

Approved Shade Trees*

for UP Shade Tree
Reimbursement Program

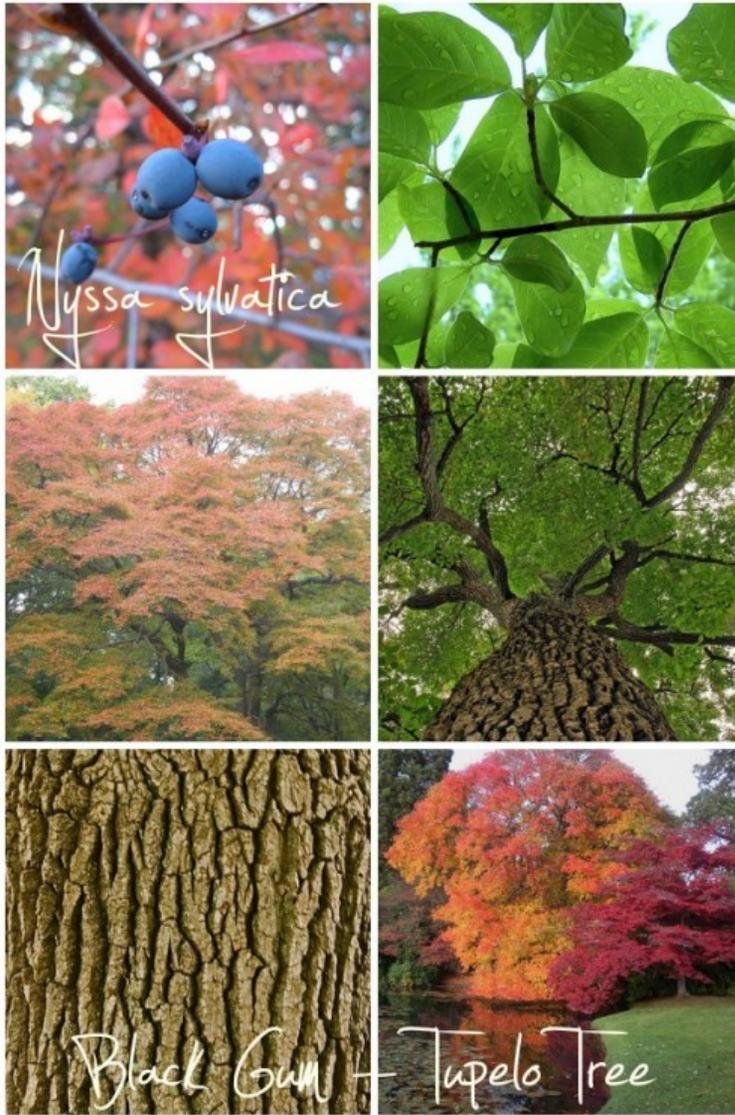


University Park,
Maryland
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Black Gum



HEIGHT: 30' to 50'

SPREAD: 20' to 30'

GROWTH RATE: Slow to medium; 12 to 15' over a ten year period

FALL COLORS: Fluorescent yellow to orange to scarlet to purple

FLOWERS: Very small, in greenish-white in clusters at the top of a long stalk.

LANDSCAPE VALUE: Excellent specimen tree, acceptable street tree in residential areas, not for heavily polluted areas; outstanding summer and fall foliage, one of the best and most consistent native trees for fall color.

Also called the Black Tupelo (*Nyssa sylvatica*), tupelo, or black gum, is a medium-sized deciduous tree native to eastern North America from New England and southern Ontario south to central Florida and eastern Texas, as well as Mexico. These trees typically have a straight trunk with the branches extending outward at right angles. The bark is dark gray and flaky when young, but it becomes furrowed with age, resembling alligator hide on very old stems. The twigs of this tree are reddish-brown, usually hidden by a greyish skin.

Chinese Elm



HEIGHT: 40' to 50'

SPREAD: 40' to 50'

GROWTH RATE: Medium to fast; about 1.5' per year

FALL COLORS: Yellowish and reddish purple; not outstanding

FLOWERS: Inconspicuous, appearing in axillary clusters during

August-September, essentially masked by the foliage.

LANDSCAPE VALUE: Excellent, tough, durable tree for about any situation.

The Chinese Elm (*Ulmus parvifolia*) or Lacebark Elm, is a species native to China, Japan, North Korea and Vietnam. It has been described as "one of the most splendid elms, having the poise of a graceful Nothofagus." The leathery, lustrous green single-toothed leaves are small, and often retained as late as December or even January in Europe and North America.

The trunk has a handsome, flaking bark of mottled greys with tans and reds, giving rise to its other common name, the Lacebark Elm, although scarring from major branch loss can lead to large canker-like wounds.

Hickory



HEIGHT: 60' or more

SPREAD:

GROWTH RATE:

FALL COLORS: Yellow to gold

FLOWERS: Small, yellow-green catkins produced in spring

LANDSCAPE VALUE: Although extremely beautiful and aesthetic native trees, they develop large taproots and are difficult to transplant.

The Hickory (*Carya*) tree includes 17–19 species of deciduous trees with pinnately compound leaves and big nuts. Five or six species are native to China, Indochina, and India (State of Assam), 11 or 12 are from the United States, two to four are from Canada and four are found in Mexico.

The fruit is a globose or oval nut, 2–5 cm (0.79–2.0 in) long and 1.5–3 cm (0.59–1.2 in) diameter, enclosed in a four-valved husk, which splits open at maturity. The nut shell is thick and bony in most species, and thin in a few, notably *C. illinoensis*; it is divided into two halves, which split apart when the seed germinates.

Kentucky Coffee Tree



HEIGHT: 60' to 75', can grow to 90'

SPREAD: 40' to 50'

GROWTH RATE: Slow to medium; 12 to 14' over a ten year period

FALL COLORS: Often ineffective (some yellow) but on some trees is excellent

FLOWERS: Greenish white, 4 to 5 petals. Female flowers are fragrant.

LANDSCAPE VALUE: A choice tree for parks, golf course and other large areas; at times somewhat dirty for the pods, leaflets and rachises are falling at different times.

The Kentucky Coffeetree (*Gymnocladus dioica*) native to the Midwest of North America. The seed may be used as a substitute for coffee beans; however, it is toxic in large quantities. The wood from the tree is used by cabinetmakers and carpenters. Branches are stout, pithy, and blunt; roots are fibrous.

The tree is typically long-lived however often appears dead for the first six months of its growth. This is because the Kentucky Coffeetree sheds its leaves early during the fall and therefore appears bare for up to 6 months. The naked appearance of the tree is reflected through the Kentucky Coffeetree's Greek genus name: γυμνοκλαδus = "naked branch."

London Plane Tree



HEIGHT: 70' to 100'

SPREAD: 65' to 80' and can spread to 120'

GROWTH RATE: About 2' a year

FALL COLORS: Yellow brown

FLOWERS:

LANDSCAPE VALUE: Acceptable for open areas in parks, golf courses, campuses; use as a street tree should be restricted for it grows too large

The London Plane (*Platanus x acerifolia*) is a large deciduous tree with bark usually pale grey-green, smooth and exfoliating, or buff-brown and not exfoliating. The leaves are thick and stiff-textured. The young leaves in spring are coated with minute, fine, stiff hairs at first, but these wear off and by late summer the leaves are hairless or nearly so.

The London Plane is very tolerant of atmospheric pollution and root compaction, and for this reason it is a popular urban roadside tree. It has a greater degree of winter cold tolerance than the Oriental Plane, and is less susceptible to anthracnose disease than the American Plane. The seeds are used as a food source by some finches and squirrels.

Northern Red Oak



Photo © Karina Helm, Arbor Day Foundation

HEIGHT: 60' to 75'

SPREAD: 60' to 75'

GROWTH RATE: Fast; 2' per year over a 10 year period

FALL COLORS: Russet Red to bright red, sometimes never passing much beyond yellow-brown.

FLOWERS:

LANDSCAPE VALUE: Valuable fast growing oak for lawns, parks, golf courses and commercial areas; common street and urban tree.

The Northern Red Oak (*Quercus rubra*) or champion oak is a native of North America, in the northeastern United States and southeast Canada. It grows from the north end of the Great Lakes, east to Nova Scotia, south as far as Georgia and states with good soil that is slightly acidic. Often simply called "red oak", northern red oak is formally so named to distinguish it from southern red oak, also known as the Spanish oak. It is also the state tree of New Jersey. Open-grown trees do not get so tall, but can develop a stouter trunk, up to 2 m (6 ft) in diameter. It has stout branches growing at right angles to the stem, forming a narrow round-topped head. It is tolerant of many soils and varied situations, although it prefers the glacial drift and well-drained borders of streams. Trees may live up to 500 years according to the USDA.

Overcup Oak



HEIGHT: 40' to 60'

SPREAD: 40' to 60'

GROWTH RATE:

FALL COLORS: Rich yellow brown to tannin brown

FLOWERS:

LANDSCAPE VALUE: Will withstand considerable flooding.
Worth considering for especially difficult sites.

The Overcup oak (*Quercus lyrata*) is native to lowland wetlands in the southeastern United States, from Delaware and southern Illinois south to northern Florida and southeast Texas. The leaves are deeply lobed, often somewhat lyre-shaped, dark green above, paler and often finely hairy beneath. The flowers are catkins, produced in the spring and maturing in about 6-7 months into acorns largely enclosed by the cupule (acorn cup).

The common name comes from the acorns being largely enclosed in the cup; the scientific name comes from the lyrate (lyre-shaped) leaves.

Southern Magnolia



HEIGHT: 60' to 80'

SPREAD: 30' to 50'

GROWTH RATE: Slow to medium; with water and fertilizer a fast grower.

FALL COLORS: No change from lustrous dark green above and lighter green below.

FLOWERS: Creamy white, fragrant

LANDSCAPE VALUE: Widely used and planted; needs room to develop; a very handsome tree; sometimes used as a screen, grouping and hedge.

The Southern Magnolia (*Magnolia grandiflora*) is a very popular ornamental tree native to the southeastern United States, from Virginia south to central Florida, and west to eastern Texas and Oklahoma. Widely cultivated around the world, over a hundred cultivars have been *bred and* marketed commercially.

The timber is hard and heavy, and has been used commercially to make furniture, pallets, and veneer. It typically has a single stem (or trunk) and a pyramidal shape. The leaves are simple and broadly ovate, with smooth margins. They are dark green, stiff and leathery, and often scurfy underneath with yellow-brown pubescence. The large, showy, lemon citronella-scented flowers are white petals with a waxy texture, emerging from the tips of twigs on mature trees in late spring.

Sugar Maple



HEIGHT: 60' to 75', potential to 100' to 120'

SPREAD: Usually 2/3 the height

GROWTH RATE: Slow, possibly medium in youth

FALL COLORS: Brilliant yellow, burnt orange and limited red tones

FLOWERS:

LANDSCAPE VALUE: One of the best of the larger shade and lawn trees; excellent for lawn, park, golf courses, possibly as a street tree. Not for crowded or polluted conditions.

The Sugar Maple (*Acer saccharum*) is native to the hardwood forests of northeastern North America, from Nova Scotia west to southern Ontario, and south to Georgia and Texas. Sugar maple is best known for its bright fall foliage and for being the primary source of maple syrup.

The Sugar Maple is a favorite street and garden tree, because it is easy to propagate and transplant, is fairly fast-growing, and has beautiful fall color. The shade and the shallow, fibrous roots may interfere with grass growing under the trees. Deep well-drained loam is the best rooting medium, although Sugar Maple can grow well on sandy soil which does not become excessively dry. Light (or loose) clay soils are also well known to support Sugar Maple. Poorly drained areas are unsuitable and the species is especially short-lived on flood-prone clay flats. Its salt tolerance is low and it is very sensitive to boron.

Swamp White Oak



HEIGHT: 50' to 60'

SPREAD: 50' to 60' or greater

GROWTH RATE: Fast

FALL COLORS:

FLOWERS: Brown, yellow-brown or sometimes reddish

LANDSCAPE VALUE: Found in the wild in low lying and more or less swampy situations, often occurring in moist bottomlands and along the banks of streams. Requires acid soil.

The Swamp White Oak (*Quercus bicolor*) is a medium-sized tree of the north central and northeastern mixed forests. It has a very large range, and can survive in a variety of habitats. It grows rapidly and can reach 300 to 350 years. It is not a large tree. The bark resembles the White Oak. The leaves are always more or less glaucous on the underside, and are shallowly lobed with five to seven lobes on each side, intermediate between the Chestnut Oak and the White Oak. In recent years, the swamp white oak has become a popular landscaping tree, partly due to its relative ease of transplanting.

Sweet Gum (seedless)



HEIGHT: 60' to 75'

SPREAD: 2/3 to equal the height

GROWTH RATE: Medium to fast. 1' to 2' per year in dry soil

FALL COLORS: Rich yellow-purple-red tones. Great variability in fall colors

FLOWERS: Small, produced in a dense globular inflorescence

LANDSCAPE VALUE: Lawn, park, or street tree but needs large area for root development.

The Sweetgum, (*Liquidambar styraciflua*) has lobed leaves arranged spirally on the stems and have a pleasant aroma when crushed. Mature bark is grayish and vertically grooved. The woody biomass is classified as hardwood. In more northerly climates, Sweetgum is among the last of trees to leaf out in the spring, and also among the last of trees to drop its leaves in the fall, turning multiple colors.

Sycamore



HEIGHT: 75' to 100'; can grow to 150'.

SPREAD: Similar or greater than height

GROWTH RATE: Medium to fast, about 2' per year over a 10 year period.

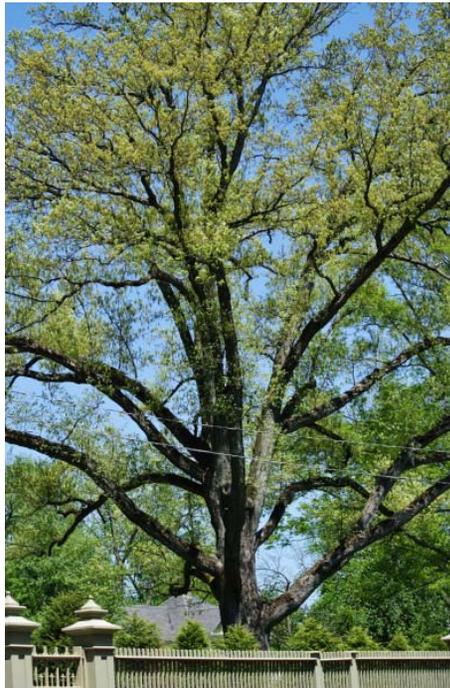
FALL COLORS: Tan to brown

FLOWERS:

LANDSCAPE VALUE: BOOK RECOMMENDS NOT PLANTING THIS TREE BECAUSE IT IS TOO LARGE AND CONSTANTLY DROPPING LEAVES, TWIGS, AND FRUITS. TOO MUCH MAINTENANCE AND TROUBLE.

The American Sycamore (*Platanus occidentalis*), American planetree, Occidental plane, and Buttonwood, is native to North America. It is usually called Sycamore in North America, a name which can refer to other types of tree in other parts of the world. An American Sycamore tree can often be easily distinguished from other trees by its mottled exfoliating bark, which flakes off in great irregular masses, leaving the surface mottled, and greenish-white, gray and brown. The bark of all trees has to yield to a growing trunk by stretching, splitting, or infilling; the Sycamore shows the process more openly than many other trees. The explanation is found in the rigid texture of the bark tissue, which lacks the elasticity of the bark of some other trees, so it is incapable of stretching to accommodate the growth of the wood underneath and the tree sloughs it off.

White Oak



HEIGHT: 50' to 80'

SPREAD: 50' to 80'

GROWTH RATE: Slow to medium; 12' to 15' over a 10 to 12 year period

FALL COLORS: Varies from brown to a rich red to wine color

FLOWERS:

LANDSCAPE VALUE: PRODUCTION IS DIFFICULT, GROWTH IS SLOW, AND TRANSPLANTING CAN BE A PROBLEM; a majestic and worthwhile for large areas.

The White Oak (*Quercus alba*) is one of the pre-eminent hardwoods of eastern North America. It is native to eastern North America and found from southern Quebec west to eastern Minnesota and south to northern Florida and eastern Texas. Specimens have been documented to be over 450 years old.

The White oak becomes quite massive and its lower branches are apt to extend far out laterally, parallel to the ground. It makes an outstanding shade tree

Willow Oak



HEIGHT: 40' to 60'; can grow 90' to 100' in ideal situations

SPREAD: 30' to 40'

GROWTH RATE: Medium, 1' to 2' per year

FALL COLORS: Yellow, bronze-orange, yellow-brown and russet-red

FLOWERS:

LANDSCAPE VALUE: Best oak for overall texture and form. Makes a good avenue, street or boulevard tree. Also excellent for large area use.

The Willow Oak (*Quercus phellos*) is native to eastern North America from southern New York south to northern Florida, and west to southernmost Illinois and eastern Texas.

Its leaves are bright green above, paler beneath, usually hairless but sometimes downy beneath. It is one of the most prolific producers of acorns, an important food tree for squirrels, birds, and other animals in the forest. The tree starts acorn production around 15 years of age, earlier than many oak species.

The Willow oak is one of the most popular trees for horticultural planting, due to its rapid growth, hardiness, balance between axial and radial dominance, ability to withstand sun and shade, light green leaf color and full crown. Despite being massively planted in the U.S. South (such as Washington, DC and Atlanta, Georgia) around malls, along roads, etc., the tree tends to grow larger than planners expect, and often leads to cracked sidewalks.

Zelkova



HEIGHT: 50' to 80'

SPREAD: Generally less than height

GROWTH RATE: Medium, possibly fast in youth; 10' to 12' over a 4 to 6 year period

FALL COLORS: Yellow-orange-brown, possibly deep red to reddish purple.

FLOWERS:

LANDSCAPE VALUE: Very handsome tree because of good foliage, interesting growth habit and handsome bark; well suited to lawns, residential streets, parks, and large areas.

Zelkova (*Zelkova serrata*) is a genus of six species of deciduous trees in the elm family Ulmaceae, native to southern Europe, and southwest and eastern Asia. They vary in size from shrubs (*Z. sicula*) to large trees up to 35 m tall (*Z. carpinifolia*). The leaves are alternate, with serrated margins, and (unlike the related elms) a symmetrical base to the leaf blade. The fruit is a dry, nut-like drupe, produced singly in the leaf axils.

Acknowledgements and Errata

*The trees in the UP Shade Tree reimbursement program typically grow very tall. It is important to carefully consider location before planting.

This list is not exclusive. Other species may be eligible for reimbursement, including N. American beech, other oaks and maples, etc. All trees not in this guide must be approved prior to purchase to qualify for reimbursement.

The UP Tree Committee recommends that all residents seeking reimbursement for any shade tree contact the UP Director of Public Works, Mr. Michael Beall, 301-927-4262, prior to purchase for additional instructions.

Information on trees adapted from:
Dirr, Michael A. 1998. Manual of Woody Landscape Plants. Stipes Publishing: Illinois.

Wikipedia.com, accessed November 2012.

For more information on shade trees and other plants go to:
<http://www.arboday.org/Shopping/Trees/all-trees.cfm>

Booklet originally designed and assembled by Linda Verrill, University Park resident.

Contents and design approved by University Park Tree Committee and Town Council.

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