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About the Institute
The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Achimenes

by

B. Y. Morrison

Although there are perhaps hundreds of plants as worthy of attention, plants that have come in and gone out of fashion, the current dementia in growing African violets makes one wonder if there might not be a revival of their cousins the achimenes.

If one turns to the reading of old books and garden journals of the mid-1800's, he realizes that the achimenes like many another plant had been subjected to that minute examination peculiar to the era when every slight variation made the individual a subject for naming and preservation. Such lists show that the family had two marked branches, one with smallish red flowers with more or less yellow color in their broad throats, and the other, the larger lavender to violet tribe with their broader, flatter faces and narrower tubes.

Examined dispassionately, there is little to commend the African violet to the average amateur. It is sensitive to changes in temperature, moisture and light, none of which factors are easily controlled in the average home. It is brittle in all its parts and easily bruised. In most of its clones it is intermittent in flowering and should it fall prey to the mealy bug, one may more easily start again with new plants than worry with the "safe" routines to rout the insect. Nevertheless, it is a best seller!

In what lies its particular hold on the general public? Without a doubt it is the fantastic ease with which the home gardener can propagate new plants from the leaves. Persons who have never before shown the slightest interest in house plants now bear down upon one with a strange glint in

their eye to beg a new leaf or to make you look at their successes or explain their failures.

The achimenes are equally indecent in the prolific manner of increase but vastly more interesting in all their intimate processes of vegetative propagation, whether spontaneous or induced by the gardener himself. Though seasonal in bloom, once started, they are more continuously floriferous in a far wider range of colors and form, but they are not all year round performers, asking for a decent rest through the winter months, which may lose them converts.

The writer's first sight of the growing plant was on a mowed-over bank at a finca in Guatemala, where a few unmistakable lavender flowers were still to be seen peering up from the axils of the remaining cut-over stalks. The main season "had passed" which seems curious since the peak of bloom here comes in the autumn when these were seen in Central America.

The second sight came in a garden in Pass Christian, Mississippi, where the rather straggling stalks of what is probably Achimenes longiflora clambered up through the evergreen masses of Vinca major, the greater periwinkle, the fine lavender-blue flowers resting on the leafage. The next push of interest came from correspondence with Mrs. Lula Roblin of Hazlehurst, Mississippi, who had been growing them commercially for some years. Nearly all the materials photographed came from her stock generously shared.

In the actual growing of the material, the writer has had the aid of Mr. Albert Close and his assistants, so that he himself is scarcely more than reporter.

The curious roots that one gets from dealers are shown on page and these make a poor contrast with the roots one grows himself, that have not had to suffer from slow loss of moisture in warehouse and storeroom.

As one can see, the longer roots look something like scaly catkins and the shorter ones like small cones. When one lifts a well grown plant there will be a cluster of such roots just below the soil level but they may be broken apart and usually are for sale singly. If the proper cultural methods are followed, no special advantage comes from the planting of the clump rather than a single root.

As a basis of comparison, useful though not altogether pertinent, one might remember the cultivation of the chrysanthemum. One plants the achimenes roots, singly as one does the rooted chrysanthemum cutting destined for pot culture, in a friable rich soil that drains well. It is given light and air and possibly a bit more humidity in the case of the achimenes. As soon as the shoot makes any decent size, one may and should pinch out the top to induce branching. The branches in turn are stopped and so on until one has a fine structure of branches that will begin producing flowers from the axils of the shoots as they grow out. If one does not follow the program, he will get just what he gets from a chrysanthemum, a long straggling stem with flowers along the uppermost parts and such side branches as the plant may determine. A little experience will soon show each grower how he may like to handle his plants.

Mid-Victorian tradition suggests that the dormant roots be planted in any convenient place and then, when sprouted, be transplanted with equidistant spacing into a bulb pan or hanging basket. Our own plants were mostly grown in bulb pans but were not subjected to much pinching so that they did not fall "in cascades" over the sides of the pans. One lot, planted in an old wooden orchid basket and hung from a rafter, did all that should be expected.

Flowering commences after midsummer and by late October, depending in part on the actual age of the plants as well as the season, the plants may begin to show some signs of going to rest. In the deep South where they are used as herbaceous perennials, this will care for itself. In pot plants, one merely reduces the amount of water to hasten off the ripening of the flowering shoots. One may leave them in the pots over winter in a cool place but not a place where they will be chilled, or may lift them, cleaning off the "roots" carefully and storing them in some moist but not wet packing material such as sand or peat moss. Again the storage temperatures must not be low, certainly never below 40° F.

As one buys roots in the market, one finds names that suggest scientific names cheek by jowl with obviously horticultural names. This reporter is in no position to offer any explanations but catalogues the descriptions as they come, with merely the suggestion that most of the varieties grown suggest clonal variations of A. longiflora assuming, perhaps incorrectly, that the long-tubed, pale blue-lavender form received under that name is that species in fact. Since white forms are not unknown in many colored species, a variety like Purity offers no surprise and, since dark reticulations in the throat of the lavender forms show plainly, it does not seem strange that they should also show spilling out over the face of the flower as in Ambroise Verschaffelt. Two other variants, received from Mrs. Roblin, show flushes of color, not veins, about the mouth of the tube, a perfectly common color variation in other flowers.

These come closest to a clone catalogued as "patens major" but whether or not that is a taxinomic entity or a garden form is not suggested here. One doubts it in spite of the acceptable Latin. When one comes to darkly colored flowers like those of Mme. Georges and Purple King, almost identical save in

the leaf characters of the plants, one doubts if there is a single species involved. Clones like Pink Beauty and Crimson Glory are so far removed from A. longiflora that one does not even guess. Pink Beauty suggests a hybrid nearer longiflora, Crimson Glory nearer the small red variety sometimes listed as A. pulchella.

The flowering is something like that of a petunia; once begun it goes on continuously as the shoot elongates, with the eventual development of lateral branches that take over. The habit also suggests that of the petunia with its similar lax growth that will either droop over or elbow its way upward on any support that is near by.

As far as propagation goes, there is very little that the modern worker can add to the complete but very concise directions given years ago by C. P. Rafill in Bailey's Standard Cyclopedia of Horticulture (p. 207). Our group went over the same ground as there outlined and would only elaborate or emphasize some of the cited statements.

Most certainly it is correct that "each of these (rhizomes) may be used for forming one or more plants". If the root is broken on receipt, plant all of the pieces. After the sprouts have appeared, they can be teased apart, each shoot developing independently into a plant. It was our experience that "scaly buds or short rhizomes" could be forced into appearing almost anywhere on the plant, if it were given a temporary check as by reducing moisture. Cuttings certainly root with ease and the photographs on pages and show that leaves and even portions of leaves will root and produce roots, rhizomes, and leafy shoots. In the moist air of the greenhouse, many sorts, but particularly A. longiflora and "patens major", produced scaly shoots from the base of the plants with small plants at their tipe, the scaly shoot rather like a rhizome greatly elongated on its axis and the succulent

scales replaced by thinner bractlike scales in the above-ground growth. (see pages and). Sand was used in all cases as the rooting medium and a humid atmosphere was assured by an extra glass cover on the bench. In home practice, this could be a glass jar over the sheltered cutting.

With all these means of rooting plants, the "propagator's urge", that has been rewarded in the case of the African violet, could have an even greater range of expression and probably with lesser likelihood of losses, and certainly with quicker flowering from the new plants.

It would mean also that any clonal variation could be worked up into a "stock" of commercial quantity even more quickly than seems possible with the saintpaulia. This was definitely carried out by an attempt to increase rapidly the stock of Ambroise Verschaffelt. No difficulties of any kind presented themselves and the small plants from the single node cuttings came quickly into flowering as if there had been little interruption in the growth of the original shoot.

No effort was made to be certain that seed was produced though there was evidence that capsules were forming. Doubtless were seed available, it could be sown on sifted sphagnum moss and the resulting seedlings grown on, using the rich, humus-laden but free-draining soil mixture already mentioned.

This report must close with a note of dissatisfaction, not with the plants themselves but with our own failure to arrive at any conclusions, even tentative, concerning the clones bought as Scarlet Gem and Storm Cloud. The former does not come close enough to the descriptions of any of the red-flowered species studied to make one feel that it could be more than a garden form, though it is sometimes listed as A. pulchella. If it has a fault, it is that it is slower to begin its flowering season than the rest. Storm Cloud is quite another matter and one could wish that he might dismiss it as A. lanata.

Its growth can be guessed from the illustration, vigorous, erect, rather more coarse than most. Its flowers are distinct in size and shape as well as carriage. Their lavender color is almost identical in tone with that of the yellow-green leaves. Unfortunately, in photographing, no filter was used to make the flowers "appear" lighter than the leaves, as in fact they do. The flowering season with us was shorter than that of the others and there was little tendency to produce lateral shoots from the base. Possibly its greatest value will come later on for some new hybridist who will value it for its size, the wide open tube and other characters less obvious in themselves.

No effort has been made or will be made to determine how short a period of winter rest will suffice. Since many plants of Central America have come from "wet-season, dry-season" climates, one suspects that the dormant period might be reduced. One might then need to discover if the plant in active growth through our summers with their long days would content itself only with the production of greater masses of vegetative growth and postpone its flowering as now until days grow shorter.

Again day length might determine whether or not flowering could be continued well into our winter. If our ever-shortening days brought growth, and so flowering, to a close, the plant could not take its place in an ordinary collection of house plants unless it could be cajoled into a spring flowering when the day lengths matched those of autumn. It is a neat problem and one that smells of a doctorate.

There are other details that one could wish would attract the plant breeder. For example, one could wish for the venation pattern of Ambroise Verschaffelt superimposed upon colored grounds, that there could be some way

to enlarge the central colored zones as of "patens major". It would help also to study all the material and determine if there is some species or even clone that would bring very short internodes into the habit, so that flowers would appear more "en masse". It might be worth while to study the pigmentation of the plant itself and see whether or not there would be some virtue in bringing in the ruddy tone of stem and leaf that distinguished Mme. Georges from Purple King. He might observe that the lobes of the corolla are not well imbricated in some forms, for example Purity, and, recalling the perfectionists of old, the more geometrical bloom. He might decide that he likes the tendency to fringed corolla margins and raise seedlings to increase this detail. In short, he might bring about the revival and enjoyment of exquisite minutiae such as were cherished and preserved in that marvelous period in the 1800's before the half-hardy plant had been relegated to semi-oblivion in the mad rush for hardy borders, the naturalistic style of landscape gardening and a bit later the modern greenhouse with its seasonal "cropping" practices that made "annuals" of all the stock plants.

A postscript is in order. As so often happens, once one has begun to look for a particular plant, they appear unsought. There have come to my attention clones listed by two nurseries, all of which we hope to try this season since they have not been seen or grown. Lakemont Gardens of Winter Haven, Florida, list twenty-odd named varieties, and Giridlian of Arcadia, California, offers three others.