

RURAL AND SUBURBAN

CATTLEYS AND OTHER ORCHIDS FROM SEED

The best orchids for the average man who wants plenty of flowers are the cattleyas and the best of the cattleyas are those that comprise the "labiata group" (C. labiata and its numerous varieties), says Leonard Barron in the Garden Magazine. In one or another of its forms this season covers the entire year. The flowers are six to eight inches across, and as many as six have been seen on one "spike," but usually three or four. The color is normally light rose tinged with maroon with the expanded portion of the lip crimson, perhaps having a frilled edge of white; the throat yellow more or less; it varies to much deeper color, to pink and to white. Cattleya labiata is thus perhaps the most remarkable plant in cultivation. These different varieties of the one species have been a source of no little bother to the student, and have even been regarded as so many distinct species. The type plant, the first of a new genus, was named in honor of Mr. Cattley, an English amateur, with whom it first flowered in 1818, and the specific name was given because of the conspicuous lip. Somehow it never has had a popular name, and really doesn't need one.

One of the reasons why orchids are so interesting is that there is a fragment of personal history about so many of the most important. This plant of Mr. Cattley opened its flowers in November. It had been sent over from South America but without any exact record of its locality, and hunt and search as collectors did, never another plant of the true autumn-flowering labiata was discovered, for many years. It was about 1889 that I recollect the introduction by a Belgian dealer of a "new" autumn-flowering Cattleya Warocqueana. Its advent was heralded with great joy as a substitute for the long-lost true labiata.

But orchid collecting had by that time become a keenly followed industry, one collector dogging the movements of his competitors in the closest manner, and so, almost at the same time, an English dealer startled the world of horticulture and sent no small flutter of excitement among the botanists by blazing forth the news of the re-discovery of the long-lost, almost mythical, labiata vera. It was true, and the "new" species in Belgium proved to be the old one that everybody had been seeking, but had not recognized when it was at last found. It had not come from the reputed region.

Today, the true autumn-flowering labiata is to be had in quantity. Before the re-discovery, a piece of the original importation, having but two growths, was worth \$1,050 (the price actually paid); you could buy a couple of hundred or more larger plants today for that sum. Sander, of England, sent four men at different times to follow, step by step, the path of the original discoverer. The facts are that Swainson did not collect the plants himself, but secured them from others. His real business was hunting insects, not plants, and, curiously enough, too, it was an entomologist who re-discovered it. After the wonder had subsided, Fate's last touch of irony was hard. In the first volumes of the Edinburgh Philosophical Journal was found a letter of Swainson in which the clue to the longed-for facts was recorded, but nobody had thought of looking there.

The type plant of C. labiata vera has three to five rosy-mauve flowers on a stalk. The petals and sepals are three and one-half inches long, the two petals a little more than two inches wide, while the three sepals are quite narrow—half an inch. The lip is very showily colored. It is three lobed, the two lateral ones closing round the column, and on the outside is about the same color as the petals; the remaining lobe, called the median lobe, is expanded to about two inches, variously blotched and veined with shades of deep crimson or magenta-purple, but with a paler margin that is also crisped. Extending back from this blotch is the throat, usually yellowish and veined with crimson-purple. This somewhat minute description is given in order that the distinctions of the important varieties may be the more convincingly stated.

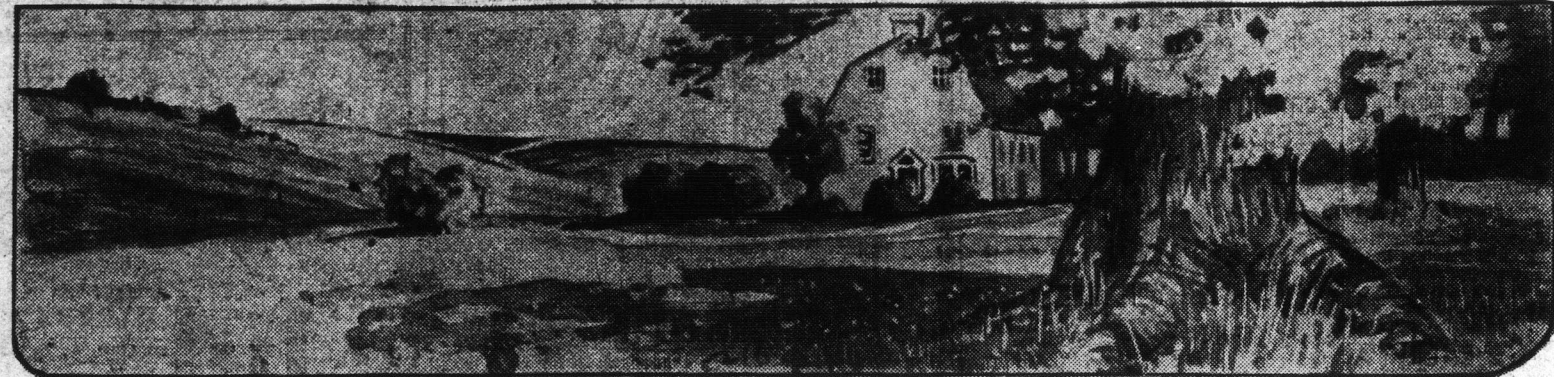
As a commercial flower during the fall months (September, October and November), this plant has become so popular that it is practically the only orchid of that period. If you see a half-dozen or so flowers of a rose-colored cattleya (practically uniform in marking) in the fall and particularly in the retail florists' stores, it is certainly safe to assume it is the "lost orchid."

Two Summer Kinds

There are two varieties that approach the type so closely that in some of their forms they can hardly be separated at all except that they flower from May to July. C. labiata, var. Warneri, has been called the "summer labiata," and for a long time was thought to be the real basic type of which the rare autumn-flowering plant was an unusual form. That even received the varietal qualification autumnalis. Warneri flowers in June and July, being preceded by Gaskelliana, a somewhat less attractive form, in which the flower is smaller in all its parts, rather lighter in color, and almost devoid of the rich coloring on the lip. This is probably the least attractive of all the forms, and moreover blooms at a season when there is such an abundance of outdoor gardening interests that orchids are not wanted. Cattleya labiata, var. Gaskelliana, always looks to me like the "poor relation" of this rich family.

A Unique Yellow

A companion to the type plant in its season of flowering, but so utterly different in its color, is the beautiful yellow-petalled Dowiana. It is one of the most easily recognized of all the orchids, being the only erect growing



cattleya of its color. There is a brighter yellow in the smaller fragrant flower of C. citrina, it is true, but this last is always pendent, and indeed looks somewhat like a yellow tulip growing upside down. Dow's yellow labiata has all the characteristics of its family save that the rose mauve of the petals and sepals is displaced by dull yellow except for traces. The lip is large, expanded, with a frilled edge, deep crimson-red veined far into the throat with dull yellow lines. The subvariety, called aurea or chrysotoxa, which has a brighter yellow without any trace of rose or crimson in the petals and clearer veining in the lip, is the more esteemed. This comes from Costa Rica and the plants are not over-plentiful, and the cut flowers are probably the most expensive flowers grown for market. Good blooms are often worth one dollar wholesale. This cattleya is the only one found north of the Isthmus of Panama, the chief region of the labiata group being the northern regions of South America. It will never be as common as some other kinds, because it is harder to grow, demanding more heat and more light and water.

Where Fragrance Counts

Slightly in advance of the true labiata season comes the variety Eldorado, in which the chief mark of distinction is again a yellow coloring. But this time it is in the throat. A rich orange-yellow extends from the deep purplish-crimson area. It appears all the more prominent because the rest of the lip clasps closely around the column. The other

variety cannot be advised in a mixed collection; it needs special conditions, but if these are given, it usually is one of the most satisfying plants to the worshiper of superb color.

Its companion, Mendelli, has the largest lip of all the varieties; it is also beautifully waved, the color is more nearly magenta than that of Warscewiczii. The broad petals are sometimes so large that the flower presents an unbroken front to the eye. Apart from its lip, the variety Mendelli varies greatly in its coloring, some forms being even tinged with yellow. On the other hand, yet others present a peculiar, pale-bluish overcast tint, and in some cases the petals are marked with an intensification of the color along the central vein.

The only competitor with which the preceding can be confused is the variety Mossiae, which comes into bloom with Mendelli, but ceases three or four weeks earlier. C. labiata var. Mossiae has almost a more intense magenta in its lip, but instead of being self-colored and merely waved, it is distinctly frilled and white along the edge. The heavy frilling distinguishes it most easily from other varieties. As a cut flower it is one of the very best, the blooms lasting several weeks in a cool room. It is one of the easiest to flower, and (to the confusion of the student) is one of the most variable. There are several named sub-varieties. In different individuals the degree of frilling, the intensity of the color on the lip, and the depth and quantity of the yellowish tinge which is found in its throat

with the other large-lipped varieties, is lighter.

A Flower for Easter

A form of the preceding which is after all a beautiful albino variety—the pale Trianaei—is known in the trade as C. Schroederae. It has all the gracefulness and beauty of the best forms of the variety combined with an almost entire absence of color. It is distinguished from the regular Trianaei in form by a much greater crisping or waving of both petals and lip; in the very palest forms the lip is devoid of color except in the throat, where the presence of the beautiful light yellow is just sufficient to give character to the flower.

The Connecting Link

The last of these well-marked varieties is Luddemanniana (or speciosissima of the florist). Flowering in autumn, it completes the cycle of the year, filling in the gap between the season of Warscewiczii (Gigas) and the type labiata. It overlaps the seasons of both. It differs from the former in being less showy, having a less gorgeous lip, and from the latter in being more showy. The lip is waved and deeply divided at the apex; the deep crimson color is carried back into the throat in streaks; and the points of the lateral lobes of the lip, which enclose the column, are tipped with white.

White Varieties of All

It should be remarked that the foregoing colors given above are not absolute. They are, however, sufficiently dominant to be taken as guides, and in conjunction with the details



Orchid Culture Under Glass

parts of the flower in the ordinary form are quite a pale rose, which also accentuates the depth of the yellow in the throat. The whole flower is generally smaller than the average of the labiata group and is also markedly fragrant. Too much reliance must not be put on that feature, however, because all the varieties have more or less fragrance noticeable whenever a large number of blooms are together. The expert, however, regards Eldorado as the "fragrant labiata."

The Most Gorgeous Lips

There are two of these labiata cattleyas that are distinguished from all others of the family by the great breadth of the lip, and its wonderful depth of coloring. These two are Mendelli and what is generally called Gigas. In the Cyclopaedia of American Horticulture, the latter name is given as a synonym for Sanderiana, but I think that it is properly Warscewiczii, as it was described by Reichenbach under that name in 1855 and later as labiata, var. Warscewiczii in 1883. Mr. J. E. Lager, who has traversed the region, informs me that "the so-called Sanderiana is a local form of Gigas, entirely isolated from the type, and differs in being somewhat lighter in color and, as a rule, larger. The name Gigas was given in 1873."

There is no possibility of ever confusing these two types, because they flower at totally different seasons, Mendelli opening from April to May, while Warscewiczii is a midsummer cattleya, producing gorgeous show of blossoms in June, July and August. For long this was regarded as one of the difficult cattleyas to grow, and even today many people are not really successful with it. The trouble appears to be that its season of active growth alternates with that of most of the other members of the group; consequently, if the majority are grown successfully, the gorgeous Gigas sickens, fails and succumbs.

This giant cattleya has larger and broader petals and sepals than the other varieties, but its best distinguishing characteristic is its pair of yellow spots—eyes as they have been called—that seem to glare out of the brilliant crimson-purple of the lip. These are located behind the median lobe. The cultivation of this

vary just as greatly as do the tints of pink, crimson and rosy purple, or even white, to be found in the petals and sepals. As a cut flower it is much valued because of the graceful outline and droop of its frilled lip, and the colorings are so varied that it is usually found suitable to almost any tonal scheme of decoration.

Flowers for Winter

Covering the season from November to March, there are two fairly distinct forms, both of which may be had in perfection for Christmas time. The variety Percivaliana, which is appropriately called the "Christmas orchid," might aptly be described as a smaller winter-flowering Mossiae, so far as its form and general bearing goes; but the flower is, as a rule, darker and richer in color. It is, among cattleyas, the nearest approach to a crimson, although it is well within the limits of the rose-purple—and the throat is lined with crimson and yellow.

Beginning to flower by November and continuing throughout the holidays until February perhaps, when the Mossiaes and Mendellis begin to bloom, the most popular, or at all events the most commonly known, of all this family is the variety Trianaei. I would not like to say positively how many sub-varieties of this beautiful orchid have been put into print; let us say fifty on a chance. I have a list of over thirty before me, and that was prepared some years ago. Trianaei combines a great many of the good qualities of both Mossiae and the true labiata: it has a wavy lip fringed with a lighter color than the body, and it approaches the beauty of Mendelli in its very wide petals, which are also (normally) beautifully waved, giving to the flower a texture that is indescribable, but that seems to recall the delicacy of some beautifully woven fabric. Delicate shadings seem to line the surface of the petals as a result of this waving of the substance, so that they, together with the lip, combine to make a trio of delicately poised feathers. The whole flower is usually of a bluish tone, the throat has a distinct zone of yellow and the expanded portion of the lip is bright, intense rose-purple. The lip as a whole is very conspicuous and in comparison

of form and flowering season, should suffice to distinguish the varieties. There are white, or practically white, sub-varieties of nearly every variety described above, and every degree of shading, too, in most of them.

There are slight differences of habit of growth among these cattleyas; by which the entire group can be divided into two distinct sections. The Trianaei, Mossiae, Mendelli, and Percivaliana varieties make a growth or sheath, and, resting a short time then resume growth, and develop their flowers. In all the others, the growth is continuous—that is, the flowers appear simultaneously with the maximum development of the growth. In the type labiata, there is a slight, almost imperceptible rest.

Orchids from Seeds

Cypripediums.—These exceedingly popular garden orchids have been much improved by hybridization and cross-breeding, and although at first much difficulty was experienced in raising plants from seeds obtained artificially, they are now easily managed by those who understand them. The way to succeed is as follows: Select as nurse plants a number of healthy, well-rooted, short-leaved cypripediums, such as harrisianum, barbatum, lawrenceanum, callosum and ananthum. These do not deprive the seeds, and afterwards the seedlings, of light and air—two essentials to successful germination. The plants should be repotted in a mixture of fibrous loam, osmunda fibre, sphagnum moss, and a good sprinkling of silver sand and small crocks. About one-quarter of the pot or pan should be first filled with broken crocks, placing them in an upright position, wedging one against the other to hold them firm and ensure free drainage and aeration. Shake off all old potting materials from the roots of the plants, and carefully wash them in clean soft water; then pot them firmly, but not too hard, and finish with an evenness of surface which should be about three-quarters of an inch from the top of the pot—this allows the plants to be watered without danger of washing away the seed. The plants after potting should remain for at least three weeks before any seed is sown round them, giving them plenty of

water so as to get the soil thoroughly soaked and settled, and a final watering about two hours before sowing the seeds. To sow the seed, cut a small hole in the side of the seed-pot, and gently tap the pot from behind to cause the seeds to fall evenly all round the plant. Care should be taken not to have other plants near when sowing, the seed being so light that some of it may fall astray, thus causing a mixture of seed which may afterwards perplex the grower. From November to February is the best time for sowing.

After the seed has been sown the plants will not require watering again for about a week or ten days, beyond a slight spraying overhead and syringing between the pots. When they are watered it should be with a fine rose, giving no more water than the pot will hold without flowing over the top, or the seeds may be washed away. Continue this treatment for about six weeks, by which time, and sometimes before, providing the seed sown was fertile and in good condition, the tiny seedlings should appear.

All being well, in about three months from the date of sowing the strongest seedlings will be fit to be placed singly in thimble pots, and some of the rather weaker ones two or three in a pot, leaving the smallest of them until they get larger and stronger. The transplanting of the seedlings requires care and patience. A sharp-pointed bone needle is useful for this purpose, and each seedling must be lifted separately. The compost for potting these may consist of loam fibre, osmunda fibre, and sphagnum moss in equal proportions, with all the dust removed, and then chopped very fine. Two crocks in the bottom of the pot are sufficient. Water sparingly for two or three weeks with a fine rose. If the time can be spared dipping is much safer. When once the seedlings have become established in these pots the only thing to be done is to pot them on when they require it. They should not be allowed to become rootbound or starved. In from three to four years the plants will be strong enough to flower.

The temperature for seedling cypripediums should never fall below 60 degrees nor rise to more than 70 degrees, except by sun heat. The house must be kept moist by using the syringe and sprayer freely, and giving air whenever the outside conditions will allow. They require plenty of shade during the hot summer months, and to be fumigated regularly, say, about every three weeks.

Cattleyas.—Where it is desired to raise cattleyas from seeds on a large scale it is most advisable to have a small house specially made for the purpose, or an old house reconstructed. If it is intended to grow only a few this may be done in any house where conditions are favorable. To ensure success plenty of heat is required.

The best time to sow is as early as possible in February; the days are then getting longer, and the sun has not sufficient power to necessitate shading. There is also plenty of time to get the seedlings up and established before winter. The temperature should be kept up to 75 degrees by day and not lower than 70 degrees at night, rising with sun heat some times to 85 degrees or 90 degrees. When it gets higher than 90 degrees a little shading had better be used. For sowing the seeds mix in equal proportions of polydium fibre and sphagnum moss, removing all heads and rubbish from the latter. This should be placed in five-inch pans, with a few small crocks below, stretching over it a piece of coarse canvas or linen which has been properly sterilized to prevent the growth of fungus. These pans should then be placed in the propagating case on inverted pans, thoroughly soaked with soft water, and then allowed to stand for two hours before sowing the seed, which should be done in an isolated place to prevent mixing, sowing sparingly, and placing a pane of glass over each pan for the first three days afterwards, and keeping the cases closed. After the third day the glasses should be removed, and on every day following a little air may be admitted into the case, gradually increasing the amount. An occasional spraying will prevent the seeds from becoming dry. The first signs of germination is the swelling of the seed, which gradually turns green, and becomes almost globular. Then fine hair-roots are developed, and as soon as these appear the seedlings should be pricked off with a sharp-pointed bone needle on to some prepared five-inch pans, the compost consisting of peat and sphagnum moss, packed very closely and evenly, placing about a hundred seedlings in each pan, still keeping them in the cases, where after a few days they will push up minute leaves and send out small roots. In a few weeks they will be large enough to be placed about seven or ten in a small pot filled with coarser compost of the same material, and as they continue to grow they can afterwards be potted singly, and subjected to cooler treatment. These small plants must never be allowed to become dry or they will shrivel up and be lost. When once they become established pot them on as often as necessary, and always encourage them to make their growths at the proper seasons. After the first year they will thrive on fresh air, warmth, plenty of light, and abundance of water, and in from four to five years they will be strong enough to flower.

Laelias.—These require the same treatment as cattleyas, except that instead of sowing the seeds on peat and sphagnum dead leaves should be used, first thoroughly washing them and drying them in the open. The leaves should be packed in an upright position, moderately tight, to a depth of an inch and a half in the pans, and then the canvas stretched over before watering thoroughly. The seeds may be sown the next day, scattering them much thinner than cattleyas.

Cymbidiums.—The seeds of much larger than in the majority they can therefore be watched very first. Precisely the same treatment should be adopted as for cattleyas, with a temperature of 70 degrees by day and lowering greens at night. Give plenty of moisture with a fine sprayer, and dip the pans in water.

Dendrobiums.—These also require treatment as cattleyas, except that polydium fibre use osmunda, peat moss and leaving a rough surface which stretch the canvas tightly, well down between the side of the pot and the compost.

Odontoglossum.—The seeds of treated by several different methods. I give two, both of which have proved successful. The first one is to select a well-rooted healthy plants as nurse in a mixture of osmunda fibre and sphagnum moss, mixed with a small quantity of peat and silver sand. The pot should be filled to about half an inch below the top of the pot and then well watered. The plants should be potted about a week before being sown on them, taking care the material is very moist before doing so. In the same way as advised for cypripediums, and then place the plants in a temperature of 55 degrees to 60 degrees which may fall to 50 degrees to 55 degrees at night. Give plenty of air and plenty of sunlight. January and February are the best months for sowing.

Life on

Nearly two decades ago I was blessed with a house where the wild flowers abundant and the pheasants loved themselves on the seaward side of covered rocks.

The mosquito hawk nested (if you nesting) on those rocks. Golden stone-pink peucedamun carpeted them. I met the woods a cataract of spiraea orange flowed down upon them, at the foot of the wide winged swallow "admirals" of the red and white.

Somewhere, I believe, once bought a house at a dollar an acre with the swamp (!) thrown in as valueless, perhaps you may buy it at a thousand dollars, though it is not half as beautiful as it was then, but in those days you would have been served every year by the electric tram company and to any water which the city has to supply.

At the time I speak of the house was finished and the owners were very much in the middle of the business, but they entered, in much pomp, two equine known, who, having assumed a position, upon the future tennis lawn with those two foolish young English upon the isolation of their future home would be unable, the equestrians anything of their friends.

The answer was too obvious to the condolence serves to make my Gregariousness is one of the characteristics of our people, in sharp contrast to the spirit of their predecessors, who hated to see another man's smoke.

The house I have spoken of was miles from the post office, but it was out then and, for a great many, the much too far out today.

It takes an hour even by the Crete to get to Sidney, whence any one may be reached by launch or boat, the railway ever electrified, with at Schwartz's Bay, there seems no man should take more than an hour to his island and his club, but very people have that instinct for part which accounts for the existence of did country homes of England, and there are still one or two island homes.

It is wonderful, but even here, things cannot last, if the wanderer continue to pervade our province, that goes to make a country home according to English ideas, the island advantage of every other part of the world.

I know that this is a bold assertion, but the gentlemen who are enough to write to me after reading an article upon the Samian peninsula and insist upon the superiority of districts, ending their letters with offer of a romantic home site at a salary per acre upon easy terms, but I know it. What I have written I have written.

The disadvantages of the island if you are an invalid likely at a moment to be in need of a doctor, they are far from the telephone. Dr. Gordon at Sidney is perhaps within two or three miles (I am making the worst of it), cases that is too long for a sick man to wait, and of course what applies to applies to the butcher, the baker, the bonnet-maker. This is the first disadvantage that under present conditions is not easy to find a working man to live upon the land, or a man anxious to remain one, with the seductions of Government stock opportunities offered by a large quiet and seclusion of an island.

Moreover, it is contrary to the people that any one should emigrate who are content to live upon it is contrary to law, I believe,