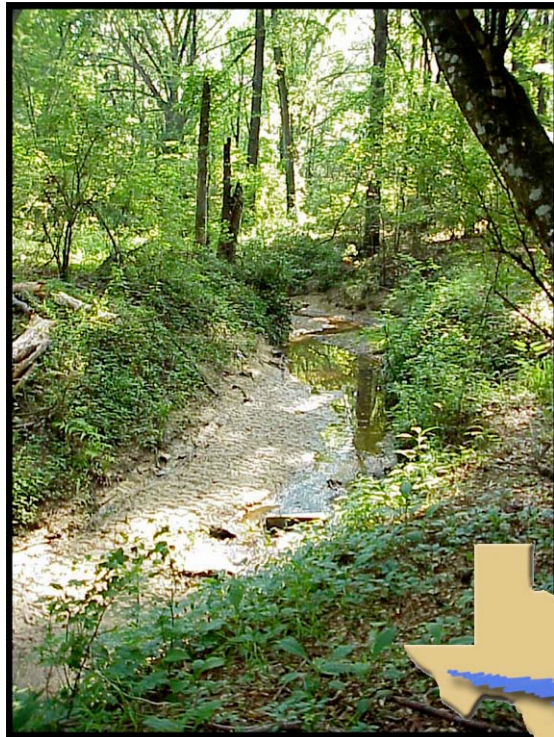


# Field Guide for the Eastman Nature Trail



Visit  
Eastman Outdoors Texas at  
[www.eastman.com/EastmanOutdoors/index.htm](http://www.eastman.com/EastmanOutdoors/index.htm)

## Acknowledgements:

Boy Scouts of America  
Gregg County Master Gardeners  
East Texas Beekeepers Association  
Longview High School FFA Chapter  
Eastman Employees and Retirees  
Native Plant Society

*We would like to thank you all for your  
hard work and dedication*

*Sponsored by*

**EASTMAN**  
Eastman Chemical Company

Texas Cooperative  
**EXTENSION**  
The Texas A&M University System

**T E X A S**  
FOREST  **SERVICE**

Author:  
Eric L. Taylor  
Assistant Professor & Extension Specialist - Forestry  
<http://extensionforestry.tamu.edu>

# Field Guide for the Eastman Nature Trail



Visit

Eastman Outdoors Texas at

[www.eastman.com/EastmanOutdoors/index.htm](http://www.eastman.com/EastmanOutdoors/index.htm)

## Poison Ivy

(*Toxicodendron radicans* L.)

ANACARDIACEAE

poison oak, poison sumac

Eighty-five percent of the people exposed to poison ivy will develop an allergic reaction. Usually, sensitivity develops only after several encounters with the plants, sometimes over many years. However, sensitivity may occur after only one exposure. The rash is caused by a chemical in the sap called urushiol. Stems or leaves broken by the wind or animals, and even the tiny holes made by chewing insects release urushiol. It can stick to pets, garden tools, or anything it comes in contact with and may remain potent for years.

### Quick ID:

Poison ivy may be a woody, ropelike vine, a trailing shrub on the ground, or a free-standing shrub. Leaves normally tripinnately compound. Leaves are green in the summer and red in the fall. Flowers greenish-white. Berries white.





**Sugarberry**  
(*Celtis laevigata* L.)  
ULMACEAE



Sugar Hackberry, Texas Sugarberry

Many folks call this tree hackberry (*Celtis occidentalis*) which grows in the northeastern U.S. Sugarberry, hackberry's southern cousin, differs only slightly. Both are used extensively for landscape planting as a substitute for elm. Also, the fruit is good raw or cooked down for an unusual syrup

**Quick ID:**

Simple, alternate, lanceolate leaves often with a few teeth on the top half of the leaf (leaf apex). Leaf appears light green and the base of the leaf is uneven (inequilateral). Also, the 3 largest veins are very prominent beneath. Look for the smooth pale gray bark with prominent warty projections.



**Black Cherry**  
(*Prunus serotina* Ehrh.)  
ROSEACEAE



Black Mountain Cherry, Rum Cherry

This tree was widely used by the early pioneers. Its bark was made into a cough remedy and the fruit was used as a flavoring extract or mixed with sugar or honey to make pies, jellies, and jams. *Do not eat the seeds as they contain highly toxic hydrocyanic acid.* Black cherry is food for many wildlife although the foliage is considered to be poisonous to livestock. Black cherry is a very desired wood.

**Quick ID:**

Simple, alternate leaves with finely toothed (serrate) leaf margins. Look for reddish hairs on mid-vein on the back side of leaf. Bark is striped horizontally with gray lenticels.





## Eastern Redbud

(*Cercis canadensis* L.)

FABACEAE



Redbud

Redbud is desired as a landscape shrub for its showy pink to purple spring flowers that contrast well with the white flower of dogwood. Strips of the red bark were used extensively for basket weaving by Native Americans. *Try this:* add the fresh flowers and flower buds to salads, breads, and pancakes. They have a pleasant, slightly sour flavor and are very high in vitamin C.

### Quick ID:

Small tree, Look for leathery, reddish-brown seed pods (legumes). Leaves simple, alternate, and often shaped like a heart (cordate). Principal veins radiate from the leaf base. Bark smooth and gray



5



## Sweetgum

(*Liquidambar styraciflua* L.)

HAMAMELIDACEAE



White Gum, Gum-wood, Star-leaf Gum

Sweetgum is one of the most common trees in Southern forests. Often it is the first tree growing in cleared areas. Its resin has long been used for medicinal purposes, and its resin (sap) has a sweet taste and can be chewed like gum (hence the name sweetgum). It is a rapidly growing, long-lived tree that has beautiful color variations of red and yellow in autumn. It is also gaining popularity in reforestation projects because of its rapid growth on cutover lands and its use in making paper.

### Quick ID:

It's easy to recognize its simple, alternate, star-shaped (palmately lobed) leaves and its spiny fruit. Often the twigs and branches will have corky wings. Large tree reaching 100 feet or more.



6



## Boxelder Maple

(*Acer negundo* L.)  
ACERACEAE

Manitoba Maple, Maple-ash, Ashleaf Maple,  
Water-ash, Sugar Maple

This tree is but one of the many different maples native to North America. Boxelder, however, is unique in that it has a compound leaf. As some common names suggest, its leaves resemble ash. You will commonly find it extensively planted as a quick growing ornamental tree. It can be tapped for its sugary sap. Some other uses include furniture and pulp for paper.

### Quick ID:

Medium height tree. Leaves are opposite on the branch and compound with 3 - 7 leaflets. Leaflets can be toothed (serrate) or lobed above the middle. Twigs are smooth and shiny green. **Leaves with 3 leaflets resemble leaves of poison-ivy**



## American Beautyberry

(*Callicarpa americana* L.)  
VERBENACEAE

French Mulberry, Beautyberry

American Beautyberry is also called French Mulberry although it is not related to our red mulberry in the south. The pinkish-purple berry is beautiful and edible, but because of its taste, serves better as decoration than as lunch. Beautyberry does, however, provide browse and shelter for many wildlife species.

### Quick ID:

This is a shrub about 3 meters tall. Its leaves are simple, crenate (rounded over teeth) leaf margin and opposite on the twig. It is easily identified by the bright purple berries along the twigs or by the antler-like stalks that persist on the twig once the fruit drops.



## Common Persimmon

(*Diospyros virginiana* L.)

EBENACEAE



Jove's-fruit, Winter Plum, Possum-wood

*Diospyros* literally means “fruit-of-the-gods” This species produces a fruit that is somewhat smaller than the fruit you might see in the grocery store. It is edible, however, and was appreciated by early settlers as it is sweet and juicy at maturity. Persimmons can be used in jams, pies, puddings, bread, or fresh from the tree. **Be careful, the astringent unripe fruit will cause an unwelcome pucker.** The dense black wood is related to ebony and is used for golf clubs.

### Quick ID:

This is a tree generally less than 35 feet tall. Branches spread from main stem at right angles. The simple, alternate entire, leaves are dark green and often have gray or black spots on them.



9

## Mexican Plum

(*Prunus mexicana* Wats.)

ROSEACEAE



Big-tree Plum, Texas Plum

*Prunus* is the ancient name for a plum of Europe. Unlike other plums, it is treelike (hence the name big-tree) and does not sprout to form plum thickets. Its fruit is edible and makes excellent jellies, jams, and fruit sauces. **Like black cherry, however, its bark, leaves, and seeds are toxic.** Plum is a popular landscape ornamental because it is drought resistant and has very attractive white flowers in the spring.

### Quick ID:

Small tree up to 25 feet tall. Produces a dark purplish plum. Leaves are alternate, simple, and thick. The bark is easily recognizable with its gray to black exfoliating plate-like scales. It resembles black cherry as it is in the same genus.



10



**Deciduous Holly**  
*(Ilex decidua Walt.)*  
**AQUIFOLIACEAE**



Possum-haw Holly, Meadow Holly, Prairie Holly, Welk Holly, Bearberry, Winterberry

*Ilex* is the ancient name of Holly and *decidua* refers to the deciduous leaves. That is, unlike other native hollies, Deciduous Holly loses its leaves during the winter. It is occasionally planted as an ornamental because of its persistent, bright, orange-red fruit. The common name, possum-haw, refers to the fact that O'possums are fond of the fruit.

**Quick ID:**

Small shrub with spreading open crown, or sometimes a tree up to 25 feet tall. The simple alternate leaves may appear opposite on the twig because of spur shoots. Crenate leaf margin is gland-tipped. Bark smooth, thin, and grayish white.



**Water Oak**  
*(Quercus nigra L.)*  
**FAGACEAE**



Pin Oak, Spotted Oak, Possum Oak

This tree is typical in low woods or stream banks. The species name, *nigra*, refers to the black bark. This oak has gained popularity and is extensively planted as a shade tree in this region. Its wood is commonly used for fuel, lumber, poles, and cross ties. Of the oaks, which are generally slow growing, water oak is relatively fast growing.

**Quick ID:**

Water oak can attain a height of 80 feet. Look for the tight dark bark with gray banding. The leaves are spatulate. That is, shaped like little spatulas or spoons. Be careful, leaves on young trees look much different (deeply, bristle-tipped lobes) and might be mistaken for southern red oak





**Willow Oak**  
*(Quercus phellos L.)*  
 FAGACEAE



Pin Oak, Peach Oak, Cork Oak, Swamp Oak,

The species name, *phellos*, means cork. Willow Oak is often called Pin Oak in the South. Although the name is reserved for the true Pin Oak, *Q. palustris*, common in the North East and not native to Texas. The wood is inferior to other commercial oaks in the region but is often still used for fuel and general construction. The acorns are an important food mast for wild turkey, quail, birds, and squirrel.

**Quick ID:**

Large tree up to 125 feet tall and 6 feet in diameter. Leaves are deciduous, alternate, simple, and linear-lanceolate (long and narrow like a sword or lance). Typically grows on rich, wet, clay-loam, bottom lands. Look for the bristle-tipped leaf.



**Southern Waxmyrtle**  
*(Myrica cerifera L.)*  
 MYRICACEAE



Waxberry, Southern Bayberry, Candleberry,

*Cerifera* means “waxy-fruit.” The fruit is eaten by about 40 different birds, and was used for candle making, soaps, and as bay leaves in stews and soups. **Try this:** gather some waxy-blue berries and boil them until melted. Skim off the wax and pour into a mold. The strong smell of “palmitin” from the burning candle was said to help the pioneers breathe during the long, cold, winter months.

**Quick ID:**

This is an evergreen shrub. Leaves are simple and alternate. Leaf margin sometimes serrate above the middle. Leaves are dark green and waxy, and have a pungent odor when crushed. Look for the orange-colored glands on young twigs.





## Tallowtree

(*Triadica sebifera* L.)

EUPHORBIACEAE

Tallow-tree, Chinaberry

You don't really see too many Chinese Tallowtrees in the northern parts of Texas. The tree suffers freeze damage, wood borers, cotton root rot and other diseases that limit its numbers. Nevertheless, it is planted extensively as an ornamental because of its quick growth and attractive red and yellow fall colors. Its clusters of hard white, mature seeds as well as the immature greenish seeds are potentially toxic.

### Quick ID:

This is a fast-growing, short-lived, poor-quality shade tree. Leaves are deciduous, simple, and alternate. The deltoid or diamond shaped leaves have entire margins, and the leaf tip tapers to a long point.



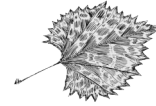
15

## Muscadine Grape

(*Vitis rotundifolia* Michx.)

VITACEAE

Grape, Wild Grape



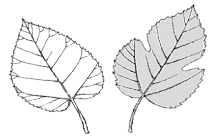
Texas has more than a dozen species of grapes. Muscadine grape, however, is the most famous. The juicy, sweet, purple to black fruit grows in abundance from midsummer to late fall. You can use any of the Texas grapes for juice to jelly, though sweetness varies from vine to vine. One grape, Mustang grape, bears fruit so pungent that it can irritate your hands while picking. **Be careful not to confuse grape with similar but inedible fruits.**

### Quick ID:

Grapes have simple, alternate, heart-shaped or broadly ovate leaves; the leaf margins are toothed, or lobed, with dense wooly hairs underneath. Grapevines do not have spines.



16



## Red Mulberry

(*Morus rubra* L.)  
MORACEAE



Mulberry, Black Mulberry, Morea

The oblong fruits of mulberries resemble raspberries and blackberries. Mulberry has red (*rubra*) immature fruit that are purple when ripe. The fruit can be tasty, but is not often used. Use mulberries fresh on cereal or ice cream, or boil them down for jelly or preserves. The fibrous bark was used to make cloth by early Indians. **Try this:** To cold water, add berries and crush. Strain the mixture through cheesecloth and sweeten to your taste.

### Quick ID:

Red mulberry is a small- to medium-sized tree. Leaves are alternate, simple and have toothed margins. The leaves may be unlobed, deeply lobed on one side, resembling a mitten, or lobed on both sides. Leaf margins are crenate or serrate.



17



## Sassafras

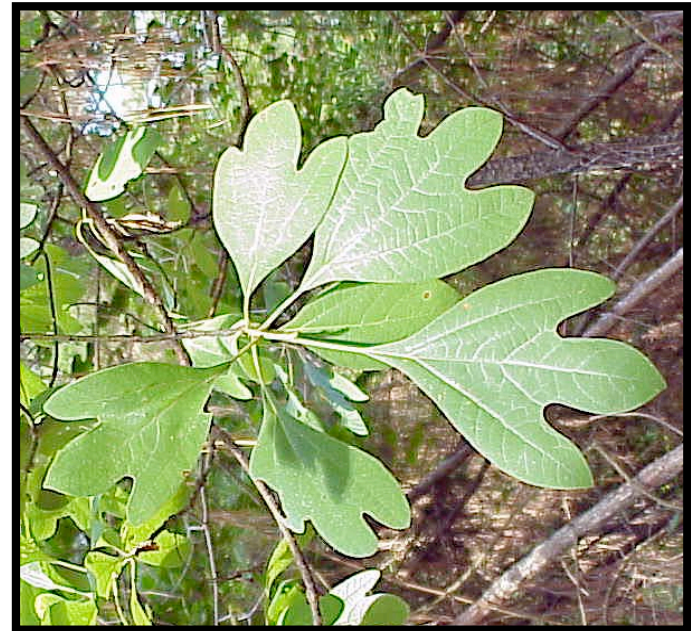
(*Sassafras albidum* Nutt.)  
LAURACEAE

Cinnamon-wood, Smelling-stick, Saloop

Sassafras tea has been a favorite for more than 400 years. Florida Indians first introduced the tree to the Spanish in the 1500s. **Sassafras was the first cash crop of the Virginia colony.** It was exported to Europe for its reported “cure-all” purposes. The tea is brewed from the bark of the roots which has a root beer aroma. Dried leaves are powdered into filé, a creole spice used in gumbo. Today, sassafras is used for flavoring medicines, tobacco, root beer, soaps, toothpaste, gum, and perfumes.

### Quick ID:

Like red mulberry, three variations of the oval leaves appear on a single tree but the leaf margins are entire and the twigs are greenish.



18



**Winged Elm**  
 (*Ulmus alata* Michx.)  
 ULMACEAE



Cork Elm, Water Elm, Red Elm, Witch Elm,  
 Wahoo Elm

*Alata* refers to the corky wings on the twigs. Winged elm is a favorite shade and ornamental tree. It is easily transplanted. It sprouts readily from seed; it grows relatively rapid, and it is relatively free of disease and insects. The wood makes excellent tool handles and agricultural implements. In some areas, the bark was used for baling twine.

**Quick ID:**

Tree attaining a height of 60 feet. Its slender branches often have conspicuous corky wings. Leaves are simple, alternate, deciduous, lanceolate, coarse, and doubly serrate on margin.



**Black-Gum**  
 (*Nyssa sylvatica* Marsh.)  
 NYSSACEAE



Black Tupelo, Yellow Gum, Snagtree, Hornpipe, Sour Gum,  
 Pepperridge, Bee Gum

This tree provides quality shade and good form but it is often overlooked as an excellent shade and ornamental tree. The wood is used for veneer, plywood, crossties, boxes, pulp, woodenware, and tool handles. The fruit is important to many species of birds. The foliage was browsed by black bear and white-tailed deer. Bees also love the flowers.

**Quick ID:**

Tree up to 100 feet tall. Leaves are glossy and dark green and are often clustered on dwarf branches (spur shoots) at the end of major shoots. The leaf margin is entire but sometimes it will have a single small tooth at the middle. Look for the distinctive 90 degree branching from the trunk.





**Red Maple**  
*(Acer rubrum L.)*  
 ACERACEAE

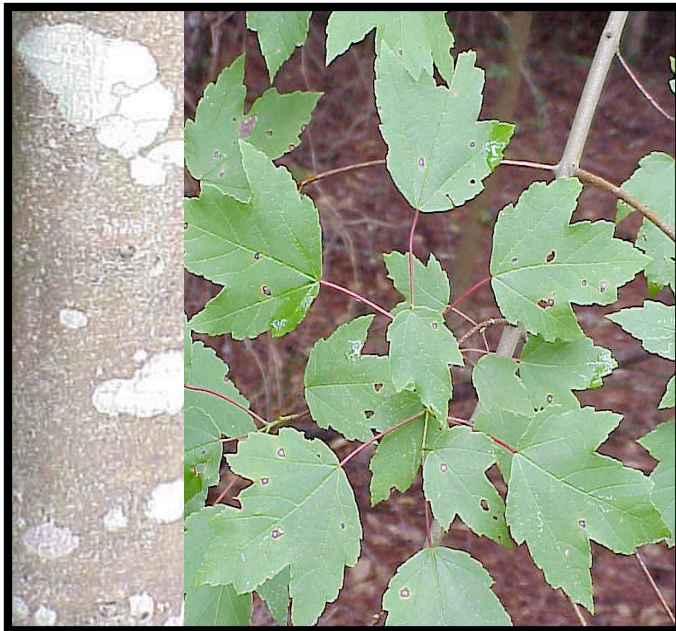


Scarlet Maple, Swamp Maple, Soft Maple,  
 Shoe-peg Maple

Red maple is a common species of the forests of eastern North America, ranging as far south as Florida and as far west as East Texas. It is widely planted as a shade tree. This maple gets its name from the bright red twigs, buds, flowers, immature fruits, and leaf stalks (petioles). In fact, *rubrum* literally means “red.”

**Quick ID:**

Beautiful tree attaining a height of 90 feet with a narrow rounded crown. Bark light gray and smooth. Leaves deciduous, opposite and with 3 or 5 shallow lobes with parallel sides or tapered toward the tip. Leaf margin irregularly toothed. Leaf stalk or petiole is red.



**Southern Pine Beetle**  
*(Dendroctonus frontalis Z.)*

During the 1970s, enough trees were killed by the southern pine beetle (SPB) to build 55,000 houses. Of all southern pines, loblolly is the most susceptible. The first signs of SPB attack are popcorn-size masses of yellowish-white resinous “pitch tubes” appearing in the bark crevices from the base of the tree to the lower limbs. Fading needle color from green to yellow, red, and brown is a sign that attacked trees will die. The adult SPB, which is about the size of a grain of rice, makes winding, S-shaped galleries on the inside of the bark cutting the cambium. It introduces a blue stain fungus into the tree that eventually plugs the water-conducting tissue and the tree dies.

To reduce SPB problems, maintain vigorously growing forests. A healthy tree can “pitch out” a SPB.



## Flowering Dogwood

(*Cornus florida* L.)

CORNACEAE

Boxwood, Cornelius-tree, White Cornel

Dogwood is a very common understory tree in East Texas forests. It is also planted extensively as a landscape ornamental primarily because of its very attractive, 4 large, white or pinkish, petal-like bracts (false flower petals that hide true greenish yellow flowers in dense clusters). The bright red berries and red autumn foliage also add to its splendor. The wood is hard, heavy and strong. So strong, in fact, that it is desired for fabric looms, turnery, handles, and forms. It is preferred food for birds, wild turkeys, squirrels and deer.

### Quick ID:

Small tree up to 30 feet tall with a flat, spreading crown. Leaves are opposite, ovate and 3 to 5 inches long. Margin entire and sometime wavy. Leaf veins are prominent and follow the leaf margin. Twigs green and telescoping.



23

## American Elder

(*Sambucus nigra* spp. *canadensis*)

CAPRIFOLIACEAE

Elderberry, Common Elderberry, Elder, Blue Elder

This common shrub to East Texas produces an abundant supply of fruit each summer. The fruit, available in midsummer, makes excellent jellies and jams and is high in vitamins A and C. The raw berries, however, have an unpleasant flavor and should not be eaten in quantity. Cooking removes the unpleasant taste. *The green berries, leaves, twigs and roots may be slightly toxic.*

### Quick ID:

This is a shrub to about 10 feet tall. The leaves are once pinnately compound and very rarely twice pinnately compound. *The petiole and rachis of the leaf resemble a celery stalk.* It is found in mesic to wet areas.



24



## Southern Red Oak

(*Quercus falcata* Michx.)

FAGACEAE



Spanish Oak, Turkey Oak, Pagoda Oak,  
Cherry-bark Oak

The species name, *falcata*, refers to the scythe-shaped leaves. The tree is often planted as an ornamental and the wood is used for many purposes. The bark is an excellent source for tannin and is used as an astringent in medicine. It has many variable shapes especially when young. Not all botanists agree to the exact status of its variations.

### Quick ID:

A wonderful landscape tree with an open rounded crown reaching about 80 feet tall in North East Texas. Leaves are simple, alternate, deciduous, and quite variable. Generally, however, leaves will have 3-7 bristle-tipped lobes lobed.



25



## Shortleaf Pine

(*Pinus echinata* Mill.)

PINACEAE



Yellow Pine, Rosemar Pine, Forest Pine,  
Old-field Pine, Pitch Pine, Carolina Pine

The species name, *echinata*, refers to the hedgehog-like or echinate, bristly needles. The wood is valuable because of its softer, less resinous character. It is used for general construction, exterior and interior finishing, utility poles, mill products, veneer, cooperage, boxes, crates, posts, toys, and many more items. A number of species of birds and rodents feed on the seeds.

### Quick ID:

Valuable coniferous tree to 110 feet and 2 feet in diameter. Branches are whorled and crown is short. Leaves needlelike, short (3-5 in. long) with usually 2 in a cluster. Bark reddish brown and broken into large scaly plates.



26

## Loblolly Pine

(*Pinus taeda* L.)  
PINACEAE



Black Pine, Bull Pine, Lowland Pine, Slack Pine Sap Pine,  
Indian Pine, Swamp Pine

The species name, *taeda*, is for the resinous wood. The wood is used for lumber, poles, cooperage, pulp, boxes, crossties, posts, and fuel. Loblolly pine is the most valuable conifer in Texas, as in many southern states, and it is planted extensively in plantation settings. In 1998 as many as 153,000 acres were planted in loblolly pine. Texas has a total pine inventory of about 4 million acres (7.8 billion cubic feet) for a combined stumpage value of over 600 million dollars.

### Quick ID:

Nice conifer that can attain a height of 120 feet. Leaves are persistent, needle-like and in clusters of 3 (rarely a few in pairs). Needles are light to dark green, 3-sided and 5-10 inches long.



27

## Silktree

(*Albizia julibrissin* Durz.)  
FABACEAE



Mimosa-tree, Powderpuff-treer

Silktree is a lovely Asian ornamental with beautiful pink puffball flowers in late spring. It is often called “Mimosa-tree” because the flowers are similar to those of the related herbaceous sensitive-plants (plants whose leaflets fold up when touched) of the genus, *Mimosa*. It has leaves that are not just compound...they are twice-pinnately compound (fernlike), and the leaflets fold up at night.

### Quick ID:

This is a small ornamental tree to about 20 feet tall with short trunk. Secondary leaflets of the pinnately compound leaves are 1/4 inch long. A pink globose makes of the showy flower.



28

## Yaupon Holly

(*Ilex vomitoria* Ait.)  
AQUIFOLIACEAE

### Yaupon

Yaupon is an important browse especially during winter months when the berries are eaten by numerous birds and mammals. Yaupon is widely dispersed by birds. Twigs and leaves are eaten by o'possums, rodents and deer. Natives used the foliage for medicinal and ceremonial purposes. Tribes would gather the high-caffeine leaves to brew a tea-like drink called 'black drink' that was used to cause vomiting, hence the name of *vomitoria*. The dark foliage and red berries make it a popular Christmas decoration and landscape plant.

#### Quick ID:

An evergreen shrub or small tree up to 20'. Leaves simple, alternate, less than 2" long, elliptical, thick, leathery, dark green on top, paler underneath. The fruit is a persistent red berry. Bark is smooth and light gray.



29

## American Holly

(*Ilex opaca* Ait.)  
AQUIFOLIACEAE

### Yule Holly, Christmas Holly, White Holly

An East Texas evergreen, American holly's foliage and fruit are often used for holiday decorations. Leaves of this tree may also be used for tea but they do not contain caffeine. Cattle sometimes browse the leaves and many species of birds eat the fruit. Be careful, the leaves can be very sharp and stiff.

#### Quick ID:

An evergreen tree to 70 feet, with short crooked branches and a rounded or pyramidal crown. Leaves are thick, waxy, simple, alternate, persistent, ovate. Leaf margins are wavy and commonly stipulate (with sharp spines). Bark light to dark gray and smooth.



30





**Cherry-laurel**  
(*Prunus caroliniana* Mill.)  
ROSEACEAE

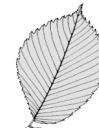


Wild Peach, Carolina Cherry-laurel,  
Carolina Cherry

*Try this:* take a couple of leaves and crush them between your finger tips. Now smell. Does the aroma resemble that of Maraschino cherries? That's because the leaves of cherry laurel contain prussic acid which, by the way, has been shown to be injurious to livestock. However, a number of birds feed on the seeds. Also, the tree is widely cultivated as a ornamental and can be trained into hedges.

**Quick ID:**

Evergreen tree attaining a height of 40 feet. Leaves persistent, simple, alternate, dark green, shiny, and leathery. Leaf margin may be entire or toothed with a few remote spines.



**American Elm**  
(*Ulmus americana* L.)  
ULMACEAE



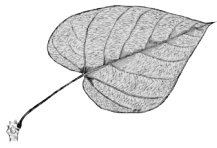
White Elm, Rock Elm, Common Elm, Soft Elm, Swamp Elm

American Elm makes up the greater part of elm lumber and logs. It is known in the wood industry as White Elm. It is the largest and most graceful of the elms. It is a very desirable ornamental tree for street and park planting. Unfortunately, only a few large trees now exist in the Eastern U.S. Most have been killed by Dutch Elm disease, caused by a fungus, *Graphium ulmi*, and by a phleom necrosis caused by a virus. Advances have been made with clones that exhibit good form and some tolerance to the disease.

**Quick ID:**

A large beautiful tree up to 120 feet. Leaves simple, alternate, deciduous. Leaf margins coarsely and doubly serrate. Leaf base an inequilateral shape.





## Southern Catalpa

(*Catalpa bignonioides*)  
BIGNONIACEAE

Catalpa, Indian Bean, Caterpillar Tree

Catalpa is a common tree in East Texas. It is easy to grow in almost any soil and rarely needs pruning. It is commonly planted in urban landscapes, parks, and golf courses for its shade and attractive summer flowers. Catalpa is perhaps best recognized as the “Caterpillar Tree” because Catalpa, in East Texas, is home to the Black Caterpillar which is prized by many as the “World’s Best” fishing bait. The caterpillars, however, must be introduced to the tree.

### Quick ID:

This is a large, fast-growing deciduous tree. The light green leaves are opposite or whorled on the branch. The leaves are somewhat heart shape and very large if growing in the shade. Fruit is a long bean containing many papery thin seeds.



33

## Greenbrier

(*Smilax spp.*)  
SMILACACEAE

Common Greenbrier, Stretchberry, Catbrier

If you have ever been snagged by this vine you can appreciate its various common names. The thorns are like the claws of cats. The succulent growing tips of the vines, as they emerge in the spring, furnish a delightful nibble for deer. The blue-black berries are not toxic. However, they are not considered edible. The berries are like rubber, hence the name “stretchberry” and they produce beautiful dyes for wool.

### Quick ID:

With one exception, greenbriars are woody vines with spines scattered on the stem. Vine climbs with the help of tendrils. Leaves entire, lobed, or spiny.

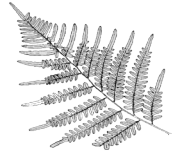


34

## Bracken Fern

(*Pteridium aquilinum* L.  
var. *pseudocaudatum* Clute)

POLYPODIACEAE



Western Bracken Fern, Pasture Brake

Bracken Fern is commonly found in open woods, pastures, and in sandy soils. It is the most widely distributed fern in the world and considered by some to be the most widespread of all vascular plants with the exception of a few annual weeds. It is so tenacious that it regenerated in 1 meter thick volcanic ash only 1-2 years after the Mt. St. Helens' volcanic eruption in Washington. "Bracken Poisoning" is a problematic weed in many areas because it is potentially fatal to livestock. Its toxins (cyanide-producing glycoside and thiaminase) cause fatal Vitamin B<sub>1</sub> deficiency. It is also known to be allelopathic. That is, it kills the competing surrounding plants with toxins leached from the plant tissues.



35

## Japanese Privet

(*Ligustrum japonicum* Thunb.)

OLEACEAE

Roundleaf Privet, Glossy Privet, Common Privet,  
Chinese Privet

This non-native shrub, originally native to China, Korea, and Japan, has been planted extensively as an ornamental. Commonly planted in warm regions, its compact shape and stiff short branches and leaves make it a perfect hedge. Since its introduction into cultivation in about 1860, common privet has escaped cultivation and is now considered with the native East Texas plants.

### Quick ID:

Shrub to 20 feet tall. Leaves simple, opposite, evergreen and ovate-lanceolate. Leaf margin entire. Fruit a berry-like drupe, oblong, and blue-black.



36

## Rich Pine Top

Pine knots, lighter pine, kindling

Rich Pine Tops are also called “Pine Knots.” This term refers to the smaller branch stubs diverging from the main stem. The unique fact about “Rich Pine Tops” is that the heartwood is heavily soaked, or “rich,” with resin. This occurs only with the southern yellow pines. This resin-soaked wood is resistant to decay and may persist in the woods for many years.

Rich Pine Tops were prized by early pioneers. Once split into splinters or kindling, it became a very reliable fuel source for starting campfires even in the rain. Pioneers also used the resin-soaked branches as torches to guide their path by night.



37

## Fusiform Rust

Fusiform rust is caused by a fungus, *Cronartium quercuum* f. sp. *fusiforme*. The fungus produces orange, spindle-shaped swellings or galls on the branches or main stem. Fusiform rust infections that occur on the main stem within the first 5 years of a tree’s life normally cause tree death. Infections that occur late in life weaken the stem, resulting in wind breakage at the canker or quality loss at rotation age.

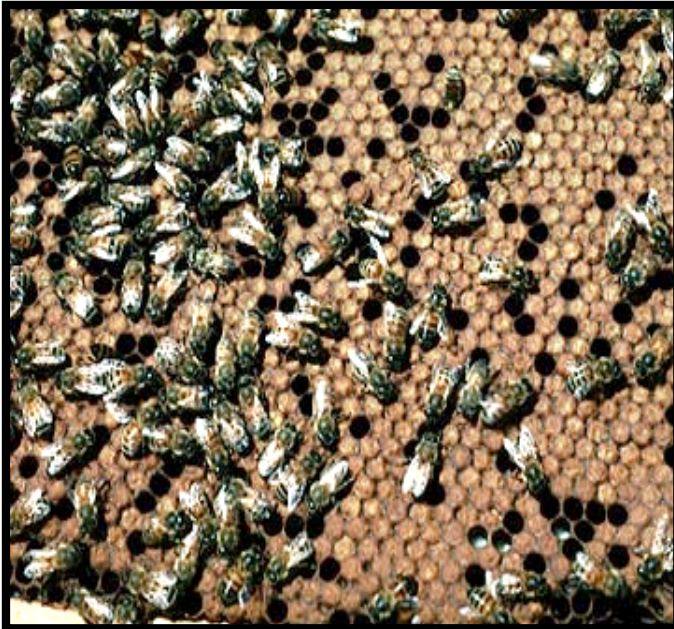
Losses in individual nurseries have exceeded 80 percent. Loblolly and Slash pine are the most susceptible species. It is because of the severe susceptibility of slash in East Texas that Slash pine is rarely ever planted in plantation settings.



38

## Honey Bees

The honey bee is one of man's most useful insects. In the United States, honey bees produce about 50 million dollars worth of honey and beeswax each year and they pollinate more than one billion dollars worth of valuable agricultural crops. Honey bees are social insects. This means that they live together in a colony and depend on each other for survival. There is one queen in each colony and her job is to lay eggs and maintain the colony's population. Most of the bees in the colony are workers. Worker bees live for only six weeks, and it is an extremely busy six weeks. Worker bees must collect food and water for the entire colony, do the housework, and guard the hive against intruders.



39

## Activity

### MYSTERY TREE - 1

I am found in many yards throughout East Texas, but many mower operators don't particularly care for my fruit.

Birds, however, do like my fruit. Also, children love to use my fruit as ammunition when playing together.

I love to grow up very quickly in clearings and old fields and quickly invade the site.

Pioneers may have enjoyed chewing my sweet tasting resin.

*What am I?*



40

## Activity

### MYSTERY TREE - 2

I am usually overlooked, but I make an excellent shade tree for your yard.

Take a look at my distinctively horizontal branching. My branches come off the main trunk at 90 degrees.

My wood is used for many general purposes.

My fruit is enjoyed by birds, and my foliage was browsed by black bear and white-tailed deer.

*What am I?*



41

## Alabama Supplejack

(*Berchemia scandens* Hill.)

RHAMNACEAE

Supplejack

Alabama supplejack is a woody vine that can grow to be quite large. In fact, it sometimes kills the support tree through girdling. It's fruit, however, is highly desired by birds and small mammals. The vines are very strong and can often be used to swing or climb. Historically, the vine was used to create decorative walking canes by early crafters and pioneers.

**Quick ID:**

This is a vine about 15 meters tall. The leaves are commonly 2 inches long with distinctive pinnate venation, dark shiny green. The leaf margin is entire. The twig and bark is green.



42

## Activity

### MYSTERY TREE - 3

I have simple, alternate, lanceolate leaves often with a few teeth on the top half of my leaves.

My leaves are yellowish-green with the three largest veins very prominent.

My bark is very smooth with distinctive warty projections.

Birds love my fruit, and the fruit can be cooked down for an unusual syrup.

*What am I?*



43



## Eastern Red-cedar

(*Juniperus virginiana* L.)

CUPRESSACEAE



Cedar, Red Savin, Carolina Cedar, Juniper -bush,  
Pencil-wood Red Juniper

Have you ever had a cedar lined chest or closet. Often times the lining is Eastern Red-cedar. Beside the fact that it has a pleasant smell, its aromatic characteristic is considered to be a good insect repellent. That is, it keeps moths away. Extract of cedar oil has various commercial uses especially in perfumes. Ironically, Eastern Red-cedar is not a cedar at all...it belongs to the Juniper family.

### Quick ID:

This is an evergreen tree of variable shape. Leaves are usually scale-like (successive pairs overlapping) and pointed with needle leaves present. Seed cones are berry-like, dark blue with a whitish powder.



44



## Hercules-club

(*Zanthoxylum clava-herculis* L.)

RUTACEAE



Prickly Ash, Toothache Tree, Tickle-Tongue

The species name, *clava-herculis*, means “club of Hercules,” and refers to the trunk’s thorny character. *Zanthoxylum* is Greek for “yellow wood.” All parts have a pungent aroma. A number of species of birds eat the fruit, but they might be toxic to humans. **Try this:** Pick a leaflet or two and crush them in your fingers. Can you smell the strong odor?

### Quick ID:

Small tree with a broad, rounded crown, easily recognized by the corky-based prickles on the trunk and branches. Leaves alternate, odd-pinnately compound of 5-19 leaflets. Bitter aromatic, tickling or numbing of the mouth when chewed.



## Peppervine

(*Ampelopsis arborea* L.)

VITACEAE

Pepper vine

Peppervine commonly occurs in moist to wet bottomland forests and along streams and rivers but can also be found in moist forest plantations and forest margins. Peppervine is found in most of the southeast, between Texas and Florida in the south, to Oklahoma, Illinois, and Virginia in the north. Peppervine is a source of food for white-tailed deer. The fruits provide food for numerous other wildlife species.

### Quick ID:

A high-climbing vine that is occasionally bushy. Branched tendrils opposite to leaves. Leaves compound, alternate, deciduous, bipinnately or tripinnately compound with deeply serrated leaflets. Fruit is a round, black berry in clusters.





## Virginia Creeper

(*Parthenocissus quinquefolia* L.)

VITACEAE

American ivy, Fiveleaved ivy, Woodbine

Virginia Creeper grows just about anywhere - forests, fields, gardens, and along banks of streams or lakes. It can grow in shade or sun. It grabs onto tree trunks and other surfaces with tendrils that have little adhesive pads at the end. The berries of this plant are eaten by many animals (birds, mice, skunks, chipmunks, squirrels, and deer). White-tailed deer also eat the leaves and stems, but Virginia Creeper berries are poisonous to humans. This species may slowly kill the host it grows on.

### Quick ID:

Alternate, palmately compound, 3 to 8 inches across, with five leaflets per leaf. Leaflets are elliptical in shape, with crenate to serrate margins. Flowers small, green and borne in clusters on long stems in June to July. Fruit is blue-black berry, 1/4 inch in diameter maturing August to October.



47

## Mayapple

(*Podophyllum peltatum*)

BERBERIDACEAE

Mandrake

Mayapple has a tasty fruit only when it is fully ripe. Look for the fruit in late summer, as the leaves die back and the fruits are falling off the herb. The flesh will be golden yellow or purplish with translucent and jelly-like pulp. You can eat the berry raw, puree into a refreshing drink, or cook it down to jams and jellies. Chemicals in the toxic root have medicinal benefits including treating certain cancers. *Warning: eating a quantity of ripe raw mayapples may cause temporary intestinal pain and diarrhea. Leaves, roots, and green fruits are highly poisonous and can cause death.*

### Quick ID:

Herbaceous plant with large palmately lobed single leaf blade. One leaf per stock.



48

## GLOSSARY (from Nixon, 1985)

ACUMINATE	A tapering acute tip with concave margins; it can be long or short acuminate.
ACUTE	Pointed, forming an angle less than 90 degrees.
ALTERNATE	Any position of leaves on the stem other than opposite or whorled.
AMENT	An elongate, unisexual inflorescence falling as a whole (e.g., the inflorescences of willow, hickories).
APEX	Uppermost part, highest point.
AROMATIC	Having a property which can be perceived by the sense of smell.
ATTENUATE	A gradually tapering acute tip with essentially straight margins. The margins may be entire or toothed.
BARK	A term applied to all the tissues outside the vascular cambium.
BASE	Lowest part (e.g., the lowest part of a leaf blade would be the leaf base).
BERRY	A fleshy fruit with one or more seeds (e.g., the fruit of grapes, greenbriers, soapberry).
BIPINNATELY	
COMPOUND	Two times pinnately compound.
BLADE	(LEAF)The flat expanded portion of the leaf.
BRACT	A modified or reduced leaf subtending a flower, inflorescence, etc. (e.g., the 4 white showy bracts of dogwood).
BRANCH	A stem arising from an older stem.
BUD	An undeveloped stem tip with leaves, or an undeveloped flower or group of flowers, or an undeveloped stem tip with leaves and flowers. Buds are usually enclosed by bud scales.
BUD SCALES	Modified or reduced leaves that enclose buds.
COMPOUND	Made up of two or more parts (e.g., a compound leaf is made up of 2 or more leaflets).
CONE	Seed bearing structure of pines, etc. consisting of a number of bract-like structures (sporophylls) attached to a central axis.
CONIFERS	Plants which bear cones. (See Gymnosperms).
CORDATE	Heart shaped. This term may also be used to characterize a leaf base (one that is notched).
CORKY WINGED	Usually in reference to the corky wing-like appendages found on the twigs of plants like winged elm, cedar elm and occasionally sweetgum.
CRENATE	Having smoothly rounded teeth on the margin.
CRENULATE	Having small smoothly rounded teeth on the margin.
CULTIVATE	To grow or tend in yards, gardens, fields, etc., for various purposes.
DECIDUOUS	Falling; usually in reference to trees that lose all or most of their leaves in the fall of the year (autumn).
DELTOID	Broadly and somewhat equally triangular.
DENTATE	A margin with outwardly pointed teeth (usually at right angles to the mid-vein).
DICOTYLEDONS (DICOTS)	Plants having 2 cotyledons (seed leaves). The cotyledons are usually observed during seed germination. Also characterized by having taproots, netted venation, flower parts in 2's, 4's or 5's or multiples of these numbers, etc.
DOUBLY	
SERRATE	Twice serrate on the margins (a margin with teeth of two different sizes).

## GLOSSARY (from Nixon, 1985)

ENTIRE	Having a smooth line without noticeable projections or indentation (e.g., having an entire leaf margin).
EVERGREEN	Remaining green year round. Usually used in regard to trees that keep their leaves through the winter.
FALCATE	Curved like a sickle. Usually used in reference to the midvein of the leaf with that portion of the blade below the midvein having less surface area than that portion above the midvein.
FIBROUS	Consisting of slender, elongated structures (e.g. a fibrous bark or a fibrous root system).
FLESHY	Plump and juicy (fruits) or thick and watery (leaves).
FLOWER	A stem with special appendages (the appendages are the sepals, petals, stamens and carpels). The reproductive structure of the angiosperms.
FRUIT	A matured (ripened) ovary. GLOBOSE
GYMNOSPERMS	Plants which produce seeds within a cone. Also referred to as conifers.
INCISED	Having irregular, sharp and rather deep indentations.
INFLORESCENCE	The arrangement of flowers on the stem.
LANCEOLATE	Lance-shaped; widest at the base and tapering to the apex. Usually 3 or more times as long as wide.
LEAF	The appendage produced laterally on the stem. It is usually green.
LEAF MARGIN	The edge of the leaf blade.
LEAF TIP	The apical or upper part of the leaf. That portion of the blade furthest from the attachment to the petiole.
LEAVES	
COMPOUND	Leaves made up of 2 or more leaflets.
LEAVES SIMPLE	Having the leaf blades in one piece.
LENTICELS	The corky, variously shaped spots on the bark of some trees.
LOBED	Margins indented one fourth or more of the distance to the midvein (pinnately lobed or to the leaf base palmately lobed).
MESIC	The condition between wet and dry, a medium amount of moisture.
MIDVEIN	The main or central vein of a leaf, petal, sepal, etc. The term is used most in regard to pinnate venation.
MONOECIOUS	With separate staminate and pistillate flowers on the same plant.
NUT	A hard or bony shelled one-seeded fruit (e.g., hickory nut, walnut, acorn).
OBLIQUE	Having unequal sides. Usually used in reference to leaf base.
OBLONG	Shaped with margins parallel or nearly so. Usually about 2 or 3 times as long as broad.
OBOVATE	The reverse of ovate (upside down ovate). Widest above the middle and slowly tapering to the base.
OBTUSE	A straight-margined apex or base forming an angle greater than 90 degrees.
ODD-PINNATE	A pinnately compound leaf with a terminal leaflet (this gives the leaf an odd number of leaflets).
ONCE PINNATELY	
COMPOUND	A compound leaf with leaflets arranged on both sides of an elongated axis (rachis).
OPPOSITE	The term applied to leaves (or buds) that occur in pairs at each node.

## GLOSSARY (Cont'd.)

PALMATE	Lobes or veins originating from a common base.
PALMATELY COMPOUND	Leaflets originating from a common base.
PARASITE	An organism that gets its nourishment from another organism upon which it lives.
PERENNIAL	A plant that persists from year to year (usually lives 3 or more years).
PERSISTENT	Remaining attached or always there.
PINNATE	With parts arranged on each side of a common axis.
PINNATELY COMPOUND	Leaflets arranged on each side of a common axis.
POME	A fleshy fruit with most of the fleshy portion being derived from the receptacle (e.g., the fruit of hawthorns, apples, pears).
PRICKLES	Sharp-pointed outgrowths on the stem derived from the bark or epidermis.
PUBESCENT	Having hairs, used in this manual as a general term for hairiness.
RACHIS	The elongated axis of a spike or raceme inflorescence and a pinnately compound leaf. In a pinnately compound leaf, it is the main central axis.
RESINOUS	Producing sticky substances.
REVOLUTE	Margins rolled to the undersurface.
ROOT	The lower portion of the plant (generally below ground and without nodes).
SCABROUS	Rough to the touch because of minute projections.
SEED	A matured ovule; the variously shaped and sized structures found inside fruits.
SERRATE	Uniformly sharp toothed with teeth pointing upward.
SERRULATE	Finely serrate.
SESSILE	Without a stalk (e.g., a leaf without a petiole; as a result the blade is attached directly to the stem).
SHRUB	A small woody plant with several basal stems.
SPATULATE	Having a shape like a spatula; with a rounded tip and concavely narrowing to the base.
SPECIES	A group of organisms that generally look alike and interbreed (all sweetgum trees are members of the same species). Also a taxonomic category below genus used as the second part of the scientific name.
SPINE	Hard, sharp-pointed structures derived from below the epidermis and modified leaves or parts of leaves. Sometimes restricted to sharp-pointed structures associated with leaves.
SPUR SHOOTS	A short side branch.
STEMS	The main supporting structures of plants (leaves, buds, etc., are attached).
STIPULES	Variously shaped structures located at the base of the leaf petiole.
TENDRILS	Modified stems or leaves which coil or wrap around structures giving the plant support.
THORNS	Sharp-pointed, hard, woody branches.
TREE	Large woody plants with one main stem.
TRIFOLIATE	With 3 leaves.
TWICE PINNATELY COMPOUND	(See Bipinnately Compound).
UNARMED	Without thorns, spines or prickles
UNDULATE	Wavy.

## GLOSSARY (Cont'd.)

VEINS	The vascular strands (tissue) of the leaf.
VENATION	The position or arrangement of principle veins in the leaf blade.
VINE	A plant that climbs upon other plants, fences, buildings, etc., by means of twining, tendrils, or aerial roots.
WHORLED	A ring of 3 or more structures at a node.
WINGED	Bearing a wing (a wing is a thin, flat, dry structure).
WING	A thin, flat, dry structure (See Winged).



## REFERENCES

- Diggs, G.M., B.L. Lipscomb, R.J. O'Kennon. 1999. *Shinners & Mahler's Illustrated Flora of North Central Texas*. Botanical Research Institute of Texas. Fort Worth
- Farrar, John L. 1995. *Trees of Northern United States and Canada*. Ames. Iowa State University Press.
- Harlow, W.M; E.S. Harrar, J.W. Hardin, and F.M. White. 1996. *Textbook of Dendrology*. New York. McGraw-Hill, Inc.
- Retrieved July, 2004 from the Integrated Taxonomic Information System on-line database, . [www.itis.usda.gov](http://www.itis.usda.gov)
- Nixon, Elray S. 1985. *Trees, Shrubs, & Woody Vines of East Texas*. Nacogdoches. Bruce Lyndon Cunningham Productions.
- Tull, Delena. 1987. *Edible and Useful Plants of Texas and the Southwest: A Practical Guide*. Austin: University of TX Press.
- Vines, Robert A. 1977. *Trees of East Texas*. Austin: University of Texas Press.

## Mockernut Hickory

(*Carya tomentosa* (Poir.) Nutt.)



Juglandaceae

Whitebark, Bigbud, Bullnut, or Fragrant Hickory

This tree is easily identified by its large, hairy terminal buds. In fact, the species name actually refers to the hairs on the terminal bud and leaves. This hickory prefers mesic to dry ridges and hillsides. The aromatic foliage is occasionally browsed by deer, and the nuts are consumed by many species of birds, wood duck, woodpecker, fox, squirrels, beaver, rabbits, turkey, mice, deer, and others. The nut is sweet but is not used as commonly as others (pecan, walnut) in the walnut family.

### Quick ID:

Leaves are alternate, deciduous, odd-pinnately compound (5-9 leaflets), strongly fragrant when crushed. Twigs stout, grayish brown, and hairy when young. Buds are distinctively large. Bark has tight interlaced ridges that form a netlike pattern.



16a

## Mockernut Hickory

(*Carya tomentosa* (Poir.) Nutt.)



Juglandaceae

Whitebark, Bigbud, Bullnut, or Fragrant Hickory

This tree is easily identified by its large, hairy terminal buds. In fact, the species name actually refers to the hairs on the terminal bud and leaves. This hickory prefers mesic to dry ridges and hillsides. The aromatic foliage is occasionally browsed by deer, and the nuts are consumed by many species of birds, wood duck, woodpecker, fox, squirrels, beaver, rabbits, turkey, mice, deer, and others. The nut is sweet but is not used as commonly as others (pecan, walnut) in the walnut family.

### Quick ID:

Leaves are alternate, deciduous, odd-pinnately compound (5-9 leaflets), strongly fragrant when crushed. Twigs stout, grayish brown, and hairy when young. Buds are distinctively large. Bark has tight interlaced ridges that form a netlike pattern.



16a