

# BETULA NIGRA

## RIVER BIRCH



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**JONATHAN | LANDSCAPE**  
**ALDERSON | ARCHITECTS**

Easily grown average, medium to wet soils in full sun to part shade. River birch is perhaps the most culturally adaptable and heat tolerant of the birches. Prefers moist, acidic, fertile soils including semi-aquatic conditions, but also tolerates drier soils. Consider using soaker hoses and bark mulches to keep the root zones cool and moist. Adapts well to heavy clay soils of Missouri and will tolerate poor drainage. Avoid pruning in spring when the sap is running.

Betula nigra, commonly called river birch, is a vigorous, fast-growing, medium-sized, Missouri native deciduous tree which occurs on floodplains, swampy bottomlands and along streams throughout the State. In cultivation, it can be trained as either a single trunk or multi-trunked tree. As a single trunk tree, it develops a pyramidal habit when young, but matures to a more rounded shape typically growing 40-70' tall. Multi-trunked trees form a more irregular crown and are generally considered to be the superior growth habit for this species. Salmon-pink to reddish brown bark exfoliates to reveal lighter inner bark. Leathery, diamond-shaped, medium to dark green leaves (1.5-3.5" long) with doubly toothed margins turn yellow in fall. Monoecious flowers appear in drooping, brownish male catkins and smaller, upright, greenish female catkins.

Genus name is the Latin name for birch.

Specific epithet means black.

Specimen or small groupings for lawns, parks and commercial properties, and, in particular, for wet soils along ponds, streams or in low spots. Good choice for the St. Louis area and generally a good substitute for the paper birch in the hot and humid areas of USDA Zones 5-9.

**Common Name:** river birch  
**Type:** Tree  
**Family:** Betulaceae  
**Native Range:** Eastern United States  
**Zone:** 4 to 9  
**Height:** 40.00 to 70.00 feet  
**Spread:** 40.00 to 60.00 feet  
**Bloom Time:** April to May  
**Bloom Description:** Brown (male)  
green (female)

**Sun:** Full sun to part shade  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Shade Tree, Rain Garden  
**Flower:** Showy  
**Attracts:** Birds  
**Other:** Winter Interest  
**Tolerate:** Deer, Drought, Clay Soil, Wet Soil, Black Walnut, Air Pollution  
**Tolerate:** Clay Soil, Air Pollution





# CERCIS CANADENSIS

## EASTERN REDBUD



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

JONATHAN | LANDSCAPE  
ALDERSON | ARCHITECTS. LLC

Easily grown in average, medium moisture, well-drained soils in full sun to part shade. Part shade is best in hot summer climates. Performs best in moderately fertile soils with regular and consistent moisture. Avoid wet or poorly drained soils. Since this tree does not transplant well, it should be planted when young and left undisturbed.

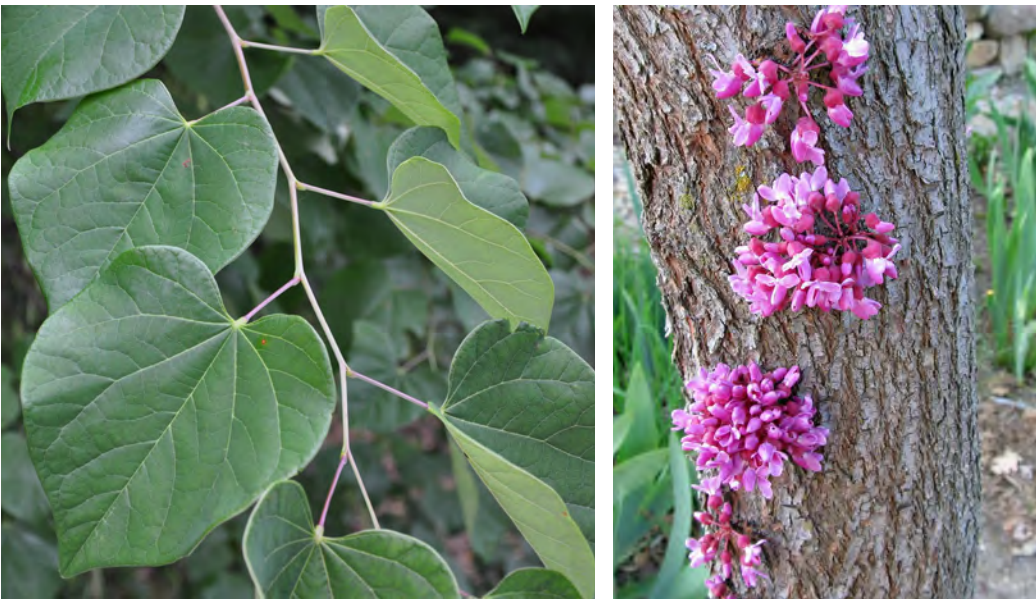
*Cercis canadensis*, commonly called eastern redbud, is a deciduous, often multi-trunked understory tree with a rounded crown that typically matures to 20-30' tall with a slightly larger spread. It is particularly noted for its stunning pea-like rose-purple flowers which bloom profusely on bare branches in early spring (March-April) before the foliage emerges. This tree is native to eastern and central North America from Connecticut to New York to southern Ontario and the Great Lakes south to Western Texas and Florida. It is found in open woodlands, thickets, woodland margins, limestone glades and along rocky streams and bluffs throughout Missouri (Steyermark). Flowers (to ½" wide) bloom in clusters of 4-10. Flowers are followed by flattened leguminous bean-like dry seedpods (to 2-4" long) that mature to brown in summer. Each pod has 6-12 seeds. Pods may remain on the tree into winter. Alternate, simple, cordate, broadly ovate to nearly orbicular, dull green to blue-green leaves (3-5" across) have a papery texture and are short pointed at the tip. Leaves turn pale yellow to greenish-yellow in fall. *Cercis canadensis* is the state tree of Oklahoma.

Genus name comes from the Greek word *kerkis* meaning "weaver's shuttle" in reference to the resemblance of each seed pod to a weaver's shuttle.

Specific epithet is in reference to Canada (southern Ontario) being part of the native range of this tree.

**Common Name:** eastern redbud  
**Type:** Tree  
**Family:** Fabaceae  
**Native Range:** Eastern North America  
**Zone:** 4 to 8  
**Height:** 20.00 to 30.00 feet  
**Spread:** 25.00 to 35.00 feet  
**Bloom Time:** April  
**Bloom Description:** Pink

**Sun:** Full sun to part shade  
**Water:** Medium  
**Maintenance:** Low  
**Suggested Use:** Street Tree, Flowering Tree, Naturalize  
**Flower:** Showy  
**Leaf:** Good Fall  
**Attracts:** Butterflies  
**Tolerate:** Deer, Clay Soil, Black Walnut





# CERCIS CANADENSIS ‘FOREST PANSY’

## EASTERN REDBUD



Easily grown in average, medium moisture, well-drained soils in full sun to part shade. Part shade is best in hot summer climates. Performs best in moderately fertile soils with regular and consistent moisture. Avoid wet or poorly drained soils. Since this tree does not transplant well, it should be planted when young and left undisturbed.

*Cercis canadensis*, commonly called eastern redbud, is a deciduous, often multi-trunked understory tree with a rounded crown that typically matures to 20-30' tall with a slightly larger spread. It is particularly noted for its stunning pea-like rose-purple flowers which bloom profusely on bare branches in early spring (March-April) before the foliage emerges. This tree is native to eastern and central North America from Connecticut to New York to southern Ontario and the Great Lakes south to Western Texas and Florida. It is found in open woodlands, thickets, woodland margins, limestone glades and along rocky streams and bluffs throughout Missouri (Steiermark). Flowers (to ½" wide) bloom in clusters of 4-10. Flowers are followed by flattened leguminous bean-like dry seedpods (to 2-4" long) that mature to brown in summer. Each pod has 6-12 seeds. Pods may remain on the tree into winter. Alternate, simple, cordate, broadly ovate to nearly orbicular, dull green to blue-green leaves (3-5" across) have a papery texture and are short pointed at the tip. Leaves turn pale yellow to greenish-yellow in fall. *Cercis canadensis* is the state tree of Oklahoma.

Genus name comes from the Greek word *kerkis* meaning "weaver's shuttle" in reference to the resemblance of each seed pod to a weaver's shuttle.

Specific epithet is in reference to Canada (southern Ontario) being part of the native range of this tree.

*Forest Pansy'* is a purple-leaved cultivar of the popular Missouri native redbud tree. Fall color is variable, but often includes attractive shades of reddish-purple and orange.



**Sources:** Missouri Botanical Garden; USDA NRCS; NC State Extension

**Common Name:** eastern redbud  
**Type:** Tree  
**Family:** Fabaceae  
**Native Range:** Eastern North America  
**Zone:** 5 to 9  
**Height:** 20.00 to 30.00 feet  
**Spread:** 25.00 to 35.00 feet  
**Bloom Time:** April  
**Bloom Description:** Rosy Pink

**Sun:** Full sun to part shade  
**Water:** Medium  
**Maintenance:** Low  
**Suggested Use:** Flowering Tree  
**Flower:** Showy, Good Cut  
**Leaf:** Colorful, Good Fall  
**Attracts:** Hummingbirds  
**Tolerate:** Deer, Clay Soil, Black Walnut





# CRATAEGUS VIRIDIS ‘WINTER KING’

## GREEN HAWTHORNE



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

JONATHAN | LANDSCAPE  
ALDERSON | ARCHITECTS

Easily grown in average, dry to medium, well-drained soils in full sun. Tolerates light shade and drought. Moist, rich, fertile soils may encourage unwanted succulent growth. Tolerant of urban pollution.

*Crataegus viridis*, commonly called green hawthorn, is native to the southeastern U.S. from Virginia to Florida west to Texas and up the Mississippi River valley to Illinois. It is a dense, rounded, largely spineless tree that typically grows 20-35’ tall with a broad spreading crown. Gray stems are clad with serrate, ovate to elliptic, glossy dark green leaves (to 3 1/2” long) that are shallowly lobed in the upper half. When present, thorns grow to 1 1/2” long. Leaves turn purple to red in fall. Fragrant, 5-petaled, white flowers in 2-inch clusters (corymbs) bloom in May. Flowers are followed by small red fruits (pomes) that ripen in September and usually persist on the tree well into winter. Fruits are technically edible, but are usually best left for the birds. The fruit is sometimes called a haw. The fruit may be harvested to make jelly. Bark on mature trunks exfoliates to reveal orange inner bark.

Genus name comes from the Greek name for the tree. From *kratos* meaning strength for its strong, hard wood. Specific epithet means green.

‘Winter King’ one of the most disease-resistant cultivars that is noted for its profuse bloom of flowers, larger fruits, silvery-barked stems and more attractive fall color (purple and scarlet). It is one of the best hawthorns for landscape purposes. Unlike most hawthorns, this cultivar (as well as the species) is largely spineless, with only occasional small thorns. As with most hawthorns, there is some susceptibility to cedar hawthorn rust (rust stage where eastern red cedars are present in the area) and fireblight. Fungal leaf spots, powdery mildew, cankers and apple scab are occasional problems. Insect pests include borers, caterpillars, lacebugs, leafminers and scale.

Excellent spring flowering tree for lawns and streets. Good fall color and persistent fruit help provide year round interest. Pollution tolerance makes it a good candidate for urban plantings.

**Common Name:** Green Hawthorn  
**Type:** Tree  
**Family:** Rosaceae  
**Native Range:** Japan, Southern China  
**Zone:** 4 to 7  
**Height:** 25.00 to 35.00 feet  
**Spread:** 25.00 to 35.00 feet  
**Bloom Time:** May  
**Bloom Description:** White

**Sun:** Full sun  
**Water:** Dry to Medium  
**Maintenance:** Low  
**Suggested Use:** Flowering Tree  
**Other:** Winter Interest, Thorns  
**Tolerate:** Drought, Clay Soil, Dry Soil





# LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'

## SWEETGUM



Easily grown in average, medium moisture, well-drained soils in full sun. Intolerant of shade. Prefers deep, moist, fertile soils, but seems to tolerate a wide variety of soils. Avoid alkaline soils. Trees are not reliably winter hardy in the northern areas of USDA Zone 5.

Liquidambar styraciflua, commonly called sweet gum, is a low-maintenance deciduous shade tree that is native from Connecticut to Florida and Missouri further south to Texas, Mexico and Central America. It typically occurs in moist low woods and along streams only in the far southeastern corner of the state (Steyermark). Each leaf has 5-7 pointed, star-shaped lobes. Leaves are fragrant when bruised. Fall color at its best is a brilliant mixture of yellows, oranges, purples and reds. Branchlets may have distinctive corky ridges. Non-showy, monoecious, yellow-green flowers appear in spherical clusters in April-May. Tree wood has been widely used for a number of applications including flooring, furniture and home interiors. The gum obtained from genus plants has been used in the past for a variety of purposes, including chewing gum, incense, perfumes, folk medicines and flavorings.

**Rotundiloba** is a narrowly pyramidal, deciduous tree which typically grows 60-75' tall (less frequently to 100' ). Deep green leaves have, as the cultivar name suggests, distinctively rounded lobes (5-7). Foliage turns yellow to burgundy in fall. Non-showy, apetalous, monoecious flowers appear in small clusters in spring. Tree does not set fruit (the infamous gum balls).

No serious insect or disease problems. Webworms, caterpillars, borers and scale may cause problems in some areas. Leaf spots, wood rot and bleeding necrosis may occur. Chlorosis may occur in alkaline soils.

Lawn or shade tree. Street tree if provided with sufficient room to grow.



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** Sweet Gum  
**Type:** Tree  
**Family:** Altingiaceae  
**Native Range:** Eastern North America  
**Zone:** 5 to 9  
**Height:** 60.00 to 70.00 feet  
**Spread:** 20.00 to 30.00 feet  
**Bloom Time:** April to May  
**Bloom Description:** Greenish

**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Low  
**Suggested Use:** Shade Tree,  
Street Tree  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Tolerate:** Rabbit, Deer, Clay Soil





# MAGNOLIA VIRGINIANA

## SWEET BAY MAGNOLIA



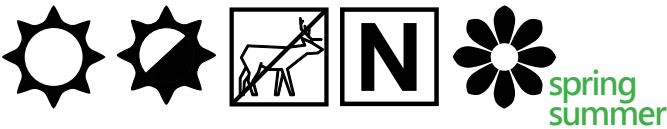
Easily grown in acidic, medium to wet soils in full sun to part shade. Prefers moist, rich, organic soils, but, unlike most other magnolias, tolerates wet, boggy soils. Also does quite well in the heavy clay soils of Missouri. Appreciates a protected location in USDA Zone 5 where it is not reliably winter hardy throughout.

Magnolia virginiana, commonly called sweet bay magnolia, is native to the southeastern United States north along the Atlantic coast to New York. In the northern part of its cultivated growing range, it typically grows as either a 15-20' tall tree with a spreading, rounded crown or as a shorter, suckering, open, multi-stemmed shrub. In the deep South, it is apt to be more tree-like, sometimes growing to 60' tall. Features cup-shaped, sweetly fragrant (lemony), 9-12 petaled, creamy white, waxy flowers (2-3" diameter) which appear in mid-spring and sometimes continue sporadically throughout the summer. Oblong-lanceolate shiny green foliage is silvery beneath. Foliage is evergreen to semi-evergreen in the South, but generally deciduous in the St. Louis area. Cone-like fruits with bright red seeds mature in fall and can be showy. See also Magnolia virginiana var. australis which primarily differs from the species by being somewhat taller, having more fragrant flowers and being more likely to be evergreen.

Genus name honors Pierre Magnol, French botanist (1638-1715).

Specific epithet means of Virginia.

Excellent specimen tree for lawns or tall multi-stemmed shrub for shrub borders. Use in foundation plantings, near patios or on the periphery of woodland areas. Often planted in parks. Will grow in wet soils such as those found in low spots or near ponds/streams.



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** sweet bay magnolia  
**Type:** Tree  
**Family:** Magnoliaceae  
**Native Range:** Eastern United States  
**Zone:** 5 to 10  
**Height:** 10.00 to 35.00 feet  
**Spread:** 10.00 to 35.00 feet  
**Bloom Time:** May to June  
**Bloom Description:** White

**Sun:** Full sun to part shade  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Flowering Tree,  
Rain Garden  
**Flower:** Showy, Fragrant  
**Fruit:** Showy  
**Tolerate:** Deer, Clay Soil, Wet Soil,  
Air Pollution





# MALUS 'ADIRONDACK'

## 'ADIRONDACK' CRABAPPLE

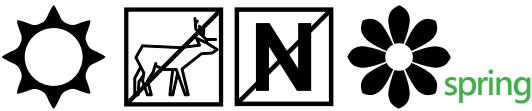


Adaptable to diverse soil, moisture, and climatic conditions. Requires virtually no pruning to maintain its shape, nor chemical controls for the common crabapple diseases.

'Adirondack' exhibits a combination of many desirable traits, making it a near-perfect crabapple. The narrowly obovate, upright-branched growth habit combines with an annual bloom cycle; abundant, small, persistent fruit; slow to moderate growth rate, and tolerance to multiple diseases that is rare to find in crabapples. Highly rated for both aesthetics and disease resistance by the International Ornamental Crabapple Society.

Effective for foundation plantings of buildings or formal gardens; as a specimen for space-limited situations; a strong focal accent in the shrub border or residential garden; park and recreational area screen; roadside or street tree where shade is not needed.

It's habit is narrowly obovate, upright-branched small tree. Maintains upright form with age. Foliage is leathery, dark green leaves that are highly tolerant to cedar apple rust, apple scab, and powdery mildew. This cultivar flowers annually starting with dark carmine buds that mature to a lighter red and open to white, waxy, heavy-textured, wide-spreading flowers with traces of red; slightly fragrant. The fruit is called a pome- Abundant, bright orange-red, hard, small (1/2-inch) fruits persist until early winter. Relished by birds after they are softened by freezing.



Sources: USNA USDA; NC State Extension

**Common Name:** 'Adirondack' Crabapple  
**Type:** Tree  
**Family:** Rosaceae  
**Native Range:** (Hybrid) East Asia  
**Zone:** 4 to 8  
**Height:** 15.00 to 20.00 feet  
**Spread:** 10.00 to 20.00 feet  
**Bloom Time:** Late Spring  
**Bloom Description:** White, Pink

**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Low  
**Suggested Use:** Flowering Tree  
Flower: Showy, Fragrant  
**Tolerate:** Drought





# NYSSA SYLVATICA

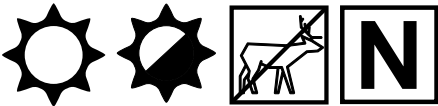
## BLACK GUM



Easily grown in average, medium to wet soils in full sun to part shade. Prefers moist, acidic soils. Tolerates poorly-drained soils and can grow in standing water. On the other end of the spectrum, tolerates some drought and adapts to some dryish soils, at least in the wild. Long taproot precludes moving established trees. Female trees need a male pollinator to set fruit.

*Nyssa sylvatica*, commonly called sour gum, is a slow-growing, deciduous, Missouri native tree which occurs in a wide range of soils south of the Missouri River in the southeastern quarter of the State. It is primarily a lowland tree found in low wet woods, bottomlands and pond peripheries, but also can be found on dry rocky wooded slopes and ravines. A stately tree with a straight trunk and rounded crown (more pyramidal when young) that typically grows 30-50' tall, but occasionally to 90' . Primarily dioecious (separate male and female trees), but each tree often has some perfect flowers. Small, greenish-white flowers appear in spring on long stalks (female flowers in sparse clusters and male flowers in dense heads). Although flowers are not showy, they are an excellent nectar source for bees. Flowers give way to oval, 1/2" long fruits which are technically edible but quite sour (hence the common name). Fruits mature to a dark blue and are attractive to birds and wildlife. Spectacular scarlet fall color. Obovate to elliptic, entire to slightly toothed leaves (to 5" long) are dark green above and paler below. Sometimes commonly called black tupelo. The closely related water tupelo (*Nyssa aquatica*) is a tree most often seen growing in standing water in swamps and bottomlands in the lower Mississippi valley and southeastern U.S. coastal areas, either in pure stands or in combination with bald cypress, water oaks and swamp cottonwoods.

Excellent ornamental shade tree for lawns or street tree. Also grows well in moist woodland gardens or naturalized areas or in low spots subject to periodic flooding or in boggy areas. Although slow-growing, it still needs to be sited in an area which affords plenty of room for future growth, particularly since it is so difficult to transplant.



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** black gum  
**Type:** Tree  
**Family:** Nyssaceae  
**Native Range:** Eastern North America  
**Zone:** 3 to 9  
**Height:** 30.00 to 50.00 feet  
**Spread:** 20.00 to 30.00 feet  
**Bloom Time:** May to June  
Bloom Description: Greenish white

**Sun:** Full sun to part shade  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Shade Tree, Street Tree, Rain Garden  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Attracts:** Birds  
**Tolerate:** Clay Soil, Wet Soil, Black Walnut





# PARROTIA PERSICA

## PERSIAN IRONWOOD



Best grown in average, slightly acidic, medium moisture, well-drained soils in full sun. Tolerates light shade and a wide range of soil conditions.

Parrotia persica, commonly called Persian ironwood, is a small, single trunk, deciduous tree eventually growing 20-40' tall (but typically 10' after 7-8 years) or a large, multi-stemmed shrub growing to 15' tall. Apetalous flowers with dense, red stamens surrounded by brownish bracts appear in late winter to early spring before the foliage. Flowers are attractive on close inspection, but are generally considered to be somewhat insignificant. Oval to oblong leaves (to 4" long) emerge reddish-purple in spring, mature to a lustrous, medium to dark green in summer and change to variable shades of yellow, orange and red in fall. Bark of mature trees exfoliates to show green, white or tan patches beneath and provides good winter interest.

Genus name honors F. W. Parrot (1792-1841), German naturalist and traveller who climbed Mount Arart in 1834.

Specific epithet means Persian.

Excellent small lawn tree or street tree. Can be incorporated into foundation plantings, particularly in shrub form.



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** Persian ironwood  
**Type:** Tree  
**Family:** Hamamelidaceae  
**Native Range:** Northern Iran, Caucasus  
**Zone:** 4 to 8  
**Height:** 20.00 to 40.00 feet  
**Spread:** 20.00 to 30.00 feet  
**Bloom Time:** March to April  
**Bloom Description:** Red

**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Medium  
**Suggested Use:** Street Tree, Flowering Tree  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Other:** Winter Interest  
**Tolerate:** Clay Soil, Air Pollution





# PARROTIA PERSICA ‘PERSIAN SPIRE’

## PERSIAN IRONWOOD



Best grown in average, slightly acidic, medium moisture, well-drained soils in full sun. Tolerates light shade and a wide range of soil conditions.

Parrotia persica, commonly called Persian ironwood, is a small to medium sized, single trunk, deciduous tree eventually growing 20-40’ tall (but typically 10’ after 7-8 years) or a large, multi-stemmed shrub growing to 15’ tall. Apetalous flowers with dense, red stamens surrounded by brownish bracts appear in late winter to early spring before the foliage. Flowers are attractive on close inspection, but are generally considered to be somewhat insignificant. Oval to oblong leaves (to 4” long) emerge reddish-purple in spring, mature to a lustrous, medium to dark green in summer and change to variable shades of yellow, orange and red in fall. Bark of mature trees exfoliates to show green, white or tan patches beneath and provides good winter interest.

Genus name honors F. W. Parrot (1792-1841), German naturalist and traveller who climbed Mount Arart in 1834. Specific epithet means Persian.

‘JLColumnar’ is an upright selection of Persian ironwood that features colorful foliage and a columnar to narrowly oval-shaped growth form. Mature trees will reach around 25’ tall with a 10’ spread. The 2.5-3.5” long and 1.5-2” wide, ovate to obovate leaves have coarse, rounded teeth and slightly undulating margins. The foliage emerges purple in spring before maturing to deep green in summer and providing a consistent fall display in various shades of yellow, orange, red, and burgundy. Small flowers bloom in early spring and although they lack petals the clusters of bright, crimson red, pendulous stamens add interest before the leaves emerge. Commonly sold at nurseries and garden centers under the name PERSIAN SPIRE.

No serious insect or disease problems.

Excellent small lawn tree or street tree. Can be incorporated into foundation plantings, particularly in shrub form.



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** Persian ironwood  
**Type:** Tree  
**Family:** Hamamelidaceae  
**Native Range:** Northern Iran, Caucasus  
**Zone:** 4 to 8  
**Height:** 20.00 to 25.00 feet  
**Spread:** 8.00 to 10.00 feet  
**Bloom Time:** March to April  
**Bloom Description:** Red

**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Medium  
**Suggested Use:** Street Tree, Flowering Tree  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Other:** Winter Interest  
**Tolerate:**





# PLATANUS × ACERIFOLIA

## LONDON PLANE TREE



Easily grown in average, medium to wet, well-drained soils in full sun. Tolerates light shade. Prefers rich, humusy, consistently moist soils. Generally tolerant of most urban pollutants.

*Platanus × acerifolia*, commonly called London planetree, is a hybrid cross between American sycamore (*P. occidentalis*) and Oriental planetree (*P. orientalis*). The original cross may have occurred as early as the 1640s, after which this tree became widely planted in London and other major European cities because of its perceived tolerance for urban pollution. City planting spread to America where this hybrid today is common in such distant locations as Brooklyn, New York and San Francisco, California. This hybrid can be very difficult to distinguish from its American parent. Distinguishing features include: (1) Leaves have deeper sinuses and (2) fruiting balls appear in pairs. Like its American parent, it typically grows as a single-trunk tree to 75-100' (less frequently to 120' ) tall with horizontal branching and a rounded habit. Trunk diameter typically ranges from 3-8' . The signature ornamental feature of this huge tree is its brown bark which exfoliates in irregular pieces to reveal creamy white inner bark. Mature trees typically display mottled white bark that facilitates identification from great distances. The large 3-5 lobed medium to dark green leaves (4-9" wide) have coarse marginal teeth. In fall, foliage typically turns an undistinguished yellow-brown. Small, non-showy, monoecious flowers appear in small rounded clusters in April. Male flowers are yellowish and female flowers are reddish. Female flowers give way to fuzzy, long-stalked, spherical fruiting balls (to 1 3/8" diameter) that ripen to brown in October and persist into early winter. Fruiting balls appear in pairs. Each fruiting ball consists of numerous, densely-packed, tiny seed-like fruits (achenes). Fruiting balls gradually disintegrate as fall progresses, dispersing their seeds, often in downy tufts, with the wind. Also listed as *Platanus hybrida* and *Platanus x hispanica*.

Genus name comes from the Greek word, *platanos*, for the oriental plane tree (*P. orientalis*).



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**Common Name:** London plane tree  
**Type:** Tree  
**Family:** Platanaceae  
**Native Range:** (Hybrid) Southeastern United States, Southeastern Europe to Asia Minor  
**Zone:** 4 to 8  
**Height:** 75.00 to 100.00 feet  
**Spread:** 60.00 to 75.00 feet  
**Bloom Time:** April  
**Bloom Description:** Yellow (male) and red (female)

**Sun:** Full sun  
**Water:** Medium to wet  
**Maintenance:** High  
**Suggested Use:** Shade Tree, Rain Garden  
**Flower:** Insignificant  
**Fruit:** Showy  
**Other:** Winter Interest  
**Tolerate:** Deer, Clay Soil, Air Pollution





# QUERCUS BICOLOR

## SWAMP WHITE OAK



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

JONATHAN | LANDSCAPE  
ALDERSON | ARCHITECTS. 

Easily grown in average, medium to wet, acidic soil in full sun.

Quercus bicolor, commonly called swamp white oak, is a medium sized, deciduous tree with a broad, rounded crown and a short trunk which typically grows at a moderate rate to a height of 50-60' (sometimes larger). Leaves are dark, shiny green above and silvery white beneath, with 5-10 rounded lobes or blunt teeth along the margins. Fall color is yellow, but sometimes reddish purple. Insignificant flowers in separate male and female catkins in spring. Fruits are acorns which mature in early fall. Indigenous to north, central and eastern Missouri in moist to swampy locations in bottomlands and lowlands, such as along streams and lakes, valleys, floodplains and at the edge of swamps. Also has surprisingly good drought resistance.

Genus name comes from the classical Latin name for oak trees.

Specific epithet refers to the leaves being shiny green above and silvery white beneath.

Specimen, street tree, lawn tree. A good tree for wet ground and low spots.

**Common Name:** swamp white oak  
**Type:** Tree  
**Family:** Fagaceae  
**Native Range:** Northeastern North America  
**Zone:** 3 to 8  
**Height:** 50.00 to 60.00 feet  
**Spread:** 50.00 to 60.00 feet  
**Bloom Time:** April  
**Bloom Description:** Yellowish-green

**Sun:** Full sun  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Shade Tree, Street Tree, Rain Garden  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Attracts:** Birds  
**Tolerate:** Wet Soil





# QUERCUS IMBRICARIA

## SHINGLE OAK



Sources: Missouri Botanical Garden;  
USDA NRCS; NC State Extension

JONATHAN | LANDSCAPE  
ALDERSON | ARCHITECTS. LLC

Best grown in rich, humusy, medium moisture, well-drained soils in full sun. Adapts to a wide range of soils including dry ones.

Quercus imbricaria, commonly called shingle oak, is a medium sized deciduous oak of the red oak group that typically grows in a conical form to 40-60' tall, with the crown broadening and rounding with age. Trunk diameter to 3' . Brownish gray bark develops shallow furrowing and ridging with age. Shingle oak is native primarily from Pennsylvania to Iowa and Arkansas. It is particularly common in the Ohio River Valley. In Missouri, it occurs in a variety of locations throughout the state, including upland dry woods, prairie margins, slopes, ravines, stream margins and bottomlands (Steyermark). Insignificant monoecious yellowish-green flowers in separate male and female catkins appear in spring as the leaves emerge. Fruits are rounded acorns (to 3/4" long), with scaly cups that extend to approximately 1/3 the acorn length. The acorns do not ripen until fall of the second year, as is the case with most oaks in the red oak group. Acorns are an important source of food for wildlife. Narrow, oblong, smooth-margined, glossy dark green leaves (3-6" long and 1-2" wide) are pale and pubescent beneath. Fall color is variable, sometimes producing attractive shades of yellow-brown to red-brown. Old leaves tend to persist on the tree throughout most of the winter.

Wood was once used by early settlers in the midwest for shingles, hence the common name.

Shingle oak is considered to be a low-maintenance tree with good pest resistance. Oaks in general are susceptible to a large number of diseases, including oak wilt, chestnut blight, shoestring root rot, anthracnose, oak leaf blister, cankers, leaf spots and powdery mildew. Potential insect pests include scale, oak skeletonizer, leaf miner, galls, oak lace bugs, borers, caterpillars and nut weevils.

A medium shade tree for large lawns or parks. Street tree. May be pruned for use as a screen or hedge.

**Common Name:** Shingle Oak  
**Type:** Tree  
**Family:** Fagaceae  
**Native Range:** Eastern and Central United States  
**Zone:** 5 to 8  
**Height:** 40.00 to 60.00 feet  
**Spread:** 40.00 to 60.00 feet  
**Bloom Time:** April  
**Bloom Description:** Yellowish-green

**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Low  
**Suggested Use:** Shade Tree  
**Flower:** Insignificant  
**Leaf:** Good Fall  
**Fruit:** Showy  
**Attracts:** Birds and Mammals  
**Tolerate:** Drought, Black Walnut





# QUERCUS MACROCARPA

## BUR OAK



Easily grown in average, dry to medium, well-drained soils in full sun. Prefers moist well-drained loams, but adapts to a wide range of soil conditions. Good drought tolerance. May take up to 35 years for this tree to bear a first crop of acorns.

*Quercus macrocarpa*, commonly called bur oak or mossycup oak, is one of the most majestic of the native North American oaks. It is a medium to large sized deciduous oak of the white oak group that typically grows 60-80' (less frequently to 150' ) tall with a broad-spreading, rounded crown. Acorn cups are covered with a mossy scale or bur near the rim, hence the common names. It is native to a variety of habitats in central and eastern North America. Best growth occurs in bottomland soils, particularly in the Ohio River valley. Insignificant monoecious yellowish-green flowers in separate male and female catkins appear in spring as the leaves emerge. Fruits are oval acorns (to 1 1/2" long), with fringed, burry cups that extend to approximately 1/2 to 3/4 the acorn length. Acorns are an important source of food for wildlife. Leathery, dark green leaves (6-12" long) with 5-9 rounded lobes are variable in shape, but usually have a pair of deep central sinuses that extend nearly to the midrib giving the leaf a waisted appearance. Fall color is an undistinguished yellow-brown. Twigs sometimes are ridged with corky wings.

Genus name comes from the classical Latin name for oak trees. Specific epithet comes from the Greek words macro meaning large and carpa meaning fruit in reference to the large acorn size.

Oaks are susceptible to a large number of diseases, including oak wilt, chestnut blight, shoestring root rot, anthracnose, oak leaf blister, cankers, leaf spots and powdery mildew. Potential insect pests include scale, oak skeletonizer, leaf miner, galls, oak lace bugs, borers, caterpillars and nut weevils. Notwithstanding the aforementioned, bur oak is generally considered to be a low-maintenance, long-lived tree.

A large shade tree for very large lawns or parks.

**Common Name:** Bur Oak  
**Type:** Tree  
**Family:** Fagaceae  
**Native Range:** Northern & Central United States  
**Zone:** 3 to 7  
**Height:** 60.00 to 80.00 feet  
**Spread:** 60.00 to 80.00 feet  
**Bloom Time:** April  
**Bloom Description:** Yellowish-green

**Sun:** Full sun  
**Water:** Dry to Medium  
**Maintenance:** Low  
**Suggested Use:** Shade Tree, Rain Garden  
**Flower:** Insignificant  
**Fruit:** Showy  
**Attracts:** Birds  
**Tolerate:** Drought, Clay Soil, Dry Soil



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension



# TILIA TOMENTOSA

## SILVER LINDEN



**Sources:** Missouri Botanical Garden;  
USDA NRCS; NC State Extension

**JONATHAN | LANDSCAPE**  
**ALDERSON | ARCHITECTS**

Easily grown in average, dry to medium, well-drained soils in full sun to part shade. Prefers moist, fertile, well-drained loams, but adapts to a wide range of soil conditions. Best drought resistance of any of the lindens. Good tolerance for urban conditions.

*Tilia tomentosa*, commonly called silver linden or European white linden, is native to Europe and Asia. It is noted for its attractive foliage, which is glossy green above and silvery-white below. The foliage flutters in the slightest breeze, showcasing the silver and green leaf colors. This is a medium to large deciduous tree, typically growing to 50-70' (less frequently to 100' ) tall with upright branching and a broad-columnar habit. Fragrant pale yellow flowers in drooping cymes appear in late spring to early summer (June-July). When a tree is in full bloom, bees often visit in such abundant numbers that humming can be heard many feet from the tree. Flowers are followed by small nutlets attached to narrow, bract-like, strap-shaped leafy wings (to 2.5" long). Nutlets ripen in late summer. Ovate, shiny, dark green leaves (to 4" long) with acuminate tips and serrate margins are densely covered beneath with silvery-white hairs. Fall color is an undistinguished pale green to pale yellow.

Genus name comes from the Latin name for the linden or lime tree, known in southern Sweden as linn and the origin of the name Linnaeus.

Specific epithet means covered with short, soft, woolly hairs in reference to the leaf undersides.

Lindens are usually called limes in Great Britain.

Shade, lawn tree or street tree.

**Common Name:** silver linden  
**Type:** Tree  
**Family:** Malvaceae  
**Native Range:** Southeast Europe to Asia Minor  
**Zone:** 4 to 7  
**Height:** 50.00 to 70.00 feet  
**Spread:** 30.00 to 50.00 feet  
**Bloom Time:** June to July  
**Bloom Description:** Pale yellow

**Sun:** Full sun to part shade  
**Water:** Dry to medium  
**Maintenance:** Low  
**Suggested Use:** Shade Tree, Street Tree, Flowering Tree  
**Flower:** Showy, Fragrant  
**Leaf:** Colorful  
**Attracts:** Butterflies  
**Fruit:** Showy  
**Tolerate:** Drought

