Numbers

by J. C. McDANIEL

How many native species of magnolias grow in the continental U.S.? Linnaeus, in Species Plantarum (1753) published Magnolia virginiana as a species with four varieties, including therein what we now know as M. acuminata, M. tripetala and M. grandiflora. The number of U.S. magnolia species grew as more systematic knowledge accumulated, and was published. It is unlikely, from now on, that the number will be extended. So, how many species do we now have? Botanists still disagree. The minimum is 6 (virginiana, acuminata, tripetala, grandiflora, fraseri, macrophylla). The maximum may be 9 or 10. It depends on how far you go in separating some of the look-alikes, or, if you are a lumper, in combining them.

Horticulturally, they are all capable of having variants separated as cultivars, even in the relatively uniform *M. tripetala*. The great variability of *M. grandiflora* is well known, and led to the selection of more than four score cultivars, often (in previous times) described as varieties. Hybrids, if fertile, offer the possibility of evolving into new species, and a probable hybrid that tends in that direction is 'Charles Dickens', which is tetraploid in contrast to the usual hexaploid condition in grandiflora. *M. × thompsoniana*, on the other hand, is a sterile hybrid.

Getting back to the look-alikes, Ashe's M. australis, though itself quite variable, is currently combined with M. virginiana as var. australis. M. cordata is by some regarded as separate, by others made M. acuminata var. cordata, though subcordata has priority as a variety name. (Hortus III and the Magnolia Checklist will treat it as M. cordata). M. macrophylla, besides a wild Mexican connection (M. dealbata), has a southern little sister, M. ashei Weatherby, regarded as a separate species since 1925.

I had thought there was by now general agreement on the botanical as well as geographic separation between *M. fraseri* Walt. and the smaller *M. pyramidata* Bartr. Yet in a recent flora, "Woody Plants of Alabama" (Ann Mo. Bot. Gard. 58:99-242. 1971) botanist Ross C. Clark attributes *M. fraseri* to 10 of Alabama's 67 counties, Tuscaloosa the most northerly. He considers *M. pyramidata* not specifically distinct, though admitting the Coastal Plain plants to be disjunct in range from the *M. fraseri* of higher elevations in more northerly states, and smaller plants at maturity. Clark is entitled to his viewpoint, as are others who regard *M. pyramidata* to be separate, both botanically and geographically. The others may prove right.

In other genera, too, Clark tends to be a "lumper." In Catalpas of Alabama, both wild and naturalized, he recognizes only *C. bignonioides*, thinking *C. speciosa* not sufficiently distinct. I'll acknowledge that there is some confusion among catalpas both in southern and midwestern plantings. But the Asiatic species, C. ovata, also has entered the picture, having been about 100 years ago in Indiana, hybridized with C. bignonioides to give $C. \times hybrida$ Spaeth. Alfred Rehder, in Bailey's Cyclopedia of Horticulture (p. 685), said its seedlings usually resemble C. ovata. Some of the catalpas now in Alabama and many other states are probably descended from this hybrid. I have yet to see what I'd consider a hybrid between C. speciosa and the later flowering C. bignonioides. C. ovata also is late-flowering in my observation (in August at Hillier's nursery in England) though Rehder's Manual listed it to flower in May.

Clark's paper now is available as a separate book. In spite of some of my differences in interpretation (and observation) I can recommend it to all who go looking for native woody plants in Alabama and parts of adjacent states. Another good guide to distribution for native trees there and throughout the country is E. L. Little's "Atlas of United States Trees, Vol. 1. Conifers and Important Hardwoods," (U.S.D.A. miscellaneous publication no. 1146. 1971). Clark includes other magnolias which Little did not find important enough to include in his first volume.

Other magnolias, spotted to the counties of Alabama by Clark, are M. acuminata (including M. cordata) in 26 counties, M. macrophylla in 25, M. grandiflora in 23, (though doubtless cultivated in all 67), and M. tripetala in 20. For M. virginiana (which in Alabama native material is always var. australis by my observation), Clark spots 44 counties omitting Cullman and Saint Clair where I've also seen it wild in the past. Distant relatives of Magnolia (both placed outside the Magnoliaceae by recent systematists) are Ilicium floridanum in some of the most southern counties, and Schisandra glabra (Brickell) Rehder (synonym: Schizandra coccinea Michx.) in 4 southwestern counties.

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