

# Technical Report



## Wetland Flora

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### Sweet Gum

*Liquidambar styraciflua* L.

#### Growth Habit and Diagnostic Characteristics

Sweet gum is a tall tree (40 - 120 feet) with somewhat star-shaped leaves. The leaves are usually 5 lobed, but can vary from 3 to 7 lobes, and are arranged alternately on greenish branchlets. Margins are toothed and green on both sides, but slightly lighter green on the bottom. Its common name may come from the fresh leaves, that when crushed, give off a mild, pleasant odor. Twigs and branches are often corky-winged, an unusual feature, in just a few trees in temperate regions. As the tree matures, these corky wing-like projections usually are not apparent. The bark of mature trees is gray with longitudinal ridges and alternating deep grooves.

Perhaps the most striking feature of this tree is the spikey, pendulous, ball-shaped capsules, which vary from green in summer to rusty-brown in the fall. Small winged seeds, often unnoticed, escape from the spherical capsules when the capsule dries and dehisces.

Sweet gum leaves are somewhat similar to red maple (*Acer rubrum*) (Wetland Flora, no. 91-7, July, 1991); however, red maple has opposite leaves which are whitish underneath. Red maple also does not produce ball-like fruits, but rather, winged fruits . . . the typical maple seed.

Sweet gum should not be confused with black gum (*Nyssa sylvatica*), for sake of a similar common name, which has simple, unlobed alternate leaves and bluish, fleshy fruits.

#### Distribution

*Liquidambar styraciflua* is found from southern New England, west to southern Ohio, south to Oklahoma and east to central Florida.

#### Habitat

Sweet gum is found in a wide range of habitats from damp slopes to winter wet woods with saturated soils. There are indications that in the Southern United States, *L. styraciflua* grows best in intermediately flooded sites.

In Virginia, sweet gum is a frequent community component of winter wet woods, otherwise known as palustrine, forested, broad-leaved deciduous, temporarily flooded (PFO1A) wetlands according to the federal wetland classification scheme. Many PFO1As in coastal Virginia are dominated by red maple in association with other species such as sweet gum, black gum, sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), loblolly pine (*Pinus taeda*), and American hornbeam (*Carpinus caroliniana*).

#### Ecological Values/Benefits

Specifically, sweet gum produces many seeds that are eaten by chipmunks and squirrels, as well as quail, wild turkey and songbirds. The bark and cambium of young twigs are a favored food for beaver in the southeast.

Holistically, as an associated species in palustrine wetlands, *Liquidambar styraciflua* accrues, in part, the general ecological values of these wetland habitats. These wetlands function as natural filters of high nutrient loads, which often originate from croplands, as well as sediment runoff, pesticide and herbicide residues and other potential toxins.

#### Hydrophytic Factor/Federal Delineation

According to the *National List of Plant Species that Occur in Wetlands: Virginia* (1988), *L. styraciflua* is classified as a **facultative plant (FAC)**. FACs are plants that are equally likely to occur in wetlands or nonwetlands (estimated probability 34%-66%).

*Liquidambar styraciflua* L.

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