



## Ontario Regional Lily Society

# All About Lilies

The true lilies are perennial plants growing from bulbs, which are made up of loosely overlapping scales not enclosed in a protective outer coat as, for example, the tulip. They produce erect leafy stems from a few inches to several feet tall topped by a terminal flower or flowers borne on stalks held at varying angles from horizontal to vertical. The seedpod opens at the top and splits into three seed compartments that contain light papery seeds. The shape of the flower varies greatly from massive trumpets to small bell shaped blossoms, but no matter what their form all true lilies have six petals and six stamens that carry the anthers or pollen bearing organs. Many other plants are called lily, which do not belong to the true lily group (botanically *Lilium*) such as Day lily, Calla lily, Water lily, and Plantain lily and their cultural requirements should not be confused with the plants we are discussing.

Hardy lilies have enjoyed an ever-increasing popularity as garden subjects during recent years. This is partly due to the introduction of many new and improved hybrids and varieties, which give more garden value, with less care, than any other group of plants and also to a better understanding of their cultural requirements in general. No other group of plants gives greater elegance of bloom, combined with such a wide variation of flower forms and colours plus a flowering season ranging from mid June until mid August.

Lily species grow in nature over a large part of the Northern hemisphere, in Asia from southern India to eastern Siberia, in Europe from Spain to the Caucasus and in North America from Louisiana to the Canadian provinces. Their habitat ranges in altitude from near sea level to many thousands of feet. As may be expected, therefore, all of their cultural requirements are not identical although if certain basic principals are understood the great majority of both species and hybrids may be grown with entire success.

## ***BULB AND FLOWER TYPES***

Lily bulbs vary greatly in size, shape, colour and general appearance. Likewise do the flowers that they produce. The smaller flowered lilies such as *cernuum*, *pumilum* and *concolor* grow from small bulbs rarely measuring more than 4 inches around in contrast to the very large bulbs produced by such species as *henryi* and *regale*, often a foot or more in circumference. In shape the bulbs may be almost round, oblong, oblique or horizontally creeping. In color they vary from white, through yellow and pink to reddish brown. All lily plants have a system of basal roots and a large number of both species and hybrids also produce stem roots that appear on the section of the stem between the top of the bulb and the soil surface. Generally speaking the Asiatic species and their hybrids are both stem and basal rooting, the North American partially so, and the European kinds usually basal rooting only.

For simplicity the flowers of the true lilies are best divided into four classifications although many intermediate forms have been developed by hybridization during recent years. Briefly these include (1) the Trumpet types varying in length from a few inches to over a foot, and in color from pure white, through yellow, to deep pink. (2) The Bowl shape widely expanded flat opening flowers up to 10 or 11 inches in diameter, usually white and with or without crimson or golden



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spots. (3) The recurved forms, generally pendent and sometimes bell shaped, varying in size from two to over six inches in diameter and in a multitude of colors from pure white through various shades of yellow, pink, apricot, orange, red and lavender to deep purple. (4) The Erect type, medium size upright facing flowers usually in shades of yellow, salmon, orange or red.

### ***FRAGRANCE AND GROWTH HABIT***

The presence or absence of fragrance in lily flowers is rather closely related to the flower types described above. With few exceptions the Trumpet and bowl shaped lilies have a pleasant, sometimes heavy, fragrance. The Recurved forms are split about half with fragrance and half without while the Erect types have rarely any noticeable scent. The habit of growth, height, foliage and flower placement varies greatly within the family of hardy lilies and contributes in a large way to their versatility in the general garden picture. Lilies range in height from less than a foot to over ten feet with on average of from three to five feet Their foliage may be narrow or grass-like. brood and scattered. or arranged in whorls about the stem. While many lilies have tall stout stems others produce a slender graceful growth. When one considers the wealth of material available, it is small wonder that they are in such demand.

### ***BULB CONDITION***

Lilies are long lived, hardy perennial plants which should have as much care bestowed upon them in planting as would be given a tree, shrub, or other material item which one may expect many years of enjoyment. With proper care they seldom need transplanting, and then only when crowding by other plants or their own natural increase demands it. The condition of the bulb at planting time is of vital importance The fleshy scales should be firm, not soft and externally shrivelled as is often the case with bulbs that have been stored for long periods or under unfavourable conditions. Such stock cannot possibly give best results. Freshly dug bulbs should have their basal roots intact to a reasonable degree. However, this is not as important as the condition of the bulb itself. Plump healthy bulbs will produce new roots rapidly the first season, whereas stock that has shrivelled and lost much of its vitality will have difficulty in properly rooting and hence in replacing the energy lost through improper handling. Gardeners generally realize that locally grown bulbs dug at the proper time for fall planting are the remedy for the failures of former years with stock imported from far lands.

### ***PLANTING - WHEN & HOW***

The best time to plant lilies is during the fall months from late September to November. All lilies do not mature at the same time, some varieties being available in late September, others not until late October. It is always advisable to order as early as possible, enabling the grower or dealer to supply the bulbs promptly after digging. In some northern latitudes, the late maturing lilies may not arrive in time to permit immediate planting outdoors. If such a condition is foreseen and the planting location heavily mulched beforehand, planting may still be accomplished. If this has not been done, the bulbs should be unpacked promptly and potted in soil, using ample size containers for storage until outdoor planting is possible. Deep flats may be used to equal advantage. The storage facilities should be cool, 40 to 45', and the bulbs kept slightly damp but not wet. Too



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much warmth and or moisture will encourage top growth before weather conditions permit planting out. Under no circumstances should dormant bulbs be permitted to remain in plastic bags or similar shipping containers or any appreciable length of time particularly at ordinary house temperatures. It should be remembered that lily bulbs are not like daffodils and tulips that can stand much longer periods out of the soil with no ill effect.

The correct planting depth will vary considerably depending upon the variety, size of the bulbs, and soil conditions. The closest to a hard and fast rule is to plant, assuming that the soil is of average texture, so that the bulbs are covered with twice their depth of soil up to a limit of six or seven inches. By this rule bulbs two inches in height should be covered with four inches of soil. Lilies that have basal roots only may be planted somewhat shallower than the stem rooting varieties and in the case of candidum and testaceum, the bulbs are best covered with not more than an inch of soil. Light sandy soils would call for somewhat deeper planting; an inch or two additional should be quite sufficient.

The proper spacing of lily bulbs is just as important as planting depth. Here again exact rules cannot be given due to the variation in size and type of growth. The lower growing, smaller flowered lilies may be planted more closely together than the tall trumpets or other varieties which produce a robust top growth. A good general rule is to plant not less than 1½ to 2 times the bulb's circumference apart. Bulbs 4" in circumference, therefore, should be set from 6" to 8" apart. 6" bulbs from 9" to 12", 8" bulbs from 12" to 15" and so on.

### ***SOILS AND DRAINAGE***

The most important point in selecting a situation for planting lily bulbs is sharp drainage. This is a matter that is often overlooked or not explored carefully enough. The lack of proper drainage will not only seriously impair good growth but in more cases than not cause the disappearance of the bulbs in a very short while. Heavy, moisture retentive soils are usually poorly drained and not suitable for lily planting. Select a soil and situation where water does not stand for any length of time after heavy rains. Somewhat sloping sites are usually well drained although not always so. To be sure, sink an eight-inch empty clay pot into the soil up to its rim. If water stands in the pot at any appreciable depth for longer than a few hours after a rainy spell you may be certain the situation is poorly drained and another should be selected. It is good practice to place a handful or two of sharp sand below and around the bulb when planting. This further insures fast drainage and is helpful in locating the bulb should digging be necessary at some future date. Where drainage is a serious problem, raised beds often provide a solution. These are constructed simply by adding extra soil to the planting site so it will be raised several inches, at least enough so that the bulbs when planted are not much below the original level of the surrounding soil. The great majority of lilies grow best in a neutral or slightly acid soil. Only a few can be said to prefer an alkaline condition and to many this is poison. However, the degree of acidity or alkalinity is actually of less importance than the soil texture and drainage.

### ***FERTILIZERS AND MULCHES***

Lilies are moderately heavy feeders and enjoy a well-aerated soil abundant in humus. For best



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results the ground should be dug deeply and some compost or leaf mold incorporated below the level of the bulbs. Humus in the form of well-rotted leaf mold or compost may be well mixed in the layer of soil above the bulbs to which it is advisable to add a moderate application of bone meal - one pound to 20 square feet of planting area. This latter material must be well worked into the soil; if allowed to lie on top during damp weather there will be danger of mold. The combination of leaf mold and bone meal seems to be ideal for newly planted bulbs and will usually supply all the fertilizer necessary for a season or more.

As mentioned previously, many lilies have a system of stem roots near the soil surface in addition to the basal roots present on all varieties. The stem roots largely support the flowers and much will be gained from a mulch and surface fertilizing. One-inch depth of peat moss placed around the stems as they emerge in the spring and in a circle at least a foot in diameter will supply an excellent mulch for the stem roots, giving them a cooler root run. This will also reduce the necessity of continual watering and cultivating and keep the weed problem at a minimum. Fertilizing in subsequent seasons is best accomplished before growth starts in the spring and prior to flowering. Raw manure should never be used in connection with lily bulbs, neither as a mulch nor worked into the soil for fertilizer. The safest and most satisfactory plant foods for lilies are bone meal, leaf mold and compost used in the fall and these may be applied each season or so as the planting requires them.

### ***WHERE TO PLANT***

Lilies are adaptable to a great variety of situations and types can be selected which will thrive in almost any degree of sun or shade, except the very deep shade of evergreen forest. The ideal situation for a majority of them is one with morning sun and some shade from midday until late afternoon. The pink and pastel colors are always benefited by shade during the heat of the day. Generally speaking the white trumpets and the recurved and erect hybrid types are easily grown in full sun. The Asiatic and American species prefer varying amounts of shade. Local weather conditions, altitude and latitude must be taken into consideration in selecting the best site for any particular variety. All true lilies require some sun, many can be grown either in full sun or part shade, a number prefer part shade or at least afternoon shade and some are definitely woodland plants whose preferences are to light but never total shade a good part of the day.

The taller growing lilies should not be planted in situations, which are subjected to high winds during the growing season. While they can withstand considerable buffeting about, there is no need to risk damage needlessly. Windbreaks in the form of hedges, fences, etc., will be helpful in such a situation but generally it is best to select a more protected site.

Group planting of lilies is usually more effective than individual specimens. Lots of three or more bulbs planted from six inches to a foot apart, depending upon the variety, will give prolonged bloom and may be combined with many other types of plant material. The color, height and flowering time depend upon individual taste but spots where they will prove most effective will be found in the perennial border, the rock garden or in lightly shaded woodland situations to mention but a few.



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### ***POST-SEASON CARE***

Now a word about cleanliness in the lily garden. Remove all old flowers as they fade. This prevents the plant going to seed that would reduce flower production in the following season. If seed of certain choice varieties is wanted, allow each plant to mature only a pod or two. This will produce quite sufficient seed for the average gardener to handle. At the end of the growing season and after the stems and foliage have browned cut the stems to the ground and remove all old foliage, which may have dropped on the soil previously. An ounce of prevention here will go a great way toward assuring a pest and disease-free lily garden during the ensuing year.