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## Maple, Red (spp.)

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**Leaf Color** Green  
**Fall Color** Orange, red and yellow  
This plant has attractive fall colors.

### Leaf Identification

**Type:** Simple  
**Arrangement:** Opposite  
**Venations:** Palmate  
**Margins:** Incised, lobed and serrate  
**Shapes:** Star-shaped  
**Length:** 2in./5cm to 4in./10cm

**Fruit Color** Red

The fruit is dry and elongated.

### Environment

This plant tolerates some drought, flooding and a little salt. This plant will grow in dry to wet or submerged soil. Suitable soil is well-drained/loamy, sandy or clay. The pH preference is an acidic to slightly alkaline (less than 6.8 to 7.7) soil.

### Landscape Uses

- Woodland garden
- Street tree
- Specimen

### Attributes and Features

- Naturalizing
- Wetlands plant
- Attracts birds
- Attractive fruit
- Fruit is edible by birds
- Fruit attracts animals

### *Acer rubrum*

Red Maple, Swamp Maple

### Aceraceae (Maple)

**Type** Tree, woody plant

**Hardy range** 4A to 10B

**Height** 50' to 75' / 15.20m to 22.80m

**Spread** 40' to 60' / 12.20m to 18.20m

**Growth rate** Fast

**Form** Oval, rounded and upright or erect

**Exposure** Full shade to full sun

**Persistence** Deciduous

**Bloom Color** Red

**Bloom Time** Spring and Winter

The flowers are showy.

### Native Habitat

Abundant and widespread in eastern North America due to its tolerance to different soil types, pH, moisture, elevation and soil texture. Grows from sea level to 3000 feet elevation as a subclimax species in bogs to mountain tops. In Florida and at the extremes of its southern range, it is almost exclusively a swamp plant.

Native to the following North American locales: Alabama, Arkansas, Connecticut, District of Columbia, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Massachusetts, Maryland, Maine, Michigan, Minnesota, Missouri, Mississippi, North Carolina, Newfoundland, New Hampshire, New Jersey, Nova Scotia, New York, Ohio, Oklahoma, Pennsylvania, Prince Edward Island, Quebec, Rhode Island, South Carolina, Tennessee, Virginia, Vermont, Wisconsin, West Virginia

### Crown, Branch and Twig

This plant is asymmetrical with a medium texture and has a moderately dense crown.

This plant's bark is not showy.

Branches or twigs are of medium thickness.



This plant typically grows with one trunk.

This plant has low flammability. National champion is 141 x 88 feet in Tennessee.

### Culture Notes

This tree is over-planted in many areas and should be used less often. The tree makes the best growth in wet places in the southern portion of its range but adapts nicely to drier locations in the northern and central portion of its range where rainfall is greater than 40 inches. In fact, it can grow into hardiness zone 10 provided it is planted on a wet site. Trees in the northern portion of its range can grow to more than 100 feet tall in their native habitat.

Red Maple may develop chlorosis on alkaline soil (pH >7.2) due to manganese deficiency where it also grows poorly. Red maple is taking over (invading) many woodlands throughout its hardiness range due to fire suppression designed to protect urban structures. Trees sprout readily from cut stumps. This is the state tree of Rhode Island.

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. Be sure to plant a Red Maple grown from a seed source as close to the planting site as possible, preferable within a hundred miles. Northern seed sources perform poorly in the south; southern seed sources perform poorly in the north. Trees in one study in NY had trouble recovering from bare-root transplanting.

The cultivars 'Schlesinger', 'Franksred' and 'Bowhall' are more tolerant of flooding than *Acer x freemanii* 'Armstrong', 'Autumn Blaze', 'Scarlet Sentinel', 'Morgan' and *A. rubrum* 'October Glory'; these are more tolerant than *A. rubrum* 'Karpick', 'Autumn Flame' and 'Northwood'. 'Scarlet Sentinel' is well adapted to the southern US. October Glory holds its foliage well into fall compared to Red Sunset™. Red Sunset™ defoliates earlier.

Red maples are slowly taking over some moist, eastern deciduous forests. Before 1900, *Acer rubrum* remained mainly in swampy areas but recently has taken over some upland sites. Experts believe the major cause is the repression of forest fires, which killed maples and spared thick-barked species such as oaks, hemlocks and hickories. Acid rain, which red maples tolerate, is another potential cause.

Red Maple tends to form included bark in the crotches of main branches which makes the tree susceptible to breakage. Soft wood results in mid-limb failure in ice storms. Storms also break out sprouts from previous topping cuts. Trees transplant easily but are not very resistant to decay when injured or pruned improperly. Silver Maples are considered better compartmentalizers of decay than Red Maple, but red maple is a fairly good compartmentalizer.

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. Roots growing into mulch resting on the side of the trunk can girdle the trunk. Branches sometimes grow upright through the crown forming poor attachments to the trunk. These should be cut back (or removed if they are small in diameter) in the nursery or after planting in the landscape to help prevent branch failure in older trees during storms. Soft wood results in mid-limb failure in ice storms. Storms also break out sprouts from previous topping cuts.

Best fall color in the south can be had with the following cultivars: 'Autumn Blaze', 'Tilford', 'Bowhall', October GloryR, and 'Autumn Flame'. Some cultivars such as 'Autumn Flame', October GloryR, Red SunsetR, 'Schlesinger' are more resistant to decay; others such as 'Armstrong' (*Acer x freemanii*), 'Bowhall', 'Karpick', and 'Scanlon' compartmentalize decay poorly. 'Somerset' (cross between October GloryR and 'Autumn Flame') and gives great fall color even in the deep south.

Wood specific gravity averages about 0.54 g/cc. The wood is considered diffuse porous which means that there is little difference in size between the spring wood pores and the summer wood pores. Plants serve as hosts for the tiger swallowtail (*Papilio glaucus*) butterfly larvae. Pollen can cause slight to significant allergy problems for some people, depending on the tree. The following produce no pollen: 'Autumn Glory', 'Bowhall', 'Davey Red', 'Doric', 'Embers', 'Festival', 'Franksred', October GloryR, and 'Red Skin'.

### Maintain adequate mulch area

Clear all turf away from beneath the branches and mulch to the drip line, especially on young trees, to reduce competition with turf and weeds. This will allow roots to become well established and keep plants healthier. Prune the tree so trunks and branches will not rub each other. Remove some secondary branches on main branches with included bark. This reduces the likelihood of the main branch splitting from the tree later when it has grown to become an important part of the landscape. Locate the tree properly, taking into account the ultimate size, since the tree looks best if it is not pruned to control size. The tree can enhance any landscape with its delightful spring flush of foliage. It can be the centerpiece of your landscape if properly located.



### Pests, Diseases and Damaging Agents

Pests: Mites, aphids and twig borers cause some cosmetic damage to the tree. Potato leafhoppers can cause problems including twig die-back for Red Maple; 'Brandywine' (zone 4-8), 'Sun Valley' (zone 4-7), and 'Red Rocket' (zone 3-8, columnar habit) are supposed to be resistant. Formosan termites can feed on live, healthy trees.

Asian long-horned beetle, a new pest in certain regions of the country since 1996, attacks and kills trees. Tunneling by beetle larvae girdles tree stems and branches. Potentially resistant trees include *Metasequoia* (Dawn Redwood), *Taxodium* (Baldcypress), *Corylus colurna* (Turkish Hazelnut), *Quercus* (Oak), *Gleditsia* (Honeylocust), *Tilia* (Linden), *Ginkgo*, and *Gymnocladus dioica* (Kentucky Coffee Tree).

Diseases: Anthracnose, scorch and nutrient deficiencies can be troublesome. Manganese deficiency is most often the cause of chlorosis on alkaline soil. *Ganoderma* and stem cankers can cause occasional problems as can soil nematodes.

Considered a minor host for this disease, bacterial leaf scorch causes leaf scorch, premature browning, and gradual decline of trees. There is often a yellow line or hollow separating the scorched tissue from green tissue. Infection probably spreads by root grafts and certainly by leafhoppers, spittlebugs and sharpshooters. Pruning tools are not likely spread the disease. Neither fertilization nor pruning have any effect on treatment of the disease. There may be chemical treatment that can reduce symptoms but nothing will cure an infected tree. Bacterial leaf scorch can kill trees in several years.

This genus is sensitive to fluoride air pollution, sources of which include glass and brick manufacturing plants and other facilities that heat or treat with acid materials containing fluoride. Symptoms due to fluoride injury are more prominent on the side of the plant facing the pollution source. In deciduous plants, symptoms include leaf browning along the margins of the leaves. A dark brownish band may appear along the boundary between healthy green tissue and the affected brown tissue. Eventually, the entire leaf may turn brown. In conifers, the tips of the current year's needles turn reddish brown. Older needles are typically unaffected. If you suspect fluoride has injured this plant, look in the neighborhood for gladiolus plants. They serve as indicator plants for fluoride air pollution damage because they are very sensitive to it. Other sensitive plants include ash, maple, oak, white pine, poplar, and redbud. Plants that resist injury include birch, flowering cherry, dogwood, hawthorn, American linden, juniper, pear, spirea and sweet gum.

### Special Notes

This plant has aggressive roots.

