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Know Your Natives

By Phyllis Risch, SMG Member

Native Trees, Part 1 of 2

Kentucky Yellowwood

A rare and beautiful tree, the Kentucky Yellowwood, also known as the American Yellowwood is a hardwood tree native to North America. It is a member of the legume family and is the only species in North America. There are some related species in China and Japan. After several iterations the Yellowwood is known as *Cladrastis kentukea* so formally named by Valma Rudd in 1971 using the Botanical Rules of Nomenclature. The genus name *Cladrastis* is from the Greek *Klados* and *thraustos* meaning “branch” and “fragile”

Some of the earliest known documentation of the tree was penned by a French botanist, Andre Michaux. In March of 1796 Michaux was examining and collecting botanical specimens in an area of North America soon to be known as Tennessee in the Cumberland plateau near the Cumberland river. He observed the grey barked, vase shaped tree and later the yellow wood. He envisioned its possible use as a source of dye. He never saw the tree with its spectacular fifteen inch long Wisteria like white blooms but was able to collect seed to take back to France. In 1813 Michaux’s son Francois returned to the area and was able to collect specimens and seed to send to France. He named the tree *Virgilia lutea*.

The plant is a midsize deciduous tree growing to an average height of 30 to 40 feet. It is hardy in zones four through eight. *Cladrastis* is native in twelve US states. From western North Carolina, west to Eastern Oklahoma, Southern Mississippi, Indiana, Kentucky and south to central Alabama. The growth rate is 9 to 12 feet over an eight to ten year period and generally blooms after the age of ten years. Yellowwood trees prefer moist, well drained

soil but will tolerate alkaline, dry, clay sites. The fruits are thin, flat dehiscent pods approximately 4 inches long. The *Cladrastis* blooms every two to three years, likely to preserve energy as it blooms profusely and draws numerous pollinators.

The leaves are pinnately compound growing up to a foot long. In the Fall the foliage is a striking golden yellow. The growth habit of the tree is vase-like with limbs often growing low on the trunk. Limbs tend to grow inward and the wood is dense and heavy. This causes problems with strong winds or heavy ice so judicious pruning in summer is necessary.

The Yellowwood is considered rare but not threatened. In Eastern Kentucky it is most common along the Kentucky River Palisades upon limestone cliffs. In Indiana the Yellowwood trees grow in Brown County State Park in the Ogle Hollow Nature Preserve and Trail.

Since the native stands of Yellowwood are relatively spread out there has been interest in the effects on pollination of the trees and consequently genetic diversity. The Nature Conservancy, in conjunction with the Hardwood Tree Improvement and Regeneration Center, aligned with Purdue University horticultural genetics scientists and a study of the genetics of native Yellowwoods was performed. The genetics of the populations did vary and the Indiana population was deemed a “relic” population due to relative lack of genes being introduced from other populations.

Continued



Photos: Purdue Arboretum



Notes of interest:

- Prior to the introduction of Europeans to North America, various indigenous peoples (including the Cherokee Nation) utilized the Yellowwood for carving canoes, tools and weapons and the bark of the roots for dyes.
- In Cave Hill Cemetery and Arboretum in Louisville Kentucky a larger than usual Yellowwood stands at least 80 feet high known as the Kentucky Champion.
- In 1822 a renowned botanist and polymath named Constantine Rafinesque sent seeds to Thomas Jefferson at Monticello. In his thank

you Jefferson purportedly replied "I'm too old to plant trees for my own gratification. I shall do it for posterity".

References:

- <https://bernheim.org/yellowwood>
 - <https://cavehillarboretum.org/Yellowwood>
 - <https://missouribotanicalgarden.org>
 - <https://mortonarboretum.org>
- <https://piedmontmastergardeners.org/article/yellowwood-a-rare-and-beautiful>