



Alabama's *TREASURED* Forests
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Live Oak

(*Quercus virginiana*)

By Fred Nation, Environmental Services, Baldwin County

Our regal, enormous live oaks are familiar, beloved emblems of the American South. Superlatives abound: they can become huge, among the most massive native plants east of the Mississippi River. According to the formula used by the Alabama Forestry Commission to determine champion trees, a live oak in Mobile, which is 82 feet tall, with a trunk circumference of 30 feet and a crown spread of 136 feet, is the largest of Alabama's 146 state champion trees.

Along with yellow pines, live oaks are also among our most historic Southern trees, with dozens of important uses that began with the earliest prehistoric Americans.

A cold-limited, Southern species, live oak is native from southeastern Virginia, along the Atlantic coast, through Florida and the central Gulf coast, into coastal and central Texas. When planted much north of its native range, cold damage can occur.

Live oaks are certainly distinctive. When they occur as large, solitary trees, particularly on open, sandy sites, they are impressive landmarks. Typically the trunks are short and they can become immense, with thick, dark brown, deeply furrowed bark. The crowns are broad, spreading and rounded. The enormous limbs often sweep downward and then arch upward near the tips. Even the evergreen leaves are interesting and unusual. Dark green, to about 4 inches long and 2 inches wide, they are shiny on top, pale gray-green below, with tiny grayish, star-shaped hairs. The leaves are thick, stiff, and brittle, prone to break if bent, and they are somewhat "boat-shaped," with the margins turned downward.

Oaks fall into two groups: the white oaks that produce acorns in one growing season, and the red oak group that ripens fruit over two years. White oaks typically produce acorns with less tannin, and they are therefore less bitter than acorns produced by red oak species. Live oak trees are in the relatively palatable white oak group, and since prehistoric times their acorns have been gathered and used as a nutritious food staple. The acorns are shiny, dark brown, about one inch long, rather slender, with

the scaly cup enclosing one-third or more of the nut. Live oaks produce large acorn "mast" crops during the fall, which provide an important food source for many mammals and birds.

Historic uses of live oak are numerous and well-documented. The tannin-rich bark was frequently used as a tanning agent for deer hides and as a mordant for dyeing fabrics; Louisiana's Houma Indians made a tea from the inner bark to treat dysentery; leaf and stem galls from live oaks and other oak species were mashed and mixed with iron sulfate or iron filings to make blue-black "gallo-tannic ink," widely used in eighteenth and nineteenth century documents, including the Constitution of the United States!

In the days of fighting sail, our stately live oaks had a distinguished career in the fledgling American Navy. The wood, which is heavy and immensely strong, with an irregular grain, was in great demand for hull planking and framing members for warships. The USS *Constitution* was built with a 24-inch triple-layered hull made of white oak with a live oak core. In 1812, during an engagement with the British warship HMS *Guerriere*, 18-pound cannonballs bounced off *Constitution's* hull, and a British sailor was heard to exclaim, "Her sides are made of iron!" Not iron . . . "Old Ironsides" was built with good, strong Southern live oak! 🌳



Photo by Fred Nation