

Administration Building


Thompson-Ringold

Wells Hall

Valk Agriculture Building

Bell Tower

Roberta Hall



**MISSOURI**  
Tower Trail  
**ARBORETUM**  
Established 1993

Northwest Missouri State University

University Drive

Seventh Street

## Tree Descriptions - Tower Trail

### T01 Limber Pine *Pinus flexilis*

Native: Rocky Mountains of western North America, Alberta to northern Mexico, east to Texas. Leaves: densely crowded on the ends of the branchlets, pointing forward, rigid, curved or slightly twisted, 2 1/2 to 3 1/2" long, margins entire, apex sharp-pointed, 3 to 4 lines of stomata on each surface. Flowers: Monoecious, staminate clustered, rose colored, female purple. Fruit: Cones subterminal, short-stalked, cylindrical ovoid, 3 to 6" long, 1 1/2" wide.

### T02 English Oak *Quercus robur*

Europe, Northern Africa, Western Asia. Leaves alternate, simple, with three to eight pairs of rounded lobes; dark green in summer, brown fall color. Height 60 to 75 feet with a comparable spread. Useful in parks and other large areas. Acorn is 1 inch long and elongated.

### T03 Pin Oak *Quercus palustris*

Native. Leaves alternate, simple, 3 to 6 inches long and deeply lobed. Height to 70 feet. Is distinguishable from other oaks by its downward angled lower branches. Acorns are small and striped with dark lines. Favorite food of waterfowl along river borders. Widely planted.

### T04 Eastern White Pine *Pinus strobus*

Northeastern United States. The needles are soft and flexible, five in a bundle, and are 3 to 5 inches long. They remain on branches one to two years. Cones are curved, spineless, and are usually 4 to 8 inches in length. Height to 80 feet. This beautiful native pine is valued for parks and estate landscapes and very adaptable to various environmental conditions. The common name refers to the almost white wood.

### T05 Siberian Elm *Ulmus pumila*

Northern China, Siberia. Leaves alternate, simple, 1 to 3 inches long, with serrated edges. Height to 70 feet. Growth is rapid and the wood brittle. It will grow under any kind of condition and is a poor ornamental tree. Not recommended for planting because of branch breakage and large number of seedlings produced.

### T06 Water Oak *Quercus nigra*

Southern New Jersey, south to Florida, Texas; Mississippi valley to southeastern Missouri and eastern Oklahoma. Leaves: Alternate, simple, variable size and shape, obovate, 3-lobed at apex or sometimes entire, rarely pinnately, 1 1/2 to 4" long, 1/2 to 2" wide. Fruit: Acorn, usually solitary, 1/2" long and wide, enclosed 1/3 in a broad, shallow, short-stalked cup with appressed scales. Round-topped tree, 50 to 80' high.

### T07 Ginkgo (Maidenhair Tree) *Ginkgo biloba*

Eastern China. Fan shaped leaves 2 to 3 inches across. Height 80 to 100 feet. Leaves change to yellow in fall, but a freeze will cause leaves to drop almost overnight. Male trees are preferred in the home landscape because fruits produced on female trees are messy and have a foul odor. Fossils of this plant have been found dating from the Mesozoic Era (time of the dinosaurs).

### T08 Littleleaf Linden *Tilia cordata*

Leaves alternate, simple, heart-shaped, 1 to 3 inches long and almost as wide, serrated edges; dark green, changing to yellow in fall. Clusters of fragrant, cream-colored flowers are produced in June. Excellent shade tree, pyramidal in shape. Can reach heights of 90 feet.

### T09 Common Hackberry *Celtis occidentalis*

Native. Leaves alternate, simple, 2 to 4 inches long. Dark red to purple fruits. Bark warty, grey to brown, easily identified. Height to 100 feet. Conforms to adverse conditions. Nipple galls, caused by an insect, usually disfigure the leaves, but do no permanent damage.

### T10 Kentucky Coffeetree *Gymnocladus dioica*

Native. Leaves are alternate, bipinnately compound, and 36 inches long with six to 14 leaflets. Height to 90 feet. It is one of the last trees to leaf out in the spring. Leathery pods 5 to 10 inches long form on female trees and make it identifiable in the winter. It is somewhat messy with falling leaflets and pods. Seeds are poisonous when raw but it is believed the pioneers roasted them to substitute for coffee.

### T11 Swamp White Oak *Quercus bicolor*

Northwestern United States. Leaves alternate, simple, 5 to 6 inches long with very shallow lobes. Height to 60 feet. It usually grows in swampy soil.

### T12 Japanese Tree Lilac *Syringa reticulata*

Japan. Leaves: Broad-ovate to ovate, 2 to 5 1/2" long, about half as wide, acuminate, rounded or subcordate, glabrous or slightly pubescent; petiole 1/2 to 1" long. Tree reaches 20 to 30' in height; 15 to 25' in spread. Flowers: Perfect, creamy white, fragrant, 6 to 12" long and 6 to 10" wide panicles. Fruit: Warty, glabrous, scimitar-shaped, dehiscent, 3/4" long capsule, blunt at apex.

### T13 Amur Corktree *Phellodendron amurense*

Northern China. Leaves are opposite, pinnately compound, 10 to 15 inches long with five to thirteen leaflets. Height to 45 feet. The unique bark has a ridged and furrowed cork-like pattern on mature trees. Female trees produce fruit that has a strong odor when bruised. Used in China to make furniture and gunstocks.

### T14 Willow Oak *Quercus phellos*

Native. Leaves simple, alternate, lance-shaped, 2 to 5.5 inches long, .33 to 1 inch wide, light to bright green in summer, yellow to yellow-brown in fall. Young trees are pyramidal in shape; oval to rounded shape when mature. Acorns very small, .5 inches long and wide. Good for street, golf courses and parks.

### T15 Bradford Pear *Pyrus calleryana*

China. Leaves simple, alternate, 3 inches long and nearly round. Height 30 to 50 feet. The upright growth and showy white flowers in early spring make it ideal for malls and city streets.

### T16 Common Alder (Black) *Alnus glutinosa*

Western Asia. Leaves alternate, simple, 2 to 4 inches long, broadly ovate and doubly serrate. Forty to 60 foot tree. Prefer; wet areas. This tree has the ability to fix atmospheric nitrogen, and its charcoal is used in the manufacture of fireworks.

### T17 Thornless Honeylocust *Gleditsia triacanthos var.*

Native. Leaves alternate, pinnately or bipinnately compound, 6 to 8 inches long; 20 to 30 leaflets. Height to 70 feet. Used as a filtered shade tree, but can have disease and insect problems, especially mimosa webworm. The genus name commemorates Gottlieb Gleditsch, director of the Berlin Botanical Gardens in 1786.

### T18 White Ash *Fraxinus americana*

Eastern United States. Many cultivars are seedless. Leaves are pinnately compound, opposite, 8 to 12 inches long with three to seven leaflets. Leaflet stems are very long. Leaves can turn yellow or purple in autumn. Bark is gray with diamond shaped ridges. Can grow to 80 feet. The wood is valued for furniture making.

### T19 Canadian Hemlock *Tsuga canadensis*

Northern United States. Extremely graceful evergreen with weeping branches. Needles are .25 to .66 inches long, flat, dark green on top with two whitish bands on the underside. Can grow to 70 feet. Very well suited to city conditions but can die from extremely dry conditions. The soft wood has no value but the bark is used for tanning hides.

### T20 White Spruce *Picea glauca*

Canada. Needles are bluegreen, .5 to .75 inches long. Branchlets do not droop. Cone is 1 to 2 inches long and drops soon after it matures. Heights of 60 feet. Bark is thin, flaky, ash-brown; inner bark somewhat silvery. Found along lakes and streams. Often used in the plains states as hedges and windbreaks.

### T21 Yoshino Cherry *Prunus yedoensis*

Japan. Leaves alternate, simple, doubly toothed, 2.5 to 3.5 inches long and 1.5 to 2.5 inches wide with a rounded base and a slender point. Fragrant pink or white flowers, March-April. Round, shining black fruits. Yellowish fall color. Tree is rounded, spreading and 20-30 feet tall. This is the famous cherry that grows in Washington D.C.

### T22 Serbian Spruce *Picea omorika*

Southeastern Europe (Yugoslavia). Leaves: 1/2 to 1" long, 1/16 to 1/12" wide, compressed, flat, keeled on both sides, without stomata above. Height 50 to 60' by 20 to 25' spread, can grow to 100'. Flowers: Monoecious. Fruit: Cones are oblong-ovoid, 1 1/4 to 2" long, blue-black when young, shining cinnamon brown when ripe, scales suborbicular, finely denticulate.

### T23 Red Mulberry *Morus rubra*

China. Leaves simple, alternate, 3 to 5 inches long. Female trees produce red to purple juicy, edible fruit. It has escaped cultivation

and become naturalized throughout much of the United States. Will grow to 70 feet.

### T24 Hedge Maple *Acer campestre*

Europe, Near East and Africa. Leaves opposite, simple, 2 to 4 inches across, with three to five lobes. Milky sap exudes from detached petiole or leaf stem. Height 25 to 45 feet. Good small tree for residential areas. Tolerates wide range of soil conditions but prefers full sun to light shade. Yellow fall color. Can be pruned into hedges.

### T25 Turkish Filbert *Corylus corlurna*

Southeast and Western Asia. Leaves alternate, simple, doubly serrate. Broadly pyramidal in shape with a height of 40 to 50 feet. Tolerates hot summers and cold winters but prefers full sun.

### T27 American Sweetgum *Liquidambar styraciflua*

Native. Leaves are simple, alternate, star shaped, and 4 to 7 inches wide. Height to 75 feet. The prickly dried fruit capsules can be messy. Twigs have corky wings. The genus name meaning liquid and amber refers to the aromatic fluid secreted from the wood and leaves. This oil is used as a fixative in perfumes. Pioneers scraped gum from the inner bark to chew.

### T28 Yellow Buckeye *Aesculus octandra*

Native. Leaves opposite, palmately compound with five leaflets. They will turn a pumpkin color in fall. Wood is light and tough. The gray-brown bark has large, flat, smooth plates. Grows to 90 feet in its native area. Yellow flowers are borne erect, 6 to 7 inches long and 2 to 3 inches wide in May. These form pear-shaped fruit capsules that hold two dark brown seeds.

### T29 Saucer Magnolia *Magnolia x soulangiana*

Japan. Leaves simple, alternate, 3 to 6 inches long with pointed tips. Height to 30 feet. If protected, this tree will produce beautiful white to pink flowers, 5 to 7 inches in diameter in the early spring.

### T30 Red Maple *Acer rubrum*

Native. Height to 80 feet. Leaves opposite, simple, 2 to 4 inches long. Three to five lobes. Fall color varies from greenish yellow to brilliant red. Good specimen tree for yard or park, but will not tolerate heavily polluted areas.

### T31 Downy Hawthorn *Crataegus mollis*

Northeastern United States. Two-inch thorns can be dangerous but valued as a barrier or hedge. Broad, sharply serrated 3-inch leaves. Height 20 to 30 feet. One-inch red fruit ripens in fall. Often badly infected with hawthorn rust.

### T32 White Oak *Quercus alba*

Native. Leaves are alternate, simple, lobed and 4 to 8 inches long. The leaves turn purplish-red in the fall. Height to 100 feet. The common name refers to the color of the wood which is used for barrel making, flooring and ships. State tree of Illinois.

### T33 Bur Oak *Quercus macrocarpa*

Native. Leaves alternate, simple, 4 to 10 inches long. Lobes are wider at the top. A fringed cup covers half the acorn. Twigs often have corky wings. Height to 80 feet.

