

Virginia Department of Conservation and Recreation

Sky Meadows State Park

SNOWDEN TRAIL

TREE IDENTIFICATION FIELD GUIDE

Version 05-04-2024



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SNOWDEN TRAIL - FIELD GUIDE

Introduction

Welcome to Sky Meadows State Park and its 23 miles of trails, one of which is the Snowden Trail. This 1.14-mile trail loop winds through a wooded area of the park. We invite you to take a self-guided hike of the trail using our *Tree Identification Field Guide*. This guide will introduce you to some of the most remarkable residents of the forest: its native trees. This field guide is structured to be hiked in a counter-clockwise direction. Please proceed up the hill (do not turn left upon entering the Snowden trail head) and look for the numbered trees.

Field Guide Organization

- To help you navigate the trail, the *Table of Contents* starting on page 3 lists the following:
 - 28 trees, each of which corresponds to a numbered tree tag along the trail.
 - Each tree's location either to the right side (RS) or left side (LS) of the trail.
 - Each tree's common name.
 - The page on which the tree's species-specific characteristics are found.
- The *Identifying Characteristics & Featured Trees* section starting on page 5 will introduce you to traits that are key to identifying any tree. They include the shape and arrangement of the leaves; the bark's color and pattern; and the "anatomy" of the tree's twigs and buds. This information is followed by photos and identifying characteristics of the tree species featured in this guide.

Quiz Yourself

Remembering the traits of each tree species is not easy! It takes practice. As you hike the trail, you will notice question marks (?) on some trees. These "quiz" trees (**their numbers and hints are located on pages 3 and 4 in the Table of Contents**) will help reinforce your new tree knowledge and add a layer of challenge to your hike. Use what you have learned so far along the trail to identify the mystery trees. Check your answers on page 20.

Let Us Know About Your Experience

As your knowledge of trees grows, your enjoyment is likely to grow, too. Instead of seeing only "trees" and "bark," you will begin to recognize the unique characteristics of individual species and appreciate their contributions to the forest ecosystem and wider environment.

We hope you enjoy your time on the Snowden Trail and encourage you to try out your Tree ID skills on other trails at Sky Meadows.

Please share your experience with this guide by submitting your feedback and suggestions via email to the Sky Meadows Park Visitor Experience Dept. at skymeadows@dcr.virginia.gov.

Snowden Trail receives its name from ruins that date back to the 1700s and are found nearby on the South Ridge Trail. The woods you walk through today were once pastureland. Unfortunately, the house burned down in 1931 leaving only the ruins you see today. The Snowden property was part of a larger tract of land inherited by Thomas Culpeper, the Sixth Lord of Fairfax, who arrived from England in 1736. He divided up the land and leased it out in parcels. Each leaseholder was required to build a house 16-foot wide by 20-foot long and to plant an orchard of 100 trees 30 feet apart.

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Acknowledgement: Sky Meadows State Park recognizes Paul Guay (VMN*) and park staff - Charlie Price (VMN*, CIG*), and Kathy Nutt (VMG*, CIG*) for their efforts in developing and publishing this *Tree Identification Field Guide*.

* VMN – Virginia Master Naturalist
 *VMG – Virginia Master Gardener
 *CIG - Certified Interpretive Guide

SNOWDEN TRAIL - FIELD GUIDE

Identifying Characteristics & Featured Trees

Every species of tree has unique, species-specific twig, leaf and bark anatomy. Learn to identify these major components of a tree's anatomy.

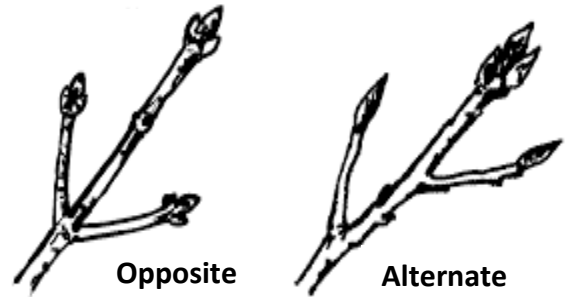
TWIG ANATOMY:



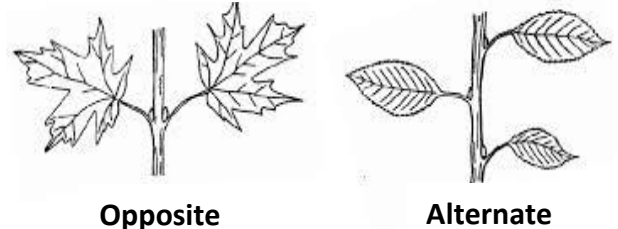
Tree Of Heaven,
Alanthus

NOTE: In spring the Axillary and Terminal buds give rise to new flowers and leaves, disappearing until they reform again later in the summer.

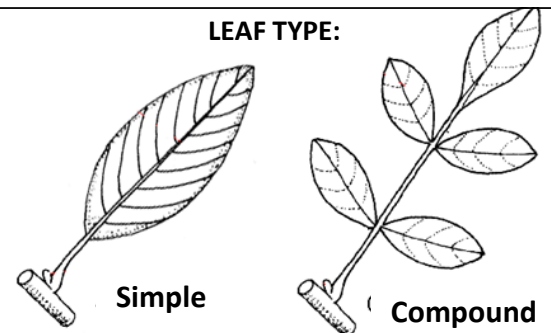
BRANCHING PATTERNS:



LEAF PATTERNS:



LEAF TYPE:



B
A
R
K

A
N
A
T
O
M
Y

BARK

Bark Type:
Many trees can be identified by their bark alone.



SMOOTH
PAWPAW



LENTICELS
SWEET CHERRY



SCALES
WILD BLACK CHERRY



VERTICAL STRIPES
RED OAK



VERTICAL CRACKS
RED MAPLE



BLOCKY
BLACK GUM,
PERSIMMON



EXFOLIATING
PLATES SHAGBARK
HICKORY



INTERSECTING
RIDGES WHITE
ASH



HORIZONTALLY
BROKEN RIDGES
WHITE OAK



EXFOLIATING
PLATES WHITE OAK

1. Hackberry, *Celtis occidentalis*

- **Main ID Characteristics: BARK:** rough, corky ridges, light colored.
- Hackberry's edible fruit is an important late summer food source for local bird populations.



2. Wild Black Cherry, *Prunus serotina*

- **Main ID Characteristics: BARK:** scaly, dark color.
- The edible fruit is an important mid-summer food source for at least 3 dozen local bird species.
- ***Serotina*** is Latin for "late" as the fruits mature in August, much later than other cherries.



3. Pawpaw, *Asimina triloba*

- **Main ID Characteristics:** **BARK:** smooth, gray. **TWIG:** moderately stout, red-brown. **END BUD:** leathery, fuzzy, pointed, flattened, curved, up to ½ inch. **LEAF SCAR:** crescent shaped. **FORM:** small tree.
- The largest native American tree fruit.
- *Asimina* is the Native Algonquian word for the tree.



4. White Ash, *Fraxinus americana*

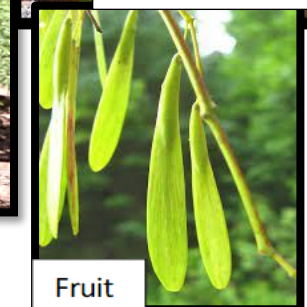
- **Main ID Characteristics:** **Opposite Branching.** **BARK:** thick, with intersecting ridges forming diamond-shaped patterns.
- **LEAF SCAR:** deeply crescent shaped. Most mature trees have been killed by the Emerald Ash Borer.
- The lack of bitter tannic acid in ash leaves makes them ideal food for tadpoles in the spring. The decline in ash tree populations has led to a decline in American frog populations as the dying ash trees are replaced by maples and oaks.



Opposite Branching



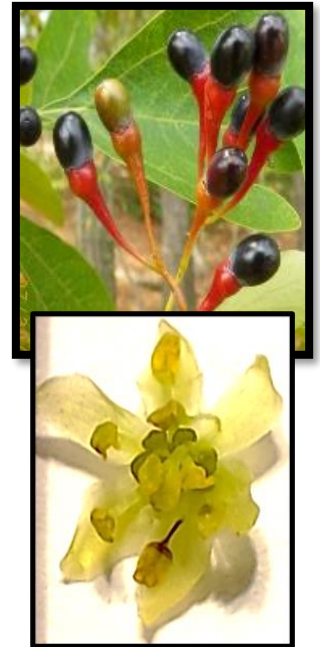
Flower



Fruit

5. **Sassafras** (immature), *Sassafras albidum*

- **Main ID Characteristics:** **BARK:** light orange-brown, thick, coarsely ridged and deeply furrowed. **TWIGS:** green, with spicy aroma when broken. **INNER BARK:** nearly white. **FORM:** small tree.
- The oily fruits are an important mid-summer foodsource for local birds, bears and foxes. The dried and powdered mucilaginous leaves are the thickener used in the Cajun dish, File Gumbo.
- **Sassafras** is the Native Algonquian word for the tree.
- **Albidum** is Latin for “nearly white.”



6. **Flowering Dogwood**, *Cornus florida*

- **Main ID Characteristics:** **Opposite Branching.** **FLOWER BUDS:** clove shaped, persisting during winter. **BARK:** scaly, blocky. **FORM:** small tree.
- The wood is extremely hard and was once used for firewood, fence rail splitting wedges, tool handles and sharp daggers (once called “dagger wood”).

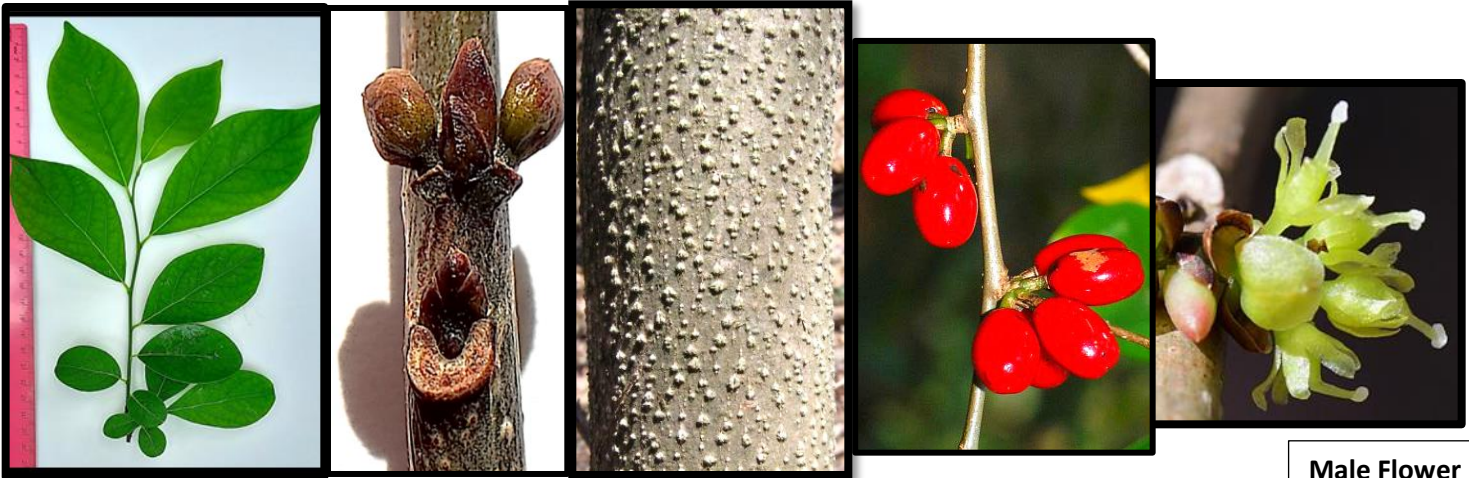


Opposite Branching



7 and 9. **Spicebush**, *Lindera benzoin*

- **Main ID Characteristics: BARK:** thin with many knobby *lenticels*.
- **BROKEN TWIGS** have lemony scent.
- **DORMANT FLOWER BUDS:** globose, persist through winter.
- **FORM:** shrub.
- The edible oily red berries are an important autumn food source for native birds and can be used as a substitute for all-spice.



8. **Black Walnut**, *Juglans nigra*

- **Main ID Characteristics: BARK:** thick, dark brown, deeply furrowed. **TWIGS AND BUDS:** pubescent (“frosty” fuzz).
- ROUND NUTS** litter ground.
- The edible, oily nuts are a favorite winter food for small mammals and humans alike.
- *Juglans Nigra* translates from the Latin as “the black Jupiter nut.” (It’s as big as Jupiter!)



Male Flower

Female Flower

10. **Bitternut Hickory**, *Carya cordiformus*

- **Main ID Characteristics: BUDS:** fuzzy, pointed, sulphur yellow (unique among local hickories). **BARK:** gray with shallow furrows and interlacing ridges. **LEAF SCAR:** heart-shaped (cordiform).
- The nut's high tannic acid content makes it bitter and not a favorite food of wildlife. Early settlers used an oil extracted from the nuts as lamp fuel.



11. **Pignut Hickory**, *Carya glabra*

- **Main ID Characteristics: BARK:** interlacing shaggy-topped ridges.
- **END BUD:** oval and pointed, ¼ inch long. **TWIG:** *glabrous* (lustrous, without hairs or fuzz). **LEAF SCAR:** heart shaped.
- The nuts of *Carya glabra* are an important winter food for squirrels, chipmunks, mice and even bears.
- The wood is harder than oak or maple and is frequently used for tool handles and wheel spokes.



12. Chestnut Oak, *Quercus montana*

- **Main ID Characteristics: BARK:** thick, hard, grey-brown with parallel sharply pointed ridges.
- **END BUDS:** multiple, pointed, narrowly conical, 5-angled, with a frosty pubescence (fuzz).
- The high tannic acid content of the bark made the chestnut oak an essential resource for the leather tanning industry.
- **Montana** means “of the mountains,” as the tree’s favored habitat is on dry ridgetops with poor soil.



13. Red Oak, *Quercus rubra*

- **Main ID Characteristics: BARK:** reddish brown, with wide flat-topped ridges and white, vertical, crisscrossing “ski track” furrows. **TWIG:** stout, red-brown, glabrous (lustrous, without fuzz). **TERMINAL BUDS:** multiple, quite large, conical, with reddish brown, mostly hairless scales.
- **TERMINAL BUD SCALES** with some frosty pubescence (fuzz).



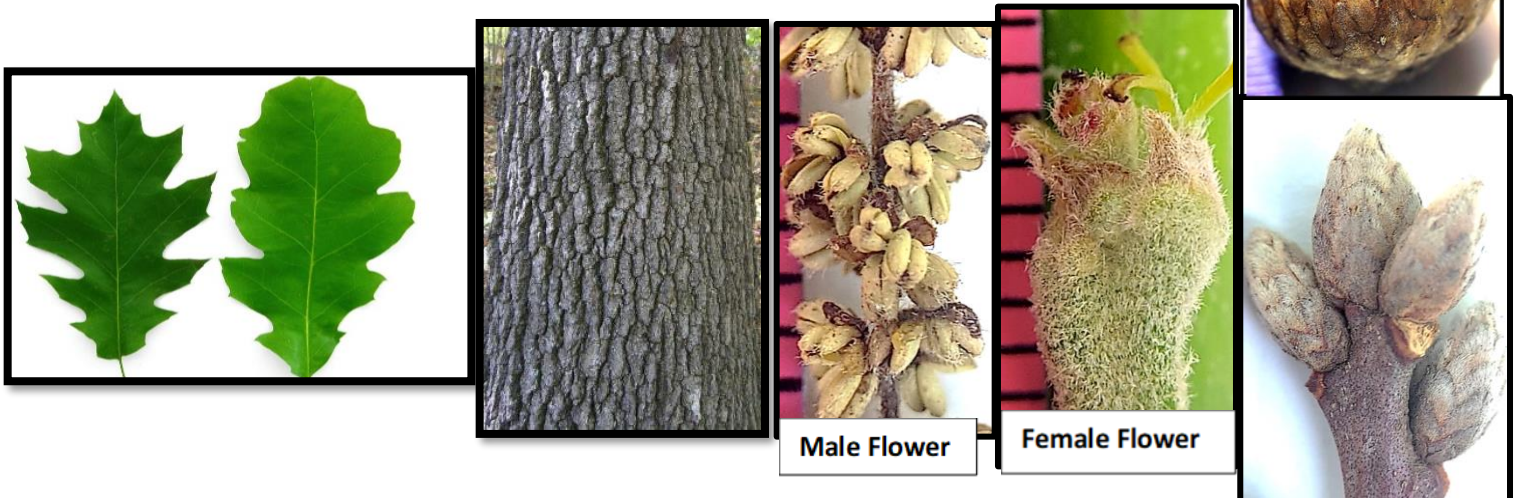
14. **Tulip Poplar**, *Liriodendron tuliperifera*

- **Main ID Characteristics:** **BARK:** light gray, flat-topped ridges separated by whitish diamond-shaped furrows. **TRUNK:** tall, straight, often limbless. **END BUD:** elongate, valvate (2 overlapping scales), “duck billed.” **TWIGS** have sweet, spicy odor when broken.
- **FORM:** tall, straight, limbless trunk.
- The latin name translates to “the tulip-flowered lily tree.”



15. **Black Oak**, *Quercus velutina*

- **Main ID Characteristics:** **BARK:** thick, coarse, nearly black, deep vertical furrows with horizontal furrows. **INNER BARK:** usually bright orange. **END BUDS:** very large (1/4 to 1/2 inch long), buff-colored, pubescent (fuzzy), pointed and distinctly angular.
- LEAVES** of two distinct shapes.
- A yellow dye (quercitron) is extracted from the bark and used to dye wool, cotton, silk, linen and leather.



16. **Black Gum** (immature), *Nyssa sylvatica*

- **Main ID Characteristics:** **BARK:** thick, blocky, resembling alligator hide. **TWIG:** stout, red-brown. **BUDS:** ovate, pointed, light brown. **FORM:** Tall tree, upper trunk and branches usually contorted (look up into tree canopy to observe).
- The purple, oily fruits are an important late summer food for all local birds and mammals.



17. **White Oak**, *Quercus alba*

- **Main ID Characteristics:** **BARK:** ashy gray, scaly, exfoliating or blocky, often with both present on a single tree. **TWIG:** red-brown, lustrous. **END BUDS:** reddish-brown, numerous, small, rounded, glabrous (hairless).
- The valuable wood of the white oak is flexible, strong and durable and used for construction, furniture, flooring, boat hulls and barrels.



Female Flower

18. **Black Haw**, *Viburnum prunifolium*

- **Main ID Characteristics:** **Opposite Branching.** **BARK:** grayish brown with square plates similar to dogwood. **TWIG:** reddish brown, stout, stiff. **END BUD:** valvate (2 overlapping scales), pointed ovate, pinkish-brown, leathery. **FRUIT:** edible, sweet, in clusters, purple to black, oval, ¼ inch, persists into winter.
- The sweet fruits are edible for humans and enjoyed by at least 2 dozen local bird species. Fruits ripen in late summer and persist through early winter.



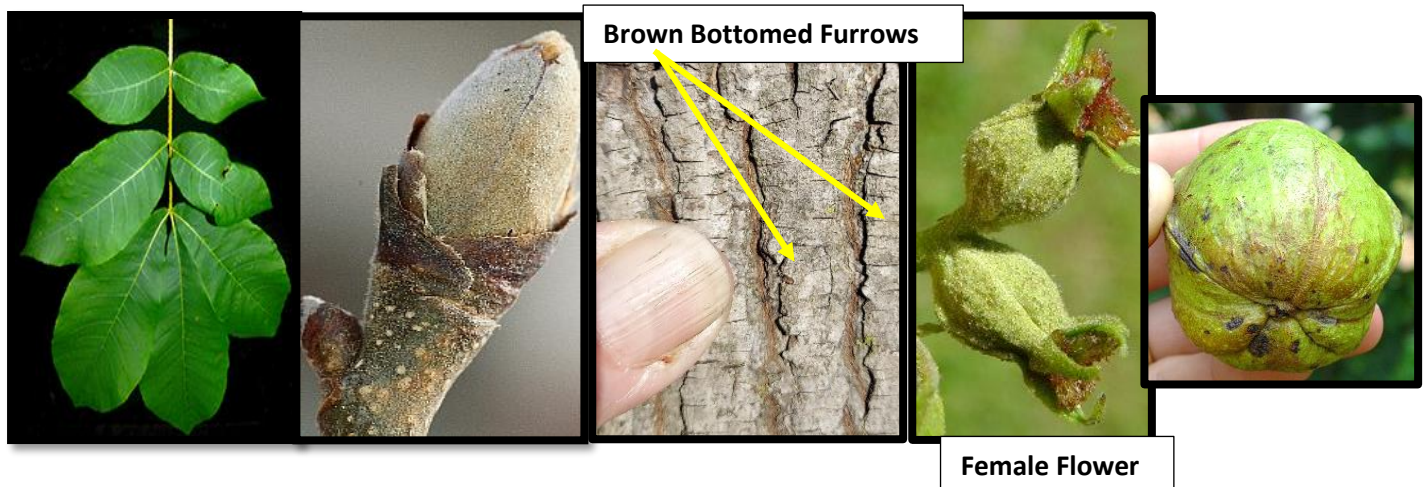
19. **American Basswood**, *Tilia americana*

- **Main ID Characteristics:** **BARK:** gray-brown, with long flat-topped ridges separated by shallow furrows. **TWIG:** stout, zigzag, reddish-brown. **END BUD:** “false” (bulging to one side), pink or reddish. **BUDS AND LEAVES** are edible, mucilaginous.
- The word BASSwood is a contraction of the older name for the tree; **Bastwood.** **Bast** refers to any plant-derived fiber (the basswood’s inner bark) used by Native Americans for making ropes, nets, mats and even coarse clothing.



20. **Mockernut Hickory**, *Carya tomentosa*

- **Main ID Characteristics:** **BARK:** Brown-bottomed furrows between grey flat-topped ridges (**look closely!**). **LEAVES:** compound. **END BUD:** large, whitish, silky, ovate, with dark outer scales. **LEAF SCAR:** “monkey faced.” **TWIG:** stout, *tomentose* (fuzzy).
- Distinctive among hickory trees because of the hairiness of its foliage, especially the young twigs, leaf stems and *rachises* (main vein in leaf).



21. **Black Gum** (mature), *Nyssa sylvatica*

- **Main ID Characteristics:** **BARK:** thick, blocky, resembling alligator hide or charcoal briquettes. **TWIG:** stout, red-brown. **BUDS:** ovate, pointed, light brown. **FORM:** Trunk and branches usually contorted (look up into tree canopy to observe).
- The purple, oily fruits are an important late summer food source for all local birds and many mammals.



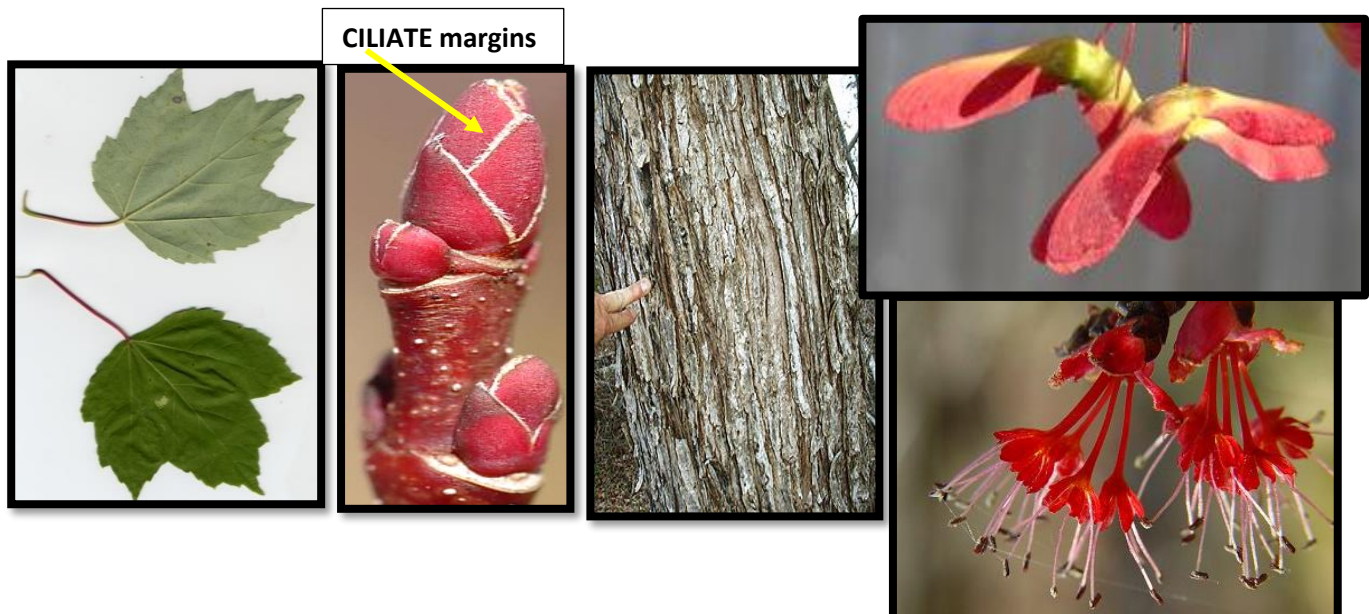
22. **Shagbark Hickory**, *Carya ovata*

- **Main ID Characteristics: BARK:** unique, broken into long wide plates attached in middle, curving away from the trunk at their top and bottom. **END BUD:** large, elongated, brown, pubescent (fuzzy), covered by 3 to 4 brown overlapping scales.
- The Shagbark's nut is large and sweet and relished by wildlife capable of cracking it. The nut was also a staple winter food for all Native Americans living within its range.



23. **Red Maple**, *Acer rubrum*

- **Main ID Characteristics: Opposite Branching. TWIG:** reddish, lustrous, with small white lenticels. **BUD:** lustrous, plump, reddish brown. **BUD SCALES:** 4 to 6, margins *ciliate* (short hairs). **BUNDLE SCARS:** 3.
- The U.S. Forest Service recognizes the Red Maple as the most abundant native tree in eastern North America.



24. Sweet Cherry, *Prunus avium*

- **Main ID Characteristics: BARK:** Reddish-brown, smooth, with prominent, long horizontal lenticels; often cracks and peels.
- The Sweet Cherry is native to Europe and Western Asia. It was imported into North America by early colonists as a source of table fruit along with apples, peaches, pears and plums. Before that, the largest cultivated *native* American fruit was the pawpaw.



25. American Beech, *Fagus grandifolia*

- **Main ID Characteristics: BARK:** smooth, thin, gray with whitish patches. **TWIG:** zigzag, light brown, smooth. **END BUD:** $\frac{3}{4}$ inch, cigar shaped, light brown with many overlapping scales.
- Beechnuts are eaten by a variety of birds and mammals, including mice, squirrels, chipmunks, black bear, deer, foxes, ruffed grouse, ducks and blue jays. Beechnuts can be roasted and eaten or ground and used as a coffee substitute.



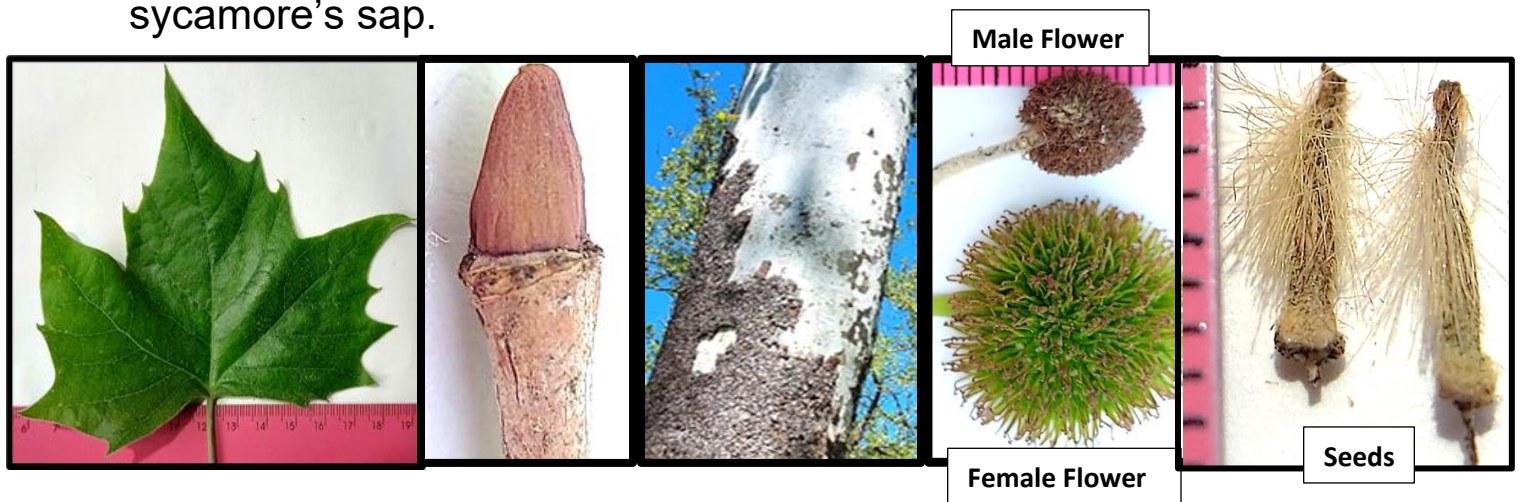
26. **Witch Hazel**, *Hamamelis virginiana*

- **Main ID Characteristics: FORM:** Multi-stemmed shrub to 20 ft.
- FLOWERS:** Yellow, bloom in late October and November.
- **SEED CAPSULE:** Brown, woody, persistent (sometimes for a year).
- When ripe, the seed capsules burst open and eject the edible, pistachio flavored seeds up to 20 ft. The seeds are eaten by a variety of game-birds.



27. **American Sycamore**, *Platanus occidentalis*

- **Main ID Characteristics: BARK:** Thin, exfoliating, mottled brown, green, tan and white. **MATURE BARK:** gray-brown and scaly.
- Native Americans made a tea from the inner bark to treat dysentery, colds, lung ailments, measles and cough.
- The hard-to-split wood is favored for butcher blocks.
- A high quality, butterscotch flavored syrup can be made from the sycamore's sap.



28. **Sassafras** (mature), *Sassafras albidum*

- **Main ID Characteristics:** **BARK:** light brown, thick. coarsely ridged and deeply furrowed. **TWIGS:** green, spicy aroma when broken. **INNER BARK:** Nearly white. **FORM:** small tree.
- The oily fruits are an important summertime foodsource for local birds, bears and foxes.
- The dried and powdered mucilaginous leaves are the main thickening ingredient of the Cajun dish, File Gumbo.
- **Sassafras** is the Native Algonquian word for the tree.
- **Albidum** is Latin for “nearly white.”



SNOWDEN TRAIL - FIELD GUIDE

Quiz Answer Key

Quiz #	Tree I.D. Hint	Answer – Tree Species
1	BARK: Rough, corky ridges	Hackberry
2	Large black nuts	Black Walnut
3	Largest native tree	Pawpaw
4	Very bitter nuts	Bitternut Hickory
5	Ski tracks in bark	Red Oak
6	Dagger wood	Dogwood
7	The tulip-flowered lily tree	Tulip Poplar
8	Tannic acid	Chestnut Oak
9	Hairy (tomentose)	Mockernut Hickory
10	Shaggy bark	Shagbark Hickory
11	Most common tree in VA	Red Maple
12	Most common tree in VA	Red Maple
13	Non-native fruit	Sweet Cherry