

*The* NATIONAL  
HORTICULTURAL  
MAGAZINE



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JANUARY, 1949



# The American Horticultural Society

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*Camellia Sasanqua*



# Camellia Sasanqua

CLAUDE CHIDAMIAN

*Camellia Sasanqua*, a delicately beautiful species of camellia, has waited more than a century for the recognition which it has lately begun to receive in England and America. In earlier years, the overwhelming popularity of the fully double, strictly formal varieties of *Camellia japonica* left little room for the simple beauty of the single and semi-double types. The prim, stiff, solid blooms of Alba Plena, Lady Hume's Blush and a thousand others like them, somehow typified the stolid refinement of the Victorian Era. In the informality of our own time, however, we have come to appreciate the single and semi-double forms of *Camellia japonica*, particularly if the blooms are as large as dinner plates. But we have not yet learned to recognize the beauty of these same forms when they appear in the smaller, delicately fragile blooms of *Camellia Sasanqua*.

In Japan, where mere magnitude or symmetry of form have never been criterions of floral beauty, the Sasanquas have always been favored above all other camellias. This native species, growing wild in the mountains of Kyushu and Shikoku and in the Ryukyu Islands, has been cultivated by the Japanese for centuries and is more frequently encountered in gardens and public places than *C. japonica*.<sup>1</sup>

<sup>1</sup>It is interesting to note here that *C. japonica*, despite its name, may not be a native of Japan at all but was probably brought to that country from China and Korea by Buddhist monks early in the Christian era. It is a well-known fact that the Japanese in early times showed very little interest in developing new varieties of *C. japonica*. E. H. Wilson, "The Camellia—Rose of Japan," *House and Garden*, LVII (March, 1930), 142, offers a strange but simple explanation for the Japanese attitude toward this camellia: "In Japan the Tsubakki was regarded with superstitious awe by the warrior or Samurai class. The color of the flower is red and it has a bad habit of falling

Various garden forms of *C. Sasanqua* were undoubtedly carried by priests and traders to the large cities of China, for it is from the vicinity of Canton that the first plants of this species were taken to England early in the 19th century. The Abbe Lorenzo Berlesè in his *Monographie du Genre Camellia* (Paris, 1837) gives the date 1810 for the introduction of the single white form, and 1826 for the double pink type called *C. Sasanqua rosea plena*, or *multiflora*.<sup>2</sup> This latter variety was later found to belong to another species, *C. maliflora*, and still later Sasanqua introductions from China were identified as belonging to the closely related Chinese species, *C. oleifera*. All this confusion has led some observers to suggest that the true *C. Sasanqua* did not reach Europe until 1869, going first to France and then to England in about 1879.<sup>3</sup> This conclusion seems unnecessarily cautious, however, for we

off at the neck almost as soon as its petals are expanded. The color suggested blood to the Samurai and the fallen flower a human head severed from the body, and so to those who lived by the sword the Tsubakki symbolized their probable fate by decapitation. One sees the plant in Japanese gardens today and one or two distinct varieties are grown, but the Japanese really favor another species (*C. Sasanqua*). . . ."

<sup>2</sup>Lorenzo Berlesè, *Monography of the Genus Camellia*. Tr. by Henry A. S. Dearborn (Boston, 1838), pp. 96, 97. Berlesè's second date is not generally accepted and may be a typographical error. William Beattie Booth describing *C. maliflora*, "The Apple-Blossomed Camellia," in *Illustrations and Descriptions of . . . the Natural Order Camellieae* (London, 1831) writes as follows: "It was first brought to this country, in 1816 by Captain Richard Rawes, who presented the original plant to his relation, Thomas Carey Palmer, Esq. of Bromley, in Kent, in whose collection it flowered in 1818, and was afterwards published in the Botanical Magazine, as a variety of *Camellia Sasanqua*; hence it has been cultivated, and is usually known by the name of the Sasanqua Rosea, or Palmer's Double Sasanqua Camellia; but from that species it has been lately separated by Mr. Lindley, in the Botanical Register, f.1078, who has applied to it the very appropriate name we have here adopted."

<sup>3</sup>J. R. Sealy, "Species of *Camellia* in Cultivation," *Jour. Royal Hort. Soc.*, LXII (August, 1937), 360-362.



are now quite certain that the *Camellia Sasanqua flore simplice*, known as "Lady Banks' Camellia," was brought to England from Japan in 1811.<sup>4</sup>

The varieties of *C. Sasanqua* in America today are all of very recent introduction. Although a few plants of this species were grown in 19th century American collections, they were probably only kept as botanical specimens and no particular attention was given to their cultivation. In recent years, however, largely through the efforts of two American growers, the number of *Sasanqua* varieties has been increased to stand second only to *C. japonica*. More than fifty of the finest Japanese varieties were brought into the country some years ago by Mr. E. A. McIlhenny for his famous Jungle Gardens collection at Avery Island, Louisiana. To these have been added a number of very fine American seedlings developed chiefly by Overlook Nurseries in Crichton, Alabama. There are now more than 100 named varieties of this species in American collections.

*C. Sasanqua* is the earliest bloomer of the camellia family, the flowering period being from September to January. Thus it come into bloom at a season when other shrubs in flower are scarce and before most varieties of *C. japonica* have begun their full display. In colder sections of the country, this early blooming habit saves the *Sasanqua* blooms from frost injury, and in all areas it extends the camellia season by several months.

In their native state the *Sasanquas* are found growing as rather open, twiggy, picturesque shrubs to a height of eight or ten feet, with much smaller

foliage than *C. japonica*. The branches when young are slender, reddish and hairy, and the plants have a rampant, horizontal growth which later develops into a bushy compact specimen. The cultivated varieties of *C. Sasanqua*, on the other hand, have several distinct forms of growth. Some are openly branched and spreading, others quite upright, and still others definitely pendulous or weeping in habit. There is considerable variation in foliage, too, some varieties having leaves as large as those of *C. japonica*. The dried foliage of certain varieties is distinctly aromatic and frequently added to tea to increase the bouquet. A decoction made from the leaves is also used by the Oriental women to wash their hair. The oil of *C. Sasanqua* has an agreeable odor and is used for many domestic purposes. It is extracted from the seeds by subjecting them to pressure sufficient to reduce them to a coarse powder, and then boiling and again pressing the crushed material.

The blooms of the horticultural varieties also differ widely from the wild stock. The small, single white flowers of the species have been bred to produce larger blooms in every tint and shade from pure white to deep carmine, and floral forms developed embracing single, semi-double, double and peony types. Although there are a few variegated varieties and some which are exquisitely shaded from lighter to darker tones, the *Sasanquas* are relatively stable plants and do not sport as readily as the *japonicas*.

The primary usefulness of the species lies in its beauty and adaptability as a garden shrub. Picturesque growth habits, bright glossy foliage, exquisitely delicate blooms, an abundant early-flowering—all blend to give softer tones to landscaping. In addition, the *Sasanquas* seem better adapted to

<sup>4</sup>William Beattie Booth in *Transactions Hort. Soc. London*, VII (1830) describes the introduction as follows: "Introduced in 1811 by the Honourable Court of Directors of the East India Company, in the *Cuffnells* by Captain Wellbank from Japan."



growing in sunny places and in colder locations than most varieties of *C. japonica*. Although the Sasanquas may be used just as the japonicas in border, background, specimen, or foundation plantings; they are even more valuable in certain unique treatments. The upright forms are especially beautiful when grown as a high natural hedge. Such a hedge when once seen in bloom will never be forgotten and may serve as a thrilling substitute for the ever-present Privets and Eugenias. The openly branched and spreading varieties may be put to the same use when made dense and compact by judicious pruning, but they are best suited to espalier work. Applying original or established patterns, the long pliant branches are easily silhouetted against a wall or trellis. The trailing and sprawling habits of the pendulous varieties make them ideal ground cover subjects in front of taller shrubs. These same plants may also be used in rock gardens, in hanging pots or baskets, and trimmed or grafted to form weeping, tree-shaped standards. The Sasanquas may be used liberally in every garden to help accentuate the general landscape design.

From the Sasanqua varieties available in Pacific Coast nurseries I have chosen six which will make an interesting collection:

**BLANCHETTE:** A pure white single flower lightly tinted pink on the margins which reminds one of dogwood blooms. The growth is very sturdy and upright, with dainty grey-green foliage. As all other Sasanquas this variety is delightfully fragrant.

**HEBE:** The exquisite single, deep rose-pink flowers are borne in great profusion. The upright and spreading plant is very vigorous and has bronzy green foliage.

**WHITE DOVES:** One of the finest and largest of the double Sasanquas. The gracefully trailing plant is loaded with great masses of delicate, feathery, snowy-white flowers.

**SHOWA-NO-SAKAE:** A fine large semi-double to peoniform pink flower. The plant is of weeping habit with large leaves. This is one of the Japanese varieties imported by Doty and Doerner, Inc., of Portland, Ore.

**BRIAR ROSE:** A single, soft clear pink variety which resembles a wild rose. Like the wild roses, the loose attachment of petals and stamens in the Sasanquas causes the blooms to shatter at maturity, blanketing the ground beneath the plants with drifts of color. This variety has small, dark green foliage and an open, flaring habit of growth.

**TANYA:** One of the finest deep-colored varieties. The delicate single flowers are a deep carmine-rose shade. The foliage is dark and glossy and the plant rather dwarf and weeping in form.

Many small-leaved or scented varieties now included in the species are probably misplaced as were the scented variety Appleblossom, now identified as belonging to the species *C. saluenensis*, and the small-leaved but scentless variety Betty McCaskill which is now recognized as the old *C. maliflora*.

Although the Sasanquas seed freely and the fast-growing seedlings are especially favored for use as understocks in grafting, the real possibilities of hybridizing the species remain unexplored. If the exquisite colors, delicate texture, and the early free-blooming habits of this plant can be transmitted to the other species, a whole new race of camellias will result.





U.S.D.A.

*Large Nipa palms in tidal pool at the Botanic Garden, Georgetown,  
British Guiana.*

## The Nipa Palm of the Orient

H. F. LOOMIS

In temperate regions the word "palm" often carries with it a picture of a coconut-lined strand or of rank tropical jungles in which a dominant feature are palms of many kinds and sizes, but the diversity of habitats in which these plants may grow is seldom recognized. While a few palms are native in temperate regions, it is in the tropics that the species are found in greatest abundance and luxuriance, frequently associated with rain forests. The tropics, however, are not made up of low, humid jungles and verdant savannahs only but also contain high plateaus; great mountain ranges with peaks reaching far above any plant life; and even some of the earth's most arid and forbidding deserts. In some of these unusual plant habitats a few kinds of palms have adapted themselves

so that one species of wax palm of the genus *Ceroxylon* rears the heads of its largest specimens higher than any other palm, possibly over 200 feet, in the cold, moisture-laden air of the Andes nearly 10,000 feet above sea level while closer to the equator a much shorter palm of the same genus is found at over 13,000 feet! The "Mazri" palm (*Nannorrhops ritchiana* Wendl.) inhabits the dry desert highlands of western India where winter freezing is common; date palms (*Phoenix dactylifera* L.) and the branching Gingerbread palms of the genus *Hyphaene* survive the tremendous heat and intense light of African deserts but must be where their roots can find abundant moisture; coconuts thrive on sea coasts and can grow even on coral islets that are almost destitute



of other plants; and, as a final example of life under seemingly prohibitive conditions, the slender Ekman palm (*Coccothrinax ekmanii* Burret), grows at a snail's pace to a height of nearly 30 feet from the merest pocket of humus in solid lime-stone rock on the tiny, arid, island of Beata off the south coast of Hispaniola. In their long lives these latter, supple, palms have bowed almost horizontally to many a hurricane, suffering little damage, and the lightest breath of air sets them swaying.

In a family of plants seldom thought of as containing aquatic species, the "Nipa" palm (*Nipa fruticans* Wurm.) of the Orient more closely fits this classification than does any other member. Its habitat is at the other extreme from most of the palms just mentioned for it lives in tidal marshes and on the shallowly submerged banks of bays and estuaries from the Philippines and Burma through Malaya to northern Australia and westward to Ceylon. There are other water-loving palms, such as the "Monkey-cap" (*Manicaria saccifera* Gaertn.), several species of *Mauritia* and *Raphia*, and a palm of southern Florida (*Paurotis wrightii* (Griseb. & Wendl.) Britton), in nature always found in swampy locations, but none of these palms is truly aquatic as they can be grown quite successfully on moist high land where the Nipa will not live. Whether in nature or where planted by man, the Nipa thrives only with its base at least partially submerged in brackish water each day. Thus its home is strictly limited to areas near the sea where fresh and salt water intermix on tidal lands, but here great areas may be filled with it as a single Nipa marsh in the Philippines has been estimated to contain more than 20,000 acres.

Botanically, the Nipa palm belongs

in the smallest of the five tribes of palms, being associated only with the genus *Phytelephas* which is made up of a dozen species commonly referred to as the "Ivory nut" palms, all being found in the American tropics. Although these two genera now are separated by half a world, their ancestors may have lived much nearer each other for fossil "nuts" of a species close to, if not identical with, the Nipa have been discovered in tertiary deposits near the mouth of the river Thames.

The Nipa palm forms great, dense, clusters (page 4), spreading by means of a thick, prostrate, branching subterranean rootstock, usually beneath the water, the ends of the branches bearing the leaves and inflorescences. The leaves are pinnate, bright shining green and may attain a length of 30 feet or more, rising from thickened bases and bending gracefully outward from the center of the clump. The stout and prominently scaly inflorescence is sent up three or four feet from the axil of a leaf and bears, at its apex, the globular head of female flowers while from several of the lower lateral scales secondary scaly branches are produced that terminate in large, stout, catkin-like structures on which the small male flowers are thickly arranged (page 6). The rich golden brown of the stem and large scales and the bright yellow of the male catkins make the inflorescences curious and strikingly beautiful objects during the few days they hold their color. The fruit that develops at the tip of the inflorescence is a rich mahogany brown, roughly globular body nearly a foot in diameter and composed of many coarse, protruding, rather conical carpels of varying size, only the largest of which contain single seeds nearly the size of a hen's egg (pages 7 and 8). Great numbers of the mature fruits are found floating in sur-





U.S.D.A.

*Young inflorescence on Nipa palm at the U. S. Plant Introduction Garden, Coconut Grove, Fla. The female flower-head is seen in the center surrounded by the catkins bearing the innumerable tiny male flowers.*





U.S.D.A.

*Close view of Nipa palm in lagoon. Basal structure of leaves and mature fruit-head are shown. An abortive inflorescence, with dried male flowering branches, may be seen above and behind the fruit-head while another such inflorescence is above and to the right of it.*





U.S.D.A.

*Three mature Nipa fruit-heads showing the large seed-bearing carpels among many smaller sterile ones.*

rounding waters or even at considerable distances from them after the ripening season has passed.

The English have applied the names "water palm" and "water coconut" to this palm but one of the native Philippine names, "Nipa," has been accepted generally as the common English name and also has been made the scientific generic designation. In the various other countries where the palm is native, different vernacular names have been given to it.

The Nipa palm is of great local economic importance but its products seem not to have been exported in quantities to countries outside its range. Its principal use is to provide thatch for buildings and in many places this is the sole roofing material. In the large cities and towns of the Philippines its use for this purpose has been prohibited in recent years because it is highly inflammable.

The thatch is prepared by stripping the leaflets from the frond and tying their ends thickly in a "fringe" on a reed. Lengths of this fringe are fastened, one above the other, overlapping like shingles, until the roof is covered. Such a roof is said to give better protection and be more durable than one of coconut thatch. The leaflets also are used extensively for matting, basketry, bags, raincoats, etc., and the dried petioles of the fronds have been used for fishnet floats, to float heavy timbers, and also as fuel. By cutting off the young fruit at the proper time the remaining stem can be made to yield a tremendous quantity of sweet juice for a period of 45 to 90 days by daily removal of a thin slice from the top of the stem that causes the sap to continue to flow. Since the fruiting season of the palms extends over quite a long period not all the palms in a given area are ready to



be tapped at the same time and the season usually lasts for about six months. It has been estimated that in such a period a single acre of palms in the Philippines may yield 3,200 gallons of juice. The juice can be used for the production of sugar, alcohol, vinegar or for making native wine called "toddy." Since the palms occupy land of little value, require no maintenance care and can be tapped at low cost, they are believed to be the cheapest source of sugar and alcohol known, but seem not to have been exploited extensively for the former although in 1919 a production of two and a quarter million gallons of alcohol annually was reported produced from this source. The species is of sufficient importance that in some parts of the Philippines tidal marshes have been cleared of other vegetation and planted with Nipa palms, after which little or no "cultivation" has been required for their maintenance.

It is not known when or by whom the Nipa palm was first introduced into this hemisphere but it was probably by the English sometime late in the 19th or early in the 20th century. In 1932 the writer saw large specimens growing in the botanic garden at Georgetown, British Guiana, and from them obtained 50 seeds that were sent to the United States Plant Introduction Garden, Coconut Grove, Florida. A single seed germinated and the resulting plant was grown in the greenhouse until the summer of 1935 when it was set in the edge of a tidal lagoon at the Garden. The plant made good growth and in December 1941 flowered for the first time but did not develop a fruit head. Since then this palm has produced a number of inflorescences, and from them developed a few fruit heads that grew to considerable size but contained no viable seeds.

In the spring of 1938, Col. R. H. Montgomery, Old Cutler Road, Coconut Grove, Florida, obtained a dozen seeds by air express from the British Guiana plants, and from them grew five plants that were set in the margin of a tidal pool in his grounds. These palms also have grown well and for two years have been flowering, with one inflorescence developing a head containing a few seeds that now are germinating. These plants have produced flowers from late September well into the summer but it was from the early spring flowering, this season, when two or three of the palms flowered simultaneously, that the seeds developed. It is possible that cross-fertilization may be required for seed production, which would account for the failure of the single palm at the Plant Introduction Garden to set viable seed.

The two foregoing cases are the only ones known to the writer of successful establishment of this palm in South Florida although Bailey's *Cyclopedia of Horticulture* (1916 ed.) mentions that it was introduced there but gives no further details and no other records have been found. Mowry, in "Native and Exotic Palms of Florida," Bull. 228, Fla. Ag. Exp. Sta., 1931, questions the planting of the species in Florida.

The palms that have been established here have undergone a number of hurricanes in one of which they were completely submerged in salt water for two or three hours at least. Also they have been exposed to several quite severe freezes, surviving both storms and cold with only superficial damage to their leaves. The fact that roots, trunks and growing tips were beneath the water undoubtedly accounts for the escape of this very tropical palm from cold damage and, being by nature inured to



brackish water, flooding by sea water for short periods is not especially harmful. With the cold protection that is afforded plants in or near water, the range of the Nipa palm in Florida should be quite extensive and possibly may extend along both coasts, in suitable locations, from the middle of the state southward. As it probably will be found that this palm can be grown successfully elsewhere along these coasts its importance will be greatly in-

creased over that locally demonstrated, for it will fill a landscaping need that no other plant does for beautifying the drab, muddy margin of tidal pools, drainage canals and other waterways and parts of the extensive mangrove swamps that skirt many sections of our shores. The Nipa palm can be made an interesting and attractive part of our tropical flora even if none of its native commercial products is utilized.

*Coconut Grove, Florida.*

## My Flower Has a Temperature!

MULFORD B. FOSTER

*Philodendron* is almost a common word even in the dime stores where literally millions of philodendrons are sold every year. They make one of the quickest growing, easiest to care for plants on the plant market.

Other members of this great Arum family are familiar to us in the names of Elephant Ear, Fancy-leafed Caladium, Jack-in-the-pulpit, Skunk Cabbage and Calla "lily" (which has no similarity to a true lily.)

My philodendron is a giant cousin to all these. It is a majestic creature of great magnitude. Branching at the base it forms a great mass in its native habitat, Brazil, sometimes covering as much as a quarter of an acre. It is one of the few arborescent forms which, unlike the majority of the species, does not climb but remains as a branching form. The leaves become three feet long and two feet wide and are a pleasing green deeply indented. The light colored circular scars left by the leaves make a most unusual design on the trunk as it gains a height of eight to ten feet. Although it is extremely decorative it is unfortunately too large for the average household but a magnifi-

cent subject for a sub-tropical or tropical garden. It is not, however, without something in common to every human being; it gets a temperature!

On one of my early morning rounds in my Florida garden I spied for the first time the dramatic flower on our spectacular specimen of *Philodendron bipinnatifidum* which I had brought from its native Brazilian home. As a matter of curiosity I stuck my nose into the open spathe to get a whiff of the brand of perfume or "lure-bait" it was producing. But I found more heat than scent. The flower had a temperature!

I phoned for the doctor, Dr. F. E. Gardner of the U. S. Department of Agriculture Experiment Station. He kindly loaned me three thermometers. One for the air, one for the plant and the other for the flower. My own temperature by this time seemed to be back to normal.

For three days and three nights I sat up with that plant and took hourly temperature readings. Like a nurse at the hospital with a temperature chart I stood by with the patient and made my records until the crisis was over.

Altogether, five flowers appeared on





*Philodendron bipinnatifidum.* A spectacular Brazilian cousin to our lowly native plant, Jack-in-the-pulpit. This immense plant is growing in a park in the center of the city of São Paulo, Brazil. M. B. Foster, by permission Jacques Cattell Press.

this plant during a period of four weeks. So I was able to check and re-check my findings and also to procure several photographs of the different stages of development.

At this point I might digress with the simple explanation of the construction of the flowers belonging to this Arum family by using the common calla "lily" for an example. The chaste white portion of the calla is called the spathe. This partially envelopes the yellow center which is called the spadix. This spadix may be made up of a few or thousands of male and female flowers as the case may be in the many different members of this interesting family which is far different from the true lily family.

In each of the five "flowers" of this philodendron the spathe would start to

open soon after daylight and would be fully open by six P.M. that first day, so that the spadix would show in its full size reaching the top of the spathe. At this time the female flowers could be seen only by cutting away the spathe as they are all situated at the base of the spadix. During the first day of flowering there is a slight, sweet camphorish odor. But this increases the following day and by noon of the second day nectar begins to exude from the inner walls of the spathe.

The temperature of the spadix begins to rise early in the morning of the second day and at 7:30 A.M. I placed one thermometer, suspended, near the plant to record the temperature of the air. It was 70 degrees Fahrenheit. Then a thermometer was inserted into the leaf petiole near the





*Leaf scars make an interesting pattern on the trunks of this giant philodendron.*





*The lovely Philodendron bipinnatifidum in our garden. Like a nurse I sat up for three days and nights taking hourly temperatures until the crisis was over!*



base; the temperature was the same as the air. A third thermometer was inserted into the upper section of the spadix containing the male flowers. This recorded  $90^{\circ}$  of heat. At 8:30 it rose to  $93^{\circ}$  although the air and plant recorded only  $73^{\circ}$ . From 10:30 A.M. until 12:30 the spadix registered  $94^{\circ}$  while the plant and air registered  $88^{\circ}$ . By 4:30 P.M. the plant and air stood at  $89^{\circ}$  and the spadix at 96 degrees. Two hours later at 6:30 in the evening the air and plant were  $80^{\circ}$  while the spadix was recorded at 97 degrees.

Up until this time the temperature of the plant had been rising correspondingly with the air; now the heat of the day was past, but the heat of the plant continued to increase. At this stage the spadix started to close. At 7:30 P.M. the air and plant were  $79^{\circ}$  while the spadix increased to  $98^{\circ}$ . By now the spathe was half closed. Soon the pollen started exuding from the male flowers and at 8:00 P.M. the flower temperature was at its maximum of  $102^{\circ}$ , with the temperature of air and plant at  $78^{\circ}$  making a difference of 24 degrees between the air and the flower. Here was a plant with a temperature four degrees higher than the normal human blood-heat.

At nine o'clock that night the flower temperature had gone down to  $98^{\circ}$  and at 10:00 P.M. it was standing at  $93^{\circ}$  with the air at 74 degrees. The spathe was now tightly closed.

During these last two hours the continuous emission of pollen from the male flowers was a phenomenon well worth witnessing, especially when the fact is considered that this one inflorescence contained some 20,000 male flowers and 400 female flowers. The moist pollen grains were forced out in a continuous transparent thread-like mass. There being five grains showing on a cross section of this silk-like

thread. The threads were over one inch long so the astounding quantity of pollen grains emitted from this one flower head would run into unbelievable billions in number.

When the spathe was nearly closed the pollen grains were still being forced out at a rate easily visible to the eye. Several times the pollen was brushed away and immediately could be observed the continuous action, for, as though from a miniature potato masher, the white streams of pollen grains emerged like so many squirming worms. Ants, beetles and other insects were busily exploring this flower head during the entire exposition and several of them were imprisoned when the final gap was closed. However, not one of these flower heads was pollinated.

At 12:30 noon on the fourth day a black viscid fluid oozed from the spathe and on the fifth day this strong smelling fluid was still sloughing off. Two days later the entire inflorescence loosened and fell to the ground.

After careful observations and dissections of the blooming parts I have concluded that the female flowers are receptive to pollination *before* the male flowers are mature and that the pollen would necessarily have to be carried from another plant during the night of the first opening of the spathe of the plant to be pollinated. As soon as these pollen grains were emitted from the male flowers, I endeavoured to pollinate the female flowers before the spathe was closed but neither my attempt nor that of the trapped insects was successful in pollinating the flowers.

I am now looking forward to the time when two plants might be in bloom simultaneously so that there will be an opportunity for cross pollination.

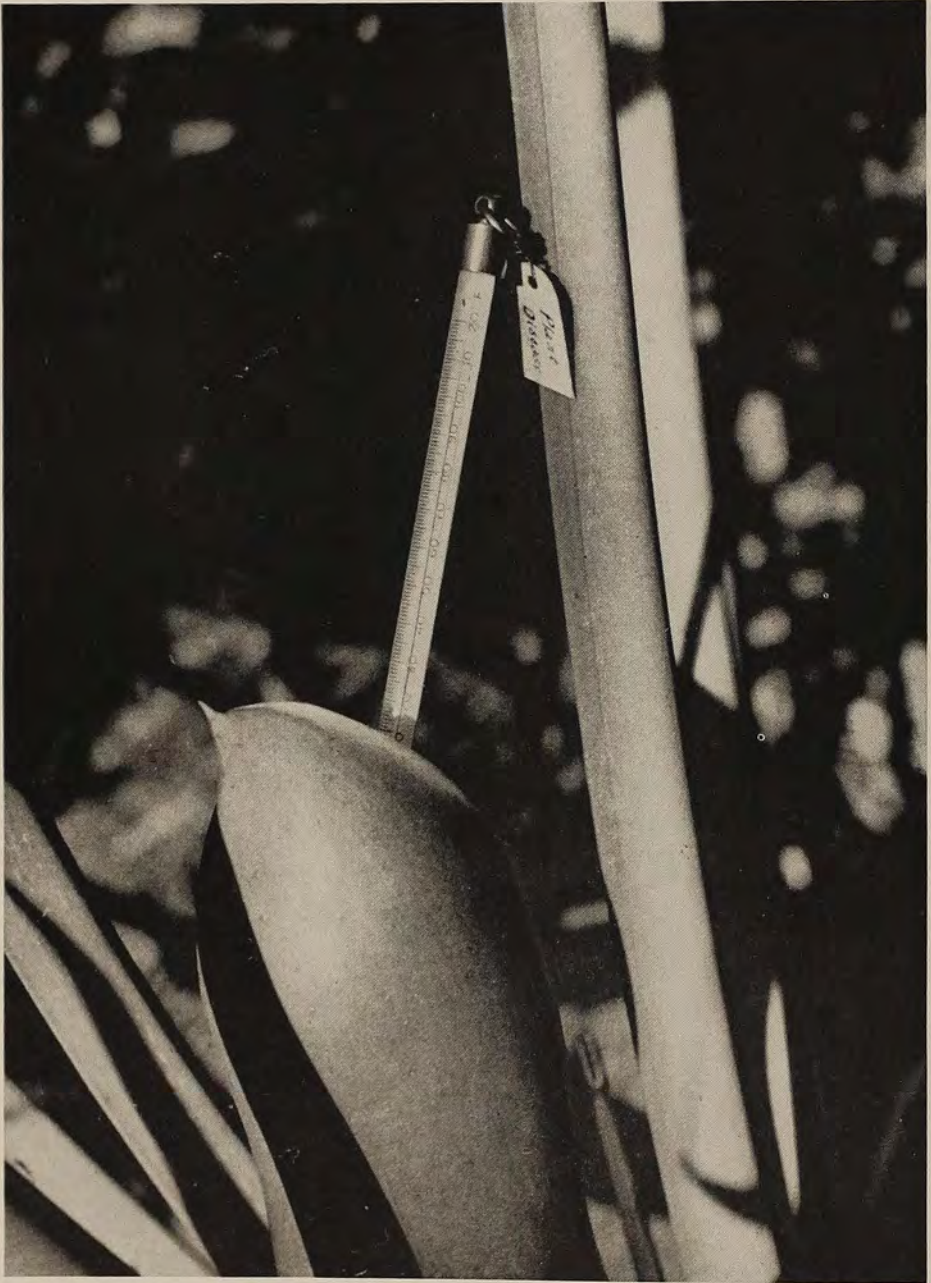
The temperature rise in flowers has not been an unknown phenomenon. A first report was made in 1778 by La-



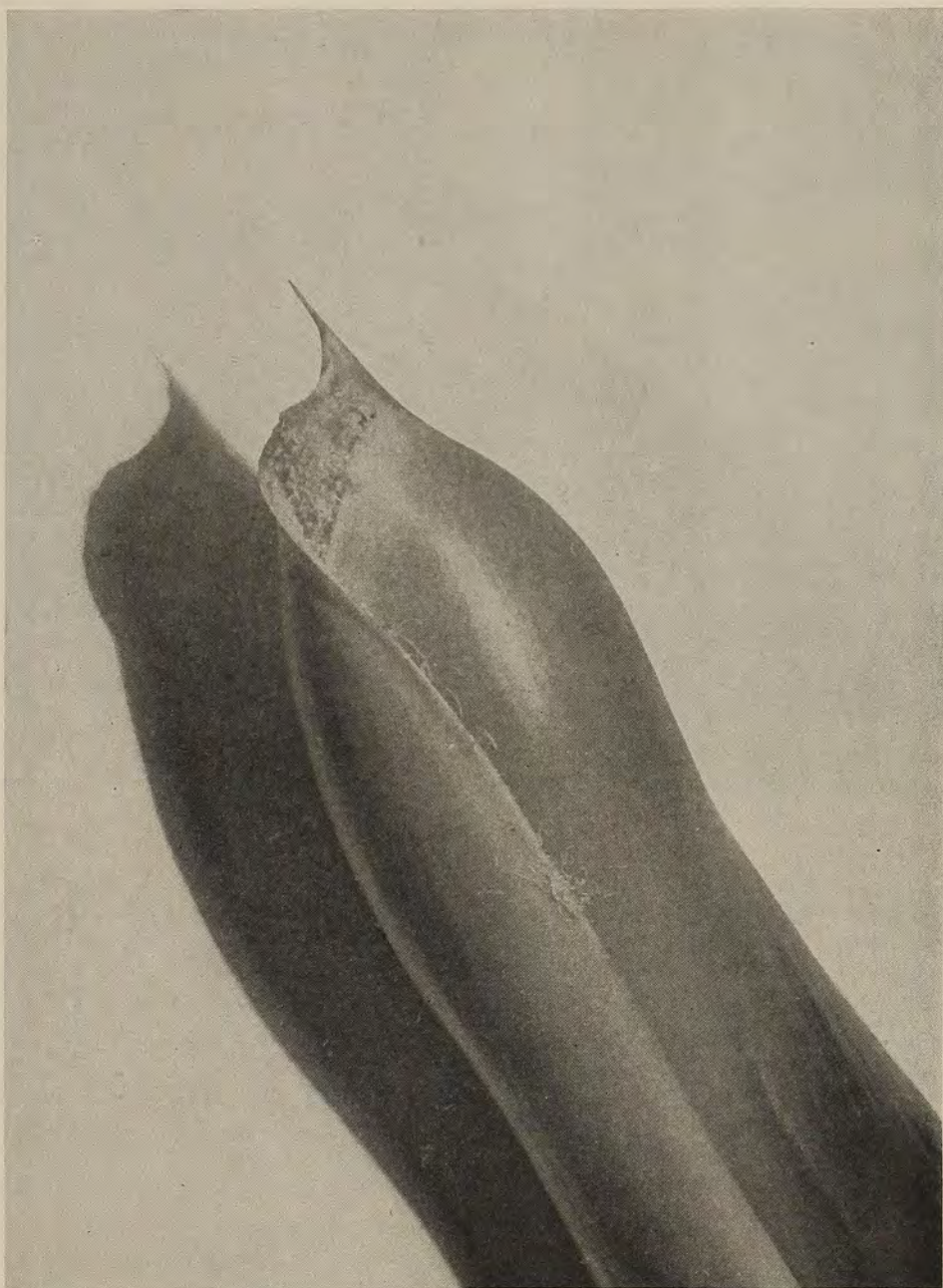


*It took three thermometers for my "patient." One for the flower, one for the plant and one for the surrounding atmosphere.*



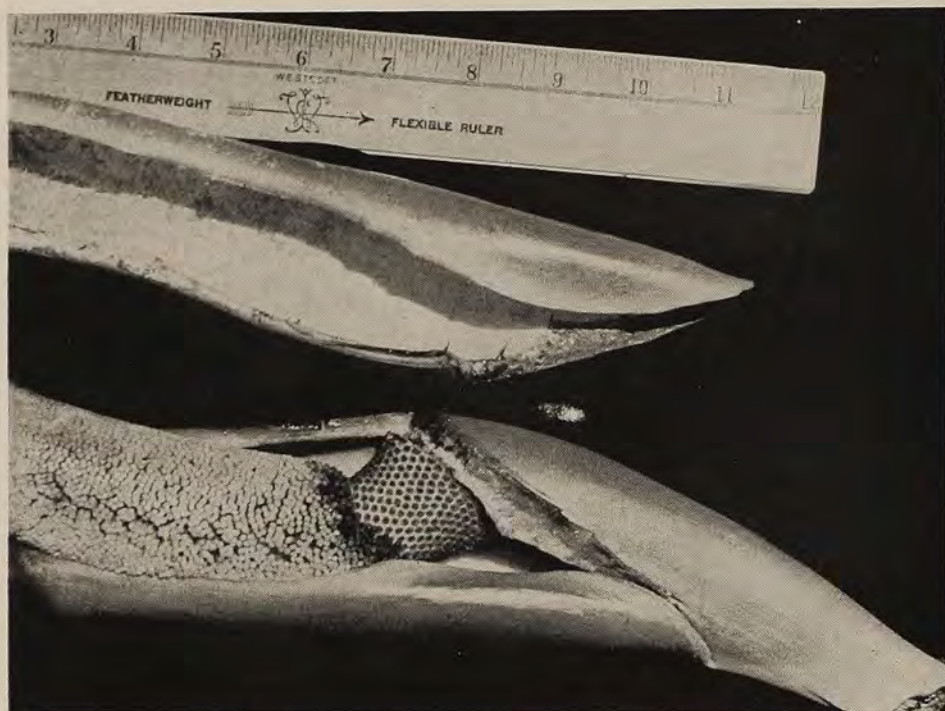


*At 8 P.M. Excited but not sick! The flower temperature was at its highest of 102° F. 24 degrees higher than the air around it, four degrees higher than normal human blood-heat!*



*At 9 P.M. when the flower temperature had gone down to 98° the spathe was nearly closed.*





After the spathe had closed it was cut open; this showed part of the pollen mass above, the thousands of male flowers in the upper section of the spathe and the 400 female flowers at the base of the male flowers.

marck following a discussion of *Arum italicum* in Flore Francaise III:538. Nine years later he again refers to this phenomenon in Encyclopedie Methodique Bot. II:9 which more or less confirms his earlier observation. A free translation gives his conclusion: "It is likely, nevertheless, that many plants may present phenomena of this nature, at least in the parts destined to their reproduction. . . ."

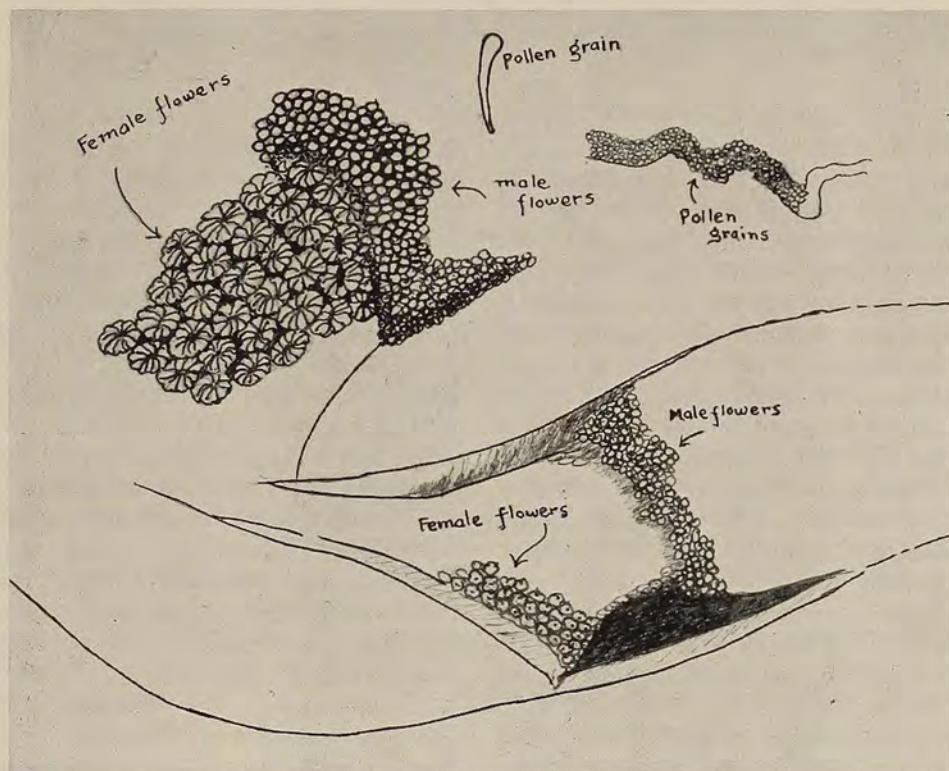
Another early reference to the heat of *Alocasia odora* was discussed by Herbert in 1804 in the Journal de Physique, de chimie, d'hist. nat. et des arts 59:280.

All during the 19th century a number of reports were made, a good bibliography on the subject being in the first volume of the *Araceae* in "Das

Pflanzenreich." In 1896 G. Kraus published comparative results on temperature rise in flower opening in palms, cycads and aroids but little has been published since 1900. In the large comprehensive work "Natural History of Plants" by Kerner von Marilaun, translated from the German by Oliver in 1895 comes a summary on observations of temperature rise page 501:

"Due to respiration and growth, the temperature of the flower is higher than that of atmosphere. Examples, Brazilian *Tornelia fragrans*: outer air temperature 25° C., flower temperature 38° C. In *Arum cordifolium* while the air was 25° C. the flower temperature was 35-39°; *Arum italicum* made history with a record outer air temperature 15°, with flower heat at 40° to





*Details of flower structure.*

44°. This later temperature was the highest recorded up to that date. These readings are Centigrade and on the Fahrenheit thermometer the highest temperatures would read 104° to 110°.

In the above experiment with *A. italicum* the thermometer was placed in the cavity of the spathe while in my experiment with *P. bipinnatifidum* I placed the thermometer directly into

the upper portion of the flower spadix. Whether the difference in positions would have made much difference in the temperature record I do not know. At any rate, when a plant's "blood heat" rises above 102 degrees it is interesting news, but when man's blood heat rises to those heights it's often sad news.

*Orlando, Florida.*



## Roses in the Garden Picture

ALFRED BATE

There are few things horticultural that seem sadder and more desolate to me than a rose garden of the present vintage; that is, nothing but rose bushes evenly spaced and trimly pruned to gaunt sticks with scattered tufts of flowering shoots, with smoothly raked soil between the plants and a patient gardener eternally spraying the foliage for some disease or bug with a spray that kills all rose scent which might be in evidence—most modern roses have none however. I have seen three such this past season and one in a Botanic Garden. Even in June they looked sad; heavy bloom on some and only faded flowers on others. The flowers themselves were often lovely but the bushes that bore them were merely sticks of wood. Now a rose bush is quite a shapely shrub if one would keep his pruner shears under control. The main stems gradually become stouter and taller and gradually pass into smaller branches that in turn carry smaller side shoots which end in flowers; and the whole forms a pleasant shrub of the size according to its type. Not so in a "real" rose garden. Here the stems are cut back in early spring till the base of the plant is nothing but a clump of stubs which emit strong shoots for the first display and then they too are slashed back for another display. And the poor things are fed and fed until one wonders how they can possibly digest it all. Perhaps larger blooms are obtained by this method but certainly not a really profuse flowering.

I distinctly recall several gardens of my boyhood and youth where roses were the main flowers grown and they were all treated in just the opposite manner. These were all in southern

Indiana where summers are hot and winter very severe. As grown in these gardens all the rules of the modern rosarian were completely ignored yet there were roses and plenty of them at all times and the bushes were attractive. In the first place the plants were on their own roots, raised from cuttings struck under Mason glass jars. One old lady would buy plants and when she decided she liked the rose would take cuttings in the autumn and then in the spring after she was certain her "slips" had rooted she would dig up the budded plant and consign it to the bonfire. At all times there was a miscellaneous medley of low growing plants jostling about between the rose bushes, "it keeps the roots cool and damp" she would say; there were pansies, verbena, pinks, lobelia, rose geranium and dwarf marigolds, if they got too close to her roses they were severely snubbed. It made a garden picture but oftentimes the colors were jarring; yet she did have wonderful roses. As to fertilizers, well rotted cow manure was spread on the dead annuals after the ground was frozen in late autumn and stirred into the soil in early spring; then, once a month liquid manure was given and after every washing was over the laundry water was poured over the beds unless it was a rainy spell. And as to trimming, dead looking wood was cut out in late winter and after growth had begun all stems were cut back to strong sprouts if they needed it; when flowers were cut or faded blossoms removed the stems were cut to leave three or four eyes for further growth. That was all the pruning her plants ever received. Winter protection was given only to such tender Teas as



"Perle des Jardins," "Mme. de Watteville," "Niphetos," and it was an eight inch layer of oak leaves held down by several sticks; the hardier Teas such as "Etoile de Lyon," "Marie van Houtte," "Francesca Kruger," etc., had merely the dead stems of the annuals left about them, for the cleaning up of the garden did not occur until winter was reasonably over. When "Gloire de Dijon" grew to above second story window height and bloomed continuously from June till heavy frost and "La France" stood five feet high and could spare a dozen flowers from two bushes without spoiling the effect and three foot tall "Mme. Hoste" looked like a giant bride's bouquet almost every day during the summer, one may reasonably conclude that the old lady's method was right. And there were other but smaller gardens like hers in the same city.

Where are those Teas today? Something went out of our gardens when we stopped growing them. They had charm, beauty and refinement as well as a delightful fragrance which few of our newer roses have. This past autumn, (1947) at a flower show two bowls of creamy pale roses were marked "Starlight"; they had all the delicate charm, delightful fragrance and refined beauty and the good green foliage of a Tea, the color was a smooth even pale yellow that was almost white. It was introduced several years ago as a greenhouse rose and only this past summer tried out of doors. From those shown I would judge, I was unable to ask the exhibitor, it had done well. How it will survive this frightful winter remains to be seen. Knowing nothing of its parentage, I can only say it looked like a Tea and express the hope it is a forerunner of a type of rose we badly need.

Of late years there has been an in-

terest shown in the old-fashion roses of a century or so ago and many of these old favorites are now available. Surely even the most ardent rosarian would not object to their use in the mixed border as they are almost all more vigorous growers than the Hybrid Teas which are so butchered and pampered in the Rose Garden. Most of them can even hold their own in the shrub borders; but some are more fitting among perennials where they would not only be accents in the plan by their varying the sky-line but also provide shade for such plants that need it and so increase the variety of material used in the border. Some of them are continuous bloomers while others will give a good display of autumnal bloom. Some are particularly adapted for use as pillars; we make too little use of these in our mixed borders. It is easy enough to set a stout pole or the straight trunk of a four inch sapling firmly in the ground and tie the rose canes to it. If all the portion which is buried in the soil is heavily charred it will prevent decay and the post will last almost indefinitely. It is said that the Venetian palaces are still standing because piles upon which they were built had been heavily charred before being sunk in the mud.

Two Pemberton Hybrids, which, however, are not old roses as they were introduced in 1918, I have used in this way. "Daybreak" is a semi-double soft yellow flower which fades to a deep cream, the buds are very deep yellow; it blooms in clusters; the foliage is rather small, deep rich green with a red tinge on the new leaves. It will easily grow to five foot pillars. "Pax" is a fully doubled pure white with lovely cream color buds, it is fragrant and the blossoms come singly or with a secondary flower; the foliage is large and a medium green. The growth is



more open than in "Daybreak" and it is somewhat taller. Both bloom from June until frost.

"Stanwell Perpetual" is a very old rose whose date of introduction I have been unable to find but certainly was prior to 1840. It is a semi-double light pink slowly turning to almost white and the flowers open widely to show their golden stamens; it flowers from June until frost and is very fragrant. The foliage is rather small and light green in color. While usually grown as a shrub it will nicely clothe a six foot pillar and be attractive at all times.

"Mme. Hardy" (1832) while better used as a shrub in the mixed border will make a good four foot pillar of large light green foliage. As such it should be allowed fewer canes which will tend to make it branch more freely. It has large fully double pure white flowers which it carries in clusters; they are very fragrant. Only in June is it a lovely mass of white.

"General Jacqueminot" (1853) with deep red fragrant flowers is fairly well known but "Prince Camille de Rohan" (1861) with dark crimson sweetly scented blossoms though equally desirable is not often seen. Yet both will make excellent pillars and bloom again in the autumn especially when planted in the mixed border where they will receive more feeding than is usually given to the shrub border. There is another Hybrid Perpetual, a glorious soft white with a creamy center, which I have always been told is "Gloire Lyonnaise" but have not seen either in gardens or catalogues for many years. It would make a large pillar for its growth is strong and will give scattered blossoms in the autumn, if we could but get hold of it again.

Some of the stronger growing moss roses such as "Salet," a rose pink, fragrant, well mossed flower and "Blanche

Moreau," a white, equally fragrant and well mossed can also be used as pillars as well as grown as bushes among the perennials. Both will flower again in the autumn.

I have never been fond of striped roses but make an exception of "Rosa Mundi" which dates back to Parkinson's time. It is a semi-double rather flat rose with white to pale pink ground color striped with red and dark pink and containing a wealth of golden stamens. Its only shortcoming is that it does not flower again in the autumn. It should not be confused with "York and Lancaster" which is inferior to it in every way. Used as a bush among perennials it is charming; its growth is too low to be treated as a pillar.

Coming to more recent roses "Dainty Bess" makes an excellent pillar and blooms continually. Its sprays of single flowers are always lovely, salmon-pink petals surrounding maroon stamens make a charming combination. And of course there is always "Innocence" with its large single flowers of purest white and deep red stamens.

Coming to lower growing roses for the front of the border, "Donald Prior" can not be excelled. A foot and a half tall, constantly blooming plant it carries clusters of rich fragrant dark red flowers that are almost single. "World's Fair" is a darker red and has more petals but is equally fragrant. Among the smaller flowered polyantha roses I would always give first place to "Margo Koster" because it is so double and of so lovely color; it bears large clusters, for its size—a foot tall bushy plant—of an almost indescribable orange flushed pink, round and as close petaled a ranunculus in form. The salmon and shell-pink "Cameo" comes nearest to it but while it is more popular I do not like it so well as "Margo Koster."  
*New Jersey.*



# Achimenes

## PRELIMINARY NOTES

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-1800s 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 forms, 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 mate-



rial, 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 25 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 store room. 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 upper most 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.

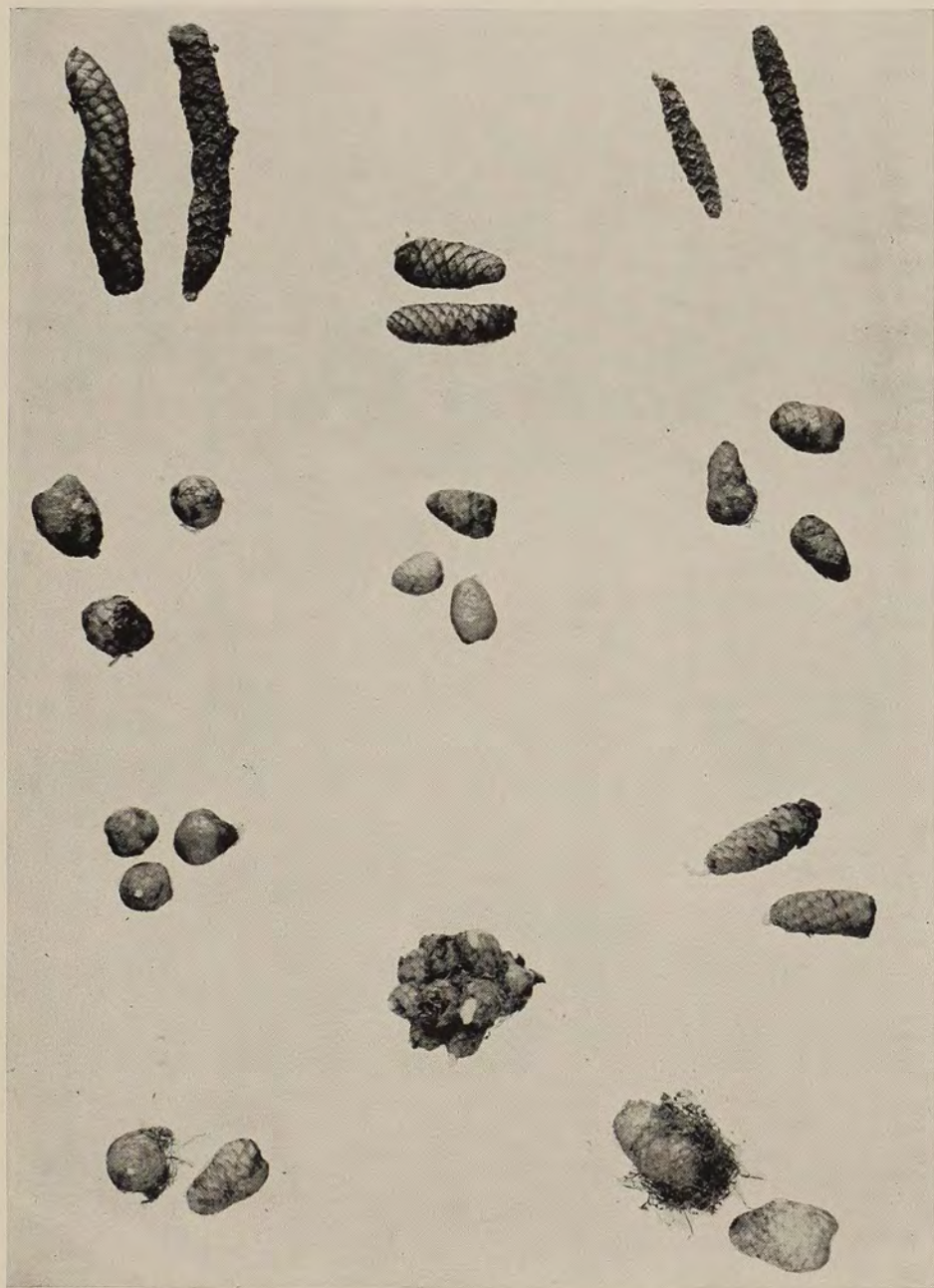
Mid-Victorian tradition suggests that the dormant roots be planted in any

convenient place and then when sprouted, be transplanted with equi-distant 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 mid-summer 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





Robert L. Taylor

*Achimenes* as purchased, commercial sources.

*Purple King*

*Mexicana*

*Longiflora major*

*Mexicana* (other source)

*Little Beauty*  
*Adele de la Hante*  
*Madame Georges*

*Crimson Glory* (other source)

*Crimson Glory*

*Purity*

*Longiflora*





Robert L. Taylor

*Achimenes longiflora*, grown in hanging position, but really better suited for upright growth on some supporting plant.





Robert L. Taylor

*Achimenes longiflora*





Robert L. Taylor

*Achimenes*, probably "Maxima" of current trade.





Robert L. Taylor

*Achimenes, Purity*





Robert L. Taylor

*Achimenes*, probably "*patens major*."





Robert L. Taylor

*Achimenes, Ambroise Verschaffelt*





Robert L. Taylor

*Achimenes, Mme Georges.*





Robert L. Taylor

*Achimenes, Purple King*





*Robert L. Taylor*

*Achimenes, Little Beauty*





*Robert L. Taylor*

*Achimenes, Crimson Glory*





Robert L. Taylor

*Achimenes, Scarlet Gem.*





Robert L. Taylor

*Achimenes, Storm Cloud.*

*This may not be an Achimenes at all.*



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 taxonomic entity or a garden form is not suggested here. One doubts it in spite of the acceptable Latin. When one come 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 suggest that of the petunia with its similar lax growth that will either droop over or elbow its way upward on any support that is nearby.

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 page 43 and show that leaves and even portions of leaves will root and produce roots, rhizomes and leafy shoot. 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 tips, the scaly shoot rather like a rhizome greatly elongated on its axis and the succulent scales replaced by thinner bract-like scales in the above-ground growth. (See pages 39 and 43.) 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





Robert L. Taylor

*Close up of pot to show the developing "runners" that show the reduced and now bract-like leaves, and in some cases the plantlet forming at the tip.*



Robert L. Taylor

*Achimenes*, leaf cuttings.





Robert L. Taylor

*Top: Old leaves formed roots, tubers and then shoots.*

*Center: Younger leaves produced first roots, then shoots and finally tubers, as well as "runners."*

*Bottom: Youngest leaves produced roots, shoots the beginnings of tubers.*



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.

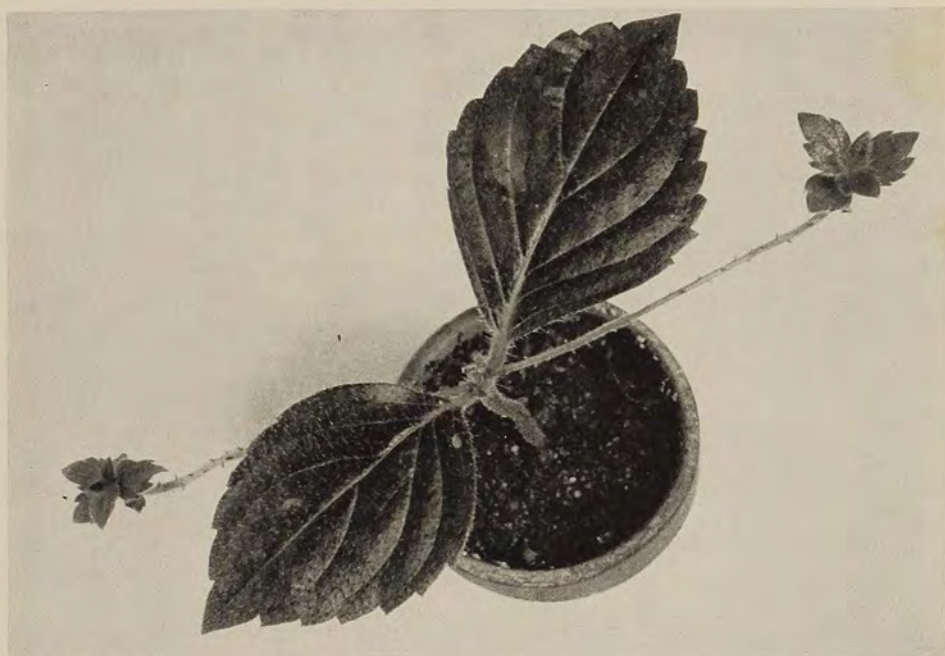
No effort has been made or will be made to determine how short a period of winter rest will suffice. Since many plants of Central America have come from "wet-season, dry-season" climates, one suspects that the dormant period

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.

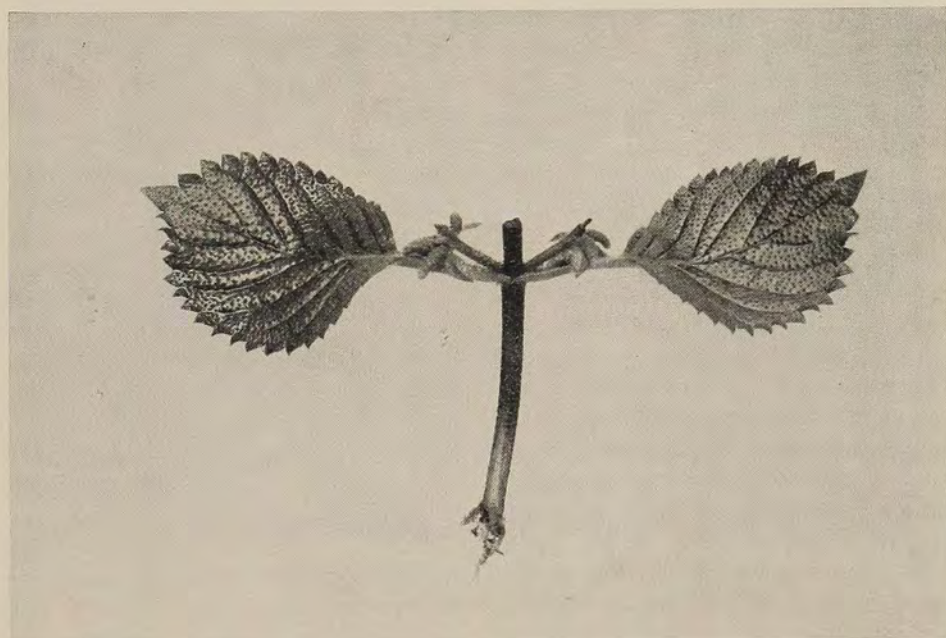
There are other details that one could wish would attract the plant breeder. For example, one could wish for the venation pattern of Ambroise Verschaffelt superimposed upon colored grounds, that there could be some way to enlarge the central colored zones as of 'patens major'. It would help also to study 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, produce 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





Robert L. Taylor

*Rooted cutting that developed laterals that produced small plants on the tips.*



Robert L. Taylor

*Stem cutting that developed clusters of catkin-like roots on stopped lateral branches.*

such as were cherished and preserved in that marvellous period in the 1800s 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 lists some 20 odd named varieties and Giridlian of Arcadia, California, offer 3 others.

## Rhododendron Notes

CLEMENT GRAY BOWERS, *Editor*

*Two Old Indian Azaleas* (See pages 45, 46)

As has already been intimated in these pages our knowledge as to the hardiness of some clonal varieties is by no means complete and the word complete is used deliberately rather than any other since the categorical generalizations commonly cited are so often in error that one hesitates to offer other statements equally categorical in their place.

Both of the varieties described here have been cold hardy in the Washington, D. C., area for ten years which does not mean that disaster might not overtake them, but it is a period long enough to have displayed all sorts of vagaries and to have lulled suspicions.

In the chronological, annotated check list published in the Netherlands in 1938, the variety "Iveryana" is credited to the English nurseryman Ivery, in 1849, one hundred years ago this year. It was offered in the same year on the continent but apparently was dropped from the trade by 1876 or a little later, a fact not difficult to understand as by that time the varieties in favor were selected more and more for their value in the forcing trade. The official description is: "Pure white, finely flaked and striped with rose;

large flower, good form, good habit; an outstanding variety for the time. In 1876, it was still offered in the catalogue of J. Nuytens-Verschaffelt, of Ledeborg."

No mention is made of the fact that it frequently produced branch sports on which the flowers were self-colored in rose, slightly duller as compared to many others.

If one looks at the illustration on page 45, he will note that the official description is still correct and if he is knowledgeable in azaleas he will note that the 5 stamens suggest that one of the parents could have been *Rhododendron indicum* Sweet and that the broader leaves suggest possibly *R. Simsii* as the other. If he knows the plant itself he will remember that the general aspect after the plant has become old and twiggy and has shed many of the larger leaves produced in Spring, is much more like that of the "macrantha" azaleas than the figure suggests.

For us in the North, the variety has the great value of blooming among the later sorts, this picture having been taken on May 13, 1946, mid-May being our second major bloom period, fine but not so varied as yet, as the great show of mid-April. It is entirely pos-





*Robert L. Taylor*

(See page 44)

*Indian azalea, Iveryana*





*Robert L. Taylor*

(See page 44)

*Indian azalea, Flag of Truce*



sible that the plant will never make the dimensions that it reaches in the South, but it does not have the appearance of a plant that is entirely out of its range.

Our other plant, "Flag of Truce" is credited to Rollinson in 1863 and is described as "a large flower, double white, a beautiful variety that has long been cultivated although it forms its flower buds with some difficulty." Here as a general rule there is no difficulty in the development of the double flowers unless there are light frosts that damage the partly developed bud. As can be seen from the illustration on page 46 the doubling has come from a partial alteration of the stamens, not all of which are transformed. The pistil appears to be normal.

Although descriptions are not given for all the varieties listed for the earlier years, at the time of the production of "Flag of Truce" there were far more single than double forms in the trade, even if one counts the semi-doubles.

The writer has not had enough experience in the production of doubles to warrant even a conjecture as to the possible parentages. Some double whites precede this in the check list as for example: alba flora plena

(1831), Toinette (1854), Narcissiflora (1855), ledifolia umbellata plena (1860) with mention of transformed stamens, Leviathan (1860), Louise Margottin (1860) sometimes semi-double. Of these, narcissiflora and ledifolia umbellata plena might both be forms of what we now call *R. mucronatum* G. Don (*Azalea ledifolia* \_\_\_\_). The flower shape, imbrication and character of the lobes would suggest that something with *R. indicum* rather than *R. Simsii* blood might have been the other parent. Since there were a fair number of white "indicum" varieties, one may at least risk the guess.

As is the case with many double flowers, those of "Flag of Truce" last well when cut.

The writer is definitely interested in it because the type of doubling is that that produced (probably) the "anemone" type of double flowers, namely a stamen transformation in which the new petals are smaller than the corolla lobes and form a rosette in the center of the normal corolla. This is a type illustrated in old books but not often seen now since breeders have apparently worked for "full" doubles.

B. Y. M.

## A Book or Two

*The Daffodil and Tulip Year Book—1948.* Published by The Royal Horticultural Society, London, England, 1948. 148 pages, illustrated. 8 shillings 6 pence plus postage.

This is the fourteenth volume published by the Society and like all its predecessors is of not only current interest but of historical value, now and more so in the future. The major portion of the work deals with narcissi, the shows in England coming first,

then the shows from the other special centers, Australia and New Zealand, very poor and inadequate reports from the United States and so on; then there are the descriptive pieces, telling of the new things not yet to be seen here, a sort of "saint's progress" going from one perfection to another; the inevitable historical records of registrations, awards, etc., and the outline of the new classification system that is to go into effect as of January 1, 1950. The bal-



ance of the book concerns tulips with one paper on growing tulips for market, a report from Vancouver Island, B.C., and the awards from the Wisley Trials of *Tulipa Kaufmanniana* forms and hybrids 1948.

The illustrations are many and splendid except those for the flower arrangements of Frank Galsworthy whose water colors are so well known and cherished. Less can be said for the arrangements most of which are rather awful as if the arranger had been carried away by his sense of color and had quite forgotten all other matters. Our "judges" would certainly have a field day had they seen them in actuality!

*Camellias Illustrated*. Morrie L. Sharp, Editor. Sponsored by The Oregon Camellia Society, 2222 S.W. Broadway Drive, Portland 1, Ore. 1948. 160 pages, illustrated both in color and black and white. \$5.00.

The first appeal doubtless will be as the Society intended, the pictures that fill the small handbook. There are forty-six in color, and with the exception of the plate for *Magnoliaeflora* all are of beheaded blooms, i.e., one flower with one or two leaves, taken usually in such position as one would find if he looked at the cut blooms on the exhibition table. *Magnoliaeflora* shows a crowded head of three and being one of the reviewer's favorites does not seem to him to be the best possible. Within the limits of the camellias known to the reviewer the colors seem rather better than most of the reproductions known. Certainly the portrayal not only in color but in black and white of so many named kinds will relieve all future writers catalogue or otherwise from any responsibility of describing form and will save the be-

ginning-buyer from choosing varieties that he will not enjoy.

There are illustrations from many parts of the country and information from many quarters. Much of the latter is a careful reporting of what has been put forward elsewhere, but it is nice and fresh and people who do not have to read everything will never know! And they certainly should be overjoyed to get so much for so small a price.

*American Camellia Yearbook—1948*.

Edited by R. J. Wilmot for the American Camellia Society (for members). Gainesville, Florida, 1948. 225 pages, illustrated.

The task for the editor of a yearbook must be rather more than a task, for there will always be some one to appear and ask for a treatment of something that has already been done and needs as yet no revisions. Mr. Wilmot and those who have worked with him are to be congratulated in the present issue. It is true that the camellia as it is grown here permits the felicitous situation of working not only in the present with an eye to the future, but also into times well past, unravelling as may be the historical details of introduction, nomenclature and personal records, almost the field of the novelist.

In the practical field there are articles that treat of commercial details of marketing flowers, the horror section that deals with insects and diseases and the preliminary papers on propagation routines and reports on certain routines of interest essentially to plant breeders.

There are reports of shows from many parts of the country and a rather detailed report on flower arrangements built over, about, with and for camellias. A most ingenious scheme was worked out for the competition.



The most interesting section, for all who live outside of the now acknowledged camellia country, is that called "Hardiness in Camellias." This is still not complete and should not be taken too literally. For those of us who are not in the "area," it should be mentioned that hardiness here seems more often applied to the capacity of the flower to endure the winter weather that overtakes the camellia in its flowering season even in the more favored spots. It has relatively less to do with hardiness of the plant itself. Since perfect weather for blooming is something of a gamble even at best, we on the fringes need not be too discouraged but it would seem that probably we shall have to do some testing for ourselves and that the basis of the test will be centered about the dates when the plants show the first impulse to grow as well as to flower, for there are varieties hardy as to plant here, Washington, D. C., that never make a flower.

*Michigan and the Cleveland Era.*

Edited by Earl D. Babst and Lewis G. Vander Velde. The University of Michigan Press, Ann Arbor, Mich., 1948. 372 pages, illustrated. \$2.50.

"This copy of *Michigan and The Cleveland Era* comes to you through the University of Michigan Press with the compliments of the Michigan Historical Collections, \* \* \*" In the present volume a group of alumni \* \* \* have collaborated to show how one institution, at one period in American history, provided from its graduates and faculty members a generous measure of leadership in a variety of important public functions. \* \* \*"

Of the group, J. Sterling Morton, Cleveland's Secretary of Agriculture is the man whose work comes closest to the reader-interest of our group. He is known to most of us as the "founder of Arbor Day," that annual festivity celebrated long after all self respecting trees should have been long planted and newly growing. The account of his years of service as Secretary are rather quickly passed over with congratulatory notice of his reduction of spending, reduction of staff, advancement of Civil Service, initiation of new lines of research including work on soils and roads, expansion of the Weather Bureau and so on. It sounds very dull, no matter how worthy it all may have been, for those of us who have lived through years of government service have seen and known both expansions and contractions, times when curtailment should have been embraced and was not and times when curtailment was the height of folly. The best part of the irritatingly brief sketch has nothing to do with agriculture, but touches lightly and too little on the irascible gentleman's many collisions with one and sundry! He seems to have been "quite a lad." One could wish that his explosions had been more detailed and not hidden in a varnish of sobriety of achievement. Nice lad, fell in love at first sight, was expelled from University on eve of graduation, went West when going was difficult, upheld personal opinions under any fire, suffered from mistakes but was capable of change, looked for argumentative situations, in short made a stir in his world; and now is commemorated by the planting of trees out of season.



# The Gardeners Pocketbook

The regular material for this section has been set aside this month in order to allow a fuller presentation in April and to give the editor the opportunity to remind readers that it is the section of the magazine in which every one can participate with the greatest freedom. It has always been the policy to use in this section small notes telling about specific plant materials and their behavior under a wide range of conditions.

If one has ever had the problem of searching for data on specific plants he will have discovered that it is not too difficult to find some of the basic facts about the plant itself, its appearance and its desirability. He will also have found that frequently it is impossible to learn anything that will suggest the limits of its usefulness. The writers live in different parts of the country and do not always tell precisely what they mean by hardiness for example. There are plants that are hardy to cold, that suffer under summer temperatures that may be too high or may merely be of too long duration. There are plants that will endure some low temperatures if they are of short duration and will not endure somewhat higher temperatures if they are long extended. In other words they will not tolerate a period of continuous chilling. These are the data that are most difficult to find.

Again it is hard to discover anything about the periods of growth. If growth always comes too early and that growth cannot endure intermittent frosts, the plant is useless. There are plants for example that always start too early in the Spring. There are others that remember their native conditions and start into leaf growth in the

Autumn with disastrous results in many areas. Within one family there may be species that are evergreen and others that are deciduous, this one factor alone determining whether or not they can be used in a given area. As an example it would appear that some species of *Zephyranthes* are quite deciduous and will tolerate cold ground conditions fairly well, but there are others that must keep some green leaves all the year through and so are useless on the northern limits of what would seem their range. There are some species of *Agapanthus* that seem to be deciduous, aside from the dwarf Mooreanus variant of the common species, but no one has reported on the limits of chilling that they will tolerate. Some species of *Alstroemeria* make an evergreen mass of leaves and non-flowering shoots that go through the winter well in the South, but may not tolerate a more northern range. There are no data easily found that suggest which other species are completely deciduous and rest in a dormant condition through a cold period.

In preparing the material for the piece on *achimenes* in this issue, it was not possible to tell from anything already printed, how completely dormant they may become in those regions where they can be left in the ground. There was some evidence from Mississippi that all tried there were completely dormant through the Winter and pushed into growth slowly in the Spring, but it is not in books, or in any books found.

These are the matters with which every member can help and the editor will be happy to hear from members on any gardening point that may be of interest to them.



SOCIETIES AFFILIATED WITH  
THE AMERICAN HORTICULTURAL SOCIETY

(Continued from page i)

State Agricultural Society,  
P. O. Box 2036,  
Sacramento 9, Calif.

Takoma Horticultural Club,  
A. C. Barret, Pres.,  
4719 Brandywine St., N. W.,  
Washington, D. C.

The San Francisco Garden Club,  
465 Post St.,  
San Francisco 6, Calif.

Trinity County Garden Club,  
Mrs. Rose N. Grigsby, Treas.,  
Weaverville, Calif.

The Trowel Club,  
Mrs. J. Douglas Rollow,  
4524 Cathedral St., N. W.,  
Washington, D. C.

Tulsa Garden Club,  
Mrs. Allen Henry, Pres.,  
1301 South Yale,  
Tulsa 4, Okla.

Victoria Horticultural Society,  
Mr. Jack G. Beastall, Sec'y.,  
255 Battleford Ave.,  
Victoria, B. C., Canada

Vivian Garden Club  
Vivian, La.

West Hills Horticulture Society,  
5420 S. W. Alfred St.,  
Portland 19, Oregon

Welcome Garden Club  
Mrs. J. A. Reid, Pres.,  
400 Speed Drive,  
Monroe, La.

Winnsboro Garden Club,  
Winnsboro, La.

Woodridge Garden Club,  
Mrs. Alma E. Marshall  
1326 Allison St., N. E.,  
Washington, D. C.

Worcester County Horticultural Society,  
30 Elm Street,  
Worcester, Mass.

## The American Horticultural Society

**I**NVITES to membership all persons who are interested in the development of a great national society that shall serve as an ever growing center for the dissemination of the common knowledge of the members. There is no requirement for membership other than this and no reward beyond a share in the development of the organization.

For its members the society publishes THE NATIONAL HORTICULTURAL MAGAZINE, at the present time a quarterly of increasing importance among the horticultural publications of the day and destined to fill an even larger role as the society grows. It is published during the months of January, April, July and October and is written by and for members. Under the present organization of the society with special committees appointed for the furthering of special plant projects the members will receive advance material on narcissus, tulips, lilies, rock garden plants, conifers, nuts, and rhododendrons. Membership in the society, therefore, brings one the advantages of membership in many societies. In addition to these special projects, the usual garden subjects are covered and particular attention is paid to new or little known plants that are not commonly described elsewhere.

The American Horticultural Society invites not only personal memberships but affiliations with horticultural societies and clubs. To such it offers some special inducements in memberships. Memberships are by the calendar year.

The Annual Meeting of the Society is held in Washington, D. C., and members are invited to attend the special lectures that are given at that time. These are announced to the membership at the time of balloting.

The annual dues are five dollars the year, payable in advance; life membership is one hundred dollars; inquiry as to affiliation should be addressed to the Secretary, 821 Washington Loan and Trust Building.