

Variety in Evergreen Magnolias

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The Spanish, the French and the English took *Magnolia grandiflora*, Southern Magnolia, from the South Atlantic and Gulf Coasts to their homelands during the Colonial period. Adaptable to widely varied soil and climatic conditions, it has since become the favorite American flowering tree in most warm-temperature to subtropical areas around the world. Until recently, most named cultivar forms of this species were English and French selections but now, since variations have received attention, there are at least as many American cultivars, selected both within and beyond the original native range. Other evergreen *Magnolia* species, American and Chinese, and some hybrids, are promising for several regions, but are not often seen in our gardens or nurseries.

A majority of the world's *Magnolia* species are evergreens, but only a very few of the approximately 46 or more evergreen species (mainly tropical) are cultivated anywhere. *M. grandiflora* is by long odds the most popular one. The shiny leaved *M. nitida* from Yunnan and southeast Tibet grows in southern Cornwall, but has seldom been successfully propagated. *M. delavayi*, also from Yunnan, has fewer and less showy flowers than *grandiflora*, but impressive 8-14 inch long leaves, is easily cutting-propagated, and is justifiably gaining popularity in southern England and along the Pacific Coast as a worthwhile ornamental. I haven't seen it tried in the southeast U. S. Three Mexican and one Guatemalan species are in the U. S. trials but but can probably be grown outdoors only to Zone 8 or 9 and, like other Latin American magnolias, are passed over for planting in their native countries in favor of the more showy-flowered *M. grandiflora*. *M. portoricensis* and *M. splendens* grow wild in Puerto Rico. The other sometimes evergreen U. S. species is *M. virginiana*, much more often seen in gardens in its northern typical variety. *M. virginiana* var. *australis*, actually the more prevalent variety as a native tree, can, depending on the clone, be deciduous by December, semi-evergreen, or fully evergreen, so it merits some discussion here. Then there are the hybrids, mostly combining *M. virginiana* with *M. grandiflora*. Many of the best cultivar forms in *M. grandiflora* appear to me to be descended from natural hybrids with *M. virginiana* var. *australis*, that occurred long before Oliver M. Freeman in 1937 reported his controlled crosses of *virginiana* × *grandiflora*.

M. grandiflora:

Adventurous gardeners have tried, and often succeeded, in growing *M. grandiflora* far north (and south) of its native range from southeast North Carolina to eastern Texas and central Florida. Seedlings and some cultivars

are now seen occasionally flowering up to the northern parts of the U.S.D.A. Zone 6, including the shores of Lake Erie. At this stage, we cannot say for sure which are absolutely the hardiest cultivars, since no inclusive test has tried many of them together in the same locality in or north of Zone 6. Those selected or successfully cultivated in middle latitudes would be initially more promising candidates than some newer ones not previously tested outside California or the lower South. On this basis, 'Cairo', 'Charles Dickens', 'Edith Bogue', 'Empire State', 'Exmouth', 'Freeman', 'Galissonnere', 'Praecox Fastigiata', and 'Victoria' would all be promising for cold hardiness. Others may prove equally hardy.

Farther south, the discriminating planter has a potentially wider field of choice. Since hardiness is than not such a problem, he can expect better results with nearly any cultivar than with the cheaper but often nondescript *grandiflora* seedling.

Cultivars in *M. grandiflora*, selected for superior foliage, flowers and tree form, or supposed hardiness, have been propagated asexually in England since 1737, and are becoming more prominent in recent American propagation for Zone 6 and warmer areas. They are greatly to be preferred for quicker flowering and for uniformity over the usually offered variable seedlings. The following list includes both American and European selections believed to be in current propagation, although some are not commonly offered. Many older named cultivars are extinct, or nearly so.

Alabama Everblooming - leaves lanceolate; long flowering, but probably inferior to 'Cairo' in colder climates.

Baby Doll - slow growing, small leaved, from Florida.

Baldwin - dark foliaged, compact, heavy flowering Alabama selection.

Cairo - exceptionally shiny lanceolate leaves with light tomentum, comparable to *M. nitida* for glossiness; handsome flowers, long flowering; ripe fruits reddish; broad-columnar tree. Selected in Cairo, Illinois.

Charles Dickens - spreading specimen tree (lower limbs touch ground), with wide, well-indumented obovate leaves, large flowers and very large, very red-coloring fruits in Tennessee. A tetraploid, possibly with *M. macrophylla* ancestry, so it has interesting breeding possibilities. (Ordinary *M. grandiflora* is hexaploid.)

Edith Bogue - selected in Montclair, New Jersey; relatively hardy, and easy to propagate.

Empire State - selected long ago on Long Island by H. Harold Hume; a large-flowered, long leaved cultivar that should be hardier than average. Known now at Tampa, Florida and under test at Brooklyn Botanic Garden.

Exmouth (synonyms: *exoniensis*, *lanceolata*, etc.) - the most popular English cultivar, and a good one in America, more free flowering, compact and slower growing than most seedlings. Sometimes has "double" flowers with up to 20 or more tepals, but 9 is the usual number in this and most *M. grandiflora*.

Ferruginea - one or more English clones with red-brown indumentum on

leaf undersides are propagated under this name. Some American selections have better flowers and are equally "rusty".

Freeman - *M. virginiana* X *M. grandiflora* hybrid of rather narrow upright growth. Leaves much like *grandiflora* but leaves and flowers are smaller. Partially fertile.

Galissoniere (Galissoniensesis) - French selection with handsome glossy leaves, reputedly hardy.

Griffin - small leaves, large 12-lobed flowers over long season, red fruits. Tree compact, spreading.

Goliath - light glossy green blunt leaves. Large flowers over a long season in England. Isle of Guernsey selection.

Little Gem - small glossy leaves, good sized flowers. A North Carolina selection.

Madison - lanceolate leaves, less shiny than 'Cairo'; free flowering over long season, very vigorous grower in lower South. Selected near Huntsville, Alabama.

Majestic Beauty - patented; notable for large, rather thin leaves. Southern California selection.

Nannetensis - French selection, with flowers perhaps more frequently "double" than in 'Exmouth', but variable.

Praecox Fastigiata (Kingsville Fastigate) - very floriferous, medium flowers over long season, tree narrow. Henry Hohman's seedling of 'Praecox' raised at Kingsville, Maryland, and good at Barnes Arboretum.

Russet - patented. Small leaves, intensely orange-brown tomentose beneath and held rather erect. In Florida, it is a less dense tree than most.

Saint Mary - leaves more glossy and browner beneath than usual. Has long been the most propagated cultivar in U. S., but now seems less desirable than 'Cairo' and 'Samuel Sommer'. Has been flowered at Detroit, Michigan.

Samuel Sommer - patented. Growth erect, leaves rather large and glossy, brown-hairy beneath. Good flowers.

San Marino - patented. Rather horizontal branches; ruffled leaves with light tomentum. Selected as a California street tree.

Satin Leaf - leaves long-petioled, elliptic or nearly so, intensely red-brown tomentose underneath; flowers large; a Florida selection. (A similar, but not identical selection is known in Washington and Oregon.)

Victoria - dark foliage, with considerable tomentum underneath; flowers rather small. From Victoria, B. C., Canada, and a current favorite in Oregon where it seems resistant to occasional hard fall freezes.

In addition to the named cultivars, some southeastern nurseries are propagating unnamed local selections from cuttings. Others grow seedlings from choice named or unnamed trees, which give considerably less uniform products than clonal propagation through averaging better than the usual

unselected seedling. Most *grandiflora* clones can be rooted from cuttings, some more readily than others. Budding or grafting is usually on seedlings of this species as stocks, although *M. kobus* stocks have occasionally been used.

M. virginiana var. *australis*:

Var. *australis* is usually a more upright, more nearly single-stemmed tree than the northern sweetbays (var. *virginiana*), and grows in the South to 60 feet or taller.

Var. *australis* flowers open later in the afternoon and have a more intense fragrance than those of typical var. *virginiana*.

'Henry Hicks', the principal named cultivar of evergreen sweetbay magnolia, was selected at Swarthmore, Pennsylvania, and has been hardy at Brookville, Pennsylvania and Urbana, Illinois. It is propagated by grafting on either variety of *M. virginiana*. It is vigorous as a young tree, but may seldom exceed 30 ft. at maturity in the north.

Other clonal selections, of better than usual evergreen forms may be appearing soon. I am growing, at Urbana, Illinois, one selected from the most elevated known native outpost of this variety (1600 ft.) near Crofts Chapel, Turtletown, Tennessee, which has smaller but more glossy leaves than 'Henry Hicks', and am obtaining seedlings from crosses, since var. *australis* flowers are self-incompatible. I have some intervarietal hybrids between 'Henry Hicks' and a shrubby selection of var. *virginiana*, which are very precocious and promise to yield some intermediate cultivars. Crosses have also been accomplished between the larger flowered but more nearly deciduous form of var. *australis* occurring in Texas-western Louisiana, and the fully evergreen but more tender Florida Everglades race of this variety. The latter has yielded some very dwarf hybrids with northern sweetbay.

Back-Cross and Other Hybrids:

Because of their more slender petioles, the leaves of *M. v.* var. *australis* in exposed midwestern situations are subject to more breakage in winter winds, especially when ice-coated, than those of *M. grandiflora*. I have obtained hybrids of typical *M. virginiana* with pollen of both the 'Freeman' hybrid and 'Charles Dickens', which have stouter evergreen leaves than *virginiana*, but glaucous beneath, and these produce sterile flowers of intermediate size. One or more, hardy at Urbana, may be selected for naming. (Var. *australis* seems not to cross with 'Charles Dickens' in either direction.)

Another new hybrid which is in earliest stages of testing is a persistent-leaved *M. × thompsoniana*. Pollen of the *M. tripetala* parent has consistently set seed on *M. v.* var. *virginiana* but not on var. *australis*. I now have one hybrid from an intervarietal cross *M. (virginiana × australis) × tripetala*, not yet to flowering.

William F. Kosar, while at the U. S. National Arboretum, made the cross *M. guatemalensis* × *M. virginiana*. The evergreen intermediate hybrids appear vigorous, but sterile, and offer no horticultural advantage over *virginiana* selections. Several other interspecific hybrids involving *M. virginiana* with deciduous magnolias are deciduous, so outside the scope of this article.