

RURAL AND SUBURBAN

WATER LILIES AND THE WAY TO GROW THEM

One of the most attractive forms of gardening is the cultivation of water plants, and those who are fortunate enough to possess a small pond, or, better still, a stream running through their grounds, have the means of growing many beautiful subjects. Foremost among these water plants are the Nymphaeas, which may be grown in the stream itself, and of which there is now in cultivation a large number of varieties of many shades of color, from white to yellow and crimson. Well-established groups of these produce an abundance of flowers from the middle of May till the middle of October, and form sheets of color. While the stream or pond itself is occupied with Nymphaeas, on the margins of the water a home may be found for many other charming plants, such as our native Flowering Rush (Butomus umbellatus), Sparrowwort (Ranunculus lingua), common Marsh Marigold (Caltha palustris) and Golden Club (Orontium aquaticum) among many others. Higher up on the bank might be planted groups of Lay Lilies (Hemerocallis), Irises, Globe-flowers (Trollius), the noble Gunnera manicata, with its ample foliage, and the Royal Fern (Osmunda regalis). These are only a few of the many suitable and charming plants available for beautifying the water-side and banks.

For those, however, who do not possess such a natural stream or even a pond, and who desire to grow these beautiful Nymphaeas, it will be necessary to provide artificial means for the purpose. This may be in the form of a cement tank sunk so that the top is just on a level with the surface of the ground; the water level is therefore lower, and thus enables one to look down and see the flowers at their best. Where the cost of a cement tank is prohibitive, Nymphaeas may be grown in sunk tubs arranged on a slight slope. A gentle flow of water through the whole series of tubs could be arranged by having the water supply at the higher end and connecting the different tubs by short pipes, allowing a slight fall between the tubs.

Cultivation

Providing water in any convenient form is handy, the cultivation of the Water Lilies is not at all difficult. The planting time may extend from March to June, but it is always advisable to get them planted as early as possible, just when growth is beginning. All those enumerated are quite hardy, and will grow in any part of this country. The stronger-growing ones, like N. glaucostriata and the common N. alba, will flourish in water that is a foot or more in depth; but the crowns of the smaller ones, like N. pygmaea, should not be more than 9 inches to 1 foot below the surface of the water. The best way to plant Nymphaeas in deep water or streams is in baskets of good loam and well-decayed cow manure. Then cover the top with turves, and tie them down securely with thick cord, so that when the water is lowered into the water they will not come off. The Nymphaeas will soon root through the bottom of the basket and fix themselves in the mud below, after which they will require little attention except thinning out when they grow too thick.

For Growing in Tanks

The best way is to make a good heap of the soil mentioned above and plant the Lilies in it, taking care to keep the top about 1 foot or 18 inches below the level of the water. If turfy soil is used, the heap may be built so that it will not crumble with the action of the water. Large pots or tubs may also be used instead, but the heaps of soil allow more run for the roots. For culture in tubs the soil may be the same. Fill the tubs to within 18 inches or 1 foot of the top with the soil, then plant the Nymphaea, and afterwards fill up with water. To give it a cleaner appearance a good layer of river sand should be spread over the top of the soil, whether in heaps or tubs. The propagation of Water Lilies is easy, as the roots may be parted, taking care to leave a crown or two on each piece. This may be done at planting time. They may also be raised from seed, which is produced freely. Sow this in shallow vessels containing soil at the bottom with a few inches of water. Seeds should be kept through the winter in wet moss or in vessels of water in a cool place, and sown in spring in heat. When the seedlings come up, they should be potted off singly in small pots, using a sandy loam. As they get larger, gradually harden off the plants by placing them in water of a cooler temperature. The following is a good selection for

Growing in Tubs

N. Laydekeri.—This is one of the less rampant kinds, of which there are several varieties. N. L. fulgens has fragrant amaranth red flowers, with crimson stamens. N. L. lilacea opens with a blush tint, changing with age to rose, crimson and lilac. N. L. purpurata has deep crimson flowers. N. odorata alba (the American Lily).—A pretty, sweet-scented kind from the United States. It produces a long succession of white flowers, and likes a warm, sunny situation. N. o. Exquisita.—A choice little plant with fragrant, rose-colored flowers paler near the tips of the petals. Other forms of N. o. lucida suitable for growing in tubs are N. o. lucida, deep rose; and the Newfoundland Water Lily (N. o. rosea), a beautiful variety which bears a crown of a rich rosy pink all the summer through. N. o. minor (N. pumila).—A charming little Lily with white flowers about 3 inches in diameter. N. o. sulphurea.—A small-growing plant with marbled leaves and pale sulphur-colored flowers.

N. pygmaea.—This little Chinese Lily is the smallest Water Lily, and grows freely in shallow water. It produces a long succession of its small white flowers all through the summer. N. p. Helvola.—A yellow-flowering form of the pigmy Water Lily, with small foliage tinted with bronze. N. caroliniana.—A lovely free-flowering kind with fragrant rose pink flowers of good size, darkening to deep rose in the centre. All the above may be grown in tubs where there is from 9 inches to 1 foot of water. For Ponds and Streams there is a much larger selection available, among the best being: White Flowers.—N. alba, N. caroliniana nivea, N. glaucostriata and N. Marliacea alba. Rose or Pink.—N. Arc en Ciel, N. caroliniana, N. colossea, N. Marliacea carnea, N. tuberosa rosea and N. William Doogee, the latter with flowers of large size and great abundance. Red to Crimson.—N. ellisiana, N. Froebelii, N. atropurpurea, N. gloriosa (one of the finest), N. James-Brydon, N. Marliacea ignea, N. Robinsonii and N. William Falconer. Yellow or Orange.—N. fulva, N. aurora, N. Marliacea chromatella, N. odorata sulphurea grandiflora and N. Siegnourteii.

THE TOWN GARDEN.

Planting Hardy Border Flowers. Taking time by the forelock is a good maxim and proverb, though in the planting or relanting of certain perennial border flowers it is possible to push such a proverb to extremes and to do more harm than good. Hence one might suggest that there is much to be learnt from planting in season and in reason. For example, if we take into consideration the more heavy, retentive and moisture-holding soils for the moment, we shall find that in a very large degree for many weeks together—and in a wet season in particular—such soils by reason of their wetness and paste-like character when touched, are quite unfitted for the work of planting, and any plants, unless of the most vigorous and enduring character, would be almost foredoomed to failure if planted at such a time. By inserting them in wet soils and treading or firming them in their positions the planter is simply making matters worse and assisting the failures of which he may be fore long have cause to complain. The Value of Waiting. Presently, however, when the March winds have played their part and April shows gives place to May-time's sun and warmth, a much more congenial condition of the soil may be found, and the value of waiting—or of planting in season and in reason—will be seen at a glance. Not only will the necessary work be done far more expeditiously at such a time, but there will be a very reasonable hope, if not the assurance, that the plants so cared for and treated will respond with a more liberal and free growth, while the death-rate may be indeed, will be reduced to a minimum. For wet and heavy soils, therefore, the planter should select a rather dry time in early spring, or an equally dry time in late spring. To do the work at any convenient moment may prove to possess a far greater number of disadvantages than it is possible to see at the moment. The lighter classes of soils may be dealt with at almost any time, and some of these rarely, if ever, become too wet for doing such work. Flag Irises. The foregoing remarks on planting are made relative to certain groups of plants that, being hardy and enduring, are dealt with at almost any time, and the Flag Irises are of this number, though perhaps there is no season like April and May for planting these extremely fascinating and delicately colored flowers. By planting or replanting them at such a time the plant is given the opportunity of a full season's growth and development, and this in the position in which it is to flower. My readers should not plant nor crave for big clumps of these things, a well-formed fully developed single crown and rhizome (rootstock) giving infinitely better results. If it is desired to form groups—which is, of course, the better way—the individuals should be arranged 6 or 9 inches apart, so that presently the whole may constitute an attractive colony. What Not to Do. Avoid burying the plants of these Irises too deeply in the soil, and observe the lesson which Nature supplies, viz., that the rootstock, or rhizome, inclines always to ride on the surface of the soil, the plants rooting invariably from under the sides of these roots and penetrating very deeply into the soil. Lessons such as these, and which to the observing planter are very real, are not regarded with adequate seriousness by the amateur in these matters. Varieties Worth Planting. In addition to the predominant shades of color given hereunder, it should be remembered that the petals of nearly all the varieties are freely veined with other colors, which renders them more attractive. Of pale blue shades, pallida, p. speciosa and p. dalmatica are the best. Of yellow shades, Darius, Chelone and Auria are distinct and good. Queen of May is a lilac-tinted flower. Mme. Chereau is white, the petals bordered or pencilled with violet. Victorine has white, purple-tinged flowers. Dr. Bernice has smoke-brown flowers, very distinct; while Princess of Wales, L'Innocence and Mrs. Charles Darwin are nearly white. E. H. JENKINS.

DOUBLE PRIMROSES

Double Primroses are very easily managed, when the conditions are favorable, for, in fact, they manage their own affairs perfectly. But they are coy beauties, and one reason why you see them looking happy in gardens is that when they are unhappy they soon die. There are many varieties worth growing, and they are all beautiful, but the double white, double lilac and double red are worth any amount of trouble to ensure a free growth and a perfect bloom. They require a deep, moist, loamy soil, a partially-shaded situation, and to be often looked after, or they will not thrive. A comparatively pure air is necessary. A dry soil is fatal to them, and when there is any doubt about their doing well, water them freely all through the summer season. As remarked before, they require a deep, moist, loamy soil, but they will thrive in clay, sand, or peat. If in the first arrangement it is kept in mind that a free-rooting ground and constant moisture are essential, those who wish to grow these plants on poor sand or stubborn clay will find it a good plan to dig deep, break up the staple well and mix with it a liberal allowance of fat manure; the rest is easy. They must have food and like shade and moisture. The multiplication of the choicer sorts is by division, and May and June are the most suitable months for the operation, because there is a longer growing season before the plants to enable them to become established. But there is a great danger of the destruction of the stock when inexperienced cultivators divide their plants in summer. My advice is to leave them undisturbed until they become large thriving clumps, and then to divide them in August. In the meantime give them liberal supplies of water in dry weather, and, if the soil is known to be somewhat poor, weak liquid manure once a week all through the growing season is helpful. Be not alarmed at the fast growth of the leaves, for in proportion to the leaf-growth in summer will be the splendor of the flowers in the succeeding spring.—T. B. Field, Ashwellthorpe Hall Gardens, Norwich.

GROWING NASTURTIUMS

Of nasturtiums there are dwarf and climbing varieties to suit all situations, with flowers practically alike. Any ordinary well-drained soil will support them perfectly, even though it is decidedly thin. In fact, they blossom better in such earth than in very rich, for in the latter they run to leaf and are apt to rot off in wet weather, in their own dense shade, especially if at all crowded. As early as the ground is ready. The dwarf or Tom Thumb division will be in bloom in two months. Insects will leave them alone. Waphids colonize unpleasantly on the climbers sometimes—and they will still be blossoming when frost comes if picked freely. This is true of most annuals in fact; liberal picking induces generous flowering, for they go on, industriously bent on producing seed, until allowed to do so.—Grace Tabor in Woman's Home Companion.

CAULIFLOWERS

The production of a good supply of Cauliflowers over as long a season possible should be one of the aims of the vegetable gardener, for it matters not what other vegetable may be in season, the demand for this particular one when well grown, clean and fresh never ceases. During recent years much has been heard of the system of "Intensive Culture," known as French gardening, and one of the most important crops applicable to this mode of treatment is the subject of this note. For many years, however, it has been the practice in this country to produce this vegetable with the aid of glass, and by similar means excellent well-appreciated produce may be obtained much in advance of outdoor supplies; in fact, with strict attention to details, a continuous supply may be obtained from April till the end of the year. It must be borne in mind, however, that to assist the grower in his attainments, only the varieties most suitable for the particular seasons must be grown. Much attention has been given in this direction during the past year by our leading seedsmen of repute. Where the convenience is at hand, and the necessary means are at one's disposal, the earliest supplies may be obtained by growing the plants throughout in pots. Cauliflowers in Pots. For this method of treatment a start must be made early in the New Year by sowing a small quantity of seed thinly in shallow boxes, and raising in a gentle heat such as may be found in early forcing-houses at that time of the year. Under such conditions germination will rapidly take place, and it is then imperative to raise the box as close to the glass as possible, so that the young plants may receive the maximum amount of light. As soon as the rough leaf is discernible, the plants must be transferred to other boxes containing a moderately light mixture of sifted loam and decayed leaf-mould. Prick the seedlings out about three inches apart, keep them well down in the soil, and make them fairly firm. Continue to grow them in a similar temperature as already advised, and when well rooted, again shift them on into three-inch pots. These should be well-drained, and use a slightly rougher soil, which may contain a dusting of bone-meal. Pot firmly, and again as deeply as possible, without burying the leaves. When the roots have penetrated freely to the edge of the pots, give them the final shift into nine-inch pots. Drain the pots well, but take up as little of the space as possible, and use a rougher mixture, which should

consist principally of loam with the addition of a third part of horse-manure. When potting avoid damaging the ball, and just cover the same and finish off about half-way up the pot. This will allow of a top dressing at a later date. For a time a warm temperature will encourage good growth, when they must be gradually inured to cooler conditions and air admitted accordingly, and finally a sheltered position out of doors allotted them. Water must be given whenever necessary, and the plants further encouraged when root action is vigorous by applications of weak liquid manure and top-dressings. Excellent curds or heads are obtainable by this method, and two varieties especially adapted for the purpose are Snowball and Veitch's forcing. Cultivation in Frames. For early supplies another system much in vogue is to raise the seedlings in autumn and winter the plants in cold frames. For this kind of treatment I always make two sowings, one in the beginning and the second in the latter end of September, the last-named in a cold-frame. Sow thinly and prick out the plants when quite small, allowing a distance of about four inches between them. To keep these in the best possible condition during the winter months, they must have all the light and air possible and any presence at coddling them must be avoided, though protection from frost must be given. For a warm sheltered position and placing under frames, hand-lights or cloches, the strongest plants may be lifted early in March. Lift them with a good ball, and plant with a trowel. The remainder should be lifted and planted out of doors in various positions to ensure a continuation, and planted at a distance of about two feet apart. For further succession make sowings at intervals from the end of January until the middle of April. The same firm, uninterrupted treatment of growth should be given never allowing the plants to suffer from lack of moisture or become over-crowded and drawn, always encouraging a sturdy, hardy growth.

Preparation of the Ground

This is an important item in the growth of the main and later crops. Select a piece of ground that has not previously grown any of the Brassica tribe for at least two years. This is essential, and no doubt does much to stimulate the growth and prevent clubbing in the plants. Deep tillage must be resorted to, and the ground left to possess of time, if this is absent in the soil, will be beneficial, and will also destroy many noxious insect pests. Attention to Main Crops. Frequent hoeings during hot and dry weather will do much to keep down weeds and also resist drought. Copious supplies of water are absorbed by the plants if this is given, as well as occasional doses of liquid manure-water. A good mulch should then be applied, and this will do much to keep moisture in the ground. In showery weather a dusting of artificial manure may be applied, also soon.

Varieties

For autumn sowing, Magnum Bonum, Walcheren and Autumn Giant; and for successive sowings in the spring Early Giant is good for summer and early autumn cutting, and, later, Autumn Mammoth and Autumn Giant. There are, however, many excellent varieties catalogued by the various firms. BREEDS FOR SMALL-HOLDERS. Those who are about to become small-holders often ask for advice as to the best breeds of live stock for them to keep. Generally they are recommended to adopt the breeds commonly kept by farmers in the neighborhood. In most cases this is sound counsel, and for several reasons. In the first place, by taking to a breed commonly kept in the district, the small-holder is certain that he is starting with a type of animal suited to the local conditions of soil and climate. Secondly, such stock are the easiest for him to secure, and the best to dispose of in the local markets. Thirdly, breeding is facilitated, because the small-holder is almost invariably dependent on the services of whatever bulls and boars he can find in the neighborhood. In the case of pigs, the advice may be said to always hold good. In many districts there is a strong local prejudice against pigs of a different color from that of the breed commonly kept, and no other kind can be sold to advantage. It is, therefore, best, at least, to start with a breed favored locally, postponing any experiment with a different class of animal until a sound footing has been obtained. Much the same argument as regards local prejudice may be used with sheep, which, however, are not very often found on a small holding. With dairy cows the rule does not always hold good. If the local sort is a good one for milk or butter, whichever is desired, it is usually best to adopt it, as then any calves that are reared or fattened for sale will meet with a ready market. There are cases, however, in which the local breed is by no means best suited to the needs of the small-holder. It is evident that he cannot afford to keep a cow that does not yield well in milk, and it is best for him to purchase one or two that are known to be heavy milkers rather than to be particular as to their being of any special breed. As the small-holder generally makes butter, a Jersey or Guernsey cross is very suitable, and it is doubtful whether a Jersey-Shorthorn cross can be beaten. Such cows give plenty of rich milk, while they also make a good carcass for the butcher when their milking days are over. The pure-bred Jersey cannot, of course, be excelled

for butter, but the small-holder generally wants a cow that makes a better carcass in the end, and gives him calves that are good to fatten. The small-holder's horse is generally required to trot to the station or market, as well as to do odd jobs on the land. For such a purpose he does not want a massive cart-horse, but rather an animal of lighter build. A cross between a thoroughbred or hunter sire and a cart mare makes a good horse for the purpose, and there are often misfits from such mating that are available for this work. Crosses of this kind are strong and active, capable of working many hours, and keeping sound and fit on much less food than would be needed by a heavy horse. Another very suitable kind of horse for the small-holder is a stout cob from a Welsh drove. Sometimes the small-holder, who has not too much work, can pick up at a sale of discarded vanners a horse that will do all he requires.—London Telegraph.

SALT IN BUTTER

For slightly salted butter salt is added by the process of brining where the butter is made in small quantities. Brine used in butter-making is usually made by dissolving one pound of salt in about one gallon of clean water. A sufficient quantity of brine is made and used to thoroughly float the butter grains in the churn, so that the latter may be rotated several times without danger of the grains going together to form a solid mass. Brine, when freshly made, will be found to be several degrees below the temperature of the water from which it was made. This is due to the salt absorbing heat from the water in dissolving. The low temperature of the brine is a great advantage in reducing the temperature of the butter in hot weather.

It is impossible to incorporate salt in butter by means of brine unless it is churned to small grains. In the case of churning until a large lump of butter is formed in the churn, dry-salting must be resorted to. It is usual to soak the butter grains in the brine for about ten minutes. If the butter grains in the churn are very hard, the brine should be a little stronger, as hard grains do not absorb quite so much brine as do soft ones. Brine should also be stronger when the butter grains are very small, as they then contain a lot of moisture, which is expressed by the butter-worker, and which carries a certain amount of salt away with it.

Where butter is churned to fairly large grains, the brine may be made a little weaker, as large butter grains do not require so much working as small ones, and therefore not so much water and salt are expressed in hot weather, when the butter grains are very soft, the brine of weaker strength may be employed, as the softer the butter the more brine it absorbs, and the saltier will be the resulting butter. Owing to the expensiveness of brining butter, this can only be practiced in private dairies; so that where large quantities of cream are churned the dry-salting process has to be resorted to, and in this case salt is added at the rate of one quarter to three quarter ounces to the pound of butter, according to the degree of saltiness required in the flavor of the finished article. For mild butter 1 per cent of salt is present, but the usual proportions of salt are 2 to 3 per cent.—London Telegraph.

POULTRY CULTURE

Almost all the breeds of poultry bred and exhibited at the present time have been introduced to poultry-lovers during the last half century, and whilst many have suffered in popularity and are seldom seen in exhibitions, their principal features have been wisely utilized in the manufacture of new breeds and varieties, as instanced in the Wyandotte, Orpington, Plymouth Rock. Every credit is due to the fanciers by whose energies such excellent breeds have been created for the benefit of poultrydom. It should be remembered that it has not always been financial gain which has been the incentive to urge such men on, but a love of the beautiful, which appeals to the best side of a poultry-keeper's nature. The scientific and intelligent breeding of poultry is full of fascinating interest. It has been argued that the old-fashioned breeds were the most prolific, but present-day records of newly-manufactured breeds prove the contrary, and, in justice to breeders of the latter and poultry-fanciers generally, it should be stated that it is now recognized as a cardinal feature of successful poultry culture that the popularity of any breed depends upon its adaptability to utility purposes. As long as this is kept in view satisfactory progress will be recorded each year. Cochins and Brahmans were imported into England about 1847, and both of these massive Asiatic breeds may claim to be prominent progenitors of all fancy poultry seen today, whilst the Langshans, from Northern China, introduced in 1872, should here be mentioned. Plymouth Rocks were not seen in this country until 1872 were not seen in this country. Wyandottes were imported about 1888 from the States. Of the small or lighter breeds the Leghorn, although originating in Italy, was also sent by Yankee poultry-breeders in 1870, although it had been freely bred in America for many years previous. The Minorca, another Italian fowl, was first imported about 1883, and replaced the white-faced Spanish fowl, which once enjoyed popularity. Anconas claim to have been bred since 1870 in England, and are another Mediterranean breed. Of imported French breeds, the Houdan was first exhibited in 1871, and the more recent creation—Faverolles—about 1894. Since the importation of such breeds a great improvement has been effected, not only in the type and general appearance, but also in the utility properties.—London Telegraph.

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