

Bulbous Iris

Unlike the "flag" Iris, which grow from rhizomes, these Iris grow from true bulbs and are listed in the plant dictionaries as IRIS XIPHIUM. They are all planted at the same time as the Tulips; grow 24-30 inches high, and flower about May or early June according to the locality.

For garden planting there are three hybrid races of the original native Mediterranean species of I. XIPHIUM. They were all distributed from Holland and are named Dutch Iris, Spanish Iris and English Iris.

SPANISH IRIS

The Spanish Iris was the first one to be introduced into this country and records show it was used in European gardens three hundred years ago. It has thin, scanty, reed-like foliage and was planted in city flower gardens for outside display and cutting.

Because the bulbs were so inexpensive and seemed to have few, if any, troubles, the Spanish Iris was quite popular until the English and Dutch Irises were introduced about twenty years ago.

From 1905 to 1925 most bulb catalogs listed a wide selection of Spanish Iris in many shades of white, blue, violet and yellow. Most of them were imported directly from Holland each year and sold at a remarkably low price. Today most sorts are not available with perhaps the exception of:

CAJANUS—Standards are golden yellow; falls, several shades darker, almost to golden orange. A very striking and brilliant variety.

GOLDEN LION—Broad-petaled flowers of purest yellow, splendidly ruffled along the edges with a fullness of petal not found among other Iris. This exquisite flower is in a class all its own. Will last for a week or ten days in water when cut. In the garden it makes a stunning group. Plantings increase freely and a carefully planted clump will bloom for years without attention.

The other sorts have been replaced by Dutch and English varieties.

Actually the English and Dutch Iris are improved hybrids of the Spanish and other Mediterranean native Iris. The hybridization was done mostly in Holland and England; hence, the names.

ENGLISH IRIS

The English Iris inherits from one of its parents a distinct liking for a moist, heavy, rich soil, in which it will flourish without being moved or divided for several years. It has a heavier foliage than Dutch or Spanish types and therefore is to be preferred for garden decorative purposes.

Available varieties of English Iris are:

MONT BLANC—Pure white Iris of striking beauty. Blooms usually two or three on one stem.

OTHELLO—Rich, dark blue flowers of excellent substance.

QUEEN OF THE BLUES—Pure light blue flowers. A lovely sort for the garden as well as for cutting.



ENGLISH IRIS

English Iris give superb results when they are grown in moist, rich garden soil in a permanent border

SIR WILLIAM MANSFIELD—Clear purple-blue flowers; exceptionally good for cutting.

All the above sorts flower at exactly the same time under similar conditions. They may be planted in groups of colors separately or in a mixture with pleasing results in either case. As in the similar case of the Dutch Iris they give best results when set in groups in a permanent border where companion plants hide the foliage after blooming. A background of Shasta Daisies or flowers with similar heavy green foliage is very effective in displaying the orchid-like Iris to perfection.

DUTCH IRIS

The Dutch Iris are the ones which are greatly prized by greenhouse men because they force easily. They flower about two weeks earlier than the Spanish or English Iris, and prefer a much lighter soil. A rich, loamy, sandy soil, which is well-drained, suits them to perfection.

Of the older sorts there is only one which is outstanding:

IMPERATOR—Uniform bright blue with orange-yellow mark on lip. Flowers of good substance. The easiest of the true Dutch Iris to grow. Very hardy, strong stem. Unusually fine for cutting.

NEW DUTCH SORTS

The De Graaffs have recently introduced a fine group of newer hybrids of the DUTCH group which are fast becoming popular because they provide a full range in Iris colors including white, yellow, gold, bronze, pale blue, royal blue, dark blue and violet.

These newer De Graaff Hybrids are readily distinguished because they carry a narrow orange stripe on the falls instead of the large yellow blotch which distinguished the older varieties. Among the most popular sorts now available are:

WHITE EXCELSIOR—Falls and standards a uniform pure white with narrow streak of golden orange on lip. Falls very broad, of good form and substance. Flowers last a long time in the garden or for cut flowers.

YELLOW QUEEN—Standards and falls are a pure golden yellow. Has thin wiry stems, excellent for the garden; hardy, is a very popular yellow.

White Excelsior and Yellow Queen flower exactly at the same time and are among the first of the DUTCH group to bloom. Imperator is about two weeks later and flowers at the same time as the Golden Lion (Spanish Iris). These two make a magnificent combination.

Other excellent varieties of this new strain include:

JAN NAGEL—A magnificent new yellow Iris with standards and falls of uniform golden yellow; extremely tall and strong growing. Is beautifully proportioned and a most desirable novelty.

JACOB DE WIT—Standards very dark blue, falls a shade lighter but still dark and rich in color. A very early Iris of remarkable substance. A most popular blue.

LEONARDO DA VINCI—A striking beauty with creamy white standards and canary yellow falls with the orange stripe of quality. Very large flower, early.

VIOLET QUEEN—Standards and falls a uniform light bluish violet. A very large flower of fine proportions. Beautiful in the garden.

THERESE VAN DUYLL SCHWARTZE—Standards pale cornflower blue, falls pure white with narrow orange stripe. Is an excellent cut flower because of its regal beauty and fine keeping qualities.

BLUE HORIZON—Very broad and strong, light violet-blue standards: falls soft sky-blue with narrow orange stripe. Large, beautiful flower.

INDIAN CHIEF—Standards violet, tinged bronze; falls bronze. An excellent novelty with an unusual color combination that is particularly effective.

Of these varieties, Jan Nagel flowers first. Jacob de Wit, Leonardo da Vinci and Violet Queen come together a few days later. Therese Van Duyll Schwartze comes next with Blue Horizon and Indian Chief flowering together as the later ones, although none of them are more than a week apart.

TINGITANA HYBRID

The only other Bulbous Iris that is available is a beauty from North Africa. It is a hybrid of *I. TINGITANA* and is called **WEDGEWOOD**. This sort is a very great improvement over the older French Tingitana.

It is larger and much hardier. WEDGEWOOD is the first of all the bulbous Iris to flower and blooms about two weeks before the Dutch Iris. Its standards are a pure "Wedgewood blue" while the faces of the falls are pale blue with a yellow "mouth". This attractive coloring and its strong stem make it a favorite for planting in groups of 10-12 in the perennial border, in places where it may be used for either garden display or cut flowers after tulips and narcissus are over.

CULTURE

Although the English types enjoy a heavier, richer soil than the Dutch or Spanish sorts, they will all give exceptionally fine results when planted in any GOOD garden soil.

Originally it was considered that all bulbous iris needed a "sweet" soil: experience now shows that they will do well in almost any good garden soil such as is generally used in perennial borders or in flower beds. They never seem to object to a neutral or even slightly acid soil.

Best results are achieved by planting them at the same time as hyacinths or tulips.

Almost immediately after setting out in the fall a short leaf growth appears above ground and remains about 3-4 inches high until the spring growth commences. During this fall period of establishment a good root formation is produced, which enables the very rapid spring growth to be accomplished without much effort.

PLANTING

The bulbs should be planted about six inches deep from base of bulb to soil surface. Like most other spring flowering bulbs, the root growth emanates from a basal ring and spreads downward for about four inches.

It is therefore necessary to prepare a rich, WELL-DRAINED soil below the bulbs before planting in exactly the same manner as is done for tulips and hyacinths.

Moles and soil insects seldom bother the bulbs, but as a precaution either sulphur or naphthalene should be mixed in the soil below and around them at planting time. Since the bulbs and plants are gross feeders, it is advised that both well-rotted manure (or compost) and some good commercial fertilizer be added to the "below-the-bulb" soil at planting time.

The bulbs seldom multiply in the garden so it is unnecessary to take them up more than once every four or five years.

When cutting, the stem may be removed, but leaves must be allowed to remain for bulb-building for the next season.

After flowers are cut (if used as a garden flower, tops should be removed as soon as they are "over") the leaves are about the same size and just as unsightly as tulips. For this reason it is wise to plant them where the foliage is hidden by other plants while they are dying down.

Although these Iris are used by the million, grown in greenhouses as a forced cut flower, the plants are generally too leggy to be very satisfactory as an indoor plant in pots when grown in the same manner as hyacinths or early tulips. However, they are no more leggy than Paper White Narcissus and are sometimes grown indoors with satisfaction—provided some shorter plants, like ferns, are used to hide the stems.

Minor Bulbs Are Garden Gems

Muscari are so easy to grow that there should be many groups of these minor bulbs in every garden



MUSCARI (Grape Hyacinth)

NOTHING IS more appreciated than the first blooming of real early spring flowers and the "minor" bulbs provide a wide range and good selection from which to choose.

Since they are very early bloomers, the bulbs should be given choice positions in the garden. Set them where they may be seen from as many house windows as possible. Where convenient place the bulbs where they may be enjoyed from the neighbor's windows too.

When looking through the beautifully illustrated catalogs you receive, give a little time to perusal of the many sorts of bulbs other than tulips, narcissus and hyacinths, the ones most generally used.

There are many other charming bulbs that may be given a trial this season with every assurance of success. Many of them are not only quite hardy, but they have the added advantage that they seldom, if ever, suffer from diseases or insect pests.

These no-trouble bulbs deserve a place in everyone's garden. Besides taking care of themselves, they are so inexpensive that they may be planted in large groups and bought by the hundred for only a few cents each.

A rock garden, rock wall or bank that faces the street or the house should have large groups planted in any "show" spot. There is nothing more attractive or pleasing to visitors or passers-by as well as to the garden's owner, than a "fairy-patch" of these lovely bright spring's first flowers.

Each Fall season should be welcomed as one during which we can plant several sorts of minor bulbs and establish them for a permanent display.

The fact that they all multiply with great rapidity and a planting will soon produce a great colony of these lovely spring flowers, should commend them highly to our consideration for planting in fall.

As a general rule, all bulbs of the types discussed should be planted about three inches deep in reasonably rich moist soil. The special requirements are given under the brief cultural description of each variety and group. Be sure to add sufficient good commercial fertilizer and naphthalene to each planting bed, because the bulbs all may be allowed to remain undisturbed for several years.



*Bluebells are
one of the best
companion plants
for rhododendrons*

BLUEBELLS

Among the most easily grown of all the spring flowering bulbs is the group known as the English Bluebells.

Carpeting the woods in Southern England and other parts of Europe in Spring, these bulbs have multiplied there by bulb and seed until there

are acres of them, forming an entrancing carpet of sky-blue just as the trees leaf out.

One of the great advantages of Bluebells is their immunity to insects and diseases. When they are grown for several years in one place, they multiply rapidly and never seem to get into trouble.

There are two Bluebell groups for which bulbs are available.

THE SCILLA NUTANS

It has long bells hanging from a fleshy stem in much the same manner as Solomon's Seal or Coral Bells. The "faces" of the Bluebells hang down as if they are trying to look at the ground. This "hanging" is, of course, Nature's way of protecting the inside of the flower from rain and is definite indication that the plant is exceptionally successful under trees or shrubs.

Around Rhododendrons or other shrubs of a like nature, Bluebells make a most effective display. They may be planted in groups or singly at first. They multiply rapidly, and soon form a complete ground cover under these shrubs.

The leaves appear in very early spring and form a lovely green carpet under Rhododendrons and Azaleas. When the pale green flower stems sprout up, the color of the "carpet" becomes lighter. Then the "cloud" of Bluebells covers the green in a most attractive manner. After the flowers are over, green seed pods are formed which are not unsightly, as they provide with the leaves a background for the shrub's brilliantly colored flowers, which seem to need the "screen" or ground cover to enhance their brightness and beauty.

For the practical side, Bluebells do not do any harm to the shrub roots. In fact, their growth of leaves greatly helps the soil's moisture holding ability and seems to do much to assist the shrubs to feel "at home" and grow with great success.

The other part of the Bluebell family is the SCILLA CAMPANULATA group. These are almost identical to "NUTANS" in growth, but the bells are shorter, and the flowers do not hang down, but rather seem to face upwards.

While the "Campanulata" will do quite well under trees and in dense shade, they are recommended for the more open spaces, leaving NUTANS to take care of the over-hung areas.

Bluebells are very attractive when planted as a border to a hedge (especially holly), along a driveway or in a "ribbon" border in the garden or around the house.

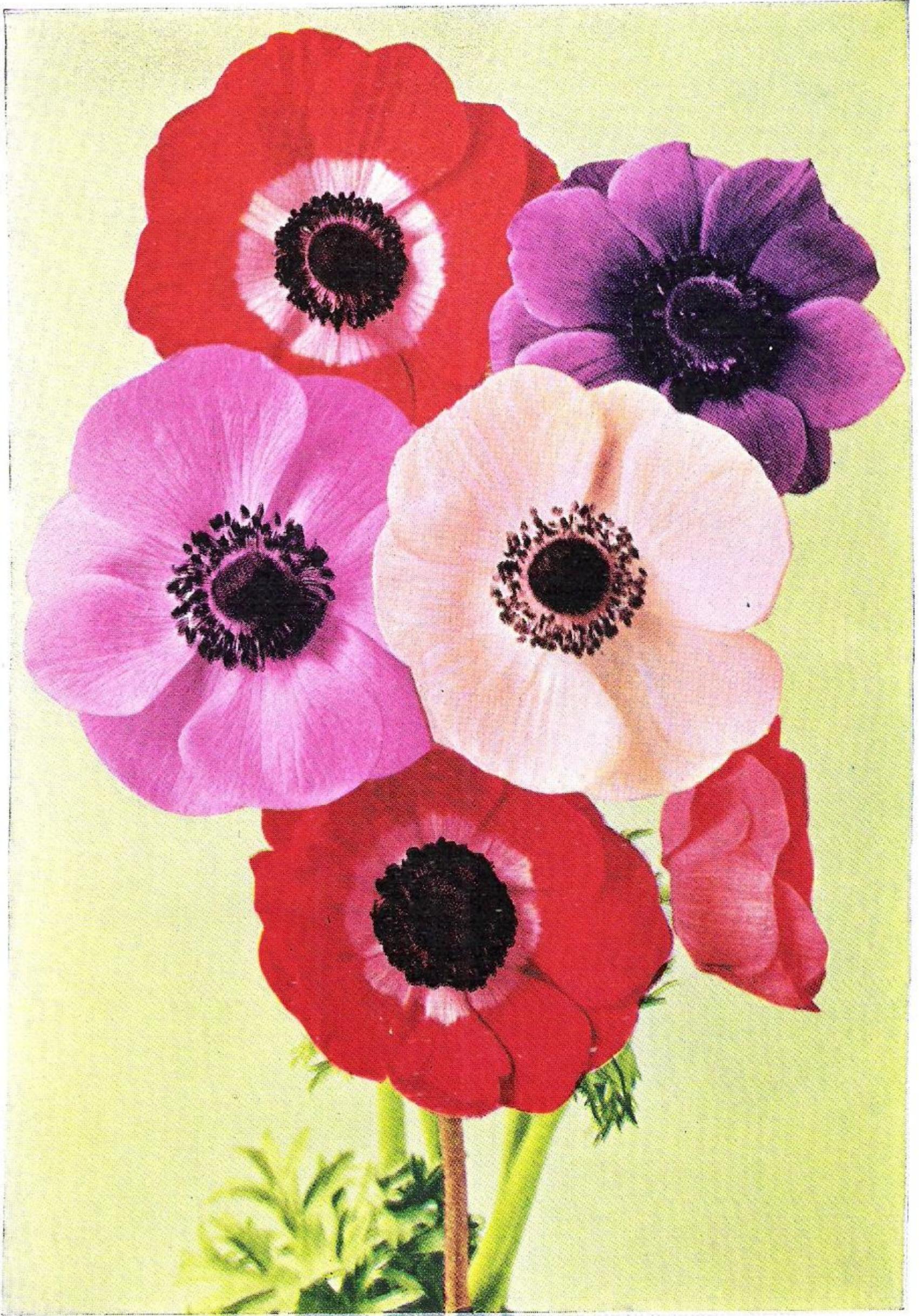
A clever way to use them is to plant behind a border of "pinks". The two plants together form an attractive and neat border which is always clean and colorful.

The bulbs are like those of tiny hyacinths. In grassy areas, the bulbs are set just under the turf roots (about 4 inches). Under shrubs, they may be set at any convenient depth. Generally 6 inches is satisfactory.

Their demands as to specialized soil and conditions are almost negligible. They seem to do best in rich sandy soils, and enjoy a plentiful supply of natural moisture.

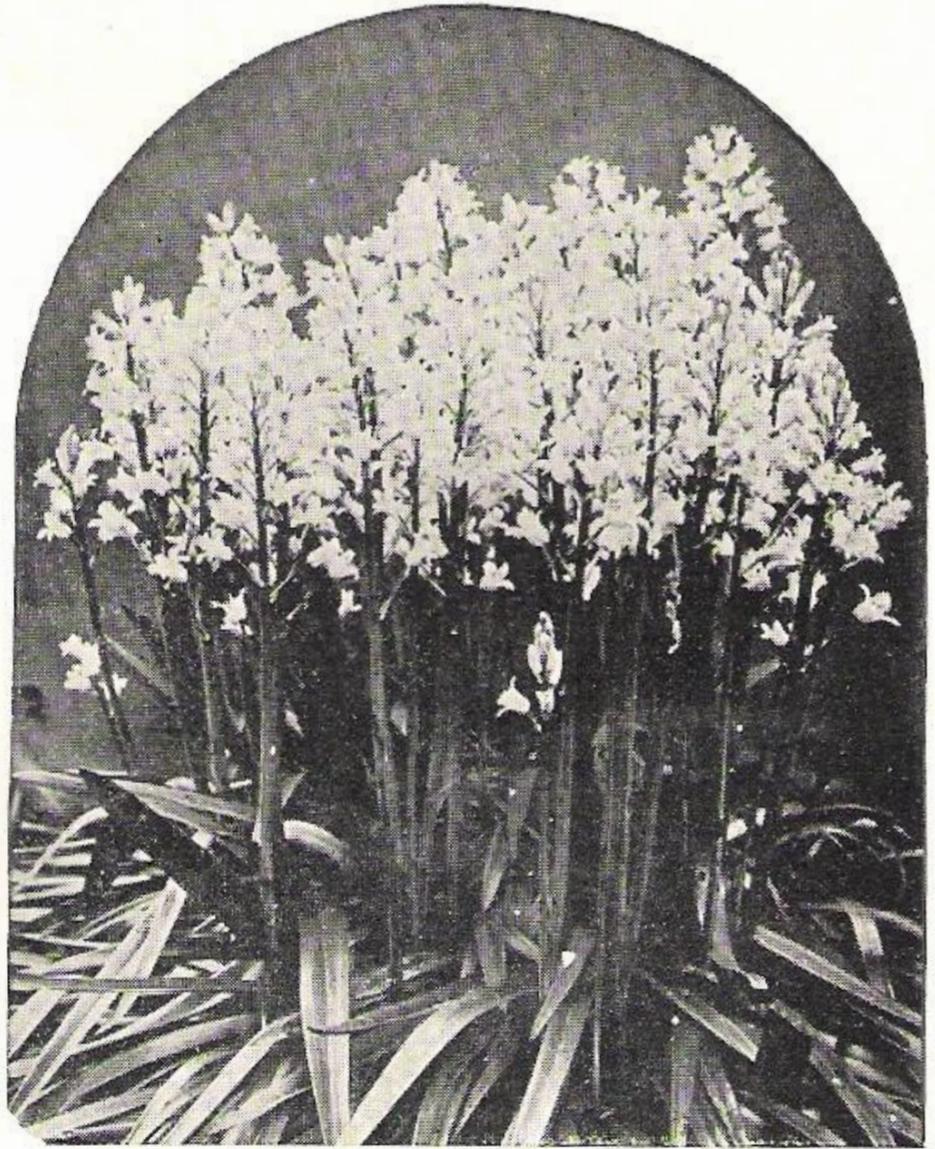


ST. BRIGID ANEMONE



ANEMONES DE CAEN

*Bluebells thrive equally well
in either shade or full sun*



SCILLA CAMPANULATA EXCELSIOR

Since all Scillas, both Nutans and Campanulata, were originally woodland natives, one must remember to provide them with a plentiful supply of humus or leaf mold in the soil. They also respond in any area where old decomposed log-wood has been added to the soil. The only place where they will fail is in hard clay soil; but when even this has had plenty of rotted humus and sand mixed with it, an ideal planting medium is provided.

PLANT EARLY

The bulb's roots commence to grow as soon as the fall rains commence in the same manner as those of daffodils and narcissus. For this reason it is wise to plant bulbs in early October.

Although the Bluebell's most common color is a bright blue, there are also white and pink sorts.

Scilla Nutans comes in blue or white; Scilla Campanulata, in pink as well as white and blue, thus enabling gardeners to do their own color scheming to fit the plan of the planting site.

The bulbs are very inexpensive and for this reason, may be bought by the hundred and massed in the garden.

Ranunculus



RANUNCULUS, TECOLOTE GIANTS

There are many "poor relatives" of this lovely garden flower that grow wild here, which is sufficient evidence that the gorgeous garden varieties may be expected to enjoy living in our gardens.

The new giant strains of Ranunculus will be found listed in a grand display of large camellia-like flowers in all shades of red, orange and gold. The stems are long and strong and as a cut flower they have little competition. They last a long time indoors and remain bright and attractive with no attention or tidying-up in the vases needed.

Ranunculus can be relied upon to provide the sunshine colors when they are most needed in spring, either in the garden or in the house.

The best varieties of ranunculus bulbs that are found catalog-listed are the French, Persian and Turban types.

The bulbs are odd looking things—a mass of small tubers resembling claws, joined together at one end, which generally puzzles most people as to which end should be up when planted. On close examination, however, it is easy to see that the claws should point down.

The best place to grow these ranunculus is where the soil is rich and well drained. They will do almost equally well set out in the open or in partial shade. To secure the finest flowers, on long 18-inch, strong stems, partial shade is best. Under these conditions, the plants generally provide a much-longer blooming period, which is a decided advantage.

Since most of the garden soils in this district are clayey and poor, the soil should be prepared and enriched before shrubs are planted.

The bulb should be set about three inches from the soil surface, but the hole or bed should be prepared to a depth of 18 inches.

Surplus water in winter is harmful, so be sure that the planting site is well drained. Mix equal quantities of soil, sand and humus, to form a rich bed.

Since the bulbs may be left undisturbed for many years, be sure that the soil will not become sour after a year or two. To avoid this, a reasonable quantity of charcoal in pieces about the size of a pea should be thoroughly mixed in the soil beneath the bulbs.

Before the bulbs are planted in the prepared hole, place a handful of sand there and press the clawlike little tubers carefully into it.

This simple precaution of actually setting the bulb in a tiny core of sand is one of the least noticeable and yet most important of the planting rules.

Many gardeners have found that the addition of well-rotted cow manure, as an additional humus help (not for fertilizer) gives even more satisfactory results. This is especially noticeable in cold, clayey soils.

The prepared soil above and below the bulb should be well enriched with a reasonably large amount of commercial plant food, to supply plenty of the needed food elements.

Ranunculus bulbs may be planted in the Fall (October) in mild climates. They almost immediately produce a few leaves above ground which are susceptible to severe winter weather. For this reason, in cold winter climates, it is best to delay planting until early Spring.

The bulbs are one of the few which make a simultaneous root and top growth. Since this hard work takes much stored food from the bulb at a dangerous time, the roots should be encouraged to make a rapid and heavy early growth by dusting the bulbs when planting with a good hormone powder.

The ranunculus will give a fine display, if planted in groups of a dozen to twenty near a pool or in some similar spot where there is a cool moist condition naturally existent.



Anemones All Season



Anemones are easy to grow and will bring color to the garden all season long

ANEMONE DE CAEN

FROM FEBRUARY until the late November frosts, gardeners who desire them may have one or more of the many sorts of "Windflowers" to brighten the garden effectively.

For the average small garden, all the various sorts of Anemones are well worth consideration, and merit inclusion in the flower display. They are one of the most hardy of any of the flower plant groups.

If properly grown, it is very unusual for any Anemones to suffer from attacks of insects or diseases. For this reason they are classed among the "Good-Natured" plants that are able to grow successfully for everyone without much care or trouble.

In this Anemone family one may find varieties and sorts that are naturally able to do well in rock gardens, whether placed in the shade or in full sun. There are also many kinds that are quite happy in partial shade or even directly underneath shade trees, because it is in this kind of location that they are found growing wild.

The most popular type of this varied family is the brilliantly colored Garden Anemones, which make their attractive show in May and June. In some protected gardens the display commences before this time, but the fact that they are at their best around Decoration Day is making them very popular with gardeners who have not used them before to any great extent.

The St. Brigid strain, in particular, provides so many fine flowers in brilliant reds, whites and blues that they make a gorgeous bouquet of our national colors.

Anemones belong to the Ranunculus or Buttercup family. Because of this, they will be found to succeed anywhere provided a cool and moist place is provided.

CULTURE

The cultural instructions for Anemones are very brief and simple.

The tuberous sorts will do almost equally well in full sun or partial shade while those with underground root-stems or fibrous roots seem to benefit most if they are placed where they are protected from direct sunlight but where they get as much air as possible.

The soil conditions for all Anemones are easy to prepare. The ground should be very porous. Since most soils are heavy here and tend to pack, it is necessary to incorporate plenty of peat moss and coarse sand in the place where their roots need to spread and function.

Avoid any place where the soil gets muddy in winter or where water lays in puddles at any time. During the drier weather (except for the tuberous sorts) there should be an ample supply of soil moisture.

All Anemones respond favorably to an application of Vitamin B, especially just before they flower.

THREE GROUPS

The Anemone may be divided into three sections, using their time of flowering as the guide.

1. Pasque Flower, Wood Anemones and kinds like Blanda that flower in Early Spring.

2. Garden Anemones that are grown from Tubers (bulbs) and flower in late Spring and early summer.

3. Japanese Anemones that commence flowering with the fall rains and last until heavy frost.

WOOD ANEMONES

In the woods of many parts of Europe and especially in those of Southern England, there are many areas, several acres in extent, that are carpeted a pure white with millions of these delicate and dainty flowers. This occurs only where there is a thick carpet of leaf mold and some chalk or limestone in the subsoil.

Many visitors in April to gardens in Victoria bring back a memory of dainty white or blue clouds of these lovely flowers. They are also to be found in a few gardens in most other areas of this country.

The Anemone Nemorosa grows from a piece of rootstock that looks much like a thick piece of quack grass. It spreads by the lengthening of these cylindrical roots, which spread horizontally just below the soil surface.

The soil in which they are grown should be at least 50% leaf mold or peat moss. Since Wood Anemones are rather particular as to what leaves are used in the leaf mold, it is best to rely on peat moss. They do not like maple leaf mold; but thrive in that made from chestnut leaves.

As a companion plant in a bed of Rhododendrons they are extremely beautiful. They carpet the ground with their "green" in a very early spring, and when in flower are dainty and very effective. They are all through blooming before the Rhododendrons commence to give their more brilliant display, but even at that time the Anemones hide the soil with a carpet of lovely green leaves.

The reason why these Wood Anemones are recommended for planting in the Rhododendron bed is that they thrive in the same rich porous soil that is generally provided for that bed.

Their creeping rootstocks do not smother, choke or impede the growth of the Rhododendrons. In fact when the two plants are grown together they seem to help each other greatly.

There are several colors of Wood Anemones. In white there is both a single and a double form. The sky-blue variety seems to be the one most prized. There is also a golden-yellow variety (ranunculoides) which should be more popular than it is.

There is one variety in this group (Anemone Grayi) that is a Native of Oregon and Washington and found in moist shady places here.

BLANDA

In the very earliest part of the spring, and sometimes for Christmas and New Year's when we have a mild winter, the Anemone Blanda makes its appearance. This variety really ought to be given the title of Seattle's first spring flower, so early does it appear to please us on a warm day even before winter has passed.

The flower is an intense sky-blue in color which is not a common color for so early in the year.

The plant is quite easily grown. It has the same kind of creeping rootstock as the Wood Anemone, likes the same rich soil and conditions. Since this plant flowers before the trees begin to leaf out, it is adapted to the brightening of many otherwise drab garden spots.

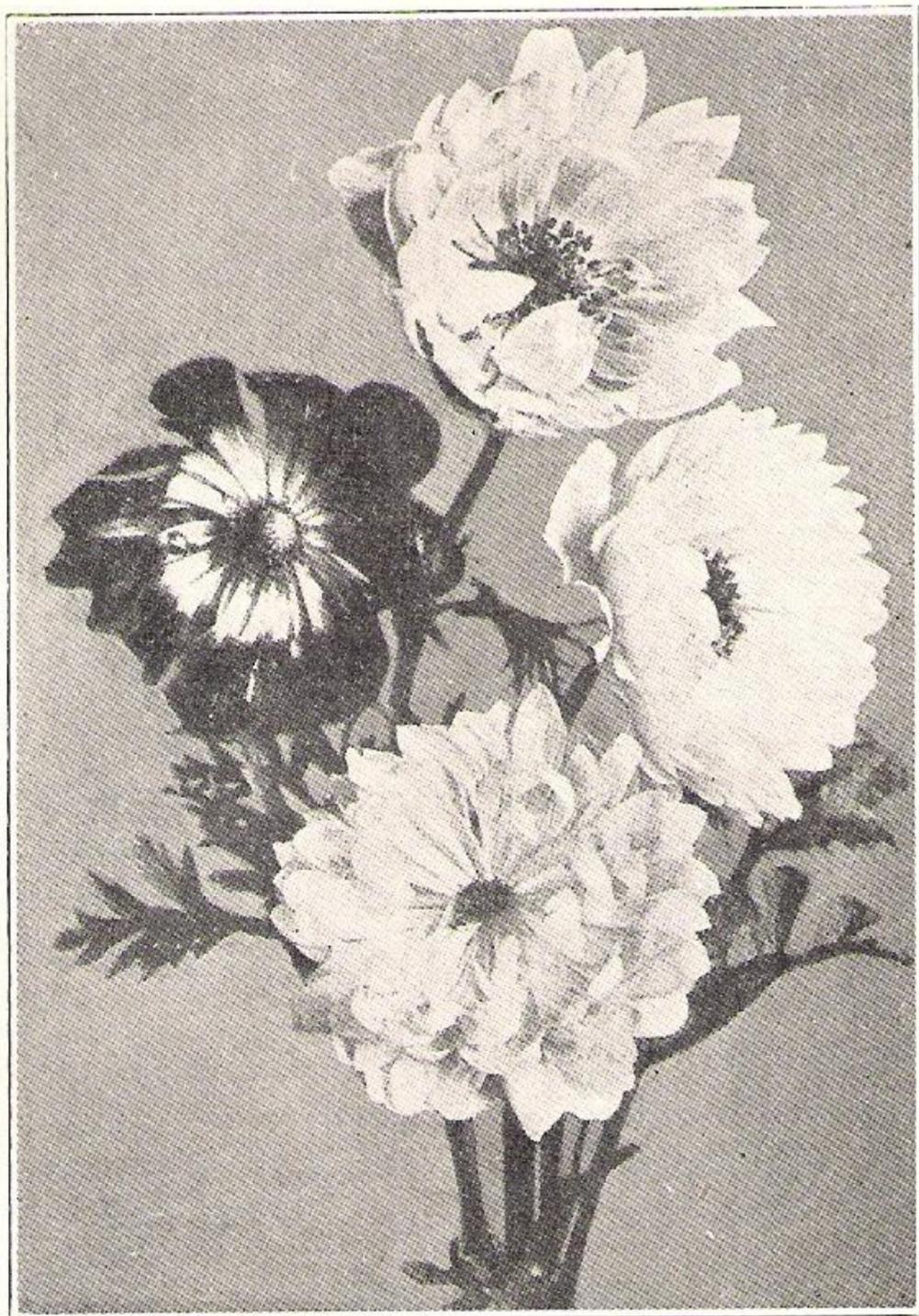
THE PASQUE FLOWER

Anemone Pulsatilla is now becoming quite a favorite among gardeners here in the Puget Sound area. Its odd looking flowers on short stems are quite attractive and appear as if they ought to be used to catch flies, on account of the hairy appearance.

This plant is a very common wild flower in Southeast England, generally being found in rich soils near chalk or limestone.

After the blossoms of the Pasque flower are over and it goes to seed, a feathery head is formed on ripening, which is quite attractive, too.

This variety does best in rich soil in partial shade, but must be grown where there is extra good drainage so that it does not get "wet feet". To insure this good drainage mix plenty of coarse sand in the soil under the roots.



Gaudy colors, strong stems and fine lasting qualities make Anemones fine for cut flowers, too

ST. BRIGID'S ANEMONES

GARDEN ANEMONES

This group is the most attractive in color display. The many brilliant colors which are often combined in one flower in circular rings make this type a very popular one.

There are also many fixed named varieties in beautiful self-colors of deep red, sky-blue and pure white.

This group is often referred to by gardeners as the poppy-flowered Anemone. Actually there are many varieties, but they are generally all grouped under the title of Anemone Coronaria.

Among the best commercial varieties of this group are the De Caen, Fulgens and St. Brigid.

The Fulgens is often found in flower quite early. Its brilliant scarlet petals and center of black stamens make a most attractive display.

The St. Brigid was actually at first a cross between the coronaria and hortensis groups, but during the last few years it has been so greatly improved by American and European growers that it is by far the best known and certainly the most popular of this type.

The St. Brigid may be grown from seed quite easily. It should be started indoors in early Spring in a moderate temperature. The young plants are set out as soon as weather permits and will often produce flowers the first season, although they are rather small and poor. The second season's flowers are always good. It is at this time that many gardeners pick out the colors and types they like best and group them together as desired.

Not only does the St. Brigid produce a great variety and wide range of the brilliant sunshine colors, but the flowers are produced in doubles and semi-doubles as well as single flowers.

For the gardener who wants only a few dozen plants, the best method is to purchase bulbs (tubers) in early fall. These should be planted in rich soil. The position they like best is one that is out in the open, but shaded from the afternoon sun.

The soil, when prepared, should be one that can supply plenty of moisture up until the time the flowers are over. After that it does not matter if they get fairly dry. The ground must be well drained, naturally. If necessary, coarse sand should be mixed to provide the drainage, for this plant cannot thrive in soil that gets over wet and muddy during the winter.

The St. Brigid Anemones need plenty of food. Besides using a good brand of commercial fertilizer, it is found that cow manure, added to the soil, helps to produce a strong rank growth capable of sustaining very large flowers.

An ideal spot for St. Brigid is to set them permanently where tuberous begonias are to be grown during the summer. These two colorful plants follow each other very successfully.

The bulbs of St. Brigid Anemones (like *Ranunculus*) may be planted in the fall in mild climates. In cold climates it is best to do the planting in early Spring because ones set out in fall often throw up a few leaves which become damaged by winter weather, causing the plant an unnecessary set-back.

The bulbs (tubers) look like knobby little pieces of a cedar tree root. They should be planted as early in the fall as possible to avoid any chance of their drying out.

When planting the bulbs, they should be set quite shallow with the pointed end down. Two or three inches deep is enough. If a small amount of coarse sand is placed in each hole for the bulb to rest on, they seem to thrive better, but the soil from which they derive their nourishment *must* be rich and moist, especially during their growing season in spring.

JAPANESE ANEMONES

This part of the Anemone family is one of the most popular. It flowers from early September until late frost in November.

It is practically free of "troubles" and will quickly grow into a large "clump" which will produce its flowers every year without much care.

The Japanese Anemone grows to a height of about 3 feet. It is equally at home in the perennial border or in a shaded part of the garden.

The plant produces many attractive downy leaves on short stems. The flowering stems, when full grown, present a stately appearance.

Most gardeners seem to prefer to plant it on the north or shaded side of the house. If this is done and it is given a really rich soil in which to grow, it is one of the plants that are the most satisfactory in such a position.

During the last two decades, several very lovely kinds of this variety have been offered for sale by nurserymen as named varieties. The two best known sorts are Queen Charlotte, a lovely pink, and Whirlwind, a pure white.

There are also colors in rose, red, silvery pink and rose pink in single and semi-double types which are offered by nurseries.

The flowers are never fully doubled, but show a green button surrounded by yellow stamens in the center. As a cut flower they last a long time in water and are equally lovely in a large vase or a small bowl for the table center.

There is also a lower growing type—*Anemone hypehensis*—which is generally classed in this group. It flowers earlier than the Japonica with pink or mauve flowers, and provides its display in July and August in most gardens.

The plants are all fibrous-rooted and will grow to a large size, provided a good root-run is given them.

Since the Japanese type of Anemone flowers in the fall, the best time to plant, divide or transplant is in March.

FOR THE ROCK GARDEN

Anemones are not very successful in a rock wall or in a dry rock garden. If an area is prepared in a low rock garden, where soil conditions and moisture are correct, there is no more lovely and colorful display than a group of Blanda or St. Brigid. However, since these sorts practically disappear from view in summer and fall, provision should be made to set some colorful annual into the places to avoid a blank spot. Good results have been achieved by setting a few seeds of such compact colorful annuals as Globe Nasturtiums or Baby Zinnias in the areas for this purpose.



Lily of the Valley

*Easy to grow,
easy to care for,
permanent and
satisfactory*



THIS WELL-KNOWN and really old-fashioned plant is one of the most popular and easily grown of perennial plants and is especially esteemed for its dainty bell-like pure white sweetly scented flowers.

It is equally useful for indoor table decoration in low vases or bowls and very desirable because it is quite easily made into the most attractive corsages.

Like most other hardy perennials it has a great deal of work to do during the season. The plant not only has to produce an entirely new growth above ground every year, but must build up and store up next year's display underground, in a "bud" after the season's flowers are over.

During the summer months its main energy is directed into the formation of a new bud or "pip" which will contain a complete set of two leaves and a flower stem. Unless this work is properly conducted and completed before the next winter, the following season's crop of flowers will be affected or completely spoiled.

Provided the plants are able to perform their necessary bud-building, the display of flowers will always be assured for the next spring.

“Bailey” states that this plant is the one that is popularly supposed to have been referred to in the “Sermon on the Mount”.

He also states that the roots are sold by druggists as a heart tonic, and that, as with many other like plants, small doses are beneficial and large doses are poisonous to humans.

There is no doubt that this lovely flower was first brought into gardens and cultivated for its medicinal properties and the selection of varieties that produced large and attractively scented flowers came later because several other varieties of this plant family do not produce any flowers at all.

The Lily-of-the-Valley plant grows from a central “pip” or bud, which is attached to a string-like root. From this root, hundreds of hair-like side rootlets are produced.

The plant multiplies by sending out underground runners in all directions which, in time, produce new plants in the form of a bed.

If allowed to grow without care, the bed becomes filled with more and more roots and runners until it succeeds in choking itself. This causes each new bud to be starved by crowding. The evidence of this natural choking is first noticed when the plants do not produce flowers in any quantity. A badly crowded bed will sometimes entirely quit flowering altogether.

The correct time to take care of this trouble is when the leaves have died down in winter. At this time the Lily bed should be entirely remade. In fact, it is highly desirable in most gardens to remake the bed every four years, to avoid any overcrowding before it affects the flowering of the plants.

CHOICE OF POSITION

As with all other plants, it is most wise to carefully examine the construction and make-up of the plant to determine the position that will be most suitable and satisfactory for it.

LEAVES

Two leaves are produced on a single stem. These leaves are broad and, when water, rain, or dew falls on them, it is conducted by the funnel-like shape and structure of the leaves down the leaf stalk, down the stem, to the roots.

This is a definite and natural indication that the plant loves plenty of moisture and needs it all season long at regular intervals.

FLOWERS

From five to ten in number, are borne on a single, strong slightly curved stem. They are quite pendulous, each flower hanging face downward, and each one is joined to the main stem by a small short curved stem of its own.

The flower stems are generally found to be slightly shorter in height than the leaves, as if they needed their own leaves' protection. Occasionally a long strong flower stem will manage to lift its one or two top flowers above the foliage, but most of them are hidden.

All flowers of this type naturally desire a place in the shade. The formation of the Lily-of-the-Valley plant shows that it grew wild in positions that were generally overhung by trees. Its time of flowering indicates that these trees were deciduous ones and point out that its natural habitat was never under evergreens.

Its habit also definitely tells us that, being an under-tree plant, it loves a cool place where conditions are moist in summer, and that it should be given plenty of leaf mold or rich humus in which to grow.

PREPARE THE BED

There are only a few gardens in which Lily-of-the-Valley may be left to fend for themselves for many years without disturbance. To keep them at their best, plan to give them a new or renovated bed every four or five years.

To prepare this bed, first select a position in which the plants will naturally be happy. They enjoy a cool root-run, so select a place under deciduous trees—trees that do not make a very heavy root growth if possible.

Other good positions are near a wall, house or building. Lilies-of-the-Valley give fine results when grown between a house and a cement or stone walk—on the protected north side of the building, where they are sheltered from the direct rays of the sun.

Lily-of-the-Valley, unlike most other plants that grow in similar positions, should have a soil which contains lime or magnesium. This is proven by experience and also by the fact that plants are found growing wild in areas where limestone is abundant.

In preparing the bed, then, dig the soil to depth of twelve inches. Remove and cut off all the tree roots in the area.

Remember that if many tree roots have to be cut, they will undoubtedly grow back again, so be prepared to use a spade to cut encroaching roots around the bed at least once a year.

The soil mixture of the bed should be made up of equal parts of the original soil, sand, and leaf mold (or some equally good humus).

Add to this one pound of garden lime or marl, one pound of charcoal and one pound of your favorite commercial fertilizer to each ten square feet of bed.

The preparation of the bed should be finished at least two months before the plants are to be set in it, so plan to have this work completed by early October.

By allowing the bed this length of time (two months) to mellow, settle and become fertile, the plants, when set out, will move into almost instantly active root growth and the first season's flowers will be twice as fine.

When digging up the old bed and resetting plants into the new one, no time should be lost. If possible, the work should all be done in one day so as to prevent the fleshy little root stocks from drying out.

Take particular notice of exactly where the roots are growing when you dig them. It will be seen that they are all quite close to the surface.

When replanting, they **MUST** go back at the same depth, and should be planted in that position again, taking care not to get them any deeper than Nature intended them to grow.

However, since the reason for moving the plants is to prevent or alleviate over-crowding, it is best to carefully spade out all the roots in a bed. Shake off all the soil and sort them out. Select all the pieces with large "pips" or eyes for planting in the new bed. Set the "pip" upright about 4-6 inches apart with the roots spread out fanwise, just like they were growing in the old bed. Sever any thick roots which join two "pips" as near the center between them as possible.

After the new bed has been planted with the best roots and "pips" it will be found that there is about an equal number of inferior and smaller ones left over. Dig over the old bed in the same manner as the new ones were prepared. Add the humus, fertilizer and lime and replant the "seconds".

WHAT TO DO NOW

The Lily-of-the-Valley bed should never be disturbed during or after flowering time. The leaves will be working, from Spring until the time they turn brown and die down in fall, in producing the new buds or "pips" and by the time their work is done the complete flower and leaves will be there, sheathed in the bud, underground.

To help produce better buds each season (for the next year's flowers) there are several good garden practices that should be observed.

The first is to be sure that the plants get plenty of water when they need it, during the dry times in summer. Thoroughly soak the bed several times during the three summer months, but do not water artificially after September.

Artificial water is generally pure water and contains no plant food. Be sure to add some plant food and also some Vitamin B1 to the water. Both of these may be dissolved in the water or applied dry before watering. No matter which way they are used, do not omit them or the plants which are overcrowded and choked will not be able to establish the desired and expected quantity of flowering buds.

WHEN PICKING FLOWERS

Do not "pull" the stems, but always snap or cut them at the soil level.

The best time to pick the flowers is in the early morning so that they will last longer in water and retain their perfume as long as possible.

Never pick or cut the Lily-of-the-Valley leaves. They are needed by the plant, to work on the production of next year's flowers.

OTHER PLACES

Although the natural place for this plant is in shade or partial shade, it is quite possible, should no such position be available, to grow them very successfully in the open. They prefer a place where they get as much shelter from the *direct* sun's rays as convenient, so make your choice from places that are not right out in the open all day. Perhaps a conveniently placed tree, bush or building in the next lot will do, and

only a couple of hours partial shade in the afternoon is better than none at all.

If you have Rhododendrons or other like shrubs, try a border-bed of Lily-of-the-Valley in front of them.

Surprising as it may seem, the Lilies-of-the-Valley are not detrimental to the shrubs, and it will be found that shrubs bordered by the plants invariably look better and grow better than those with "bare feet".

FLOWERS FOR WINTER INDOORS

If desired, when transplanting the Lily-of-the-Valley plants, one may select a dozen or two of the largest and best formed "pips" which have a sturdy and plentiful supply of this lovely flower for indoors right after New Year's.

The "pips" should be planted quite close together in the pots. Generally a six inch bulb pot is used for each twelve "crowns".

Great care must be used in setting the roots in the pots, for they will do best only if the roots are spread out as much as possible and plenty of soil pressed in between each little rootlet in the pot.

To do this, be prepared to take plenty of time when setting each pot. The soil and the roots must be carefully pressed in, a little at a time, with the fingers and then carefully watered so that roots and soil are firmed well and evenly together.

Because the Lily-of-the-Valley plants need to start growth as soon as they are potted up, one should use a supply of Vitamin B1 in warm water at three-day intervals.

The pots should be kept in a very warm room, where the temperature is able to be kept around 65° to 70° consistently. Choose a place in the room where plenty of direct daylight is available, and out of a draught. Use warm water, at room temperature, at all times. Egg-water is exceptionally good.

The soil in the pots should be as rich as possible and prepared exactly in the same manner as for tulips and hyacinths. Use very rich soil that has been mixed and prepared several weeks in advance of the potting. Be sure it contains plenty of rich humus and a sufficient quantity of charcoal to keep the soil sweet.

After the Lily-of-the-Valley has finished flowering in the pot indoors, the pot may be removed and the clump and attached soil can be set into a carefully chosen place in the garden, where it will form a nucleus of a new bed which will provide a satisfactory display for several seasons afterwards, without further care.



Crocus

*Yellow Crocus
bloom first but
white ones are
equally attractive
around the
base of tree*



WHITE CROCUS

Because it flowers so very early in the season, braving the cold winds and frosts, to flower even before winter is past, the Crocus is a general favorite with many gardeners.

The yellow flowered variety is perhaps the most popular, but there are many other shades—white, blue, lavender, purple and blue-and-white striped.

The yellow, being the first one to flower, is quite often found planted in a circle around a shade tree, in parking strip, lawn or backyard. Blooming before the trees leaf out, a planting forms a veritable “fairy-ring” of gold around the tree’s base.

Since the golden crocus variety flowers before the blue, white, and striped, many gardeners plant several varieties together in the same group. It is most interesting to note how each color blooms out in proper order, presenting a kaleidoscopic effect of natural color changing; which cannot be equalled by any other plant.

Although most of the crocus bulbs used to come from Holland, Amer-

ican growers have provided us with a supply—not plentiful—but enough for present needs.

The crocus bulb is really a CORM and grows very much like the gladiolus.

It is a perfectly hardy plant and may be allowed to remain undisturbed for a considerable period.

Each year, a new Corm is formed on the top of the old one, which rots and gradually disappears. Since crocus bulbs are generally planted quite shallow, it is wise to inspect them every few years. The yearly formation of one or more new bulbs on top of the old gradually brings them nearer to the surface. When they get too shallow, all that is necessary is to lift them in October and replant them a few inches deeper.

Crocus multiply quite rapidly and a single bulb, planted properly, will form a sizeable colony in a few years. It is in order to divide these groups when replanting as they soon multiply again.

Crocus bulbs should be planted about three inches deep in the same manner as other bulbs. When planting, be sure to mix plenty of naphthalene in the soil around them to keep away field mice which seem to enjoy feasting on the bulbs, especially if they can be reached through a mole's tunnel.

There are two things that Crocus prefer to have omitted from their garden planting spot—clay and manure. If your soil is clayey, add plenty of sand and peat moss but avoid manures. A good brand of commercial fertilizer should be used for crocus in the same manner as for other bulbs.

The flowers of the crocus are rather peculiar. They come from a tuft of tiny new leaves in very early spring.

The flowers have no stems. What at first appears to be the stem is really an elongated "neck" of the flower.

Crocus flowers close when out of the sun and in doing so, lose much of their beauty, so choose a place that gets as much sun as possible, when planting them. If this is done, the flowers will remain open practically all day, giving a longer period of color display.

Several clusters of crocus of various colors may be planted successfully in any rock garden. Groups will also present a lovely display set at the base of a rock wall, especially if they are just in front of Iris.

One of the most puzzling of garden problems, is to find out how to make a sloping bank, that is too steep to cut with a lawn mower, look attractive. The answer in early spring is to use several large groups of golden crocus.

About the only "trouble" that comes to crocus is that sparrows seem to delight in pecking off the golden petals, if allowed. No one seems to be able to give any reason for the birds' doing this damage, unless it is that they enjoy the sweet juice of the plant. Sparrows are easily kept away, however.



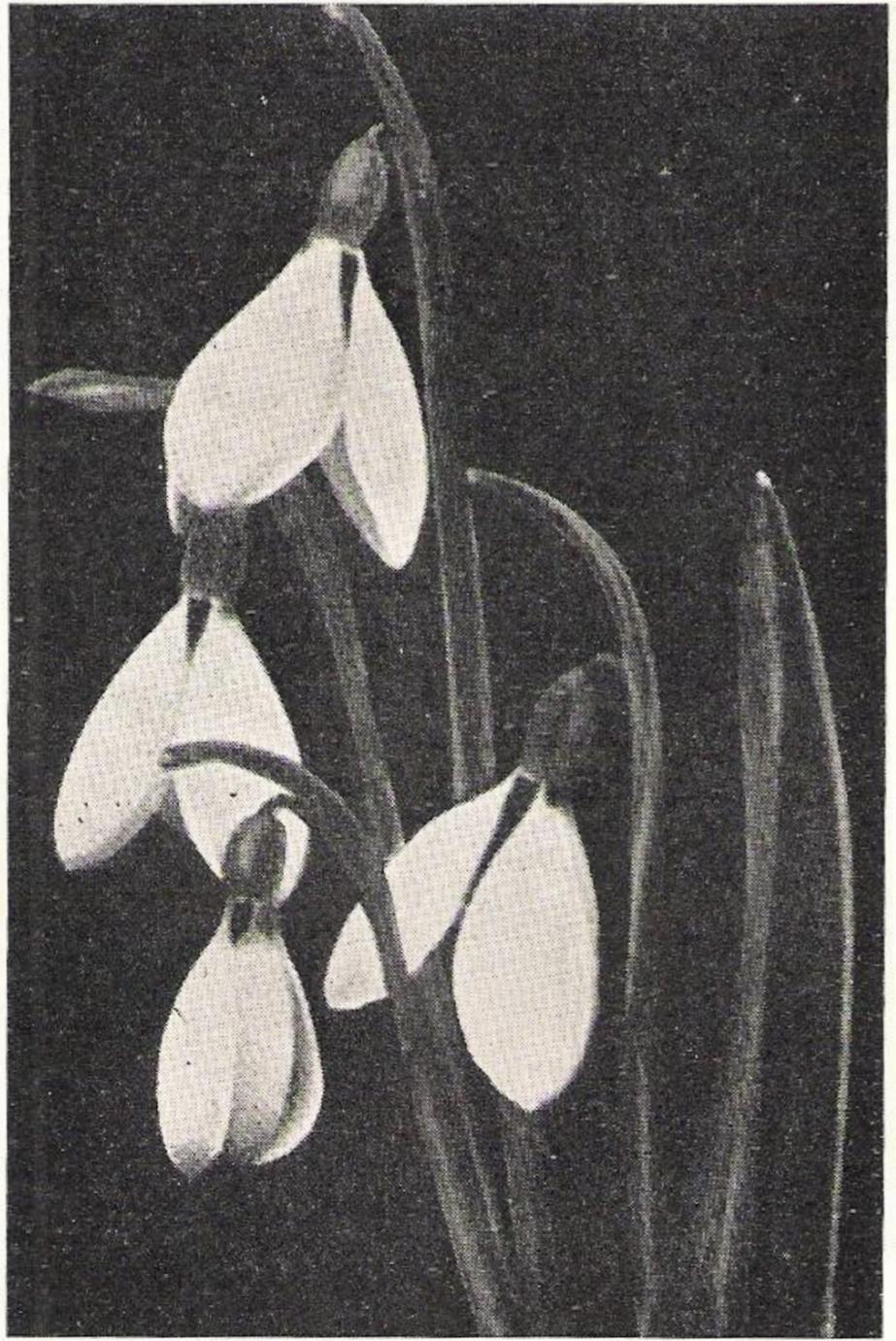
RANUNCULUS TECOLOTE GIANTS



DUTCH IRIS

Snowdrops

*Milk white pearls
that glisten in
Spring's first sunshine*



“The Fair Maids of February.”

“While still the cold northeast ungenial lowers
And scarce the hazel in the leafless copse
Or sallows show their downy pendent flowers,
The grass is sprinkled with its silver drops.”

—Author Unknown

Everyone knows this lovely hardy bulb-flower which is always remembered as “one of Mother’s favorites.” Flowering as it does in March, before hardly any of the other garden flowers commence to bloom, it is as much loved as the Crocus.

Its lovely white flowers are well named “Snow-drops” but few realize that its rather unwieldy botanic name of *Galanthus* is Greek for “milk-flower”, which is equally expressive.

Actually the flowers are not pure white although they appear to be, when seen growing in the garden. Each petal has a green blotch on it. Rosetti gives the best description of this, calling it “a heart-shaped seal of green on every snow-white petal.”

There are three varieties of snowdrops that may be obtained by purchasing bulbs.

G. NIVALIS—The small flowered old-fashioned single snowdrop.

G. ELWESII—A variety, with much larger flowers, stems and leaves.

G. NIVALIS Fl. Pl.—The double flowered sort that is found "near the backdoor" of so many old homes. The flowers of the double variety last much longer than the single ones.

The snowdrops thrive excellently in a moist, cool, shady place, where a soil is provided that is rich in leaf mold. They will do well under almost all trees, where they flower even earlier than in semi-shade.

Because of the earliness of flower production, they necessarily have to make much root-growth in fall. For this reason it is advisable to plant the bulbs in early October or even September.

To ensure perfection in snowdrop culture, the bulbs should be planted with as much care as daffodils. The bulb should be set three inches deep. Since its roots have to be produced below this level, the planting site should be prepared to a depth of six inches.

In the bottom of the hole, mix good sandy garden soil and leaf or woods mold in equal proportions. Firm it down well and spread a course of sand for the bulb's base to rest in. In good rich soil and when growing in a spot where they are "happy", the bulbs multiply quite rapidly and soon provide large colonies of snow-white loveliness. Many gardeners prefer these cluster groups, but they may be divided up in September to gradually increase the snow carpet display of which they are so capable.

Winter Aconite

WINTER ACONITE (ERANTHIS HYEMALIS) was named for the Greek word (eranthis) meaning "Flower of Spring". It has a tuberous root, belongs to the buttercup family, and does especially well in an exposed position in the rock garden or border.

Each single stem has a rosette of finely cut lacy leaves at the top. The solitary yellow buttercup-like flower sits in this rosette. It stands up sturdily and is never affected by the winter weather. It flowers before the crocus and is the first yellow bulb-flower to greet the few sunny days in January or February. After flowering and going to seed, it dies completely down to take its rest period during the early summer. Growth commences again with the first fall rains and the little green tufts are quite attractive in fall and winter.

Because of its habit of growth, the bulbs (tubers) should be planted not later than early September. The plant thrives in a rich sandy soil and grows best where there is some protection from surrounding shrubs. Like most other woodland plants, it is quite happy in partial shade, but dislikes being placed too close to evergreens.

*Star
of
Bethlehem*



There are two good varieties that are most used in gardens: *O. Nutans* and *O. Umbellatum*. Both have white flowers marked with green. *Nutans* is the first to flower in April with 9-10 inch stems. *Umbellatum* comes a little later (May) and is a little shorter.

The flower clusters (racemes) carry 12-20 blooms atop single leafless stems.

Bulbs should be planted in small groups, in rich sandy soil. They multiply quite rapidly and will soon form a permanent colony which may be relied on to flower with regularity and certainty year after year with little or no attention, other than transplanting and dividing every five or six years if they become too crowded.

This is one of the many plants that have no insect or disease troubles and may be safely listed in your bug-free plant garden.

Their attractive clusters of flowers are particularly "in place" near a pool or rock garden where they bloom in advance of most plants generally used in these positions. Planted in a group with Bluebells, *Scilla Campanulata*, they make a most attractive display. Their perfume or odor is quite unusual and different, and they should therefore be sparingly used as cut flowers.

One of the most attractive oddities about this plant is that it opens its buds only on sunny days, closing them up as the sun goes down. On cloudy days the buds remain closed but attractive, like clusters of inverted snowdrops.



FEATHER HYACINTH

Muscari or Baby Hyacinths

*Equally bright in
rock garden or
near a pool*



MUSCARI

There are two lovely little gems in this family, for which bulbs are available. They are the Grape Hyacinth and the Feather Hyacinth.

The Grape Hyacinth, *M. botryoides* (which means "like a bunch of grapes") looks like a tiny Hyacinth whose flowers refuse to open. The sky-blue flowers last a long time and form a bright little cluster in garden or rock garden.

The most popular of the Grape Hyacinths are:

ARMENIACUM—Deep cobalt blue blooms, producing many spikes with large flowers. Wonderfully fragrant. While there are several kinds of Muscari, this variety is considered the best for mass planting. Their flowers open just about the time that the Crocus are through. When grown in partial shade stems will be long enough for cutting.

HEAVENLY BLUE—Few flowers combine with others so well as these little sky blue harbingers of spring. With Daffodils they are particularly effective as a ground cover. They are excellent also for edging spring borders, for rock gardens, around shrubbery and trees, and around old tree stumps where they nestle enchantingly. They may be planted as close as two inches apart for a massed effect. They soon form clumps and, being perfectly hardy, reappear each spring to surprise you again with their beauty.

ALBA—This is the white Grape Hyacinth which is very pretty when planted with the blue variety or separately as a ground cover to intensify the coloring of its companion plants.

The Feather Hyacinth, *M. plumosum*, looks as if every petal has been shredded and is sometimes called "shredded lilac" in old garden books. Its color is a lovely lilac-lavender.

The bulbs of Muscari look like tiny Hyacinth bulbs. They should be planted in the open in rich soil that is quite moist. Since many of Spring's early flowers are yellow or white, these two blue and lilac miniatures are most attractive, especially if they are planted in large groups in a rock garden.

Bulbs should be set 2-3 inches deep to have fully satisfactory results. The bulbs last for many years without need for digging or replanting. The planting instructions for hyacinths should be followed as exactly as possible.

Chionodoxa



Glory of the Snow
is the first blue
Spring bulb flower

CHIONODOXA

CHIONODOXA is commonly known as "Glory of the Snow". It is one of the very earliest of all flowers to bloom in Spring, and is particularly useful because it is the first real bright blue to show up.

There are two popular varieties; SARDENSIS, which is the earliest and is a pure medium blue, and LUCILAE, which follows it within ten days with lighter but bright blue flowers that have a bright white eye.

The stems are strong and rather short—generally 5-6 inches. They carry a cluster of 3-5 star-shaped flowers which stands upright atop the stem. The plant likes the open garden best, but will do quite well under shrubs that leaf out later.

The soil should be sandy and gritty, but containing plenty of leaf mold or humus. The richer the soil the better, for the bulbs multiply with rapidity once they are established. They take 2-3 years to become well established before they do their best. They should not be moved or replanted unless necessity arises.

The Blue Chionodoxas are exceptionally lovely as a bed set at the base of a Star Magnolia and are as effective as a ribbon of golden crocus around the base of an apple tree. They will also make a fine show if planted at the feet of Camellias, Rhododendrons or Azaleas.

*Snow
Flakes
are
well
named*



SNOWFLAKE, LEUCOJUM

SNOWFLAKE (*Leucojum*), as its name implies is a very early white flower. It is so much like the Snowdrop, there is no wonder that it was similarly named.

The hollow stiff leafless stems are 12-15 inches in height, and carry several nodding bell-shaped flowers on each stem. The flowers are not so divided as the Snowdrop and look like little white skirts with tiny green hearts embroidered on the hems. The flowers have practically no perfume. The leaves grow like those of daffodils or bluebells and are about the same height as the flowers.

They flower quite early—generally in March or early April, and make a very pretty show when planted in front of, or between shrubs.

If a large colony is desired, they may be divided and reset every few years in July.

They do not seem to have any special soil requirements, but do exceptionally well in a sandy soil to which has been added a goodly amount of rotted leaf mold or compost.

Once established, the plants will flower annually until they get too crowded, when division and replanting is called for by evidence of failure to flower copiously. This plant never seems to suffer from insect pests or diseases and in consequence is very desirable for use in a large garden.

AESTIVUM—A very hardy, handsome, robust growing plant, producing tall spikes of elegant drooping white flowers, tipped yellow and green. Prized for cutting. It should be allowed to remain undisturbed for many years in the same location.

Carpets for Spring Bulbs

PROVIDED WE experience an ordinary season, our gardens in April and May will be bright and colorful with the lovely spring flowering bulbs.

Whether your bulbs were newly purchased or were those that had been grown in the garden for several years, they will all be due for a little extra care and attention this season.

First, let it be remembered that, to have the bulbs grow bigger and better each year, it is necessary to give them all the assistance possible.

From Spring until July or August, the visible parts of the plants are the leaves and flowers. After the shoots are well out of the ground, it is possible for us to cultivate the soil between and around them. This work can be done quite easily by the use of a long handled hoe or other cultivator. The disturbance of the soil around the plants will facilitate the entrance of air into the ground and consequently make the soil more productive. To give the growing bulb plants an additional "boost", it would be wise to scatter a small quantity of your favorite garden fertilizer before stirring the soil.

The cultivation will properly work this plant food into the soil with a highly beneficial effect on the size and color of the flowers.

During the ripening period while the leaves are dying down, they look far from attractive and the whole plants are quite often removed to some obscure or neglected place in the garden. This removal, before ripening is completed, prematurely stops the food storage and naturally affects the quality and size of the bulbs.

Since the dying-down bulbs present an unattractive appearance, the best method is to hide them as much as possible without moving them or stopping the ripening processes.

To accomplish this, plants that are generally called "companion plants" are grown in the bulb beds. The value of these "companions" is that they cover the ground in Spring and make the beds more pleasing and attractive by hiding the bare soil.

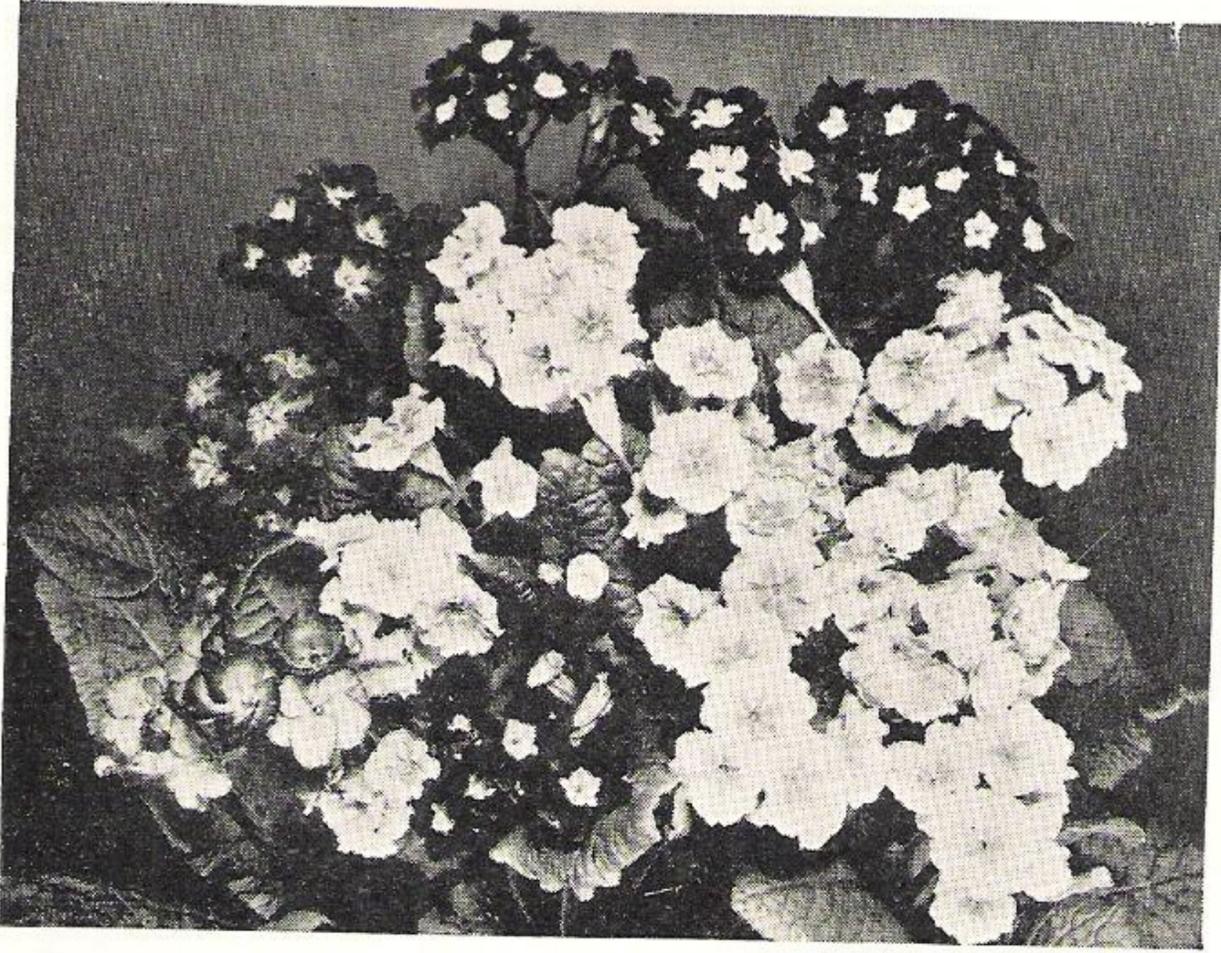
Plants are chosen that produce a ground cover, and whose roots, because of their shallow habit, do not hamper the continued natural growth of the bulb plants.

In the descriptive list given here will be found suggestions for plants that will attractively cover the bare ground with green growth before the bulbs flower. This green carpet provides a pleasing background while the bulbs are in flower. After they are over, the "companion" produces its own lovely display of flowers which are not only beautiful in their own right, but serve to hide the unsightly appearance of the ripening bulb plant's stem and leaves.

CARPET FLOWERS

Forget-me-not seedlings are to be found in almost every garden. If these are carefully transplanted in March and placed between tulips, hyacinths or narcissus they are most beautiful in the way they form a blue cloud beneath the flowering bulbs.

Pink tulips and blue forget-me-nots are lovely together. After the tulips or other flowers are picked, the forget-me-nots are still attractive until June, when they may be pulled up and replaced with such summer sunshine flowers as Fairy Bouquet, Linaria, Dwarf Marigolds or Dwarf Zinnias.



POLYANTHUS PRIMROSES

PRIMROSES AND POLYANTHUS

These two plants are ideal to set between spring bulbs. Most garden stores and nurseries have many lovely sorts to choose from, for sale in early Spring.

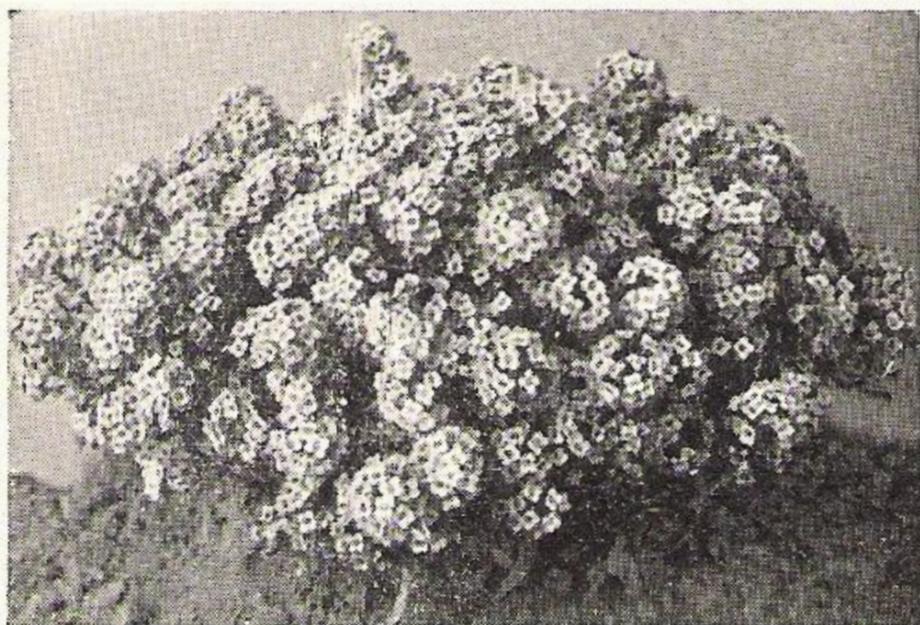
The various colors and varieties should be grouped with regard to the colors of the bulbs with which they are planted, because they will both be flowering and at their best at the same time. After flowering, the primroses make a good leaf growth which is quite attractive. They may be divided and moved in early summer to make room for a display of annuals.

PANSIES

Their shallow rooting habit and colorful display make them most attractive subjects as bulbs' companions. The soil and condition of the bulb bed are highly satisfactory for Pansies (and Violas) and if the soil is well fertilized before they are set out both they and the bulbs will benefit greatly.

Since the Pansy plants are in flower when purchased from the stores, it is an easy matter for every gardener to do a little color scheming with gratifying results.

Carpet Annuals



There are dozens of varieties of lovely low growing annual flowers that may be planted from seed in March. The great value of these annuals is that their cost is well within the reach of every pocketbook. A dime packet of seed of any one variety is generally enough and two dimes' worth will provide an ample supply of plants that will start to flower as soon as the bulbs are over, and continue until late fall.

These annuals, because of their root structure, will become established quickly and flower their heads off all summer without the need of much water. Because of their ability to do so well without much water, they are invaluable companions in a place where water must be used sparingly while bulbs are completing their ripening process.

The large and varied choice and selection of these annuals makes it possible for everyone to plan his own displays in a manner and style he likes best, choosing and experimenting with many lovely and different color combinations.

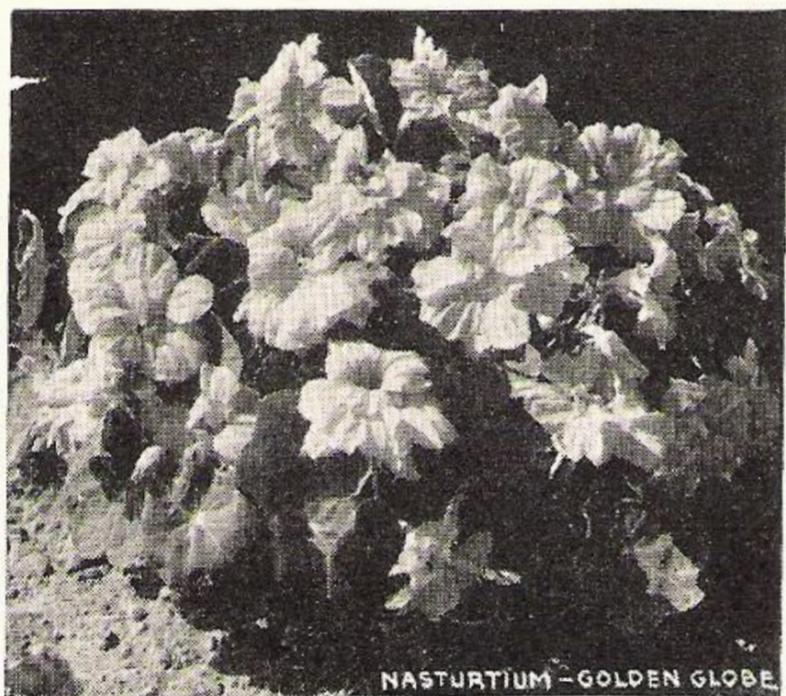
These annuals, when planted from seed, will germinate quickly and rapidly, cover the ground with a green carpet of foliage against which the flowers of the spring bulbs may be enjoyed in their full beauty.

CANDYTUFT is one of the most easily grown and attractive of the suitable low growing annuals. Seed stores can supply seed in mixed or separate colors. Most gardeners prefer this plant in white for growing between bulbs or in borders, but the lovely bright colors which completely cover the bed with rainbow brilliance all summer should be given first consideration.

FAIRY BOUQUET LINARIA is one of the Gold Medal winners of a few years ago. Its habit is like an airy graceful tiny snapdragon plant. It grows about eighteen inches high and will flower all summer provided the branches are cut back as they flower. "Fairy Bouquet" is quite hardy and may be sown from a dime packet of seed in March. This plant will provide all the colors imaginable including the brilliant ones such as cerise, bright blue and orange, and a full range of pastel shades, too.

The Fairy Bouquet is now much used as a different and dainty substitute for Babys Breath or other greens for use with Sweet Peas in the house. Fairy Bouquet is generally used with the tallest and latest flowering tulips.

***Globe Nasturtium
makes a good
companion plant***



MIGNONETTE is a lovely sweet scented, low growing annual. It is ideally suited to this climate and should be better known. When it is used more, it will be most popular. Seed may be planted in any bulb bed, but, it is especially suitable to grow between hyacinths.

Mignonette flowers best when it is grown in a rather dry place and so it is especially suitable to grow as a companion to bulbs that have to stay fairly dry during July and August.

GEM NASTURTIUMS are the new race of very low growing varieties of this free flowering annual. These Gem or Globe varieties come in all colors. They only grow a few inches high and spread to make a mat of flowers which cover the ground completely until frost.

The seeds should be planted singly between the bulbs. They will start to grow in April and will carpet the bulb bed more rapidly than any other plant. Nasturtiums flower better and more profusely where they are not watered at all during summer, so they are ideal companions for bulbs and are unequalled for the brilliance of their color display.

BABY BLUE EYES (Nemophila) is another very hardy annual plant which may be grown from seed that may be planted by scattering it between the bulbs.

Everyone knows this flower well, but few have seen what a lovely carpet companion it is when grown in the bulb bed. Here in this climate this plant will live for many years as a perennial. It may be moved as often as desired and will do well in any sunny location.

PHLOX, DRUMMONDI is the annual phlox. It grows only about 3-4 inches high, producing a compact branching plant which is literally covered with clusters of flowers all season long. The plant is a hardy annual and the seed may be scattered outdoors. Since the seed is very tiny, it is wise to carefully smooth and level the soil between the bulbs before planting. Seed may be scattered on the surface. The rains will cover it all that is necessary.

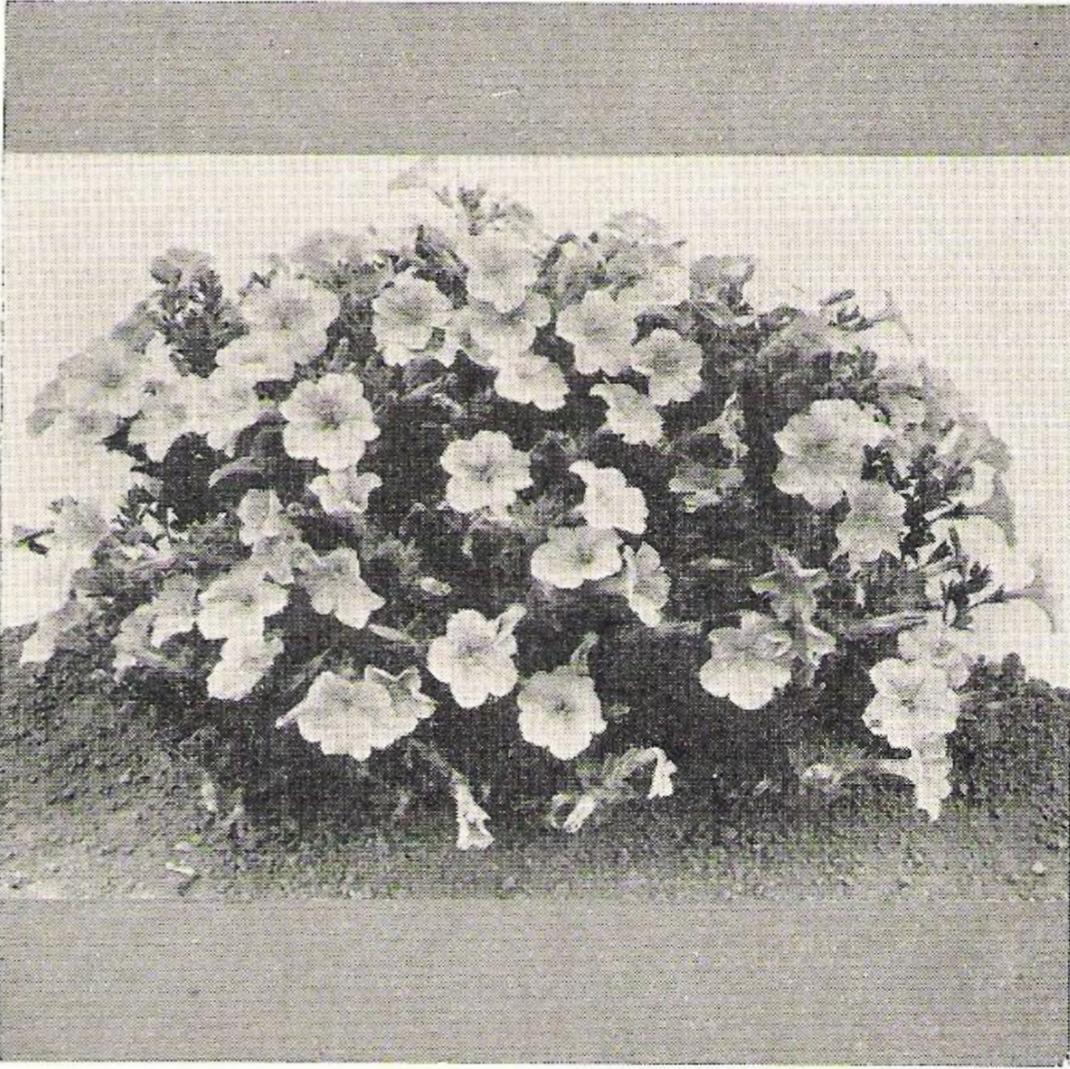
In the color range of this annual Phlox there are many lovely colors and sorts that are sold separately by your favorite seed store. One new variety won a well-deserved A.A.S. Award.

If desired, the seeds of the *hardy* Annuals, Candytuft, Linaria, Mignonette, Nasturtiums, Nemophila, and Phlox may be planted outdoors at the same time as the bulbs are set out in the Fall.

If bulbs remain in the ground for several years, the hardy annual companions, may be "volunteered" by planting the seed when the fall clean-up of the garden is done.

FOLLOW PLANTS

There are also many flowering plants in the annual group that are known as sunshine annuals. These have to be started from seed indoors and the young plants set out in May. Just as soon as the bulb-flowers are over is an ideal time to set this group of plants out. There is no need to worry about color scheming in regard to the bulbs because they are all through blooming before any flowers bloom on the annuals. Their great value is in the fact that these plants make a rapid growth, need little artificial moisture and completely hide the dying tops of the bulbs without doing them any harm.



The new Dwarf Petunias are ideal for follow plants for bulbs

DWARF MARIGOLD. There are about a dozen very new, very dwarf types from which a choice may be made. Some sorts like *PYGMY* grow only up to 6 inches high while others like *HARMONY* are twice as tall. All varieties branch out well and form a perfect ground cover.

The dainty *Tagetes signata pumila*, with its fine ferny foliage and hundreds of bright single yellow flowers, is an old variety but still a favorite where a short compact growth is needed.

DWARF ZINNIAS is another recent introduction. The Lilliput or Tom Thumb group is ideal for this work. Mixed colors are generally used but for those who favor one color, there are many to choose from. The Scarlet Red Riding Hood is a spectacular variety.

SCHIZANTHUS or Butterfly flower is another little known but most effective annual that makes a complete bed of dainty flowers.

NEMESIA, Triumph will do in almost any garden spot, but seems to prefer a little afternoon shade. Its tiny dainty orchid-like flowers cover the compact twelve inch plants all season.

PETUNIAS may be successfully used to follow in the bulb bed, too. Especially well liked are the new *DWARF* sorts in all colors. They are much more compact and never get straggly.

Taking Up Spring Bulbs

EVERYONE WHO grows spring bulbs may, with ordinary care, be sure of a lovely display each year. There are two important gardening functions to be considered to ensure the good results.

The first is, of course, to plant the bulbs properly in good rich soil that is well drained and fertile and, of course, to plant them at the correct season.

The second—and just as important, is the subject each year of whether to take up the bulbs.

1. Should I take up my bulbs every year?
2. When should I take them up and how?
3. How do I make them flower if they quit?

WHAT IS IN A BULB?

Few gardeners are willing to sacrifice a bulb to become acquainted with the inside structure, but it is really worth the cost to cut a bulb up and examine the “insides.”

However, since an onion is a true *bulb* and a very good specimen of one, it may be used to dissect if desired.

If a bulb is cut through the center, it will be noticed that the center is formed of a dormant flower bud, which is wrapped in many scales laid in concentric layers and covered by a skin-coat.

Most of the material found inside the bulb is placed there by a natural storage method, almost all of which takes place between the time the flower opens and the dying-down of the leaves.

All true bulbs, if grown properly, should become slightly larger each year until they reach their maximum size, which enables them to continue to produce better flowers.

As everybody knows, the food which forms the new bud and “fattens” the bulb comes from the leaves. The leaves are the “lungs” of the plant and act as the food factory by combining materials from the air with the food supply which comes from the ground through the roots. This living matter exists throughout the winter in “bulb storage.”

If either the roots or the leaves are removed or damaged before they have completed their natural function, the bulb can not fill its job of storing food and building next year's flower.

Therefore, if good flowers are desired for the next season, it is important that the leaves remain until they have dried and ripened. The roots generally disappear about the same time.

It is a mistake to lift bulbs before they are quite ripe. To do so will destroy the remaining roots. These cannot be replaced after the flowering period and so the water and food supply from the soil is cut off. In consequence the leaves cannot function without raw materials and the storage in the bulb is interrupted and stopped.

This happening is one of the most common in a garden and for that simple reason it is strongly advised that the bulbs should NOT be lifted immediately after flowering, even if the garden does look a little untidy.

The dying leaves of spring bulbs, can be hidden from sight by the careful use of other flowers and plants that cover or hide them.

LIFT BULBS? — YES!

All bulbs may be lifted each year but *unless the work can be done correctly* it is much better to leave them alone and allow them to remain in the same place for several years without disturbance.

However, if bulbs are allowed to remain, there are several dangers to which they are subjected.

Should their exact location be forgotten after the tops have died, they are likely to be disturbed, cut or spoiled when one is spading or planting near them.

Slugs are "bad medicine" to bulbs that are allowed to remain several years in one place. Many gardeners imagine that the slug pays his attention only to plants above ground. Slugs quite often leave tulip bulbs so riddled and perforated that they are worthless. Annually planted bulbs do not suffer so much from this trouble or from attacks by soil rodents because naphthalene or sulphur, being mixed with the soil when planting, prevents their attacks.

"Fire-blight" of tulips more often attacks those bulbs left in the soil for several years or bulbs that are lifted before foliage is ripe.

Bulbs may be lifted as soon as the tops dry. Some bulbs begin to develop new roots soon after wilting. If moved after development starts, they may be injured. When necessary to move them after root growth starts, get a clump of earth and, above all, do not let them or the roots dry out.

It is not good garden practice to move bulbs before they have ripened naturally, but sometimes it is necessary to get the bulbs out of a bed before normal ripening period is over.

Some people recommend that bulbs be lifted as soon as they are through flowering and "heeled" in some spare garden space until the tops have died down. The interruption of the ripening by this method is detrimental to all bulbs.

Should bulbs *have* to be moved early, a much better procedure is to *hasten* the ripening. This is done by thrusting a fork below the bulbs and heave it upwards gently but enough to break many of the roots. By cutting off a major portion of the supplies that come from the roots, the leaves will ripen very much more quickly. As soon as the leaves have dried, they may be dug and stored.

WHEN LIFTING

Of course it is superfluous to mention that great care should be taken when digging, that no bulb be cut or damaged by fork or spade.

When digging, remember that the bulbs have been in the dark under the ground where moisture and temperature remains very normal and even.

Avoid exposing any bulbs to the sun. It is even important to remove them to a cool darkened room a few at a time while they are being lifted, so as to prevent exposure to the sunshine or full daylight for even a short period of time.

After the bulbs are dug, they should be dried off in a cool shady place where there is plenty of air. *On no account* should bulbs ever be washed.

The best way is to spread them singly on the floor of a garage or basement. If handled carefully, they will dry slowly and remain plump. It is important to prevent shrivelling of the bulb while it dries by keeping it as cool as possible.

As soon as the bulbs are quite dry, they may be cleaned up. Remove any soil, do *not* take off the bulb skin. Nature put it there for use and protection.

When cleaning bulbs, break off any tiny bulblets which may have grown, joined to the base of the bulb. This procedure does not apply to Narcissus, Daffodils and Jonquils, on which the offshoots should be allowed to remain until they become large enough to break apart naturally.

Examine the bulbs carefully, looking for trouble while handling them. It's easy to cure anything that may be wrong, if it is taken care of at digging time.

Especially examine the "basal ring" for any sign of minute insects that might prevent the early formation of new strong roots after re-planting.

Be sure to burn or otherwise destroy all cleanings, to prevent possible spread of any insect or disease that might be on them.

For prevention of bulb carried insects and diseases, the bulbs should be placed in paper sacks. Do not fill each sack more than half full of bulbs.

In each sack place two heaped tablespoonsful each of naphthalene and garden sulphur and shake the bulbs up well so that they are thoroughly "dusted".

Then hang the sacks in a warm (70°-80°) place for about two weeks.

This will cause the sulphur-naphthalene to give off fumes that will penetrate to reach and destroy many minute live insects or diseases carried by the bulbs.

At the end of the two-week period the bulbs should be taken out of the bags and placed in a cold dark place where good air circulation is assured.

They can remain there until planting time.

TROUBLES TO LOOK FOR

Should tulip bulbs have grown scabby areas under the skin, cut them out with a sharp knife. Dust the cut, *after it dries*, with sulphur.

If Daffodils or Narcissi did not flower, one will most likely find the big white grub of the Narcissus fly in the center of the bulb. To find out whether it is there press the finger in the center of the basal ring.

If center is brown and soft and contains the large grub, it is best to destroy the bulb.

Green-blue mold on Tulip and other bulbs often occurs when bulb was damaged in digging or through poor circulation. The dusting of sulphur will generally check this trouble, but don't wait until it spreads and shrivels the bulb.

It is worthwhile to examine the basal ring of every bulb several times with a strong glass for signs of minute insects which feed in the "ring" and prevent the later formation of healthy strong roots. The sulphur-naphthalene dusting generally is a sufficient control.



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