

Native U.S. Magnolias

by J. C. McDaniel

The following remarks about native U.S. magnolias were excerpted from a paper, "Plants for the 1980's and Beyond," presented on a variety of ornamental plants by the author to the 1979 annual meeting of the Holly Society of America, and are reprinted by permission from Holly Letter No. 66, 1980.

I am biased in favor of native diversity. I think greater use should be made of selections native to the region of the country in which we happen to reside. The American species of trees, shrubs or other plants have the advantage in many cases over those brought from different climates and different soils. Cultivar selection among the native species is taking place, but not to the same extent as in Europe.

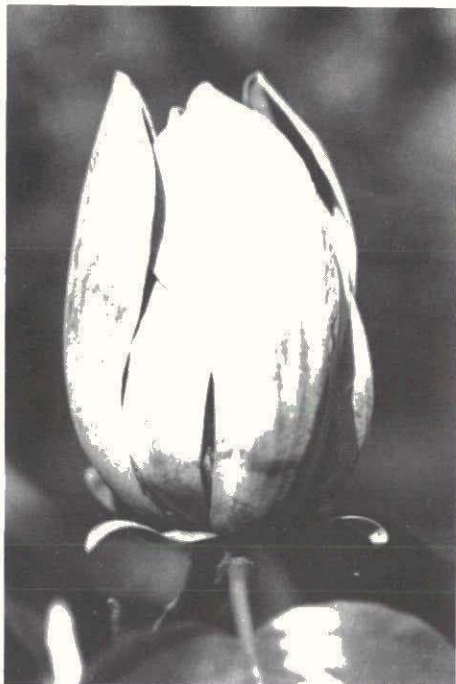
Magnolia acuminata, our largest deciduous magnolia tree, can compare with the great oaks as landmarks at maturity. Illinois' largest is just under 12 feet in trunk circumference, and Wisconsin's is even larger. The city engineer of North Canton, Ohio in 1979 measured one there with a 20.25 foot circumference and 94.2 foot tall. Here again we find much variation. I propagated last summer, from a tree at the College of Wooster (Ohio), a tree shaped much like a 'Bradford' pear, but destined to be much larger at maturity. At Bethesda, Maryland, stands one that when dormant resembles a good bald cypress in outline. One at Springfield, Illinois has massive elephantine branches. Some are highly wind resistant. One in

Champaign, Illinois resembles a good *Liquidambar* in its stiff, pyramidal outline, and turns bright yellow in fall. It came as a seedling from Hiram, Ohio. I looked for others there and found one on the Hiram College Campus that grew tall and narrow. The 'Shag' selection from an old tree at Princeton, Illinois, has bark in attached, clinging plates somewhat like a shagbark hickory; its grafts have grown fast. 'Golden Glow' from the Smoky Mountains National Park (Tennessee) has good yellow flowers. Subspecies *subcordata* (syn. *M. cordata*) with heavily pubescent twigs and more moderate growth, usually has yellow flowers; the best cultivar I've seen is 'Miss Honeybee' (propagated by James Merrill, a wholesaler at Painesville, Ohio). There are other selections propagated and under observation.

M. acuminata, besides its landscape value, has been perhaps the one best magnolia understock species, if only we could get enough seedling stock of it. Working against such abundance is the



M. acuminata subcordata



Flower of *M. acuminata*

purple grackle, a bird whose principal aim in life seems to be to peck all the green *M. acuminata* fruits to little pieces. I've covered fruits with my wife's old nylons and managed to save some hand pollinated *acuminata* seeds.

Crossed with Asian species, *M. acuminata* is a valuable breeding source for the future. My hardy varicolored *M. × brooklynensis* 'Woodsman' came from *acuminata × liliflora* (*quinquepeta* in *Hortus Third*, but I like the other name.)

'Elizabeth,' a hybrid magnolia with a great future when it reaches the market soon, was bred at the Brooklyn Botanic Garden, from *acuminata × denudata* (or *heptapeta*), with many, many light yellow fragrant flowers on a strong tree, it blooms later than *M. × soulangiana*.

Other *M. acuminata* crosses have been made at the National Arboretum (in Gene Eisenbeiss' group, now headed

by Dr. Frank Santamour) and by other private experimenters. Perhaps the other man now most active is Philip J. Savage, Jr., at Bloomfield Hills, Michigan (2150 Woodward Ave.). Among others, Savage recently crossed *acuminata* with *M. sprengeri*, a large pink-flowered relatively hardy Chinese tree. I'm growing some from his seeds.

M. macrophylla, the bigleaf magnolia, native as far north as Ohio, has among the largest leaves, and its many June blossoms are absolutely the largest flowers of any U.S. native tree. My selection 'Whopper' is among the largest, and has extra tepals (to 10) and particularly large purple markings, which extend to all tepals. This species is available from some nurseries but many have confused it with *M. tripetala*. I find 'Whopper' and an all-white flowered selection named 'Sara Gladney' can be chip-budded on young *macrophylla* seedlings, with nearly 100 per cent success.

The only deciduous Mexican magnolia, the endangered *M. dealbata*, was brought in as scions in late 1975, and I budded it on *macrophylla* in Mississippi, where it flowered this year, perhaps the first time anywhere in cultivation. It is quite similar to *macrophylla*, but later in season.

M. macrophylla subsp. *ashei* is a shrubby variant of the bigleaf, but native only to the west Florida panhandle. It has been cultivated many years in Rochester, New York. Several years ago I crossed it with typical *macrophylla*, obtaining intermediate-sized F_1 hybrids, hardier than *ashei* in central Illinois. I've now crossed *ashei* and the hybrids with 'Whopper.'

With some species, there are not reliable commercial sources, and the A.M.S. "Seed Counter" may be about the only available source.

U.S. production of the evergreen *M. grandiflora* (hardy to Zone 6b usually)



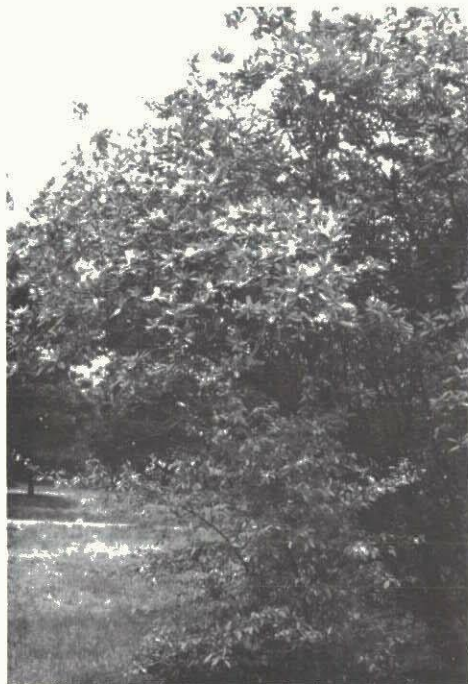
This spreading Magnolia grandiflora at Driver, Virginia, was known to be 160 years old when photo was taken in 1965.

has been mainly from variable seedling stock, though this is a species in which over 150 cultivars have been named. Selected cultivars may be more available soon in the southeast, now that reliable cutting-propagation methods have been worked out.

Among the better cultivars now available from some sources is 'Little Gem' with good sized flowers on a long-blooming small tree with small leaves, which have a brown indumentum. 'Cairo,' selected at Cairo, Illinois, has shapely flowers over a long season, a pyramidal growth habit, and very glossy upper leaf surface. Its fruits color red in the sun. 'Charles Dickens' has very large, very red coloring fruits, on a more spreading tree, and gives seedlings that have survived recent Urbana winters. It is exceptional in being tetraploid: *M. grandiflora* generally is hexaploid. 'Charles Dickens' has given interesting

hybrids when crossed with the diploid *M. virginiana*, the sweetbay. 'Edith Bogue,' selected in New Jersey, is apparently one of the hardier *grandiflora* cultivars for the New York City vicinity. In the northwest, 'Victoria,' selected on Vancouver Island, is a favorite. 'Samuel Sommer,' patented in California, is a superior cultivar, of greater than average hardiness, with large flowers.

M. virginiana, in its northern (typical) variety, is not really evergreen, but will supply a smaller, fragrant flower north of where *M. grandiflora* succeeds. Seedlings vary in hardiness, roughly with the latitude of the original seed source, Massachusetts to eastern Georgia. It also is becoming available as selected cultivars. Two I selected in Illinois are the large shrub 'Mayer,' which gives seedlings that can bloom the second year from seed, and 'Havener,' a small to medium sized tree



Magnolia virginiana

with larger flowers and extra tepals. Both cultivars ordinarily come exceptionally true from seed.

M. virginiana var. *australis*, predominantly south and west of Savannah, Georgia, goes to the Everglades and on the Gulf Coast to Texas. It is potentially a larger, taller tree, and has more nearly evergreen forms in the Southeast. Its most elevated site, near Crofts Chapel out of Turtletown, Tennessee, (1600 feet) is the source of 'Crofts,' with exceptionally glossy upper leaf surfaces. This has survived at Urbana, along with other *australis* sources, but they were not evergreen there in recent winters. They are more reliable in Zone 6b and southward. The prevalent form in Texas and west of Pearl River, Mississippi has larger leaves, mostly deciduous by Christmas. The Texas seedlings have been slightly frozen back in Urbana. Typical *M. virginiana* is self-fertile, but var. *australis*, with a few exceptions, requires cross-pollination to develop fruit. I have

crossed it with typical *virginiana* and among my seedlings had both groups.

M. virginiana (typical) may be pollinated by *M. tripetala* to give *M.* × *thompsoniana*. My 'Urbana' clone is hardier than the original one from an English nursery about 1809. Soon to be introduced is a National Arboretum hybrid, *M. hypoleuca* × *M. virginiana*, described as a "glorified *thompsoniana*." These *virginiana* hybrids are all sterile. (*M.* 'Nimbus,' was described in *MAGNOLIA* Vol. XVI No. 1.)

M. tripetala, perhaps the second-hardest American species (after *M. acuminata*) is a small to medium-sized tree with large leaves but not so large as *M. macrophylla*, and tapered to the base without the "ears" that the latter's leaves have, and a glabrous twig. Its large flowers are attractive, but unpleasantly scented. 'Bloomfield' is a cultivar with good sized flowers and large, thicker, later expanding leaves than the typical seedling. *M. hypoleuca* from Japan is rather similar, but larger growing and highly fragrant. It can take up to 20 years from seed to flower, but can be grafted from mature trees for quicker bloom. The Arnold Arboretum, and some parks in Czechoslovakia, have good hybrids of *hypoleuca* × *tripetala*.

Both these two species have crossed on *M. sieboldii*, a spring-summer flowering Japanese species. *M. sieboldii* × *hypoleuca* gave *M.* × *wieseneri* (syn. *M. watsonii*) in Japan, a hybrid with extremely powerful fragrance, that can be budded on *M. tripetala*. A *M. sieboldii* × *tripetala* chance crossing at Kew resulted in *M.* × 'Charles Coates,' which is fragrant in a more modest way, but more abundantly flowering. It has one drawback at Urbana and southward: high temperature (85° or more) during leaf expansion results in necrotic spots on the leaves. I have redone the cross, using *M. tripetala* 'Bloomfield' pollen, and hope to have a better hybrid.