

THE CULTIVATION OF LILIES.

(With Coloured Plate of Lilium concolor.)

LILIES are not altogether so desirable in the garden of the amateur as they have been described by writers who never had the pleasure of purchasing bulbs, or paying for their management or mismanagement, as the case might be. When men who have done a little gardening at other people's expense write about lilies, they are sure to recommend their readers to invest widely and wildly, and the result is that those who take their advice get bitten, and it may be that a few of them turn from floriculture with some degree of disgust; whereas, had they been wisely instead of wildly advised, they might have persevered in a path which certainly should be and really might be strewn with flowers. It has been my good or bad hap to labour long with the lilies, and pay for all my experiences. I don't know where to find one whose business it is to write who has done the same. You are not to suppose that I set myself up as the only amateur of lilies, for there are hundreds to be met with, and the few suggestions and reports we obtain from such are of inestimable value. But our writers trust to other people's observations and experiences, having had no opportunities of acquiring experiences of their own, and as lilies are curious plants, the books record successes only, and amateurs who value time and patience, and have to pay for their floral amusements, are too often deluded with notices of lilies that are said to be easy of management, when, in fact, they are extremely difficult. I must confess I should like to have in my pocket now all the money I have wasted on lilies; but I have instead a little knowledge of their waywardness, and I purpose to turn this to account, to the best of my ability, for the service of readers of the FLORAL WORLD.

All the lilies agree in certain characteristics and requirements, which is a great comfort, for it lessens the brain-work of managing them. They are all hardy in the British islands, but only a small proportion of the one hundred and fifty varieties now in cultivation are adapted for permanent occupation of the open border: and it therefore follows that those who would succeed in the cultivation of a collection must keep many sorts in pots, although these same sorts are really hardy enough to endure an ordinary winter in the open ground. All lilies love sunshine, and therefore none of them should be planted in deep shade, although partial shade rarely interferes with their well-doing. They agree, also, in requiring a deep, rich, moist soil when growing, and to be moist, but not wet, throughout the whole of the winter. Stagnant wet in the dark days will kill them more surely than frost, and hence, when wintered in pots, they should have a little water occasionally, even although they appear to be quite at rest. The last remark reminds me of another point of agreement; it is, that *lilies never rest*. They appear to be dormant certainly for months together, but, if the conditions are favourable,

they will then be making new roots preparatory to the next growth above ground; and from this consideration follows another, and with it a rule of practice. Every kind of liliium begins a new growth below ground very soon after the flowering is over, and hence, when the flower stems begin to wither they should be repotted, transplanted, or subjected to any necessary disturbance of the roots. Attention is directed to the words "necessary disturbance," for the roots of a lily should never be disturbed without a reason, and it should be observed that the bulbs are soft and juicy; and hence exposure to the atmosphere exhausts their vital powers, and renders their next growth less vigorous than it should be. Finally, fresh animal manure should never touch the bulbs, or, indeed, be in immediate proximity to the roots. The best manures for them are leaf-mould, rotted turf, and spongy peat. Generally speaking, a soil consisting of peat alone is not the best, although many sorts will grow in it. As a rule, a deep, mellow, fertile loam, enriched with very old hot-bed manure and leaf-mould, will grow lilies to perfection.

The amateur who purposes at this time to begin the cultivation of lilies, will, perhaps, be inclined to ask if the foregoing remarks tend to the depreciation of shop bulbs, which of necessity are taken from the ground and packed in dry material, and kept for some time in a drying atmosphere. As a matter of fact, our remarks do tend that way, and it must be acknowledged that shop bulbs are not so good—other things being equal—as bulbs just lifted from the ground or freshly turned out of pots. But as we cannot do without shop bulbs, and as we have all had to begin by purchasing, we must make the best of the case by *purchasing early, and potting and planting at the earliest possible moment afterwards*. Nine-tenths of all the disappointments experienced by amateurs of lilies may be traced back to the exhaustion of the bulbs in passing through the hands of the trade, and when it is necessary to import the bulbs from Japan, China, and the Pacific coast of America, the bulbs must be subjected to exhaustive conditions, and there is no help for it. The amateur may speculate in Auratum, Pardalinum, Washingtonianum, and others; and having secured fine bulbs, and done full justice to them in cultivation, be so far disappointed as not to see a single flower. This is an extreme case, but it is within possibility. In such a case, what is to be done? The answer is ready, *have patience*. If proper care is taken of the sorts that have gone through a season without flowering, a splendid bloom may be expected the next season, and thenceforward those particular sorts may be regarded as established; and the cultivator who does justice to them will very soon find the stock increase to render him rich in lilies. It often happens that imported lilies require one whole summer to recruit their energies, and, this accomplished, they are prepared to do all that is required of them in the production of their splendid flowers.

There is a peculiarity of growth of these plants that every amateur should take notice of, for it affords a key to one important point in their cultivation. Every lily has *two sets of roots*. One set of roots proceeds from the base of the bulb, the other set proceeds

from the base of the stem above the bulb. Now, it has been conclusively proved by observation and experiment that the bulb prepares within it the stems that are to bear the next year's flowers; but those stems are nourished by their own roots, and hence the roots that appear on the stems above the bulbs should be covered with soil, that they may be enabled to perform their proper functions. It follows, therefore, that bulbs of lilies should be planted comparatively deep, or put into pots comparatively large, to ensure the proper covering of the roots that will in due time be formed above the bulb. We put hyacinths singly in 48 and 60-sized pots, and they prosper; but such a course of procedure is destructive to lilies, for not only should their bulbs *but* their stem-roots be covered. Hence, in potting such sorts, for example, as *Lancifolium* and *Longiflorum*, it is better to put several bulbs rather deep in a 24, 16, or 12-sized pot, and look for a great head of bloom, than to pot them singly, and ensure exhaustion of the bulbs.

It may appear from the foregoing remarks that the cultivation of lilies is a very complicated business; but in truth it is very simple, provided only the main requirements are conscientiously attended to. Messrs. Teutschel and Co., of Colchester, who are the principal importers of lilies from Japan and elsewhere, grow about 150 sorts in the open ground in light, deep, well-drained loam, and they lose but few in winter, and established bulbs flower well in the summer; and hence, as a rule, lilies of all kinds may be grown together under one very simple system of management. Nevertheless, to attain to complete success, the particular requirements of particular species must be studied, and therefore I have prepared a few notes on the most useful of the lilies, with a view to assist the amateur who has no intention of speculating in an extravagant manner in lilies, but would gladly grow a few of the most attractive kinds and leave to others the joys that accompany the full development of liliomania. The following are adapted for amateurs who take moderate views of things, and are content with such lilies as give the least trouble, and are the surest to produce an agreeable display of flowers:—

Auratum is the finest lily known, and one of the best amongst those that are adapted for pot culture. It may be planted out in cool mellow loam or peat, and if the situation is well drained a severe winter will do the bulbs no harm, but if the soil is water-logged they will certainly perish. In the wet winter of 1872-3 I lost a considerable number of valuable lilies, including *auratums* that were planted out in beds of peat; owing to a defect in the drainage at the time the rain came as a deluge for several days and nights together. *Agapanthuses* in the same beds were not hurt in the least. The proper time to pot *Auratum* is the end of September and throughout October. The soil should be carefully shaken from the bulbs, and the fresh roots should be as much as possible preserved. A good compost may be prepared by mixing two parts turfy loam and one part each of leaf-mould, the fibre of good peat, and the sharpest sand that can be obtained. If the loam is poor one part of good rotten hotbed manure may be added. A No. 8 or No. 6 pot will

hold a dozen bulbs, and it is better to pot several together, because of the advantage of *depth of soil* when large pots are used. The best place for the pots is a cold frame, in which they should be plunged to the rim in coal-ashes or tan. Keep the lights off as much as possible, but put them on during heavy rains, and cover them with mats during frost. From first to last they must have water, but during the winter they will need but little. As soon as the growth spears through increase the supplies, and in the height of summer give abundance. Early in May remove them from the frame, and put them out of doors on a brick or stone pavement in the full sun, taking care to protect the roots from the sunshine by laying a few boards aslant against the pots. The under sides of these boards will be always damp, and this will promote a cool state of the roots, while the leafage has all the advantage of sunshine. I have found that the use of liquid manure promotes the flowering at the expense of the bulbs, and I should recommend the amateur never to apply liquid manure except to specimens intended for exhibition, for the bulbs usually perish as the result of using it. Some growers replot annually, but I have found it better practice to replot every second year; and in the autumn, when replotting does not take place, I remove as much of the old soil as possible without injuring the roots, and replace it with a mixture of equal parts rotten manure and mellow loam.

Bulbiferum, *Candidum*, *Tigrinum*, *Pomponium*, *Excelsum* or *Testaceum*, *Chalcidonicum*, and *Martagon* are the best of the cheap border lilies, and need only to be planted out in clumps to repay the cultivation, with their fine umbels of flowers. Of this group *Chalcidonicum* is alone worth growing in pots. The well-known *Martagon*, or "Turk's cap," is by no means a showy plant, but large clumps of it in odd places have a good effect, and we must not be in haste to discard so good a reminiscence of the days of Gerard and Parkinson.

Cordifolium or *Giganteum* is a singular plant, unlike other lilies, and only adapted for the garden of an amateur who can exercise patience in order to secure a good thing. I have seen it growing grandly in a bed of peat in a sheltered garden in Somerset, and I have had pretty good luck with it on my heavy soil, but the wet winter of 1872-3 destroyed my stock. It is a fine pot plant, requiring a firm loamy compost, and to be shifted on every autumn until it flowers, and then it should not be disturbed for a year, by which time there will be a stock of bulbs in the pot, and they may be shaken out and divided. If well managed, and especially if bountifully supplied with water from May to August, the flower-stem will rise five or six feet, and present a noble cluster of a dozen flowers of an elegant funnel shape, five or six inches long, ivory white, with a delicate tinge of purple in the throat.

Concolor.—A neat-growing plant, with spreading lanceolate leaves and a handsome corymb of half a dozen crimson-scarlet flowers, which are indistinctly spotted, and quite without fragrance. This would make a magnificent bedding plant, and it is also well worthy of pot culture.

Leichtlini was figured in the FLORAL WORLD for March, 1869. It is a neat-growing plant, well adapted for the open border, but scarcely showy enough for pot culture.

Longiflorum is a lovely species of dwarf growth, the flowers large for the plant, elegant funnel shaped, and of the purest white within and without. Having invariably succeeded with this species when growing it in pots, and invariably failed when it has been planted out, I am bound to recommend pot culture. In the autumn of 1869 I planted out a large stock of *Longiflorum* in beds of peat, and left them undisturbed until the autumn of 1873, when they had dwindled away to about a fifth of their original number. When these remaining few were taken up and potted, they were found to be in a thoroughly thriving state, with abundance of roots and a perfect nest of bulbs, proving that the peat soil suited them. As they never flowered, and became fewer every year, I conclude that the climate is at fault, especially as this lily grows early, and is usually killed back by spring frosts.

Speciosum or *Lancifolium* is one of the most beautiful, and one of the easiest to manage. It is remarkably hardy, and will thrive in peat or loam, and may be grown in beds or pots without any difficulty. I have had a considerable number of the best varieties of *Speciosum* planted out in beds of peat since the autumn of 1869, and they are now flowering finely, and in the fullest possible vigour. Yet they occupy the very beds which were water-logged last winter, and in which *auratums*, *longiflorums*, *testaceums*, and *chalcidonicums* perished. This showy and accommodating species is badly treated by market growers, who purchase imported bulbs, and pot them in small pots and help them with liquid manure. They send them to market looking glorious, but the bulbs are well nigh ruined. An amateur who should happen to buy market plants would do well to plant them out four inches deep, and forget them. After a year or two they would recover, and again flower in the superb style by which this species is characterized. The best varieties are *rubrum*, *album*, and *punctatum*. S. H.

THE WINTER DECORATION OF FLOWER-BEDS.



WITH the aid of the cheap, neat-growing evergreen shrubs, the flower-garden may be made to present such a beautiful appearance throughout the winter, that we are bound to express our surprise that more attention is not paid to the decoration of the flower-garden during the dead season. Yet, throughout the winter months, all the compartments that have been occupied with flowers during the summer, and especially those so situated as to be within view from the windows of the dwelling-house, might be richly furnished at a very trifling expense. In our remarks on the "Plunging System," which have



LILIUM CONCOLOR.