

Taxodium distichum: Baldcypress¹

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean²

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

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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 coastal 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.



Product Details

Ilex x attenuata 'Eagleston' is a naturally occurring hybrid of the Dahoon and American Holly. A broad-leaf evergreen tree or shrub. Slowly reaches 20-25 ft. high and 10-20 ft. wide. Keeps its pyramidal shape without pruning. Excellent accent shrub or hedge plant. Plant in full sun to part shade in moist to average soil. Red berries put on a show in winter.

Hamelia patens Firebush, Scarlet Bush¹

Edward F. Gilman, Alan Meerow, Ryan W. Klein, and Gail Hansen²

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.

Thank you for reviewing the Fact Sheets for the tree species available (while supplies last) for the Fall 2024 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 2024 Validation Code you need to enter on the tree reservation online form is:

2024PNF

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



KEEP NASSAU BEAUTIFUL

Acer rubrum: Red Maple¹

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert and Drew C. McLean²

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 is sometimes confused with red-leaved cultivars of Norway maple.

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



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

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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2. Edward F. Gilman, professor emeritus, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Agricultural Engineering Department; Ryan W. Klein, graduate assistant, Environmental Horticulture Department, Gainesville, FL 32611; Andrew K. Koeser, assistant professor, Environmental Horticulture Department, UF/IFAS Gulf Coast Research and Education Center (GCREC), Wimauma, FL 33598; 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.

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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: $\frac{3}{4}$ 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

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.



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

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 Sentinel' 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.

Liriodendron tulipifera: Tuliptree¹

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean²

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.

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)



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

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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.