Production of *Sinojackia rehderiana* and *Sinojackia xylocarpa* from Seed©

H. William Barnes
Lorax Farms, 2319 Evegreen Ave., Warrington, Pennsylvania 18976 U.S.A.
Email: "Bill Barnes" <loraxfarms@verizon.net>

INTRODUCTION

Sinojackia rehderiana Hu, jack tree, and *S. xylocarpa* Hu are two deciduous members of the Styraxcaceae from Eastern China (Griffiths, 1994). Both trees are hardy to Zone 6 and could be significant additions to the flowering tree market from Zone 6 to 8.

In the landscape the trees are somewhat shrubby and can form a single stem, which persists for a limited time only to be followed by fast growing basal shoots that quickly convert the tree to a clump form. However in deep shade this tendency is reduced, and single stem specimens can be found. Flowering is in the spring for both species, and the trees have a strong resemblance to other members of the *Styrax* family, particularly *S. japonica*. Differences between the *Sinojackia* and *Styrax* pertains to the strong central leader and stem of *S. japonica* as contrasted to the more open clump characteristics of *Sinojackia* species and pubescent leaves of *Styrax* as opposed to the glaucus leaves of *Sinojackia*.

Culturally they are pretty much the same with very similar requirements and little or no pest problems. Being ready clump formers *Sinojackia* taxa are overall smaller in stature and do not have the robust nature of *Styrax*. Both of the *Sinojackia* can be raised in full sun to part shade, which opens up greater usage in the landscape as compared to the *Styrax*. Treated as understory trees they perform quite well and do give a good floral display with white pendulous fragrant flowers quite reminiscent in shape and form to that of *S. japonica*. The fruit, however, differs substantially with the *Sinojackia*. *Styrax japonica* fruit is smooth and round with a light green outer shell holding a very dark nut-like seed. *Sinojackia* have fruits that are elongated, being 2–3 times in length as compared to diameter and quickly tapering to a very sharp point. The seed coat of both species is brown with dark speckling. Also the fruit of *Sinojackia* is much larger than that of *Styrax* and hangs down on the very long peduncle that once supported the flower. There are some subtle differences in the fruit characteristics of *S. rehderiana* as compared to *S. xylocarpa* with a few features sufficient to tell them apart but otherwise they are quite similar. The fruit of both *Sinojackia* is so unusual as to extend a unique contribution to the landscape uses of the plant that none of the *Styrax* offer.

Two cultivars of *S. xylocarpa* have been introduced to the trade. Efforts of the J.C. Raulston Arboretum in Raleigh, North Carolina (J.C. Raulston Arboretum, 2003) have produced *S. xylocarpa* 'La Grima', a narrow fastigiate form and Brian Upchurch from Highland Creek Nurseries, Fletcher, North Carolina, (PendulousPlants.com, 2005) has introduced *S. xylocarpa* 'Linda Carol', a unique weeping form. To date no cultivars of *S. rehderiana* are available.

PRODUCTION

While it seems plausible that the *Sinojackia* taxa could be rooted, no reports of this method of production are available. Highland Creek's method of *S. xylocarpa* 'Linda Carol' depends on grafting to *S. xylocarpa* seedlings with no particulars being mentioned. It is probably a safe bet that the J.C. Raulston Arboretum's cultivar 'La Grima' is also produced by grafting.

For the purpose of raising either of the two *Sinojackia* species for landscape use or for root stock seedlings are required. The production of *Sinojackia* seedlings pretty well follows the same pattern of other members of the *Styrax* family. As with *Halesia carolina,* (Dirr and Heuser, 1987), *H. diptera* (Barnes, 2005), *S. japonica*, and *S. obassia* (Dirr and Heuser, 1987), after ripening is a fundamental requirement. This is usually accomplished with 5–6 months warm moist stratification in the dark. After this initial after-ripening period is achieved a moist cold period of 60–90 days is necessary to break dormancy. From that point on seeds can be sown in cell trays or beds or pots depending upon how the seedlings are to be handle. Germination though is sporadic and has properties that are similar to the difficulties encountered with *H. diptera.* Once the seedlings are growing to the point of having several normal leaf pairs they can be handled much the same as with *S. japonica.*

LITERATURE CITED

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