

Live Oak: State Tree of Georgia

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Common name: Live Oak

Other names: Virginia live oak, Spanish oak, Spanish encina

Scientific Name: *Quercus Virginiana*

Habit

Live oak is a beautiful, spreading, medium-sized to large tree 45-65 feet tall and 3-4 feet in diameter. It was named for its evergreen foliage. The largest registered live oak now living is 11 feet in diameter, 55 feet tall, with a crown spread of 132 feet. This tree is growing near Lewisburg, Louisiana. The largest live oak in Georgia is almost 10 feet in diameter, 86 feet tall, with a limb spread of 143 feet. This Georgia champion is in Waycross, Georgia.

Live oaks usually have a large, multicolumned trunk base that divides after only a few feet into 3-5 arching, horizontal branches that form a wide-spreading, low, dense crown sometimes more than 100 feet across. The largest trees are usually 200 to 300 years old. Live oak makes a great shade and street tree in its native range.

Leaves are held until new leaves appear in Spring. Live oak leaves are simple and alternate along the twigs. Leaves have an extended oval to elliptical shape and are 2-4 inches long and 1-2 inches wide with smooth, rolled edges, and occasionally, a few teeth. The leaf tip is rounded. The underside of the leaf usually has grayish hairs and a yellow mid-vein.

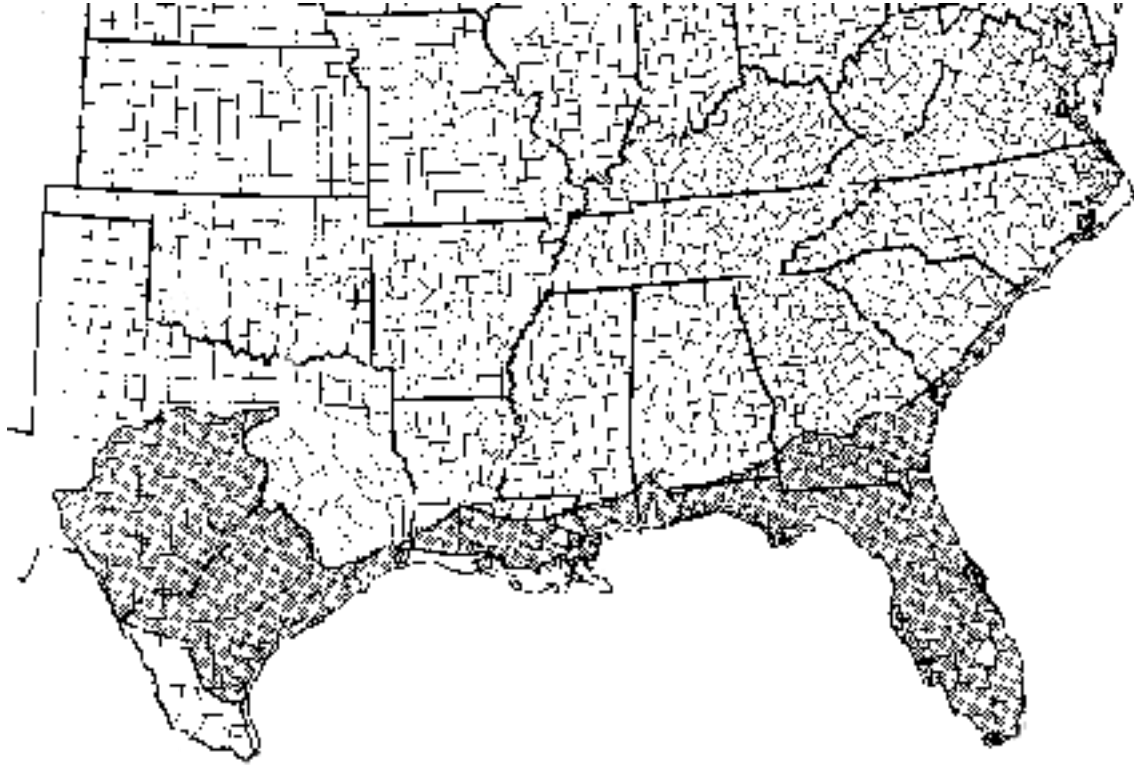
Male flowers are hairy catkins dangling 2-3 inches below the twigs. Female flowers, found on the same tree, are small, slender, hairy stems 1-3 inches long with bright red tips.

The fruit is an acorn that matures in one year. Acorns are oval, $\frac{3}{4}$ to 1 inch long and dark, shiny brown. The acorn is enclosed by a bowl-shaped, reddish-brown cap for $\frac{1}{3}$ its length. Fruit forms in longstalked clusters of 3-5 acorns. The small acorns are eaten by many native, migrating, and wintering songbirds as well as quail, turkey, squirrel and deer. Live oak starts bearing fruit at a young age and bears a good crop

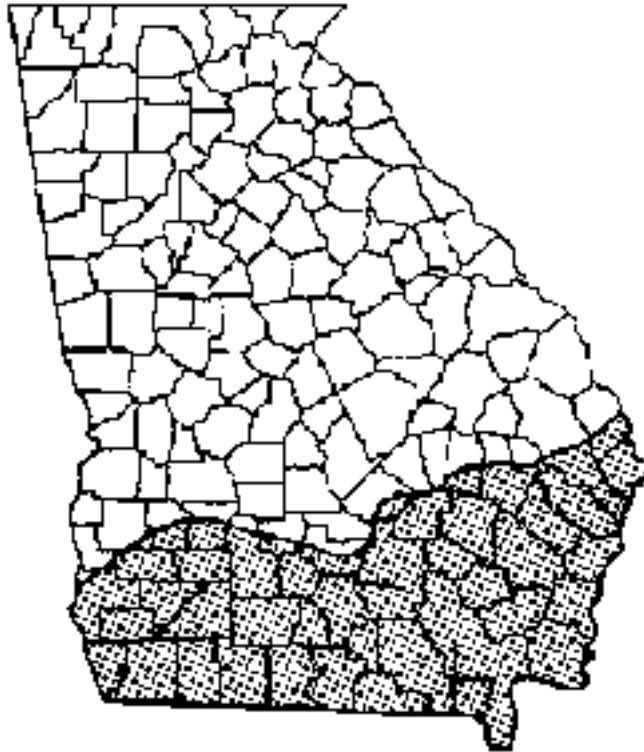
almost annually.

Habitat

Live oak grows from coastal Virginia, south to southern Florida, and west to central Texas. Live oak is found on sandy soils along the Atlantic and Gulf of Mexico's coastal plains. Live oak forms pure stands on deep sands. It also grows on a wide variety of other soils.



Native range of live oak.



Native range of live oak in Georgia.

Live oak is found in many different habitat types including floodplains, barrier islands, upland forests, swamp hammocks, sand dunes, pine woods, and stretched over pastures. Dwarf varieties of live oak are found on the most droughty of sites. Live oak tolerates salt spray and is the dominant tree in coastal forests and on island sand dunes. Damage from cold weather keeps live oak from thriving farther north and inland from the coast.

In many areas, live oak is the dominant forest tree. Live oak is intolerant of competition and tends to dominate sites where other trees have difficulty growing. Once live oak is established and growing on a site, it is tough to kill by cutting although they can be more easily killed by fire. Most present live oak forest sites used to have large stands of longleaf pine. Fire prevention and cutting practices pushed out the pine and live oak invaded.

Wood

Live oak is one of the heaviest, toughest, and durable native woods. It seldom grows in a long, clear bole for premium lumber. Sapwood is grayish-white and heartwood is yellow-brown. The wood has irregular, tight grain and is diffuse porous.

Historic Tree Use

Live oak timbers were once used (and are occasionally still used) for building ships. The nation's first national forests were purchased for the navy around 1800 to preserve live oaks for ship building. Some

of these forests are still held by the Navy. Because of the large, curving branches near the ground, live oak timbers were ideal for the curved parts of ship hulls. Ship hulls made of live oak were very strong.

The frigate USS Constitution, nicknamed "Old Ironsides," had its hull made of Georgia live oak. In the War of 1812 she engaged H.M.S. Laurant. Old Ironsides shattered and crushed the Laurant's hull made of longleaf pine.

Beside ship building, the wood has been used for tool handles, wheel hubs, and wooden sprockets. Bark was used to tan leather. A vegetable cooking oil was pressed from the acorns. Indians and early settlers soaked the tannins out of the acorns with water and made grits, flour, and roasted nuts.

Varieties

Live oak has a number of unique populations and varieties. Only a few have been cataloged. Sand Live Oak (*Quercus virginiana* var. *geminata*) and Dwarf Live Oak (*Quercus virginiana* var. *minima*) are two common varieties. Live oak can hybridize with several other oaks including overcup oak, post oak, swamp white oak, bur oak and Durand oak.

Similar Species

Live oak can be confused with Darlington oak (*Quercus hemispherica*.) Both live oak and Darlington oak have leathery, thick, evergreen, unlobed leaves. Darlington Oak has hairy, saucer-shaped acorn cups and leaf tip bristles of the red oak group. Darlington oak is a nearly evergreen tree. Leaves are widest near tip and diamond shaped with a wavy, slightly rolled, or coarsely toothed edge.

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