

# Veterans Memorial Park

## Oak Trees

*Oak trees represent the strength in our American military men and women.*



**#1 Sawtooth Oak** (*Quercus acutissima*)

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The name “sawtooth” comes from the wavy, tooth-like margin on the leaves. This tree is native to Japan, China and Korea. The species was introduced here because of its rapid establishment and heavy fruit production at an early age. It serves as a source of food in late summer and throughout autumn for wildlife. Large birds (crows, blue jays, turkeys); squirrels, deer; raccoons; opossums; and other

mammals love the large, abundant crops of acorns which are borne heavily every other year, if not every year.

Sawtooth oak was introduced into the eastern United States around 1920, but some internet sources claim it happened much later, in 1962. Sawtooth Oak trees have moderate water requirements and have a moderate tolerance to salt and alkali soils. Sawtooth Oak is a good shade tree.



**#2 Goldenchain Tree** (*Laburnum anagyroides*)

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The yellow flowers are responsible for the old poetic name of this tree, which is native to the mountains of southern Europe.

All parts of the plant are poisonous and can be lethal if consumed in excess. It has yellow pea-like flowers and bloom long into spring, which makes them very popular. The tree has historically been

used for cabinetmaking and inlays as well as for musical instruments. Goldenchain Trees reach 15-25 feet in height. On older specimens the bark is often darker and deeply fissured. Young specimens bear a smooth, green-colored bark. Leaves are trifoliate and look like pointy clover leaves, but don't exhibit dense foliage. Their branching patterns can be hard to predict. However, this is of little consequence since they are grown for only one reason: the gold racemes they produce in May or June that give them their name. Care for the Goldenchain tree is considered to be simple, with little to no pruning required. The trees are known to have a short lifespan, living for an average of 20 years.



**#3 Overcup Oak** (*Quercus lyrata*)

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This oak tree derives its name from the acorn cap that very nearly covers the acorn. The tree can produce very prolific acorn crops but generally does not begin to produce for 15-plus years.

The wood of the Overcup Oak is brownish, hard, heavy and strong; it is marketed as white oak primarily

for lumber and cooperage but is not consistently valued for quality products because of fire damage and defects from wood borers and heartwood decay following fire injuries.

Overcup Oaks are planted to improve wildlife habitat and for bottomland restoration. Ducks, wild turkeys, hogs, white-tailed deer, squirrels and smaller rodents eat the acorns. It is also planted as an ornamental. The trees can withstand significant flooding and poorly drained soils and are tolerant to drought and cold.

The Overcup Oak is easy to transplant and tolerates most soil conditions and partial shade to full sun. Acorns are produced annually and are relatively small, usually between one-half to one inch. The trees create a wildlife habitat on land where most oak species cannot survive.



**#4 The White Mulberry** (*Morus alba*)

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was introduced along the Atlantic seaboard during colonial times when an attempt was made to establish the silkworm industry in this country. Fruits of the White Mulberry may be white, red, or deep purple.

The tree is scientifically notable for the rapid plant movement involved in

pollen release from its catkins. The stamens act as catapults, releasing stored elastic energy in just 25 microseconds. The resulting movement is approximately 350 miles per hour (560 km/h), over half the speed of sound, making it the fastest known movement in the plant kingdom.

The wood is valued for sporting goods due to its durability, flexibility and elasticity. It is used mainly for tennis and badminton rackets, hockey sticks, furniture, agricultural implements, and house and boat building materials. The stem is fibrous and is used in Europe and China for making paper.

The root bark has been used as a traditional medicine in Asian countries and exhibits antibacterial activity against food poisoning micro-organisms. Its plant leaf extract has been studied against the Indian Vipera/Daboia russelii snake venom and proved to be very efficient with local and systemic effects.

The White Mulberry is considered to be antibacterial, astringent, diaphoretic, hypoglycaemic, odontalgic and ophthalmic. Its leaves are usually used in treatment of colds, sore throats, flu, eye infections and nosebleeds. Recent research in Japan showed that leaves contain substances that inhibit intestinal enzymes from passing sugar into the bloodstream. Leaf extract could inhibit the oxidation of LTL-cholesterol, act as a carbohydrate blocker and reduce the concentration of the arterial plaque. With these attributes, the possibility of stroke is greatly diminished.



**#5 Lacebark Pine** (*Pinus bungeanca*)

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We love lacebark pine for its tall, pyramidal habit and its beautiful exfoliating bark. Lacebark pine is native to China. This tree can live up to a thousand years.

With age, the flaking bark creates a beautiful patchwork of colors ranging from white, red-brown, gray to green. Lacebark Pine is the perfect specimen

tree for the small garden, in China it can often be found in the grounds of Buddhist temples. Lacebark pine is one of the loveliest plants to observe in the winter. It can be counted among deer resistant plants.

Recently it has been found that the lacebark pine is resistant to air pollution, especially to sulphur dioxide, and can absorb some poisonous gases. Being an evergreen conifer, it is considered particularly suitable for landscape gardening in industrial cities.



**#6 Chinquapin Oak** (*Quercus muehlenbergii*)

**#6 Chinquapin Oak** (*Quercus*

*muehlenbergii*) is a worthy specimen for larger lawns, estates, or parks. A medium to large size oak with 4"-6 1/2" glistening dark green leaves in summer turning yellow-orange to orangish-brown in fall. Produces 1" sweet acorns that mature in a single season. The acorns are at the top of the

food preference list for many wildlife species. Its bark is an ashy light gray that breaks into narrow, thin flakes. As this species matures, it becomes a magnificent specimen and a conversation piece. Grows 40'-50' tall with a similar spread under landscaping conditions, becoming 70'-80' high in the wild. Does best in well-drained soil and adapts to many different soil types. Grow in full sun.



**#7 Swamp White Oak** (*Quercus bicolor*)

memorial plaza in New York City.

The bark resembles the White Oak but its leaves are broad ovoid in shape and measure 4–7 in long and 3–4 in wide. The leaves are always more or less glaucous on the underside, and are shallowly lobed with five to seven lobes on each side. In autumn, they turn brown, yellow-brown, or sometimes reddish, but generally, the color is not as reliable or as brilliant as the White Oak can be. The fruit is a peduncled (really long stem) acorn, .6-.8 inches; rarely 1 inch long and .4-.8 inch wide, maturing about 6 months after pollination.

**#7 Swamp White Oak** (*Quercus bicolor*) This rapid grower is not a large tree, typically growing 60-80 ft tall. The tree has a crown shape and bi colored leaves (dark above and lighter beneath). This sturdy tree will grow in poorly drained soil and will tolerate soil compaction. Over 400 swamp white oak trees are being planted in the September 11th



**#8 Pin Oak**(*Quercus palustris*)

will turn yellow and decline in vigor if planted on alkaline soils. The tree can also be a maintenance problem because of a tendency to grow limbs low on the trunk. This tree likes the sun and produced acorns tht mature after 16-18 month.

**#8 Pin Oak** (*Quercus palustris*) is pyramidal through early maturity, its form turns more oval with age. It is fast-growing, tolerates wet soils, likes full sun. Glossy dark green leaves turn russet, bronze or red. The tree grows into a gigantic tree and you need plenty of yard room - at least 600 sq. ft. Pin oak needs acid soil and "wet" feet so soil test first. Its leaves



**#9 Post Oak** (*Quercus stellata*)

general. The Post Oak grows in rocky, sandy soil and ridges and dry woodlands. It is considered drought resistant. It is very difficult to find in a nursery, but is a beautiful gnarly tree with time.

The leaves have a very distinctive shape, with three perpendicular terminal lobes, shaped much like a Maltese Cross. They are leathery, and tomentose (densely short-hairy) beneath. The branching pattern of this tree often gives it a rugged appearance. The acorns are 1.5–2 cm long, and are mature in their first summer.

The name refers to the use of the wood of this tree for fence posts. Its wood, like that of the other white oaks, is hard, tough and rot-resistant. This tree tends to be smaller than most other members of the group, with lower, more diffuse branching, largely reflecting its tendency to grow in the open on poor sites, so its wood is of relatively low value as sawn lumber. It is also a popular wood for smoking Texas barbecue.

**#9 Post Oak** (*Quercus stellata*) is sometimes called Iron Oak as its wood is very durable. It is an oak in the white oak group and is a slow growing small tree, typically 10–15 cm tall with a 30–60 cm trunk diameter, though occasional specimens reach 30 cm tall and 140 cm in diameter. It is native to Kansas and the United States in



**#10 The Bosnian Pine** (*Pinus heldreichii*)

**#10 The Bosnian Pine** (*Pinus heldreichii*, synonym *P. leucodermis*; family *Pinaceae*) is a rare pine in the Kansas landscape, but it is becoming more widely planted because it has proven itself very hardy and disease resistant. . It is more commonly grown in eastern and southern Europe.

It is very similar to the Austrian pine, an old favorite around Olathe, but without the foliage fungal problems.



**#11 Southern Red Oak** (*Quercus falcata*)

**#11 Southern Red Oak** (*Quercus falcata*)  
The Southern Red Oak is an excellent large, durable shade tree which reaches 60 to 80 feet in height with a large, rounded canopy when it is open-grown. It is sometimes called Turkeyfoot Oak because the leaf is shaped like the footprint of a wild turkey. The deciduous, shiny green leaves are four to five inches wide, with the terminal lobe much longer and narrower than the others.

The dark brown to black bark is ridged and furrowed and resembles Cherry bark, to some extent. The half-inch-diameter acorns are popular with wildlife. The trunk normally grows straight with major branches well-spaced on the tree. The tree is also called Spanish Oak possibly because it is native to areas of early Spanish colonies. The uses of oak include almost everything that mankind has ever derived from trees-timber, food for man and animals, fuel, watershed protection, shade and beauty, tannin and extractives. There is a sub-species of Southern Red Oak called Cherrybark Oak because the bark resembles that of a cherry.



**#12 Shingle Oak** (*Quercus imbricaria*)

**#12 Shingle Oak** (*Quercus imbricaria*)  
Shingle oak has dark green leaves 4 to 6 inches long, 1 to 2 inches wide, broadest above the middle, oblong-elliptical, with shiny upper surface. The leaves turn yellow or reddish-brown in autumn; dead leaves often persist on the tree through winter. Settlers in eastern Kansas often used the tree for shingles because its wood splits

evenly and is readily available since it is a native tree. A tool called a “fro” was used to split the shingles. The expression “to and fro” came from that tool. Shingle Oak has an attractive branching habit and ridged bark, and it casts medium shade in summer. The acorns are eaten by many species of birds and mammals. Any tree that retains leaves in winter provides better cover for animals during bitter weather than trees that are bare. All the champion oaks, including Olathe’s, are on the Kansas Forest Service website under Community Forests.



**#13 Bur Oak** (*Quercus macrocarpa*)

**#13 Bur Oak** (*Quercus macrocarpa*) or mossycup oak is one of the most majestic of the native North American oaks. It is a medium to large sized deciduous oak with a broad-spreading, rounded crown. Acorn cups are covered with a bur near the rim, hence the common names and the largest acorn of all our native oaks. It is native to a variety of habitats in central and eastern North America. The best growth occurs in

bottomland soils. In Missouri, it typically occurs in the low woods and stream valleys in the Ozark region. It is a large long-lived tree on good sites, with stout limbs forming a broad crown at maturity. Bur oaks are native throughout all but the northwest corner of the state; difficult to transplant because of a deep taproot; and once established trees grow one to two feet per year on favorable sites. It is one of the largest trees in Kansas. In fact, it is not official yet, but Olathe will soon have the state champion as the prior champion has died.



**#14 White Oak** (*Quercus alba*)

**#14 White Oak** (*Quercus alba*) is one of the largest trees in the forests in the eastern United States. The tallest known White Oak tree is an 84-foot tree in Mahoning County, Ohio. The bark is much lighter in color than other oaks. It is usually a light gray color, which has a “flaky” appearance to it and can sometimes be peeled off in small pieces. Birds like nuthatches and woodpeckers will

look for bugs under the bark. The leaves are easily distinguished, which are multi-colored in that they are darker green on top and lighter green on the underside. The acorns are quite large, quite abundant in the summer and fall. The close-grained, strong wood is best for furniture and hardwood flooring and is the favorite tree used to make barrels. Native American Indians made flour from its acorns. Both Indians and early settlers boiled the acorns to make them more palatable. Many kinds of wildlife feed on the acorns as well.



**#15 Willow Oak** (*Quercus phellos*)

The Willow Oak is a strong and beautiful tree that shares similarities with other oaks but is unique in many other ways that make it such an attractive tree to behold. The most significant particularity of the Willow Oak is the shape of its leaves, which are narrow and slender and very similar to that of the willow tree. The leaves have a glossy, lustrous finish on top and can be 2 to 5 inches long. They are not serrated and end with a hair-like tip at the end to help rainwater drain. The strength of the Willow Oak can be seen by its majestic size and rapid growth and typically grow to around 60 feet in height. Willow Oak has aesthetic qualities which helps clean and clear the air and grows comfortably in a toxic environment, is relatively pest free with minimal serious diseases. The third President of the United States, Thomas Jefferson, chose the Willow Oak as his favorite tree.

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**#16 English Oak** (*Quercus robur*)

Being deciduous, the English Oak will lose their leaves in winter and not fall. They have been prized for their timber. It can take as long as 150 years before an oak is ready to be used for construction purposes. Until the middle of the 19th century it was the choice wood for building ships.

For such a huge long living and widespread tree, the English Oak is surprisingly bad at reproducing naturally. It can take a full 50 years before the tree has its first crop of acorns. Also an overwhelming majority of the tens of thousands of acorns it drops are eaten by animals or they simply rot. It is the forgetful squirrels and jays, who bury the acorns for future consumption, that continue the lifecycle of this giant.

**#16 English Oak** (*Quercus robur*) English Oaks are a symbol of great strength and endurance. These magnificent trees grow to well over 125 feet and live for 1,000 years or more. Flowering begins in late spring with the acorns, which will ripen by autumn. The acorns grow in clusters. They are an important food source for many birds and small mammals.



**#17 Norway Spruce** (*Picea abies*)

**#17 Norway Spruce** (*Picea abies*) is an evergreen conifer with graceful pendulous branches. It is the fastest growing of the spruce, and can grow up to 3 feet per year. The cones are the largest of the spruces, growing to 4 to 6 inches. It is perhaps the most common spruce, rivaled only by Colorado Spruce.

It's an ornamental tree in the urban environment and windbreak in rural areas. It prefers moist cool climates and quickly reaches 80 feet in height by 40 feet in spread. It is a medium to rapid growth tree. The Norway Spruce is grown as a Christmas tree, and is becoming more popular for that reason.

It's an ornamental tree in the urban



**#18 Japanese Pagodatree** (*Sophora japonica*)

**#18 Japanese Pagodatree** (*Sophora japonica*) is a medium-size tree native to; China and Korea. Introduced to Japan where it is often planted around Buddhist temples for showy flowers. It produces creamy fragrant flowers in July and August. The Japanese pagoda tree has very distinctive fruits that grow in long yellowish pods that resemble a string of beads. This tree grows well in humid regions. It is often

planted as a shade tree and as an ornamental. It has a moderate growth rate. It likes sun and part shade. It is an upright spreading tree with pendulous branches growing 50 to 70 feet tall with a width of 50 feet. A Japanese pagoda tree withstands heat, air pollution and drought and is a good street tree, making it a good choice for our local environment.



**#19 Western Soapberry** (*Sapindus saponaria*)

May into early July, attracting bees and butterflies. It turns a dazzling golden yellow in the fall producing beautiful translucent amber colored berries. The fruit of the Western Soapberry is called a "drupe". The berries contain a black seed. The mature fruit without seed will produce a good lather with water, with which you can make soap. The berries are poisonous to eat. Western Soapberry is rarely affected by disease or insect pest.

**#19 Western Soapberry** (*Sapindus saponaria* var. *drummondii*) can grow 10 to 50 feet tall depending on habitat. The largest one in the nation is in Olathe. The Western Soapberry at Veterans Memorial Park is an offspring of this tree. It is an extremely adaptable tree, at home in dry areas as well as moist sites. The Western soapberry produces flowers in large cream-colored clusters from late



**#20 Northern Red Oak** (*Quercus rubra*)

shiny stripes down the center.

The northern Red Oak provides good cover and nesting sites for birds and mammals. Its abundant acorns are eaten by a wide variety of large and small mammals, and birds. Its leaves turn a beautiful brick red in the fall.

**#20 Northern Red Oak** (*Quercus rubra*) is native to North America. Used in the landscape as a shade tree. It is fast growing, easy to transplant, and tolerant of urban conditions. This tree grows straight and tall, upwards of 40 feet, and can get as tall as 140 feet, living up to 500 years. The Northern Red Oak is easily recognized by its bark, which features bark ridges that appear to have



**#21 Shumard Oak** (*Quercus shumardii*)

**#21 Shumard Oak** (*Quercus shumardii*), is one of the largest southern red oak trees. It grows moderately fast and produces acorns every 2 to 4 years that are a bonus since they can be used by wildlife for food. It was named for Benjamin Franklin Shumard (1820-69), state geologist of Texas.

This deciduous tree, sometimes called the Texas Oak, has small, usually 5-lobed leaves, small acorns, and hairy red buds (instead of hairless brown). Shumard Oak trees have shiny, dark green leaves, and the bark is gray and smooth. Shumard Oak trees tolerate poor soil and drought conditions, especially after they are established. This outstanding stately tree has beautiful deep crimson-red fall color and has been embraced as a hardy city species. It is also a valuable lumber oak.



**#22 Chestnut Oak** (*Quercus prinus*)

**#22 Chestnut Oak** (*Quercus prinus*) is a beautiful tree with large limbs and a broad crown of pretty leaves and brown acorns. They range in height from 50 to 70 feet and are generally two to three feet in diameter with heavy close-grained wood. The Chestnut Oak, very similar to the Swamp Chestnut Oak, are both sometimes called Basket Oak. Both

trees were used to make baskets in the past due to the long, flexible strips that can be taken from the tree. The primary difference between the Swamp Chestnut Oak and the Chestnut Oak is that the Swamp Chestnut Oak tolerates flooding more easily.

The Chestnut Oak doesn't begin to branch until about 20 to 30 feet up the trunk. Chestnut Oaks have thick bark which ranges in color between dark-red and black, with broad rounded scaly ridges. Chestnut Oaks have yellow-green leaves that are shiny on the top but rather pale on the bottom with many fine hairs. The leaves of the tree turn a dull orange or rusty brown color in the autumn shortly before they fall off. One of the best-known characteristics of the chestnut oak is its acorns, which are actually the fruit of the tree. These acorns are about 1.5 inches long and are usually light to dark brown in color.

Chestnut Oak wood is used for fuel, fencing, and railroad ties and in most other wood products you see; such as store bought firewood. These trees are famous for their tough wood,

which is used in wood floors because of its excellent durability. Early settlers also used the tannic acid in the bark of the Chestnut Oak for tanning their leather.



**#23 Black Oak** (*Quercus velutina*)

**#23 Black Oak** (*Quercus velutina*) is a common, medium-sized to large oak of the eastern and Midwestern United States with a trunk up to 3 ½ feet in diameter. The species name *velutina* is a reference to the underside of its leaves, which are covered with fine hairs. The yellowish-orange inner bark is bitter to taste. The nut has vertical lines that look like fine pin striping that run the length of the nut.

Its acorn is bitter but a good food source for many songbirds, game birds, mice, raccoons and deer. Acorns are produced every other year.

Black Oak wood is used in construction, for fence posts and fuel. The wood quality is less than that of Red Oak, but the uses are similar for both species. Native Americans used Black Oak to treat a wide variety of ailments including indigestion, chills, fevers, respiratory problems, sore eyes and more. It was also used as an antiseptic and an emetic (to induce vomiting). The tree was a source of yellow dye during the time of the Civil War. The Common Smoketree (which was not common) were often used for yellows dyes. It grows best on moist, rich, well-drained soils, but it is often found on poor, dry sandy or heavy glacial clay hillsides where it seldom lives more than 200 years. Black Oak is seldom used for landscaping.



**#24 Blackjack Oak** (*Quercus marilandica*)

**#24 Blackjack Oak** (*Quercus marilandica*) grows in poor, thin, dry, rocky or sandy soils where few other woody plants can thrive, usually on low ground. It does not have the beautiful form of many oaks, but is nonetheless a valuable tree for growing in very poor conditions.

It is a small to medium-sized tree which can grow to a height of 50 feet, but is usually much smaller. The trunk is often gnarled with a diameter of up to 1 to 1 ½ feet. It has tough leaves that are covered with a waxy substance (cutin) that retards water loss. Blackjack Oak retains its leaves into the autumn and early winter

and withdraws major nutrients from them prior to leaf fall. Acorn production is biennial, with acorns maturing in October of the second year after pollination. They are oblong or roundish, approximately  $\frac{3}{4}$  inches long, and about  $\frac{1}{2}$  inch in diameter. They are brown and often have vertical stripes.

Blackjack Oak wood is heavy and strong. The wood is very dense and produces a hot flame when burned, which functions as an excellent source of heat for barbecues and wood-burning stoves. However, the wood is not desirable for wood fireplaces because the heat causes popping, thereby increasing the risk of house fires.



**#25 Douglas-fir** (*Pseudotsuga menziesii*)

**#25 Douglas-fir** (*Pseudotsuga menziesii*) is hyphenated because it is not a true fir. It was named after David Douglas, the Scottish botanist. Douglas-firs are very big. They can grow from 40 to 60 feet tall and 15 to 25 feet wide. Because of this they are the most important lumber tree in the world. The dense wood is very hard, stiff and durable. Like most of its family it

has a fine texture and is pyramid shaped. The trunks on older trees are free of branches. They have a short cylindrical crown with a flattened top. Needles are flat with a pointed tip. The tip of the needles are a bright yellowish-green with a single groove down the center, the bottom the needles are paler. The needles appear to stand out around the twig. The cones are 1 to 3 inches long, turning from green to gray as they mature. Small bracts with three prongs grow between each scale. They curl up when the cone gets older, making the cone look very bristled.

The wood is used as lumber, timbers and plywood. Native Americans had many uses for the Douglas-fir. They used the wood and branches for cooking. They also used it for fishing hooks and for handles. Douglas-fir branches were used for covering the floor of lodges and sweat lodges.

The Douglas-fir has been a taxonomic nightmare for those trying to settle on a genus name. After changing names on numerous occasions the present scientific name *Pseudotsuga menziesii* now uniquely belongs to Douglas-fir. To make things even more complicated two different varieties of the species are recognized, the coast Douglas-fir and the blue Douglas-fir.