



LILIES.
From the painting by LILLIAN TROTMAN.



RIVAL QUEENS: THE TALE OF THE LILIES.

By JOHN ALLEN.



FIG. 1.—LILIUM GIGANTEUM.

PART I.

FEW people will dispute the supremacy of the lily as queen of the flower-border, or equally as peerless in its season in the conservatory or among the shrubs. The rose may be more easily grown, it unquestionably has more devotees; but the lily, speaking generally, ranks before it for graceful charm, for purity of colour, and abounding fragrance. Far be it from us to question the merits of the rose. There is a beauty in its trailing, clinging festoons, a rampant freedom in the toss of the unpruned stems, of another order of beauty to the stateliness of the more formal growths of the trumpet lilies, or the freer arrangement of the crowded heads of lilies

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FIG 3.—LILIUM LONGIFLORUM.

of the auratum or speciosum types. Under the gardener's knife much of the graceful growth native to the rose becomes stunted and ugly. No knife is required among the lilies. The rosette of leaves from which springs the slender pillar which has as capital a head of handsome flowers, the swelling curves of the flowers themselves, full of loveliness of the antique sculptures, are entirely pleasing. In point of fragrance the lilies yield nothing, in colour the comparison is favourable, while for permanency they are supreme. The rose keeps its perfections for a day, lilies attached to the mother stem, or as cut flowers, last a week or more.

The more familiar lilies of the cottager's border, the Martagons, the Orange lily, the Madonna lily, are easily grown. Each season the flower stems are sent up, and each season following the laws of their growth, new bulbs are formed below the surface and ripened with the stores of food drawn from the air and the earth by the alchemy of the sun's rays, without further aid from the gardener. But with the Japanese and Himalayan introductions of recent years, some knowledge of bulb nature, its growth and decay, a careful attention to the requirements of the species is necessary to secure the best results. The number of species introduced to garden lovers



FIG. 2.—LILIUM WALLICHIANUM.



FIG. 4.—LILIUM HARRISI.

in recent years, their innumerable varieties, and the perplexing confusion in the names by which both species and varieties are known and sold to cultivators, is to a degree repellent to some who would wish to form a collection of lilies. Totally different species bear the same name, and to make the matter worse, many kinds have a dozen different names, each name as fearful in spelling, and as learnedly correct in botanist's Latin as the other. It is to throw some light upon these points, to trace a path out of the confusion, that as far as the limits permit, these lines are written.

Only one, the purple lily, *Lilium martagon*, has any claim to be recognised as wild in England, and this is doubtless an escape from old priory gardens to which it was introduced from Central Europe, when the ecclesiastical connection with Italy was very close. Parkinson in his *Paradisus or Garden of Pleasant Flowers*, 1689, commences his work with an enumeration of the thirteen lilies then known to him, "because the lily is the more stately flower among many." He includes five kinds of Martagons, six of the umbellate lilies, and two varieties of the white or Madonna lily. One of these, the Canadian lily, was already introduced from N. America, the rest grow wild in Central Europe and Western Asia. Less than one hundred years later, Linnaeus describes only nine species, some of Parkinson's being only varieties, two more having come to Europe from America, and one (a doubtful lily) from Kamschatka. Thunberg in 1784, is responsible for much of the confusion prevalent in lily nomenclature. In suitable localities, lilies are wild all over the temperate regions of the northern hemisphere, and are found also in high altitudes on some of the tropically situated mountains in Asia. Thunberg made the acquaintance of many of these Asiatic and Japanese forms, which though totally distinct from the European species were made by him to agree with those known to Linnaeus. Such very distinct lilies as *longiflorum*, *japonicum*, *cordifolium*, *speciosum*, *hansonii*, *elegans*, and *collosum* were twisted and vexed in the description, that when later travellers rediscovered the plants, they were not recognised, but described as new species with new names. Another source of confusion arose from the Japanese having kept, like the Dutch bulb-growers, the cultivation of some particular strain in one family, its care descending for untold generations from father to son. Since the destruction of the power of the Daimios in Japan, and in the pressing need for new sources of income through the government taking possession of their revenues, these cherished strains have come to Europe, and though they differ but very slightly, they all have had distinctive names bestowed upon them. The Japanese lilies have been so long under cultivation, and accidental seed varieties, and varieties produced by crossing and hybridisation been developed and improved upon, that there are but the slightest traces left to guide to the wild sources from which they all sprang in the remote past. On mountain slopes and highlands of the Corea and Japan, are doubtless the habitation of many of them. The Japanese first made their conquest of the Corea in A.D. 202, when under Jingu Kôgô. To this remote period the introduction of the Corean lilies into Japan may be referred.

The key to the successful cultivation of the recently introduced exotic lilies lies in the knowledge of the conditions of the climate in which they flourish. The species coming from the Eastern States of N. America and Canada are largely damp meadow and bog plants, and should be so placed that their roots have access to water. Those from the western sides of the Rocky Mountains are found in well-drained situations, but

subject to a copious rainfall during the growing months. The same observation applies very largely to the Asiatic species, particularly those found on the Himalayas and its subsidiary ranges. In these situations the winter brings with it a heavy fall of snow. After this has passed away, the bulbs throw up the new foliage under a hot sun alternating with an enormous rainfall. The basal leaves are protected by the surrounding shrubs or the herbage from the action of the sun, and only the flower-head rears itself above the vegetation around. A short cold winter, a warm spring and summer, with much moisture, are the conditions under which they flourish. Lilies are not found in countries subject to prolonged drought. In Japan during the spring and summer, "there is a relatively high temperature, light winds, great dampness of the air, and frequent rains, which alternate, however, once or oftener with dry spells a week long."—Rein's *Japan*.

About forty-five species are known to science. Japan is the greatest centre, having about twelve indigenous species; some of them, though thoroughly acclimatised, are of Corean origin. The Himalayan range and its offshoots about nine species. Europe claims seven, Eastern North America gives hospitality to six, and a few are found in the wilds of Manchuria. Botanists being themselves undecided as to what are true species among lilies, no finality attaches to the figures just given. The bulb plays an important part in the life-history of lilies. The art of producing good bulbs is the art of producing good lilies. The bulb draws its sustenance from the earth and the air, the latter by two sets or roots, one of thick fleshy fibres, leaving the base of the bulb like a wig, which have a double function, that of extracting moisture from the soil, and of storing up elaborated food for future use. When the flowering stem is being produced another set of root fibres leave the stem above the bulbs. These have only feeding for their function and are thin and wiry. The bulb itself consists of a central core or axis, which gives off a series of closely-packed and overlapping scales, arranged front to back, the inner ones of which frequently develop into aerial leaves. These scales are also reservoirs of food, to be drawn upon to produce the flowering stem and ultimately the seed, the latter being the true consummation of bulb-life. If there is an overplus of food stored in the scales and fibres, this goes to produce other bulbs which take their origin in the axils of the scales. With the production of the flowering stem and flowers the life of the bulb comes to a definite end. It has finished its mission. This will explain the cause of the so-called failure in the cultivation of lilies. Only enough energy has been stored up to produce seed, the secondary production of bulbs is too much for the energy of the plant, and as an individual it dies. The aim of the cultivator should be, therefore, to produce strong healthy bulbs. These will throw up healthy aerial leaves, which in turn elaborate food to store in the underground roots and scales. Thus two processes are going on. The locked-up stores are drawn upon for seed production, and are replenished by the leaves for bulb production. The growth of the bulb does not depend solely upon aerial leaves. The scales themselves are leaves, and are capable of executing the functions of leaves though withdrawn from light, and without that great plant energy, chlorophyl. A bulb may be without aerial tokens for two or three seasons, and yet arrive at a plumpness sufficient to flower strongly. There is also a certain independent vitality in scales which can be taken advantage of. Thus if the flower-buds are cut off and the stem laid on the surface, the production of bubblets in the axils of the leaves is the result. This naturally takes

place in the tiger lily, and *L. bulbiferum*. To quote the experience of a large grower. Inspecting his stock of auratums late in the year, he threw aside, as waste, a number of scales and badly developed bulbs into a basket holding cocoa-nut fibre, and leaving it disregarded till March, found a mass of growing bubblets, produced from the old, partially decayed scales. The Dutch bulb-growers strip the scales off old bulbs and plant them in light, rich soil, when bubblets spring into existence, which are treated as seedlings with, however, the advantage of flowering one year earlier. The white lily, *L. candidum*, may be multiplied in the same manner. The flower head is, under favourable circumstances, produced in the third year of the bulb-life, though some species, as *L. giganteum*, produce as late as the sixth and seventh year.

In purchasing bulbs the shorter the interval between the raising the bulb and replanting it the better. Bulbs only degenerate in the open air. The Dutch raise and partially dry them to obtain a finer colour; at the same time they cut off the mass of fleshy fibres in which the food is stored. Every day out of the ground and every fibre cut away is so much decrease in the vitality of the plant, which frequently has to make up for such treatment by a year barren of flowers. The Dutch do not themselves buy bulbs under such conditions.

To supply the English markets large importations of lily bulbs are made annually from the Continent, Bermuda, and Japan. The first consignments from the latter country, chiefly *auratums*, were collected from the pine-woods on the hills surrounding Yokohama. These have for some years been exhausted like other wild sources, and now the merchants procure their supplies from farmers in the interior, who grow bulbs as a crop. Of late years, owing to a different method of packing, the loss by decay is much less than formerly, when whole cargoes used to arrive in London in a rotten condition. The bulbs are now enclosed in a moist ball of clayey mud, and not disturbed till they are put upon the market. They come to hand pale in colour, plump, and as a rule free from fungus, and in good heart for the production of a flower head the same season.

The following rules may be taken as leading to the successful cultivation of lilies. Early in autumn choose your bulbs fresh from the earth, undried, with the lower fleshy roots on and fresh, and with new white central growth. Plant deeply according to the retentive character of the soil, say six to eight inches for a wet sub-soil, deeper in drier soil. Plant on a shady border with a south-east or south-west aspect, but not where the ground is sterilised by the roots of trees; where moisture can be supplied, and the lower leaves and surface of soil can be shaded, and the flower head allowed to get into the sun. If there is good drainage, too much water cannot be given during the growing season. Some of the exotic lilies are too tender for open-air culture in England, as *L. wallichiana* and *L. neilgherrense* and one or two others. These are better reared under glass. As during the growing season a number of slender fibrous roots appear on the flowering stem above the bulb, these should be protected when in pots by fibrous peat or loam on the surface. To prevent water lodging between the scales the Japanese usually plant the bulbs sideways, the stems adjust themselves. Use large pots, from ten to fifteen inches according to the size of the bulb. Keep well watered, if plunged, every other day, if watered from can, every evening, using a fertilizer occasionally. The soil must not get sodden. Shade during the middle of the day.

An unusual number of species of the genus *Lilium* are in cultivation, and the task of discriminating between them is difficult unless

some key is at hand. Such a key is found by some in the differences between the bulbs of the species and varieties, and this method is invaluable to the salesman, but of little use to the connoisseur, who usually only sees the plant when in flower. For her the genius of Mr. J. G. Baker, F.R.S., has unlocked the door by finding characters more or less reliable in the general aspect of the flowers. In the genus *Lilium* the sepals and petals of ordinary flowers are merged into one organ of six parts in two rings, one outer, and the other alternating with its members inside, the whole being called the perianth. Really the organs are known as calyx and corolla. In all the *Liliums* they have assumed so similar an appearance as to be in effect one organ. The six parts of the perianth are quite distinct from each other, they may be plucked from the flower without tearing away any other part. Mr. Baker's classification depends upon several features, i.e., whether the flowers stand more or less upright, or leave the common stem at an angle approaching a right angle, or are yet more expressed and drooping. Whether there is a longer or shorter tube to the flower, or whether the perianth when fully expanded rolls back nearly or quite to the stalk. Upon the shape of the perianth members. Some have a claw, that is they are narrowed to a stalk, others are widest near the middle, and others again nearer the point than the middle. In some the stamens emerge from the perianth in beautiful spreading curves, while in others the anthers are clustered together more like a tassel. These then are the differences seized

upon to group the lilies into four sections. As the limits of this article forbid a notice of the entire genus, such members will be noticed as will illustrate the four sections and include most of the species of lilies likely to be met with by the reader in any collection of these attractive flowers. There have been many recent introductions of new species and varieties, but as it takes some years for such to get largely into commerce, it would obviously be of little use to notice these. Nor can room be found for colour varieties of the larger species; these are variable to a great extent, and can only be appreciated by the specialist in lilies. But such members have been chosen for illustration as are distinctive in character, will form a representative collection, and are not the costliest of their kind. In making this list the writer has to acknowledge the kind assistance of Dr. Wallace of Colchester, whose knowledge of liliums is unrivalled.

The first group or section are the funnel-shaped lilies called eulirion. The flowers project more or less horizontally from the stem, the divisions are broadest above the middle, spreading only towards the tip when fully expanded. The filaments and styles are nearly straight.

Lilium giganteum (Fig. 1), as its name indicates, is the giant among lilies, growing to a height of twelve feet on the Himalaya Mountains. It hides itself among the shrubs on the borders of woods at an elevation of 10,000 feet. In almost perpetual rainfall, its scented head of flowers tower above the surrounding leafage in July, though for four

months it is covered by snow. It is perfectly hardy, the parts of England enjoying the most rainfall suiting it best. We received it in 1847. It has heart-shaped leaves like *L. cordifolium*, a Japanese relative. Its flowers are white, with a magenta stripe on the inner members of the perianth.

L. wallichianum (Fig. 2).—Another Himalayan species flourishing on steep grassy plains under a deluge of rain, after passing the winter beneath two feet of snow. It grows to only half the height of the first-named species. It seldom produces seed in a state of nature, as it sends out suckers which bear young bulbs on all sides. A hen and chickens among the lilies. It flowers in August and September, the blooms are white with yellow tube.

L. longiflorum (Fig. 3).—This is perhaps the most perfect of the trumpet-lily type. It comes from Japan. Its dwarf habit and pure white flowers make it a great favourite for bedding among lowly shrubs.

L. Harrisii, the Bermuda or Easter lily (Fig. 4), is of great importance because of its early blooming. It comes into flower any time between Christmas and Easter at the will of the cultivator. According to Mr. Baker it is only a form of the Japanese *L. longiflorum*, changed by cultivation in Bermuda, where large fields are devoted to its growth. The bulbs are not produced in England by forcing, but large consignments annually replenish the stock. It is grown by thousands for the London flower-market.

(To be concluded.)

A DREAM'S FULFILMENT.

By Mrs. L. B. WALFORD.

CHAPTER II.



It was one of the hottest nights of the year, and the Scotch express was starting with the usual freight which the first week of August always brings. As the hour for departure drew nearer, King's Cross Station became every moment more and more densely crowded; until it finally resolved itself into a raging Pandemonium of excited, bewildered passengers, and harassed, overworked officials; between and among whom gigantic piles of luggage gradually blocked up every available inch of room. The air was stifling. The very lights looked dim and lurid.

To one person, however, the scene with all its concomitants was one of enchantment only. Vera Harwood neither saw nor heard anything but what was exhilarating and inspiring in the general uproar. All had gone well with her so far. Her preparations had been so complete for the long-anticipated expedition, that the vicissitudes of fortune had, happily, not found her at disadvantage, when the tide finally turned in her favour. Her small, black portmanteau, her handbag and umbrella, were in the act of being carried

out of the front door when her brother-in-law appeared, and George, with his usual easy good humour, had himself handed her into the hansom, and wished her a hearty "Good-bye," and a "jolly time." Minnie had been equally *complaisante*, and the children, in their appreciation of the sudden stir and flurry of departure, had forgotten the lamentations which otherwise might have prevailed.

Then she had been lucky in finding her friends with whom she was to travel, directly she alighted at the station entrance. They were there before her; two pleasant-looking, capable women; one considerably older than Vera, the other of much the same age, but both with the self-possession of experienced travellers. Under their wing the flutter of her pulses, and the slight thrill of anxiety which had made itself felt as she perceived the endless stream of vehicles which turned in at the station entrance, quieted down, and she could give herself up to joy, pure and simple. The Misses Claybury had engaged their seats, wired for them in the afternoon, and further, added the precaution of taking one for Vera on the chance of her going.

"There would have been no difficulty, my dear, in giving it up, if you had been prevented coming; but there would have been great difficulty in getting one, if you had come without having it secured," explained the elder lady, in reply to a grateful outburst. "Jane and I know all about such things; there is nothing like a little foresight. Now, you see, here are our names," pointing to the window of a third-class, corridor carriage, indicated to be for "Ladies only," "and corner seats too! I always mention 'corner seats,' and I thought you would like to sit facing the engine, as Jane does? I prefer to

sit backwards myself; one gets less dust. But Jane thought—" It proved that Jane's thought was correct; and having deposited their goods, and laid in a store of fruit and buns, the travellers prepared to pass the night as comfortably as circumstances would allow—Vera's own feeling being that she was far too happy, if not indeed too hot, to sleep.

Vera Harwood here merits a few words of description, before we proceed with our story. Like many other quiet, reserved girls in daily life, she cherished an ideal which met with such scant sympathy from those about her, and was so at variance with the circumstances of her lot, that it needed more strength of fibre, more tenacity of disposition than Vera would have been credited with by any but those who knew her best, to keep it alive. In childhood she had lost her mother, but it was to this mother that the "romantic" vein in her sister's nature was invariably ascribed by the more practical and prosaic Minnie—the Minnie whose highest aspirations had never gone beyond a nice little home of her own in a London street, with a husband and children, and two servants, and Vera to live with them until Vera should follow her example.

Vera hated London, the only London that she knew. It meant for her either sitting still, working head and eyes and hands in a large, warm, full, and busy place (Vera was a telegraph clerk), or else sitting still again in a very small and still more noisy apartment, which, when George was in it, would seem almost blocked up by his burly little person, and almost too cramped for the tones of his loud, jovial voice. When he brought his friends home to tea-dinner, and to spend the evening, Vera would sometimes feel as though the house could not contain them and her too. She seldom cared to join the pleasure parties

THE TROOPSHIP.

THE tender's left for shore,
And the ship is on the foam,
And my last adieux are o'er,
To thee, sweet wife, and home;
But I see thee linger still
Beside the cold grey quay,
And thine eyes in silence fill
As they look their last on me.

Thy trembling cheeks are wet,
And thy lips are white with pain,
And thine arms would seek me yet—
Alas, alas, in vain!
Ah me! I'd give my life
To be back upon the shore,
And to clasp thee, sweet my wife,
To my breaking heart once more!

But Honour points the way,
And she waves me o'er the sea—
Did I the coward play
I were not worthy thee.
Though a mist bedim mine eyes,
Though my bursting bosom swell,
Though the scalding tears arise,
Farewell, sweet wife, farewell!

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profusely, and a gorgeous sight is a field in full bloom, the ivory white bell contrasting with the vinous purple of the outer side of the perianth. It grows to a height of one to three feet in little better than pure sand, copiously manured.

L. Nepaleuse (Fig. 6).—This was introduced from Nepal as early as 1825, but disappeared shortly after, being only reintroduced about six years since. Unlike the other members of this group, it has a golden yellow perianth, profusely marked with a deep maroon colouring. The size of this flower may be gathered from it measuring five inches across the mouth.

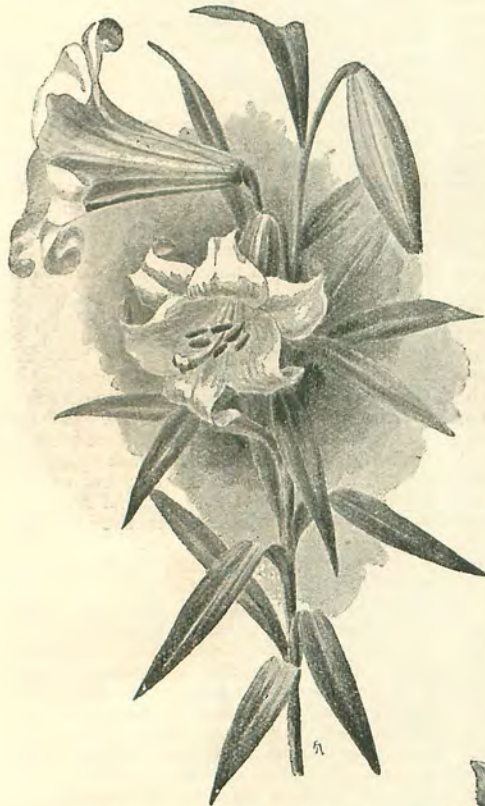


FIG. 5.—LILIUM BROWNI.

PART II.

L. Browni (Fig. 5).—This lily gives an instance in which the inexorable botanical laws run counter to popular and trade usage. It is grown on the continent and largely in England as *L. Japonicum*, and sold as such, though there is another with a yet better claim to the name. But an obscure nurseryman, living at Slough, published it under a Latinised form of his own name, in 1841, in a trade catalogue, and *L. Browni* it must remain till someone can prove an earlier publication. It is wild on Herschel Island, of the Corean Archipelago, but cultivated in China and Japan. In Holland and Belgium it is grown



FIG. 6.—LILIUM NEPALEUSE.



FIG. 7.—LILIUM CANDIDUM.

L. candidum (Fig. 7).—The Madonna lily, as Elwes says of it, "the best known and universally loved lily which is seen everywhere. It is stately, showy, fragrant, and disposed to increase." The sweet-scented Madonna lily is one of the oldest inhabitants of the flower garden. It was well known to Parkinson and to Gerarde, as was also the variety with the yellow striped leaves, which is now grown for the variegations as a winter-foliaged plant. Whether outside the Japan islands beauty was anciently much regarded in flowers, is open to question. We are told the white



FIG. 8.—LILIIUM SPECIOSUM.



FIG. 10.—L. AURATUM.



FIG. 11.—L. PHILADELPHICUM.



FIG. 12.—L. BULBIFERUM.



FIG. 13.—L. DAVURICUM.



FIG. 9.—L. TIGRINUM (VAR. FORTUNEI).

lily was grown in early times as a plant of "great efficacy in taking away the wrinkles of the face." It grows wild in Palestine and Syria and on the Jura and Pyrenees Mountains. Its cultivation is so easy that it will grow in any soil or situation, a deep loam is most favourable. Its fragrant memory clings to the settler away from home, and any sweet-scented white flower is to him a lily. A large white buttercup found by the lonely shepherd on the slopes of Mount Cook becomes the New Zealand lily, though only a botanist can measure the interval in relationship between the two flowers, a space evidently quickly bridged by the heart.

Section 2. *Archelirion*, a small, counting the species, division of the genus, but reckoned by the attractiveness and vast popularity of the varieties included perhaps the most important. Mr. Baker describes its perianth as broadly bell-shaped, horizontal or drooping, the divisions ovate or lanceolate, not distinctly clawed, spreading widely from below the middle when fully expanded, much curved stamens, and declinate style.

L. speciosum (Fig. 8), the Queen of Lilies.—Mr. Elwes writes thus enthusiastically of this Japanese lily. "All the lilies previously seen in Europe are thrown in the shade by this glorious species, for which we have to

FIG. 14.—*L. CROCEUM* (VAR. *CHAIXI*).FIG. 15.—*L. ELEGANS* (THUNBERGIANUM).FIG. 16.—*L. CONCOLOR*.FIG. 17.—*L. MARTAGON* (VAR. *DALMATICUM*).FIG. 18.—*L. CANADENSE*.FIG. 19.—*L. SUPERBUM*.

thank Dr. von Siebold, who introduced it into Holland. Not only is it handsome beyond all before known in gardens on account of the clear deep rose colour of its flowers, which seem all rugged with rubies and garnets and sparkling with crystal points, but it has the sweet fragrance of a petunia."

Though it came in 1832 from Japan the Japs call it the Korean lily. It has since been found wild at Kiu-Kiang on the Yanktse-Kiang River. In the Dutch gardens it is known as *lancifolium*. There is no end to the number of varieties of specimens which

have been produced under the fostering care of the Japanese. Some of the English distributors catalogue fourteen, others fewer varieties. It is easy to cultivate and propagate, the best results being obtained from it as a conservatory plant. Grown in the open air on a peaty soil among rhododendrons it shows to perfection.

L. tigrinum, var Fortunei (Fig. 9), tiger lily.—A bulb-bearing species introduced into England in 1804, since when, by means of its numerous bulblets it has become extremely common. The variety shown came over in a

consignment of *auratum* bulbs. It grows to a height of seven feet, bears twenty to thirty flowers, lasting from the middle of September to the end of October. The species is found in China, Corea, and Japan. On the Bay Hakodadi it grows self-sown on the decaying thatch of cottages. Its starchy bulbs are eaten by the poorer Japanese.

L. auratum (Fig. 10), the golden-rayed lily, and hill lily of the Japanese.—An interesting history attaches to the introduction of this plant, which has been described as "the most beautiful floral production that can be seen." It was one of the commonest wild flowers of Japan, till the millions of bulbs sent to England stripped the woods of this flower, now it is cultivated by farmers for exportation. The pity of it is that many of these bulbs arrived rotten and useless, through bad packing. Von Siebold tried as early as 1829 to send a living plant to Europe, but his efforts, like all others till 1860, failed. But the

fame of this lily was rapidly growing. In 1859 the treaty port of Yokohama was opened. There was a rush as to a gold-field to get some bulbs introduced into western civilisation. Mr. Fortune and Mr. John G. Veitch each got off a living consignment to England. Von Siebold despatched some to Belgium, and Mr. Dexter to America. Messrs. Veitch's arrived in good condition, and the firm was able to exhibit an *auratum* for the first time in flower in 1862. This introduction created an enormous sensation, and succeeded in lifting the whole genus into popularity. Happily for the race of *auratums* a new method of packing in mud or clay brings the bulbs fresh and sound to England in large cargoes towards the close of each year. For some reason this species does not find favour with the Japanese, while here it becomes increasingly popular. The less the bulbs are disturbed after planting the better. Pot cultivation suits it very well. A dry season is very inimical, but those which do live get stronger year by year. It will grow to twelve feet in height and bear forty flowers. As may be expected there are numerous varieties sold, some of the flowers are more than a foot across.

Section 3, *Isolirion*.—Sufficiently marked by the flowers being erect, in umbels, the perianth members in most of them narrowing down into a stalk at the base.

L. philadelphicum (Fig. 11).—It grows wild in the Eastern States of America from Canada to Louisiana in open woods and sandy soil. It came over in 1754. The inside of the perianth is of a vermilion orange red on the upper half, golden yellow below, with reddish brown spots.

L. bulbiferum (Fig. 12), Another bubble-bearing lily, as its name indicates. It is the reu-bulbed lily of Parkinson. It is wild on the Central European Mountains, but not common in England, other species, with the usual lily trade confusion, being supplied under its name. Perianth bright crimson red on upper half, with dashes of darker colour and papillæ, yellow below. It succeeds well in ordinary garden soil.

L. davuricum (Fig. 13), the Siberian lily.—This again is a lily about which the continentals have gone wrong. The Dutch grow it as *L. catesbai*, another plant entirely. At first supposed to be an American species, it is now known to be a Siberian plant widely distributed from the Mountains of Dauria, eastward to Saghalien, the penal settlement of Russia, and Yesso, the home of the Hairy Ainus. It produces usually one flower, seldom two.

L. croceum, v. Chaixi (Fig. 14), the orange lily.—This is a native European lily, and is found in North Italy, Corsica, sub-Alpine Switzerland, and the South of France. The stem is first trailing, giving out long stolons, the flowering stem rises some distance from the bulb. It sometimes gets double in cultivation and often bears a large number of flowers in the umbel.

L. elegans (Thunbergianum) (Fig. 15).—Another orange red umbellate lily of extreme variability. Introduced by von Siebold from Japan in 1831-32. The culture of this species and its varieties is easy. A good, rich, well-drained sandy soil suits it. Seeds freely under pot culture. There are good well-marked varieties, some catalogues giving nearly a score. *Atroranguineum, Venustum, Alutaceum* and *Alice Wilson* are among the best. It has often as many as twelve flowers in the umbel.

L. concolor (Fig. 16).—A small bright scarlet or yellow-spotted black lily, of which the names are in the most intricate confusion. As shown in the figure there is sometimes a departure from the umbellate inflorescence. It came to us in 1804 from Canton. There are two forms of the bulb, one solitary, the other a nest of bulbs.

Section 4. *Martagon*, perianth always

drooping, broadly bell-shaped, its divisions lanceolate, not distinctly clawed, distinctly reflexed when fully expanded, stamens much curved, style declinate.

L. martagon, var dalmaticum (Fig. 17), the Martagon lily.—Either wild in England, or introduced so long since, that no record is discoverable. It is wild in West Central and Eastern Europe and Asia. The variety shown in figure was introduced by the great lily specialist, Leichtlin, who journeyed especially to Dalmatia to discover it. He found it growing in calcareous gravel, in the bed of an old glacier, at about 3000 feet elevation. The old form of martagon has largely gone out of cultivation. A white variety not infrequent.

L. canadense (Fig. 18).—A most variable introduction from East America, where it grows from Canada to the Mountains of



FIG. 20.—*L. PARDALINUM (V. AUGUSTIFOLIUM)*.

Georgia and west as far as the Missouri, in marshy places and grassy meadows. Its range is from eighteen inches to four feet high.

L. superbum (Fig. 19), the swamp lily.—The illustration makes no attempt to realise the aspect of this noble American marsh lily, which growing six feet high often bears thirty flowers. The flowers are a bright yellow, prettily spotted. Found from Canada to Carolina. A writer says of it, "In New Jersey there were at least 5000 of these lilies all in flower at once. But out of the whole number it was difficult to find three alike." It will not exist in dry places, and bears being under water the whole of winter.

L. pardalinum, v. Augustifolium (Fig. 20).—This is a Rocky Mountain species, or rather from the Californian and Oregon Coast range. It grows up to an elevation of 6000 feet in marshy valleys. The centre of the flowers is bright yellow with red spots, passing to orange red at the ends of the perianth members. It is a good garden variety, increasing naturally in deep moist soil.

L. monadelphum, v. Szovitzianum (Fig. 21), the Caucasian lily.—This pretty lemon yellow lily has been freely imported of late years. It



FIG. 21.—*L. MONADELPHUM (V. SZOVITZIANUM)*.

is very hardy, sweet-scented and early flowering. It grows in its native mountains up to an elevation of 6000 feet. Although it flowers freely and produces abundant seed, as these seed take about ten years to produce flowering stems, only a Dutchman's patience can bear the test. When it is established it grows up to



FIG. 22.—*L. CHALCEDONICUM*.

five feet in height. The partial union of the filaments gives the specific name.

L. chalconicum (Fig. 22), scarlet martagon lily.—A deep bright coral red lily, found wild in many parts of Greece and its islands up to 3000 feet elevation. It was introduced here as early as the tenth century, but that interesting record does not prevent more modern importations driving it on to the rubbish heap or out of cultivation entirely, a fate its brilliant flowers do not deserve. It will grow in heavy soils and any neglected spot.