

Platanus occidentalis: Sycamore¹

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Introduction

Sycamore is a massive tree reaching 75 to 90 feet in height, has a rapid growth rate, and tolerates wet and compacted soil. The white bark peels off in patches and is the most ornamental trait. Pyramidal in youth, it develops a spreading rounded or irregular crown with age, supported by a few very large diameter branches. These branches should be spaced two to four feet apart along the trunk to develop a strong structure. The dominant central leader which typically develops on Sycamore usually assures that the structure of major limbs is desirable with little corrective pruning required other than removing occasionally-occurring, upright, aggressive branches with tight crotches. It is also helpful to thin out the many branches which develop early on the central trunk.

General Information

Scientific name: *Platanus occidentalis*

Pronunciation: PLAT-uh-nus ock-sih-den-TAY-liss

Common name(s): sycamore, American planetree

Family: *Platanaceae*

USDA hardiness zones: 4B through 9A (Figure 2)

Origin: native to the eastern half of the United States and southern Ontario

UF/IFAS Invasive Assessment Status: native

Uses: street without sidewalk; screen; shade; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn > 6 ft wide; urban tolerant; highway median



Figure 1. Full Form - *Platanus occidentalis*: sycamore

Credits: UF/IFAS

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Figure 2. Range

Description

Height: 75 to 90 feet

Spread: 50 to 70 feet

Crown uniformity: symmetrical

Crown shape: pyramidal, round, spreading

Crown density: dense

Growth rate: fast

Texture: coarse

Foliage

Leaf arrangement: alternate

Leaf type: simple

Leaf margin: lobed, incised

Leaf shape: ovate, star-shaped

Leaf venation: palmate, pinnate

Leaf type and persistence: deciduous

Leaf blade length: 4 to 9 inches

Leaf color: bright green and smooth on top, paler green and pubescent underneath

Fall color: yellow

Fall characteristic: not showy



Figure 3. Leaf - *Platanus occidentalis*: sycamore
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Figure 4. Canopy - *Platanus occidentalis*: sycamore
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Flower

Flower color: red

Flower characteristics: not showy; borne in compact, dense clusters on a spherical head

Flowering: spring



Figure 5. Flower - *Platanus occidentalis*: sycamore
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Fruit

Fruit shape: round

Fruit length: ½ to 1 inch

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: does not attract wildlife; showy; fruit/leaves a litter problem; globulose cluster of achenes

Fruiting: ripens in late fall to early winter



Figure 6. Fruit, Young - *Platanus occidentalis*: sycamore
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Figure 7. Fruit, Mature - *Platanus occidentalis*: sycamore
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Trunk and Branches

Trunk/branches: branches droop; showy; typically one trunk; no thorns

Bark: white and sloughing off in thin, irregular plates to reveal green, tan, cream, and brown inner bark

Pruning requirement: little required

Breakage: resistant

Current year twig color: brown

Current year twig thickness: medium

Wood specific gravity: 0.49



Figure 8. Bark - *Platanus occidentalis*: sycamore
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Culture

Light requirement: full sun

Soil tolerances: clay; sand; loam; alkaline; acidic; wet to well-drained

Drought tolerance: high

Aerosol salt tolerance: moderate

Other

Roots: can form large surface roots

Winter interest: yes

Outstanding tree: no

Ozone sensitivity: sensitive

Verticillium wilt susceptibility: resistant

Pest resistance: sensitive to pests/diseases

Use and Management

They are best suited for soils which are moist and do not dry out. Dry soil can lead to short life for this wet-site-tolerant tree. Sycamore has been cursed by horticulturists and others because it is said to be messy, dropping leaves and small twigs throughout the year, particularly in dry weather. However, the tree grows in places which appear most unsuitable to plant growth, such as in small cut out planting pits in sidewalks and in other areas with low soil oxygen and high pH. Unfortunately, aggressive roots often raise and destroy nearby sidewalks. The dense shade created by the tree's canopy may interfere with the growth of lawn grasses beneath it. In addition, the leaves which fall to the ground in autumn reportedly release a substance which can kill newly planted grass. Best not planted in yards due to messy habit, it should be saved for the toughest sites and supplied with some irrigation in drought. Allow at least 12 feet (preferably more) of soil between the sidewalk and curb when planting as a street tree.

Sycamore is subject to attacks of anthracnose in wet, cool springs. The disease causes moderate to severe leaf drop and many trees are removed with this disease each year in our major cities. Many trees also defoliate early in the fall due to lace bug infestation. Therefore, do not overplant with Sycamore since they are so prone to problems.

The National Arboretum in 1984 released two selections of *Platanus occidentalis* x *Platanus orientalis* which could prove to be superior to the parents: *Platanus* x *acerifolia* 'Columbia' - upright, orange-grey bark, five-lobed leaves; *Platanus* x *acerifolia* 'Liberty' - upright pyramid, five-lobed leaves, reportedly more resistant to powdery mildew and anthracnose, though not immune.

Propagation is by seed, cultivars by hard or soft wood cuttings.

Pests

Aphids will suck the sap from Sycamore. Heavy infestations deposit honeydew on lower leaves and objects beneath the tree, such as cars and sidewalks. These infestations usually do no real harm to the tree but the sticky honeydew and black sooty mold below can be annoying.

Sycamore lace bugs feed on the undersides of the leaves causing a stippled appearance. The insects leave black flecks on the lower leaf surface, and cause premature defoliation in late summer and early fall.

Sycamore is considered resistant to gypsy moth.

Diseases

Some fungi cause leaf spots but are usually not serious.

Anthracnose causes early symptoms on young leaves resembling frost injury. When the leaves are almost fully grown light brown areas appear along the veins. Later the infected leaves fall off and trees may be nearly completely defoliated. The disease can cause twig and branch cankers. The trees send out a second crop of leaves but repeated attacks can lower tree vigor. Use a properly labeled fungicide according to the latest recommendations. Fertilization helps trees withstand repeated defoliation.

Powdery mildew causes a white fuzz on the tops of leaves and distorts leaves.

A bacterial leaf scorch can kill the tree in several growing seasons, and can cause significant tree losses. Leaves appear scorched, become crisp, and curl up as they turn a reddish-brown.

Stress cankers form on limbs of trees stressed with drought.

Reference

Koeser, A. K., Hasing, G., Friedman, M. H., and Irving, R. B. 2015. Trees: North & Central Florida. University of Florida Institute of Food and Agricultural Sciences.