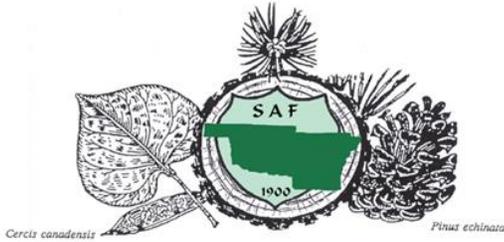


Your Hosts for the Walk



Society of American
Foresters - Oklahoma
Division of the Ouachita
Chapter



Oklahoma Forestry Services, a Division of the State
Department of Agriculture, Food and Forestry



WALK IN THE FOREST

At Tulsa's Turkey Mountain Urban Wilderness Area



Oklahoma State University – Department of
Natural Resource Ecology and Management

*A Guide to Help You Discover the
Forests In Your Own Backyard*

City of Tulsa
River Parks Authority



Hosted by

Society of American Foresters
In cooperation with
Oklahoma Forestry Services
OSU - Natural Resource Ecology & Management
City of Tulsa – River Parks Authority

Welcome to Turkey Mountain Urban Wilderness Area!

The City of Tulsa is pleased you are visiting one of our greatest natural treasures – the Turkey Mountain Urban Wilderness Area. For over 30 years, Turkey Mountain has been a center for outdoor enthusiasts in northeast Oklahoma.

Our current master plan guides our efforts to create an enjoyable place for fun, recreation and outdoor experiences, while also protecting a precious City resource. Join us today as we thank all of the project partners who have helped offer this Walk in the Forest event! We hope you have a great experience, and please come back again!

Tulsa River Parks Authority

Safety First

Please remember that you are outdoors enjoying the natural world. Although hiking the trails, observing the forest and learning about trees and forestry are safe activities, there are some things you might encounter during your visit.

- These woodlands are full of life, including a wide variety of insects just hanging out and doing their thing. Some of them, such as ticks and chiggers, mosquitoes, horseflies, deerflies, bees and wasps, could bite or sting. Use bug repellent if you wish, stay on the trails and don't bother the bugs you meet and you'll be fine.
- There are several species of snakes that live in the Cross Timbers, although it is unlikely you'll see them. They will leave you alone if you leave them alone.
- One of the most common plant species found here is poison ivy. Learn to recognize it (see inside back cover) and stay away from it. Also avoid prickly vines, such as blackberries and greenbrier, which have thorns.
- Tree roots, stumps, logs, fallen branches, rocks and sloping ground can be tripping hazards if you venture off the beaten path. Slow down and watch your step!
- Please be respectful of others on the trail.

Need Help? For minor bumps and bruises, scrapes or stings, forester volunteers are available to assist you at the main entrance as well as at each educational station.

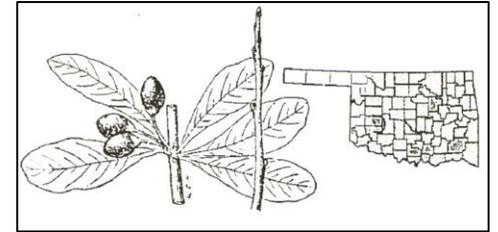
In case of an emergency, yell for help and then call 911!

Chittamwood

Sideroxylon lanuginosum

Medium-sized tree mostly found scattered in clumps on dry, rocky sites throughout the Cross Timbers. Its leaves are short and narrow and routinely clustered in bunches on short spur shoots along branches.

Slender, stout, sharp thorns are common along its branches. Clusters of its berry-like, purple-black drupes are found at the base of leaves, and are foraged by birds and small mammals. The furrowed bark is dark gray-brown to blackish-brown.



Poison Ivy

Toxicodendron radicans



A poisonous vine that trails up and along tree stems and fences, and also forms low clumps or thickets on the edge of the woods and deep within the woods as well. Contact with any part of the plant can lead to serious skin rash, blistering and an unrelenting itching. Its leaves are borne in 3s, and its vine stem has numerous thread-like appendages to aid it in clinging to other plants as it ascends. Late in the summer and fall it has small clusters of white berries.

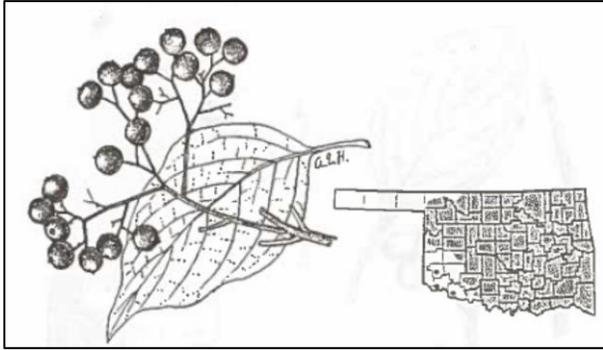
Be careful as you move about the woods, and remember....

Leaves of three, let it be...Berries white, poisonous sight!

Other Native Species Found at Turkey Mountain

Black cherry, cottonwood, grapevine, hawthorn, greenbrier, Mexican plum, possumhaw, red mulberry, slippery elm, smooth sumac, white ash, winged elm

Roughleaf Dogwood *Cornus drummondii*

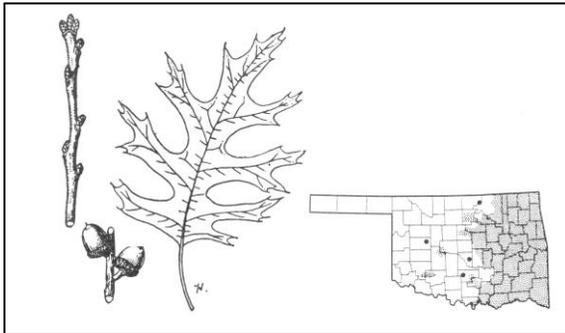


A thicket-forming woody shrub often found along the woodland-prairie edge or in open clumps in forest openings. Leaves are borne in pairs along branches and the leaf veins turn and run parallel to the edges.

They have a characteristic

rough texture like fine-grained sandpaper. Songbirds and small mammals forage on its white berries which are borne in clusters at the ends of small branches that are reddish-purple and slightly hairy. Dense shrubby clusters provide good cover for animals that frequent woodland edges.

Shumard Oak *Quercus shumardii*



A medium to large-sized tree, common in the Cross Timbers but not a dominant species. It prefers areas where soil stays moist. Acorns can be up to an inch long, and are readily consumed by various wildlife species, including deer and

squirrels. Shumard is often planted as an ornamental shade tree, and is generally drought tolerant. Leaves are somewhat shiny and dark green, from 3 to 7 inches in length, providing excellent orange or red autumn colors. They are deeply lobed, with tips ending in bristles, common to the red oak group.

Greetings from the Chairman of SAF

We are excited to offer this educational experience at one of the state's premier outdoor settings – Turkey Mountain Urban Wilderness Area – and truly appreciate the City of Tulsa's River Parks Authority for making this Walk in the Forest event possible. As you enjoy the Walk today, you will have an opportunity to visit with and learn from several of Oklahoma's professional foresters about what we do and the positive differences they make on our natural resources.

The forestry profession needs more people who are excited about working with trees in their hometowns and with forests across the country, helping provide the many resource benefits on which our citizens depend each and every day.

I hope you enjoy your time here today and leave with a much better appreciation for the Cross Timbers, forestry and your natural surroundings. It's your community forest – enjoy it, embrace it, learn from it and take care of it – it's an invaluable legacy for your children and for generations to come!

Kurt Atkinson, 2016 Oklahoma Division SAF Chairman

What is the Society of American Foresters?

The Society of American Foresters (SAF) is the national scientific and educational organization representing the forestry profession in the United States. Founded in 1900 by Gifford Pinchot, it is the largest professional society of foresters in the world. The mission of the Society of American Foresters is to advance the science, education, technology and practice of forestry; to enhance the competency of its members; to establish professional excellence; and, to use the knowledge, skills and conservation ethic of the profession to ensure the continued health and use of forest ecosystems and the present and future availability of forest resources to benefit society.

What is a Walk in the Forest?

A Walk in the Forest offers people an opportunity to appreciate forests, and to teach others about the benefits forests provide and how forestry practices can enhance those benefits. A walk in the outdoors also helps audiences of all ages unplug from their busy lives and witness first-hand the wonders of nature. SAF-sponsored Walks in the Forest help people reconnect with the outdoors and develop a better understanding of the critical importance of our forests.

Thank You Sponsors and Contributors!

The following businesses, organizations and agencies contributed funds, materials and other resources to make this an enjoyable experience for all.

Weyerhaeuser Company – Broken Bow

Oklahoma Forestry Association - Idabel

OSU Department of Natural Resource Ecology and Management

International Paper Company – Valliant

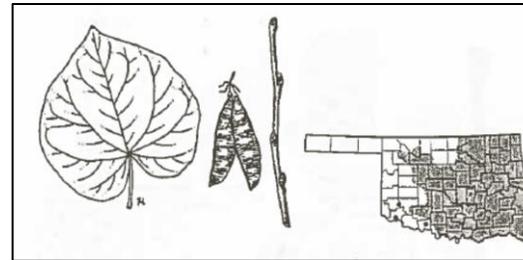
Winlectric Company – Stillwater

Oklahoma Forestry Services



Eastern Redbud

Cercis canadensis

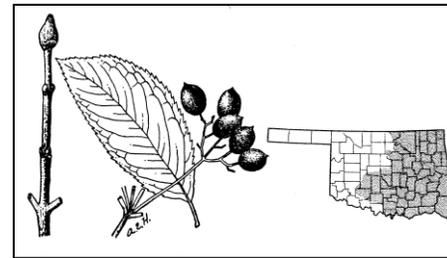


The State Tree of Oklahoma, noted for its vivid display of violet to lavender-colored flowers early in the spring, often in full bloom before the leaves are fully formed. Leaves are heart-shaped, and its fruit is a brown-colored pod or

legume about 3 inches long. Redbud is a small tree, often multi-stemmed, with a broad-spreading crown of branches. It is typically found along woodland edges and scattered in meadows and forest openings. It is a popular ornamental that adorns yards, parks, and streets in the urban landscape. The gray-brown bark is scaly on older stems.

Rusty Blackhaw

Viburnum rufidulum

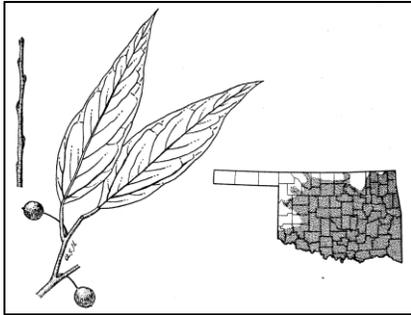


A large shrub or small tree, found in the understory and along the creek in the Park. Its elliptical leaves have finely saw-toothed edges, grow opposite each other on the stems and may be blunt or rounded at the ends. The short leafstalks and veins on the undersides of the leaves have short, rusty-colored

hairs, hence the name. Flower clusters are white and bloom in the spring. The fruits are also in clusters, are about a half-inch long and are blue with a whitish bloom. The slightly sweet pulp is edible, and surrounds a large flattened stone type seed, maturing in late summer or autumn. The fruit is readily consumed by wildlife, and the Blackhaw can make a handsome ornamental tree.

Sugarberry

Celtis laevigata

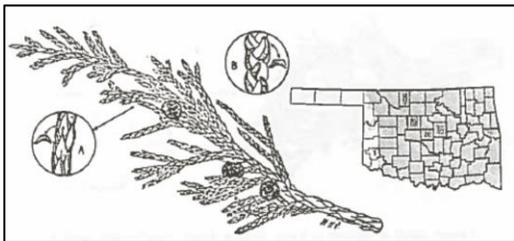


A medium-sized, drought tolerant tree also called "southern hackberry." Its leaves are long-pointed and lance-shaped, with the two sides very uneven. Sugarberry is a close relative of hackberry, and both species have prominent corky warts on the bark. They can be distinguished because hackberry leaves have toothed edges, while sugarberry leaves have smooth

edges. The small, round reddish or purple fruits are dry but sweet, and are eaten by birds.

Eastern Redcedar

Juniperus virginiana



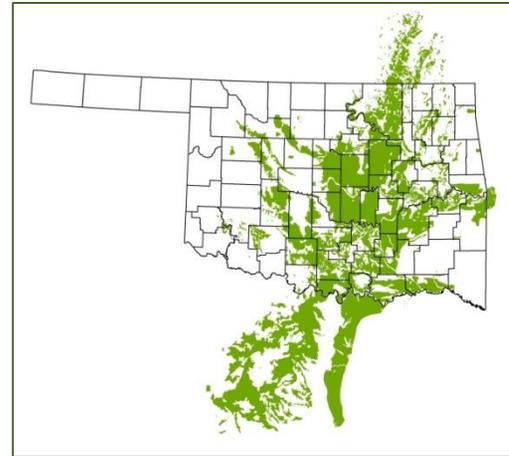
A large shrub or small to medium-sized tree common throughout the Cross Timbers, often found in the forest, along fence rows and aggressively colonizing meadows and agricultural fields no longer in production. Though a native

Oklahoma tree, many consider eastern redcedar as an invasive species. Prior to settlement, periodic lightning-caused fires kept the distribution of eastern redcedar in check. In our modern era of land settlement and sprawl, intensified land-use and fire suppression, it aggressively spreads across the landscape and readily outcompetes many other tree and plant species. It is an evergreen with tiny scaly and spiny leaves. Male trees produce copious amounts of pollen in the spring and trigger respiratory allergies in many people. Female trees produce its trademark purplish berry-like cone which contains seeds. Birds are principal vectors of eastern redcedar, as they consume the cones as forage, and then readily disseminate the seeds as they perch on fences, power lines or trees, or fly across open fields. They spread the undigested seeds with a little plop of "fertilizer!" The aromatic wood has long been favored for long-lasting fence posts, cedar chests and closets.

The Cross Timbers

Nowhere is the intersection between different ecosystems more evident than in the Cross Timbers, a distinctive forest type that covers nearly 4 million acres in Oklahoma. The City of Tulsa and Turkey Mountain lie at the northeastern fringe of this remarkably diverse area.

Historic Cross Timbers Distribution (Kuchler 1964)



When moving across the state from east to west, declining precipitation causes the tall trees of the continent's eastern deciduous forests to mingle with the grasses of the central prairies, forming a mosaic of upland forests, tallgrass prairies, savannahs and glades. Although our Cross Timbers woodlands contain many of the same species found in forests farther east, here the trees are reduced in stature

and often stunted and gnarled. In the Cross Timbers, post oak and blackjack oak are the dominant tree species.

In places, these Cross Timbers forests are so dense that many early travelers to the region considered them impenetrable. In 1832, author Washington Irving described traversing them as if "struggling through forests of cast iron," and it is reported that early wagon trains traveled north or south to avoid crossing them.

Fortunately, these distinctive features, that so vexed the spirit of early travelers, left Oklahoma with one of its greatest forest treasures. The Cross Timbers is one of the least disturbed forest types in the eastern United States because its trees were too stunted and low in quality to be worth logging, its terrain too steep to be farmed and its soil too thin and rocky to grow crops. Remnants of Oklahoma's "ancient" Cross Timbers forests remain essentially intact, appearing much the same and containing a similar mix of animals and plants as they did prior to European settlement. Some of Oklahoma's oldest trees can be found in the Cross Timbers, with post oaks 400 years of age and eastern redcedars as old as 500 years.

Did You Know?

- Forests and woodlands cover about 12.3 million acres, almost 27% of the State.
- Unlike most states to our west, more than 95% of Oklahoma's forests are privately owned. Two-thirds of our forestlands are in an estimated 115,000 ownerships, involving 234,000 individual and family forest owners.
- Oklahoma's forest industry employs 7,000 people with an annual payroll of \$351 million. The value of the industry's annual output is approximately \$2.9 billion.
- Our forests are growing more wood each year (157.2 Million Cubic Feet) than we are harvesting or losing to wildfires, insects or diseases (103.9 Million Cubic Feet).
- The main threats to Oklahoma's forests are invasive species, urban development, wildfires, insects and disease and conversion to non-forest land uses.
- According to Dr. Elbert L. Little, former Chief Dendrologist for the U.S. Forest Service and a native of Muskogee, the State claims 143 native tree species, more than all of Europe.

Oklahoma's Amazing Forest Diversity

Oklahoma is in the top three states in its natural diversity, thanks to wide variations in precipitation, temperature, geology, topography and soils. The State lies at the intersection of some of the most significant ecosystems of North America – the tallgrass prairie of the continent's center gives way to the shortgrass prairie of the west, the mesquite grassland of the southwest, the deciduous forest of the northeast and the pineywoods of the southeast.

Within the State's borders you'll find native **ponderosa pine**, **pinyon** and other Rocky Mountain species at the farthest end of the Panhandle; hardwoods in the northeastern corner, such as **sugar maple** and **basswood**, that are more characteristic of New England; stately **baldcypress** trees, reminiscent of Louisiana, in the sloughs and oxbows of the extreme southeastern corner; productive **shortleaf pine** and **loblolly pine** timberlands of the Gulf Coastal Plain and mountains of the east; and **shinnery oak** and other species characteristic of the continent's deserts in our southwest. Occupying the transition zone between eastern forests and western prairies is the Cross Timbers, an expanse of short-stature woodlands dominated by **post oak** and **blackjack oak** as found at Turkey Mountain.

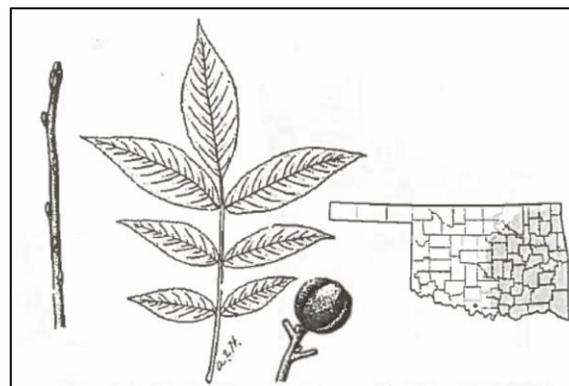
Want to Learn More? Contact Your State Forester!

Oklahoma Forestry Services
2800 North Lincoln Boulevard - Oklahoma City, OK 73105
405-522-6158
www.forestry.ok.us

Black Hickory

Carya texana

The most common native hickory of the Cross Timbers, often found in association with post oak, blackjack oak and black oak. A medium-sized to tall tree that is mostly scattered in its distribution. It has compound leaves, with 5 to 7 leaflets per leaf. The fruit is a tan-colored, smooth nut that is encased in a blackish-brown husk

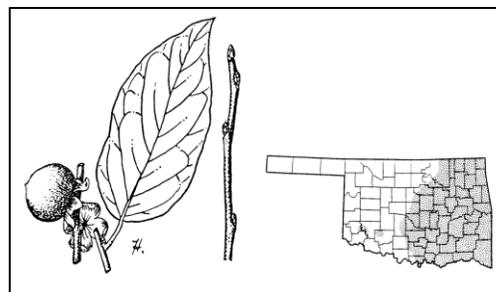


that opens along defined lines at maturity. Squirrels and small mammals favor the nuts as forage. The bark is blackish-brown and tightly furrowed with interlaced ridges.

Persimmon

Diospyros virginiana

A small to medium-sized tree or thicket-forming shrub common to the eastern half of the state. Twigs are slightly zig-zag, and leaves are shiny dark green with smooth edges. The bark is black or dark brown and furrowed into small square scaly plates. The fruits are rounded or flattened, orange or purplish, and ripen in autumn. The fruits are very astringent when immature, but turn soft and sweet, usually after first frost, and are eaten by many wildlife species.

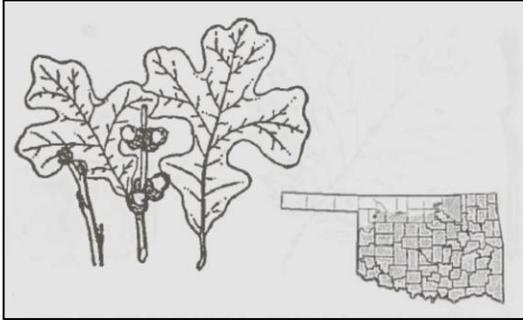


Species Common to the Cross Timbers

What You Will Learn in the Forest

Post Oak

Quercus stellata

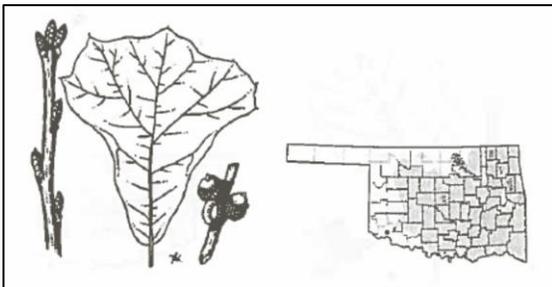


A medium-sized, slow-growing tree with grayish scaly bark, very common in the Cross Timbers in association with blackjack oak. It persists well on dry, rocky, upland sites. One of the oldest trees here, though not necessarily the largest in overall size, often attaining 400+ years

of age. Its cross-shaped leaves with rounded lobes are its trademark. Post oak provides good habitat for wildlife. Its acorns have a bowl-shaped cap and are a favored food source for songbirds, small mammals and white-tailed deer. Pioneer settlers used post oak logs to build their cabins, and to fuel their hearths. It serves as a source of firewood for people today and readily sprouts from the stump after being cut.

Blackjack Oak

Quercus marilandica



A very common component of the Cross Timbers along with post oak. It has blackish-brown furrowed bark, and its stiff and tough lower branches often droop to the ground and persist for many years, making dense stands

almost impenetrable to early pioneers. Its leaves are broadest at their top and are somewhat bell-shaped, with tiny bristles along their edges. Blackjack provides good wildlife habitat. Its acorns are eaten by some birds and small mammals, and white-tailed deer. Pioneers used its strong and "tough as iron" wood for construction timbers, fence posts and firewood. Folks still use blackjack oak today for firewood.

This close-to-home, beautiful outdoor setting offers a perfect venue for learning about one of Oklahoma's unique forest types – the Cross Timbers – and about forests and foresters. Following the trail (**see map on next page**) will take you through a small part of these woodlands to visit educational stations where professional foresters will help interpret your surroundings, provide short presentations and answer questions. Along the way, also learn about some of the tree species found in the area, and about other aspects of this forest. As you walk the trails and enjoy these woodlands, take time to think of the early settlers to this region who either complained about the difficulties of passage or marveled at this remarkable ecosystem's beauty and bounty overlooking the Arkansas River.

Station One... The Forest Community. Learn that these community forests in your own backyard are more than trees. They are complex and dynamic systems with lots of connected parts.

Station Two... Aliens in the Woods. Learn about threats from invasive species and wildfire, why you shouldn't move firewood and why it is important to be careful when selecting species to plant on your property.

Station Three... The History of the Forest. Learn some Cross Timbers history and how this site has changed over time, and recovered from disturbance in the 1920s.

Station Four... What Are Trees Good for Anyway? Trees and forests provide many tangible and intangible benefits. Although not typical of what most people think of when they hear the word "forests," these woodlands provide an astounding array of benefits called "ecosystem services."

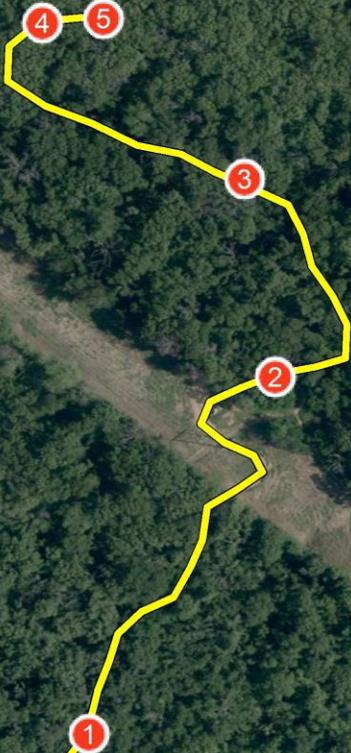
Station Five... Ask a Forester. Foresters are knowledgeable about trees and forests and how to take care of them. What a perfect chance to learn more from the experts, and explore forestry as a career.

Giveaways and Resource Station. Return to the parking lot and help yourself to more informational items. Young folks who have completed their workbooks get their reward here.



A Walk in the Forest

Turkey Mountain Urban Wilderness



Legend

 Welcome Station

 Resource Table

 Walk in the Forest Path

Station Points:

 1 The Forest Community

 2 Aliens in the Woods

 3 The History of the Forest

 4 What are Trees Good for Anyway? (Tree and Forest Benefits)

 5 Ask a Forester



Source: Esri, DigitalGlobe, GeoEye, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community