

Japanese clones of *Magnolia denudata*, and Japanese cultivars of the *Magnolia* × *soulangiana* grex were also brought in, to the enrichment of American horticulture. A strain or clone of *Michelia figo* was also brought from Japan during those years, and by Japanese mass production methods, soon outnumbered plants of the older clone from England, on the Gulf coast, and in California. Brought to Japan from China several centuries ago, this natural variety may have originated hundreds of miles from Kwangtung province, and perhaps, represents a more cold-hardy strain. All this, of course, is theory.

In "A Forest Botany of China," Dr. Shun-Ching Lee gives the natural range of *Michelia figo* as Kwangtung, Kwangsi, Fukien and Chekiang provinces, and describes the flowers as "small, creamy-yellow, shaded purple on both sides, cup-shaped, with a sweet odor."

To the west, in Yunnan province, from whose temple groves came the beautiful *Camellia reticulata* clones, a sometimes cultivated species closely allied to *Michelia figo* was named *Michelia yunnanensis* by Franchet. It is described as a small shrub, 5 to 15 ft. high, "with flowers about 5 cm. across, cup-shaped, creamy." It is conceivable that this taxon, in centuries past, could have been brought down the busy Red River to temple gardens in Vietnam and Laos and from thence to southern France. The description of *Michelia yunnanensis* is practically a carbon copy of the subject species, and a closer acquaintance will be necessary to determine if it is truly distinct.

Magnolias as Big Trees

by J. C. McDANIEL

American Forests magazine, in its April 1973 issue lists 732 trees as champions of their respective species in the United States. Nine of them are magnolias.

Since 1949, the biggest known cucumbertree magnolia (typical *M. acuminata*) has been one in the Great Smoky Mountains National Park in Tennessee. Its circumference (at 4½ feet) is given as 18 feet 4 inches, its height 125 feet and its spread 60 feet across. (This was nominated by Dr. S. Glidden Baldwin, late of Danville, Illinois).

Champion yellow cucumbertree magnolia, *M. acuminata* var. *cordata*, is one planted in the 19th century by the Pierce brothers, at what is now Longwood Gardens, Kennett Square, Pennsylvania. Its dimensions, 13 feet; 97 feet; 65 feet, as reported in 1969 by Dr. John C. Swartley, Ambler, Pennsylvania, led me to believe at first that it might not properly belong to var. *cordata*, but

the Longwood taxonomist, Dr. Donald G. Huttleston, wrote (May 8, 1973): "True, this is very much larger than the books allow for the taxon and also its flowers are large, in the range of *M. acuminata*. On the other hand, the petals are bright canary yellow except for a suffusion of green on their outer surfaces. The leaf apices are rounded and very abruptly acuminate, and the twigs are very densely pubescent even when a year old." This array of features, particularly the twig pubescence, would place the tree within Dr. James W. Hardin's 1954 treatment as var. *cordata* Sarg., rather than forma *aurea* (Ashe) Hardin (*Jour. Elisha Mitchell Sci. Soc.* 70(2):306). Hardin places the heavily pubescent Southeastern trees under var. *cordata*, whether yellow flowered or not, and makes *aurea* merely a flower color form of the less pubescent var. *acuminata*. Incidentally, David B. Paterson, propagator at Longwood, is grafting from their magnificent old "champion", so this clone will soon be represented in other arboreta. At most places, *cordata* is at present represented by a more nearly shrub-like "trade clone" which could never be expected to grow so near to 100 feet tall.

The champion southern magnolia (*M. grandiflora*) has reigned only since 1972. Several changes have occurred through the years in listing the biggest of this species, either as bigger ones came to notice, or as old champions within the hurricane-prone Gulf Coastal areas fell and released their thrones. The current champion, at Olla, Louisiana, was nominated by Kenneth Winberry and Arthur Doughty, Urania, Louisiana.

Its measurements: 18 feet, 5 inches; 35 feet; 60 feet.

Others, currently listed as champions, are the following magnolias:

Ashe, *Magnolia ashei* (1971) 18 inches; 35 feet; 18 feet.

Terreya State Park, Florida. James A. Stevenson, Tallahassee.

Bigleaf, *M. macrophylla* (1972) 9 feet, 3 inches; 59 feet; 62 feet.

Baltimore, Maryland. Maryland Forest Service.

Fraser, *M. fraseri* (1968) 8 feet, 4 inches; 65 feet; 50 feet.

Philadelphia, Pennsylvania. Dr. John C. Swartley, Ambler.

Pyramid, *M. pyramidata* (1972) 6 feet, 4 inches; 59 feet; 37 feet.

Newton County, Texas. James Whaley and Leo Rawls, Kirbyville.

Sweetbay, *M. virginiana* (var. *australis*) (1971) 13 feet, 1 inch; 91 feet; 46 feet

Leon County, Florida. George Apthorp, Tallahassee.

Umbrella, *M. tripetala* (1969) 9 feet, 8 inches (at 2 feet); 45 feet, 48 feet.

Lumberville, Bucks County, Pennsylvania. Dr. John C. Swartley.

In a related genus, we have:

Yellow-Poplar (or Tuliptree), *Liriodendron tulipifera* (1972) 30 feet, 7 inches; 124 feet; 122 feet.

Bedford, Virginia. Kenneth E. Crouch and Glenn W. Garret, Bedford.

All of the above are native American species. Part of them are growing wild, or as remnants of forest stands, though the *acuminata* at Longwood, the *fraseri* at Philadelphia would be planted trees, outside their native range.

The American Forestry Association also keeps records on foreign species which have become naturalized, but this does not seem to have occurred with any of the Asiatic magnolias. Perhaps it may with *M. sprengeri* in the future, and possibly with *M. hypoleuca* and *M. kobus*.

Two varieties of American species might well be investigated for future national champions: the typical (northern) *M. virginiana* and the form known in the nursery trade as *M. acuminata* var. *cordata*. For the latter, the contest could be between native trees in the Carolinas and an old grafted one in Woodland Park at Lexington, Kentucky.

For today's planters, who may plant trees that could be champions in the future, there are several choices, American, Asiatic and hybrids. The three American magnolias that eventually, in fertile and otherwise suitable sites, can attain majestic proportions, are typical *M. acuminata* over a wide range, and both *M. grandiflora* and *M. virginiana* var. *australis* in warm climates. Large-growing Asiatic species are *M. kobus* (including var. *loebneri*) and *M. hypoleuca* with a range in northern Japan (*M. hypoleuca* also in eastern Siberia). The Yulania section species from farther south in mainland Asia all are big timber trees in their native ranges, so, climate permitting, we shall eventually see large trees in America of *M. campbellii*, *M. dawsoniana*, *M. denudata*, *M. sprengeri*, *M. sargentiana* var. *robusta* and hybrids of some of these, such as *M. × veitchii* and *× 'Caerhays Belle'*. The U.S. National Arboretum has hybrids between *veitchii* and *denudata* that are at least as vigorous as *veitchii*.

Both *M. × soulangiana* and *M. × brooklynensis* have *M. liliflora* as one considerably smaller-statured parent, so would be expected to be smaller than the Yulania magnolias. But with typical *M. acuminata* as one parent, the cultivars so far selected in *M. × brooklynensis* appear to be faster growers, and probably will mature into larger trees than any *M. × soulangiana* cultivar. Another hybrid that is very vigorous in its early years is Dr. Frank B. Galyon's fertile cross of *sprengeri* 'Diva' with a *soulangiana* that he calls "Pink Lennei". Both this and the current *brooklynensis* clones should give some vigorous progeny, either selfed or crossed with trees of other ancestry in the Yulania section. Crosses of such trees with *kobus* are other possibilities for the future.

As a start on Buergeria × Yulania hybrids I have one hybrid of *stellata* 'Waterlilly' × *denudata*, and Joseph A. Witt at the University of Washington Arboretum has crossed 'Wada's Memory' × *sargentiana* *robusta*. What has so far passed in American cultivation as *M. cylindrica* may actually be an accidental hybrid, of that species (section Buergeria) with some species in the Yulania section. ***

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