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ENH-778

Taxodium distichum: Baldcypress[1]

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean[2]

Introduction

Narrowly to broadly pyramidal when young, baldcypress, the state tree of Louisiana, eventually develops into a broad-topped, spreading, open specimen when mature. Capable of reaching 100 to 150 feet in height, most landscape specimens are rarely seen in this open form because they are usually much younger and shorter. Trees grow at a moderately fast rate, reaching 40 to 50 feet in about 15 to 25 years. Although it is native to wetlands along running streams, growth is often faster on moist, well-drained soil. The green, needle-like leaves turn a brilliant coppery yellow in fall before dropping, but the bare branches and reddish gray, peeling bark provide much landscape interest during the winter. The trunk grows unusually thick toward the base, even on young trees. The small seeds are used by some birds and squirrels.

Figure 1. Full Form—*Taxodium distichum*: baldcypress

1. This document is ENH-778, one of a series of the Environmental Horticulture Department, UF/IFAS Extension. Original publication date November 1993. Revised December 2006 and December 2018. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.

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General Information

Scientific name: *Taxodium distichum*
Pronunciation: tack-SO-dee-um DISS-tick-um
Common name(s): Baldcypress
Family: *Cupressaceae*
USDA hardiness zones: 5A through 10B (Figure 2)
Origin: native to the southeastern United States, in addition to east Texas and Atlantic costal states as far north as Delaware
UF/IFAS Invasive Assessment Status: Native
Uses: street without sidewalk; screen; specimen; reclamation; parking lot island < 100 sq ft; parking lot island 100–200 sq ft; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn 4–6 feet wide; tree lawn > 6 ft wide; urban tolerant; highway median; shade; hedge

Figure 2. Range

Description

Height: 60 to 80 feet
Spread: 25 to 35 feet
Crown uniformity: symmetrical
Crown shape: pyramidal, upright/erect
Crown density: dense
Growth rate: fast
Texture: fine

Foliage

Leaf arrangement: alternate
Leaf type: simple
Leaf margin: entire
Leaf shape: linear, lanceolate
Leaf venation: none, or difficult to see
Leaf type and persistence: deciduous
Leaf blade length: ½ - ¾ inch
Leaf color: green
Fall color: yellow to copper
Fall characteristic: showy

Figure 3. Leaf—*Taxodium distichum*: baldcypress

Flower

Flower color: brown
Flower characteristics: not showy

Figure 4. Flower—*Taxodium distichum*: baldcypress

Fruit

Fruit shape: round or ovulate, cone
Fruit length: ½ to 1 inch
Fruit covering: dry or hard
Fruit color: green when young, then turns brown and hard with maturity

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

Figure 5. Cone—*Taxodium distichum*: baldcypress

Trunk and Branches

Trunk/branches: branches droop; showy; typically one trunk; no thorns
Bark: gray and/or reddish brown, smooth, fibrous, with extremely shallow or completely lacking furrows, and with a buttressing base
Pruning requirement: little required
Breakage: resistant
Current year twig color: green
Current year twig thickness: thin
Wood specific gravity: 0.46

Figure 6. Knees—*Taxodium distichum*: baldcypress

Culture

Light requirement: full sun to partial shade
Soil tolerances: sand; loam; clay; acidic; slightly alkaline; wet to well-drained
Drought tolerance: high
Aerosol salt tolerance: moderate

Figure 7. Bark—*Taxodium distichum*: baldcypress
Credits: Gitta Hasing

Other

Roots: not a problem
Winter interest: yes
Outstanding tree: yes
Ozone sensitivity: tolerant
Verticillium wilt susceptibility: resistant
Pest resistance: resistant to pests/diseases

Use and Management

Although often seen at water's edge where it will develop "knees", or root projections, that will extend above the water, baldcypress can also be grown in dry locations and makes an attractive lawn, street, or shade tree. Cypress knees do not generally form on these drier sites. Cities from Charlotte, NC, Dallas, TX to Tampa, FL currently use it as a street tree and it should be used more extensively throughout its range in urban landscapes. It provides a good vertical accent to the landscape and should be used more often in urban areas. Baldcypress can be clipped into a formal hedge, creating a wonderful soft screen.

Surprisingly, the roots do not appear to lift sidewalks and curbs as readily as some other species. Its delicate, feathery foliage affords light, dappled shade, and the heartwood of baldcypress is quite resistant to rot. However, most lumber available at lumber yards today is sapwood and is not resistant to rot.

Baldcypress is ideal for wet locations, such as its native habitat of stream banks and mucky soils, but the trees will also grow remarkably well on almost any soil, including heavy, compacted, or poorly-drained muck, except alkaline soils with a pH above 7.5. Locate where the sun will strike the tree on all sides for best symmetrical development. Baldcypress is relatively maintenance-free, requiring pruning only to remove dead wood and unwanted lower branches which persist on the tree. It maintains a desirably straight trunk and a moderately dense canopy and does not form double or multiple leaders as do many other large trees.

The cultivar 'Monarch of Illinois' has a very wide-spreading form and 'Shawnee Brave' has a narrow, pyramidal form, 15 to 20 feet wide. 'Pendens' has drooping branchlets and large cones. *Taxodium ascendens* is native to wet, boggy areas with standing water, whereas *Taxodium distichum* is more common along streams.

Propagation is by seed.

Pests

Bagworms can defoliate portions of the tree. Mites can be particularly troublesome in dry summers without irrigation, causing early leaf browning and defoliation in mid to late summer.

Diseases

Twig blight is caused by a weak pathogen and is usually present on dead or dying tissue. When the tree is stressed the fungus can kill branch tips. Dead tips can be pruned off. Do not let dead or diseased branches remain on the tree. Keep trees healthy with regular fertilization.

References

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

Koeser, A.K., Friedman, M.H., Hasing, G., Finley, H., Schelb, J. 2017. Trees: South Florida and the Keys. Gainesville: University of Florida Institute of Food and Agricultural Sciences.

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ENH-581

Nyssa sylvatica: Black Tupelo[1]

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Introduction

Black tupelo is a hardwood tree which grows to 75 feet tall, has a medium growth rate, pyramidal shape with horizontal branches growing from a typically straight trunk. But the shape of the crown varies from tree to tree and, unfortunately, this is looked upon by some architects as undesirable. As the tree grows to 10 and 15-years-old, crown form becomes more uniform among trees. Lower branches droop with age and will need to be removed if used as a street tree. Growth habit is similar to pin oak, a tree which many people are familiar with. Providing a brilliant display of red to deep purple foliage in the fall, black tupelo surprises most people since it does not particularly stand out in the landscape until then. The small, blue fruits may be considered a litter nuisance in urban/suburban plantings but are quite popular with many birds and mammals, and they wash away quickly.

Figure 1. Full Form - *Nyssa sylvatica*: black tupelo
Credits: UF/IFAS

General Information

Scientific name: *Nyssa sylvatica*
Pronunciation: NISS-uh sill-VAT-ih-kuh
Common name(s): black tupelo, blackgum, sourgum
Family: *Nyssaceae*
USDA hardiness zones: 4B through 9B (Figure 2)
Origin: native to the east half of the United States, extreme southern Ontario, and central and southern Mexico

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UF/IFAS Invasive Assessment Status: native
Uses: reclamation; specimen; street without sidewalk; shade; parking lot island 100-200 sq ft; parking lot island > 200 sq ft; sidewalk cutout (tree pit); tree lawn 4-6 feet wide; tree lawn > 6 ft wide; highway median

Figure 2.

Description

Height: 65 to 75 feet
Spread: 25 to 35 feet
Crown uniformity: symmetrical
Crown shape: pyramidal, oval
Crown density: moderate
Growth rate: slow
Texture: medium

Foliage

Leaf arrangement: alternate
Leaf type: simple
Leaf margin: entire
Leaf shape: elliptic (oval), oblong
Leaf venation: pinnate
Leaf type and persistence: deciduous

Figure 3. Leaf - *Nyssa sylvatica*: black tupelo
Credits: UF/IFAS

Leaf blade length: 2 to 6 inches
Leaf color: dark green and shiny on top, paler green underneath; develops purplish spots
Fall color: orange, red, and deep purple
Fall characteristic: showy

Flower

Flower color: greenish yellow
Flower characteristics: not showy; emerges in clusters on a small stalk at leaf axils
Flowering: spring

Figure 4. Flower, Female - *Nyssa sylvatica*: black tupelo
Credits: UF/IFAS

Figure 5. Flower, Male - *Nyssa sylvatica*: black tupelo
Credits: UF/IFAS

Fruit

Fruit shape: oblong
Fruit length: ¼ to ½ inch
Fruit covering: fleshy drupe
Fruit color: blue-black
Fruit characteristics: attracts birds; not showy; fruit/leaves a litter problem
Fruiting: ripens in late summer and early fall

Trunk and Branches

Trunk/branches: branches droop; not showy; typically one trunk; no thorns
Bark: dark gray, brown, brown black; irregularly and shallowly furrowed; becoming blocky with age
Pruning requirement: little required
Breakage: resistant
Current year twig color: gray, brown
Current year twig thickness: thin, medium
Wood specific gravity: 0.50

Figure 6. Bark, Young - *Nyssa sylvatica*: black tupelo
Credits: UF/IFAS

Culture

Light requirement: full sun to partial shade
Soil tolerances: clay; sand; loam; acidic; wet to well-drained
Drought tolerance: high
Aerosol salt tolerance: moderate

Figure 7. Bark, Mature - *Nyssa sylvatica*: black tupelo
Credits: Gitta Hasing, UF/IFAS

Other

Roots: not a problem
Winter interest: yes
Outstanding tree: yes
Ozone sensitivity: tolerant
Verticillium wilt susceptibility: susceptible
Pest resistance: free of serious pests and diseases

Use and Management

Black tupelo prefers a moist, slightly acid soil. Larger specimens may be difficult to transplant from deep, well-drained field soil because of its deep roots and should only be transplanted from the field in the spring. Therefore, it is usually seen growing in containers at the nursery. Little pruning is required to form a well-structured tree since the trunk stays straight and branches usually grow at wide angles with the trunk. Black tupelo makes a good street or parking lot tree for suburban neighborhoods, possibly for downtown areas. It should be used more often for this purpose but will benefit from occasional irrigation in droughts. Does amazingly well in wet, compacted soils typical of many urban areas with highly disturbed clay soil. It is also somewhat salt-tolerant for planting along the shore.

Black tupelo is rarely attacked by pests, and when it is they are rarely serious enough to warrant control.

Nyssa sylvatica var. *sylvatica* grows on moist sites; var. *aquatica* has a buttressed and swollen trunk base and grows in swamps. *Nyssa bicolor* is very similar and often confused with *Nyssa sylvatica.*

Pests

Scales, including Sourgum scale, can be controlled with horticultural oil.

Forest tent caterpillar can defoliate the tree in the spring. Unless defoliation is extensive in two or more successive years, control is not needed.

Diseases

Several fungi cause cankers on black tupelo. As the cankers enlarge the infected stems die back. Trunk cankers cause tree dieback. Prune out infected branches and keep trees healthy.

Leaf spots cause purplish blotches on the upper leaf surface. Rake up and destroy infected leaves in the fall to reduce the disease potential for the following year, if you wish.

Recently a large number of trees have been discovered dying in the mountains of North Carolina, Tennessee, Virginia, and Georgia. The causal agent is unknown but symptoms include leaf spots, branch cankers, leaves dying and hanging on the tree, and leaf blotches.

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.

Diospyros virginiana: Common Persimmon[1]

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean[2]

Introduction

An excellent small to medium tree, common persimmon is an interesting, somewhat irregularly-shaped native tree, for possible naturalizing in yards or parks. Bark is grey or black and distinctly blocky with orange in the valleys between the blocks. Fall color can be a spectacular red in USDA hardiness zones 4 through 8a. It is well adapted to cities, but presents a problem with fruit litter, attracting flies and scavengers, such as opossums and other mammals. Its mature height can be 60 feet, with branches spreading from 20 to 35 feet and a trunk two feet thick, but it is commonly much shorter in landscapes. The trunk typically ascends up through the crown in a curved but very dominant fashion, rarely producing double or multiple leaders. Lateral branches are typically much smaller in diameter than the trunk.

General Information

Scientific name: *Diospyros virginiana*
Pronunciation: dye-OSS-pih-ross ver-jin-nee-AY-nuh
Common name(s): common persimmon
Family: *Ebenaceae*
USDA hardiness zones: 4B through 9B (Figure 2)
Origin: native to the southern two-thirds of the eastern United States
UF/IFAS Invasive Assessment Status: native

Uses: fruit; reclamation; specimen; urban tolerant; highway median; bonsai

Figure 1. Full Form—*Diospyros virginiana*: common persimmon

1. This document is ENH390, one of a series of the Environmental Horticulture Department, UF/IFAS Extension. Original publication date November 1993. Revised December 2018. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.

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Figure 2. Range

Description

Height: 40 to 60 feet
Spread: 20 to 35 feet
Crown uniformity: irregular
Crown shape: oval, pyramidal
Crown density: moderate
Growth rate: moderate
Texture: medium

Foliage

Leaf arrangement: alternate
Leaf type: simple
Leaf margin: serrate
Leaf shape: ovate, elliptic (oval)
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: 2 ½ to 6 inches
Leaf color: dark green and shiny on top, paler green underneath
Fall color: yellow, red, and purple
Fall characteristic: showy

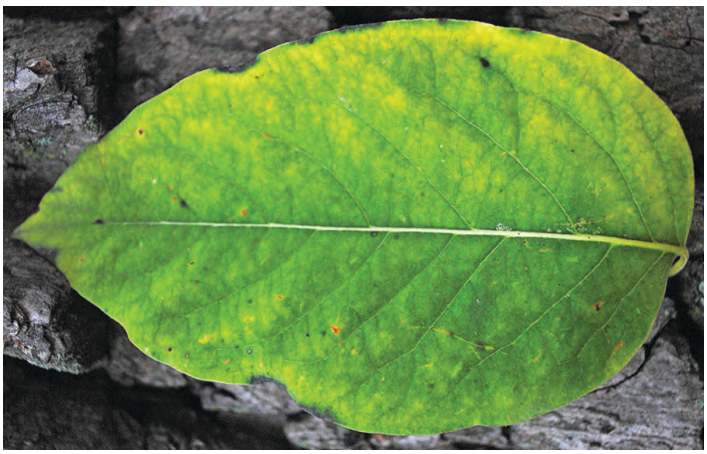

Figure 3. Leaf—*Diospyros virginiana*: common persimmon

Flower

Flower color: white to greenish white
Flower characteristics: not showy; fragrant; male: emerges in 3's; female: emerges solitary
Flowering: late spring to early summer

Figure 4. Flower—*Diospyros virginiana*: common persimmon

Fruit

Fruit shape: round
Fruit length: 1 ½ to 2 inches
Fruit covering: fleshy berry
Fruit color: green to orange when ripe
Fruit characteristics: attracts squirrels/mammals; showy; fruit/leaves a litter problem
Fruiting: mid to late fall, usually ripens after a frost

Figure 5. Fruit—*Diospyros virginiana*: common persimmon

Trunk and Branches

Trunk/branches: branches droop; showy; typically one trunk; no thorns
Bark: gray and brow with orange peering between fissures, then becoming nearly black and breaking into thick, squarish blocks with maturity
Pruning requirement: little required
Breakage: resistant
Current year twig color: gray, reddish, brown
Current year twig thickness: thin
Wood specific gravity: 0.79

Figure 6. Bark—*Diospyros virginiana*: common persimmon
Credits: Gitta Hasing

Culture

Light requirement: full sun
Soil tolerances: clay; sand; loam; alkaline; acidic; extended flooding; well-drained
Drought tolerance: high
Aerosol salt tolerance: high

Other

Roots: not a problem
Winter interest: yes
Outstanding tree: no
Ozone sensitivity: unknown
Verticillium wilt susceptibility: susceptible
Pest resistance: sensitive to pests/diseases

Use and Management

Common persimmon prefers moist, well-drained, bottomland or sandy soils but is also very drought- and urban-tolerant. Truly an amazing tree in its adaptability to about any site conditions, including alkaline soil. It is seen colonizing old fields as a volunteer tree but grows slowly on dry sites. Its fruit is an edible berry that usually ripens after frost, although some cultivars do not require the frost treatment to ripen. Before ripening, however, the fruit is decidedly astringent and not edible. Most American cultivars require both male and female trees for proper fruiting.

Except for cleaning up the messy fruit if it falls on a patio or sidewalk, common persimmon maintenance is quite easy and it could be planted more. Locate it where the slimy fruit will not fall on sidewalks and cause people to slip and fall. Because transplantation is difficult due to a coarsely-branched root system, persimmon trees should be balled and burlapped when young or planted from containers. The wood is used for golf club heads and is very hard and almost black.

The variety *pubescens* has fuzzy leaves and twigs.

Pests

No serious pests, except occasionally caterpillars.

Diseases

Common persimmon is troubled by a leaf-spot disease that may limit its use in the South. This disease causes black spots on the leaves and premature defoliation, sometimes in August in the North, September in the South. It will not kill the tree but the litter from early defoliation may be objectionable.

It is also susceptible to a vascular wilt which can be devastating to established trees.

Reference

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

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FPS-237

Hamelia patens Firebush, Scarlet Bush[1]

Edward F. Gilman, Alan Meerow, Ryan W. Klein, and Gail Hansen[2]

Introduction

This charming Florida native will delight everyone with beautiful orange-red flowers throughout most of the year. Firebush is a large, soft-stemmed shrub that reaches a height and width of 8 to 12 feet tall without support. A one-foot-tall specimen that is planted in the spring can be expected to reach 5 feet or more by the following winter. It can grow to 15 feet tall or more if given support on a trellis or other structure. Its evergreen leaves are covered with red tomentum (hairs) when young and are speckled with red or purple at maturity. The petiole and young stems also appear red. These attractive leaves are commonly arranged in whorls of 3. Bright orange-red flowers appear in forking cymes at the tips of the branches throughout the year. The slender flowers are tubular and reach a length of 1 to 1 ½ inches. Although tolerant of shade, flowering is much reduced.

Figure 1. Full Form - *Hamelia patens*: Firebush, Scarlet Bush
Credits: Edward F. Gilman, UF/IFAS

Figure 2. Leaf - *Hamelia patens*: Firebush, Scarlet Bush
Credits: Edward F. Gilman, UF/IFAS

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Figure 3. Flower - *Hamelia patens*: Firebush, Scarlet Bush
Credits: Edward F. Gilman, UF/IFAS

Figure 4. Fruit - *Hamelia patens*: Firebush, Scarlet Bush
Credits: Edward F. Gilman, UF/IFAS

General Information

Scientific name: *Hamelia patens*

Pronunciation: huh-MEE-lee-uh PAY-tenz

Common name(s): firebush, scarlet bush

Family: *Rubiaceae*

Plant type: shrub

USDA hardiness zones: 9 through 11 (Figure 5)

Planting month for zone 9: Apr; May; Jun; Jul; Aug; Sep

Planting month for zone 10 and 11: Feb; Mar; Apr; May; Jun; Jul; Aug; Sep; Oct; Nov; Dec

Origin: native to Florida

Invasive potential: not known to be invasive

Uses: specimen; accent; screen; border; mass planting; attracts butterflies; attracts hummingbirds

Figure 5. Shaded area represents potential planting range.

Description

Height: 6 to 12 feet

Spread: 5 to 8 feet

Plant habit: spreading

Plant density: dense

Growth rate: fast

Texture: medium

Foliage

Leaf arrangement: whorled

Leaf type: simple

Leaf margin: undulate

Leaf shape: ovate

Leaf venation: brachidodrome; pinnate

Leaf type and persistence: evergreen

Leaf blade length: 4 to 8 inches

Leaf color: green

Fall color: red

Fall characteristic: showy

Flower

Flower color: orange-red

Flower characteristic: year-round flowering

Fruit

Fruit shape: oval

Fruit length: less than 0.5 inch

Fruit cover: fleshy

Fruit color: black

Fruit characteristic: suited for human consumption; attracts birds

Trunk and Branches

Trunk/bark/branches: typically multi-trunked or clumping stems; not particularly showy

Current year stem/twig color: reddish

Current year stem/twig thickness: medium

Culture

Light requirement: plant grows in part shade/part sun; plant grows in the shade

Soil tolerances: occasionally wet; acidic; alkaline; sand; loam; clay

Drought tolerance: moderate

Soil salt tolerances: poor

Plant spacing: 36 to 60 inches

Other

Roots: usually not a problem

Winter interest: plant has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers

Outstanding plant: plant has outstanding ornamental features and could be planted more

Pest resistance: no serious pests are normally seen on the plant

Use and Management

Hummingbirds and butterflies enjoy the nectar in the flowers. The small, black, glossy fruits are rounded and can be eaten. There is a continuous crop of these seedy fruits and birds are quite fond of them. The sap has been used to treat skin rashes. The firebush can be used as a foundation plant for large buildings and is superb when placed in the background of a mass of shrubs in a border. It is excellent in a mass planting and functions well as a screen or border. A hedge of firebush will need regular clipping. Flowers are often removed during this process.

Hamelia patens can be found growing naturally in a variety of situations in Florida from Sumter County southward. However, it grows best when well supplied with moisture and prefers a full sun to partial shade location in the landscape. This plant can take heat and drought, but a strong wind can cause some leaf browning. Though native, it is quite tender and can be killed to the ground during a freeze. Regrowth from the roots is rapid and rampant, and it has proven to be root hardy through zone 9. It functions very well as an annual in more northerly zones. The firebush is known to be tolerant of the lime bearing (high soil pH) soils of southern Florida. Fertilize this plant sparingly to bring out its best characteristics, and do not allow lawn grasses to invade its root zone.

Propagate Hamelia patens by seed (which must be fresh), cuttings, or air-layers.

Pest and Diseases

Occasional attacks of scales or mites may require control measures. New growth may be attacked by aphids in early spring, but natural predators often rapidly check the invasion. In south Florida, larvae of a moth species sometimes partially defoliate the stems, but they are easily controlled if you wish.

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ENH-200

Acer rubrum: Red Maple[1]

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert and Drew C. McLean[2]

Introduction

Red maple has an oval shape and is a fast grower with strong wood, reaching a height of 75 feet. Unless irrigated or on a wet site, Red maple is best used north of USDA hardiness zone 9. Trees are often much shorter in the southern part of its range unless growing next to a stream or on a wet site. This tree is preferred over Silver maple or Boxelder when a fast growing maple is needed. When planting the species *Acer rubrum*, select only those which have been grown from seed sources in your area. The newly emerging leaves and red flowers and fruits signal that spring has come. They appear in December and January in Florida, later in the northern part of its range. The seeds of Red maple are quite popular with squirrels and birds. This tree if sometimes confused with red-leaved cultivars of Norway maple.

Figure 1. Full Form - *Acer rubrum*: red maple
Credits: Gitta Hasing, UF/IFAS

General Information

Scientific name: *Acer rubrum*
Pronunciation: AY-ser ROO-brum
Common name(s): red maple, swamp maple
Family: sapindaceae
USDA hardiness zones: 4A through 9B (Figure 2)
Origin: native to the Eastern United States, neighboring Canadian provinces, and Newfoundland
UF/IFAS Invasive Assessment Status: native

Uses: reclamation; highway median; screen; shade; street without sidewalk; deck or patio; tree lawn 4–6 feet wide; tree lawn > 6 ft. wide; bonsai

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Figure 2. Range

Description

Height: 60 to 75 feet
Spread: 25 to 35 feet
Crown uniformity: irregular
Crown shape: oval, round, upright/erect
Crown density: moderate
Growth rate: fast
Texture: medium

Foliage

Leaf arrangement: opposite/subopposite (Figure 3)
Leaf type: simple
Leaf margin: incised, serrate, lobed
Leaf shape: ovate
Leaf venation: palmate
Leaf type and persistence: deciduous
Leaf blade length: 2 to 5 inches
Leaf color: medium to dark green on top; grayish to silver underneath
Fall color: yellow, red, purple
Fall characteristic: showy

Figure 3. Leaf - *Acer rubrum*: red maple
Credits: Gitta Hasing, UF/IFAS

Flower

Flower color: red or pink
Flower characteristics: showy; emerges in clusters
Flowering: late winter to early spring, before new leaves emerge

Figure 4. Flower - *Acer rubrum*: red maple
Credits: Gitta Hasing, UF/IFAS

Fruit

Fruit shape: elongated 2-winged samara
Fruit length: ¾ to 1 inch
Fruit covering: dry or hard
Fruit color: pinkish to reddish
Fruit characteristics: attracts squirrels/mammals; showy; fruit/leaves not a litter problem
Fruiting: spring

Trunk and Branches

Trunk/branches: branches droop; not showy; typically one trunk; no thorns
Bark: light gray and smooth, becoming dark gray, rough, ridged, and furrowed with age
Pruning requirement: needed for strong structure
Breakage: susceptible to breakage
Current year twig color: gray, reddish
Current year twig thickness: medium
Wood specific gravity: 0.54

Figure 5. Fruit - *Acer rubrum*: red maple
Credits: Gitta Hasing, UF/IFAS

Figure 6. Bark - *Acer rubrum*: red maple
Credits: Gitta Hasing, UF/IFAS

Culture

Light requirement: full sun, partial sun or partial shade
Soil tolerances: clay; sand; loam; acidic; extended flooding; well-drained
Drought tolerance: moderate
Aerosol salt tolerance: low

Other

Roots: can form large surface roots
Winter interest: yes
Outstanding tree: no
Ozone sensitivity: tolerant
Verticillium wilt susceptibility: susceptible
Pest resistance: resistant to pests/diseases

Use and Management

The outstanding ornamental characteristic of Red maple is red, orange, or yellow fall color (sometimes on the same tree) lasting several weeks. Red maple is often one of the first trees to color up in autumn, and it puts on one of the most brilliant displays of any tree, but trees vary greatly in fall color and intensity. Cultivars are more consistently colored.

The tree makes the best growth in wet places and has no other particular soil preference, except chlorosis may develop on alkaline soil where it also grows poorly. It is well suited as a street tree in northern and mid-south climates in residential and other suburban areas, but the bark is thin and easily damaged by mowers. Irrigation is often needed to support street tree plantings in well-drained soil in the south. Roots can raise sidewalks as silver maples can, but they have a less aggressive root system and so they make a good street tree. Surface roots beneath the canopy can make mowing difficult.

Red maple is easily transplanted and usually develops surface roots in soil ranging from well-drained sand to clay. It is not especially drought-tolerant, particularly in the southern part of the range, but selected individual trees can be found growing on dry sites. This trait shows the wide range of genetic diversity in the species. Branches often grow upright through the crown, forming poor attachments to the trunk. These should be removed in the nursery or after planting in the landscape to help prevent branch failure in older trees during storms. Select branches with a wide angle from the trunk and prevent branches from growing larger than half the diameter of the trunk.

A number of cultivars are listed. Due to graft-incompatibility problems that cause the tree to break apart, preference should be given to cultivars produced on their own roots. In the northern and southern end of the range, choose cultivars with regional adaptation. The cultivars are 'Armstrong'—upright growth habit, almost columnar, somewhat prone to splitting branches due to tight crotches, 50 feet tall; 'Autumn Flame'—45 feet tall, round, above average fall color; 'Bowhall'—upright growth habit, branches form embedded bark, graft incompatibility on grafted trees; 'Gerling'—densely branched, broadly pyramidal, about 35 feet tall when mature; 'October Glory'—above average fall color, excellent tree, retains leaves late, 60 feet tall; 'Red Sunset'—above average orange to red fall color, does well in the south in USDA hardiness zone 8, probably the best cultivar for the deep south, oval, 50 feet tall; 'Scanlon'—upright growth habit; 'Schlesinger'—good fall color, rapid growth rate; 'Tilford'—globe-shaped crown. Variety *drummondii* suitable in USDA hardiness zone 8.

There is a recently introduced hybrid cross between red and silver maple called hybrid maple (x). Cultivars of this hybrid include 'Armstrong' with a narrow columnar crown to 35 feet tall, 'Autumn Blaze' with an oval crown to 50 feet tall, 'Celebration' with a narrow upright crown and a strong central leader to 50 or 60 feet tall, 'Celzam' with a narrow oval crown to 50 feet tall, and 'Scarlet Sentenial' with great fall color, and oval crown to 40 feet tall. The culture of these trees is probably similar to Red maple.

Pests

Leaf stalk borer and petiole borer cause the same type of injury. Both insects bore into the leaf stalk just below the leaf blade. The leaf stalk shrivels, turns black, and the leaf blade falls off. The leaf drop may appear heavy but serious injury to a healthy tree is rare.

Gall mites stimulate the formation of growths or galls on the leaves. The galls are small but can be so numerous that individual leaves curl up. The most common gall is bladder gall mite found on silver maple. The galls are round and at first green but later turn red, then black, then dry up. Galls of other shapes are seen less frequently on other types of maples. Galls are not serious, so chemical controls are not needed.

Crimson erineum mite is usually found on silver maple and causes the formation of red fuzzy patches on the lower leaf surfaces. The problem is not serious so control measures are not suggested.

Aphids infest maples, usually Norway maple, and may be numerous at times. High populations can cause leaf drop. Another sign of heavy aphid infestation is honey dew on lower leaves and objects beneath the tree. Aphids are controlled by spraying or they may be left alone. If not sprayed, predatory insects will bring the aphid population under control.

Scales are an occasional problem on maples. Perhaps the most common is cottony maple scale. The insect forms a cottony mass on the lower sides of branches. Scales are usually controlled with horticultural oil sprays. Scales may also be controlled with well-timed sprays to kill the crawlers.

If borers become a problem it is an indication the tree is not growing well. Controlling borers involves keeping trees healthy. Chemical controls of existing infestations are more difficult. Proper control involves identification of the borer infesting the tree then applying insecticides at the proper time.

Twig borers can cause die-back of the terminal 8 to 12 inches of small-diameter branches. This is usually not serious and does not require control measures, but it can be a problem on young trees in the nursery.

Diseases

Anthracnose is more of a problem in rainy seasons. The disease resembles, and may be confused with, a physiological problem called "scorch". The disease causes light brown or tan areas on the leaves. Anthracnose may be controlled by fungicides sprayed on as leaves open in the spring. Two additional sprays at two-week intervals will be needed. The disease is most common on sugar and silver maples and boxelder. Other maples may not be affected as severely. Sprays may need to be applied by a commercial applicator having proper spray equipment.

Scorch may occur during periods of high temperatures accompanied by wind. Trees with diseased or inadequate root systems will also show scorching. When trees do not get enough water they scorch. Scorch symptoms are light brown or tan dead areas between leaf veins. The symptoms are on all parts of the tree or only on the side exposed to sun and wind. Scorching due to dry soil may be overcome by watering. If scorching is due to an inadequate or diseased root system, watering may have no effect.

Nutrient deficiency symptoms are yellow or yellowish-green leaves with darker green veins. The most commonly deficient nutrient on maple is manganese. Implanting capsules containing a manganese source in the trunk will

alleviate the symptoms. Test soil samples to determine if the soil pH is too high for best manganese availability. Plants exposed to weed killers may also show similar symptoms.

Tar spot and a variety of leaf spots cause some concern among homeowners but are rarely serious enough for control.

Additionally, girdling roots (a defect, not a disease) can cause issues. Girdling roots grow around the base of the trunk rather than growing away from it. As both root and trunk increase in size, the root chokes the trunk. Girdling roots are detected by examining the base of the trunk. The lack of trunk flare at ground level is a symptom. The portion of the trunk above a girdling root does not grow as rapidly as the rest so may be slightly depressed. The offending root may be on the surface or may be just below the sod. The tree crown shows premature fall coloration and death of parts of the tree in more serious cases. If large portions of the tree have died it may not be worth saving. Girdling roots are functional roots so when removed a portion of the tree may die. When the girdling root is large the treatment is as harmful as the problem. After root removal, follow-up treatment includes watering during dry weather. The best treatment for girdling roots is prevention by removing or cutting circling roots at planting or as soon as they are detected on young trees.

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.

Thank you for reviewing the Fact Sheets for the tree species available (while supplies last) for the Fall 2025 Adopt-A-Tree free tree drive-thru events.

When completing your online reservation form, insert the validation code shown below in the space provided on the reservation form. The validation code is required to reserve free tree(s).

The Fall 2025 Validation Code you need to enter on the tree reservation online form is:

FALL2025

The code above is case sensitive so be sure to capitalize the letters at the beginning and enter the code without spaces.

Planting Nassau's Future

KEEP NASSAU BEAUTIFUL

Simpson's stopper

(Myrcianthes fragrans)

For definitions of botanical terms, visit en.wikipedia.org/wiki/Glossary_of_botanical_terms.

Photo by Mary Keim

Also known as Twinberry, Simpson's stopper is an evergreen shrub or small tree that occurs naturally in coastal strands and hammocks. Its year-round blooms attract a variety of butterflies and bees; its fruit provides food for many bird species. The sweet flesh of the fruit is edible to humans, but eating the bitter seeds is not recommended.

Each fragrant flower has four white petals and many long white stamens. They are born in clusters on paired stalks. Sepals are lobed and in fours. Leaves are bright green, ovate to elliptic and leathery. They have entire margins and are oppositely arranged. Leaf surface is covered in small blackish dots. When crushed, leaves emit a citrusy or piney aroma. Fruits are greenish, ovoid berries that turn bright reddish-orange as they mature. They are typically born in pairs (hence the common name "twinberry"). Branches are stiff. Bark is reddish-brown and flaky.

The common name descriptor pays homage to Charles Torrey Simpson, an American botanist and naturalist who wrote several books about plants in South Florida. He was known as the "Sage of Biscayne Bay." "Stopper" alludes to the plant's historical use as a treatment for diarrhea.

Family: Myrtaceae (Myrtle or eucalyptus family)
Native range: Coastal counties along the central and southern peninsula, St. John's County and the Keys.
To see where natural populations of Simpson's stopper have been vouchered, visit www.florida.plantatlas.usf.edu.
Lifespan: Perennial
Soil: Moist to dry, sandy or calcareous soils
Exposure: Full sun to partial shade
Growth habit: 3'–20'+ tall
Propagation: Seed, air-layering
Florida regions of landscape suitability: Northeast, Central, South
Garden Tips: Simpson's stopper is an excellent ornamental plant with dense, evergreen foliage, attractive and fragrant flowers, and colorful fruit. Despite its limited natural range, it can be adapted to well-drained landscapes in northern Florida. It works great as a specimen or background shrub or grouped as a border, buffer or hedge. It is hardy and suitable for difficult areas where other plants may not do well. If left alone, this versatile plant will grow into a small tree, but it can be pruned to any desired form. More sun exposure will contribute to a smaller form and will encourage more blooms. In the shade, Simpson's stopper may grow taller and have a straggly, untidy appearance.

SCAN FOR FULL PLANT PROFILE:

Simpson's stopper is often available from nurseries that specialize in Florida native plants. Visit www.PlantRealFlorida.org to find a native nursery in your area.

Fact Sheet ST-326
November 1993

Juniperus silicicola Southern Redcedar[1]

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

INTRODUCTION

This densely-foliated, wide pyramidal, columnar or oval evergreen grows fairly quickly, ultimately reaching heights up to 40 feet with a 25-foot spread (Fig. 1). Some individual plants grow wider than tall as they grow older. Some botanists do not make a distinction between *Juniperus silicicola* and *Juniperus virginiana*. Its fine-textured, medium green leaves and drooping branchlets help to soften the rather symmetrical, oval juvenile form. Mature specimens of Southern Redcedar take on a flat-topped, almost windswept appearance, making them very picturesque. Bark and trunk on older specimens take on a delightful, 'old-tree' look.

GENERAL INFORMATION

Scientific name: *Juniperus silicicola*
Pronunciation: joo-NIP-er-us sill-liss-sih-KOLE-uh
Common name(s): Southern Redcedar
Family: *Cupressaceae*
USDA hardiness zones: 8 through 10 (Fig. 2)
Origin: native to North America
Uses: Bonsai; wide tree lawns (>6 feet wide); medium-sized tree lawns (4-6 feet wide); recommended for buffer strips around parking lots or for median strip plantings in the highway; reclamation plant; screen; residential street tree; Christmas tree; tree has been successfully grown in urban areas where air pollution, poor drainage, compacted soil, and/or drought are common
Availability: generally available in many areas within its hardiness range

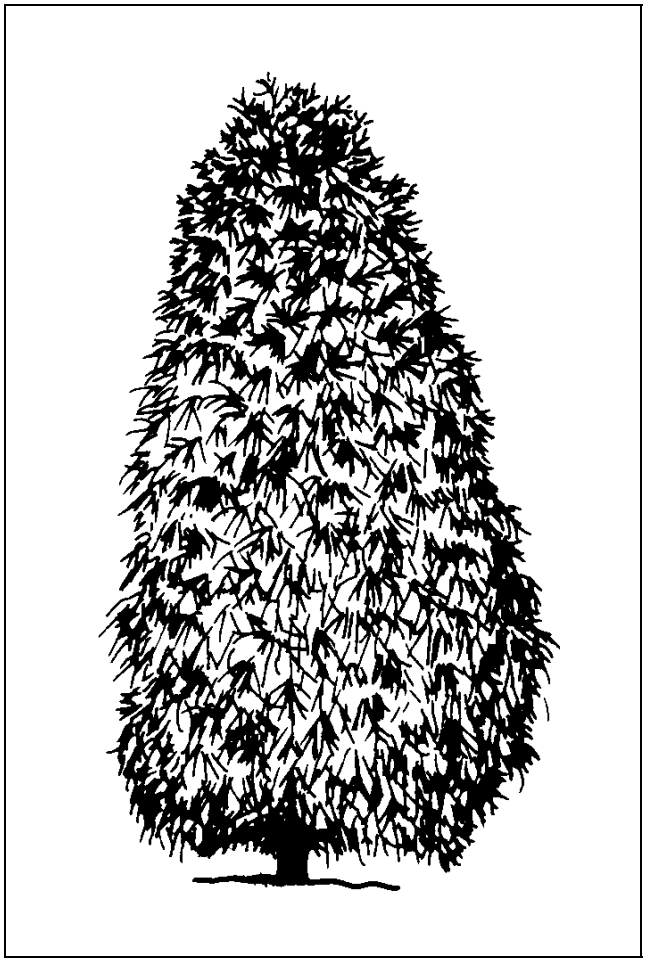

Figure 1. Middle-aged Southern Redcedar.

1. This document is adapted from Fact Sheet ST-326, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: November 1993.

2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.

Figure 2. Shaded area represents potential planting range.

DESCRIPTION

Height: 30 to 45 feet
Spread: 20 to 30 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: columnar; oval; pyramidal
Crown density: open
Growth rate: fast
Texture: fine

Foliage

Leaf arrangement: opposite/subopposite; whorled (Fig. 3)
Leaf type: simple
Leaf margin: entire; terminal spine
Leaf shape: awl-like; scale-like
Leaf venation: none, or difficult to see
Leaf type and persistence: evergreen
Leaf blade length: less than 2 inches
Leaf color: green
Fall color: no fall color change
Fall characteristic: not showy

Flower

Flower characteristics: inconspicuous and not showy

Fruit

Fruit shape: round
Fruit length: < .5 inch
Fruit covering: fleshy
Fruit color: blue; purple
Fruit characteristics: attracts birds; no significant litter problem; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; showy trunk; should be grown with a single leader; no thorns
Pruning requirement: needs little pruning to develop a strong structure
Breakage: susceptible to breakage either at the crotch due to poor collar formation, or the wood itself is weak and tends to break
Current year twig color: brown; green

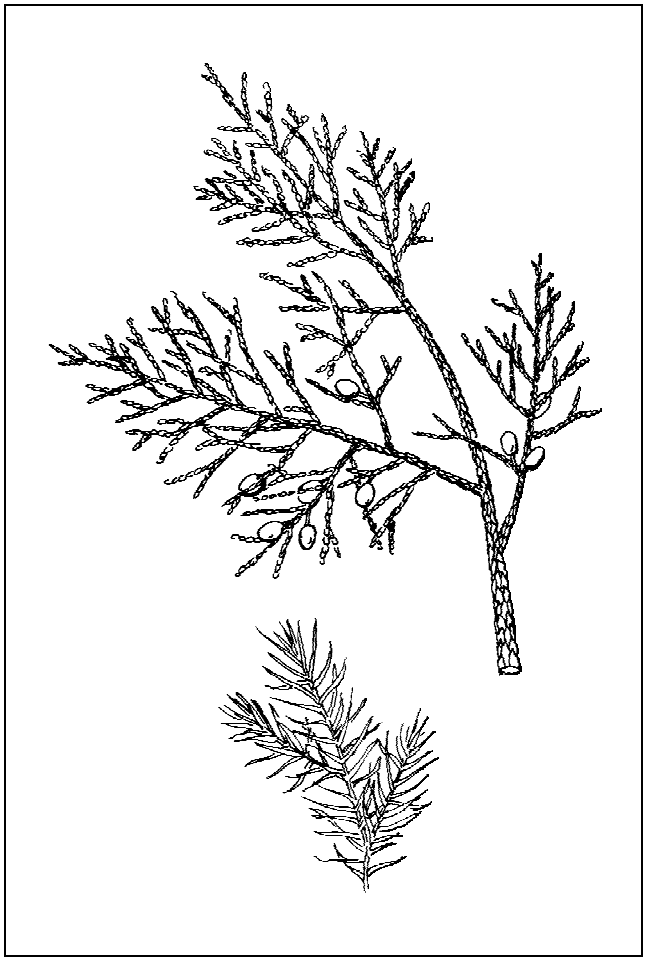

Figure 3. Foliage of Southern Redcedar.

Current year twig thickness: thin

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun
Soil tolerances: clay; loam; sand; acidic; alkaline; well-drained
Drought tolerance: high
Aerosol salt tolerance: high
Soil salt tolerance: good

Other

Roots: surface roots are usually not a problem
Winter interest: no special winter interest
Outstanding tree: not particularly outstanding
Invasive potential: little, if any, potential at this time
Verticillium wilt susceptibility: not known to be susceptible
Pest resistance: no pests are normally seen on the tree

USE AND MANAGEMENT

The dense growth and attractive foliage make Southern Redcedar a favorite for windbreaks, screens, and wildlife-cover for large-scale landscapes. Its high salt-tolerance makes it ideal for seaside locations. Redcedar can make a nice Christmas tree, and the fragrant wood is popular for repelling insects. Cedar Key, Florida, once had extensive redcedar forests before the lumber was extensively harvested and the wood used for chests and pencils. Although not currently used often as a street tree, its wood is strong, the foliage is clean, and the fruit is small making it a suitable candidate. There are some nice examples of street tree use in southern cities. With proper pruning to remove lower branches, it should adapt well to street-scapes.

Planted in full sun or partial shade, Southern Redcedar will easily grow on a variety of soils, including clay. Growth may be poor in landscapes which are over-irrigated. Plants are difficult to transplant due to a coarse root system, except when quite small. Water until well-established and then forget about the tree. It performs admirably with no care, even on alkaline soil and along the coast. Usually insects and diseases are not a problem if grown in the full sun. There may be local restrictions on planting this tree near apple orchards because it is the alternate host for cedar-apple rust.

Propagation is by seed, which germinate faster if planted as soon as the cones mature or if given a stratification period. Also, tip cuttings can be rooted.

No cultivars are listed but there is ample opportunity to propagate and culture from the wide diversity of shapes and growth habits exhibited by this tree.

Pests

Usually none are serious.

Bagworm caterpillars web foliage and debris together to make bags up to two inches long. The insects live in the bags and emerge to feed on the foliage. Use sprays of *Bacillus thuringiensis*. The insects can also be picked off the plants by hand.

Juniper scale causes yellowed needles, and infected branches fail to produce new growth. The

scale is round and at first white, later turning gray or black.

The Juniper webworm webs twigs and needles together, causing them to brown and die. The larva is 1/2-inch-long and is brown with darker stripes. The larvae are often in the densest part of the plant and can go unnoticed.

Mites cause stippled and bronzed foliage.

Diseases

Twig blights cause death and browning of twigs tips. The diseases may progress down the stem killing the whole branch. Small lesions may be seen at the base of dead tissue. Prune out dead branch tips. Dieback from Kabatina blight appears in early spring, from Phomopsis in summer.

Three rust diseases seen most often are cedar-apple rust, hawthorn rust, and quince rust. The most common is cedar-apple rust. On Juniper the disease forms galls and orange jelly-like horns in spring. The horns are most likely to form following periods of rainy, warm weather. Spores formed in the horns infect the alternate host. The diseases are more serious on the alternate host than Juniper. A separation of a few hundred yards may help avoid the disease. Prune out the spore horns when seen in the spring.

Junipers are not tolerant of ice coatings. Expect dieback when Junipers are covered with ice for several days. Removing the ice is impractical.

UF IFAS Extension UNIVERSITY of FLORIDA

ENH643

Platanus occidentalis: Sycamore[1]

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean[2]

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

1. This document is ENH643, one of a series of the Environmental Horticulture Department, UF/IFAS Extension. Original publication date November 1993. Revised December 2018. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.

2. Edward F. Gilman, professor emeritus, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Department of Agricultural and Biological Engineering Department; Ryan W. Klein, graduate assistant, Environmental Horticulture Department; Andrew K. Koeser, assistant professor, Environmental Horticulture Department, UF/IFAS Gulf Coast Research and Education Center; Deborah R. Hilbert, graduate assistant, Environmental Horticulture Department, GCREC; and Drew C. McLean, biological scientist, Environmental Horticulture Department, GCREC; UF/IFAS Extension, Gainesville, FL 32611.

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
Credits: UF/IFAS

Figure 4. Canopy - *Platanus occidentalis*: sycamore
Credits: UF/IFAS

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
Credits: UF/IFAS

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
Credits: UF/IFAS

Figure 7. Fruit, Mature - *Platanus occidentalis*: sycamore
Credits: UF/IFAS

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
Credits: Gitta Hasing, UF/IFAS

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.

UF IFAS Extension UNIVERSITY of FLORIDA

ENH-522

Liriodendron tulipifera: Tuliptree[1]

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean[2]

Introduction

Tuliptree grows 80 to 100 feet tall and maintains a fairly narrow oval crown, even as it grows older. Trunks become massive in old age, becoming deeply furrowed with thick bark. The tree maintains a straight trunk and generally does not form double or multiple leaders. Older trees have several large-diameter major limbs in the top half of the crown. Tuliptree has a moderate to rapid (on good sites) growth rate at first but slows down with age. The soft wood reportedly is subject to storm damage but the trees held up remarkably well in the south during hurricane `Hugo'. It is probably stronger than given credit for. The largest trees in the east are in the Joyce Kilmer Forest in NC, some reaching more than 150 feet with seven-foot diameter trunks. The fall color is gold to yellow being more pronounced in the northern part of its range. The scented, tulip-like, greenish-yellow flowers appear in mid-spring but are not as ornamental as those of other flowering trees because they are far from view.

Figure 1. Full Form - *Liriodendron tulipifera*: tuliptree
Credits: UF/IFAS

General Information

Scientific name: *Liriodendron tulipifera*
Pronunciation: leer-ee-oh-DEN-drawn too-lih-PIFF-er-uh
Common name(s): tuliptree, tulip-poplar, yellow-poplar
Family: *Magnoliaceae*
USDA hardiness zones: 5A through 9A (Figure 2)

1. This document is ENH-522, one of a series of the Environmental Horticulture Department, UF/IFAS Extension. Original publication date November 1993. Revised December 2018. Visit the EDIS website at https://edis.ifas.ufl.edu for the currently supported version of this publication.

2. Edward F. Gilman, professor emeritus, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Department of Agricultural and Biological Engineering Department; Ryan W. Klein, graduate assistant, Environmental Horticulture Department; Andrew K. Koeser, assistant professor, Environmental Horticulture Department, UF/IFAS Gulf Coast Research and Education Center; Deborah R. Hilbert, graduate assistant, Environmental Horticulture Department, GCREC; and Drew C. McLean, biological scientist, Environmental Horticulture Department, GCREC; UF/IFAS Extension, Gainesville, FL 32611.

Origin: native to the eastern United States and southern Ontario
UF/IFAS Invasive Assessment Status: native
Uses: shade

Figure 2. Range

Description

Height: 80 to 100 feet
Spread: 30 to 50 feet
Crown uniformity: symmetrical
Crown shape: oval
Crown density: moderate
Growth rate: moderate
Texture: coarse

Foliage

Leaf arrangement: alternate

Figure 3. Leaf - *Liriodendron tulipifera*: tuliptree
Credits: UF/IFAS

Leaf type: simple
Leaf margin: lobed, entire
Leaf shape: orbiculate
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: 4 to 8 inches
Leaf color: bright green on top, paler green underneath
Fall color: yellow
Fall characteristic: showy

Flower

Flower color: greenish yellow with orange blotches
Flower characteristics: showy; resembles a tulip
Flowering: late spring to early summer

Figure 4. Flower - *Liriodendron tulipifera*: tuliptree
Credits: UF/IFAS

Fruit

Fruit shape: elongated; cone-like aggregate of samaras
Fruit length: 2 to 3 inches
Fruit covering: dry or hard
Fruit color: brown
Fruit characteristics: attracts birds; not showy; fruit/leaves a litter problem

Figure 5. Fruit - *Liriodendron tulipifera*: tuliptree
Credits: UF/IFAS

Trunk and Branches

Trunk/branches: branches don't droop; showy; typically one trunk; no thorns
Bark: light gray and slightly roughened when young, becoming furrowed with deep brown crevices and tan or white flat-topped ridges with age
Pruning requirement: little required
Breakage: resistant
Current year twig color: brown
Current year twig thickness: medium
Wood specific gravity: 0.42

Culture

Light requirement: full sun
Soil tolerances: clay; sand; loam; acidic; well-drained to occasionally wet
Drought tolerance: moderate
Aerosol salt tolerance: none

Other

Roots: not a problem
Winter interest: no
Outstanding tree: no
Ozone sensitivity: sensitive
Verticillium wilt susceptibility: susceptible
Pest resistance: resistant to pests/diseases

Figure 6. Bark - *Liriodendron tulipifera*: tuliptree
Credits: Gitta Hasing, UF/IFAS

Use and Management

Although a rather large tree, tulip-poplar could be used along residential streets with very large lots and plenty of soil for root growth if set back 10 or 15 feet. Not generally planted in large numbers and probably best for a specimen or for lining commercial entrances with lots of soil space. Trees can be planted from containers at any time in the south but transplanting from a field nursery should be done in spring, followed by faithful watering. Plants prefer well-drained, acid soil. Drought conditions in summer can cause premature defoliation of interior leaves which turn bright yellow and fall to the ground, especially on newly-transplanted trees. The tree may be short-lived in parts of USDA hardiness zone 9, although there are a number of young specimens about two feet in diameter in the southern part of USDA hardiness zone 8b. It is usually

recommended only for moist sites in many parts of Texas, including Dallas, but has grown in an open area with plenty of soil space for root expansion near Auburn and Charlotte without irrigation where the trees are vigorous and look nice.

There are several cultivars: `Aureo-maculatum' -- leaves with yellow blotches, `Aureo-marginatum' -- leaves edged with yellow, `Fastigiatum' -- columnar growth, `Pyramidale' -- narrow growth habit. None are commonly available.

Pests

Aphids, particularly Tuliptree aphid, can build up to large numbers, leaving heavy deposits of honeydew on lower leaves, cars, and other hard surfaces below. A black, sooty mold may grow on the honeydew. Although this does little permanent damage to the tree, the honeydew and sooty mold can be annoying.

Tuliptree scales are brown, oval and may be first seen on lower branches. Scales deposit honeydew which supports the growth of sooty mold. Use horticultural oil sprays in spring before plant growth begins.

Tuliptree is considered resistant to gypsy moth.

Diseases

Tuliptree is attacked by several cankers. Infected, girdled branches dieback from the tip to the point of infection. Keep trees healthy and prune out infected branches.

Leaf spots are usually not serious enough to warrant chemical controls. Once leaves are heavily infected the opportunity for chemical control is lost. Rake up and dispose of infected leaves. Leaves often fall during summer and litter the ground with yellow, spotted leaves.

Powdery mildew causes a white coating on the leaves and is not usually harmful.

Sooty mold makes a black coating on leaves and stems. The fungus grows on the honeydew left by insects, particularly aphids. Control sooty mold by preventing the build up of insects populations.

Verticillium wilt causes wilting and death of leaves on infected branches. Severe infections kill trees. Keep trees vigorous with a regular maintenance program, including fertilizer.

During hot, dry weather interior leaves turn yellow and fall off. This condition is due to the weather and is not a disease. The problem is most common on newly transplanted trees, but also develops frequently on established trees. Yellowing may be preceded by small, angular, brown spots on the leaves.

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.