

York County Envirothon – 3rd- 4th Grade Forestry

Forest Species Fact Pack!

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Sources

White Oak

Quercus alba

Identification Features:

- ALTERNATE branching pattern.
- SIMPLE leaves with 7-10 rounded, finger-like LOBES.
- Male flowers are green catkins in spring. Female flowers are spikes.
- Fruits are ACORNS.
- Bark is whitish or gray with irregular plates or blocks.
- Large tree up to 100 feet tall.



Habitat:

- Forests



Wildlife Value:

- Oak leaves are food for over 500 different butterflies and moth larva.
- White-tailed deer eat oak twigs and leaves.
- Over 180 species eat white oak acorns including crows, bluejays, woodpeckers, turkey, and deer.
- Birds, mammals, and bees use chestnut oak cavities for nesting.



Human Value:

- White oak wood is used as lumber to make furniture, floors, and wine barrels.
- Traditionally acorns of many oak trees were used by Native American peoples as a food and medicine source.



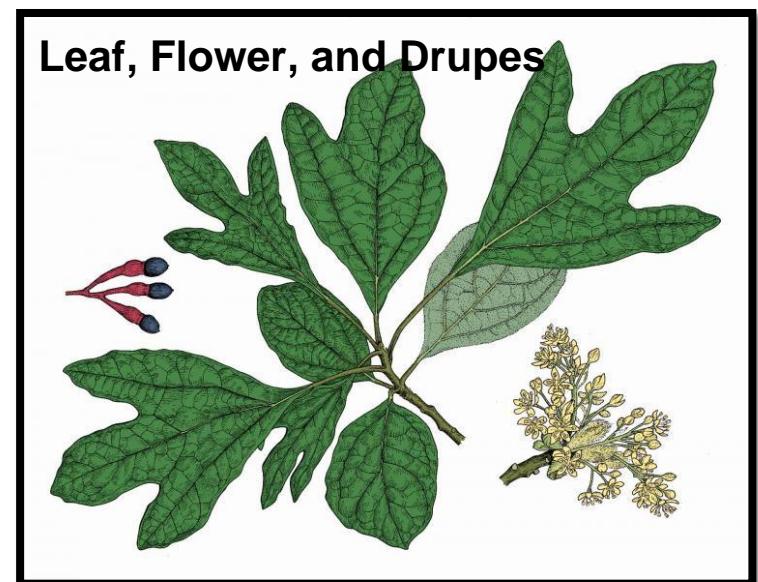
Sassafras

Sassafras albidum

Identification Features:

- ALTERNATE branching pattern.
- SIMPLE leaves, ELLIPTICAL or OVATE in shape. ENTIRE leaf margins. Variably LOBED (unlobed, 2-lobed, or 3-lobed).
- Flowers are yellow-green in spring.
- Fruits are dark blue DRUPES on a red stalk in fall (appearing only on female plants).
- Crushed leaves & twigs are fragrant with a spicy-sweet aroma.
- Small to medium size tree reaching 60 feet tall.

Leaf, Flower, and Drupes



Habitat:

- Forests, fields, thickets.

Wildlife Value:

- Fruits are eaten by turkeys, quails, mockingbirds, woodpeckers, bears, beavers, rabbits, & squirrels.
- Beavers eat the bark and wood.
- White-tailed deer eat the twigs and leaves.
- Leaves are food for spicebush swallowtail caterpillars and many giant silkworm caterpillars.



Flowers

Human Value:

- Oil harvested from the roots and bark is used to perfume soap & make tea.
- Extracts are used to flavor root beers and teas.
- Beautiful fall colors – yellow, red, purple.
- Grows early in succession sequences after a forest has been disturbed.



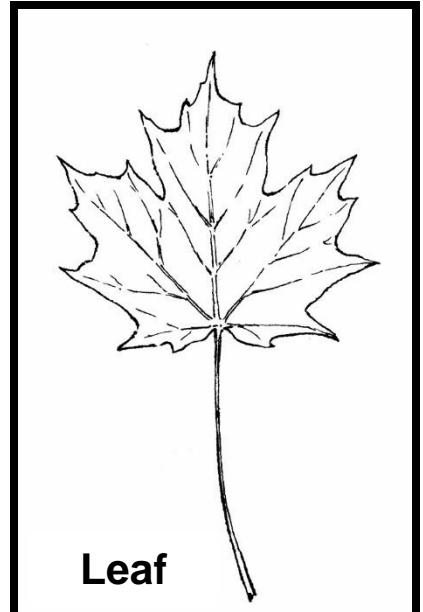
Fall Leaves

Sugar Maple

Acer saccharum

Identification Features:

- OPPOSITE branching pattern.
- SIMPLE leaves have ROUND shape with five LOBES.
- Leaves turn bright yellow, orange, or red in fall.
- Flowers are yellow-green and hang from a long skinny stem in the spring.
- Seeds are called SAMARAS. They spin as they fall to the ground like helicopters.
- Large tree reaching 100 feet tall.



Habitat:

- Moist woods and yards.



Wildlife Value:

- Birds, grey squirrels, and flying squirrels eat the seeds of sugar maple.
- Deer, moose, squirrels, porcupine, and other animals eat the twigs, buds, and bark.
- Songbirds, woodpeckers, and cavity nesters build nests in sugar maple.
- Bees and other insects visit the flowers of sugar maples to collect pollen.
- Leaves are eaten by over 285 types of caterpillars and many other insects.



Human Value:

- Sugar maple wood is used to make furniture, musical instruments, bowling pins, and hardwood floors.
- Sugar maple sap is collected and boiled into maple syrup.
- Native Americans used maple sap for sugar, candy, as a beverage, fermented into beer, and soured into vinegar.

Porcupines eat the twigs, bark, and buds of sugar maple.



Tuliptree

Liriodendron tulipifera

Identification Features:

- ALTERNATE branching pattern.
- SIMPLE leaves are ROUND shaped with four LOBES.
- Buds are large and flattened like a duckbill.
- The seeds form cone-like clusters. Each seed in the cluster is winged and called a SAMARA.
- Flowers grow high in the trees in the summer and look like tulips. They are yellow and orange.
- One of the tallest trees in eastern forests reaching up to 200 feet tall.

Habitat:

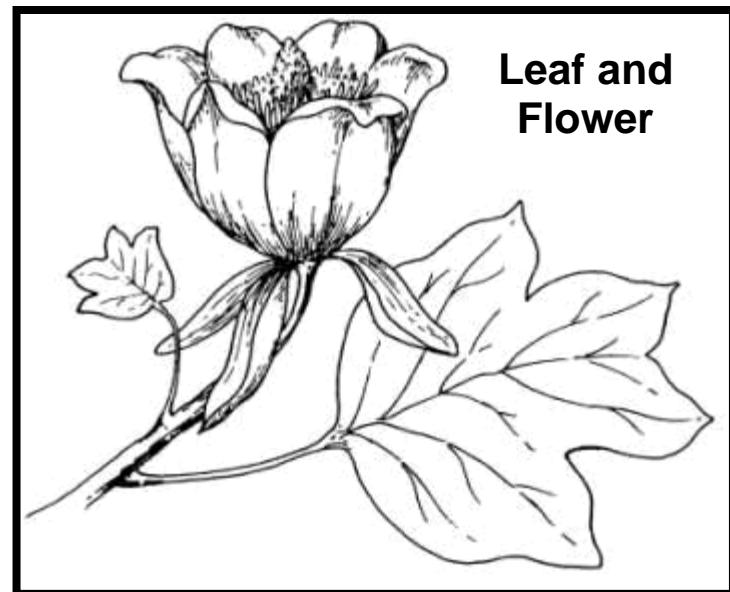
- Forests near streams.

Wildlife Value:

- Seeds are eaten by songbirds, game birds, rabbits, squirrels, and mice.
- Yellow-bellied sapsucker feeds on the phloem tissue.
- Ruby-throated hummingbirds eat nectar from the flowers.
- White-tailed deer eat young twigs.
- Leaves are food for the Eastern tiger swallowtail butterfly caterpillar and some of our giant moths including the tuliptree moth and promethea moth.

Human Value:

- Tuliptrees are planted on streets and yards for shade and beauty.
- Tuliptree wood is used to make pulpwood for paper.
- Tuliptree is planted for reforestation of damaged sites because it grows quickly.
- Tuliptree is used for furniture, general construction, plywood, and boxes.
- Native American's used tuliptree wood to make dugout canoes.



Leaf and Flower



Flower



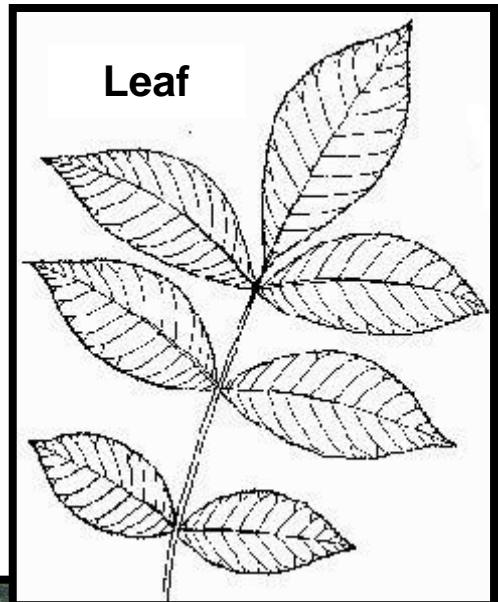
Seeds

Hickory

Carya sp.

Identification Features:

- ALTERNATE branching pattern.
- PINNATELY COMPOUND leaves have ELLIPTICAL FINELY TOOTHED leaflets.
- Flowers in the spring with male CATKINS and female spikes.
- Seeds are nearly round nuts covered in a thick husk that splits open when ripe.
- Large tree reaching 70-80 feet tall.



Habitat:

- Forests, hillsides.



Wildlife Value:

- Hickory nuts are food for squirrels, chipmunks, black bears, gray and red foxes, rabbits, white-footed mice, mallards, wood ducks, bobwhites, and wild turkey.
- Hickory leaves are food for around 200 species of caterpillars (butterflies and moths) including the luna moth and the monkey slug.
- Many animals take shelter in the branches and cavities of hickories.



Human Value:

- Hickory wood is heavy, hard, and strong. It is used for tool handles, furniture, firewood, charcoal, and to smoke meats.
- Hickory wood has been used in the past to make bows (bow and arrow) and wheel spokes for carriages.
- Nuts are edible to humans.
- Native Americans crushed the nut kernel to make cooking oil and bread flour.

The monkey slug caterpillar is the larva of the hag moth.

White Ash

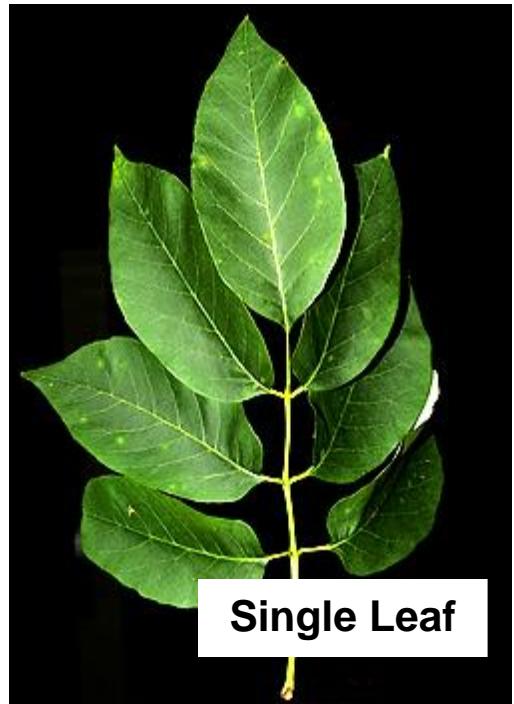
Fraxinus americana

Identification Features:

- OPPOSITE branching pattern..
- PINNATELY COMPOUND with 7 leaflets.
- Bright green to purple flower on stems appearing after leaves unfold in spring.
- One-winged, flattened samara fruit.
- Large tree up to 80 feet tall.

Habitat:

- Forests



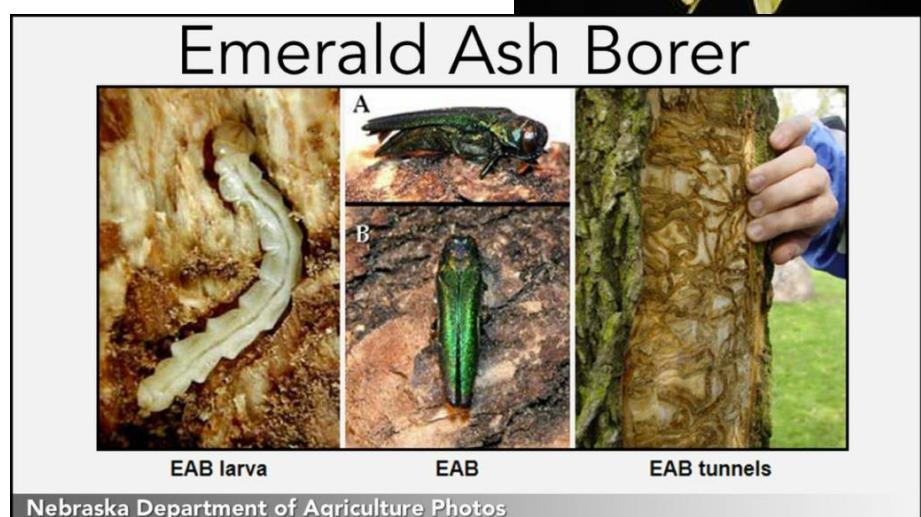
Wildlife Value:

- Seeds are food for birds such as the woodduck, bobwhite quail, and purple finch.
- Bark is food for rabbits, beavers, and porcupine.
- Many cavity-nesting birds use white ash to make nests in.
- The invasive emerald ash borer (beetle) has affected most ash trees in our area causing ash trees to die off. The larva of the borer feeds inside the tree on the wood.



Human Value:

- Wood is tough and resistant to shock. It's used to make tool handles, oars, canoe paddles, baseball bats, furniture, and cabinets.
- Juice made from the leaves relieves mosquito bite itching.



Virginia Creeper

Parthenocissus quinquefolia

Identification Features:

- ALTERNATE branching pattern.
- PALMATELY COMPOUND leaves with five toothed leaflets.
- Small green flowers appear in the spring.
- Small clusters of bluish-black berries appear in early summer.
- Woody vine.



Leaves

Habitat:

- Forests, forest clearings, fencerows, and stream banks.

Wildlife Value:

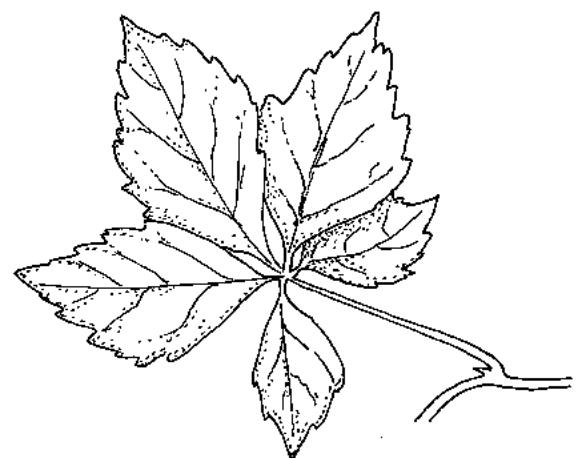
- Virginia Creeper berries are eaten by birds, mice, skunks, chipmunks, squirrels, cattle, and deer.
- The leaves provide cover for small animals.
- Vines provide birds with perches, nesting sites, and places to find food.
- Virginia Creeper makes a great ground cover on shady slopes to prevent erosion.



Berries

Human Value:

- Berries are highly toxic to humans and may be fatal if eaten. The sap can cause skin irritation for some people.
- Virginia Creeper bark has been used medicinally for many purposes including a cure for diarrhea and cough syrup.
- Used in gardens because of its beautiful fall leaves. It looks great covering walls and fences.

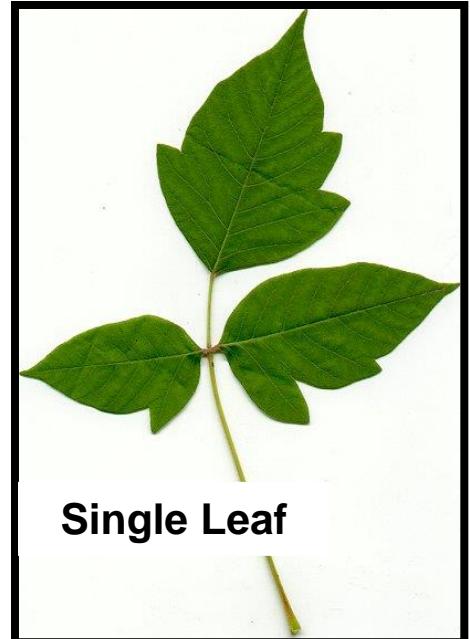


Poison Ivy

Toxicodendron radicans

Identification Features:

- Leaves have alternate arrangement.
- Leaves are palmately COMPOUND.
- Each leaf has three leaflets.
- Leaflets are lance shaped.
- Poison ivy can grow as a groundcover, vine, or shrub.
- The vine has a hairy appearance.
- Flowers are small and green or white.
- Drupes are small and whitish gray.



Habitat:

- Can live almost anywhere, including dry or moist sites, woods or fields, roadsides and paths.
- It is found in backyards where birds have left the seeds behind after digesting the drupes.



Wildlife Value:

- At least 75 species of birds eat the fruits and seeds of poison ivy.
- Mammals including bears, deer, muskrats, Eastern Cottontails, squirrels, mice, and rats eat the leaves, stems, and fruits of poison ivy.
- Several birds use the hair-like rootlets of the vine as nesting material.

Human Value:

- Poison ivy may cause rashes for humans who come in contact with any part of the plant. Therefore, poison ivy is generally removed where humans may come in contact with it.
- Poison ivy may be valuable as a native plant that can colonize disturbed areas protecting soil from erosion.



Eastern Red Cedar

Juniperus virginiana

Identification Features:

- Two types of EVERGREEN leaves. Older leaves are SCALY and young leaves are sharp-pointed.
- Red Cedar has two types of flowers. Male flowers are yellowish-brown and female flowers are light bluish-green.
- Flowers turn into berry-like cones in September.
- Bark is reddish-brown and peeling off.
- Small tree reaching up to 40 feet tall.

Habitat:

- Fields, roadsides, forest understory

Wildlife Value:

- Cedar is the host plant for over 35 species of butterfly and moth larva including the Juniper Hairstreak.
- Young Red Cedars get eaten by white-tailed deer, mice, and Eastern cottontails.
- Cones are eaten by many birds and mammals including American robins, cedar waxwings, purple finches, American crows, woodpeckers, skunks, raccoons, and many more.
- Red Cedars are important cover for small mammals and make great nesting sites for birds.
- Many fungi like to grow on Red Cedar.

Human Value:

- The wood of Red Cedar is used for fence posts, poles, paneling, furniture, pencils, pet bedding, and chests.
- Red Cedars are planted in backyards and parks to attract wildlife.
- Red Cedar wood has insect-repelling properties, so it's used to help repel clothing moths by putting wood or shavings in closets and chests.



Eastern White Pine

Pinus strobus

Identification Features:

- Leaves are EVERGREEN needles in clusters of five. Each needle is 2 ½ - 5 inches long and bluish green.
- White Pine flowers are shaped like small yellow or red cones.
- Seeds are in cones 5-8 inches long. Cones do not have prickles. Each cone scale holds two winged seeds.
- Large tree reaches 50-90 feet high. Historically, White Pines have been found to reach over 150 feet tall and live over 400 years!

Habitat:

- Forests, neighborhoods, and parks

Wildlife Value:

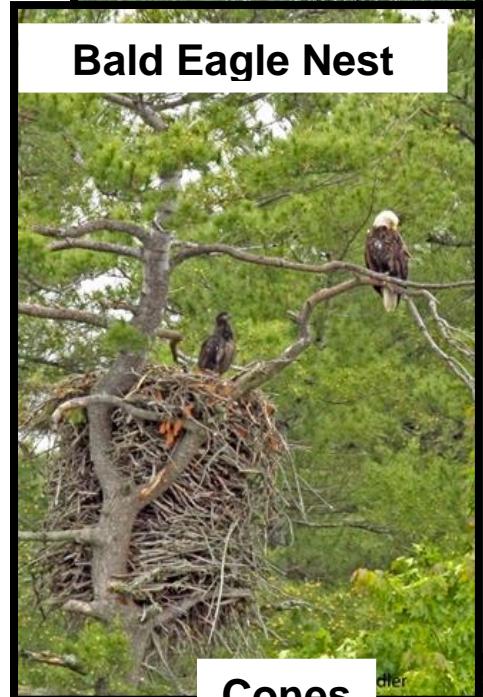
- Seeds and needles are eaten by birds, squirrels, chipmunks, voles, and mice.
- Deer and Eastern Cottontails eat the young twigs.
- Beavers, Eastern Cottontails, and Porcupines eat the bark of white pine.
- Needles are food for over 203 species of caterpillars including loopers, inchworms, the Pine Devil Moth, and the Imperial Moth.
- Many fungi parasitize White Pine including the Honey Mushroom and Dye Polypore.
- Birds make their nest in the branches of white pine, especially Bald Eagles.

Human Value:

- Planted in parks and neighborhoods for shade and privacy.
- Valuable timber is used for furniture, cabinets, house construction, matches, and paper.
- Historically its wood was used for ship masts because of their large straight trunk.



Leaves



Bald Eagle Nest



Cones



Flowers

Excellent Tree Fact Resources!

Virginia Tech Dendrology Factsheets

<http://dendro.cnre.vt.edu/dendrology/factsheets.cfm>

Common Trees of Pennsylvania by DCNR & Bureau of Forestry

https://www.envirothonpa.org/documents/2011_CommonTreesBook.pdf

USDA Plants Database

<https://plants.usda.gov/java/>

US Forest Service – Tree Factsheets (includes wildlife value)

www.fs.fed.us (Google species name and “Index of species information”)

iNaturalist.org

Trees of Pennsylvania: <https://www.inaturalist.org/guides/7451>