

RURAL AND SUBURBAN

TULIPS FOR GARDEN DECORATION

Of all the bulbous plants that are used to embellish our gardens none are either more beautiful or possess a greater variety of coloring than the tulips. From a very early date they have been great favorites, and their cultivation in olden times was not less enthusiastic than it is today, though they were grown less than for cutting than now. To prolong the season of bloom it is necessary to grow both the early and later flowering kinds, and these are divided into various groups, such as Early, May-flowering, Parrot, Darwin, etc. Each and all in their way are very beautiful, but it is more with the self-colored forms that we wish to treat at the present time, as these are far more effective for bedding when employed with other plants as a groundwork, than are those having various colorings on the same flower.

First let us treat of the plants to be used as a carpeting. Though these are by no means numerous, they are ample for the purpose. Of the myosotis, or forget-me-not, there are various shades of blue, in addition to the white forms. Seeds sown in July will produce plants large enough for planting out by the time the beds are ready for them in the autumn. Where a large quantity have to be produced sow the seeds thinly on a north or shaded border, where the soil can be kept moist. In such a place the seeds will germinate freely and the plants grow away rapidly. When large enough to handle, prick them out about four or five inches apart, and let them stand until the beds are ready, when they can be lifted with balls of earth attached. The same remarks apply to Alyssum saxatile compacta, the common white arabis, aubrietias, and others of that class. Pansies and violas may also be treated in like manner, but where particular shades of colors are desired, they are best grown from cuttings. By sowing early in July, and giving the plants liberal treatment, the majority of them will be in bloom by the autumn, so that the best may be picked out, keeping each distinct color by itself.

There are many plants, however, that will not seed readily, and these must be propagated by cuttings. The double white arabis is one of them, and nothing could be more beautiful for carpeting beds in which some of the tall May-flowering tulips are planted. If cuttings of this plant are inserted in a light sandy soil in a north border they will soon take root, and thousands of them may be propagated in this way with but little trouble. When rooted they should be transplanted, so as to induce them to make a sturdy growth. The various wallflowers are also useful, but a preference should be given to the dwarf growing kinds when employed for this purpose. The seeds should be sown thinly in June or early in July, and when the plants are large enough to handle prick them out sufficiently apart in an open space on poor ground to induce them to grow the more sturdy. There are also some annuals which, if sown in the autumn, will flower early in spring. Having a good stock of these plants, there should be no difficulty in making a fine display, and the varieties so arranged that both the carpet beneath and the tulips above flower at the same time.

Amongst the early-flowering tulips the Pottelbakkers, Proserpine, Yellow Prince, Chrysolora, White Hawk, La Reine, and Crimson King are the best selfs, while in mixed colors Keizerskroon, Duchesse de Parme, Rosa Mundi, and the like are useful. The May-flowering class, however, are by far the most effective. What can be more beautiful than a bed of forget-me-nots over which are fine bold flowers of Mrs. Moon, Gesneriana lutea, or Mrs. Keightley tulips are waving their stately blooms? When well grown the stems of these tulips vary from eighteen inches to two and a half feet, so that in exposed places they will need slight supports. The first-named grows the tallest, and produces bright yellow pointed flowers, while lutea is of globular form, large size, and good substance. Mrs. Keightley is pale primrose. There are several others of this class varying from a pale primrose or straw color to a deep orange-yellow, such as elegans maxima lutea, retroflexa, vitellina, Leghorn Bonnet, ixioides, Illuminator, and the old Bouton-d'Or, all first class.

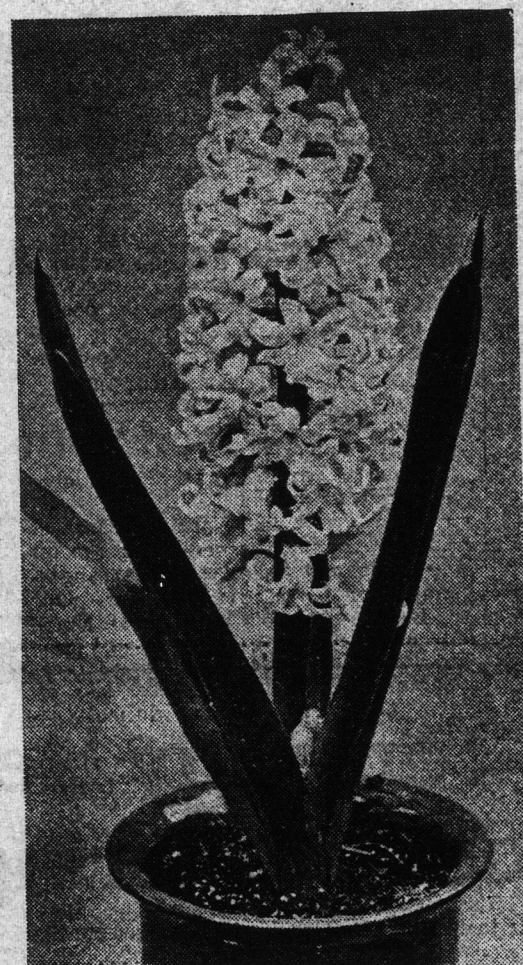
Of whites we have such varieties as the old Picotee, or Maiden's Blush, which has for a long time been a great favorite; then there is the Parisian White, a fine globular form; Milkmaid, a dwarf-growing variety, suitable for small beds; Didieri alba, White Swan Snowdon, elegans alba, and Creamy White. The beautiful shades of pink and fawn color should not be overlooked, as amongst these we have some of the finest blooms, notably Inglescombe Pink, La Perle, The Fawn, La Merveille, and others. Amongst the most showy of all the tulips are the scarlets and crimsons. The old Gesneriana is a fine, tall-growing kind; macrospila, Greigi, spatulata major, fulgens, and its early form, elegans, are all beautiful in their way, and may be grown in beds carpeted with other plants to harmonize with their colors. The number of varieties producing striped and mixed-colored blooms is very large, and these, as a rule, are best planted in groups by themselves in borders, that their coloring may not clash with other things; Bridesmaid, Bronze Prince, Clusiana, Bainty Maid, Billietiana, Shandon Belle, and Striped Beauty, are all good.

We now come to the Darwins, which are noted for their long stems and blooms of remarkable beauty. These are best planted in rather a shady position, so that the bright sun-

shine may not take the coloring out of their thick fleshy petals. The colors range from a creamy-white to almost a jet black. For cutting they should be grown in quantity, as their stems are stout enough to carry the blooms erect when placed in vases. Then we have what are called the Parrot tulips, but as these produce flowers out of all proportion to the strength of their stems, they cannot be recommended either for cutting or for making a display in the flower garden, as the flowers flop over so much, unless staked, that they come in contact with the soil, and are therefore spoiled by the heavy rains in spring. There is one other set, the old English varieties, which include Bizarres, Bybloemens, and Roses, all known by their various markings. These florists' tulips are best grown by themselves, where each can be given proper treatment, but I do not advise their cultivation for making a display in the flower garden, as the colors, as a rule, are not bright enough for that purpose, but as show flowers they are a most interesting group, and should be cultivated on that account.—H. C. Prinsep, in the Gardeners' Magazine.

WINTER BLOOMING BULBS

The value of bulbs for winter flowering in the house can hardly be overestimated. They



HYACINTH JACQUES GROWN IN FIBRE
A charming variety; the flowers bright pink.

give a maximum of pleasure with a minimum of attention occupying much less space than many other plants and yielding a long season of blooms at a season when they are most to be desired. Narcissi, crocuses, freesias, hyacinths, Bermuda Easter-lilies, the lily-of-the-valley, and tulips will certainly repay whatever work is necessary to grow them.

If flowers are desired by Christmas, it is necessary to get the bulbs potted early. Good results can be obtained only when the bulbs secure a vigorous root growth. Each bulb contains sufficient nourishment to give a blossom a start, but not enough to carry it to its full beauty; and the roots must be forced in advance of the top growth, which is done by potting the bulbs and then placing them in a situation where root growth will be stimulated while top growth is retarded—plunging them, as the process is called.

There are several ways of doing this, the simplest being to place the pots in a cellar and cover them with coal ashes for an inch or two, after watering each pot with a liberal hand. When this is done the ashes over the pot should be watered freely at frequent intervals. One of the best plans is to dig a trench in a dry place in the garden, setting the pots close together in that and covering them over with a few inches of soil, rounded a little above the surface of the ground to shed water. The pots in the trench should rest on several inches of coal ashes, and after the ground has become frozen a protection of manure or of leaves or straw should be put over the mound.

Sometimes pots are put in a sheltered spot on the ground and covered with dirt and ashes, another plan is to put them in a hot bed or cold-frame. In all cases when they rest on the ground out of doors there should be ashes under the pots to give drainage and keep out worms.

As a rule pots not less than five inches in diameter should be used, and except in the case of large bulbs, several should be grown in each pot. If there is an inch of soil between the bulbs in a pot they will not be too crowded. If the pot is new it should be thoroughly soaked before being used; otherwise it will take up the moisture from the potted soil. Pans from eight to twelve inches across are also of ten used.

It is necessary to have good soil, and one

of the easiest ways to obtain it is to dig up sods where the grass is in a flourishing condition and shake out the earth for that purpose. A little sand may be mixed with it and possibly a little bone meal, but manure should never be used.

In many cases it is advisable to secure potting soil from the florist. Several pieces of broken pots should be put into the bottom of the pot in which the bulbs are to be grown, in order to provide drainage. The pots should not be filled quite to the top, allowing an opportunity to apply water liberally, this being an important matter after the bulbs have been brought into the house. The crowns of most of the bulbs should not be deeper than one-half inch below the surface, and, as a general rule, all but the small ones should protrude for one-half inch above the soil. The lilies are an exception, however, for they should be well covered with soil.

Many of the bulbs will require three months in order to secure proper root growth; others, particularly the paper white narcissus and the Roman hyacinth, can severally be removed in five or six weeks. If properly plunged the tops will make little growth for a long time, making it possible to have bulbs flowering all through the winter.

The pots should never be taken into the room where the bulbs are to flower until the grower is certain that the root growth is as vigorous as it should be. The only way to ascertain this is to remove the contents of one of the pots, which can be done by holding the hand over the top and then rapping the pot on the edge of a table or a board, when the contents will readily come out. If the roots have developed sufficiently they will be seen in a tangled mass all through the soil; otherwise only a few straggling roots will be seen and pieces of the soil will probably drop away.

It is not good policy to remove the bulbs



TULIP PRINCE OF AUSTRIA GROWN IN FIBRE
A handsome variety with orange-scarlet flowers.

directly to a warm room, for such a practice is apt to force the blossoming stalk to such an extent that it will be unable to escape from the bulb and fail to flower. At first the bulbs should have a temperature of not greater than 50 degrees. If they can be placed in a cold frame, a light attic or similar place, the results usually will be satisfactory and the top growth will soon appear. Water should be given freely and a little commercial fertilizer designed for this purpose, and which can be secured at a feed-store will give satisfaction when used according to directions.

If it is found that the leaves are growing faster than the flowering stem, the grower will know that the temperature is too high for the best success. Foliage and flower stalk should develop together, and when they are well along the bulbs should be removed to a sunny location in the house, although the flowers will last much longer if the temperature does not run above sixty and the atmosphere is somewhat moist.

Some bulbs, especially hyacinths, can be grown very satisfactorily in water, and bulb glasses designed especially for them may be purchased at very small expense. The effect of blossoms rising from these glasses is very attractive.

The bulbs are started in the glass in a cool garret or cellar, and when the bulbs are well rooted, which can be determined very easily in this case by merely looking through the glass, they should be removed to a light room in a temperature not exceeding 50 degrees, and two or three weeks later to the room where they are to flower. This matter of introducing the bulbs to a warmer temperature by degrees is important, as it insures a strong and sturdy growth of foliage and flowering stem.

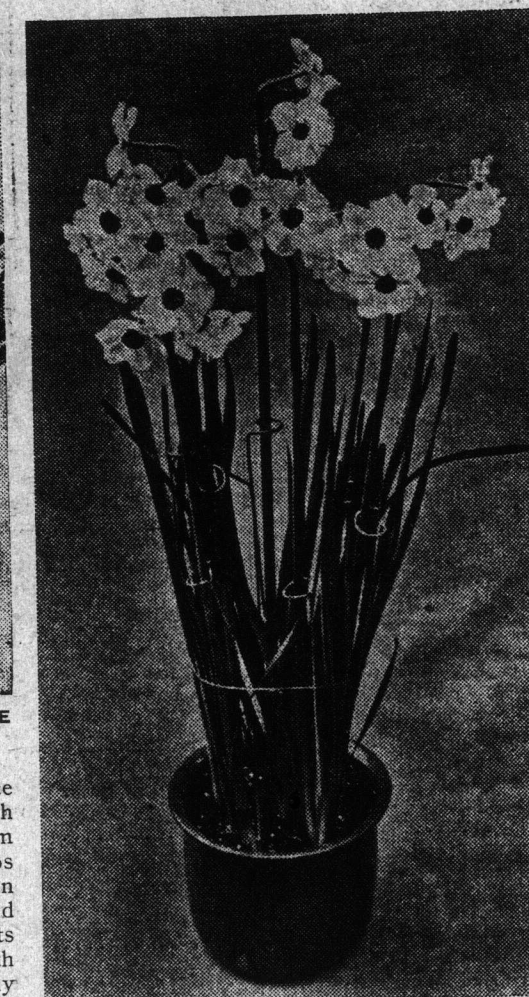
The bulb commonly known as the Chinese lily, which is really a variety of narcissus, is usually grown in a shallow dish partially filled with water. Three or four bulbs should be grown together and they should rest on sand or pebbles in the bottom of the dish. Pebbles

or small stones are used to brace the bulbs to prevent them from toppling over when the foliage has grown. The Chinese lily may be made to yield an extra number of blossoms if the skin is cut lightly just below the top.

THE AMATEUR'S PERPLEXITY

Happy in his gardening experience is he who can say that if he were planting fruit trees in his garden again he would put in the same varieties as he did before. Such a one is indeed lucky, for, however great his experience and sound his judgment, the cultivator is still to some extent at the mercy of chance, for he may find that something in his soil does not suit a particular variety; or that trees growing upon it are late in maturing their fruit, so that the latest varieties, like Sturmer Pippin, Adams' Pearmain, and Duke of Devonshire, are a failure in any but the best seasons; or that some trees are not upon the stocks most suited to them, a weak grower having been put upon an exceptionally feeble stock, or a strong grower upon a good deal of work has to be left to paid men, and mistakes will occur. Still, barring accidents, of which there must be some, it is possible by the exercise of judgment, combined with experience and observation, to reduce the number of failures to a minimum. It is hoped that these few notes, by pointing out some of the pitfalls which beset the amateur, may help him, if not in the making of a good selection, at least in the avoidance of some of the mistakes into which so many fall.

Perhaps the most frequent source of failure is the exhibition table. The would-be grower inspects the varieties, and feels he must have this and that, without taking into account the exceptional conditions that have contributed to the placing upon the table of such splendid specimens—selected, perhaps, from the produce of scores, or even hundreds, of trees of the same variety. A given variety may be a poor bearer, extremely subject to canker, very tender, liable to spot, a feeble grower, very slow coming into bearing, etc., etc., but if a grower has a hundred three-year-old trees of it he will



POETAZ NARCISSUS ASPASIA GROWN IN FIBRE
A valuable variety for indoor culture; the flowers white with yellow cup.

be unlucky indeed if he does not get enough fruit to be able to show a half-dozen selected specimens. If you had a dozen bushels of the ugliest variety of apple grown you would probably be able to pick out half a dozen that were fairly presentable. It should be remembered, too, that the finest specimens are usually obtained from two or three-year-old trees, of which a nurseryman, of course, has a large stock.

Varieties are all too numerous, and are becoming yearly more so. In some lists nothing is mentioned that is unfavorable to any variety which is catalogued, though there are few varieties of fruits which do not possess some drawback. If a variety is a poor grower, or bad cropper, or very tender, the catalogue should say so, but it rarely does. The comparing of two or three catalogues together also adds to the planter's perplexity, but it may also save him from hastily deciding upon certain varieties when he sees what different opinions are held by people of experience.

For instance, one describes Lord Burghley apple as a small grower only suitable for garden culture, while another says that it forms a large pyramid and a good standard. Of Winter Nelis pear one says that it is hardy and a good cropper, and another that it is tender, and can only be depended upon as a garden tree or on walls. Of Oullin's Golden Gage plum, one says it is a shy bearer until the tree gets old, and another that it is re-

markable for its abounding fertility. No less perplexing is the diversity of opinion as to the quality of different varieties. One says that the old Roundway Magnum Bonum apple is the best dessert kind, richer in flavor than Cox's Orange Pippin, and withal fruitful on the paradise, while another well-known list omits it altogether. One says that that beautiful pear, Josephine de Malines, is one of the most regular-bearing sorts we have, while the first grower you meet will probably tell you that he has a difficulty in getting it to fruit, at least, until the tree gets old.

There is no doubt that not only do fruits behave very differently in different soils—a liability to variation which is increased by the varying nature of the stocks upon which they are worked—but that nurserymen have different strains of the same fruit, strong or weak, prolific or the reverse, early or late, more or less highly colored, and so on. It is a well-known fact that two Blenheim Orange trees may be growing side by side, and the fruit on one be different from the fruit on the other. This increases the element of luck in the purchase of fruit trees. I have had some striking instances of this in my own experience. Catalogues tell us that Fearn's Pippin is a small grower, and an abundant bearer, but with me it grows so rampantly that no pinching will subdue it, and I have had to vigorously root-prune it, while during the half-dozen years I have had the tree—a cordon on the paradise—it has scarcely produced anything. So with Lord Burghley, which someone writing about in one of the gardening papers a little while ago, said was the worst grower and bearer he knew of, and yet with me it grows too strongly for the space assigned to it, and bears fairly well.

Similar instances might be multiplied. Novices at fruit-growing may well say it is hopeless to make a successful selection of varieties for planting. If he is quite a novice it doubtless is so, and the best thing he can do is to take the advice of some experienced gardening friend or nurseryman. But whether inexperienced or otherwise the first thing to do is to make up one's mind for what definite purpose one wants the fruit. To go to a man and say to him, "Tell me some good apples to plant," is as careless and diffuse a way of speaking as to say, "What book shall I read?" It is of no use consulting catalogues or friends until one has quite settled in one's mind whether one wants dessert or cooking sorts, early, mid-season, or late; whether as standards, dwarfs, or wall-trained, etc., having regards to the nature of the soil and situation, with all that it involves in the matter of spring frosts, early or late ripening, the inducing of canker, and other considerations which lead the experienced amateur to determine what sorts he will plant. All this needs careful study, and after it one is in a position to profit by a friend's advice, and to put some leading questions to him, with the result that one's mistakes may be reduced to a minimum. There is one mistake most of us make, and that is in the planting of too many varieties. It is interesting, of course, to have in one's garden a collection of varieties, but the more sorts the more failures, besides which, after the novelty of growing the different sorts has worn off, one wishes that he had more of the best sorts, and less of the indifferent ones, as some are bound to turn out to be. The most valuable help one can get is to see the sorts which succeed best in gardens adjoining one's own, or in the near neighborhood, assuming the soil and general conditions are somewhat similar. As regards the number of varieties, it has been said of apples that a half-dozen dessert, and a half-dozen culinary varieties are enough for any man, and yet we generally want to plant more. The sorts which are really excellent in all respects, however, are not much more numerous than this, and if we can find out two or three of these sorts which do well in the neighborhood, the best thing to do, if they answer our purpose as to season, etc., is to plant as many of them as we have space available for.

IMPERIAL JAPANESE IRIS

"Little wonder that a plant so boldly decorative in outline and bearing a flower of exquisite coloring so marvelously formed, should make its appeal to the artistic Japanese. From these foremost gardeners of the world has come a strain of irises that neither orchids nor lilies can rival in beauty of form, texture, coloring, markings, and general effectiveness. In the Mikado's garden, under ideal culture conditions—that is to say, in rich, warm, sunny alluvial land—the blossoms will measure from nine to twelve inches across their flat petals. Yet the Iris Kaempferi may be as easily grown as the potato. Moreover, it is perfectly hardy. High dry lands do not suit its moisture-loving roots, but good garden soil, enriched with thoroughly decayed manure, deeply dug in and well watered during April and May—the blossom months in this country—will produce flowers of wonderful size. Do not select a shady place for your irises. They thrive under full exposure to the sun, but moisture they must have to bloom there best, and sometimes their roots will penetrate two feet deep to get it. Naturalized in the water garden, where the tall, narrow, blade-like leaves rise in phalanxes around the shore and the stately beauty of the flowers is reflected in the mirror below, they are ideally situated; but let no one merely because he has not a stream or pond forego the delight of growing Japanese irises on his place. Some exceedingly fine specimens have been produced in a city back yard.



them to approach by daylight, when they can be seen, and to be off before nightfall, the submarine would be as efficacious in keeping the enemy's British fleet having business in the world, of course, find in these craft made and valuable auxiliary. The age of torpedo craft alone is that operate only by night, so that a really wishing to enter the Gulf or any body could do so by running through

we turn to the Pacific, we find that a factor there is the existence of a most formidable naval power, so guarantee that our relations with it will remain friendly, and there are dangerous elements in the situation. In the problem of Japanese immigration race difficulty which it raises, we under the remarkable antagonism between the United States and Japan; should powers fight, our position, in view of the explosive conditions in British and of the temptation to Japanese-American—ships to use our harbours in possible contingencies, might delicate, and we might be dragged into conflict. Aside from these dangers to ourselves, there is the general fact of one of a hundred accidents or developments which we have nothing to do the British Empire at war with

an, without dishonour, count on aomatic protection from the United States power is certain to maintain a Pacific coast, and Japan would be the Americans, for their own read be exceedingly touchy about any with us. This protection, how limitations, and might become a we were impotent and if Japan in the American littoral were to neutrality by using our coast as a might be embroiled with the United States government might suggest that we unable to safeguard our coast would undertake the task for us.

due to our Pacific policy seems to contingency. It seems an imperative to take steps to make our coast secure by a foreign fleet. Only one is the case—the torpedo. Fortunately, the efficacy of the coast, with its chain of asking the true shore, with its maize and straits, with its thousands of inlets, lends itself to mosquito war, climatic difficulties of navigation, it observed, are far less serious than on the Pacific—an important consideration when discussing the use of these fragile machinery. In addition to this very duty, there are certain peace-time patrolling, police, etc., which are the North Pacific and which might be undertaken by Canada; these require ships of the normal cruiser

remains to discuss, very briefly, the on the Great Lakes.

ould seem that if anything is to be the way of preparing for a naval of these lakes, it must be done by

If we had a naval force on the for instance, we might build and in the Gulf of St. Lawrence gun-which, while suitable for coastal work, the locks, and would carry a fairly nament. We also might maintain a of torpedo boats small enough to be ed by rail."

BERNHARDT'S NEW PART

Sarah Bernhardt's next part in Paris probability, be that of Joan of Arc, written by M. Emile Moreau, who with Sardanou in Madame Sansardou himself, had he lived, would labored in The Trial of Joan of Arc, ay is to be called, and in any case au had the benefit of the great play-advise. Mme. Sarah Bernhardt will scope for her wonderful art in this e, which deals with the last hours id's martyrdom. A play dealing with a play deals with the last hours id's martyrdom. A play dealing with a play deals with the last hours id's martyrdom.

AN EARLY MATINEE

atrical performance beginning in the of the morning is sufficiently be worth recording. A French the-pany which had been touring in erica, and which included Mme. Despres, telegraphed from Rio that ld give a performance at Dakar, on coast of Africa, when the steamer here. At eight o'clock the theatre but the company was missing. After or a considerable time, the audience away disappointed; but at 11:30 the arrived, tom-toms were beaten in the and the people flocked to the theatre, rformance began at 1:30 a. m., and fin-

y, it is a great deal to avoid wrong-ut what would you account that hus-ot be worth which succeeded only in own weeds?