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Florida-Friendly Landscaping™ PROGRAM

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# *Liquidambar formosana*: Formosa Sweetgum[1]

Edward F. Gilman and Dennis G. Watson[2]

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## Introduction

Formosa Sweetgum has a wide, pyramidal shape when young but eventually grows to a rounded or irregular form, reaching 40 to 60 feet in height with a 35 to 45-foot spread. Young specimens may vary in form and be somewhat irregular. It has a more rounded crown than native Sweetgum. The large, three-lobed leaves, purplish-red when young, are dark green through the growing season and in fall turn a beautiful yellow-red color in the south or red in the north. Branches are covered with characteristic corky projections. Formosa Sweetgum makes a nice park, campus or residential shade tree for large properties.

## General Information

**Scientific name:** *Liquidambar formosana*

**Pronunciation:** lick-wid-AM-bar for-moe-SAY-nuh

**Common name(s):** Formosa Sweetgum, Chinese Sweetgum

**Family:** *Hamamelidaceae*

**USDA hardiness zones:** 7A through 9B (Fig. 2)

**Origin:** not native to North America

**Uses:** shade; street without sidewalk; tree lawn > 6 ft wide; Bonsai

**Availability:** somewhat available, may have to go out of the region to find the tree

## Description

**Height:** 40 to 60 feet

**Spread:** 35 to 45 feet

**Crown uniformity:** irregular

**Crown shape:** pyramidal, oval

**Crown density:** moderate

**Growth rate:** moderate

**Texture:** coarse



Figure 1. Middle-aged *Liquidambar formosana*: Formosa Sweetgum
Credit: Ed Gilman

### Foliage

**Leaf arrangement:** alternate (Fig. 3)

**Leaf type:** simple

**Leaf margin:** serrate

**Leaf shape:** star-shaped

**Leaf venation:** palmate

**Leaf type and persistence:** deciduous

**Leaf blade length:** 2 to 4 inches, 4 to 8 inches

**Leaf color:** green

**Fall color:** yellow, red

**Fall characteristic:** showy

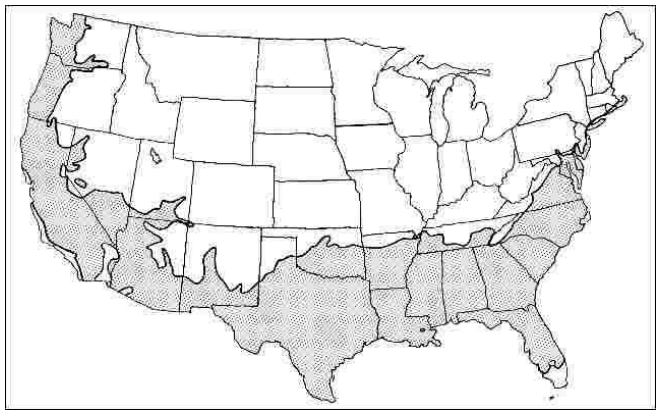

Figure 2. Range

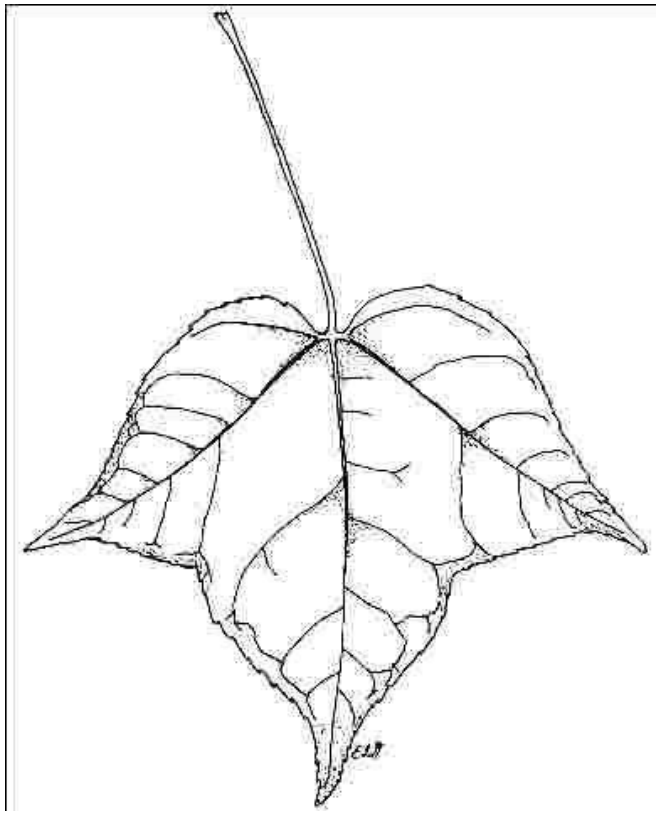

Figure 3. Foliage

## Flower

**Flower color:** green

**Flower characteristics:** not showy

## Fruit

**Fruit shape:** round

**Fruit length:** 1 to 3 inches

**Fruit covering:** dry or hard

**Fruit color:** brown

**Fruit characteristics:** attracts birds; not showy; fruit/leaves a litter problem

## Trunk and Branches

**Trunk/bark/branches:** branches don't droop; not showy; typically one trunk; thorns

**Pruning requirement:** needed for strong structure

**Breakage:** resistant

**Current year twig color:** gray, brown

**Current year twig thickness:** thick

**Wood specific gravity:** unknown

## Culture

**Light requirement:** full sun

**Soil tolerances:** clay; sand; loam; acidic; occasionally wet; well-drained

**Drought tolerance:** moderate

**Aerosol salt tolerance:** unknown

## Other

**Roots:** can form large surface roots

**Winter interest:** no

**Outstanding tree:** no

**Invasive potential:** little invasive potential

**Ozone sensitivity:** unknown

**Verticillium wilt susceptibility:** unknown

**Pest resistance:** resistant to pests/diseases

# Use and Management

Be careful when locating Formosa Sweetgum as a street tree since its large, aggressive roots may eventually lift curbs and sidewalks. Plant trees 8 to 10 feet or more away. The fruit may be a litter nuisance to some in the fall, but this is usually only noticeable on hard surfaces, such as roads, patios, and sidewalks. Fruit is softer than *Liquidambar styraciflua* and probably is less of a nuisance.

Although it grows at a moderate pace, Formosa Sweetgum requires continually-moist soils. It is recommended only for acidic soils since chlorosis develops on soils with a pH over 7.5. It grows very well in clay soils which hold moisture, and tolerates wet soil. Formosa Sweetgum is difficult to transplant in the fall from the field due to a coarse, deep root system on well-drained soil and should be planted from containers or transplanted when young. Grows well as a street tree in confined soil spaces due to its ability to tolerate poorly aerated soil, but only when supplied with adequate moisture. This tree should be tested further for adaptability to urban sites. *Liquidambar* spp. grow very well for several years after transplanting in Texas and in other areas with a high pH subsoil but chlorosis often develops as some roots establish themselves in the alkaline subsoil. The tree is very susceptible to *Endothia* canker infection and, in some areas of the country, has devastated the tree.

The cultivar `Afterglow' has lavender purple new growth and rose-red fall color. *Liquidambar styraciflua* `Rotundiloba' does not set fruit and could be a superior tree.

Propagation is by seeds which may not germinate until the second year.

## Pests

Bagworm makes sacks by webbing together pieces of leaves. The insects live in the sacks while they feed. Small numbers of insects may be picked off by hand.

Fall webworm webs over portions of large branches or may completely cover small branches. The insects feed on leaves inside the nest. If practical, nests can be pruned out while small and when the insects are inside. A few nests in large trees are not serious. Trees do not die from infestations of fall webworms.

Leaf miner causes brown blotches on leaves. If injury is caused by leaf miner the browned upper and lower leaf surfaces will be completely separate when the leaf is torn in two.

Cottony-cushion scale, Sweetgum scale, and walnut scale can infest the branches.

Tent caterpillars make nests to live in but leave the nests to feed. Prune out nests at the tips of small branches. Do not burn the nest while it is still in the tree since this will injure the tree and could start an uncontrolled fire.

## Diseases

Formosa Sweetgum may be attacked by canker diseases. These diseases cause sunken areas on the trunk and some cause profuse "bleeding". Infected bark and sapwood will be brown and dead. There is no chemical control for canker diseases. Severely infected trees will die. Prune cankers out of lightly infected trees. Maintain tree health by watering and fertilizing.

*Endothia gyrosa* has devastated Formosa Sweetgum in some areas of USDA hardiness zone 8.

Leaf spots of various types may attack Formosa Sweetgum but are not serious. Rake up infected leaves.

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[2] Edward F. Gilman, professor emeritus, UF/IFAS Department of Environmental Horticulture; Dennis G. Watson, former associate professor, UF/IFAS Department of Agricultural and Biological Engineering, Gainesville, FL 32611.

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