RURAL AND SUBURBAN

BULBS FOR WINTER BLOOM

Florists' catalogues are seductive reading, especially those which are brought out in the fall telling what one can do with bulbs. It is charming to read of the wealth of flowers that one can have to brighten living rooms while outside all Nature is still locked fast by winter's cold. "Easy to force" is the legend that accompanies numerous varieties as a cultural note, and sometimes the still more attractive statement appears, "fine for home culture." The best of it is that it is all true. There are many bulbs that it is easy to grow in the house and bring to flower while outside the snow may still be flying. And yet amateurs who make the attempt are more likely than not to reap disappointment instead of pleasure.

What makes the growing of blubs easy, is the fact that both flower and leaf are there already, coiled up in a snug bundle, surrounded with a stock of nourishment, so that about all they need to develop is sufficient warmth and water. A stock illustration in florists' catalogues is a sectional diagram showing the flower tucked within the layers of plant tissue forming the bulb, ready to pop out when duly invited, just as the round buds of the horse-chestnut tree throw out a bunch of leaves when the warmth of spring unseals the envelope that has enclosed them. All quite true, but the conditions while simple are exacting, and unless they are complied with, failure will result.

Amateurs who undertake to grow bulbs should note that one great disadvantage under which they labor as compared with the professional florist is in the matter of light. It is rare that a dwelling house or apartment can furnish any place where the amount of light will even approximate that which comes in steady supply through the glass roof of the florist's greenhouse. But the general rule is that while you can get plant growth without much sun light you can rarely get flowers. So the curtains and window draperies, which are usual appurtenances of living room arrangements, make against satisfactory results in growing bulbs for winter blooming. Another disadvantage from which the house grower usually sufers is that the air is too dry. With exceptions not worth considering from the standpoint of the ordinary amateur, all plants require a moist atmosphere. Lack of that is the usual cause of the afflicted condition which palms, ferns, and even the tolerant rubber plant soon display after they have been moved indoors for the season. I kept a rubber that when it was brought out for service as a porch ornament in the spring, it was in finer condition than when it went into winter quarters. The secret of it was that I had been able to find a place for it in a well-lighted bath-room where the air was always moist. The great cause of mortality among house plants is dry air, which makes them sickly, and then casual exposure to a draft of cold air in sweeping and airing the room administers the final stroke. Such is the usual fate of house palms.

But even under ordinary house conditions, without any special appliances for the purpose, it is quite possible for the amateur to have winter blooms from bulbs, by going about the matter in the right way and limiting efforts to certain bulbs that are particularly accommodating. The safest investment for the inexperienced amateur is the big narcissus bulb, usually known as the Chinese sacred lily. The bulb is cheap, comes readily into bloom, and if placed in a sunny window will produce its spikes of fragrant flowers with great certainty. As a house plant it has the drawback that its foliage looks too much like spring leeks to be ornamental. The way to get round that is to grow them in a mass. Three or four bulbs should be grown together in a Japanese bowl or other receptacle that will have an ornamental effect. No earth will be needed, but the bulbs should be covered with pebbles or coarse sand to keep them from tipping over under the weight of the foliage they will throw up, and then the receptacle should be kept filled with water. It is always well to keep the bulbs in a cool, dark place for two or three weeks until root growth is well established before they are brought into the light to bloom. I have often left my bulbs to sprout in the dark, so that when I brought them out the shoots were as white as potatoes that have sprouted in a cellar, but they color up promptly when brought into the light.

Another bulb that is easy to handle and which produces delicious clumps of fragrant blooms is the Paper White Narcissus grandiflora. They, too, only need water, warmth and light to come into bloom, but in practice it is better to put them in a sandy soil, putting several bulbs into a pot. They can be placed so close that they will nearly or even quite touch. Keep them in a dark, cool place until they have made a root growth, and then bring them into the light. It is a good way to leave them in the dark until the sprouts are well up above the soil. Another point to keep in mind is that too much warmth is dangerous. The best results are obtained by keeping the growing bulbs in a cool place. Provided that frost is kept out it can hardly be too cool. When the flower spikes are well up and are ready to open, an atmosphere as warm as the ordinary living room in winter will be proper. Most of us are in the habit of keeping our rooms too warm, and if we accustomed ourselves to temperatures in which green house flowers would be happy it would be better for us.

For a trial trip in bulb growing in the house, the amateur would do well to be content with the two bulbs that have been named. They are sure producers and will give satisfaction under conditions in which tulips and hyacinths would fail. And yet the latter would respond to the same treatment if care is taken to get good plump bulbs that will force easily. The florists' catalogues may be depended upon to indicate the right varieties. A point that needs attention is the disposition of the spikes from these bulbs to stick fast just as they push out. The way to guard against this is to invert an empty flower pot over the growing bulb so that it will have to stretch its neck to reach the light. Or, instead of the flower pots, cones of pasteboard may be used. Hyacinth growing in glasses made for that special purpose is well known and the process is successful if given strict attention, but single spikes of bloom obtained in this way have rather a forlorn aspect to me. I like to get winter flowers in bunches in the way described above.—Beatrice Carey.

BULB NOTES

Tulips

The soil for tulips should be rich. They are planted 4 to 6 inches deep on a layer of sand an inch thick, which prevents water from soaking the bottom of the bulbs. After the ground is frozen hard the bed should have a covering of leaves which are not removed until March. This is not to keep the bed from freezing but from thawing in warm winter days. Ordinarily tulips are planted 4 to 6 inches apart each way.

The single early tulips are commonly used for bedding, and several kinds are often planted in one bed, though a single color would, I think, be better. They are the first tulips to bloom and are useless after the first season.

The following varieties will be found satisfactory:

White—Duc van Tholl, Joost van Vondel, La Reine, L'immaculee, Milthiades.

Rosy—Cottage Maid, Rosamundi Huyckman, Duc van Tholl, La riante, Mrs. Cleveland.

Red—Bacchus, Belle Alliance, Artis, Cramoisi Brilliant, Jules Janin.

Yellow—Canary Bird, Chrysolora, King of Yellows, Yellow Prince, Montresor.

Red and Yellow—de Haan, Duchess of Parma, Duc de Berlin, Kaiser Kroon, Duc van Tholl Maximus.

The double early tulips are not so beautiful as the single ones, and I think it is a mistake to use them and miss the delicacy of the tulip cup which is spoiled by too many petals.

Parrot Tulips

Parrot tulips are large and tall and quite remarkable in color.

They are more lasting than the single early tulips, often increasing from year to year. The ends of their petals are often feathered.

Darwin Tulips

These also are fine in color and tall.

Albert King is rose color. Black Knight is brown black. Bleu aimiable is purple. Donders is brown red. La Tulipe noir is black.

There is an almost endless variety of color.

Single Late Cottage Tulip

These are the best of all tulips because of their lasting qualities, their size (sometimes 3 to 4 feet high), and their distinct beauty. They bloom in May when the apples are in bloom.

Bouton d'or is golden yellow. Bridesmaid opens white and the margins turn pink. Carnation is white turning bright rose. Gesneriana spathulata is scarlet with blue eye. Retroflexa is bright yellow, reflexed petals. Vitellina, sulphur yellow with greenish veining, very fine.

The many species of tulips which are found wild are interesting and some of them extremely beautiful. They are rarely seen but should be planted by real enthusiasts.

These are good to start with:

T. clusiana, the lady tulip. T. fosteriana, brilliant scarlet vermilion with yellow or black centre. T. greigi, low, red with black centre. T. Kaufmanniana, the earliest of all tulips. T. oculis solis, the sun's-eye tulip. T. Sprengeri, the latest tulip, scarlet. T. Tubergeniana, very large, scarlet.

Narcissi

Narcissi are planted in the same way as tulips, except that they must not be planted in ground which has been dressed with manure within a year or two.

They last almost forever and should be planted in space where they need not be disturbed for many years. They increase in number and show no loss of vigor.

There are many varieties of extraordinary beauty and wonderful color. Some of them are tall with large trumpets, others short with almost no trumpets, as the poet's narcissus, some are pure yellow, others pale cream, cream and yellow, and paper white.

The single-flowered varieties are most beautiful in form, the double ones are little more than buttons.

The following varieties, all may be called daffodils, are very good:

Barri conspicuous, pale primrose and deep yellow. Emperor, large pure yellow. Empress, yellow and pale cream. Horsfieldi, yellow and pale cream. Incomparabilis cynosure, with short cup. Incomparabilis stella, with short cup. Incomparabilis Sir Watkins, with short cup. Incomparabilis orange, Phoenix and Incomparabilis sulphur Phoenix, the commonest form, the only good double Narcissi. Leedsi, Mrs. Langtry and N. major.

Narcissi:

Maximus. Poeticus, the poet's narcissus. Poeticus ornatus, Poeticus grandiflorus, larger and later varieties of the poet's narcissus. Jonquils, grandiflorus, single, yellow, several small flowers on a stal, very sweet-scented.

Spanish and English Iris

The Spanish and English irises are bulbous irises, and should not be forgotten when one is ordering other bulbs. They are easy to grow and to plant, and bloom later than the other irises, and when once established they seem to increase rapidly.

The Spanish irises are small; pale yellow, brown and blue.

The English irises are larger, deep blue, white and purple.

In shape they are delicate and graceful, and suggest the orchid. The leaves are much like onion leaves.

Hyacinths.

Hyacinths are popular bedding plants, but they are not so strong in color or so beautiful in form as tulips, and are much better in the house, where their pale colors and beautiful perfume may be enjoyed to better advantage than outdoors. They are even poorer the second year than the single early tulips.

Their color never seem to fit the exuberance of early spring.

Crocuses

Crocuses are indispensable, and should have a special lawn to themselves. Theey can be bought in mixtures. The named varieties are not particularly distinct, except that known as Cloth of Gold, which is the earliest, and because of its bright color, the most desirable.

Plant them in a hole about 2½ inches deep, anywhere, and they are sure to appear for two or three years, after that they may fail, especially if they are planted in a lawn.

ROOT GRAFTING

Plants which come true from seed are as a rule increased by growing them from the seed; but as a variety of apple cannot be produced in that way, other methods must be adopted, and recourse is usually had to budding and grafting. In grafting fruit trees the name scion is given to a cutting of wood of the variety which is to be propagated. The stock is the tree or portion of the tree, be it young or old, that the scion is to be united with. As it is only through the stock that the scion can procure the sap which nourishes it, the former must be furnished with roots.

Some kinds of fruit may be grafted on others which are closely related to them botanically; as the pear on the quince, etc., but there is nothing so entirely satisfactory upon which to graft the apple as an apple stock, or under certain conditions the crab apple.

Although the stock and scions are united by grafting, both of them retain to a certain extent their individual characteristics. The stock does, however, modify the vigor and fruitfulness of the variety grafted on it. If a variety is grafted on a dwarf or slower growing tree than itself, the result is that the stock tends to dwarf it, as a sufficient quantity of crude sap does not pass through to maintain the natural vigor of the top, and as a lessening vigor tends to the development of fruit buds, this kind of stock is often used for the purpose of inducing fruitfulness in a variety and for dwarfing the tree. There is, however, sometimes such a difference in the growth of the stock and that of the variety grafted on it, that the result is not satisfactory. It is quite probable that such stock will tend to making the tree hardier, and if growth is checked the wood will ripen harder.

The stocks used in root grafting in the districts where the best apples are raised are usually obtained from cider mills, or any place where they can be got in large quantities, and no efforts are made to ascertain what varieties the seed came from. Stock grown from this seed, while quite satisfactory in certain districts, is not desirable in the colder parts of the country where root killing is liable to occur, as individual trees vary much in hardiness and one might graft a hardy variety on a tender stock without knowing it. Seeds selected from the hardiest varieties of apples are more likely to produce hardy stocks than if the seeds were obtained promiscuously.

For the very coldest parts of Canada where the apple can be grown at all, the berried crab, Pyrus baccata, will probably make the most satisfactory stock for root-grafting or budding. It is perfectly hardy in the Northwest where the winters are very severe.

It is important to cultivate the young trees thoroughly the first season if they are to be used for root grafting during the following winter. Only the strongest should be used the first season, and the others may be left to develop for future use.

As much of the success in grafting depends on the condition and quality of the scions, too much stress cannot be laid on the importance of having them of the best quality and in the best condition at the time of grafting. They may be cut at any time after the wood is well ripened in the autumn and before the buds begin to swell in the spring. The best time, however, is in the autumn, as they may then be kept in the desired condition.

Scions should be cut from healthy, bearing, productive trees. The wood of old trees is apt to be diseased, and if diseased scions are used they will produce diseased trees when grafted. They should be taken from the wood of the current season's growth, as older wood is not so likely to succeed; the buds should be well developed and the wood thoroughly ripened. It is not a good plan to use the water sprouts or young shoots which spring from the trunk or main branches, for grafting purposes, they may not be thoroughly ripened and are likely to develop sprouting propensities in the grafted trees. The scions may be cut off and packed away in moss, sawdust, sand or fallen leaves, where they will keep in good condition until required. The packing material should be slightly moist, but not wet; the object being to keep the scions fresh and plump, without danger of their rotting. They may be kept in a cool cellar which is not too dry, and should remain dormant until ready for use.

Probably the best method of propagating apples in this country is by root grafting. The strongest of the young stocks are taken up and heeled in during the autumn in a cool cellar in moist sand. The grafting may be done at any time during the winter, but is not usually started until January or February. Whip or tongue grafting is the method usually employed, and as only the root is required the trunk and branches are cut off and thrown away. There being but little advantage in using the whole root, it may be divided into several pieces, much depending on its size. Each piece should be at least four inches long.

A smooth, sloping cut upwards, about two inches long, is made across the main part of the root most suitable to receive the scion. The scion is prepared by cutting off a piece of the wood produced for this purpose in the autumn, from four to six inches long and with about three well developed buds on it; a smooth, sloping cut downwards and across it, is now made of about the same length as that already made on the stock. Clefts are now made on the sloping surface of both scion and stock, in the former upwards, and in the latter downwards. They are then joined together by forcing the tongue of the scion into the cleft of the stock. The inner bark, or cambium, of both scion and stock, should be in contact, at least on one side of the graft, as it is at this point of contact where the union begins to take place. In order to ensure a speedy and successful union, waxed cotton thread is wound tightly around to hold the parts together, and grafting wax should be rubbed all over where the parts are joined.

The operation having been completed, the grafts are packed away in moss or sawdust until spring. They are then planted out in nursery rows, about three feet apart and one foot apart in the rows, the point of union being about three inches below the surface of the soil. The ground should then be kept thoroughly cultivated throughout the season. Some varieties of apples throw out roots quite readily from the scion, and after a time they thus become practically on their own roots.

If it is desired to have a variety upon its own roots, a scion from eight to twelve inches long may be used, and the graft planted deep in the nursery row, only leaving one bud of the scion above the surface of the ground. Roots will then be thrown out on the scion, and when the tree is dug the stock may be cut away and the tree will then be on its own roots.

A JAPANESE GARDEN

A Japanese Garden Six Feet Square

There have been Japanese gardens a-plenty written of, but always where the spread of ground was somewhat ample and allowed of a little liberality of treatment. This records the newest idea in Japanese gardens, where it is possible to have the Far East in a back yard that measures six feet by six. Twenty-five dollars will nicely cover the total cost of this vest-pocket edition of the Orient.

In the centre of the thirty-six square feet dig out the ground for a pond of oblate-spheroid shape, the diameter of which is three and one-half by two feet, and the depth two feet. Cement the bottom and sides and introduce a brace of gold-fish. With the excavated earth build a mountain to the left of the pond, a mountain two feet high of irregular sloping sides, and cover with grass sods. Again to the right of the pond, build a companion mountain of soil to the height of three feet. Between these twin heights let a waterfall lead to the pond—a waterfall of earth and stones, with no water.

One of the purposes of this toy scene is to conquer the backyard fence and the horrors of the alley. So to the rearward of our mountains and on the hither side of the back fence let us plant four pines two feet high, worth half a dollar apiece. Between the right-hand mountain and the house plant three maples, two close to the mountain and one nearer the house. These maples will vary in height from two or three feet, and will cost half a dollar a maple.

On the left-hand west fence suspend a bronze lantern, which will give a dim garden light for $3. From the pond to the house three stepping-stones lead—round flat rocks, obtainable in a vacant lot or on a sea-beach. On the left-hand side of the garden two more maples should be set, one up against the mountain and the second in a direct line nearer the house.

For the work of cementing the pond, molding the mountains, and transplanting the trees, the labor of two men for three days, charging $3 a day, will be required.

We shall then have a vista, a pigny perspective, instead of slats and ashheaps.

If, however, one has such wealth of land as 25 x 25 feet represent, a Japanese garden can be built for $150. The general lines of make-up will be the same as that of the 6 x 6 achievement. Our pond may well be shaped like the map of Italy, with a length of thirteen feet and a width at the toe of nine feet. Two twelve-inch plants meeting on three piles, mid-stream, will lead over its tapering end. The mountains will tower three and a half and four feet, respectively. Four Norway maples seven feet high, will rise skyward behind the mountains, and will blot out the back fence.

Between the mountains a stone lantern rises three feet high. It is built of five pieces of stone, and culminates in a fat cap; $25 will buy it, and yukimi is the name of its shape.—By O. Tsuji.

ARTISTIC FENCING

That a twisted-wire fence and its unpainted posts may become a thing of beauty as well as of mere use, may become a joy that will be fresh and green all the year round, sounds a bit more improbable than the facts warrant.

My neighbor over the way has inclosed his six-acre nursery within a wire fence embowered with beauty as nearly all the year round as the climate permits. What this rich man does on a large scale, the poorer man may approach, step by step yearly as his means permit, on a small scale.

This ideal fence must be adapted, by each convert, to his or her climatic limitations. To achieve the desired result, one needs, first, taste and some leisure, and an old fence, stone wall, or wire fence.

At each post of the wire fence plant something evergreen or nearly so, to furnish an all-the-year round basis. English ivy and the hardy honeysuckles are practically never without their green leafage. Dwarfed evergreens, the arbor-vitae, the ordinary cedars, spruce and firs, with a blue cedar now and then if one has available cash, these set at intervals, furnish a working basis that will suggest to the worker yearly additions.

Then, here and there, to flourish over the wire supports, must be all the hardy vines obtainable; vines that will bloom in their season, and vines that never bloom, but, so long as a leaf is left upon them, will glow like a mass of flowers with their wealth of mottled yellow, white, green, and bronze foliage.

Each year these masses need more room, and care must be taken not to see the varieties too thickly at first. One must think of the final result, and leave at least fifteen feet of space between the various running plants, that each may become a mass, a distinguishable quantity, before meeting and mingling with its neighbors at the right and left. Otherwise the different varieties cannot be sufficiently localized to bring out all their beauties, and the result will be too mixed for real beauty.

Clumps of weigala, the Japanese quince, lilacs, syringes—every known flowering bush or shrub—are set closely to the fencing between the masses of running vines.

Is the idea clear to the mind of the reader? Then perhaps the list of plants that bloomed on last year's fence may be acceptable, as suggesting when one's own possibilities may be.

In early spring, the ivies put out their buds, the shrubbery grew pink-tinted long before a leaf could hope to burst forth, and the evergreens took on a fresher tint of green.

Then came the early stars of the jessamine, the golden bells of the aburnum, and the forsythias; later, the purple and white wistarias; the white and lavender lilacs came for service on Decoration Day, and their cousin, the syringa, arrived for the June picnics, and was soon followed by the old-fashioned cinnamon and bush-roses. Then came the low bush white roses, the masses of the "running roses," the early red "prairies," and the later "rambers" of crimson, white and yellows. How the masses glowed and vied with the green-and-gold-mottled vines and variegated leafed shrubs, each mass seeming a third larger than it was the year before.

Then came September, and certain masses of long-drawn-out greennesses on the fence suddenly changed in a day to long, fleecy whitenesses, a mass of star-like bridal draperies that filled the air with their perfume.

Here and there glowed clumps of the double, silken-tissued hollyhocks, the stately, purple-hued althaes, domes of blue and pink hydrangeas.

To all these possible charms was added, here and there, a wealth of the ampelopsis, or so-called Boston ivy, ready to receive its brilliant colorings at the proper moment from Jack Frost's paint-box.

Peacocks and pheasants clipped out of the evergreen shrubs, posts and arches clipped with mathematical precision out of the privet hedge, each have their admirers; but can the primness of a mechanically square-edged hedge outweigh in its claim for beauty the charm of the easy grace of our wire-fence hedge that shows new phases of beauty each month in the year?—Sara M. C. Aldrich

STORE CELERY FOR WINTER

When gardens are covered with snowdrifts, or the ground is frozen hard, it is a difficult matter to get at the celery which is banked up there. We prevent this difficulty by planting ours in the cellar, just before the arrival of heavy frost. We do not bank it up, but keep it growing vigorously in the garden until frost time, when it is carefully taken up, leaving a considerable quantity of earth on the roots, and planted in a row along the cellar wall. We water it immediately after replanting, and after that at intervals of about a week, or whenever it shows signs of being too dry. Care must be taken not to pour water on the leaves, and newspapers may be hung up at the windows to exclude the light.