



# Newsletter

## of the American Magnolia Society

President: John M. Fogg, Jr., Director,  
Morris Arboretum, Philadelphia 18, Pa.

Secretary-Treasurer: D. Todd Gresham,  
103 Frederick St., Santa Cruz, Calif.

### Coming of Age

IN THE SECOND ISSUE OF OUR NEWSLETTER, which appeared in April, 1965, you were informed that our Treasury was in a fairly satisfactory condition, but that we would be unable to publish another number until such time as our members submitted articles of real interest and value. My comments in that issue contained what I considered an impassioned plea for material which would enable us to come out with NEWSLETTER NUMBER THREE before the end of 1965.

For many months it seemed as though my request had fallen upon deaf ears, then, triggered by some unfathomable stimulus, the articles began to pour in. The top contributor has been Mr. Philip Savage of Bloomfield Hills, Michigan, the first half of whose excellent account of the *Buergeria* section is printed in this issue. The second half will be held over for the next number and, in the meantime, Phil has submitted enough additional material to keep us going for at least two or three years!

A half dozen other members have submitted articles of real merit and we are here using as many of these as space permits; the rest will be reserved for Number Four.

This is a highly salubrious situation, indicative, one hopes, of the fact that our organization is really coming of age and that its members realize how much they have to impart as well as to learn from each other.

#### LOCAL NOTE

For most of us here on the Eastern Seaboard, 1965 was not a distinguished Magnolia year. The prolonged drought of the summer and autumn of the preceding year profoundly affected the bud-set of many of our species and the flowering performance of such early blooming ones as *M. stellata*, *M. Kobus* and *M. salicifolia* was greatly impaired. On the other hand, many of our cultivars of *M. Soulangeana* gave a remarkably fine account of themselves and the late-spring native species such as *M. tripetala*, *M. acuminata* and *M. cordata* were seldom better. Para-

doxically, however, this has been an unusually poor year for fruiting material and we here at the Morris Arboretum in Philadelphia were almost completely unable to respond to the many requests which reached us for seeds of such species as *M. acuminata* and *M. virginiana*. It would be extremely interesting to learn how our situation compares with others of our members in different sections of the country where the above and other species are grown.

This, of course, brings up again the question which I have raised before, namely, our earnest hope that more and more of you will favor us with comments, however brief, of the behavior of Magnolias in your own garden or section of the county. The present issue contains observations from a wide diversity of areas (New York, Maryland, Michigan, and the Pacific Coast) but it seems to me that if this little sheet is to serve its intended purpose many more of us should share our experiences with the rest of our fellow members.

#### MS IN SEARCH OF AN AUTHOR

Since our SECOND NEWSLETTER appeared I have received from one of our members a very enlightening article entitled "Two Rare American Magnolias." Since this deals primarily with *M. pyramidata* and *M. Ashei* it will, of course, be of considerable interest to those residing in the southern United States.

*Magnolia* × *Loebneri*  
Morris Arboretum

Photo: Dr. John M. Fogg, Jr.





Unfortunately, the author of this paper did not include his name on the title page and I am naturally reluctant to publish it as an anonymous contribution. Will the writer of this paper please identify him- (or her-) self, so that we may spread the results of his or her investigations upon the pages of our next issue?

#### DUES

Our modest annual dues of \$2.00 for 1966 are now payable and our Treasurer, Mr. D. Todd Gresham, 103 Frederick Street, Santa Cruz, California, will be happy to hear from you. The more of you who respond to this notice, the fewer bills he will have to send out and the pennies thus saved will add up to dollars which can be devoted to publishing the next NEWSLETTER at a much earlier date than could otherwise be possible.

—J. M. F., JR.

## Pollination in the Magnolias

DORIS M. STONE

Plant Breeder, Brooklyn Botanic Garden

MAGNOLIAS ARE AMONG THE MOST ANCIENT of flowering plants. Fossils of their leaves, fruits, and seeds have been found in rock of the Cretaceous geological age which dates back approximately 130 million years. One fossil petal has been found in Kansas. Its age is estimated to be 100 million years.

It is not surprising that flowers of this genus are of a simple unspecialized type. Free carpels and numerous stamens are attached in spiral fashion to a highly convex receptacle. Usually, there is no distinction into sepals and petals. These floral leaves, often called tepals, are arranged in whorls of three. Nectar glands are missing in all species except in the tropical *M. coco*. In all other respects the flower is adapted for animal pollination rather than wind pollination.

The sex organs of the open flower are freely exposed to the weather and to all kinds of flying insects. This open "saucer" shape, together with the spiral arrangement of parts, is assumed to be the primitive form of floral construction. Later in evolution, in the Tertiary, appeared the deep corolla tubes, and the various modifications which restrict the range of visiting insect types. Such specialization is seen in gentians, primulas, snapdragons, reaching its peak in the orchids.

The natural pollination of Magnolias would seem to be an easy operation. Insects which collect pollen and insects which consume it directly would be attracted to the fragrant conspicuous flowers. (Pollen is a rich protein food which can be masticated by insects with strong mandibles.) Crawling around the open flower these creatures would collect pollen on their hairy bodies. Subsequently, this would be deposited on the stigma of another flower or even on the stigmas of the same flower.

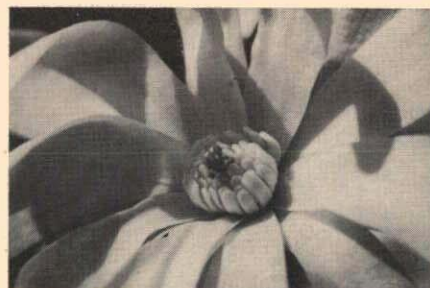
Closer examination reveals that pollination is not so easily explained. The flowers are markedly protogynous. Each free carpel has a beak-like stigma which in its receptive condition is sticky, sugary, fleshy and curved outwards. The stigmas are receptive only within the closed bud. At this stage the stamens are immature. By the time the petals

have opened and the insects have arrived in their numbers the stigmas are dry and withered. But the stamens are dehiscing and plenty of pollen is available.

The hybridizer, routinely pollinating these tightly closed buds, cannot help wondering how pollination occurs in nature. How do insects get to the ripe stigmas?

The puzzle was eventually solved. There was occasion to pollinate Magnolias in a new location — a nursery many miles distant from the urban botanic garden where, until that time, all of the pollination work had been done.

In this rural nursery most of the flower buds examined contained numerous tiny black beetles no more than 3 mm. long. It is probable that they were members of the family of flower beetles, the *Nitidulidae*, but their exact identity was not determined. Clearly, these creatures are small enough to creep between the overlapping tepals and enter the flower chamber. For what purpose one can only speculate. Flower buds make warm dry shelters — warm because the metabolic rate of developing floral tissue is high, making the temperature of the bud several degrees above that of the surroundings. Further, the sugary tissues of the stigmas might provide good nibbling material for these mandible-equipped insects.



*Magnolia stellata rosea*  
Morris Arboretum  
Photo: Dr. Patricia Allison

These beetles must be the natural pollinators of the nursery trees, many of which set open-pollinated fruit. If the beetles were to come from older flowers with pollen adhering to their hairy underbellies pollination would take place.

The interesting fact to the hybridizer is that the beetles are entirely absent from the botanic garden. Never in years of pollinating have they been observed there. Correlated with this is the lack of open-pollinated fruit in the botanic garden compared to its frequency in the nursery — this in spite of the fact that all of the nursery plants are hybrids. Perhaps flower beetles do not like urban life.

If you possess a specimen of *M. virginiana* in your garden you may now wonder what the bees that are so attracted to its flowers accomplish. In late May and June when the heavily scented flowers appear, bees buzz around the closed and opening buds. Finding no place to land, they eventually depart. Of course, the wide open flowers are good landing platforms and consequently are much visited. Presumably, pollen is collected, though by this stage there is little of it left. Clearly bees do not pollinate the sweet bay. They accept its hospitality but, as it were, perform no service in return.

The literature (see Bibliography) bears out the fact that Magnolias are in general beetle-pollinated. In a recent article Dr. E. E. Leppik points out that Delpino (an Italian botanist of the last century) considered two species, which supposedly appeared later in evolution, to be pollinated by bees. These are *M. denudata* from central China and *M. coco* from the American tropics. According to Delpino, bees enter the closed or opening buds but remain prisoners



until the petals spread out (they cannot make a "take-off" from the half-open flower.) When *M. denudata* comes into bloom in mid-April there are few bees about in the New York area, making confirmation of Delpino's observations difficult. However, in *M. denudata*'s native home and certainly in Italy where he worked, spring may be a milder season. Even so, it is still difficult to see how bees could enter the blooms in the female stage of anthesis. The same "landing problem" would arise as in the case of *M. virginiana*. (As regards *M. coco*, we have had no experience with this species.)

According to the fossil record, beetles were plentiful both in numbers and species in the Cretaceous. They were not the earliest insects to appear. Of living insects, dragonflies, may flies, silver-fish and springtails have this distinction. But beetles were in existence millions of years before wasps, bees, butterflies and moths. So were the Magnolias. To the botanist it is interesting that flowers dating back to the Cretaceous are still to this day pollinated by those insects which in that far-off time were their contemporaries. And, to the palaeontologist, it is gratifying to see the record of the rocks borne out by the inter-relations of modern living things.

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## Magnolias in Michigan

### PART II. THE BUEGERIA SECTION

PHILIP J. SAVAGE, JR.  
Bloomfield Hills, Michigan

I HAVE NOTICED that most of the gardening public, and (unfortunately), a large percentage of nurserymen, are aware of only two Magnolias capable of growing in the northern half of the United States. The hybrid *Soulangiana* seems to be commonly called the "cup" Magnolia in retail nurseries, and there is an increasing public recognition of the aptly named "Star" Magnolia.

This surprisingly limited knowledge of our favorite genus underlines one of the primary tasks of the American Magnolia Society. Publicity and good, honest promotion are needed to interest and educate homeowners and garden hobbyists in the landscape value and "beauty potential" of these wonderful trees and shrubs. If we can stimulate a public demand for Magnolia, professional nurserymen and landscape architects will quickly move to fill it. In the

process, superior seedling trees, chance hybrids, bud sports, and even unknown species, with their light now hidden "under a bushel," will be brought out into the open and saved for future generations.

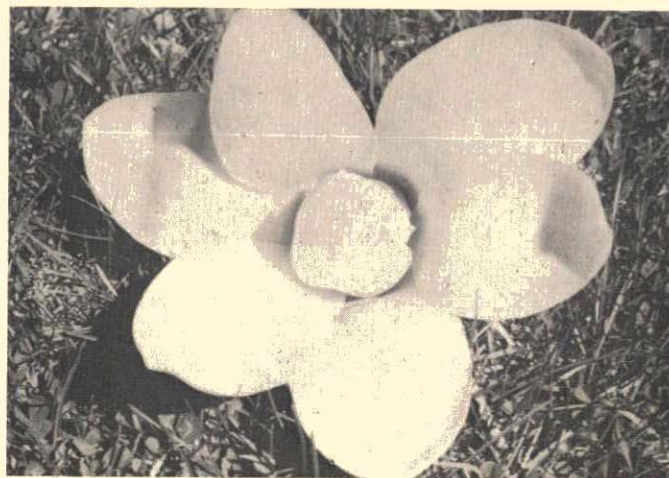
If *Soulangiana* and *stellata* were the only hardy Magnolias, there would be little need for our Society. Fortunately there are many more. I wrote about the close relatives of *Soulangiana* in the first part of this article, with a short discussion of hardy members of the section Yulania. This time let's talk about *Magnolia stellata* and its close relatives.

This "Star" has been ranked as a distinct species for many years, although in the middle of the last century Siebold and Zuccarini placed it, along with the other precocious flowering Japanese species, in a genus they named Buergeria. Fortunately, before long the "Star" and its allies came to be recognized as Magnolias, and in recent years Dr. J. E. Dandy has used Buergeria as the name for a section of the genus *Magnolia* in which he has placed, as recognizable species, *Kobus*, *salicifolia*, *stellata*, *cylindrica* and *Biondii*.

Thus, at first glance Buergeria appears a neat and well marked little subdivision, all the (arbitrary) members of which are now in cultivation, and all five of them have happily proven at least as "arctic" as tough little *stellata* itself. Rumbblings of unrest have recently shaken this tidy little kingdom, and some botanists, led by the redoubtable Ben Blackburn, have divested *stellata* of its rank as a species, and reduced it to a dwarfed race, or perhaps a cultivar of *M. Kobus*. Dr. Blackburn has some convincing evidence to support his reasoning, exhibit "A" being the extreme variability of selfed *stellata* seedlings. These exhibit a range of sizes from treelike to very dwarf, and the petals from as six, up to thirty or more, some pink-striped, others pure white.

I have no status whatever as a taxonomist, so the fact that I disagree with Dr. Blackburn about this detail should not bother him in the least. To me, *M. stellata* must be considered a species, albeit a variable one, if we are to consider the American *Ashei* a species, or for that matter *pyramidata*, *cordata* and many others.

In typical form, the plant we know as *Magnolia stellata* has probably been under cultivation in Japan for several



*Magnolia* × *Veitchii*  
Barnes Arboretum, Merion, Pennsylvania  
Photo: Dr. John M. Fogg, Jr.



centuries. It grows naturally as a large, dense shrub, sprouting constantly from the base, and producing by its own preference several long-lived, leaning trunks, thickly interlaced with branchlets and twigs. Its abundant leaves are small, narrow and glabrous, and in no way resemble the rugose leaves of typical *Kobus*. Flower buds are fur-coated in winter, and the flowers have about eighteen long, narrow petals, white with a quickly fading pink line on the back, and appear to have been lightly folded crosswise once or twice. The fragrance is pleasantly noticeable some distance from a large plant and is a veritable breath of spring.

The Vermuelen Nursery recently patented a selected clone of typical *stellata* under the name 'Royal Star'. Its value is not that it differs to any great extent from the usual form, but in being a particularly good "commercial" plant. In other words it is a uniform, dense and vigorous grower, with heavy dark green foliage and a plentiful set of flower buds every year. It reaches its peak of bloom about a week after the common trade form and has the same wonderful airborne fragrance in a slightly larger and more durable flower. A worthwhile improvement from an excellent nursery.

There is considerable variation in the intensity of pink coloring on the backs of typical *stellata* petals from plant to plant, and even from year to year on the same plant. In past years some nurseries have sold the pinker variants as *stellata* 'Rosea'. (SEE PHOTO.) This has contributed to the skeptical attitude many nurserymen have had about the actual existence of a 'Rosea' clone.

What I feel should be called *Magnolia stellata* 'Rosea', is its true form, differs in many ways from the typical white *stellata*. It tends to grow as a small, dense, single-trunked tree, with a definite leader, rather than a multi-stemmed shrub. The flowers have up to forty petals of far greater substance, without the appearance of having been folded and with no fragrance whatsoever. When first open, the very formal, symmetrical flowers have a rich pink-purple color outside which lasts well if the weather stays cool. Some flower buds, and these open first, are furry little "pussy willows," while others, scheduled to open later, are almost indistinguishable from terminal leaf buds. The tree thus blooms over a considerable period, starting a few days after white *stellata* and building up to its peak a week or so after the fragrant form. In age, the gray-barked trunk takes on the sinewy, buttressed look of a pocket-sized European beech. I don't believe there is any difference between this clone and the one named 'Waterlily'. The latter, first described as a hybrid with *Soulangiana*, is certainly not so and actually breeds fairly true to type when selfed. Some seedlings, showing the 'Waterlily' flower, tend to be rapid, treelike growers and I know one which has reached twelve feet in seven years from seed, with fine pink, multi-petaled flowers.

Back in 1946 I received a letter from Mr. Tsukasa Kiyono in which he mentioned that there existed *stellata* forms in Japan which could "almost be called red." Eventually I acquired two separate clones of this 'Rubra', the first of Holland origin, and the other from Overlook Nurseries of Semmes, Alabama.

Both of these 'Rubra' forms are true shrubs, the former with about a twelve-petaled, slightly scented, uniform magenta flower, the latter an even more compact grower, whose flowers have eighteen to twenty-four narrow, strap-

like petals, in which the crosswise folds of typical *stellata* are more pronounced. The backs of these petals are crimson, when freshly open, and the total effect of a plant in full bloom is of dark pink flowers. The folded, zig-zag shape of the petals gives a bursting rocket effect that is different and exotic. The scent of this form is sharper and, to me, less pleasing than that of the white star, and resembles the fragrance of the wayward old garden perennial, Bouncing Bet. It may be the Japanese var. *Keiskii*.

My plants of 'Rubra' from Overlook have grown well and are extremely dense, low shrubs. Even when well fertilized, the leaves are a pale shade of green and this is characteristic of this clone. Additional fertilization and watering with the object of a deeper green color causes too many flower buds to open in the fall, cutting down on the spring show. Even when properly hardened off for winter, the 'Rubra' clones are not as arctic as the other *stellata* forms and are sometimes damaged here by severe winters.

Lurking on the fringes of the family tree of *stellata* are some hard to classify cultivars having characteristics of both *stellata* and *liliflora*. Some of these have *stellata* foliage with spidery mauve flowers. Hillenmeyer Nursery of Lexington, Kentucky, has an interesting clone of this type, which is not too winter hardy here but very pretty when undamaged. In an article about Magnolias in the American Nurseryman a few years ago, Dr. Donald Wyman showed a budded twig of a *liliflora nigra*  $\times$  *stella* 'Rosea' hybrid. Also, 'George Henry Kern', plant patent #820, shows traces of that, or similar parentage, in a free blooming and cold-hardy plant.

It is unfortunate that several large nurseries have sent out plants labeled *salicifolia*, that are really nondescript seedlings of *stellata*. In the true species, the leaves are always thin and papery in texture, and of a narrow, willow-like shape. When crushed or bruised, or even when dead and dry, these leaves have a strong and unmistakable odor of anise, just like an old-fashioned "lickrish" stick. No other Magnolia, to my knowledge, has leaves that smell anything like anise, and the best English name for this tree is certainly Anise Magnolia. Years ago, Mr. W. J. Bean wrote that its bark and twigs have a lemon verbena scent, and several recent writers have credited this odor, mistakenly, to the leaves.

The flowers of *M. salicifolia* are not really impressive, being short-lived and rather floppy and shapeless when examined individually. The total effect of a full blown tree, however, is excellent. The extremely slender and wiry twigs seldom hold their flower bud upright, and the blooms usually nod over to the horizontal, or below, before opening. In this particular they resemble the west Chinese species *Sargentiana* and *Dawsoniana*, without, of course, the latter's color and size.

(To Be Continued)

## New Members

THE SOCIETY IS HAPPY TO WELCOME the following new members who have been enrolled since April, 1965:

Carl Ray Company, 8600 Lagrange Road, Lyndon, Kentucky.

Cole Nursery Co., 2000 West Jackson, Painesville, Ohio.





*Magnolia grandiflora fastigiata praecox*  
Barnes Arboretum, Merion, Pennsylvania  
Photo: Dr. John M. Fogg, Jr.

- Cowgill, Mr. Carl F., Rt. 5, Box 485A, Tampa, Florida 33615.  
Davies, Mr. Trevor C., Duncan & Davies Ltd., New Plymouth, New Zealand.  
Farris, Mrs. Victor D., 102 First Street, McMinnville, Oregon.  
Fischer, Mr. Frank P., Magnolia Forest, P. O. Box 4153, New Orleans, Louisiana 70118.  
Hempstead, Mr. Christopher, 9 Calle No. 1-50, Guatemala City, Zone 10, Guatemala.  
Hickman, Mr. Joseph W., 606 West Sixth Street, Benton, Illinois.  
Holmes, Mr. Jack O., Holmes Nurseries, P. O. Box 17157, Tampa, Florida 33612.  
Jones, Dr. Gordon, Director, Planting Fields Arboretum, Oyster Bay, Long Island, New York.  
Leide, Mr. Rudolph E., 21763 South Main Street, Matteson, Illinois.  
Pawling, Mr. R. O., Meadowby Arboretum & Nursery, R. D. 1, Lewisburg, Pennsylvania.  
Pickard, Mr. A. A., Magnolia Gardens, Westmarsh, Nr. Canterbury, Kent, United Kingdom.  
Santamour, Dr. Frank S., Jr., Morris Arboretum, Philadelphia, Pennsylvania 19118.  
Stanton, Mr. Ernest N., Westcroft Gardens, Grosse Isle, Michigan.  
Stewart, Mr. and Mrs. David Reed, 3217 Western Ave., Mattoon, Illinois.  
Taylor, Mr. Robert F., 27 Warner Road, Grosse Pointe Farms, Michigan.

N.B.—An effort has been made to send copies of the First and Second NEWSLETTER to all newly enrolled members. If you have not received yours, please notify Dr. John M. Fogg, Jr., Morris Arboretum, Philadelphia 18, Pennsylvania.

## Corrections

- Galyon, Dr. Frank B., 907 Forest Heights Drive, Knoxville 19, Tennessee.  
Grier, Miss Helen, 4671 Palm Avenue, Yorba Linda, California.

Harkness, Mr. Bernard, 385 Hollywood Avenue, Rochester New York 14618.

Jalovecky, Mr. William, 609 Roosevelt Drive, Whiting, Indiana.

Kleim, Mr. Donald L., Henderson Experimental Gardens, 4180 North Fowler Avenue, Clovis, California.

## Notes On Two Species Of Michelia

D. TODD GRESHAM  
Santa Cruz, California

WIDELY GROWN IN OUR SOUTHERN STATES, *Michelia Figo*, the Banana Shrub, is popular for its glossy evergreen foliage, furry brown axillary buds and brownish-yellow 1½-inch flowers, exuding a strong odor of banana oil; hence the popular name. A native of China, it is regarded by West Coast Chinese with a reverence usually reserved for ancestor worship.

The related *M. Doltsoa* is a Himalayan species, introduced into cultivation by seed from Farrer and Forrest to English growers some forty years ago. (SEE PHOTO.) At Caerhays Castle there are magnificent specimens, but even in England it remains rare, probably due to its tenderness, being reliably hardy only in the milder counties. This tenderness will restrict use in the United States to favored locations of Zones 9 and 10: California Coastal area San Francisco South, the Gulf States and Florida.

Where there is the will to grow plants, there is usually a way. Willing to gamble, the adventurous gardener might well try *M. Doltsoa* as a spectacular specimen for large tubs, summering out-of-doors in full sun to set flower buds and wintered in an above-freezing glass house to bloom. In California blooms appear from the latter part of January through February. This far-out observation is based on ease of propagation from blooming wood by cuttings, and bloom on relatively small plants. (SEE PHOTO.)

*M. Doltsoa* grown from Indian seed planted in 1953, flowered at San Francisco's Strybing Arboretum in 1959. A few specialists offer plants. When it becomes available and more generally planted, it will certainly prove one of the finest flowering evergreen trees for mild climates.

The foliage is ample; leaves six inches long by two inches wide, peach-leaf shaped; undulate and somewhat reticulated; a deep, glossy green, with a tendency to fold inward at the mid-rib. The perules sheathing new terminal growth are covered with brown-velvet tomentum.

Flowers are borne on new growth. Early season reveals the formation of small cone-shaped yellow-brown axillary flower buds. As the season advances, the size, form, texture and coloring of these buds is a very decorative feature of the plant. Produced with abandon, they foretell the profusion of blossoms to follow. Flowers are supported on a brown-velvet peduncle, constricted at center similar to a rattlesnake button. Twelve tepals are of irregular width, the blossoms large to five inches in diameter and so closely spaced along branches that they give the effect of a solid mass of flowers, with very little free space between blossoms.



soms. The show is startling at first sight, resembling a tree Gardenia. The odor is distinctive, a rather heavy mustiness. (More pleasant to the nostrils, than description to the mind.)

The limited specimens available for observation present varied growth habit, perhaps influenced by location. Several are bushy shrubs; one a well rounded tree; others upright, almost fastigiate.

Favor *M. Doltsopa* with a rich, open root-run, well mulched; protection from wind; in Coastal California full sun, against an evergreen backdrop.

The Squirrel and I both give thanks for an abundant crop of autumn seed cones; we are sworn enemies until the harvest is completed and each has garnered a fair share of the crop; then we bury the hatchet and are friends.

*M. Doltsopa* seed differs in several respects from

that of *Magnolia*. Seed cones forming in the leaf axil distribute the bright red cones throughout the forms of the evergreen foliage, rather than terminally as in the deciduous *Magnolias*. Cones of *M. Doltsopa* are erect in their carriage, contrasted with the usually pendant *Magnolia* cones. Each carpel, with one, rarely two seeds, is distinct, as in a bunch of grapes. Testa red; seed black; smaller than in *Magnolia*.



*Michelia Doltsopa*  
Photo: Mr. D. Todd Gresham

## Hardy Magnolia Clones Needed For the North

FRED LAPE, Director  
George Landis Arboretum, Esperance, N. Y.

IT HAS PREVIOUSLY SEEMED TO ME that I live too far north for anything I might say to be of value to fanciers of *Magnolias*. But none of the articles that I have read has attempted to answer the essential problems of a grower of *Magnolias* in the far north. That problem is, "What, if any, *Magnolias* can I grow?" Mr. Savage's article in our SECOND NEWSLETTER touches the question, but no more. Mr. Savage, in Michigan, expects a yearly winter low of -15 F. Here in Esperance, N. Y., at the George Landis Arboretum, we expect at least one winter low of -20 F. Evidently those five degrees mean a great deal to *Magnolias*, for Mr. Savage speaks of *Magnolia Soulangeana* as perfectly hardy; here it is by no means perfectly hardy.

There are in the vicinity, particularly in the cities, a few beautiful old specimens, but against these must be balanced a great number of dooryard specimens that have never become trees, but are killed back to the roots or nearly to the roots year after year. The best specimen in the Arboretum has been planted fifteen years and is still only a shrubby thing eight feet tall. My observation indicates that variety in hardiness here is not so much a matter of location as it is of variation in hardiness of individual plants, and I have therefore concluded that the best advice one can give to a home owner here is to tell him to go to a local nursery and select from the nursery row a specimen that shows no signs of ever having been pruned back to near the roots.

All the selected clones of *M. Soulangeana* that I have so far seen mentioned seem to have been selected by the criteria of flower form or period of blooming, none by either flower bud or stem hardiness. But it is exactly those qualities that we here in the north need. We want a *M. Soulangeana* that will grow and flower in our climate. And now that mist treatment has simplified the propagation of *Magnolia* clones, I see no reason why a few hardy clones of *M. Soulangeana* should not be selected and put in the trade.

Here at the Arboretum only *M. acuminata*, *M. Kobus*, *M. stellata*, in all of its forms, and *M. × Loebneri* (SEE PHOTO) have proved themselves to be perfectly hardy. *M. virginiana*, in a protected spot, grows and flowers, but its growth is very slow. *M. tripetala* can survive, and occasionally flower, but is badly injured in severe winters. Young plants of *M. obovata* show promise, but none has so far got much above snowline. *M. macrophylla* seems tenderer than *M. tripetala*, and after many tries we still have no specimens over two feet high. *M. Fraseri*, *M. cordata*, and *M. Sieboldii* have all been complete failures.

In the last few years our severe droughts have been as destructive to the *Magnolias* as winter damage. I do not know whether this is so in less severe climates, but we have found that young *Magnolias* in the field need as careful watching during droughts as young firs. One fifteen year old *M. Kobus*, loaded with fruit, suddenly began to yellow during a dry August, was dead in three weeks, and never after sprouted from the roots. That early and dramatic lesson taught us to mulch all the *Magnolias* heavily early in the summer, but even at that two of our *M. acuminata* specimens were badly cut back by last summer's drought.

## Magnolia Grandiflora, Hardy or Tender

ALBERT SNYDERMAN  
Randallstown, Maryland

LIVING IN AN AREA OF MARYLAND slightly to the northwest of Baltimore which experiences sub-zero winters on the average of once every seven years, growing *Magnolia grandiflora* can be quite exasperating. Yet the fact that they can be grown is attested to by a number of large specimens near my home. What determines who shall succeed in this area and who shall not? Cultural factors,



important though they are, put aside, I believe it is a matter of luck. And as long as nurseries continue to import seedling stock from the South, of varying hardiness, this is the way it shall remain for growers in borderline areas.

I shall illustrate this point with three specimens which happen to reside in my own garden. Cultural factors are equal as well as are locational ones, and yet these three trees exhibit wide variance in their inherent resistance to cold. One winter burns and is very unsightly every year and, during severe winters, dies back a little. Each spring it loses its leaves because they are so badly damaged. Another one of my specimens only suffers leaf damage during the most severe winters and died back only during its first year here. The third tree has never lost a leaf to extreme weather and has thrived despite temperature readings down to seven degrees below zero.

What are the repercussions of this situation to the average gardener. Often people in this area, who really love the stately *Magnolia grandiflora*, lose it during the all too vulnerable first year and, due to this, never try again to grow it. This, I feel, does tragic damage to their attitude toward Magnolias as well as to their garden picture.

The obvious answer to this dilemma is the vegetative propagation of varieties found to be hardy and the development of more hardy types. Although I realize this is being done on a limited scale, this article is a plea for a quicker dissemination of these plants to the gardening public. This, I believe, would extend the range of America's most beautiful native tree and convert many more people to the ranks of satisfied Magnolia growers.

## Notes From Oregon

IUFER LANDSCAPE CO.  
Salem, Oregon

### BLOOMING SEASON OF MAGNOLIAS

HERE IN SALEM, OREGON, Magnolias bloom nine months of the year. To my knowledge there is no other group of trees that will give you so much joy for so little care.

If you come to our place between December and February we can show you Magnolia blossoms. Today, September 6th, we have five *Soulangiana* hybrids in bloom, also *M. cordata* is in full bloom for the second time with perfect butter yellow flowers. We have one tree about 25 feet high. Also *grandiflora*, *Wilsonii*, *stellata* and *liliflora* are in flower.

I saw one nice bud of *Watsonii* this morning; *virginiana* and *Thompsoniana* are just through blooming. *Sieboldii* flowered well into August.

### TO PRUNE OR NOT TO PRUNE

I read in a flower magazine that you should never prune Magnolias. To get a good tree that will sell you need to prune it in to a good shape. With so many shrubs and trees the nurseryman has to use the clippers to trim them to a good shape to get a perfect plant.

To let a young tree grow without correcting by pruning is exactly the same as never correcting a little boy. You will soon find out what kind of a monster you are creating.

I trim my Magnolias any time of the year. I like to go

through my nursery twice during the growing season to shape up my trees.

In our soil and with a long growing season our Magnolias make too much growth (from 2 to 5 ft.) in a single year. I find it a good practice to cut off half of the season's growth every year on young trees to develop strong limbs. Otherwise we lose most of the long sloppy limb and evergreen tips when snow comes. During the last 35 years I have never had any ill effects.

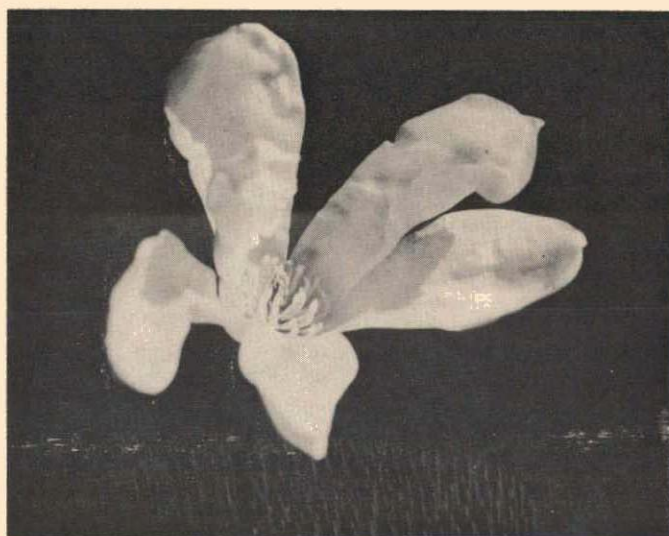
Some varieties, such as *M. Sargentiana robusta* and *M. obovata*, seem to require protection from the hot afternoon sun. It was 103° here not long ago and these seemed to scorch.

Some years ago I planted *M. Soulangiana nigra* (more correctly known as *M. liliflora nigra*) in the parking lot of the Metropolitan Life Insurance Company Bldg. They are greatly admired by people passing by and have been mentioned in the Garden Section of our local paper. This variety is excellent for narrow parking strips since they grow only about 15 feet high, bloom two or three months in spring and start blooming again in August for about two months. We recommend this variety highly.

So long, Magnolia Friends, until next NEWSLETTER.

## Magnolia Soulangiana cv. 'Adral'

*Magnolia Soulangiana* cv. 'Adral' was submitted for registration at the Morris Arboretum, May 24, 1964, as a plant blooming at Delmar, N. Y., about May 5-10, when 'Lennei' starts to flower. Flower size and shape are similar to 'Brozzoni', but colored moderate purple red (5 R P 5/10) outside, white within. It differs from 'Alexandrina' in flowering a week later and in having larger petals darker in color outside, from 'Verbanica' in the larger petals and darker color, and from the 'Lennei' group in having oblong-obovate petals rather than obovate and concave ones. It is reliably hardy in the warmer part



*Magnolia salicifolia*  
Morris Arboretum  
Photo: Dr. John M. Fogg, Jr.



of Zone 5b (-15 F. to -10 F.). It is not yet available in the trade.

—RALPH H. SMITH.

## Questions and Answers

IT IS PLANNED to make this a regular feature of the NEWSLETTER. Please mail your questions to the Editor. Answers will be furnished by a panel of experts.

- Q. From whom may I order *Magnolia denudata* 'Picture' described in the American Magnolia NEWSLETTER? Mrs. M. S., Baton Rouge, La.
- A. Plants may be ordered from the originator: Hakoneya Nurseries, Box 295, Yokohoma, Japan, also Lem Nursery, 19215 Aurora Avenue North, Seattle, Washington 98133.
- Q. Is it possible to purchase vegetatively propagated clones of *Magnolia cordata*? Mr. J. J. K., Portland, Oregon.
- A. The Tingle Nursery, Pittsville, Maryland, offers a form with very good yellow color.
- Q. I have been told it is always best to purchase Magnolia species and varieties on their own roots. Is this true?
- A. Almost invariably Magnolia species and varieties on their own roots will make specimens faster than plants grafted on understock that is, many times, not compatible.
- Q. What is the cause of "die back" in Magnolia? Mrs. D. M., Redwood City, Calif.
- A. There is a natural reduction of old, crowded wood to allow for new, vigorous growth. Neglected, poorly grown trees use this "die back" for survival.

We Welcome . . .

★ MAGNOLIA ARTICLES

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- Q. Of the pink Asiatic Magnolia, which species appears to be the most likely to succeed in colder zones? Mr. T. C., St. Louis, Mo.
- A. *Magnolia Sprengeri* 'Diva', though rare and relatively unknown, appears to be the most promising. It has bloomed at the National Arboretum, Washington, D. C., and Mr. Savage of Michigan rates it hardy in his garden. Worthy of a wide trial.
- Q. *Magnolia virginiana* is hardy with me in Massachusetts. Is any selection of outstanding clones being made? G. B. T., Salem, Mass.
- A. Mr. Tom Dodd, Jr., of Tom Dodd Nurseries, Semmes, Alabama, is interested in this species. Selections have great possibilities.
- Q. Does *M. Campbellii* subsp. *mollicomata* have any real proven advantage over *M. Campbellii*? Mr. K. T. G., Seattle, Wash.
- A. It is not as temperamental, blooming at an earlier age, later in the season, and a more consistent bloomer. *M. Campbellii* will often skip a season of bloom.
- Q. Are there any Magnolias with autumn coloring of foliage? Mrs. O. B. D., Stamford, Conn.
- A. Grown under the high shade of oak trees in California, *M. Wilsonii*'s autumn coloring rivals the poison oak and *Cornus florida*.
- Q. Will you describe a good, safe way to fertilize my Magnolia? Mrs. J. McK., Washington, D. C.
- A. In the fall of the year, before winter rain and snow, mulch soil around base of tree as far out as the drip line with old rotted cow manure, chicken or horse manure.
- Q. Is it possible to import Magnolias from England, Japan, New Zealand with success? Mrs. G. K. L., Lexington, Va.
- A. Yes. A number of members of the American Magnolia Society are well pleased with imported material. Their experience will be shared with interested members. Please write the Editor for additional information.
- Q. Why do Magnolia seed, which were purchased from a reliable seed firm, fail to germinate? Miss K. T., Portland, Oreg.
- A. The outer red pulp must be removed and the hard black seed planted immediately it is harvested, or stratified in moist sand or peat for later planting. Mr. C. Y. M., New Orleans, La.
- Q. Is it better to select a small, vigorous plant at the nursery or a larger, perhaps root-bound plant? Mr. S. R. H., Philadelphia, Pa.
- A. Planted properly with care, the smaller plant will make a better specimen.