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Walter Beebe Wilder

The Herb Garden—Foxden

A Few Savories

HELEN M. FOX

Savories first came into my garden because two of them, *Satureia montana*, a perennial and *Satureia hortensis*, an annual, are famous herbs which have been used by the housewife to flavor the cooking for centuries. *Montana* also yields an oil used in perfumery. *Montana* and its varieties and other similar looking savories form a group of comparatively small compact and shrubby plants handsome in the garden with dark green glossy foliage and habit of forming mats or clumps which hang from interstices in rocks or over the edge of walls, and sometimes seed themselves in the space between stones of steps and walks. Some of them are pretty, too, as edgings for borders. Late in summer they bring color to the garden with their white through pale pink to deep violet flowers and always there is the delight of their aromatic foliage. A second group of savories is not as attractive being weedy looking but has a place in a semi-wild planting because of the fragrance.

The botanical name *Satureia* is pre-Linnean and is said to have been mentioned by Ovid and Pliny. The Roman plant is thought to have been *hortensis*. The little perennial subshrubs grow wild in parts of Europe where it is warm as along the Mediterranean and might well have been known in classical days. The larger weedier ones grow in Europe and North Africa, too, and some of them in the Andes, Mexico and Peru.

In Grasse, the center of the perfume industry, and situated in the foot hills of the Alps not far from the Mediterranean, during the flowering season bundles of savory are brought down from the Alps along with thymes to be

distilled for their oil, after first being dried in sheds. The oil obtained from *hortensis* is similar to that of *montana* and is said to resemble oil of origanum and is sometimes adulterated with the oils of origanum and of thyme. The principal ingredient of oil of savory is carvacrol. The oil is used principally in dentifrices and soaps but also has reputed medicinal virtues such as being tonic, a carminative and an emmenagogue. It is also said to be aphrodisiac. None of these virtues is endorsed by me!

In looking up savories, the searcher, as is generally the case when straying among members of the Labiatae, is confronted with a confusion of nomenclature even worse than among other plant families and feels like a wanderer in a maze of changing names. It would seem almost all of them have at one time or another been called, Calamintha, Clinopodium and sometimes Micromeria, Nepeta or Melissa. It is not decided in some cases whether Briquet or Bentham was right. The latest listing of European savories has been made by P. G. Hegi in his book *Illustrierte Flora von Mittel Europa* who says there are one hundred and thirty *satureias*. In selecting the nomenclature in this paper I used Hegi, L. H. Bailey in *Manual of Cultivated Plants and Hortus Second*, and also Coste, *Flore de France* for his descriptions and excellent line drawings, studied dried specimens in the herbarium at the New York Botanical Garden and had some correspondence with Dr. Carl Epling in gathering the information, besides using the notes made on plants grown in my own garden.

Botanists seem to agree that characteristics of *Satureia* which distinguish

it as a genus are as follows:

The leaves are oblong, lanceolate, linear, entire, smooth, subsessile, dotted with glands and almost always fragrant. The calyx is tubular, bell-shaped, naked or slightly hairy at the throat, with ten principal veins, five pointed teeth, equal or unequal and not two-lipped. The corolla tube in the flowers is erect and essentially straight. The corolla is bilabiate, the tube equal to or longer than the calyx, the upper lip erect, smooth, entire or slightly indented, much shorter than the lower lip. The lower lip has three rounded almost equal lobes. The stamens do not or barely project, and are curving, ascending and with anthers coherent and closely appressed in pairs under the lip of the corolla. The style has two branches which are unequal, awl-shaped; carpels are ovoid and smooth. The flowers rose, white, purple or lavender are whorled, in simple spikes or raceme-like panicles.

The woody group of savories with the exception of *montana* var. *pygmaea* are characterized by having the flowers appear to be scattered through the green foliage, because the whorls are set far apart along the branches whereas thymes which they closely resemble to the eye of the average gardener, in general have club-like spikes of bloom. The low shrubby savories have larger leaves than most thymes and differ decidedly in their scent which is more peppery and not as flowerlike.

Unusual in this family is *Satureia hortensis*, an annual, because it is not woody and is very airy looking. It is easily raised from seed sown out of doors early in spring and ready to harvest, and to infuse in soups, stews, salads, hamburgers, and with vegetables, especially beans, from July on. The flowering is generally in August.

Looking for it in the herbarium I found wild specimens had been collected in Michigan, in Lancaster and also in Buffalo and Ontario showing it has escaped in this country. It is at home in the low alps of Europe and southern France. With me it grows from 19-20 inches high and has pale green much branched stems sometimes marked purplish brown and having short rough tiny hairs. The leaves are small, up to an inch long and very narrow, and set fairly far apart along the stems. The inflorescences are placed on the upper parts of the stems and grow in a leafy flower spike. The flowers are tiny and white with rosy lavender tinting.

The other annual to be described is *Satureia acynos* which seeds itself so faithfully one can depend on its returning to the same place year after year. Eventually it comes up most becomingly through other plantings. *Acynos* is a fluffy spreading little plant growing to ten inches high and spreading to as wide as one foot across and dotted with lavender flowers. The stems have the upright architectural quality that distinguishes most of the labiate herbs. It blooms from mid-July into September. The leaves smell similarly to those of thyme.

When I began to grow herbs twenty years ago they could not be purchased in the United States and seeds had to be imported either from Europe or be procured through the kindness of Mr. B. Y. Morrison who was at the Division of Plant Exploration and Introduction and would order my requests along with seeds he wanted. Another source at the time was Henri Correvon who had a wonderful collection of herb seeds, including some plants such as beebalms which he got from American collectors. Through him many plants came under the head-



Walter Beebe Wilder

Satureia montana

ing of species such as *cuneifolia*, *Illyrica*, *pymaea* and *repanda* but nowadays they are classified as varieties under *Satureia montana*.

The type called winter savory, *Satureia montana* grows wild in Europe and North Africa. The plant, as also its varieties, are sub-shrubs, the type being one and a half to two feet high. It is much branched with leafy spreading branches, woody at the base, which spread out and turn up at the tips and have pale green side shoots. The tiny white labiate flowers are scattered over it like snowflakes. The leaves are slender, pointed at the tip, without leaf stalks and the sides bend inwards as if folded. The midrib is prominent and the upper surface glistens and is dotted with glands. The whole plant smells of resin and spice and is sharp in flavoring. In the axil of each leaf is a pair of tiny leaflets and from these rise flowers, forming whorls. The flower is one quarter of an inch across. Some of them have lavender markings on the center of the three divisions of the lower lip and then a few lines leading into the throat and a pale wash of it on the upper lip. There are forms with pale lavender, pink lavender and almost purple flowers. The height of bloom is mid-August. The plants are long-lived when grown in dry sunny situations. They are best increased from seed, but can also be increased from divisions and root cuttings.

When I first grew *cuneifolia*, the seed came to me from Bulgaria. The plant is lower than the type, the thin tiny leaves are covered with stiff hairs and there are many branches. It was, however, very like *montana*. A form labeled *cuneifolia* var. *canescens* came from Almeria in Spain and was a smaller plant in every way. *Pygmaea* has the leaves more crowded on the stems than in the type and the flowers

are larger, the upper lip marked with lavender. The effect is lavender to violet. They grow in spikes crowded together which stand out, moreover the inflorescence is crowded. The whole plant looks as if it had been pushed down for it is so compact. The leaves are darker and hairier and rise on either side of the flowers and form a tiny spoon-like hollow. They are fragrant. One authority has said this plant is also called *Illyrica*. When I grew *Illyrica* it was six inches high and had the leaves closely together.

In *repanda* the leaves are set so flatly on the stem they look star-like and my plants smelled of citronella. The flowers have a white throat and the rest is pink-lavender.

A handsome plant is *Satureia alpina*. The branches are recumbent and make a mat. They start from a center and spread out flatly, to about ten inches long. The leaves are small with short petioles and are oval-elliptic, denticulate along the upper part or most of the margins while the flowers are purple, axillary, without a common peduncle and usually stand above the leaves. The calyx is curved, humped at the base and contracted in the center, bristly with pointed teeth and ciliated corolla standing above the calyx. It is found on high mountains of the Swiss Alps, Pyrenees and North Africa, in the Balkans and Asia Minor and it is an exceedingly pretty plant. It almost demands a dry well-drained and sunny situation.

A dainty savory is *Satureia glabella* var. *angustifolia* native from western New York to Minnesota and south to Missouri and Texas, growing in rocky situations and in the South, in mountainous terrain. When the plant was planted, at first there were square, much branched stems four to nine inches high bearing the characteristic



Gottscho-Schleisner

Satureia hortensis



Gottscho-Schleisner

Satureia acynos



Gottscho-Schleisner

Satureia montana



Gottscho-Schleisner

Satureia pygmaea



Gottscho-Schleisner

Satureia alpina

labiate flowers and colored bluish violet. Later a mat grew as of green leaves, but actually composed of purple maroon stolons rooting as they advanced. The leaves on these stolons are differently shaped from those on the stems. They are round at the tip, oval with the base of the central vein depressed, $5/16$ " long and $3/16$ " across and are purple-maroon on the under side. The stem leaves are linear, $1/2$ " long, rounded at the tip, obovate with hairiness along the central veins, and punctuated with glands and having a glistening surface both on the upper and lower sides. The flowers are $1/2$ " long. The whole plant smells sweetly of pennyroyal. The type *Satureia glabella* is large-flowered and robust and was first found by André Michaux in 1903 on the banks of the Cumberland River near Nashville. John Torrey found the variety *angustifolia* at Niagara Falls in 1818. I have grown only the variety and found it not too lasting.

The savories of the second group are much taller, growing to twenty inches or higher, and have larger leaves and are not nearly as elegant as the foregoing, in fact are definitely on the weedy side.

Satureia calamintha has been called *Calamintha clinopodium* but at this moment calaminthas are off the botanical lists and the plant is classified as a *satureia*. It is a weedy, woolly plant from Europe and flowers from the end of July into August. The flowers of rosy-lavender with a leaning towards red, grow in whorls along the stem and have a faint fragrance when crushed. The leaves are broad, ovate, obtuse and dentate. The plant increases by creeping rootstocks and is recommended only for the collector. The variety *sylvatica* is said to contain a volatile oil which might be of commercial value.

Naturalized in the United States is *Satureia nepeta* which is native to Europe and Asia and came to me as *Clinopodium nepeta*. In my garden the plant was a somewhat weedy perennial, however, it had a charm due to the pale blue-violet flowers being scattered in loose whorls giving it an airy quality. The leaves are covered with minute hairiness, slightly notched on the margins and ovate, $1\frac{1}{2}$ " long and $3/4$ " across. The flowers are actually white flushed lavender, $1/2$ " long and $1/4$ " across. The tubular calyx is green marked faintly with brown-magenta, and furry. The plant grows from fifteen inches to two feet high and smells of resin and peppermint, combining in a scent reminiscent of oil of citronella.

True to its name is *Satureia grandiflora*, because of its large flowers but I have not grown it. The purple flowers $1\frac{1}{2}$ " long are borne in few short peduncled cymes. The plant is very leafy, with dentate leaves one to two inches long. In Hegi's book there is a photograph of the plant taken in the Tyrol which shows the flowers conspicuous and carried above the foliage and spreading out sideways but growing sparsely. Hegi says the plant is known as "large catnip" and is found in undergrowth of high beech woods in Southern Europe and that it likes shade. Coste says the plant has an agreeable odor and is native to the Swiss Alps, Pyrenees, Corsica, Algeria and Western Asia, and that it blooms in September and is used as a tea. At first glance it looks like *Nepeta* André Chaudron, except for the upright stems.

A weedy but softly woolly plant and not fragrant is *Satureia vulgaris*. Seemingly this plant has a wide distribution for it grows in Africa and from Ireland across to Persia, also in Newfoundland, and New Mexico and Ari-

zona. It came to me as a *teucrium* and I knew at once that was not the right name. The stems grow to twenty inches high and the plant spreads two feet across. The woolly leaves are $1\frac{1}{2}$ " long and $\frac{3}{4}$ " across, their margins are slightly toothed and their surfaces are humped between the veins. The flowers in axillary whorls are a bright lavender pink.

From China comes *Satureia chinensis*, a sprawly weedy scentless plant but effective in a semi-wild place with pink beebalms or phloxes because of its purplish magenta flowers and magenta calyces which persist after the corollas have fallen. The stems are ascending, hairy, rough to the touch and the leaves ovate, acute, and toothed.

The flowers form fairly long terminal spikes 3-7 inches and grow in axillary whorls.

A large group of closely allied plants has been discovered in the Andes of South America and the mountains of Mexico and some of them, notably *S. macrostemma*, if that should prove its name, appear very handsome even when laid out in a dried state on a herbarium sheet. The flowers of *macrostemma* which are fairly large still kept their red and salmon tints. However, it has not yet been decided whether this plant is a savory. It is thought, after all, it may have to be a calaminta. So a full description of it along with others of the group will have to wait for a future time.

Mt. Kisco, N. Y.

Cochlospermum*

EDWIN C. MENNINGER

Showiest of Spring-flowering shrubs or trees in South Florida gardens are the *Cochlospermum*, whose brilliant yellow 4-inch blossoms, not unlike Dainty Bess roses, come in many-flowered clusters that continue to open over a period of several months—usually from January 10 to April 15.

The common name—if there is one—is a literal translation of the scientific label for the genus, SHELLSEED,¹ which in turn arises from the fact that the seed, about $\frac{1}{4}$ inch across, resembles a tiny cockle shell. The ineptness of this name when used to refer to a beautiful golden blossom, is perhaps responsible for the persistence of the royal-sounding old generic name MAXIMILIANEA. This was abandoned by botanists because of its confusing similarity to a genus of palms (*Maximiliana*). But if a rose by any

other name would smell as sweet, *Cochlospermum* by the same token would continue to be the loveliest of garden ornaments. The more-appealing Indian common name for a related species, YELLOW SILK-COTTON, derives from the fact that, like its distant kin, the RED SILK-COTTON (*Bombax malabaricum*), the *Cochlospermum* has its seeds imbedded in a mass of silky fibers resembling kapok.

The species most frequently seen in South Florida is the Mexican or Central American *C. vitifolium* (grape-leaved), a tree to 35 feet which begins flowering at 2 feet.² The plant is always stiff, rather sparsely branched, and the stout branchlets usually carry the 5-7 lobed leaves only toward their tips. These leaves, 6-8 inches wide, bear a striking resemblance to those of the northern sycamore maple (*Acer pseudoplatanus*).

*From the Greek: *kochlos*—a shell, snail; *sperma*—seed.



Coutant

Cochlospermum vitifolium (single-flowered form)
 Blossoms 4 inches across, a gorgeous, brilliant yellow

Cochlospermum is leafless ordinarily from January to May, though the first blossoms have appeared before the foliage is gone. Standley³ calls it "one of the most showy of Mexican plants. . . .

Usually quite leafless when they flower, they are one great mass of showy-yellow blossoms." The densely tomentose, occasional seed pods, the size and shape of a hen egg, form in May and are be-



Cochlospermum vitifolium (double-flowered form)
Blossoms 5 inches across, in clusters up to 30. Round buds get 1½" in diameter before opening. Color bright buttercup yellow

ginning to burst open as the new leaves come out in June.

Two additional *Cochlospermum* are

just beginning to make themselves known in Florida. Most arresting of these is the double-flowered form of

THE KAMPONG 4013 DOUGLAS ROAD COCONUT GROVE, FLORIDA

Feb. 27 '50

Dear Menninger

Why dont you go into the hybridization of Cochlospermum vitifolium — get all the species there are and jumble them up. I saw a new form on the road to "Rancho Grande" when we went up to that superb spot with the dear old man Henri Pittier in Venezuela last year.

I'm returning the superb photograph. As ever yours

David Fairchild

C. vitifolium. Apparently this developed in Puerto Rico where it is commoner than the single, but because it sets no seed and can be propagated only by cuttings, its distribution thus far has been very limited, and it is not referred to in the horticultural literature of any other locality.⁴ It does occur rarely in

Cuba where the colloquial name "Fool sticks" refers to the grotesque appearance of the blooming tree with stiff branches sticking every direction with clusters of posies on the tips. The blossoms of the double-flowered form are larger than the single, often 5 inches or more across, and look very much

like a spectacular, butter-yellow double peony.

The other *Cochlospermum* gaining favor in Florida is the Indian species, *C. gossypium*, which has flowers almost exactly like *C. vitifolium*, except that there are more of them on the plants. In both species the petals (RHS color chart) are Buttercup Yellow 5/1, the anthers Orange Buff 5o7, the hundred or more stamens Apricot 6o9. The perceptible distinctions between the trees are:

	<i>C. vitifolium</i>	<i>C. gossypium</i>
Bark	Red brown	Ash gray
Leaves	Wither brown	Wither brilliant orange
Stamens	—	Trace of Scarlet 19 at base
Sepals	Yellow, like flower. Standard and 2 lower sepals measure $\frac{3}{4} \times 1\frac{1}{4}$ ". 2 side sepals $\frac{3}{8} \times \frac{3}{4}$ "	Reddish $\frac{3}{4} \times 5/16$ " $\frac{3}{4} \times \frac{1}{2}$ "
Peduncle	Yellow	Magenta 27
Seed pod	Hen egg	Goose egg
Seed	$\frac{1}{4}$ " across	$3/16$ " across

Several authorities^{5,6} report that the sepals of both species shed when the flower buds open but this characteristic has not been observed on trees in Florida. In India *C. gossypium* is characteristic of dry hilly country, occupying the hottest and stoniest slopes.⁷ In Florida both species grow readily in sandy or rocky soil without attention after once established. No pests have appeared.

Cochlospermum are strictly tropical in origin and have no close relatives in the Temperate Zone. They are a monotypic genus of the natural order *Cochlospermaceae*, lying between *Bixaceae*, and *Flacourtiaceae*, in both of which they have included by various botanists in times past. There are apparently⁸ 12 species of *Cochlospermum*, 5 in Latin America, 4 in Australasia,

1 in India, 2 in Africa. All are characterized by bright yellow flowers except the Queensland *C. heteronemum* whose bright yellow blossoms are so streaked with purple they are sometimes called "Tiger Flower."⁹ Brazil's *C. orinocense*, blooming in October, is "remarkable for its ornamental qualities . . . and beautiful golden florescence."¹⁰ Peru's *C. williamsi* is reported "a magnificent tree."¹¹ *C. baliicum* from the East Indies, has "large, handsome bright yellow flowers" but "the leaves are subject to insect attacks and have a dilapidated appearance."¹² Hawaii's *C. hibiscoides* is probably identical with *C. vitifolium*¹³ although the two were separated by Rock. Hawaiians refer to the plants indiscriminately as "Buttercup Tree."¹⁴ The Australian species *C. gillivraei* and *C. gregori* have recently been introduced into Florida but are still in the experimental stage.

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Stuart, Florida

Note on *Cornus Nuttallii*

DREW SIERRARD

The most beautiful flowering tree of the Pacific Northwest is *Cornus Nuttallii*, the western dogwood. In April and May, its showy bloom brightens roadsides and woods in western Oregon and Washington, where it mingles with Douglas fir, broadleaf and vine maples, Oregon alder and willow.

It is most effective when seen against the dark background of fir, and this is where it loves to grow; in partial sunshine but protected from drying out by the shade of firs and the woodland growth. It seems to resent drying out when this protective tangle of shrubs is cleared away and it is left to stand alone, as is so often the case where a new garden is made and most of the wild growth is removed. The dogwood, pride of the owner's heart, sickens and dies. Not always, of course, but often.

Another factor that may work against it is that in its native habitat, the two summer months, July-August are practically rainless, but in the new environment thrust upon it, the lawn and of course the dogwood are drenched by the sprinkler all summer long. The worst thing that happens to it is to have the drainage of the new garden or the septic tank run down around its roots.

The western dogwood is deservedly admired in its own region, yet people who buy a dogwood for garden planting get *C. florida*, the easterner, more often than the local tree. One reason is that nurserymen stock *florida*, know how to handle it and are naturally concerned with selling their stock. Many of them are suspicious of *Nuttallii*; they say it is "touchy."

Certainly it is not an easy tree to transplant from the wild, except when

quite small. Seedling trees up to three feet can be successfully transplanted by an amateur gardener of ordinary skill. Some years ago, when the Oregon exhibit was being planned for the San Francisco Exposition, a considerable number of dogwood trees were needed. Oscar Freitag, a county agricultural agent, was asked to take up the wild trees. Fortunately he had two years' notice; enlisting a band of Boy Scouts, he selected the trees, all old enough to bloom, and the first year the roots were pruned and boxed on two sides of the tree, the second year the rest of the way around. When the trees were lifted, they had good balls of fibrous roots somewhat like those of nursery espalier trees. They were transplanted successfully and bloomed at the exposition.

Recently R. M. Bodley, a nurseryman of Portland, who has experimented a good deal with transplanting this tree from the wild, filled an order for 75 trees. They were 16 feet or more in height, and were taken up on his own land, in soil that was fairly moist; not boggy but not drying out hard on the surface. He says that the dogwood in such a situation makes more surface roots, and is not deeply taprooting. All 75 lived and grew. He put in an extra, but it was not a vigorous looking tree, and it died. A good record for an admittedly "touchy" tree.

Western dogwood is a larger tree than *florida*, with larger leaves, flowers and seed clusters. It is commonly seen 20 to 30 feet tall, and old specimens may be 50 feet or taller. A dogwood which is said to be over a hundred years old and the largest one known, is growing in the garden of Henry



Fred Huntress

*Famous old flowering tree of the Pacific Dogwood,
believed to be over 100 years old*

Niedermeyer, in Milwaukie, Oregon. It is about 60 feet tall and has a spread of 50 feet. Seeing it in bloom is an unforgettable experience.

Western dogwood often blooms again in August-September. Some trees do it more often than others, but whether this tendency is inherent in the individual tree, or due to special environmental factors I cannot say. For the last 12 years I have observed a certain tree in Portland, growing at the edge of the sidewalk on a steep hillside. It has bloomed twice every year. The second crop of flowers is well distributed over the tree, but the clusters are smaller than in spring and the bracts twisted and irregular. The bracts turn red as they age, and are almost as red

as the autumn leaves, which are a rich crimson.

Flowerbuds form in late summer for the next spring's bloom. As they swell in spring before opening, buds and bracts are a beautiful green, prized by the flower arrangers. When the flowers are open the bracts are creamy white. I have never heard of any pink-flowered tree of this species.

It is not hard to grow this dogwood from seed. Northwest nurseries that do handle it get their stock in this way. Though a good deal of difference is noticeable among wild trees in the matter of abundance and size of flowers, so far as I know there has been no attempt at selection and propagating of especially fine forms.

Oswego, Ore.

The Pacific Dogwood (*Cornus Nuttallii*)

B. O. MULLIGAN

One of the principal ornaments of the Arboretum of the University of Washington in Seattle are the numerous beautiful trees of this west coast Dogwood, growing freely and rapidly throughout the higher parts of the Arboretum to a height of generally thirty or forty feet, and flowering profusely each spring at the end of April and in early May. Some individual trees frequently bloom in late summer or early autumn—from the end of August up to late September—and while these may also flower sometimes in the spring they appear to naturally prefer the later season. One tree in particular, at the head of Rhododendron Glen, is notable for this habit as well as the size and substance of its blooms.

Seedlings appear among the other plants in many and divers places, no doubt due to the birds which eat the

ripening fruits; they begin to flower when nine or ten feet in height, and vary greatly in quality of bloom, from narrow and star-like with separated bracts, to broad, well-shaped, overlapping forms. The best of them we are now propagating vegetatively by grafting on seedlings in early spring under glass.

This fine flowering tree, which is as excellent for street planting in residential areas as for gardens in a climate where it is happy, has another season of beauty in the fall, when the ripening leaves change gradually from green to peach, orange, and almost scarlet hues; in a fine warm period such as we experienced in October 1949 this change and season of color may extend over a month or more, though two to three weeks is more usual.

The Pacific Dogwood grows wild



E. F. Marten

*Close view of flowers of a superior form of native Dogwood in the University of Washington Arboretum, Seattle, Wash. Flowers about 5 inches in diameter.
May 9, 1950*



E. F. Marten

Tree of cornus Nuttallii in Arboretum at Seattle; 45-50 feet in height, trunk 4'6" in circumference at 3' from ground. May 5, 1950

from southwestern British Columbia, including Vancouver Island, down the west side of the Cascade mountains of Washington and Oregon, in the Coast

ranges of California and on the western slope of the Sierra Nevada, as far south as Mt. San Jacinto. It is also known in northern Idaho, an interesting exten-



E. F. Marten

Nearer view of lower portion of same tree, May 5, 1950

sion of the range eastward likely to produce hardier plants than those from the Pacific slope. Like many other worthwhile plants of this region it was

first discovered by David Douglas, in the lower Columbia River valley, about a century and a quarter ago.
Seattle, Wash.

The Bell-Flowered *Amorphophallus*

H. F. LOOMIS

Among the curiosities of the plant world few are more striking than are several members of the tropical aroid genus *Amorphophallus*. An outstanding peculiarity is the single large flower rising above ground from the great tuber or corm usually before the solitary leaf appears. The flower bears some resemblance to a calla lily but is many times its size, of unusual color and with an overpowering fetid odor that attracts carrion insects thought to be the agents of pollination. The most remarkable species is Sumatran *Amorphophallus titanum*, with a flower surpassing in size that of any other known plant since it may reach a height of eight feet and a breadth of five or six feet. At least one specimen of this plant has been grown to flowering in a conservatory in this country but, so far as is known, it has never been tried successfully out of doors here as has an interesting related species, *Amorphophallus campanulatus*, a native of India and Ceylon.

In its home and some of the East Indian islands, *Amorphophallus campanulatus* has commercial importance as a food crop; two of its English names, "Elephant's Foot" and "Elephant Yam," being derived from the depressed rotund tuber or corm which may attain a weight of fifty pounds. Propagation usually is by sprouting the small knob-like projections removed from the main tuber, but also is possible from "eyes" in the rind of the tuber or from the seeds. Best growth naturally demands a fertile soil from which a crop of tubers may be produced in a little less than a year in the tropics. They are used like potatoes, as additives to stews and curries and as pre-

serves, and some medicinal value has been attached to preparations of the tubers and also of the seeds. A dried meal also may be made from the tubers and the young unopened leaf shoots find some favor as greens.

Late in 1939, seeds of this species were sent to the U. S. Plant Introduction Garden, Coconut Grove, Fla., from Luzon, Philippine Islands, by Dr. David Fairchild while on the Fairchild-Archbold Expedition to the East Indies. Seedlings from these were distributed by this Garden to experimenters under P. I. No. 134981 in the autumn of 1940 and a year later six of the plants that had been retained were set out here in a pocket of sandy loam, shaded by avocado trees. The plants grew well without special protection and five of them have survived frosts, droughts and hurricanes, the bane of tropical plant life in this region. One or more of these plants have flowered for several years past, and many visitors have viewed the strange sight of the great flowers coming directly from the earth with no apparent connection with any plant.

The first sign of activity of the plant in the late Spring is the thrusting of the flower bud above ground, usually well before the leaf-spike appears. The bud grows rapidly and in a few days the flower opens, giving off its offensive odor of decomposition for 24-36 hours after which this vanishes almost entirely, the flower lasting for several days.

The open flower suggests an inverted bell in shape, accounting for the specific name, *campanulatus*, and is well over a foot in height and nearly a foot and a half across the broadest part. The corolla-like spathe completes more



H. F. Loomis

Amorphophallus campanulatus: Two plants; One with a two-day-old flower, the other with week-old flower and leaf-spike still in the sheath

than a circle, overlapping itself on the lower side of the flower, and its outer margin is greatly waved. The inner portion is light ivory yellow, blending outwardly to a rich maroon on both upper and lower surfaces. The lower exterior of the spathe, seen in the unopened bud more readily than in the expanded flower, is light greenish, speckled with small dark spots and larger greenish-white ones. From the center of the flower rises the column, or spadix, at the base of which is a broad band bearing the many yellow, 2- or 3-lobed stigmas; above this is another broad area, covered with densely arranged, lighter yellow stamens, while the upper half of the spadix is developed into an enlarged conical cap, irregularly, coarsely wrinkled, and of a deep maroon color with a satin sheen. The function of this striking spongy cap is not definitely known. When fruits develop, they are in the form of

ellipsoid, orange-red berries usually containing two seeds. None of the five plants growing here has been seen to fruit although at least one of them has done so as small seedlings were found growing near the base of one of the plants in the summer of 1950.

The leaf comes above ground as a slenderly conic spike wrapped in a coarsely spotted pinkish-grey sheath a foot in height. The tightly folded leaf is pushed up through the sheath and gradually opens from a heavy, tuberculate grey-green spotted petiole that may grow to be over six feet tall. From the top of the petiole the three principal branches or ribs of the leaf are produced to be divided and redivided in forming the supporting structure of the leaf. These various branches bear the innumerable acuminate-oval leaflets; the complete leaf being of rounded-hexagonal shape and possibly eight feet in diameter.



Amorphophallus campanulatus: Twenty-four hours after the bud is well above ground it opens and measures 16 inches in height and 17 inches across

In the Autumn the leaf dies and the tuber remains dormant through the critical Winter and early Spring periods. Nothing has been found in the

literature as to the age single tubers may attain, but experience here shows that flowers and leaves are produced from the same tubers for many years.

Rhododendron Notes

CLEMENT G. BOWERS, *Editor*

Misconceptions Concerning Cunningham's White Rhododendron

From time to time I have had inquiries concerning the parentage of a rhododendron widely known as Cunningham's White and, in general, certain of its supposed progeny which have been popularly regarded as descendants of *Rhododendron caucasicum*. To get the answer, I have gone to the original sources for some book-research which, I hope, will clear up a misconception of long standing.

These plants are important in the improvement of our Eastern Rhododendrons for several reasons: (1) they bloom two or three weeks ahead of the Catawba hybrids, (2) some of them are remarkably easy to root from cuttings, (3) several are good whites, without admixture of objectionable purple casts, and (4) they are partially hardy.

Apparently through confusion of names or records, these qualities have been attributed to *R. caucasicum* by many authors, and have been dutifully copied by others, including the writer, because they bore the earmarks of authenticity. In fact, it seems to be a common belief both here and abroad that this species, which few persons in the East have seen, deserves an "A" rating for hardiness. But if plants subsequently tested in America and supposed to be authentic *R. caucasicum* are representative of that species as a whole, then such belief is fiction, for the plants which I have heard about, including most recently some statements from Mr. Gable, would show that they are mediocre, unhardy and far from the rating assigned.

The real Caucasian Rhododendron

(*R. caucasicum*) appears to grow in the Russian Caucasus at altitudes of from 6,000 to 9,000 feet. Other details of its range and variation are not presently at hand, but it might have a considerable range and variation in hardiness. Its geographical neighbors might be *R. Smirnowii* and *R. Ungernii*, with possibly *R. ponticum*. Its behavior in America is a far cry from what has been said about its hardiness in the books, Rehder having assigned it to Zone V.

A form more often seen is a light sulphur-yellow clone called Cunningham's Sulphur, which is reputed to be the form named by Sir Joseph Hooker as *R. caucasicum* var. *stramineum*, and regarded by some as a hybrid with *R. chrysanthum*. This is a nice little thing of uncertain hardiness, dwarfish habit and yellowish flowers. It will grow on the West Coast and in protected spots elsewhere. It may have possibilities.

The name of a hybrid called Cunninghamii (Moore, 1851) appears also in the literature and is described in Bailey's Cyclopaedia as having white flowers with purple spots and as the result of a cross between *R. maximum* var. *album* and *R. arboreum* var. *cinnamomeum*. The article adds: "It is not to be confounded with Cunningham's White."

Rehder's Manual gives the parentage of Cunningham's White as *R. caucasicum* × *R. ponticum album*, which seems to follow the popular belief in this country and abroad that it is a hybrid of *R. caucasicum*. Yet the British Rhododendron Stud Book, a carefully prepared work, lists the parentage of Cunningham's White as *R. maximum* × *R. cinnamomeum*. This is the same

parentage as described above for Cunninghamii, which is not included in the Stud Book. This poses a problem. Is it possible that the cross *R. maximum* × *R. cinnamomeum* has been called collectively Cunninghamii and that Cunningham's White is merely a clone of the same derivation? If not, what is the true ancestry of Cunningham's White?

Now, Cunningham's White is an early blooming, good-sized plant with white flowers, able to survive winters outdoors in Philadelphia and in protected sites at Rochester, but not to be trusted in too much sub-zero weather. Its leaves are brownish on the underside. It blooms about May 1st in Philadelphia and about May 10th at Rochester. It develops roots so readily from cuttings that plants thus propagated are used extensively as the grafting stock for rhododendron hybrids in Germany. It appears to have been the parent of several good early-flowering clones, among which Boule de Neige is one of the best known. Two or three good seedlings of Cunningham's White, raised by the late John Dunbar, are now growing in Highland Park Arboretum, Rochester. These plants and others constitute an early-flowering group, closely allied to the Catawba rhododendrons. Several of them are characterized by having the brownish under surface of their leaves. They have long been popularly spoken of as Caucasian Hybrids.

English breeders have raised a number of authentically recorded crosses of *R. caucasicum*, several of them, at least, being obviously with Cunningham's Sulphur.

If the early, white, semi-hardy plants which we regard as Caucasian hybrids are, instead, mere progeny of Cunningham's White, with no "blood" of *R. caucasicum* in them whatever, we

should stop calling them Caucasian and cease our efforts to get a hardy form of *R. caucasicum* for use in breeding programs. If Cunningham's White is in reality a Maximum hybrid crossed with a Himalayan sort, possibilities are opened up for work in a very different direction, with several promising implications, for Cunningham's White possesses two very important characteristics which seem to be transmitted to some of its progeny: early-flowering and ability to make roots from cuttings more easily than most other sorts.

In an effort to get to the bottom of this question, I went to the Lindley library of the Royal Horticultural Society last year while in London and found what I believe to be the authentic answer to the origin of Cunningham's White. In volume 1, pages 81-82, of "Paxton's Flower Garden" (London, 1850), the hybrid is described by its originator, George Cunningham of Liverpool, under the heading: "The White Cunningham Rhododendron (*R. cinnamomeum* var. *Cunninghami*)." Says Cunningham:

"It was raised between *R. cinnamomeum* and a late white *maximum*, as you will see at once by the foliage." The object was to get a late-blooming plant that would not have its flowers scorched by the frosts of early Spring which visit British gardens and nip most Indian rhododendrons. The crosses previously made between the fine scarlet *R. arboreum* and pink and purplish garden species (probably Catawba and Ponticum hybrids) had proved a disappointing color—as indeed they do today. So Cunningham set about to remedy this. In another note, written in 1851 (Garden Magazine, London, p. 121), Cunningham says he selected a pure white *maximum*, and, "having succeeded, though not without some difficulty, in forcing



B. O. Mulligan

Rhododendron albiflorum, roadside, Grouse Mountain, Vancouver, B. C.,
altitude 3000-3500 ft., July 5, 1947



B. O. Mulligan

Rhododendron albiflorum, north slope, of Mt. Angeles, Olympic Mountains, Washington. Alt. about 5200 ft. *Albies lasiocarpa* in rear. August 10, 1947

it into flower, hybridized it with *R. cinnamomeum*, and the result is the plant you are about to figure." The figure, as well as that in the prior reference, appears to check with what I have seen labeled as Cunningham's White in American collections. The plant referred to as *R. cinnamomeum* is regarded by modern botanists as a geographical form of *R. arboreum*, having the under-side of the leaf covered with a cinnamon-colored indumentum and bearing white flowers with purplish spots. It differs somewhat from *R. arboreum* var. *album*. This white-flowered variety of *R. arboreum* is thus the probable source of the brownish indumentum sometimes found on the under surface of early-flowering hybrids.

I am not able to say, at this time, how the error got into our literature of calling Cunningham's White a hybrid

of *R. caucasicum*, but such belief seems to have been current for a long time, both here and abroad. Meanwhile, the real hybrids of *R. caucasicum* which seem to be most valuable are those which have come from the sulphur-yellow form known as Cunningham's Sulphur. Doubtless, the name of Cunningham, applied to both groups of horticultural plants, and the possession of certain common qualities, such as early-blooming, made this erroneous deduction of the white hybrid's parentage seem plausible.

Despite its earliness, I feel that Cunningham's White is truly a *maximum* hybrid and that Cunningham really did this hybridizing, since I, also, have succeeded in forcing *R. maximum* to bloom early, but "not without some difficulty." In fact, we had to devise a special technique to do it. It is interesting to know that George Cunning-



R. L. Taylor

Rhododendron indicum, clone Warai-gishi. Flowers in two stages of doubleness from same bush: the transformed stamens from same flowers to show degrees of petaloidy and attachments

ham of Liverpool preceded us by about 100 years. Now that we have the record straight in this matter, let us stop referring to Cunningham's White and its progeny as *Caucasicum* Hybrids, and let us go to work to produce some more that will have equally good potentialities for easy rooting when propagated from cuttings.

C. G. BOWERS

Rhododendron albiflorum Hook.

(See pages 173, 174)

This plant, native to our northwestern states and an isolated area or two in Colorado, is assigned to the subgenus *Azaleastrum* Planch. which makes it a rhododendron in the garden sense, rather than an azalea.

For the illustrations we have to thank Mr. Brian O. Mulligan, Director of the University of Washington Arboretum, Seattle, Washington and were taken by him at the locations noted in the legends. As far as the editor knows these are the best illustrations yet

shown in print in this country though Mr. Mulligan hopes to have better illustrations after another trip possibly with clearer details of the flowering.

Rehder's Manual of Cultivated Trees and Shrubs notes that it is "rare in cultivation and not thriving in the East." The same reference gives Zone V as its hardiness rating, so that one must conclude that difficulties of light and moisture rather than of cold, are the limiting factors.

The plant is deciduous and the flowers are white, nodding, with a "rotate-campanulate" corolla that gives them a very different aspect from that of the better known rhododendrons though not of many species nor widely cultivated here as yet. The fact that they arise from lateral buds also gives a distinct appearance to the flowering stems and the masses of bloom.

The natural range is given as "British Columbia and Alberta to Oregon and Colorado," but the distribution is neither uniform nor continuous.

In Passing

As so often happens in the end of the year when the editor must make up the issue working from the first page as far as he dare, and starting the index at the last page working forward toward some central page to discover where and how much there is that lies empty of the prepared copy, it happens this time that there are two pages to be filled. No special "theme" is urgent nor is any special "message" crying to be put forward, save one perhaps.

It has been his good fortune to live in more than one part of these United States and to have had a chance to garden, meagerly enough in some spots, in all the locations. There is nothing quite like this experience to humble one who may have felt expert enough in the old familiar scene. When one is young this humbling is hard to grant its full effect, but as one lives on, one begins to sense the reasons for the failure as well as the smart of the mistakes themselves. Too often the roots of failure lie solely in the fact that one is trying to repeat in the new place, the performance of the old, a performance, now entirely unsuited to the environment and climate.

There is another expression of this same basic misunderstanding, in the frequent attempts to grow something that simply could not exist in the open of the new garden site. The sorry attempts of persons in the deep South to grow hybrid tea roses that have been evolving through the last twenty-five years on the basis of a successful combination of tea rose character with cold resistance bred from roses that are allowed to show in no other fashion in their progeny.

The rose as it grows native to this country, our own species, is vastly different from every one of the species

that have been in the lineage of the modern garden rose. The growth habits of our native species in most cases are far from desirable in the garden where widely-suckering plants are never wanted. That the garden races bred from species native to Europe and the Orient, with of late, blood from *Rosa lutea* of the Near East and a third climate pattern, should be as tolerant of our climates, and the plural is the word to use, is bounty we do not fully appreciate.

One wonders what would be the fate of the rose, in this country, were all the non-native plants wiped out by some magic, atomic or otherwise. Would the gardener here bent upon elaborating the possibilities that lie within these species be able to see in them and forecast anything that would approach the wealth of detail and the diversity of form and color that is now to be had in the cultivated rose?

Indeed one wonders repeatedly what would happen in our gardens if we were suddenly cut off from all future access to plant materials from other continents and were to lose what we already had? Could we look to our native plants that we frequently look at but do not fully see now, and start on a program of development and refinement that would bring out a new garden flora? Would we be willing to spend the year, perhaps generations to speed the evolving? It has been done in a limited way with American plants, *Phlox paniculata* is a shining example. Only one or two species of *Aster* have been worked with; the weedy *Helenium* has been refined abroad. *Gaillardia* and *Penstemon* have been worked with; *Tradescantia* has seeded any number of color forms here, but it took an English nurseryman to name them and propagate stocks. *Cornus florida* is being grown now in a fair number of clonal forms; our native *Ilex opaca*

is coming into its own with as many if not more forms than one could commonly find listed of the European holly in a European list. People speak wistfully of the endless variations in color and size of flower of the Flame azalea, but who is man enough to really work up nursery stocks by mound layering?

Persons who start looking at native plants' too often forget themselves in the building of 'wild gardens' than which nothing is more difficult to do well and even more difficult to maintain in excellence; or they decide that there is an "innate purity" in the native species that should not be tampered with. There is something to be said for both of these claims, but one would hate to go back to eating only the pure species that lies behind most of our food plants or to be content with the pure species that lies behind the commonest garden flowers.

This, of course, is an old argument with the writer, who has been putting in a considerable number of hours recently in train travel, part of it through not too exciting country.

Recently crossing part of Alabama, there were fields of ordinary Black-eyed Susan that made them a blaze of color. Were they all alike? Certainly not, for even from the train one could see a large proportion of flowers with partly quilled ray flowers—the fore-runner of a 'cactus type bloom'? There were also fairly common colonies that showed a pale lemon yellow color. If one searched, would there be individuals with a brown stain running out on the ray flowers? All of these are common traits among composites. Could there also be found individuals in which the disc flowers had started on their way to a petaloid development so that we might have an 'anemone-type' as in chrysanthemum, pyrethrum, dahlia and so on? Who will look, not

I, for the train never stops in a goodly site.

Taking the same journey some weeks later, there were other fields filled with what appeared to be one or more species of coreopsis but no coreopsis that is known in gardens. Still later over the same route, there were many plants, these often in gardens, of what looked like *Helianthus orgyalis*. This has come up in garden papers before this, Wilhelm Miller perhaps its advocate; but what of all the wild helianthus and the wild rudbeckias other than those already mentioned.

And as for asters, our own wildings; why should we look only at the New York and New England asters with a passing glance at a few others and agonize over *Frikartii* and *alpinus*, excellent plants but not for every garden.

There is a cultural problem involved in all this to be sure, for some wild plants do not come over swiftly into cultural routines with success. Some become gross and some die outright. The work of making a garden plant from a wild plant may take years but others have done it and what should hinder us from making a beginning or two of our own? Inertia or disbelief?

Two American lobelias, *cardinalis* and *syphilitica* made a famous group of plants for a time in England, their union producing a range of colors that included royal purples and bronzed foliage as well. There are other species than *syphilitica* that might be the not-red parent. Who will try this project?

For the garden club that is eternally talking about the difficulty of finding an exciting program, an examination of the local flora for a candidate would make a grand paper and for that horticultural committee that wanted to do something that would be new and impressive, why not a breeding project like one of these?

A Book or Two

FLOWERS TO KNOW AND GROW. Written and illustrated by Audrey Wynne Hatfield. 174 pages, illustrated. Charles Scribner's Sons, New York, 1950. \$3.50.

After reading this book one feels rather that it is a personal garden record sort of thing than a garden book *per se*. It falls into no special category, but would seem perhaps only a by-product of the author-artist's own garden for the contents are the usual run of good garden things and lean not to any one type of plant nor to rarities.

The illustrations are used as decorations for the pages and are in uniform boxes at the head with a nice block of type beneath but the uniform block has played havoc with the natural position of the blooming spray or branch and one has to look at them variously to get the proper line of growth. The line is thin but secure, the color washes pale and diagrammatic. There is no special order in the arrangement of the subjects. Some of the drawings are simplified to the point of inaccuracy as in the yarrow, the saffron crocus, and the rose, Mermaid; but that is perhaps quibbling about decorations.

The text is sound, diverting and all that but since it concerns itself with old stuff, one wonders.

There are interesting preliminary pages, scarcely chapters, with much

advice, some of it too brief to be of value.

WHEN I MAKE A GARDEN. Ralph Hancock. The Macmillan Company, New York, 1950. 80 pages, illustrated. \$4.00.

This is a book of pictures of the work of the author, landscape architect and his son, killed in the last war. It is in a way a record of their work and though most of the work is in Britain, there are examples in more than the usual British styles including some of the rather nice Japanese things of the most simple elegance.

It is not necessary to be in accord with all the expressions of the author's taste as displayed nor to remind oneself of the fact that in many cases he must have had a client to deal with, who may not have allowed a free hand. There is no point perhaps in looking too closely for the sources of inspiration but there are some watered-down bits that smell of early Lutyens, that do not have the saving grace of that man's work. Jekyll and Robinson are not forgotten in the planting masses. The Cotswold stuff is the most lumpy, the Spanish style the least happy in the pale English sunlight. The views of the English Garden on the roof of Rockefeller Center are familiar enough and pleasant, but why an English garden on the roof of a modern skyscraper?

The Gardener's Pocketbook

Consider the Forest Tree

Its location and environment dictated by chance; it at once sets about establishing itself so that it may not be overthrown by future adverse conditions. Each year its anchorage becomes firmer; its body sturdier and yet more graceful and beautiful.

Faced by competition from others of its kind, it not only holds its position but becomes more upright. Offered by nature all the elements of soil and atmosphere to feed upon, it chooses only those which are good for it, and in only such quantities as to meet its actual needs.

Neither searing drought nor roaring flood, torrid heat nor freezing cold, stagnant air nor raging storm can swerve it from the ultimate attainment of its objectives. Thirsty or half drowned, blistered or frozen, nearly suffocated or blown to tatters, it stands its ground until conditions change for the better, and then sets about to regain its normal condition, repairs its wounds and goes on to accomplish the things it set out to do.

Should it by chance be removed to the luxurious environment of a landscape garden, it proceeds to adapt itself to its new surroundings; still taking no more than it can use, and returning blessings to those who are responsible for its improved condition.

At the last, having given others an example of how to live, and having at the same time furnished to other inhabitants of the earth shelter, beauty, happiness and in many cases food; and having also attended to the perpetuation of its kind, it goes peacefully to sleep.

R. P. MAYO.

Augusta, Ga.

Cassia corymbosa

If one wants a sturdy and not too exacting shrub for late summer flowering in the South, this is one to be considered. By the end of September along the Coast, most of the crape myrtles have come to scattered flowering, the altheas are filled with seeds, the abelias have long passed into the stage when sepals are showier than the few flowers remaining, the tender hibiscus are still fine; the oleanders have or may have scattered flower heads and only old Louis Phillippe is ablaze if the owners have cut him back again and again.

In such a scene a bush of this cassia is not to be despised. The foliage is yellow green, a welcome contrast to the pure greens and the commoner black greens, and the fine flowers are the purest of butter yellows.

The season of bloom is not too long but a good two weeks of flowering is enough to expect from most shrubs.

The individual flowers are about the size of a five cent piece and impressive among legumes as the five petals are almost equal in size and so arranged that the effect is almost regular. Seed pods do form before the flowering is over and hang like thin green beans through the heads but they do not mar the general effect.

It is said that the plant is easily raised from seed and that in the South one can expect a six foot shrub in three years from seed. In this the reporter has no personal experience but wonders if such swift and rapid maturing may not suggest that the entire life of the tree is equally swift. One would also expect that the plants would move with some difficulty but that, too, has to be proven.



R. L. Taylor

[See page 182]

The Oak-leaf Hydrangea, Hydrangea quercifolia
About $\frac{1}{2}$ natural size

Ligularia and Rhodea

These two plants have nothing in common botanically and are grouped here only because they are excellent pot plants. The first known to the writer first as *Farfugium*, is a composite that makes a fine spreading rosette of leaves on tall stems, deep green in color, and mottled with irregular spots of light creamy yellow color. As a pot plant it does not often flower which is no great loss as the scapes of ragged yellow senecio-like flowers are not important.

In Japan it is prized for the great variety of its markings, which sometimes are marginal irregular borders of cream with no spots at all.

Rhodea is again a plant prized in Japan as a pot plant for its broad green leaves that have all the virtues of a subdued *sanseveria* and their own charms as well. Like *Ligularia*, it has variegated forms but only with marginal colors and no spottings. Its flowers are not much but the inflorescences are followed with bright red seeds, as fine as an aroid.

Hydrangea quercifolia Bartr.

(See page 181)

This native hydrangea with a published range of "Georgia and Florida to Mississippi" has been figured many times in garden papers because of very distinct character of the 3- to 7-lobed leaves. There is a tendency, however, to pass over the flowering as if it were not very important.

In fact, the panicles of bloom are quite as showy as those of the commonly grown *H. paniculata* from the Orient and suffer only from the fact that they appear in June when flowering plants of many types are more abundant. The photograph was taken with emphasis on the flowering rather than on the much talked of leaves.

The plant grows well in good soil

and appears to be entirely happy on the edges of woods where it gets no more than a few hours of sunlight. In such a position the plant reaches a scant five feet in height with overarching branches bent under the weight of the flowering.

As in the case of *H. paniculata* the mass of small fertile flowers is studded over with sterile flowers. These darken through pale green to dull purple if grown in shade but to a very decent dull rose if in a sunny location. They persist in good condition well into the autumn.

Its hardiness to cold is much greater than one would first believe from the reported geographical distribution, but as one discovers how much more cold resistant many southern species really are than reported this surprise grows less. It is probably not a plant that will ever displace some of the few shrubs that are grown by hundreds of thousands in and for the nursery trade, but it is a plant that deserves a little more attention than it has ever had especially if one has an area large enough to hold the second-best-loved as well as the prime favorites.

Clethra acuminata Michx.

(See page 183)

As this shrub native to mountainous areas in our southeastern States grows in the National Arboretum it makes a mass of many-stemmed shrubs up to about 5 feet in height, none of them tree-like or showing any tendency to tree forms although such are reported. It begins to flower a little earlier in the summer than *C. alnifolia* L. and is a somewhat less elegant plant.

Unlike those of the latter species, its flowers have no special scent, if any, a sort of mawkish pollen-like odor. The illustration shows well enough the general characteristics of the inflorescence and leaves. It does not suggest fully



R. L. Taylor

Clethra acuminata

[See page 182]

the grayish color of the green leaves, nor the silvery pubescence on their under surfaces.

Probably the most interesting detail, one that does not show except in winter when the leaves have fallen, is the ultimately smooth bark of the stems. They are almost as smooth as those of some of the *arctostaphylos* species, rusty and tawny red browns, that look as if covered with glaucous bloom on the oldest portions.

Clethra alnifolia L. has already been illustrated in the magazine (Apr. 1936) and we hope in time to show pictures of *C. barbinerve* Sieb. & Zucc.

The oriental species, *C. Fargesii* Franch., *C. monostachya* Rehd. & Wils. and *C. Delavayi* Franch. we do not have and perhaps will never have should they prove less amenable to our climates but it is interesting to note that this genus, too, is native to China and to our country. The last species is said to be the most handsome of the Chinese species.

Pinckneya pubens Michx.

(See page 185)

The so-called 'Fever Tree' of the Coastal Plain from South Carolina southward and in western Florida presumably should not be hardy at Washington, D. C. How well it will eventually appear remains to be seen but it is growing in the National Arboretum and flowered sparingly in late June of this year. Following the usual garden practices, it was not given a swampy, sandy site here, but a well-drained location on a sheltered hillside, as an offset to the winter cold by preventing too succulent a growth and inducing an early maturity of wood.

The plants were raised from southern seed and kept in a greenhouse with so little winter heating that outside planting seemed worth the gamble. So far there has been no trouble though

the plants are not as lush in growth as in the South or even as they had been in the greenhouse. An extreme winter may alter this success.

The intriguing thing about the flowering of this plant is the leafy to petal-like development of the sepals that are colored a rather clear pink that fades out somewhat as the flower ages. The flower itself is dull, of a dirty green color that is not enlivened by the brown or purple mottlings. If by extra watering and feeding a better development of the sepals could be induced, the specimen would be most striking and certainly would make a native plant as worthy of comment as some other native trees.

As the writer has seen it in the South, it was a many-stemmed small but rather bushy tree, most striking when seen at a short distance when the pink sepals showed clearly above the masses of soft yellow green foliage.

Viburnum macrocephalum Fort.

(See pages 186, 187)

The Chinese Snowball is not a common shrub in this area and one wonders a little if it is due only to the fact that it is not always easy to find. Our plant came from Mr. Hohman but one other plant is known that came from a small nursery no longer active. Rehder gives its hardiness as for Zone VI which lies just below our area, but as yet there is no sign of winter injury nor is any expected since shrubs that are listed as "deciduous or half-evergreen" frequently are more capable of adapting themselves than entirely evergreen species.

If one wishes to be critical of the plant, its only fault lies in the fact that the flowering heads are so large and so heavy that they hang down, but when the specimen becomes old and is moderately tall, this is not objectionable.



R. L. Taylor

The Fever Tree, Pinckneya pubens

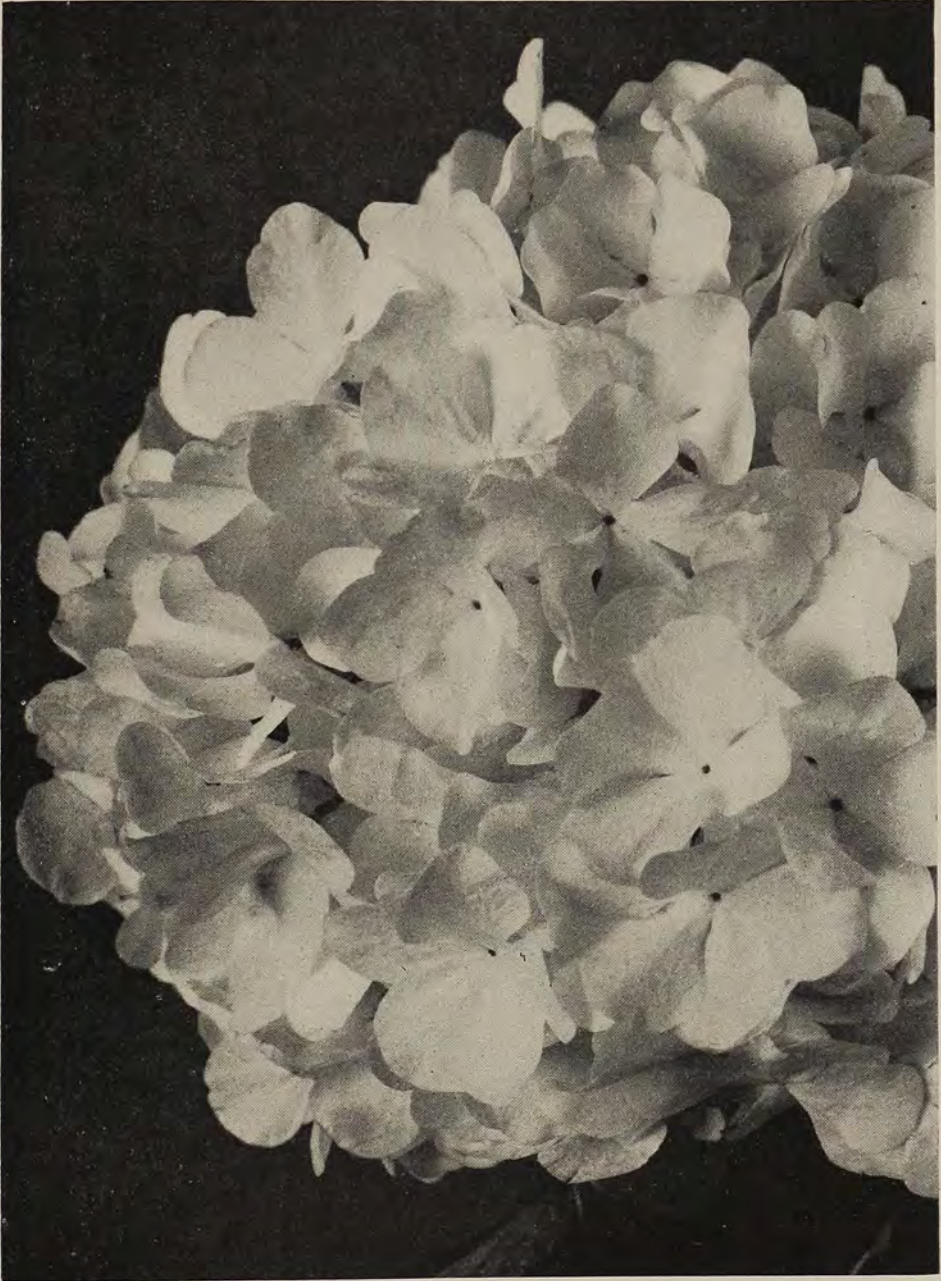
[See page 184]



K. L. Taylor

[See page 184]

The Chinese Snowball, viburnum macrocephalum
About 1/2 natural size



R. L. Taylor

[See page 184]

The Chinese Snowball, natural size, to show details



R. L. Taylor

Aucuba japonica

[See page 189]

As is the case with other snowballs, well furnished with sterile flowers they develop through fine clear tones of pale green before they show their ultimate shining whiteness. Our photograph was taken in May 1949 from material from Mr. Russell's plant as the plant in the National Arboretum is still too small to be cut for its portrait.

Like many other viburnums, it may be propagated from cuttings of half-ripened wood, taken here in August, and given the routine treatment for such material. Cold frame protection for the first winter is desirable to insure against losses in such plants as may not have an adequate root system.

In our climate it is completely deciduous which gives further protection against winter damage.

Aucuba japonica again

If the editor had been more swift he could have had the picture shown on the opposite page in time for Mr. Culpepper's article in the July issue. It is included now to show the exact size of the leaves and fruits in this particular clone, a form that has only moderately broad leaves and very few spots.

It and its fellows were purchased many years ago from the now defunct Biltmore Nursery and unlike the plants mentioned by Mr. Culpepper most of these are plain green forms with broad leaves.

One can only wonder if he were able to hunt through Japanese nurseries if he could not find as many forms and patterns as he might in the two plants mentioned on page 182.

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The American Horticultural Society

INVITES 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.