

TREE OF THE MONTH – October 2011

Bald Cypress (*Taxodium distichum*)

Cypress pond is the jewel of our Eastern North America collection. This is especially true in the fall, when the floating bridge is framed by the rusty-orange foliage of bald cypress (*Taxodium distichum*), which are planted in and on the edge of the water. This species of cypress is deciduous, a relatively rare trait for a conifer. Its soft, delicate needles change colour before being shed in the winter, leaving the tree “bald” until spring.

The cool, wet, woodland north of the bridge was designed to evoke the atmosphere of the deepwater swamps of Louisiana, where bald cypress dominates the landscape. Native to southeastern United States, *Taxodium distichum* is usually found in or near water. They thrive in swamps, river banks, and floodplains, but also do well in dry soil. They provide important habitat for fish, birds, alligators and other wetland wildlife. In their native range, their branches are often draped with Spanish moss (*Tillandsia usneoides*).

Bald cypresses are often surrounded by knees - rounded, woody projections that grow from their roots and stick up through the soil. It is widely believed that knees breathe for the roots, which are often submerged in low-oxygen soggy soil or swamp water. This is often taught in schools and was featured in the popular History Channel reality show ‘Swamp People’. Unfortunately, it isn’t true.

Experiments conducted back in the 1950’s failed to provide evidence of respiration through knees. They don’t have any lenticels, special porous cells found in aerial roots of mangroves that allow oxygen to pass through the bark and enter the sap. If you cut away the knees around a bald cypress, the tree will not suffocate. Trees growing in very deep water (where respiration would be most needed) don’t even have knees.

A number of theories of knee function have been posed over the last century, from carbohydrate storage to stabilization and asexual reproduction, but none of them hold up. The purpose of cypress knees is still a mystery.

To find these trees in the Garden, head out to Cypress Pond. Be sure to step off the concrete path and explore some of the smaller trails. And watch out for the alligator.