



### 14. Snags for Wildlife

A snag is a standing dead or dying tree that provides habitat for wildlife. Birds and small mammals, including bats, use the snags for nesting, roosting, perching, and nurseries. Snags provide a food source of insects for woodpeckers, and holes created by the woodpeckers provide

cavities for other birds such as chickadees and titmice to nest. Bats roost underneath the loose bark for shelter and to raise their young.

### 15. Persimmon

The persimmon produces an orange-brown fruit in the fall that wildlife cannot resist. Look for this tree in full sun along roadsides, fence rows, and abandoned fields. The persimmon tree can be identified by its scaly bark, which resembles alligator skin. The word persimmon in Greek translates to "the food for the gods."



### 16. Poison Ivy

"Leaves of three, leave it be" is a phrase that everyone should know. This poisonous plant excretes a poisonous oil that can cause serious irritation to the skin if touched.

Although these plants causes pain to humans, they are valuable to wildlife as they provide food for rabbits and deer, nesting sites for small songbirds, and roosting habitat for bats. To identify this plant, look for a single compound leaf with three leaflets or a hairy vine climbing a host tree. These thick vines can reach heights of 60 feet in the tree canopy.

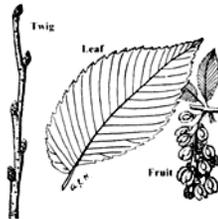
### 17. Elderberry

This shrub is identified by its opposite branches and compound leaves. Another way to identify this shrub is the Styrofoam-like pith inside the stem. The dark purple berries produced in the late summer are enjoyed by wildlife and humans alike. Historically, humans have used them for dyeing, wine making, and baking, while a wide variety of songbirds and mammals enjoy eating the abundance of fruit.



### 18. Pawpaw

This close relative to tropical species reaches 30 feet tall, has long leaves up to 12 inches, and is the only tree on the Refuge with a drip tip on the end of the leaf. The leaves have an interesting odor, like diesel fuel, when crushed. Sunlight is needed for fruit production of this understory tree. The fruit, also known as the "Indiana banana" grows green and turns a yellowish-brown when ripe. Pawpaw is the host plant for the caterpillar of the zebra swallowtail butterfly.



### 19. American Elm

This hardwood historically reached heights of over 100 feet, but today it only reaches heights of 30 feet due to a pathogen called Dutch elm disease carried by the elm bark beetle from Asia. This disease stops water and nutrients from flowing through the tree, eventually killing it. American elm can be identified by its bark, which alternates between brown and white layers. It produces a seed which attracts a variety of small mammals and wood ducks.

### 20. Red Mulberry

The red mulberry tree leaves have a variety of different lobed leaves. It can grow to be 70 feet tall and prefers to grow in rich, moist soils. It produces a dark purple fruit that ripens mid-summer, and is enjoyed by many birds and mammals. The mature bark is reddish-brown, and has long ridges with deep fissures. Historically, the wood from the red mulberry has been used to make fence posts, furniture, interior finish, and farm tools.



*This ends the tree trail, if you do not want to keep this brochure, please return it to the box for the next visitor. Thank you.*

**DIRECTIONS:** Take Hwy 64 east of Oakland City and turn north onto County Road 1275 E. Follow signage.



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## Patoka River National Wildlife Refuge and Management Area

### BOYD TREE TRAIL

This trail is dedicated to Hugh and Bertha Boyd who were early supporters of the Refuge and among the first people to sell their 160 acres to become part of the Patoka River National Wildlife Refuge and Management Area in 1996. Today, the Boyd Trail is one of the most popular spots for Refuge visitors looking to enjoy nature.

Home to a variety of species of plants and animals, the Boyd's Tree Trail provides visitors with information about native woodland species. This trail identifies 20 different trees, shrubs, and features of the forests of Southwest Indiana. Most of the trail winds through upland forest habitat, but you can find bottomland species growing closer to the Snakey Point Marsh. The numbered facts here correspond to the numbered stakes along the trail, making this an easy, self-guided learning experience.



Respect the Refuge's natural values, please:

- Do Not Litter.
- Stay on the Trails.
- Do Not Cut Plants or Remove Property.
- Campfires are Prohibited.
- Respect the Wildlife.

The Boyd's Trail is open for foot travel only, and visitation is during daylight hours only.

## 1. Silver Maple

This fast-growing and short-lived tree is very common on the Refuge. It is easily identified by its opposite branches and five-lobed leaves with a silver underside. The silver maple typically grows in floodplain forests, river bottoms, and swamps. Aging trees often form cavities in their trunk and larger branches which provide great nesting habitat for birds such as screech owls and wood ducks, as well as den sites for squirrels, raccoons, and opossum.



## 2. Eastern Redbud

The eastern redbud can be identified by its masses of bright pink blooms in the spring and alternate branching with heart-shaped leaves. This short tree, only reaching about 30 feet, is often cultivated in yards for its attractive appearance. The flowers are pollinated by a variety of native bees that are attracted to the nectar and pollen.

## 3. Hackberry

The hackberry tree can be identified by its egg-shaped leaves with hooked tips, signature “wart” bark, and red berry shaped fruit in the fall. The fruit of this tree is very popular among songbirds and squirrels and the tree’s seeds are spread through animal droppings.



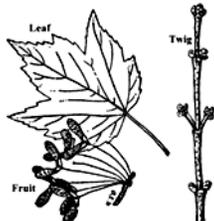
## 4. Pin Oak

Although there are many species of oak, the pin oak can be identified by its alternate leaves, bristle-tipped lobes and pin-like branches. With heights reaching up to 90 feet and a trunk with a diameter of 2-3 feet, this large oak stands out among other floodplain trees of the Refuge. Due to its abundance and heavy

acorn crops, this species is popular with wildlife on the Refuge. It is preferred by white-tailed deer, wild turkey, squirrels, and waterfowl.

## 5. Decomposition

This dead and decaying tree is more than just a life cycle ending. This tree provides habitat and food sources for wildlife and nutrients for the soil to enhance growth for other plants in the area. Fungi are one of the main agents in the decaying process for fibrous trees and other woody plants.

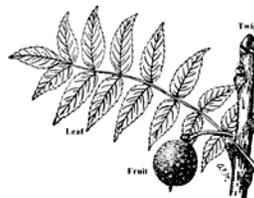


## 6. Red Maple

Typically found in wet woods, swamps, and flatwoods, this medium to large tree can be identified by the opposite leaves and branches, V-shaped notches between the main lobes, red flowers in the spring, beautiful red foliage in the fall, and paired, propeller-like fruit. Lumber from this tree is used for furniture, flooring, and cabinets. Because they bloom very early, their blossoms are among the first to feed birds and pollinators in the spring.

## 7. Black Walnut

Growing up to 120 feet tall with a diameter of 3 feet, settlers planted the black walnut as a food source. Today, the wood is prized for lumber, furniture, and gunstocks. You can identify this tree by the large, alternate compound leaves with a strong odor. The fruit of the tree is a large rounded nut with a soft-green to yellow husk and is an important food source for squirrels and chipmunks.



## 8. Woodpecker Work

On this tree, you can observe the rectangular holes created by a pileated woodpecker. The bird chipped out the holes in this tree to look for carpenter ants and wood-boring beetle larvae, or to build a nest in the hollowed out part. Woodpeckers have very long tongues with a glue-like substance on the tip to aid in the capture of insects.

## 9. White Ash

White ash can be identified by its compound leaves, opposite branches, pointed leaves, horseshoe-shaped leaf scars, and diamond-shaped bark. This tree is threatened by the emerald ash borer, an invasive beetle from Asia that lays eggs in the bark. The larvae feed underneath the bark for one to two years before emerging as adults. The larvae disrupt the tree’s ability to transport water and nutrients, eventually killing the tree. White ash seeds are eaten by a variety of songbirds and mammals in the fall and squirrels, woodpeckers, and owls use the cavities.



## 10. Black Cherry

This fast growing, fairly large tree is widely distributed throughout the Mid-west and is prized in the lumber industry for the beauty of its finished wood. Identify a black cherry by its dark, scaly bark on the outside and the reddish inner bark. The purple-black cherries in the summer provide food for songbirds, chipmunks, fox, and most omnivorous animals. The pollen and nectar of flowers attract a variety of pollinators in the late spring and early summer.

## 11. Sassafras

A long-lived tree, the sassafras can be identified by the three different leaves on its branches (the mitten, the football, and the ghost). Once a tree is mature, it only produces the football-shaped leaves. Its dark blue berries are loved by a variety of wildlife, and roots can be used to make root beer and tea.



## 12. Count the Growth Rings



Dendrochronology is the scientific study of trees using tree rings to determine the age of a tree and identify dates and chronological order of past events. Each ring symbolizes spurts of growth for that year and can tell us what happened during the year. Tree rings can show if there was a forest fire, drought,

good or bad growing season, and how much wind the area gets. Broad rings indicate a good growing season for the trees, and narrow rings indicate a poorer growing season.

## 13. Spicebush

This shrub is an indicator of rich, moist bottomland soils. The crushed leaves have a spicy scent. The bright-red fruit is very popular among songbirds and wild turkey. It blooms early in the spring with bright yellow flowers that can be seen before the trees gain their leaves. The spicebush is the host plant for the caterpillar of the spicebush swallowtail butterfly.

