

## PROPAGATION OF UNDER-USED FLOWERING TREES

ROBERT L. BYRNES

Trail Ridge Nursery  
P.O. Box 967  
Keystone Heights, Florida 32656

Our nursery is located in Keystone Heights, Florida about 45 miles southwest of Jacksonville, which puts us in the middle of Hardiness Zone 9. We grow a standard line of shade and flowering trees in containers. Over the years we have tried to collect and evaluate different trees for our area with emphasis on flowering trees. We presently have several trees that show good potential.

Introducing new plants to the trade is difficult for any nursery and for a small nursery with a limited marketing budget it is especially difficult. Many retail nurseries and landscapers are reluctant to try new plant materials citing lack of demand or unfamiliarity with the plants. Therefore, we feel the ability of a tree to flower at an early age is a major consideration when evaluating them for commercial potential. Most nurserymen will agree that a plant in flower has much more salability than one that is not, especially when the customer is not familiar with the plant. This approach may eliminate the introduction of some very good trees but it is a start. We hope it will lead to a greater appreciation of different trees and ultimately a demand for the trees that require more time to flower.

There is really no difference between the techniques for propagating flowering trees and other trees. The only difference is the effect the method of propagation can have on the age that the tree will flower. Frequently trees that are vegetatively propagated from mature stock will flower at an early age, but this is not always the case. Some species and even cultivars within a species require many years to flower even when grafted or when grown from cuttings. The following is a brief description of the propagation techniques we use on some flowering trees and my observations regarding the effect of this technique on their flowering.

*Chionanthus virginicus*, our native fringetree, and *Chionanthus retusus*, the Chinese fringetree, are both excellent flowering trees for our area. Both bloom around late March or early April. Curiously, neither is readily available in our local nurseries. I believe *Chionanthus virginicus* is almost impossible to grow from cuttings. However seed propagation is quite satisfactory. There are no listed cultivars. Seedling trees can flower as early as two years of age. The seeds have a double dormancy and may require two years to germinate. We have tried to simulate the recommended stratification schedule in the nursery with little success. We find it to be easier either to collect seedlings that have sprouted in the wild or collect seeds, sow them in the field and let nature take its course.

We produce *Chionanthus retusus* from cuttings. While not the easiest tree to root we generally get 40 to 50 percent rooting when we take recently hardened terminal and subterminal new growth in July and treat with 1 percent KIBA quick-dip. Cutting-grown trees will bloom in their first spring. The biggest problem we have with cutting-grown trees is that they tend to produce a very shrubby growth and do not head up into a tree form. To correct for this in the future we intend to try seed propagation and see if *C. retusus* will flower as early as *C. virginicus* seedlings. We also intend to cut back some trees severely hoping to generate vigorous new growth.

Most *Cornus florida* selections that are in the trade come from regions farther north than our area and do not prove satisfactory for us. Therefore, trees sold in our local nurseries are almost exclusively seedlings. We have not found any red or pink cultivars that will flower consistently for us. An old white selection, 'Weaver', which was introduced by the Glen St. Mary Nursery, is the best white dogwood we have tested to date. It is very vigorous, has large, pure white blooms every year and will bloom consistently in central Florida. We have had good success producing it from cuttings.

We take terminal cuttings as soon as they are hard enough to stay erect when stuck. We use a 0.5 percent KIBA quick-dip and bunch stick them in beds of perlite. The cuttings are drenched with captan at sticking time and every two weeks thereafter. In 4 to 5 weeks we pull the cuttings out of the bed and remove those that are rooted. Rooted cuttings are potted in individual liner pots, and the remainder are restuck in perlite. Every two weeks we repeat this procedure. Cuttings that have been potted are left in the mist for about two weeks and then placed in another greenhouse under lights that extend the daylength by four hours. As soon as they develop new growth they are potted into gallon containers and placed out on beds. 'Weaver' and several others selections will flower their first year. A few other we are trying seem to take a few years.

Most flowering cherries in the trade require too much chilling for our area where we average around 300 hours. There are two, however, that have very low chilling requirements and flower consistently for us. These are *Prunus campanulata* and *Prunus* × 'Okame'.

*Prunus campanulata*, the Taiwan cherry, blooms in late winter along with *Cercis canadensis*. Its deep rose blooms are almost iridescent and put on a real show. The tree grows easily from seed with no stratification required. However seedlings do not flower for 7 or 8 years. We have had limited success producing *P. campanulata* from cuttings or from budding, and the resulting trees still seem to require quite a few years to bloom, therefore, it's difficult to get Taiwan cherry introduced into the trade. *Prunus* 'Okame' is easily

grown from cuttings and will flower the following winter. It shows the greatest immediate promise for us.

One very nice flowering tree that has been overlooked by the nursery industry is *Rhodoleia championii*. This evergreen tree, which is native to China, has thick leathery dark-green leaves with reflective silver undersides. It produces clusters of rose-colored camellia-like flowers in late winter.

Vegetative propagation of a few trees in the Gainesville, Florida, area proved almost impossible over many years of attempts. Cuttings from a group of seedlings that we started four years ago rooted at rates from 0 to 95 percent. Of the better rooting ones, we are selecting those with the best form. A few of the original seedlings flowered sparsely at three years and several more flowered the following year. The few cutting-grown trees we have observed appear to flower in one or two years. Interestingly the cutting-grown trees tend to grow more upright than seedlings, which start off quite shrubby. Because of this and the scarcity of seeds it appears vegetative propagation will be preferable. Rooting seems to be best in late summer using 1 to 2 percent IBA.

We are working with several trees of the genus *Michellia* that show considerable ornamental potential. *Michellia doltsopa* and *Michellia doltsopa* × *M. figo* hybrids are faster and larger growing than *M. figo*. They bear fragrant white to cream magnolia-like flowers in December in our area. The flowers are around 3 in. in diameter and much more conspicuous than those of *M. figo*. Cuttings root readily throughout the summer using 0.5 to 1 percent KIBA quick-dip, and all flower at an early age.

*Michelia maudei* is a small evergreen tree that for us is in bloom almost half of the year. It has 5- to 6 in. pure white magnolia-like flowers that are very fragrant. It blooms mid-December through mid-March and then again from early June through late July. Our original seedling trees flowered at the age of 5 years. We rooted cuttings from the tree before it reached maturity. However, since it started flowering it has been difficult to get good cutting wood as there is a large flower bud at almost every node of the new growth. We were able to get some cuttings without buds from the last of this summer's new growth and will hopefully have success rooting them as this tree certainly has much ornamental potential.