

French Gardening

By William Robinson

NOTE BY THE PRESIDENT OF THE INTERNATIONAL GARDEN CLUB



IN THIS number we continue, by request, the series of articles on French gardening begun in the December 1918 issue of the JOURNAL. The following account of some of the most famous public gardens of Paris is, more than ever, applicable, particularly now that the International Garden Club is affiliated with the Park Department of the City of New York.

ZELIA K. HOFFMAN.

The Bois de Boulogne



HIS park illustrates how we improve by friction, so to speak. Till 1852 the Bois was a forest; but Napoleon III, in his admiration for English parks, determined to add their charms to Paris, or rather to improve upon them, and the Bois is one result. In concert with the municipality, the Emperor dug out the lakes, and made the waterfalls. As a combination of wild wood and noble pleasure garden, it is magnificent. The deer are placed in an enclosed space. The Bois is splendid too as regards size—containing more than 2000 acres, of which nearly half is wood, a quarter grass, one-eighth roads, and more than seventy acres water. Though with large expectations in other directions, the reader will hardly be prepared for the statement that the French beat us in parks. When first entered this may not be much liked, the numerous Scotch pines around one part of the water giving it a somewhat barren look, but a few miles' walk through it soon dispels this idea. It has more than the beauty and finish of any London park in some spots, but, on the other hand, vast spreads of it are covered with a thick, small, and somewhat scrub-like wood, in which wild flowers grow abundantly, unlike the prim London parks. There are plenty of wild cowslip dotted over even the best kept parts of it in spring, while the planting on and near the islands is far superior to anything to be witnessed in our own parks. To see what the Bois de Boulogne really is, the visitor should keep to the left when he enters from Passy or the Arc de Triomphe and go right to the end of the two pieces of ornamental water. Then, standing with his back to the water, he will notice an elevated spot, and by going to that spot he will enjoy one of the finest views he has ever seen in a public park—the water in one direction looking like

an interminable inlet, beautifully fringed with green and trees, while in the other several charming views are opened up, showing the hilly suburban country towards Boulogne, St. Cloud, and that neighbourhood. Then by turning to the right and returning to Paris by the west side of the water, he will have a pretty good idea of what a noble promenade, drive, and garden this is.

It is in all respects worthy of its grand approaches, of the width and boldness of which those who have not seen Paris can have no conception. There is some bold rockwork attempted and well done about the artificial water; and very creditable pains are taken to make the vegetation along it diversified in character, so that at one place you meet conifers, at another rock shrubs, in another Magnolias, and so on; without the eternal repetition of common things which one too often sees at home. At Longchamps, near the racecourse, which attracts half Paris to this part of the wood on fine Sundays, there is a large and ambitious cascade. Above the spring or shoot of the cascade is an arch of rustic rocks, over which fall ivy and rock shrubs, the whole being backed with a healthy rising plantation. Although made at great expense, this cascade cannot be pronounced a happy one; to me it is less pleasing than the less pretentious ones at the head of the large lakes.

The fault of the most frequented part of the Bois de Boulogne is that the banks which fall to the water are in some parts a little too suggestive of a railway embankment, and display but little of that indefiniteness of gradation and outline which we find in the true examples of the real "English style" of laying out grounds. But you do not notice this from the position above described, from whence indeed the scene is charming. The fault just hinted at is common to almost every example of this style to be seen about Paris; and in most of their walks, mounds, and the turnings of their streams, you can detect a family likeness and a style of curvature which is certainly never exhibited by nature, so far as we are acquainted with her in these latitudes. But it is only justice to say that, taking the park as a whole, it is far before our London ones in point of design.

Apart from the perfect keeping of the whole, the chief lesson to be learnt here by the English planter is the value of paying far greater attention than we at present do to artistic planting of choice hardy trees and shrubs. The islands seen from the margin of the lakes are at all times beautiful, in consequence of the presence of a varied collection of the finest shrubs and trees tastefully disposed. They show at a glance the immense superiority of permanent embellishment over fleeting annual display. The planting of these islands was expensive at first, and required a good knowledge of trees and shrubs, besides a large amount of taste in the designer; but it is so done that were the hand of man to be removed from them for half a century they would not suffer in the least. Nothing could be easier than to find examples of gardens quite as costly in the first instance, which, while involving a yearly expenditure, would be ruined by a year's neglect. It is summer, and along the margins of these islands you see the fresh pyramids of the deciduous cypress starting from graceful surroundings of hardy bamboos and pampas grass, and far beyond a group of bright silvery Negundo in the midst of dark-green vegetation, with scores of tints and types of tree-form around. It is spring, and the whole scene is animated by the cheerful flush of bloom of the many shrubs that burst into blossom with the strengthening sun, and while the oaks are yet leafless the large swollen flower-buds of the splendid deciduous Magnolias may be seen conspicuous at long distances through the other trees. In autumn the variety and richness of the tints of the foliage offer a varied picture from week to week; and in winter the many picturesque and graceful forms of the deciduous trees among the evergreen shrubs and pines offer the observant eye as much interest as at any other season.

Looking deeper than the immediate results, we may see how the adoption of the system of careful permanent planting enables us to secure what I consider the most important point in the whole art of gardening—variety, and that of the noblest kind. Mr. Ruskin tells us that “change or variety is as much a necessity to the human heart in buildings as in books; that there is no merit, though there is some occasional use, in mo-

notony; and that we must no more expect to derive either pleasure or profit from an architecture whose ornaments are of one pattern, and whose pillars are of no proportion, than we should out of a universe in which the clouds were all of one shape and the trees all of one size." These words apply to public gardens with ever greater force. In them we need not be tied by the formalism which comfort, convenience, and economy require the architect to bear in mind, no matter how widely he diverges from the commonplace in general design. In garden or in park there is practically no noticeable tie; in buildings there are many. Vegetation varies every day in the year. In buildings more than in any other things unchangeableness is stamped. In the tree and plant world we deal with things by no means remotely allied to ourselves—their lives, from the unfolding bud to the tottering trunk, are as the lives of men. In the building we deal with things much less mutable, which have a beginning and ending like all others, but their changes are much less apparent to our narrow vision. Therefore the opportunity for variety is beyond comparison greater in public or private gardening than in the building art, or indeed in any other art whatever.

Without the garden, Lord Bacon tells us, "Buildings and pallaces are but grosse handy works; and a man shall ever see that when ages grow to civility and elegancie, men come to build stately sooner than to garden finely: as if building were the greater perfection." As yet we are far from perfection as builders, and the garden holds still the relationship to the building art which is described by Bacon. Indeed, it is more backward; for in a day when building has eloquent champions to put in some such place as that quoted, and, moreover, give us practical illustrations of their meaning, we can find no proof that any knowledge of the all-important necessity for variety exists in the minds of those who arrange or manage our gardens, public or private. And yet this unrecognised variety is the life and soul of high gardening. If people generally could see this clearly, it would lead to the greatest improvement our gardening has ever witnessed. Considering the variety of vegetation, soil, climate, and position which we can command, it is impossible to doubt that our power to produce variety is unlimited.

The necessity for it is great. What is the broadly marked bane of the public as well as private gardening of the present day? The want of variety. What is it that causes us to take little more interest in the ordinary display of "bedding out," fostered with so much care, than we do in the bricks that go to make up the face of a house? Simply the want of that variety of beauty which a walk along a flowery lane or over a wild heath shows us may be afforded by even the indigenous vegetation of one spot in a northern and unfavourable clime. But in our parks we can, if we will, have an endless variety of form, from the fern to the grisly oak and Gothic pine—inexhaustible charms of colour and fragrance, from that of the little Alpine plant near the snows on the great chains of mountains, to the lilies of Japan and Siberia. And yet out of all these riches the fashion for a long time has been to select a few kinds which have the property of producing dense masses of their particular colours on the ground, to the almost entire neglect of the nobler and hardier vegetation. The expense of the present system is great, and must be renewed annually, while the gratification is of the poorest kind. To a person with no perception of the higher charms of vegetation the thing may prove interesting, and to the professional gardener it is often so; but to anybody of taste and intelligence, busy in this world of beauty and interest, the result attained by the above method is almost blank. There can be little doubt that numbers are, unknown to themselves, deterred from taking any interest in the garden; in fact, it is a blank to them. They in consequence may talk or boast of having a "good display," &c., but the satisfaction from that is very poor indeed, compared with the real enjoyment of a garden.

The one thing we want to do to alter this is to break the chains of monotony with which we are at present bound, and show the world that the "purest of humane pleasures" is for humanity, and not for a class, and a narrow one. Eyes everywhere among us are hungering after novelty and beauty; but in our public gardens they look for it in vain as a rule, for the presence of a few things that they are already as familiar with as with the texture of a gravel walk, must tend to impress them

with an opinion that our art is the most inane of all. In books they everywhere find variety, and some interest, if high merit is rare; the same is the case in painting, in sculpture, in music, and indeed in all the arts; but in that which should possess it more than any other, and is more capable of it than any other, there is as a rule none to be found. This is not merely the case with the flower-garden and its adjuncts; it prevails in wood, grove, shrubbery, and in everything connected with the garden. What attempt is made in our parks and pleasure grounds to give an idea of the rich beauty of which our hardy trees are capable, although these places afford the fullest opportunity to do so? How rare it is to see one-tenth of the floral beauty afforded by deciduous shrubs even suggested! Hitherto our gardening has been marked by two schools—one in which a few, or comparatively few, “good things” are grown; the other, the botanic garden school, in which every obtainable thing is grown, be it ugly or handsome. What we want for the ornamental public garden is the mean between these two; we want the variety of the botanic garden without its scientific but very unnatural and ugly arrangement; we want its interest without its weediness and monotony.

There is no way in which the deadening formalism of our gardens may be more effectually destroyed than by the system of naturally grouping hardy plants. It may afford the most pleasing results, and impress on others the amount of variety and loveliness to be obtained from many families now almost unused. To suggest in how many directions we may produce the most satisfactory effects, I have merely to give a few instances. Suppose that in a case where the chief labour and expense now go for an annual display, or what some might call an annual muddle, the system is given up for one in which all the taste and skill and expense go to making of features that do not perish with the first frosts. Let us begin, then, with a carefully selected collection of trees and shrubs, distinguished for their fine foliage—by noble leaf beauty, selecting a quiet glade in which to develop it. I should by no means confine the scene to this type alone, as it would be desirable to show

what the leaves were by contrast, and to vary it in other ways—with bright beds of flowers if you like. It would make a feature in itself attractive, and show many that it is not quite necessary to resort to things that require the climate of Rio before you find marked leaf beauty and character. It would teach, too, how valuable such things would prove for the mixed collection. Many kinds of leaf might be therein developed, from the great simple-leaved species of the rhubarb type to the divided ones of Lindley's spiraea, and the taller *Ailanthus*, *Kolreuteria*, *Gymnocladus*, &c. The fringes of such a group might well be lit up with beds of lilies, irises, or any showy flowers; or better still, by hardy flowering shrubs. An irregularly but artistically planted group of this kind would prove an everlasting source of interest; it might be improved and added to from time to time, but the original expense would be nearly all.

Pass by this rather sheltered nook, and come to a gentle knoll in an open spot. Here we will make a group from that wonderful rosaceous family which does so much to beautify all northern and temperate climes. And what a glorious bouquet it might be made, with American and European hawthorns, double cherries, plums, almonds, pears, double peaches, &c., need hardly be suggested. You would here have a marked family likeness prevailing in the groups, quite unlike the monotony resulting from planting, say, five or six thousand plants of *Rhododendron* in one spot, as is the fashion with some; for each tree would differ considerably from its neighbour in flower and fruit. Then, having arranged the groups in a picturesque and natural way, we might finish off with a new feature. It is the custom to margin our shrubberies and ornamental plantings with a rather well-marked line. Strong-growing things come near the edge as a rule, and many of the dwarfiest and prettiest spring-flowering shrubs are lost in the shade or crowding of more robust subjects. They are often overshadowed, often deprived of food, often injured by the rough digging which people usually think wholesome for the shrubbery. Now I should take the very best of these, and extend them as neat low groups, or isolated well-grown specimens, not far from, and

quite clear of the shade of the medium-sized or low trees of the central groupings. The result would be that choice of dwarf shrubs like *Ononis fruitcosus*, *Prunus triloba*, the dwarf peach and almond, *Spiraea prunifolia* fl. pl., the double Chinese plum, and any others of the numerous fine dwarf shrubs that taste might select, would display a perfection to which they are usually strangers. It would be putting them as far in advance of their ordinary appearance, as the stove and greenhouse plants at our great flower shows are to the ordinary stock in a nursery or neglected private garden. It would teach people that there are many unnoticed little hardy plants which merely want growing in some open spot to appear as beautiful as any admired New Holland plant. The system might be varied as much as the plants themselves, while one garden or pleasure ground need no more resemble another than the clouds of to-morrow do those of to-day.

In the rich alluvial soil in level spots, near water or in some open break in a wood, we might have numbers of the fine herbaceous families of Northern Asia, America and Europe. These, if well selected, would furnish a type of vegetation now very rarely seen in this country, and flourish without the slightest attention after once being planted. In rocky mounds quite free from shade we might well display true Alpine vegetation, selecting dwarf shrubs and the many free-growing, hardy Alpines which flourish everywhere. To turn from the somewhat natural arrangements, as the years rolled on, occasional plantings might be made to show in greatest abundance the subjects of greatest novelty or interest at the time of planting. In one select spot, for example, we might enjoy our plantation of Japanese evergreens, many of them valuable in the ornamental garden; in another the Californian pines; in another a picturesque group of wild roses; and so on without end. Were this the place to do any more than suggest what may be done in this way in the splendid positions offered by our public gardens and parks, I could mention scores of arrangements of equal interest and value to the above. If the principle of annually planting a portion of a great park or garden of this kind were adopted

instead of giving all the same routine attention after the first laying out, I am certain it would prove the greatest improvement ever introduced into our system of gardening. The embellishment of the islands in the Bois de Boulogne is very successful, but it is merely one of many fine results that artistic planting would secure. Plantations as full of interest and beauty might be made in other portions, and the fact is the vegetable kingdom is so wide that, although the combinations of plant knowledge and taste necessary to success might not often be found in the designer, the materials for any number of varied pictures in vegetation could never fail.

The principle here advocated should not only be applied to the details of one garden, but on a greater scale, and with even more satisfactory results, to all the gardens of any great city.

Take a city with half a dozen parks, a score of squares, and perhaps numerous avenues and open places where trees or flowers might be grown—take, in fact, the public gardening of Paris or London at the present day. Now, the ordinary course of things, several kinds of trees and plants, or several dozen kinds, will be found to do best in all these places, and under the usual management the same subjects will predominate in each. To the people who live in the neighbourhood of each the effect will be perhaps agreeable; but it must become monotonous. To prevent people endeavouring to see any life or interest in vegetation, the true way is to make a few things predominate everywhere. It is also a simple and easy way for the superintendents; there is no “bother with it,” but there is also little pleasure, and little of that enthusiastic effort which is the highest of pleasures, and one only enjoyed by those who work at things for their own sakes. Innumerable beds of *Cannas* and *Pelargoniums* are better than nothing, no doubt, but are bad where the opportunity for a higher kind of embellishment exists. For the credit and encouragement of our city gardening, it is necessary that we confine ourselves to the better kind of trees, as many good kinds do not grow well in streets; but when it comes to the parks and open gardens, it is a very different matter. If each park and square in a city were

arranged entirely different from every other, the enjoyment of those in the immediate neighbourhood of each would be none the less, while the gardening treasures of the town would be greater in proportion to the number of parks or squares. A walk in any direction would reveal new charms to those having the slightest sympathy with nature, and help to sow the seed of love for it, were the ground ever so barren. A walk to distant parks or squares would furnish an object to the many, who might be expected to take an interest in gardens under such management; and objects for walks in towns and cities cannot be too numerous.

One park might display minute floral interest in all its variations, with the larger subjects only used as the necessary setting, shelter, and greenery. Another, with a good soil and favourable exposition, might be made to show the dignity and variety of the forest trees of northern and temperate Europe, Asia, and America. One square might, like Berkeley Square in London, or the little squares in the Place Napoleon III. in Paris, be made very tasteful and effective from simple inexpensive materials—such as green grass, hardy shrubs, and trees. Another might display leaf-beauty so as to remind one of the vegetation of the South Sea Islands; another, chiefly the dwarf prairie and hill flora of cold and temperate countries; and so on—each class of vegetation to be considerably adapted to soil, conditions, and surroundings of the place as regards shelter, liability to foul vapours, position in relation to other gardens and avenues, and so on. In fact, this great principle of variety is capable of doing so much for public gardens, that it should be made compulsory on the heads of these establishments to make each as different from its brother as it possibly could be made. Carried out, then, as I have slightly indicated, both in the private and public place, gardening would be nearer to proving the “greatest refreshment to the spirits of man” than it has ever been in any age.

There is one feature in the Bois de Boulogne which cannot be too strongly condemned—the practice of laying down here and there on some of its freshest sweeps of sloping grass enor-

mous beds containing one kind of flower only. In several instances, near the very creditable plantations on the islands and margins of the lake, may be seen hundreds of one kind of tender plant in a great unmeaning mass, just in the positions where the turf ought to have been left free for a little repose between the very successful permanent plantations. This is done to secure a paltry unnatural and sensational effect, which spoils some of the prettiest spots. Let us hope that some winter's day, when the great beds are empty, they may be neatly covered with green turf.

The Bois being rather level, heavy rains used to lie a long time on the surface of the roads, &c., before being absorbed; to have remedied this by means of sewers would have cost about 160,000£, so the plan was adopted of constructing a number of tanks at intervals, on an average, of 200 metres, and capable of containing from ten to twenty cubic metres of water each. These tanks are generally circular in form and crowned by a truncated cone—a form which of course requires less mason's work than the rectangular, the latter being adopted only when large trees interfere with the plan. The rectangular cisterns measure from four to six metres in length, one to two metres in width, and two to three metres in depth; they are arched at the top, and, like the circular ones, provided with a trapped hole, which serves, first, to withdraw the centrings, and afterwards to clean out the cisterns if they become choked with refuse carried down by the water; the floor is uncovered, and barbicans are left in the footwalls to aid the escape of the water. These cisterns are placed either under the footpaths or in side alleys, so as not to interfere with the grass or the flower beds. The water is conveyed to the cisterns by means of drain pipes 4 in. in exterior diameter, the first joint being embedded in a mouth-piece of Portland cement. These mouthpieces are nearly 20 in. in length; they are cast in wooden moulds, and cost 2f. 90c. per metre.

Not far from the lower lake, and at about the centre of the Bois, occurs the Pre Catalan—an enclosed space, occasionally the scene of fêtes, having several refreshment rooms, an open-

air theatre, and a peculiar feature in the form of a cow-house, containing about eighty milch cows. The milk is sold to those who frequent the place, especially to horsemen who ride out from Paris for exercise in the early morning, and call here on their way to have a draught of new milk. These features, however, are kept well in the background, and the place generally bears the appearance of an ornamental garden, well worthy of a few minutes' inspection from any horticultural visitor who is traversing the Bois or on the fashionable drive, which is near at hand.

Gardeners may be interested to learn that every year, on the 30th of August, the fête of their order is held here, the patron saints being St. Fiacre and St. Rose. Here the gardeners of Paris and their friends assemble to the number of three or four thousand, and amuse themselves with dancing, games, and the usual accompaniments of a Parisian fête, including fireworks, of course. As a garden, the Pre Catalan is distinguished by good specimens of standard Magnolias, both the evergreen *grandiflora* and the deciduous kinds, and large masses of flowers and fine-leaved plants.

Apart from these, which are well known and extensively employed elsewhere about Paris, I noticed that fine aquatic, *Thalia dealbata*—usually grown in stoves in England—in robust condition in the midst of a shallow running stream, the canna-like leaves large, handsome, and 22 inches long by 12 broad, and the flower stems 7 and 8 feet high (17th September). It is one of the handsomest and most distinct of all aquatic plants, quite different from the normal type, and should be much used with us. *Erianthus Ravennae*, an ornamental grass, was in flower at the same date, and 10 or 11 feet high. *Lantana delicatissima* was used as margining carpeting to some beds here. Simple and inconspicuous thing as it is, it is multiplied to the extent of from 12,000 to 20,000 every year, which may serve to give another idea of the way in which ornamental gardening is carried on by the municipality of Paris.

Watering the Parks

The climate of Paris being dryer than that of London, and the soil less conducive to the growth of grasses, the verdure maintained in the more ornamental parts of the Paris parks is naturally a source of some surprise to visitors. It is difficult to give the reader, who has not seen it himself, an idea of how perfectly the watering is done. The contrast between the parks and gardens of London and Paris is in this way by no means flattering to our way of managing them. It will be better to quote one of our journals to represent our own side of the question. "We have repeatedly called the attention of the authorities during the summer to the melancholy state into which the parks were falling. The mischief we desired to guard against is now done. The grass is of the colour of hay, and the little of it that remains is being so rapidly trodden down that in many parts what used to be greensward is now nothing better than hard road." So wrote the *Pall Mall Gazette*, one day last summer; and really, about the end of July and the beginning of August, nothing could look more unattractive than the London parks. These parks are supported at heavy public cost; and it is a great mistake to let them be rendered as brown and uninviting as the desert by an exceptional drought, which of course will happen at the very season when the grounds ought to be in perfect beauty and attractiveness. The French system of watering gardens, &c., is excellent, or at least the generally adopted system; for at the Jardin des Plantes there are yet watering-pots made of thick copper, which are worthy of the days of Tubal Cain, but a disgrace to any more recent manufacturer, and a curse to the poor men who have to water with them. Generally Parisian lawns and gardens are watered every evening with the hose, and most effectively. It is so perfectly and thoroughly done, that they move trees in the middle of summer with impunity; keep the grass in the driest and dustiest parts of Paris as green as an emerald, the softest and thirstiest of bedding plants in the healthiest state; and as for the roads, the way they are watered cannot be surpassed. They are kept agreeably

moist without being muddy, while firm and crisp as could be desired. Of course all this is effected in the first instance by having abundance of water laid on, but that is not all. With us, even where we have the water laid on, we too often spend an immense amount of labour in distributing it. In Paris generally it is applied with various modifications of the hose, which pours a vigorous stream, divided and made coarse or fine either by turning a cock, by the finger, or even by the force of the water.

This is the way they apply it to the roads, the smaller bits of grass about the Louvre, and other places; but when watering large spreads of grass in the parks the system is different. One day in passing by the racecourse at Longchamps I saw it carried out in perfection. The space had become very much cut up by reviews and races; but in any case it is watered to keep it as green as possible in summer. At first sight it would appear a difficult thing to water a racecourse, but two men were employed in doing it effectually. Right across the whole open space from east to west stretched an enormous hose of metal, but in joints of say about six feet each. The whole was rendered flexible by these portions being joined to each other by short strong bits of leathern hose, each metal joint or pipe being supported upon two pairs of little wheels. By means of these the whole may be readily moved about without the slightest injury to the hose in any part. At about a yard or so apart along this pipe jets of water came forth all in one direction, and at an angle of about 45 deg., and spread out so as to fully sprinkle the ground on one side; and thus four feet or so of the breadth of the whole plain of Longchamps was being watered from one hose. There were two of these hoses at work, one man attending to each of them; the only attention required being to pass from one end of the line to the other, and push forward the hose as each portion became sufficiently watered. The simplest thing of all is the way they make the perforations for the jets along the pipe. They are simply little longitudinal holes driven in the pipe with a bit of steel. They must be made across the pipe, or the water will not spread in the desired direction. The

wind causes the water to fall in the most divided form possible. With an apparatus thirty metres long a man can easily water 1500 square metres per hour, moving the hose three times. Of course the quantity of water depends on the force in the conduits and the length of the tubes. With a pressure of 22 metres and hose 320 metres long the quantity of water per metre and per minute is nearly two litres. The hydrants in the grass are placed about fifty metres apart, and the wheels of the trucks are of wood, in order not to cut the grass. There are many modes of spreading water in use about Paris, but none of them half as good as this simple method. More than a mile of this kind of hose may be seen at work at one time and with hundreds of jets playing.

The hose for watering the roads is arranged on wheels also, but, as it must be at all times under command when carriages pass by, it has only one rose or jet, which is directed by a man who moves about among the carriages with the greatest ease, and keeps his portion of the road in capital condition. Of course it is a much cheaper way than carrying the water about as we do, as then we must have horse and cart, wear and tear, and man also; whereas, by having the water laid on, all the men have to do in watering is to attach the hose and commence immediately. In the same way as much work can be done in a garden in a day as with ten men by the ordinary mode; so that in the end it is much cheaper to have the water laid on. There can be no doubt that to the efficient watering much of the success of the fine foliaged plants in Paris gardens is to be attributed.

As a good system of watering is of the highest importance to cities and towns in every region of the earth a more detailed and technical account of the watering of Paris gardens may prove useful to some. The article first appeared in the *Engineer*, and refers chiefly to the arrangements for the Bois de Boulogne, but the system is the same for all other places.

The watering is performed chiefly by means of long hose with a copper branch, the latter being provided with a stop-cock, so that the delivery of the water may be arrested

instantly, without having to turn off at the plug. The hose is generally twelve metres long and 2 in. in diameter; it is constructed either of leather, vulcanized india-rubber or canvas; the first and second costing from 6s to 6s. 8d. per yard, and the last only 10d. or 11d. The screw connecting pieces, which are made of gun metal, cost about 6s. The leather hose, losing the oily matters from its pores, through the pressure of the water, soon becomes brittle, but it lasts on an average two years; the rubber is light and has no other fault but that of wearing out in twelve months, while the canvas hose soon cuts to pieces on the gravel. A system of mounting such tubes on small trucks so as to keep them from trailing on the ground, and consequently making them lighter to handle and more durable, was tried for a long time, but this has been superseded by a very simple and inexpensive invention, that of tubes made of sheet iron, lined with lead and bitumen, and connected together by means of leather joint pieces, the whole being mounted on small wooden trucks. The cost of this apparatus complete, with the single exception of the branch, is only 70f., or 5f.20c. per metre, and it will last on the average four years, while the old hose on trucks costs 127f., or nearly double.

The cost of that now in use is made up as follows: Eleven metres of iron tubes, 19f.25c.; leather junction pieces, 25f.60c.; ten trucks 20f.; ligatures, 5f.15c.; total, 70f. The apparatus in use at the present moment in Paris consists of five tubes, each about 6 feet long, and a shorter one to which the branch is attached, so that only five trucks are required; the trucks also in practice consist of a piece of plain wood, a little more than a foot in length, the tube being bolted on to the upper side and the runners fixed to the lower. As regards the connexion of the joints, this is made sometimes with brass flanges, but a joint which answers equally well, and is much cheaper and lighter, is that made with copper wire; for the branch joint, however brass flanges are always used, as the branch itself is removed and carried away when not in use, while the tubes are simply folded together, fastened with a piece of cord, and left in any convenient corner.

It is found in practice that a man cannot manage an apparatus of this kind, which is more than about 40 feet long; but for watering grass, in which case the hose is left stationary in one place for some time and then moved to another, several apparatus are, if necessary screwed on to each other. The effect of these tubes or hose have been carefully studied. The following is a table of results with a twelve metre apparatus, the inner diameter of the nozzle of the branch being 0·012 meters, or rather less than half an inch, and the branch itself being held at an angle of 45 deg.:—

PRESSURE AT THE SURFACE	QUANTITY OF WATER GIVEN PER SECOND	EXTENT OF THE JET	QUANTITY OF WATER GIVEN WHEN THE BRANCH IS NOT ON
<i>metres</i>	<i>litres</i>	<i>metres</i>	<i>litres</i>
8	0-90	10	1-80
12	1-25	12	2-40
15	1-40	14	2-75
20	1-60	15	3-10
25	1-80	15	3-40
30	1-90	15	3-60
35	2-00	16	3-80
46	2-10	16	4-00

These results, it is stated, are averages, for some apparatus give superior or different results, although all the conditions appear the same. Experience shows that with the same amount of pressure in the pipes the extent of the jet is enormously reduced by the lengthening of the hose. Of course the diameter of the nozzle of the branch depends on the pressure within the tubes, but it was thought necessary to have a uniform model, and 0·012 metres was adopted as distributing the water most advantageously with a pressure of eight to fifteen metres. An apparatus twelve metres long, with a branch one metre in length, and giving an average jet of twelve metres, is effective over a radius of twenty-five metres. The plugs or hydrants are placed at intervals of thirty metres on roads twenty metres wide, and forty metres apart in narrower roads, when they are all on one side of the road.

Formerly all the roads in and about Paris were watered by means of carts which held one ton of water. It required twenty-four tons to water the Avenue de l'Impératrice properly, the road round the lakes, and some few others. The whole of the roads in the Bois de Boulogne, as they now stand, would require ninety tons of water, which would cost, men, horses, and carts included, 13f. per ton, or 200,000f (8000 l.) for the six summer months. The new system of watering by hose costs for the whole of the Bois but 55,000f., or little more than a quarter of the expense under the old system. In this estimate, however, no account is taken either of the cost of the water itself or of the capital expended for its conveyance. Finally, it is remarked, as regards the Bois de Boulogne, that the cost is, in fact, little more than that of the maintenance of the apparatus in repair, or about 250l. a year, the work being done by the body of men called cantonniers, who have little else to do during the summer months.

A water cart drawn by one horse, in cases where the hydrants are 400 metres apart, will water 1300 metres an hour over a width of four and a half metres—that is to say, a cart will water about 6000 square metres, using in the operation three tons of water. But in the parks it was found that the cart should pass over every spot once in the hour, and this gives, with an average of seven hours' effective work, an expenditure of three and a half litres, or more than seven pints per day per square metre. The cost of labour, cart, and horse is given at about 10f. per day. In calculating the cost of watering by means of hose and branch, the hydrants or plugs must necessarily be much more numerous, the intervals between them being in the case of watering by cart 400 metres, while in the case of the hose the intervals are on an average only thirty-five metres. The total length of the roads to be watered in the Bois de Boulogne is 53,000 metres, and the number of hydrants 1500, whereas under the old system 132 would have sufficed, a difference of 1380 hydrants, costing 4l. each, or 5s. a year for interest, and, in addition, 4s. for repairs, &c. The latter is contracted for at the following rate—namely, eight

centimes per metre, or about three farthings a yard run of conduit, and 4s. per hydrant.

A hundred and twenty men are required for watering the 540,000 square metres of road in the Bois; in five hours a man waters 4500 metres of road three times over, besides watering the side paths once, which the carts of course did not touch. The cost is given as follows:—

	<i>Francs</i>
Interest and maintenance of hydrants.....	13,800
Cost and repair of hose, &c.....	6,200
Wages of 120 men at half a day for six months.....	35,000
Total.....	<hr/> 55,000

The surface watered being, in round numbers 600,000 square metres, and the average number of days 180, the cost per square metre and per day is

$$\frac{550,000}{180 \times 600,000} = 0.00051$$

showing a great economy as compared with the expense of watering by cart. The hose and branch dispense (making allowance for interruptions caused by traffic and by moving the apparatus) a litre of water per second, or 18,000 litres in five hours; the quantity is therefore about the same as that dispensed by cart, only it is effected in five instead of seven hours. Previous to the general adoption of the hose and branch, experiments were tried with small handcarts containing a quarter of a ton, and drawn by two men, but these were found to cost more than the old carts.

Another method of keeping roads and pathways in order, namely, by the application of deliquescent salts, is interesting from its novelty. The salts used are chloride of magnesium or of calcium. The former salt does not exist in commerce, but large quantities have been obtained from the residue of the manufacture of carbonate of soda, at a cost of 15f. the 100 kilogrammes; it may, however, be produced for less than a third of that rate. The salt is well calcined (in order to make it lose as much of its water as possible), and then coarsely pul-

verized; it is sprinkled over the road by hand. The effects of this deliquescent salt, as compared with those of water, are not uniform; in the case of roads with much traffic the salt is twice as dear as water, because of the necessity of constant renewal, but in side paths and roads with little traffic the salt was found far more economical. The use of deliquescent salts has this great advantage, namely, that it does not interfere in any way with the circulation, and maintains the pathways clear of dust or mud, while of course in places where there is no grass to be watered the whole of the cost of water-pipes and hydrants would be saved.

The surface of grass which has to be watered with Seine water in the Bois de Boulogne is about 250 acres, and the quantity of water required to keep it in good condition averages ten litres, or more than two gallons, per square metre, every third day. To water this surface in the same manner as the roads would require more than a hundred hose working ten hours a day, and this would entail a very heavy cost. But as the grass does not require to be treated with the same regularity as the roads one system adopted is to place a branch on a stand at an angle of 45 deg., and allow it to play over the grass for a certain time, when it is removed to another spot; in this way one man can manage ten apparatus.

The total amount of water taken from the Seine for the purposes of the Bois never exceeds 240 litres, or about fifty-four gallons, per second. The natural meadows by the side of the Seine form about 400 acres, but the soil here is alluvial, and therefore irrigation is only necessary in very hot weather, whereas the soil upon which the artificial grass is planted is nearly all sand, and the greatest care is required to keep the turf in order. The total cost of the arrangements of conduits and pipes for the supply of water to the Bois and the avenues leading to it is given at 1,520,000f., or £60,8001; the number of stop-cocks is 385, and of hydrants 1600; and the length of the conduit is 66,200 metres. It results from these figures that the cost of the whole has amounted to 22f. 97c., or about 18s., 5d. per metre.

THE PARC MONCEAU

This is on the whole the most beautiful garden in Paris, and well shows the characteristics of the system of horticultural decoration so energetically adopted in that city. It is not large, but exceedingly well stored, and usually displays a vast wealth of handsome exotic plants in summer. In spring it is radiant with the sweet bloom of early-flowering shrubs and trees, every bed and bank being covered with pansies, Alyssum, Aubrietia, and all the best known of the spring flowers, while thrushes and blackbirds are whistling in the adjacent bushes, as if they were miles in the country, instead of only a few minutes' walk from the Rue du Faubourg St. Honoré. This park was laid out so long ago as 1778 for Philip Egalité as an "English garden," and passed through various changes, till it at last fell into the hands of the municipality of Paris, a very astute corporation, who have converted it into a charming garden, and are not likely to part with it in a hurry.

The system of planting adopted here as well as in the other gardens of the city is often striking, often beautiful, and not unfrequently bad. It is striking when you see a number of that fine showy tree, *Acer Negundo variegata*, arranged in one great oval mass, silvery and bright; it is beautiful when you see some spots with single specimens and tasteful beds, every one differing from its neighbour; and bad when you meet with about a thousand plants of one variety stretched around a collection of shrubs, or flopped down in one large mass, or when a number of plants too tender for the climate are put out for the summer months amidst those that grow with the greatest luxuriance. "The subtropical system will never do for England" say some practical men. The truth is, that it requires to be done very carefully in Paris, and there is a great mistake made by putting out a host of tender plants merely because they are exotics, unless indeed you wish to contrast healthy beauty with ragged ugliness. In the Parc Monceau there is usually a group of *Musa Ensete* worth making a journey to see, and masses of *Wigandia*, *Canna*, and such Solanums as *Warce-*

wiczii, that are worthy of association with it; but I have also seen there beds of Begonias without a good leaf or a particle of beauty—scraggy stove plants, with long crooked legs, and a few tattered leaves at the topband, poor standard plants of the sweet-verbena at the same time. If it were an experimental ground, one would not mind, of course; but this, in a garden where its omission would leave almost nothing to be desired, is too bad. In some respects this park is really unequalled, and therefore one regrets the more to see these blemishes, which let us hope will not be repeated.

What first excites the admiration of the visitor used to monotonous and highly-toned type of garden now seen so much with us is the variety, beauty of form, and refreshing verdure which characterize this garden—good qualities that are so often absent in too many of our own. The true garden is a scene which should be so delightfully varied in all its parts—so bright, so green, so freely adorned with the majesty of the tree, the beauty of the shrub, the noble lines of the fine-leaved plant, the minute beauty of the dwarfer plants of this world; so perpetually interesting, with vegetation that changes with the days and seasons, rather than puts the stamp of monotony on the scene for months; and so stored with new or rare, neglected or forgotten, curious or interesting plants—that the simplest observer may feel that indefinable joy which lovers of nature derive from her charms amidst such scenes, but which few, except those of a high degree of sensitiveness and power of expression, like Shelley, can give utterance to. It would be teaching him to use the words of Goethe—

“To recognize and love
His brothers in still grove,
Or air or stream.”

If any good at all is to be done by means of flowers and gardens, you must give men a living interest, a lasting curiosity in them, and some other objects than those which can be taken in by the eye in a moment. Numbers are occupied and delighted with gardening as it stands at present, but it can hardly

be doubted that a system with something like an aim at true art would be sure to attract many more; and it is patent that there are numbers even among the educated classes who take no interest whatever in the garden, simply because they can in few places find any real beauty or interest in it. To confine ourselves to a single phase of the subject, it is certain that if all interested in flower gardening had an opportunity of seeing the charming effects produced by judiciously intermingling fine-leaved plants with brilliant flowers, and of which there are such handsome examples in this park, there would be an immediate revolution in our flower-gardening, and verdant grace and beauty of form would be introduced, and all the brilliancy of colour that could be desired might be seen at the same time. The beauty and finish of many of the finer beds here, are of the highest order, in consequence of the adoption of the principle of variety. Here is a bed of *Erythras* not yet in flower; what affords that brilliant and singular mass of colour beneath them, a display which makes the visitor pause when he comes near the bed? Simply a mixture of the lighter varieties of *Lobelia speciosa* with variously coloured and brilliant *Portulaccas*. The beautiful surfacings that may thus be made with annual, biennial, or ordinary bedding plants, from mignonette to *Alternanthera*, are infinite. At the risk of driving off the general reader we must now begin to use hard names, and go deeper into purely technical and horticultural matters, for we shall not elsewhere meet an opportunity of doing so with so much advantage. It is only fair to warn the reader that this is a purely horticultural chapter.

The following are a few examples of these graceful mixtures seen in this garden during the past year:—A bed of *Arundo Donax verisicolor*, springing from *Lobelia speciosa*; a bed of *Ficus elastica*, the ground beneath perfectly hidden by luxuriant mignonette; *Wigandia*, springing from the little silvery sea produced by the mixture of the blue and white varieties of *Brachycome iberidifolia*; *Caladium esculentum*, from a rich surface of flowering *Petunias*; glowing *Hibiscus*, from *Gnaphalium*; graceful dwarf *Dracaenas*, from very dwarf *Alternan-*

theras; Aralias, from *Cuphea*; taller Dracaenas, from a deep and richly-toned mass of *Coleus Verschaffeltii*; *Erythrina*, from a sweet low carpet of soft purple *Lantana*; tall Solanums, on mats of that most finished little plant *Nierembergia*; sea-green Bocconias, from the dwarf dark-toned *Oxalis corniculata* var., and so on. Reflect for a moment how consistent is all this with the best gardening, and the purest taste. Your bare earth is covered quickly with these free-growing dwarfs; there is an immediate and a charming contrast between the dwarf-flowering and the fine-foliaged plants; and should the last at any time put their heads too high for the more valuable things above, they can be cut in for a second bloom, as was the case with some Petunias here which had got a little too high for their slow-growing superiors. In the case of using foliage plants that are eventually to cover the bed completely, annual plants may be sown, and they in many cases will pass out of bloom and may be cleared away just as the large leaves begin to cover the ground. Where this is not the case, but the larger plants are placed thin enough to always allow of the lower ones being seen, two or even more kinds of dwarf plants may be employed, so that the one may succeed the other, and that there may be a mingling of bloom.

It may be thought that this kind of mixture would interfere with what is called the unity of effect that we attempt to attain in our flower-gardens. This need not be so by any means; the system could be grandly used in the most formal of gardens laid out on the massing system pure and simple; besides, are there not positions in every place where such arrangements could be made without interfering with what is sometimes called the "flower garden proper?" Some may say we cannot grow the fine-leaved plants in England. But this is not so. The most beautiful bed of those above enumerated was that composed of variegated *Arundo* and *Lobelia*—the former a plant that may be readily grown on good soils in Britain, and merely requiring the protection of a little ashes, refuse, or an old mat over the crown in winter, even in soils that are not particularly favourable, while the *Lobelia* is one of the many

fragile and delicately pretty little plants that do perhaps best of all in England. The fact is, we can find numbers of plants among the hardy and free-growing kinds, which will enable us to enjoy all the desired variety and diversity, even if we cannot wisely venture to plant out *Wigandias* and coloured *Dracaenas* except in the more favoured districts of southern England and Ireland.

One of the most useful and natural ways of diversifying and dignifying a garden, and one that we rarely or never take advantage of, is abundantly illustrated here, and as it is perhaps the most important lesson to be learnt in the garden, we will discuss it at some length. It simply consists in placing really distinct and handsome plants alone upon the grass, to break the monotony of clump margins and of everything else. They may be placed singly or in open groups near the margins of a bold clump of shrubs or in the open grass; and the system is applicable to all kinds of hardy, ornamental subjects, from trees downwards, though in our case the want is for the fine-leaved plants and the more distinct hardy subjects. Nothing, for instance, can look better than a well-developed tuft of the broad-leaved *Acanthus latifolius*, springing from the turf not far from the margin of the walk through a pleasure ground; and the same is true of the *Yuccas*, *Tritomas*, and other things of like character and hardiness. We may make attractive groups of one family, as the hardiest *Yuccas*; or splendid groups of one species like the *Pampas* grass—not by any means repeating the individual, for there are about twenty varieties of this plant known on the Continent, and from these half a dozen really distinct and charming kinds might be selected to form a group. The same applies to the *Tritomas*, which we usually manage to drill into straight lines; in an isolated group in a verdant glade, they are seen for the first time to best advantage; and what might not be done with these and their like by making mixed groups, or letting each plant stand distinct upon the grass, perfectly isolated in its beauty!

Let us again try to simply illustrate the idea. Take an important spot in a pleasure ground—a sweep of grass in face of a

shrubbery, and see what can be done with it by means of these isolated plants. If, instead of leaving it in the bald state in which it is often found, we try to place distinct things in an isolated way upon the grass, the margin of shrubbery will be quite softened, and a new and charming feature added to the garden.

If one who knew many plants were arranging them on the ground, and had a large stock to select from, he might make no end of striking effects. In the case of the smaller things, as the *Yucca* and variegated *Arundo*, groups of four or five good plants should be used to form one mass, and everything should be perfectly distinct and isolated, so that a person could freely move about amongst the plants without touching them. In addition to such arrangements, two or three individuals or a species might be placed here and there upon the grass with the best effect. For example, there is at present in our nurseries (I once saw quantities of it preparing for game covert at Mr. Standish's, of Bagshot) a great Japanese *Polygonum*, which has never as yet been used with much effect in the garden. If anybody will select some open grassy spot in a pleasure ground, or grassy glade near a wood—some spot considered unworthy of attention as regards ornamenting it—and plant a group of three plants of it, leaving fifteen feet or so between the stolls, a distinct aspect of vegetation will be the result. The plant is herbaceous, and will spring up every year to a height of from six feet to eight feet if planted well; it has a graceful arching habit in the upper branches, and is covered with a profusion of small pale bunches of flowers in autumn. It is needless to multiply examples—the plan is capable of infinite variation, and on that account alone should be welcome to all true gardeners.

The preceding part of this chapter was written in 1867; but as this park is so full of interest and instruction for all practically interested in the decoration of the flower-garden, the following description, written on the spot during the early part of last September, may be of some interest to the horticultural reader:—

Entering the park from the Boulevard Malesherbes we pass along an avenue of plane trees that leads from the high and ornamental gates. The walk on each side is bordered with roses in lines of different colours,—the front row well pegged down. They form long borders on each side, and are very ornamental in early summer. A carriage road leads through the park, so that it may be seen by those who drive through—but imperfectly, as the more interesting objects are along the shady side and boundary walks. On each side of the central drives glimpses are caught of very diversified and graceful foliage and flowers, but conspicuous on the margin is a great mass of *Caladium*, with leaves three feet long and two and a half feet wide, springing from a groundwork of blue *Lobelia*.

You can have no real beauty in an ornamental garden without the aid of full grown trees, their majesty producing an effect which cannot be dispensed with. Here they approach the drive in groups, some times overshadowing plantations of dense shrubs, at others springing clean from the grass. In some places they are so crowded as to make one wish for a little breath, in others they disappear, and spreads of grass and dwarfer plants permit the eye to range. On one side of the route may be noticed a hairy bamboo with black polished stems, and rods ten, twelve, and fourteen feet high; on the other, one with yellow stems of about the same height. An old specimen of the Abyssinian *Musa* is vigorously pushing up a massive flower shoot scarcely yet seen through the leaves, and in consequence they are by no means so ornamental as those of younger plants which devote all their energy to foliage. Tree ferns, and the curious and graceful *Beaucarnea* with the great swollen base, are seen here and there, the *Beaucarnea* apparently not a first-rate subject for placing in the open air. Next to the great *Musa Ensete*, the best Banana is the well-known edible *Musa Cavendishii*: it is in perfect health, emerging from a mass of *Tradescantia zebrina*; the leaves twenty-four to thirty inches long, and not often lacerated. A great mass of the variegated *Acer*—several hundred trees—is margined with rose-coloured geraniums, and all the space between filled with Dahlias, Sal-

vias, and the like: a good plan, inasmuch as it prevents a naked base. Groups of palms, single specimens of birch (as graceful as any exotic), and fine out-arching specimens of the hardy *Polygonum Sieboldi* form the most notable features of the central drive. Palms from regions comparatively temperate, like the dwarf fan palm of the south of Europe, the Palmetto of the Southern United States, and the Seaforthia, and some others, bear the open air of summer without injury, and add a very striking and valuable aid to the scene. From the cross-drive groups of Yuccas, rather thinly placed in masses of dwarf flowers and plants, a large specimen of the Angelica tree in flower, a mass of the Papyrus of the Nile, and tall specimens of *Colocasia odorata*, are the most conspicuous of the objects that approach the margin.

Again, commencing at the Boulevard Malesherbes entrance, and this time turning to the left, we meet with masses of *Musa rosacea*, *Blechnum*, *Lomaria magellanica*, the older specimens with stems two feet high; *Nicotiana wigandioides*; a telling, dark bronzy mass of *Canna atronigricans*, with some of the larger leaves two feet long, and the stems nearly seven feet high; groups of *Latania* plunged in the grass; and large leaved Begonias dotted amongst dense masses of *Tradescantia zebrina*. These Begonias do not grow well enough to warrant their being put out in our latitudes except under the most favourable conditions. Next come masses of Hibiscus, rather sparing of their great red flowers; numerous specimens of handsome plants isolated on the grass, from double scarlet Pomegranates to *Thuja aurea* and *Clanthus Dampieri*; masses of india-rubber plants with ground-work of mignonette, of *Wigandia macrophylla* with groundwork of *Coleus*, of silvery *Solanum marginatum* with groundwork of dwarf herbaceous Aster, of *Tupidanthus* in a carpet of *Cuphea*, and of variegated Arundo in one of German Aster. A mass of *Caladium bataviense*, with leaves three and a half feet long and dark stems, is very imposing. As a foliage plant, it is second to no other employed in Parisian gardens, though hitherto *C. esculentum* has generally been considered to be the best. Here there are large masses of both it

and *bataviense*. Usually *C. bataviense* makes leaves larger than *C. esculentum*, and as a rule its leaves are the largest this year, but the biggest specimens of the year were of *esculentum*, of which the largest measured four feet seven inches long, *bataviense* reaching four feet one inch. *C. esculentum* best withstands the winds, the leaves of *C. bataviense* often getting broken by them, so that many of the finer leaves made during the season were lost before September, their great stumps showing how vigorous they had been. It is usually and from the same cause denuded of leaves about the base; *C. esculentum* retaining them. The leaf-stalks of *bataviense* are of a dark hue, by which it is easily distinguished from *esculentum* with its pale green leaf-stalks. The stems of *bataviense* are also much larger than those of the *esculentum*, a few of those growing here being ten inches in diameter.

Of the Ficuses grown here, the best is yet the old *F. elastica*; but *Chauvieri* is also good, and *Porteana* has done well this season, though the Parisian summers are usually too cold for it; its leaves were fifteen inches long. *Yucca aloifolia* is hardy here. A fine old plant of it, ten feet high, and with a considerable portion of the stem naked, was in perfect health. Every winter the stem is protected as far as the leaves, and the snow prevented from remaining on these. *Melia Azederach* is also hardy here—at least, it has stood out during the past winter; and as its large compound leaves would prove so useful in the flower-garden, it should be tried out in favourable parts of England. *Andropogon formosum* does well here, and a group of Dasyliirions are plunged in the grass. The Erythrinas are a fine feature, the old *E. crista-galli* being considered the best on the whole; but *E. ruberrima* is very fine from its hue of scarlet and crimson. *Bocconia frutescens* is five and half feet high, with leaves two and a half feet long; and an *Encephalartos* is fine as an isolated specimen. *Agave americana* is left in the garden during winter and protected, but with more trouble and cost than would be incurred by taking it indoors. A mode of training various flowering climbers up the stems of trees is worthy of special notice. Clematises, honeysuckles, various

kinds of ivy, everlasting peas, and many other kinds of climbing plants may be used in this way with good effect. There is one plant grown here in quantity, which is rarely seen in England, but which should be in every English garden—*Funkia subcordata*, a dwarf, hardy plant with snowy white flowers sweeter than orange-blossom.

Two large carriage drives, laid out so as to interfere as little as possible with the old plantations, run through the park from one end to the other, and form a continuation of the boulevards leading to it. These drives are closed by iron gates of a highly ornamental character. The area of the park is about twenty-two English acres, of which thirteen are in turf, and five planted with flowers, shrubs, and trees, the remainder being devoted to walks and the small and unhappy piece of water. The total cost of alteration was over £48,000. The work was begun in the month of January, 1861, and finished in August of the same year.

The Ivy and Its Uses in Parisian Gardens



THE Irish Ivy is a very old friened that is often seen beautifying old walls and like positions, and one, as we may have thought, sufficiently appreciated and employed. Gaiety and grace I was led to expect in Parisian gardens, but that they should take up our Hibernian friend, so partial to showers and our mossy old ruins, and bring him out to such advantage in the neighbourhood of new boulevards and sumptuous architecture, was not to be expected. That "a rare old plant is the Ivy green when it creepeth o'er ruins old," we Britons all know, but that it is no less admirable when mantling objectionable surfaces with its dark polished green in winter, would not appear to have yet sufficiently dawned upon us. Apart from the fact that the Ivy is the best of all evergreen climbers, it is the best of all plants for softening the aspect of town and suburban gardens in winter, not to say all gardens. The Parisian gardeners know this fully, and they, taking it out of the catalogue of things that receive chance culture, or no culture at all, bring it from obscurity and make of it a thing of beauty.

To rob the monotonous garden railings of their nakedness and openness, they use it most extensively, and there are parts about Passy where the Ivy, densely covering the railings, makes a beautiful wall of polished green along the fine wide asphalte footways, so that even in the dead of winter it is refreshing to walk along them. And if it does so much for the street, how much more for the garden? Instead of the inmates of the house gazing from the windows into the street swarming with dust, or splashing with mud, a wall of verdure encloses the garden;

privacy is perfectly secured; the effect of any flowers contained in the garden is much heightened; and lastly, the heavier rushes of dust are kept out in summer, for so admirably are the railings covered by planting the Ivy rather thickly, and giving it some rich light soil to grow in, that a perfectly dense screen is formed. Railings that spring from a wall of some height around the larger houses are covered as well as those that almost start from the ground. Frequently the tops of the rails are exposed, and often these are gilt, while wire netting on the inner side supports the Ivy firmly.

One day, as I was passing near the Hotel de Ville, and looking at its traceries, my eye was caught by something more attractive than these; a gilt-topped railing densely covered with Ivy, and between the mass of dark green and the bared spikes at the top a seam of light green foliage, here and there besprinkled with long beautiful racemes of pale purplish flowers. That was the Wistaria, one of the most beautiful of China's daughters, here gracefully throwing her arms round our Hibernian friend, and forming a living picture more pleasing to the eyes of a lover of nature than any carving in stone. If there are tall naked walls near a Parisian house, they are quickly covered with a close carpet of Ivy. Does the margin of the grass around some clump of shrubs or flower beds look a little angular or blotchy? If so, the Parisian town gardener will get a quantity of nice young plants of Ivy, and make a wide margin with them, which margin he will manage to make look well at all times of the year—in the middle of winter when of a dark hue, or in early summer when shining with the young green leaves.

When the Ivy is planted pretty thickly and kept neatly to a breadth of, say, from twelve to twenty inches, it forms a dense mass of the freshest verdure, especially in early summer, and of course all through the winter, in a darker state. The best examples of this description of edging that I know of anywhere are to be seen around the gardens of the Louvre, and in the private garden of the Emperor at the Tuileries. In the latter the Ivy bands are placed on the gravel walks, or seem to be so; for a belt of gravel a foot or so in width separates them from the bor-

der proper. The effect of these Ivy bands outside the masses of gay flowers is excellent. They are the freshest things to look upon in Paris during the months of May, June, and July. They form a capital setting, so to speak, for the flower borders—the best, indeed, that could be obtained; while in themselves they possess qualities sufficient to make it worth one's while to grow them for their own sakes. In some geometrical gardens we have panels edged with white stone—an artificial stone very often. These Ivy edgings associate beautifully with them, while they may be used with advantage in any style of garden. A garden pleases in direct proportion to the variety and the life that are in it; and all bands and circles of stone, all unchangeable geometrical patterns, are as much improved by being fringed here and there with Ivy and the like, as are the rocks of a river's bank.

It should be observed that an Ivy edging of the breadth of an ordinary edging is not at all so desirable as when its sheet of green is allowed to spread out to a breadth of from fifteen to eighteen inches. Then its rich verdure may be seen to full advantage. It must of course be kept within straight lines if the garden be symmetrical: if it be a natural kind of garden, you may let it have its own wild way to some extent. In nearly every courtyard in Paris the Ivy is tastefully used. I do not think I ever saw the scarlet *Pelargonium* to so great advantage as in deep long boxes placed against a wall densely covered with it, and with Ivy planted also along their front edge, so as to hang down and cover the face of the boxes. One of the best known of the floating baths on the Seine has a sort of open air waiting-room immediately outside its entrance—a space made by planks, and communicating with the quay by a gangway. On this space there are seats placed around, on which in summer people may sit and wait for their turn if so disposed, while the whole is elegantly embowered with Ivy, which looks as much at home as if the river was not gurgling rapidly beneath. This is secured by placing deep boxes filled with very rich light soil here and there on the bare space; then planting the Ivy at the ends of each box and devoting the remainder of the space to

flowers, keeping the soil well watered, and training the shoots of the Ivy to a neat light trellis overhead.

In the garden of the Exposition a pretty circular bower was shown perfectly covered with it, the whole springing from a tub. Imagine an immense green umbrella with the handle inserted in a tub of good soil, boards placed over this tub, so as to make a circular seat of it, and you will understand it in a moment. That and the like could of course be readily made on a roof, wide balcony, or any such position. One sunny early summer day, when the Ivy was in its youthful green, I met with a shallow bower made of it that pleased me very much. It was simply a great erect shell of green not more than five or six feet deep, so that the sun could freshen the inside into as deep a verdure as the outer surface.

The Ivy may be readily grown and tastefully used in a dwelling-house. I once saw it growing inside the window of a wine-shop in an obscure part of Paris, and on going in found it planted in a rough box against the wall, up which it had crept, and was going about apparently as carelessly as if in a wood. If you happen to be in the great court at Versailles, and, requiring guidance, chance to ask a question at a porter's little lodge seen to the left as you go to the gardens, you will be much interested to see what a deep interest the fat porter and his wife take in Cactuses and such plants, and what a nice collection of them they have gathered together, but more so at the sumptuous sheet of Ivy which hangs over from high above the mantelpiece. It is planted in a box in a deep recess, and tumbles out its abundant tresses almost as richly as if depending from a Kerry rock.

The Ivy is also used to a great extent to make living screens for drawing-rooms and saloons, and often with a very tasteful result. This is usually done by planting it in narrow boxes and training it up wirework trellises, so that with a few of such, a living screen may be formed in any desired part of a room in a few minutes. Sometimes it is permanently planted; and in one instance I saw it beautifully used to embellish crystal partitions between large apartments.

To make the Ivy edgings which are so abundantly employed in and around Paris, plants are easily procured in pots, and at a very cheap rate, at the markets on the quays, or of the nurserymen at Fontenay aux Roses, who every year grow it in large quantities. It is planted thickly in borders, and trailed along in strips from twelve to sixteen inches in width, according to the size of the beds. It is laid down with wooden pegs, a layer of earth being placed over the stems. When once planted, it only needs to be kept clear of weeds, and to be moderately watered. Under this treatment, it forms healthy borders the year after it is planted. In preparing the Ivy for growing against railings and trellis-work that encloses the various parks and gardens, it is trained carefully during the first one or two years, so that all empty spaces may be filled up. At the end of the second year, the railings will be completely covered, and for the future it is only necessary to keep it properly pruned.

The Ivy used by the City of Paris for ornamenting the flower beds in the squares, the trunks of trees, &c., is grown and propagated at the nurseries in the Bois de Boulogne. Towards the end of the summer the propagation of the Ivy by means of cuttings is carried on. Three or four leaves are left on each cutting, and they are planted very thickly in lines in a half-shady position. When they have taken root sufficiently, which generally takes place in the following spring, they are transplanted into pots of four or five inches in diameter. Afterwards stakes are fixed along the lines of pots, from which are stretched lines of thin galvanized wire, and to this slender but firm trellis from three to five feet high the plants are trained several times during the growing season. At the end of the second or third year the plants are strong enough to be employed to cover railings, and for many similar purposes. The nurserymen in the suburbs of Paris generally propagate them by layers. For this purpose old plants are placed at a certain distance from each other, and are allowed to grow long. Pots from four to six inches in diameter are then plunged in the ground around, the Ivy being fixed in them by means of small pegs, one shoot in each pot. Afterwards stakes are placed in the pots, and the Ivy trained

against them as it grows. When the layers are sufficiently rooted, they are separated from the old plants, and towards the end of the second or third year it is ready for use. If a wide belt of Ivy is desired, the young plants may be put in in two or three rows, as the French do when making such excellent Ivy edgings as are here described. In any case, after the plants are inserted the shoots must be neatly pegged down all in one direction.

The reason why Ivy edgings when seen in England look so poor compared with those in Paris, is that we allow them to grow as they like, and they get overgrown, wild, and entangled, whereas the French keep them the desired size by pinching or cutting the little shoots well in, two or even three times every summer, after the edging has once attained size and health. The abundant supply of established plants in small pots enables the French to lay down these edgings so as to look well almost from the first day.



Robinson, W. 1919. "French Gardening." *Journal of the International Garden Club* 3(1), 114–150.

View This Item Online: <https://www.biodiversitylibrary.org/item/80595>

Permalink: <https://www.biodiversitylibrary.org/partpdf/334397>

Holding Institution

UMass Amherst Libraries (archive.org)

Sponsored by

Boston Library Consortium Member Libraries

Copyright & Reuse

Copyright Status: Not provided. Contact Holding Institution to verify copyright status.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.