var. *Engelmanni* clings better, and is much brighter scarlet in fall. Not quite so coarse.

WILD POTATO, MAN-OF-THE-EARTH. See HERBACEOUS PLANTS, p. 224.

WISTARIA (*Wistaria Chinensis*). Best early flowering permanent vine. Foot-long racemes of delicately scented mauve, pea-like flowers in May, before the leaves. Climbs and twines easily. Attains great lengths. For walls, trellises, trees, houses. Failure of flower is usually due to combination of sun and frost in early spring. Second small crop of flowers in August. Does best when left severely alone. Prefers deep, rich soil, but will grow elsewhere. Propagates by layers. Also a white variety. —— (*W. multijuga*). Has racemes 2 to 3 feet long, but smaller flowers. ——, AMERICAN (*W. speciosa*). Has shorter racemes and is less vigorous; attaining to 40 feet.

WOODBINE (*Lonicera Periclymenum*). See HONEYSUCKLE.

GARDEN FURNITURE

"And all without were walkes and alleys dight
With divers trees enrang'd in even rankes;
And here and there were pleasant arbours pight
And shadie seats, and sundry flowering bankes
To sit and rest the walkers' wearie shanks."

— EDMUND SPENSER'S "*Faërie Queene.*"

CHAPTER XVI

GARDEN FURNITURE

WHEN, in the exuberance of our joy at being released from the confines of the house in the spring we spend in the open air as much of every day as we can until autumn storms and chilly winds drive us to our firesides again, garden furniture assumes practical importance to the home maker. Breakfasts and teas under a tree or leafy arbour imply comfortable seats, at least, for families predisposed to prolong each meal with much conversation. A tendency on the women's part to carry all portable work out of doors — the hulling of strawberries, the shelling of peas, the arranging of flowers for the house, letter-writing, mending, and the superfluous but pretty needlework — these various occupations necessitate plenty of weather-proof chairs that are not too conducive to laziness, yet are comfortable enough not to precipitate flight. To have a charming garden and never be able to live in it, or even to sit down in the shade for a few peaceful moments to enjoy its beauty in different lights and atmospheres (the most potent factors of every garden picture), is to neglect a golden opportunity. A garden has need to be lived with on friendly, intimate terms if its interests are to be safeguarded and if the same taste which characterises the interior of the home is to be exercised in its surroundings where, unhappily, the gardener's, alone and undirected, is too often expressed. Where a garden lacks an appreciative master or mistress of intelligence and taste it is apt to be no more inviting than a house without one. Such ever lacks personality and soul.

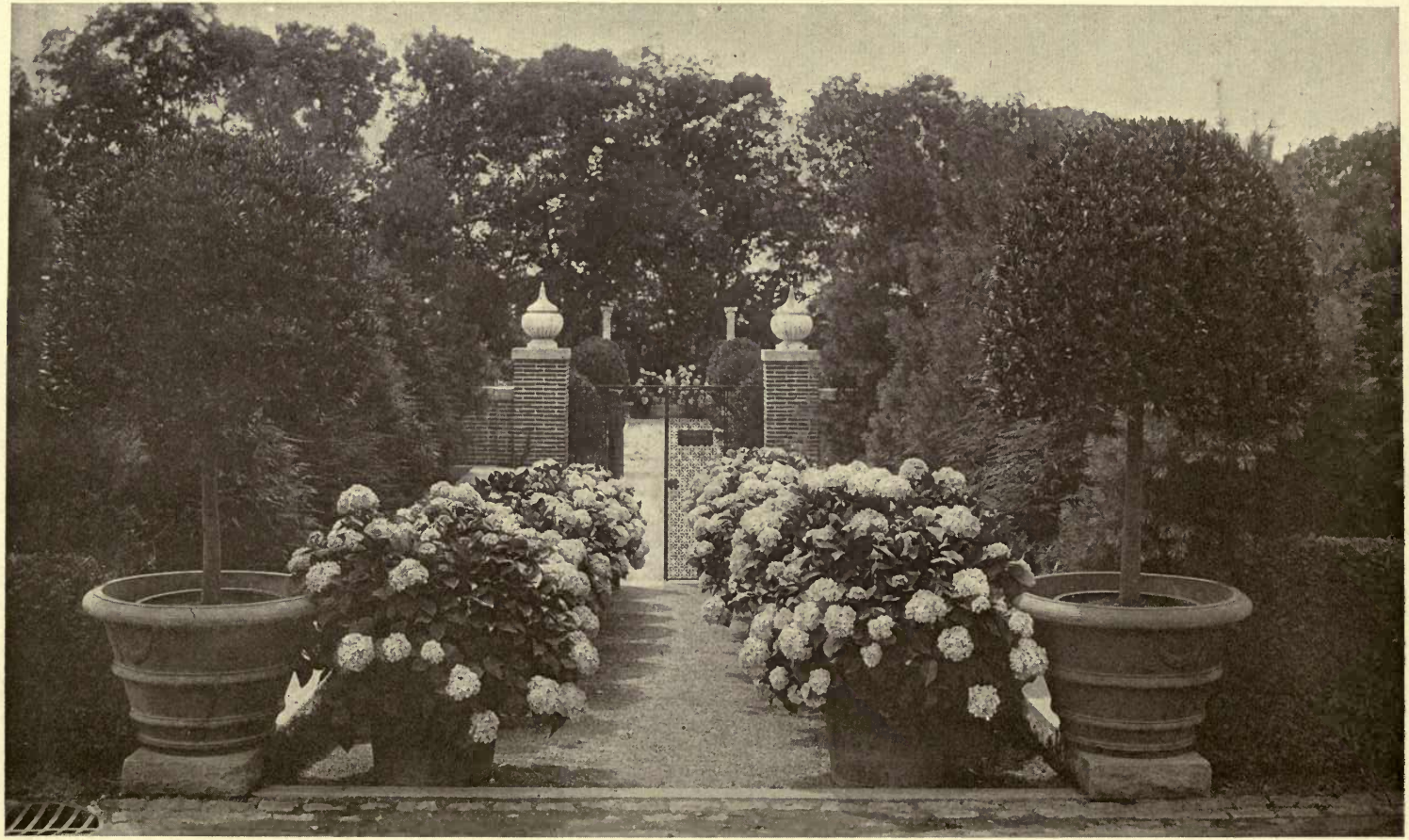
In this busy country gardening is regarded as of interest chiefly to women of leisure, and to them, for the most part, it is left; whereas in England especially, but on the Continent, too, one rarely meets an educated man, and almost never a gentlewoman, not intelligently, usually actively interested in gardens, and as ready to discuss them at the dinner-table as to talk about the latest play or novel. The Europeans live in their gardens, and have wondrously beautiful ones in which, as a rule, they take keen interest and just pride. Very fast are we following in their footsteps.

When the pioneer in Colonial times sat on the stump of the tree he had felled to rest and enjoy the view, he had as comfortable a seat as many of his wealthy descendants still provide in their gardens, if, indeed, they provide any at all. Most out-of-door furniture is hopelessly uncomfortable, crude, or inartistic — quite unnecessarily so, which is not to say that a split log laid between two trees for a seat in a wild garden is not everything it ought to be. But a little more thought expended on a seat, a fountain, or other detail, seemingly trivial and unimportant, makes a surprising difference in the effect, and does much to lift a country home above the level of the commonplace. The furnishings need not be expensive, but they should be well adapted to their uses and they ought to be beautiful.

Garden seats, like other out-of-door furniture, may be of either one of two kinds — made at home or manufactured to be sold. Both are possible to people of small means. The rustic garden seat, as commercially manufactured out of rough logs, contorted branches and twisted roots, with all their natural excrescences left on to torture the sitter, may be provided by a gentle, well-meaning little woman simply because it is everywhere offered for sale and she



THE MARBLE TABLE, ON WHICH THE SUN-DIAL RESTS, IS A COPY OF ONE UNEARTHED AT POMPEII



ENTRANCE TO A FORMAL GARDEN ENLIVENED BY A DOUBLE ROW OF HYDRANGEAS. LARGE TERRA-COTTA, STONE, OR MARBLE POTS FOR BAY TREES, CLIPPED EVERGREENS, BOXWOOD, AND SHEARED PRIVET FOR FORMAL EFFECTS ARE DECORATIVE ADDITIONS TO THE VERANDA OR FLOWER GARDEN

assumes that it must be what is needed in her garden. Yet such a seat, placed in the hot sun, is about as comfortable as the gridiron on which St. Lawrence was broiled alive. However, simple, dignified rustic work may be made by the village carpenter out of small cedar logs, which are the most durable, or of arborvitæ, or locust, or birch, whose respective merits are in the order named. Good design implies an absence of meaningless ornament. It means lines that suggest strength and comfort. Rustic arbours, trellises, rose arches, bird houses, and garden seats and tables for afternoon tea or breakfast out of doors, rustic frames for woven-wire back-stops on the tennis-court, all suggest informality and the naturalistic treatment of the home grounds. A rustic pergola next a house that is in the severely classic style of Colonial architecture would be an anachronism. But for a simple little country cottage or a house whose architecture is nondescript, rustic garden furniture may be not only the cheapest but the most appropriate and artistic that can be had.

Any amateur who can use a saw and hammer can make a rustic arch to grow climbing roses on. A row of arches seen from end to end looks like a continuous bower of greenery. If a garden scene be flat or monotonous there is no better way to diversify it and give it charm than by using arches freely across the paths — never an isolated one on a lawn. Quick-growing annual vines will cover them while the permanent climbers are starting. Few vines do well on iron arches which bake in the hot sun. They are top-heavy, unlovely things and are apt to be loosened by the wind in many cases. They rust. But if they must be used for the sake of their strength, try to enclose them in a wooden lattice. No arch should be less than a yard across; a greater width is preferable, especially if a frame be needed through which an

especially beautiful garden picture may be seen. A single broad bowery arch will lead the eye toward a distant vista as surely as a pointed finger.

An Elizabethan half-timbered house, whose projecting beams are coated with tar and oil, has its wooden lattices that screen the drying ground and its arbour that is overhung with Wichuraiana roses, clematis and wild grape, coated with the same effective tar preservative which, however, cannot be used on seats lest it rub off on one's clothes. The seats for the garden around this house are built of sturdy oak planks left to weather-stain — one plank laid across four log uprights forms a seat; another narrower one, joined by large oak dowels to two of the tall upright posts, serves for a back. Although cedar and locust rot less readily than other wood used in gardens, even these are greatly benefited by having the ends of the posts that are sunk in the earth dipped in tar.

Spar varnish as well as tar oil preserves rustic and wooden work that is exposed to the weather; moreover, it does not conceal the natural colour and grain of the wood and it protects it from borers.

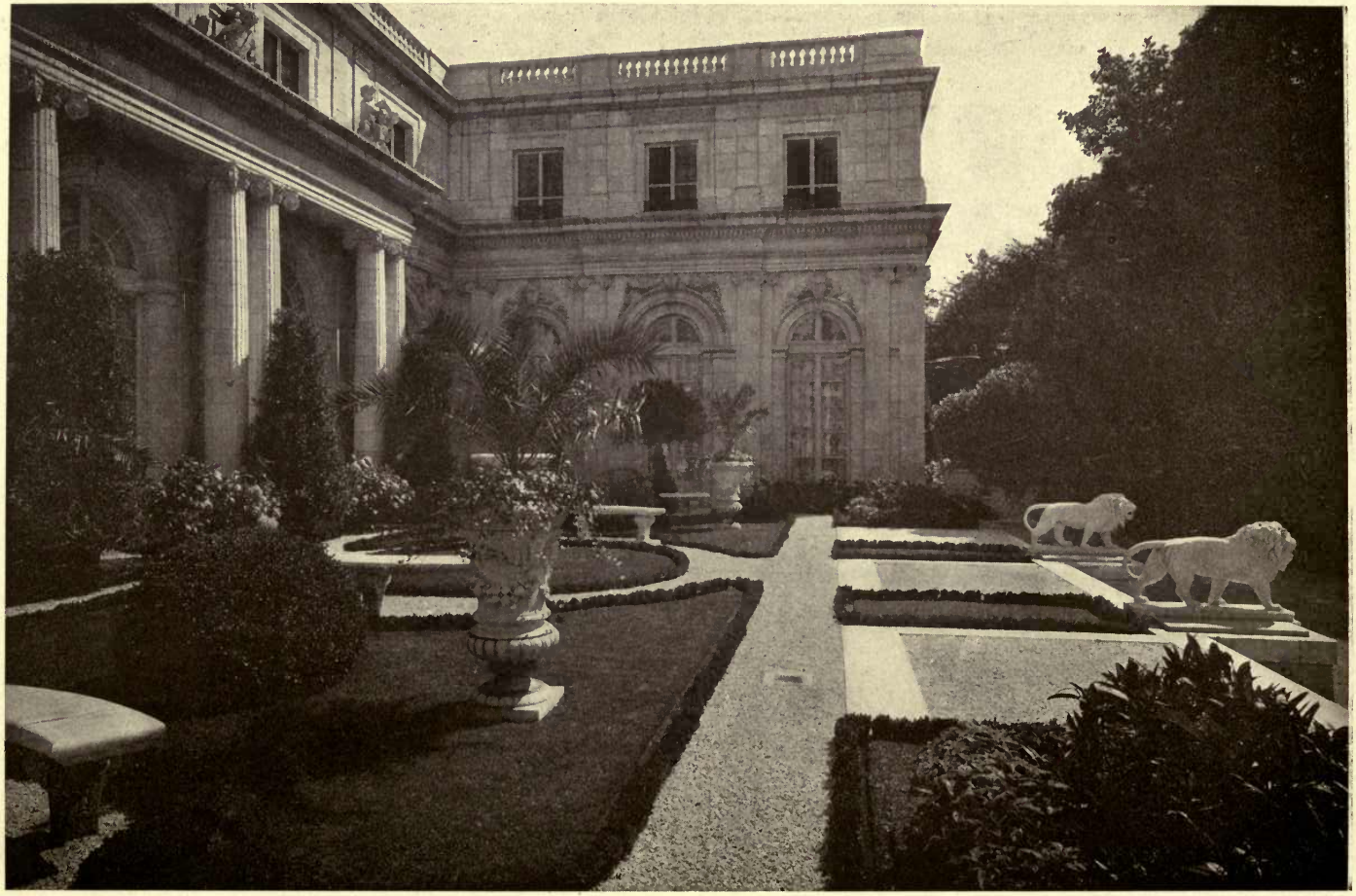
Not long ago a man, who was brought before a judge for some petty offence, was asked his occupation.

"Boring worm holes with hot wire in antique furniture, Your Honour," said the prisoner at the bar.

Worm holes in rustic furniture never increase its value, however, even to the unwary; on the contrary, they may utterly destroy it. The popular hickory chairs and settees for camps, piazzas and rustic summer houses, need varnish especially, for they usually contain occupants other than human. If little piles of sawdust form daily on the floor under the spots where the borers are tunnelling nursery holes for destructive descendants in the



RUSTIC FURNITURE, THAT MAY BE LEFT OUT IN ALL WEATHERS, IS A COMFORTABLE KIND TO OWN. UNDER THIS OLD APPLE TREE TEA IS SERVED IN THE LONG SUMMER AFTERNOONS



THE FORMALITY OF ARCHITECTURE HERE DEMANDS EXTREME FORMALITY IN THE TREATMENT OF THE GROUNDS IMMEDIATELY ADJOINING IT. STONE SEATS, VASES AND LIONS, USED IN PAIRS, ARE PERFECTLY CONSISTENT WITH THIS STYLE OF HOUSE

furniture, a small hand syringe should be filled at once with a strong carbolic wash to be injected into the holes before the varnish is applied.

Old English gardens, and the copies of them that were made in this new land during Colonial times, usually contained a few choice pieces of wooden furniture that were painted white to correspond with the pillars, cornices, railings, pilasters and other trim of the dwelling. Delightfully designed and comfortable settees, some with lattice patterns like Chinese fret-work on their backs, and smooth slats for seats that shed the rain; straight settees to place against a hedge at the end of a direct garden walk, or on either side of the front door on the porch; semi-circular settees for niches in garden walls or at the turn of a curved path; circular settees to go around the trunk of a tree that afforded shade or a fine view — all these were counted desirable accessories of a garden about a house built in the Georgian or Colonial style. Happily such seats are being manufactured again to-day, the exact copies of good old models. When soiled, they may be scrubbed and finally repainted. They are heavy and do not overturn in storms. If they can be given a permanent position — and no seat should ever be placed permanently where there is not either a pleasant prospect, shade, or some other good reason for its being there — it pays to lay a few bricks or a shallow bed of concrete where the seats rest on the soil, lest dampness injure them in time. Such seats look best with a dark hedge or shrubbery for a background against which the pattern of the white lattice at their backs stands out in high relief. They are also appropriate and beautiful in pergolas, since they, too, had their origin in Italy. But they imply a certain formality of house and garden treatment, and are as much out of place next a very modern-looking house or where

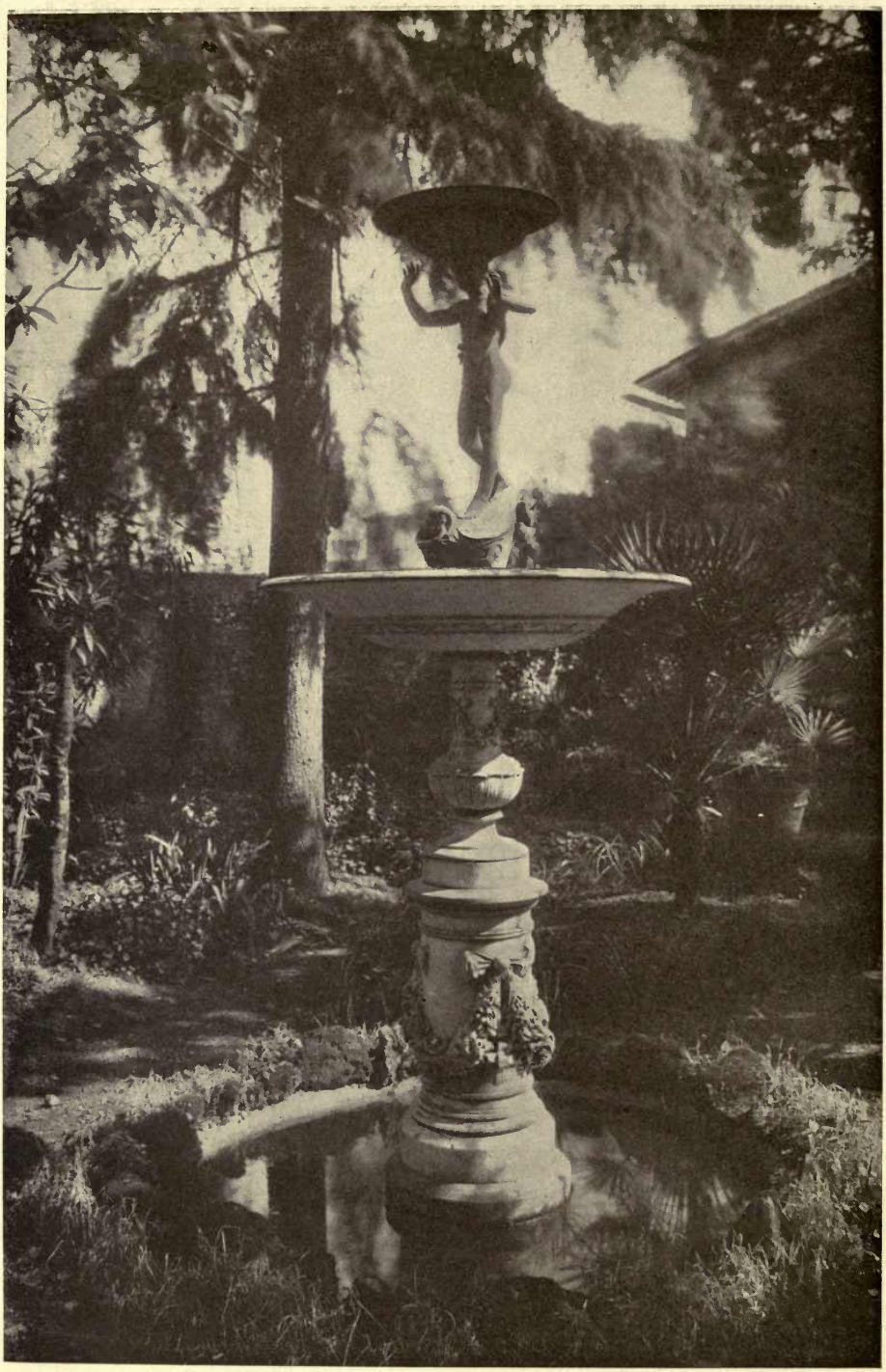
half wild or naturalistic planting come close to the doors as a patent swing would be in an old-fashioned garden. Fitness is a factor in giving pleasure.

The Colonial lattice of many patterns is, perhaps, seen at its best about Southern houses. An elaborately illustrated chapter might be devoted to the infinite variety of the lattice alone. Where it is used for porches, galleries, fences, screens, well enclosures, summer houses and garden furniture generally, it has a decorative value none may gainsay.

Wood is the most popular material for out-of-door furniture, chiefly because it may be adapted to various styles; it can be made up artistically and it is cheap, but comparatively few gardeners have any idea of the charming and varied uses to which lattices may be put aside from screening off unsightly places and affording a foothold for vines. Iron can rarely be introduced into a garden unless it be handsomely wrought into grills for gates or frames for lanterns at an entrance, or used for arches to support roses and other climbers, as has been said. The iron mushroom seats painted white or green that are often seen in public parks; the comfortless settees made of painted iron slats, usually rusty and destructive of clothes; the iron chairs with alleged decorations of iron grape-vines; the iron figure of a little Negro boy holding out a ring to tie a horse to; iron urns that afford the scarlet geraniums and magenta petunias a rarely lost opportunity to swear at each other; the iron fountain where a child holds a rusty iron umbrella over its head to catch the spray; the iron deer that stands at bay amid harmless flower beds on a suburban lawn — these and all their awful kind are rubbish for the junk heap, intolerable eyesores to people of taste. Would that they might be banished forever from the American flower garden!



AN OUT-OF-DOOR LIVING-ROOM. RED CEDAR IS THE BEST WOOD FOR RUSTIC WORK, WHITE CEDAR AND BIRCH COMING NEXT
MORE AND MORE SHALL WE LIVE IN THE OPEN AIR



FOUNTAIN OF BRONZE AND MARBLE DESIGNED BY ELIHU VEDDER

In Tuscany, hard-baked clay most exquisitely designed and wrought into garden seats, sun-dial mounts, fountains, vases, big pots for bay trees and smaller jardinieres for porches and window gardens, well-heads and decorative devices for garden walls, are still manufactured from Renaissance and ancient classical models. Florence, which remains the centre of this craft in terra cotta after centuries of supremacy, exports quantities of her charming wares to America. Mrs. Watts, the widow of the Royal Academician, conducts a village industry for the manufacture of similar work at Guilford, England; and in this country, where we have an infinite variety of beautiful clays, a few potteries, not so well patronised as they should be, are beginning to supply the home market with pieces of original design. Red terra cotta is never conciliatory with flowers, but for evergreens it is especially effective. Some great pots of biscuit-coloured clay, three feet in diameter, with a simple Aztec arrow design about their top, hold shapely specimens of pyramidal boxwood at a garden entrance. They were made at a woman's pottery in New Jersey. After the sprinklings of a single summer they took on a mossy tone. Cecil Rhodes used forty similar pots for blue hydrangeas in his famous garden at Cape Town, South Africa.

Garden furniture in stone and marble is an indulgence for the wealthy only. Somehow marble looks harder and colder in our country than in sunny Italy where, weather-worn and harmonious though it be, a dark background of ilex, cypress, or other evergreen is invariably given it; but it could be used here much oftener and more effectively than it is, especially in Southern and California gardens, were imported pieces sold less absurdly high and if a proper setting for them might be furnished. A single piece of marble statuary, like Elihu Vedder's charming figure of a

youth upholding a bronze bowl to catch the splash from the fountain in Mr. Louis Tiffany's garden, has a reason for existence, and it suffices on a large estate of remarkable beauty. But to clutter a garden with marble figures and mutilated fragments of antiques from a New York auction room in the misguided belief that such are essential to an American garden designed in the Italian style is "good taste misplaced."

Old English formal gardens contained much lead statuary which was counted more harmonious with the sombre landscape than white marble images. A craze for the curious figures has recently revived among our cousins across the sea, but it has little to feed upon because many were shipped to America as "works of art" during the Revolution and promptly melted into bullets here — probably the most effective use to which they were ever put. A very few that escaped the smelting pot are still extant in old New England and Southern gardens.

Native stone of mellow colour makes admirable garden furniture and it ages well, which cannot be said of marble in our climate. Simple pieces in stone may be made at a not prohibitive cost by any good mason, working by the day — slab seats and tables for pergolas, sun-dial pedestals and low, broad steps, for example. Wherever stone and marble seats are used in shady places, portable cushions will surely be laid on them by the sensitive and the rheumatic. Elaborate ornaments for entrance gates, balustrades for terraces, fountains and vases will probably be secured by one's architect and seldom be home made, unless one can secure the services of some exceptionally skilful stone-cutter with an artistic eye who can be trusted to copy a picture or scale drawing. But Italian masons, expert in decorative work, are already numerous in this country, and more will be forthcoming. See to it that the replicas

of the urns and vases, if Greek and Roman models be used, have deeper bowls than most of them possess, and holes in the bottom for drainage, otherwise the plants set out in them on terraces, walls and balustrades will surely wither away. The brims should be smoothly rounded if they are not to cut the vines growing over the edge. Vases need not necessarily be used in pairs, even in the most formal of gardens. A replica of a splendid great Greek vase may well be given a niche to itself in the concave wall of a clipped evergreen hedge against which its faultless symmetry stands revealed in bold relief. To duplicate a dignified and satisfying ornament of this character is but to cheapen its effect.

Everyone who may have a fountain in his garden should not deprive himself of the refreshing sound of its splashing waters, the mirror-like effect of its pool, the companionship of birds which it will bring close to his doorstep. Nothing attracts so many feathered neighbours as fresh water for them to bathe in and to drink — (they are not squeamish, they will drink their baths). Goldfish, which should live in every fountain basin to keep mosquito larvæ exterminated, may be tamed, as well as the birds, to eat out of one's hand. Robins, thrushes, cat-birds, brown-thrashers and mocking-birds, especially, are inveterate bathers and hard drinkers. No others are finer songsters.

One cannot think of fountains without seeing on the inner eye visions of the superbly beautiful ones in Italy, the land of garden magic. At the Villa d'Este, where the use of fountains, cascades, canals, rivulets and pools would seem to have reached the pinnacle of possibility, thanks to the abundant water supply of the river Anio, there is a studied simplicity in the midst of grandeur which it would be well to follow in gardens large or small. No posing mermaids combing their hair, no spouting dolphins, no

Dianas surprised at the bath, detract from the central point of interest in these fountains — just a single jet of water tossed high into the air — forty or fifty feet in the larger ones — and falling in clouds of misty spray among the towering cypresses and pink acacias in the surrounding groves. Everywhere is water in motion — the same water utilised over and over again — now sparkling and prismatic in the sunshine, now deep and dark in pools that reflect the exquisite colours of the surrounding vegetation or the moss-grown balustrades on the lofty terraces that rise tier upon tier up the steep, verdant hillside. Whoever owns even a little brook and a little cottage on a hill and a little money to invest in joy will wish to play with some of the ideas for garden making that crowd his mind as he strolls through the grounds designed by Cardinal Ipolito d'Este, the master gardener of his day. For the principles of art are of well nigh universal application.

Happily for those to whom stone work and marble are prohibitively costly, there are now made in this country some admirable reproductions of classical models in artificial stone that withstand frost. The fountain of conventionalised lions that is the central feature of a small circular garden in a carriage turn-around, illustrated in the second chapter of this book, is made of a concrete composition that is as practical as it is effective and inexpensive, having weathered five winters without showing a crack. A village carpenter made the moulds for the round basin into which concrete was poured to dry and harden in the sun. Garden furnishings in artificial stone — Pompeiian tablets, Roman chairs, Greek vases, Italian fountains, pergola columns, balustrades, well-heads, ornaments for entrance gates and garden walls, sundial mounts, big decorative pots for flowers, clipped boxwood, bay and formal evergreen trees, may all be bought so cheaply that



A SHELTERED PERGOLA UNITING HOUSE AND GARDEN. NOTE THE LOW WAINSCOT EFFECT OF THE PRIVET HEDGE; THE NOTES OF HARMONIOUS COLOUR INTRODUCED BY THE BRICK PAVEMENT, FIELD-STONE ARCHES AND WOODEN SEATS; THE AIRY GRACE OF THE CLEMATIS VINES

no one who can afford the luxury of architecture in the classic style for house and garden need forego a coveted piece for their embellishment. Even the stone lantern, without whose saving presence to frighten away evil sprits no Oriental man with a hoe would be content to work in a Japanese garden, is now reproduced in an artificial material so durable as to almost defy detection. From the old-fashioned garden, however simple, the sun-dial need not be missing when standards like the best ones designed in the seventeenth and eighteenth centuries may be bought for ten dollars or less.

Quite suddenly and violently, as is our wont, have Americans taken to pergolas: every type of house and garden in this broad land now boasts one. Many are meaningless, leading from no place in particular to no place in particular; opening up no vista through leafy arches toward a beautiful view; sheltering no cosy breakfast or tea table; inviting no one to rest awhile on comfortable, shady seats; growing no especially beautiful vines (usually the crimson rambler to the exclusion of every other one); extending no architectural lines that end too abruptly; tying no building to the surrounding garden or landscape — having, in short, no well-thought-out reason for their existence. Following fashion blindly is a weakness not confined to clothes. But how exceedingly beautiful is the well-made, well-placed, vine-clad pergola!

Its forerunner in old-fashioned gardens, the alley of pleached or braided trees that afforded our ancestors a cool retreat on a hot day, a fragrant bowery to stroll through on a summer evening, has been almost wholly superseded by this recent innovation. The Italian word "pergola" itself means a certain kind of grape; but it soon came to be applied to the rough-and-ready arbours over which the vine was grown — stones of all sizes picked up in the vineyard

and piled dry into pillars on which was laid, as an open roof, a trellis of projecting poles. A temporary lattice between the pillars on the sides of the pergola was used, too, until the vines that were trained over it reached the roof, when the side poles were usually removed. Within the leafy pergola the hardy Italian peasant and his family spent many hours of every day, and the out-of-door living-room was nothing if not practical and picturesque. The pergola had long been enjoyed by the contadino's prosperous neighbours, who adopted it purely for its æsthetic value, not for the utilitarian purpose of growing grapes. In the great villas around the principal Italian cities it was constructed almost exclusively of stone, the massive columns, plain or carved, were wreathed with flowering vines: passion flower, clematis and roses of every hue; the wooden cross-beams overhead festooned with swaying garlands none of which, however, wafted a fragrance so delicious as that of the blossoming grape. Along the leafy colonnade stone seats were placed. Much formal entertaining has been done in such an out-of-door reception room; much happy family life is still passed in Italian pergolas far less pretentious.

As the pergola may vary from the severe lines of the classic marble columns to the rough pillars of dry-laid field stone, stucco and rubble, or the knotty posts made of trees with their branches lopped off for the supports of its roof, it is adaptable to every kind of home conditions here. Only the Italian is an adept at utilising the materials lying next his hand. We have need to apply his methods, for the most picturesque effects are often attained with the simplest materials. Carving or other ornamentation on the columns enters into hopeless competition with the vines.

Because it is adaptable to so many styles of houses and gardens, and may be made of whatever material best suits its surroundings

and the size of the owner's purse, and chiefly because it is as beautiful as it is useful and healthful, the pergola will not soon, if ever, disappear from this land of its adoption. A happier day is dawning for Americans if they, like the Italians, may be enticed out of houses through leafy pergolas to spend more of every day under the open sky.

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