

## Very Curious Shrubs!

December is not a month known for colorful foliage among deciduous and semi-deciduous plants. Typically, plants are now nearly bare, although with the advent of the Holidays and family get-togethers, the lack of garden interest is probably little noticed. Yet, for those looking for seasonally appropriate garden color, there are a few semi-deciduous plants suitable for Holiday cheer. One little known consideration with a great ancestry is x *Gordlinia grandiflora* (as seen at right in September) commonly called Mountain Gordlinia or simply Gordy to his gardening friends!

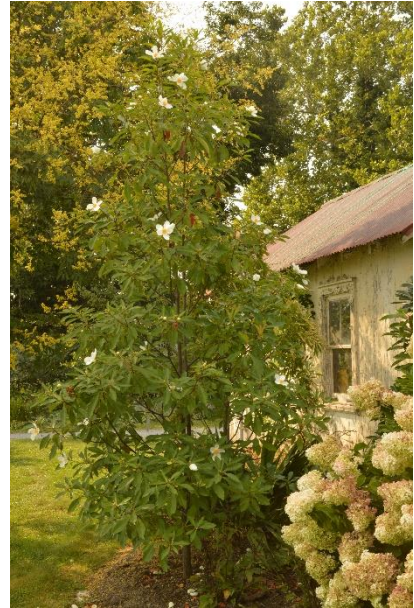
x *Gordlinia grandiflora* is a member of the Theaceae or Tea Family and as the 'x' before the genus indicates, it is an intergeneric cross or a cross between two distinct genera. In this case, it is a cross between *Gordonia lasianthus*, the Loblolly Bay and *Franklinia alatamaha*, the Franklin Tree. The cross was made by Thomas Ranney and Paul R. Frantz of N.C. State University in August of 2002 and resulted in 9 highly vigorous seedlings. So vigorous in fact, that they grew to 6' tall and flowered within 9 months of germinating!

Although the progeny of the cross is certainly the focus, the nomenclature of the two parent plants is highly intertwined and much deserving of a deeper look into this hybrid's ancestry.

*Gordonia lasianthus* was initially named *Hypericum lasianthus* by the Swedish botanist Carl Linnaeus (1707-1778) in 1753. It was reclassified and properly described in 1771 by the British naturalist and linen merchant John Ellis (1710-1776). The inspiration for the name came from the Englishman James Gordon (1708-1780), an 'eminent and highly respected gardener' as once proclaimed by Ellis. Loblolly Bay is native along the coastal regions of Mississippi east to Florida and north to southern Virginia. Of the roughly 40 species of *Gordonia*, this is the only member native to North America.

The remainder are native to Asia with one species found in South America. It bears oblong evergreen foliage, reaching 4-6" long with attractive, 2-3" diameter flowers. Each flower displays 5 white petals and a central boss of bright orange anthers surrounding a central stigma. Flowers appear from June to August, with the seed capsules opening from October through early winter. I must admit it is a plant that I have yet to see and its southern provenance and hardiness in zones 7-10 precludes it from enduring most NJ winters.

By contrast, *Franklinia* is a plant I have known and grown for over 40 years. The image at right is a specimen at Longwood Gardens. It is now extinct in the wild and owes its very existence to a Quaker farmer named John Bartram (1699-1777). Bartram was born and raised in the Philadelphia area and



developed a strong interest in botanizing throughout Eastern North America. He bought land along the Schuylkill River in 1728 and gradually established a small arboretum which still exists to this day. Bartram's botanical reputation even spread to King George III who bequeathed him the title of Royal Botanist of North America, along with an annual payment of £50, the equivalent of roughly \$17,000 today. This funding allowed him to travel more extensively in pursuit of interesting new plants.

His third son William (1739-1823) shared in his father's botanical interests and often they would explore together. On October 1<sup>st</sup> of 1765 they had crossed the Alutamaha River in Georgia, just up-stream from the town of Darien where they came across a number of small trees that John described as 'very curious shrubs.' The area was a lowland, roughly 2-3 acres in size and located between two sandy hills. It was the first time the existence of the plant was formally recorded, although they failed to provide a name for the plant at that time.

Like his dad, William's enthusiasm for collecting plants helped him gain a financier. In this case funding came from Dr. John Fothergill (1712-1780). Fothergill was a physician in London who, at that time owned the largest botanical garden in England. He generously offered to finance a multiyear expedition for William, which lasted from 1773-1777.

Quickly returning to Georgia in 1773, William sought out those 'curious shrubs' he and his dad had found years prior. As yet unnamed, William decided to name it *Gordlinia pubescens*. The plants bore a strong similarity to the Loblolly Bay he had seen and the lightly hairy or pubescent seed capsules (as seen above) inspired the species epithet. Upon returning home in 1777, he planted seed in his father's arboretum and sent specimens overseas to Fothergill. When these specimens were studied by Daniel Solander (1735-1782), a botanist associated with Fothergill's arboretum, it became apparent that this was a unique genus and not a species of *Gordlinia*. John Bartram had been a longtime friend of Benjamin Franklin (1705-1790) and the two even participated in creating the American Philosophical Society in 1743. In recognition of their friendship, John named the plant in his honor as well as recognizing its origin by the river. Oddly, he did not formally describe the plant, which was performed by William Bartram's cousin, Humphrey Marshall in 1785. Marshall was also a well-





recognized botanist who traveled throughout eastern North America in search of new plants. Marshall's son, Moses (1758-1813) was the last to officially see the trees along the Alatomaha River in 1790, although a Scottish nurseryman and botanist by the name of John Lyon (1765-1814) supposedly saw the plant in 1803.

In the very blink of geologic time, this very curious shrub vanished from the wild. All the plants in cultivation today are actually direct descendants of the plants William planted at his father's home. Fortunately, *Franklinia* is very easy to propagate and unlike *Gordonia*, it is also very hardy, easily enduring winters in zones 5-9. The plants typically grow as large, multistemmed shrubs although they can easily be trained to a single stemmed small tree. Growing from 20-30' tall by 15-20' wide, the plants feature glossy dark green foliage that is arranged alternately, although the leaves typically appear as a whirl at the tips of the branches.

The leaves are oblong, reaching 5-6" long and develop radiant, deep red fall color in October and November, as seen above at right. The flower buds appear in the leaf axils, opening into 5-petaled white blossoms with a large boss of bright orange anthers at the center (as seen above). The flowers reach 3-4" in diameter and are larger and showier than those of *Gordonia lasianthus*. In addition, flowers appear from July through October, often with the beautiful red fall color of the foliage serving as a backdrop.

Although one of the plant's more subtle qualities, *Franklinia* also sports interesting ridge and furrowed bark for those who seek out winter interest. The furrows are light yellow and flow down the stems in a stream-like configuration although the 'streams' fail to merge together into any rivers (as seen on the right). The ridges continue to grow and become more distinctive over time, developing a rather corky and attractive appearance to bark enthusiasts, such as myself!

One far less obvious yet, rather intriguing aspect of Franklin Tree is the process called zygotic dormancy. It is a process that is in fact rather rare in flowering plants.

The zygote is the fertilized ovum and will ultimately develop into a seed. In Franklin Tree, the zygote stops developing during late fall and winter, only to begin once again come the warmer days of spring. As a result, the seed does not fully ripen until the following June or July, just as



the new flower buds are starting to open. This attribute, combined with its exceptional winter hardiness has led authorities to believe the plant originally grew in northern regions and was pushed south during the last glacial period. Failing to move back north, it slowly declined in the warmer temperatures of Georgia and ultimately vanished. There are other theories to explain its extinction but, truth be known, we will probably never have a true answer for its disappearance.

The cross between the two genera by Ranney and Frantz produced a plant that embraced the best



attributes of both parents! The plants are very upright in form, growing to 20-30' tall with a spread of 8-15'. The lanceolate to elliptical foliage is once again glossy dark green in color but, it appears along the length of the new growth rather than whirls at the branch tip, typical of *Franklinia*. The flowers primarily appear from July into October, although I have photographed flowers blooming as late as November 28<sup>th</sup> in central NJ. Like *Franklinia*, the flowers appear in the leaf

axils. The white petaled flowers of x *Gordlinia* are slightly larger than its parent, often reaching 5" in diameter and open further to produce a more flattened appearance as seen above left. The central boss of anthers is also larger and more prominent, displaying more of a yellow than

orange color. In the image on the right, the x *Gordlinia* flower is on the left and *Franklinia* on the right. Similar to *Gordonia*, the plant retains its foliage well into the winter in NJ. However, much like *Franklinia* some of the leaves turn brilliant red, providing a December display of green and red as seen in the last image below. What could be more appropriate for the Holiday Season! As the weather turns colder come January the foliage often becomes tan, especially in more exposed locations. Locating the plant where it can benefit from the protection of a building or a mass of evergreens is certainly beneficial to the winter and early spring appearance of the foliage.



I have grown x *Gordlinia grandiflora* successfully in the vicinity of New Brunswick, NJ for over 6 years and at Frelinghuysen Arboretum for 3 years without any visible issues, although the plant is often listed as hardy in zone 7-9. During those years in New Brunswick, the temperatures did dip below zero on a few occasions and I feel it is worth attempting to grow this plant in zone 6b climates. The branches have also proven to be very pliable under the weight of snow! Like Franklin Tree, plants develop the best floral display and early winter color in full sun, although

the protective microclimate provided by a nearby shade tree, conifer or building is always a beneficial consideration. *Franklinia* has a bad reputation for being difficult to establish in the garden, which I can verify after killing a number of fine specimens. The reputation is primarily due its susceptibility to Phytophthora, a soil borne water mold that was once considered a fungus and impacts plants growing in poorly drained soils. Of course, the ideal soil is the mythical moist yet well-drained soil that is well enriched with organic matter and not compacted. The intergeneric cross has proven to be less particular about soil type and is easier to establish.

Understandably, x *Gordlinia grandiflora* is not a plant that readily comes to mind when considering garden interest for December. It is a plant that I have enjoyed for its ease of culture, beautiful late summer bloom and festive early winter foliage. Granted, those leaves lingering into late January often turn tan, but a plant with fall and early winter interest is a unique commodity in NJ. Just like Franklin Tree, it too is a ‘very curious shrub’, but it is a plant you most certainly should add for your holiday celebration. Happy Holidays!



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