# Guide

# Huckleberry Bog Nature Trail

## on the

## Bristol Hills Branch,
## Finger Lakes Trail

## Property of the
## Finger Lakes Trail Conference

Return this guide to this trail register box or to the trail register box at the other end of the nature trail for another hiker to use. PLEASE DO NOT keep booklets. Download your own FREE copy instead at fingerlakestrail.org under "Go Hiking," then "Special Places," or use this QR Code.

*2023 EDITION*

## *Trail Distances As Approached From the North*

.83 mi. Bean Station Road to North Trail Register
.23 mi. North Trail Register to Barnyard Detour
.60 mi. North Trail Register to Stop 11 (Settler's Homestead)
.80 mi. North Trail Register to Bog Spur Junction
.97 mi. North Trail Register to Hugging Trees
1.82 mi. North Trail Register to South Trail Register (Orange Trail)
1.22 mi. South Trail Register to North Trail Register (Blue Return Trail)
.83 mi. North trail Register to Bean Station Road

## *Trail Distances As Approached From the South*

.85 mi. South Trail Register to Hugging Trees
1.02 mi. South Trail Register to Bog Spur Junction
1.60 mi. South Trail Register to Barnyard Detour
1.82 mi. South Trail Register to North Trail Register (Orange Trail)
1.22 mi. South Trail Register to North Trail Register (Blue Return Trail)
.83 mi. North Trail Register to Bean Station Road
2.65 mi. South Trail Register to Bean Station Road (Orange Trail)
2.05 mi. South Trail Register to Bean Station Road (Blue Return Trail)

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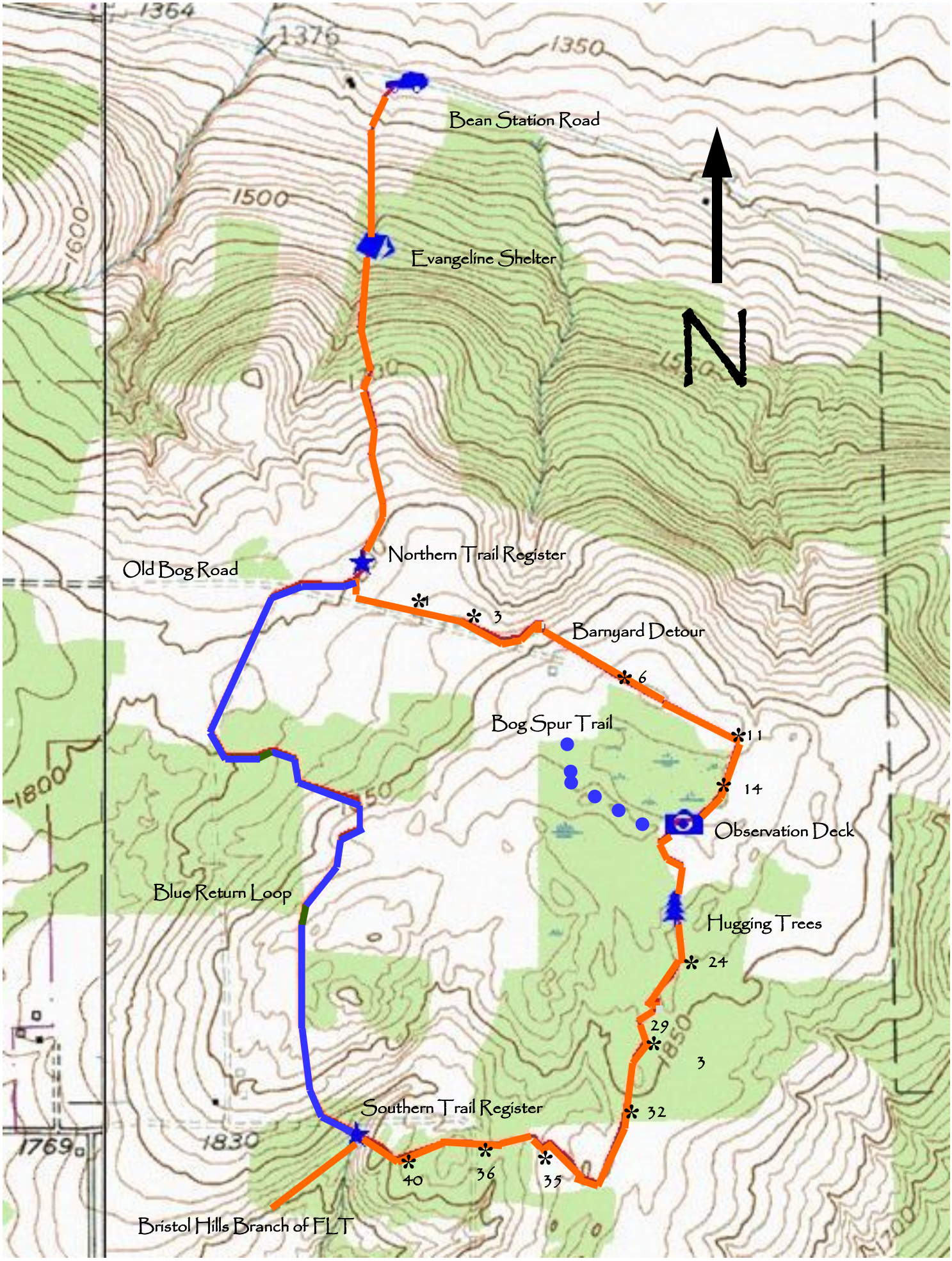


Trail Map: *Huckleberry Bog* on the BRISTOL HILLS BRANCH of the FINGER LAKES TRAIL

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**2 Red Oak & Witch Hazel**

**3 Barnyard Detour--** Sugar Maple

**4 Farm to Forest**-- Old barn foundation

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# Huckleberry Bog Nature Trail

## Introduction

The next 1.8 miles of the orange-blazed trail offer numbered white tags keyed to notes in this booklet. **PLEASE LEAVE THE BOOKLET** in the matching box at the other end, or if you return by the 1.1 mile blue-blazed loop trail, **YOU MAY RETURN IT TO THIS BOX {PREFERRED}**. You can download a free copy of this booklet at the fingerlakestrail.org website. PICK OR TAKE NOTHING!!

The fairly level trail (1770-1870' elevation), entirely within Urbana State Forest, begins its north end in a patch of young maples that was open field when a Girl Scout troop laid it out in the 1960s. It then turns left just beyond the junction with the blue return loop onto an old road that had four or five farms and homes along it during the 1800s. Notice that the roadside trees are larger, showing that they lined the lane when fields behind the road were open. Rocks cleaned out of fields line the road edge. Local citizen Romayne Barrett says that people would still drive cars up this road into the 1950s when they came to the bog to pick "huckleberries," as they were called, yet "Bog Road" had ceased to exist on property maps as long ago as the 1930s.

The trail passes through three sections of woods with different histories. Stops 1-11 are in woods that have recently grown up from fields. Stops 11-32 and 37-40 are in older forest. The older forest includes many plants that are becoming scarce and are protected by state law. Stop 36 is in an area that was logged in 1988. Keep an eye out for how these sections differ.

## BIRDS

As you walk along the Old Bog Road in the spring and summer, you may hear these birdsongs:

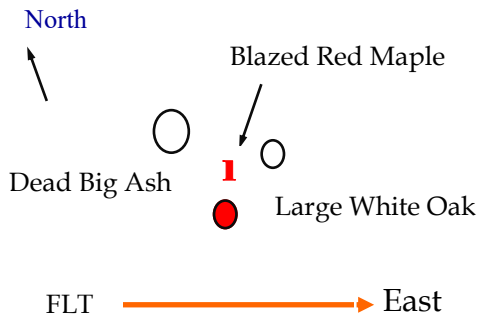
- Black-capped Chickadee—its call "Chick-a-dee-dee-dee," its song "Fee-bee" or "Fee-bee-ee" (2d note lower than first)
- Ovenbird—"teacher *teacher* TEACHER *TEACHER* ***TEACHER!***"
- Eastern Towhee— "Drink your t-e-e-e-e" (1st note higher, 2d note lower, trill note in a pitch between the first two)
- Red-eyed Vireo—two or three note phrases with short pauses between each phrase: "See me… here I am…way up here" repeated constantly all day long
- Hermit Thrush or Wood Thrush— a series of beautiful flutelike notes

**STOP 1**

*Note: For plant names in all CAPS, photos and descriptions follow. If the name is followed by a number in parentheses, it is described at the stop of that number.*

## TREES SEEK SUN

Tag #1 is on a **RED MAPLE,** the first of many you'll see along the trail. Behind it to the left is a very large dead **WHITE ASH(9)** that grew up in the open. Without competition for light, it branched out close to the ground, creating a spread shape unusual for an ash. The large **WHITE OAK** to the right has most of its branches growing toward the road's available sunlight, so it must be younger than the ash.



**RED MAPLE (Swamp Maple)** (*Acer rubrum*)

Red maples can grow over 50 feet tall with trunks one to two feet thick. Young bark is smooth and gray. Target canker fungus infections often make bulls-eye target-shaped cracks in the bark. Older bark develops vertical strips and retains the circular cracks. Tiny petal-less red flower clusters open in early spring before the leaves. Many of these flowers fall and litter the trail in April. Flowers develop into double-winged red seeds that fall in May and June. Leaves are palmate (shaped like a hand) usually with three lobes and **irregularly serrated edges.** The leaves turn vivid red, orange, and yellow in the fall. Wildlife eat the seeds, buds, and flowers. Deer and rabbits eat the sprouts.
Native Americans used the bark as an analgesic, and pioneers made dyes from it. Wood is used for furniture, flooring, cutting boards, and instruments.

Photos by Jackson Thomas

**WHITE OAK** (*Quercus alba*)

The white oak is a rugged looking tree that can live over 500 years. The branches are thick and angular. The bark is a light gray with thin vertical strips. Its deep tap root helps it tolerate drought. The oblong leaves have rounded lobes. In fall, leaves turn dull red to brown and some may stay on the tree into winter. White oaks produce fat acorns every year. Animals and birds prefer them over the more bitter red oak acorns. Native Americans also ate them after soaking or boiling them to remove the bitter tannins. Oaks feed more animals and insects than almost any other tree.

The strong, durable wood is used for lumber, furniture, woodwork, and wine barrels.

Photo by Jackson Thomas

**STOP 2**

# RED OAK & WITCH HAZEL

Tag #2 is on a **RED OAK,** a very common tree on this trail. A **WITCH HAZEL** bower is on the north side of the road. A bower is made by multiple overhanging branches that may serve as a shelter.

**RED OAK** (*Quercus rubra*)

This large tree has sharply pointed lobed leaves that turn purplish-brown in the fall. Young bark is greenish-gray or greenish-brown with narrow vertical cracks. Mature bark is dark gray or black with shallow furrows and smooth ridges, although ridges may roughen on older trees. Inner bark is reddish. Every other year, trees produce oblong acorns whose caps cover only a small part of the acorn. Birds & small mammals eat the acorns, as did Native Americans after removing the bitter tannins.

The heavy, hard, close-grained reddish wood is used for furniture, flooring, and paneling.

Photo by Jackson Thomas

**WITCH HAZEL** (*Hamamelis virginiana*)

The witch hazel is a small, spindly tree, shaded by other trees. Its leaves have scalloped edges and turn yellow in the fall. In October and November wispy little yellow flowers appear, developing into hard brown capsules which pop open the following fall, shooting seeds up to 20 feet. An aphid often lays eggs on the leaves, making a gall shaped like a witch's hat.

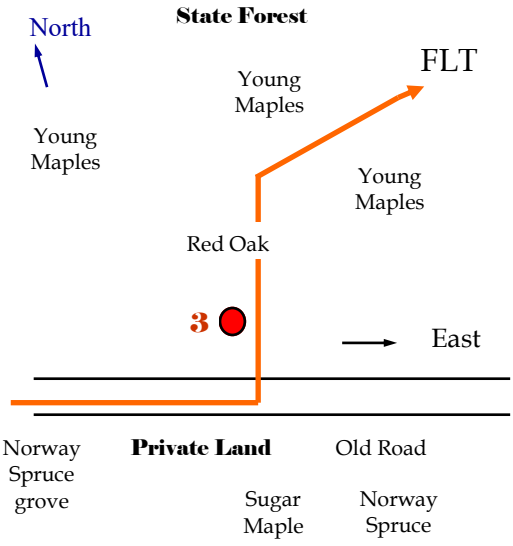
Witch hazel astringent is made by boiling the bark and twigs in water. It reduces skin irritation and inflammation. Native Americans used it, and drugstores still sell it. Forked branches are used for witching for ground water, thus the tree's name. The twigs make good camping toothbrushes.

Photo by Jackson Thomas

**STOP 3**

# BARNYARD DETOUR

Stepping off the old road, just past a large **RED OAK(2)** takes you back in time. You are now walking through young **SUGAR MAPLES** growing where a farmer planted crops 50 years ago. How many times might the farmer's children have pinched their fingers while piling the stones along the edge of the field? During what months was this part of their chores?



**SUGAR MAPLE** (*Acer saccharum*)

Photo by Nancy Peek

Sugar maples can live over 300 years, growing over 70 feet tall with trunks over three feet thick. Young trees have gray-brown bark that is finely crackled, like old paint. Bark on older trees develops vertical plates that may curl partly away on one side from the trunk. Unlike most other tree species, the branches and twigs grow opposite each other. Twigs are thin and delicate. Clusters of tiny yellow-green flowers with no petals appear in the spring before the leaves. Leaves are palmate (shaped like a hand) with five shallow lobes and smooth edges. Leaves turn yellow, orange, and red in the fall. The paired winged seeds are shaped like a drooping mustache. The sap has twice as much sugar as other maples and is used to make maple syrup. The hardwood is valuable for furniture and flooring.

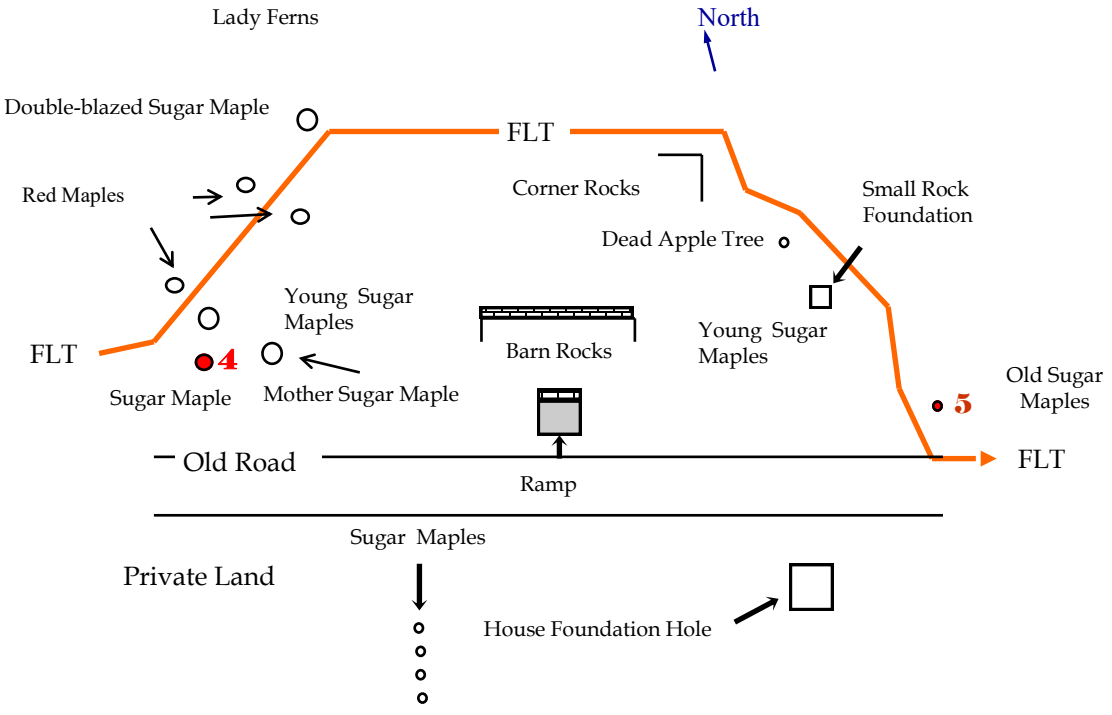
**STOP 4**

# FARM TO FOREST

Tag #4 is on a **SUGAR MAPLE(3)** behind a broken-topped **BLACK CHERRY(7).** Watch for the shapes of the stone barn foundations, obscured by the hordes of young sugar maple saplings, but they will come into view as you approach Stop 5. The ramp from the road led to the upper story of the barn where hay was likely stored, while livestock chewed their cud below. Several apple trees grew here when the trail was first made, but they have died. How long before the growing maple forest hides all traces of the old farmstead?

Although **SUGAR MAPLES(3)** dominate here, a few **RED MAPLES( 1)** mingle with them. This is a good place to compare the two maples.

*Map for Stops 4-5*



STOP 5

# DEPEW HOMESTEAD, FARMING & RAILROADS

On the private land across the road from Tag #5 (on a sugar maple) sits the basement foundation hole of the Depew house. Maps from 1857 and 1873 list S. Depew as the owner of this farm and the neighboring farm to the east. A member of the Depew family still owned a large portion of land into the 1930's. The evergreens to the east of the house site are Austrian, or black pine (import).

What did the Depew Farm produce? State agricultural censuses from the late 1800s show that most Southern Tier hill farmers had a few cows, many more sheep, a few pigs, chickens, and, of course, workhorses. Wool and butter were important products; milk not so much. Farmers grew several cereals: barley, wheat, rye, "Indian corn," and oats; they also grew potatoes, buckwheat, beans, and hay.

*See "The 'Kick and Push' Railroad, Prattsburgh, New York" by Richard F. Palmer, in the* ***Crooked Lake Review,*** *October 1993.*

Since those were the horse and buggy days, trains carried hay and grains to cities for feeding city horses. In 1889, farmers and businessmen in the Prattsburgh area started the Kanona & Prattsburgh Railway, nicknamed the "Kick & Push." It had a track 11.4 miles long that joined with the Erie Railroad, connecting to Jersey City, NJ, and to Lake Erie cities. One of the stops on the K&P route was Bean Station, just south of Prattsburgh. Perhaps the Depew Farm delivered some of its products to this stop for sale in cities. The K&P closed in 1961.

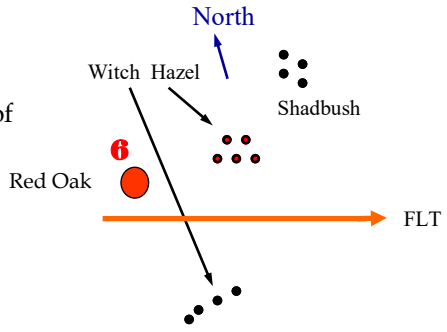
### Why did the Farmers Leave?

This hilltop has many wet spots and acid soil. The Southern Tier hills had a shorter growing season than lower, flatter land, making it hard for the hill farmers to compete, especially after settlers moved to the flat, fertile Midwest and began farming there. In 1908, the first Model-T car was manufactured, and by the 1920s cars had replaced most horses. The demand for horse feed plummeted, and hill farmers found it hard to make a living. Following the 1929 State Reforestation Act, New York State converted many of these abandoned farms into state forest, such as the Urbana State Forest here.

STOP 6

# WITCH HAZEL BOWER

Number 6 marks what used to be a bower formed by **WITCH HAZEL(2)** on each side of the road, with a clump of shadbush just beyond.



STOP 7

# BLACK CHERRY

Number 7 is on a **BLACK CHERRY,** a common tree along the trail. **WITCH HAZEL(2) trees grow around it, and a musclewood tree with sinewy bark grows to the side.**

**BLACK CHERRY**
(*Prunus serotina*)

Young black cherry trees have shiny dark reddish bark which ages to black, flaky bark resembling burnt potato chips on mature trees.
Blossoms appear in late spring. The small white five-petaled flowers cluster along one stalk and develop into clusters of small black cherries. These are edible with a slightly bitter almond taste. The oblong oval leaves have pointed tips and very finely serrated edges. They turn yellow in the fall. This native forest tree can grow very tall, and is valued for its reddish lumber.

Photo by Richard Gardner, bugwood.org


Photo by Nancy Peek

STOP 8

# THORNS & HAWS

A spindly **HAWTHORN** grows on each side of the trail here. Hawthorns along this trail are spindly because they are reaching for light through other trees that have grown up around them.

**HAWTHORN**
(*Crataegus spp.*)

Hawthorns are shrubby trees that often grow in pastures and hedgerows. There are many different species of hawthorns, but they all have **thorns** and white 5-petaled flowers that ripen into **haws**—small, usually red, sometimes yellow fruits that look like tiny apples. Some haws taste good to us and others don't, but birds and animals like them. The trunks usually have rough, dark gray bark, and leaves have irregularly serrated edges. These trees provide food and shelter for wildlife.


Photos by Nancy Peek

STOP 9

# SETTLERS' HOMESTEAD

On the north side of the trail between #9 and #11 is the caved-in foundation of a settler's homestead, now surrounded by as many brambles as Sleeping Beauty's castle. In the tangle is Graystem Dogwood and a **HAWTHORN**(**8**) telling the tale of the first stages of field succession. Lilacs that bloom in spring stand guard over the homestead. Imagine the view from here when the hill was cleared.

Number 9 is near a **WHITE ASH** tree, still alive in 2022, but the Emerald Ash Borer (EAB) is killing it. The EAB, originally from Asia, appeared in Michigan in 2002 and has spread to at least 35 states. The EAB adult beetle is about a half-inch long, bullet-shaped, and metallic emerald green. It eats ash tree leaves and in July lays its eggs on the bark. The worm-like larvae hatch in late summer. They burrow into and eat the phloem, the food transport layer of the tree just under the bark. Deprived of its own food, the tree begins to die. Woodpeckers strip off bark to eat the larvae. When the larvae emerge from their pupae as adults the next May, they make a little hole in the bark to exit the tree and fly off to find another ash to infest. This insect has killed most ash trees along this trail.

Photo by Leah Bauer, USDA Forest Service Northern Research Station, bugwood.org

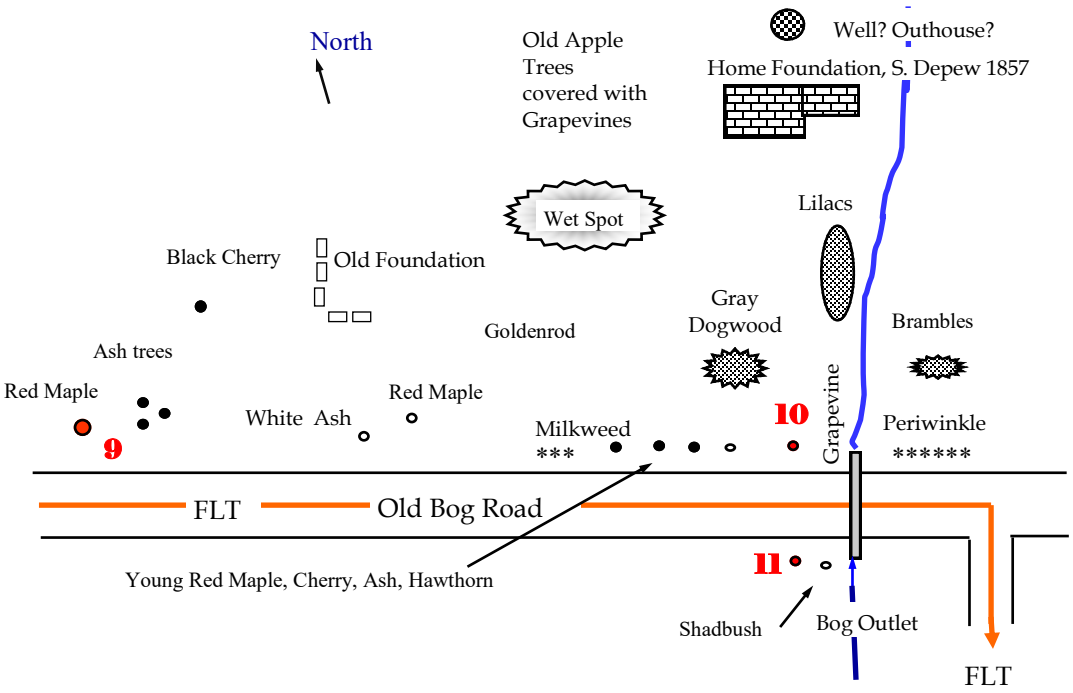
Photo by Nancy Peek

**WHITE ASH** (*Fraxinus americana*)

White ash has a long straight trunk with a strong leader. The branches and twigs grow opposite each other, and the twigs are much thicker than maple twigs. The gray bark has diamond-shaped ridges. The leaves are compound, with about seven leaflets per stem. The oval leaflets have very fine-toothed edges and turn any color from yellow to maroon in the fall. The one-winged seeds grow in clusters. This hardwood was famously used for baseball bats.

Photo by Jackson Thomas

*Map for Stops 9-11*



STOP 10

## SETTLER'S GARDEN

Several of the homeowner's plantings still survive, including the dark green ground cover known by two names. Imported **PERIWINKLE** (a.k.a. Myrtle) provided a comforting atmosphere to the settlers carving their new homes out of the wilderness and when found in the forest, is a sure sign people once lived there. Many plants that grow in old fields are here: goldenrod, yarrow, milkweed, grape, ferns, and black & red raspberries.

**PERIWINKLE (Myrtle)** (*Vinca minor*)

Periwinkle has shiny oval dark green leaves and five-lobed blue-violet flowers that bloom in the spring.

Photo by Jackson Thomas

STOP 11

## FROM BOG TO BAY

Sign #11 marks the east end of the home site and a culvert that crosses underneath the Old Bog Road. Through this culvert, water drains from the bog and heads north, downhill to mucklands that drain into Fivemile Creek which heads west down the valley toward Kanona and the Cohocton River. The Cohocton River then flows South to the Susquehanna River into the Chesapeake Bay.

Some young ash saplings grow here. Probably the emerald ash borer will soon find them. Just beyond #11, the FLT turns south on an old lane remnant beside the bog.

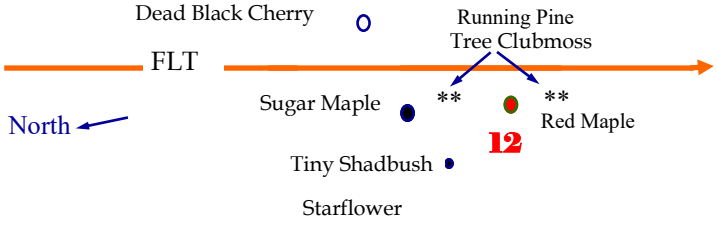
STOP 12

## INTO THE WOODS

Sign #12 is on a **RED MAPLE (1).** Near the bog, the land changes from formerly farmed land to woods that have existed long enough to develop a layer of rich humus that supports spring woodland wildflowers and clubmosses. Some of these woodland plants are declining in New York State, so the state has put them on its Protected Plant list. State law forbids digging up or picking these plants.

**TREE CLUBMOSS(16)** and **RUNNING PINE(16),** two protected clubmosses, appear here. **STARFLOWER(34)** blooms here in the spring.

*Note: Since the trail has turned south, North is no longer at the top of each trail diagram.*

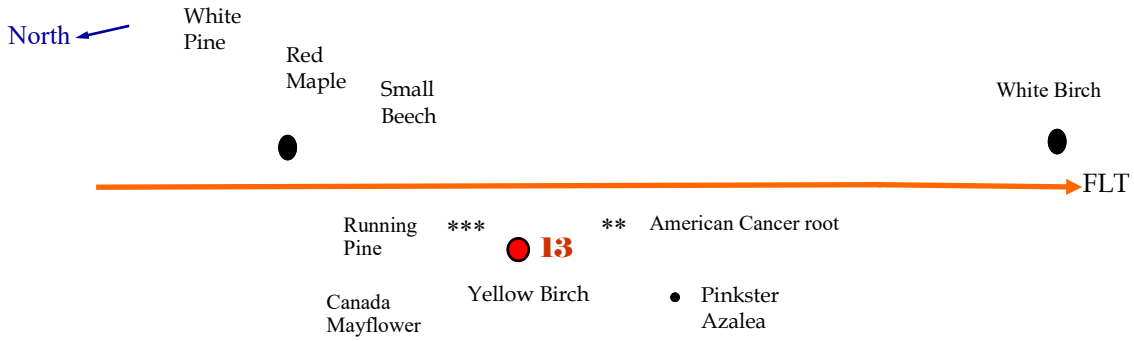


**STOP 13**

# BIRCHES

Sign #13 is posted on a **YELLOW BIRCH**. Compare it with the **AMERICAN PAPER BIRCH** farther down on the opposite side of the trail. How can you tell they're related?

In fall, winter, and spring, when leaves don't obscure the view, you may see the bog through the trees from here. **AMERICAN CANCER ROOT** grew here in Spring 2021. A **PINKSTER AZALEA**(33) blooms here during the second half of May.




## YELLOW BIRCH (*Betula alleghaniensis*)

This tree has shiny yellow to silvery gray bark with horizontal peeling curls. Scraped twigs and inner bark smell and taste like wintergreen but not as strongly as Black Birch. These are the only two birches with this scent. Tea can be made from the twigs.

Photos by Jackson Thomas

In the spring, male and female flowers appear in separate catkins on the same tree before the leaves. The male catkins hang down; female catkins are shorter, oval and upright. The oval leaves have points at the ends and edges that are sharply doubly toothed. They turn yellow in the fall. Deer eat seedlings; squirrels and birds eat the seeds.

## PAPER BIRCH **(White Birch, Canoe Birch)** (*Betula papyrifera*)

This is the tree most people connect with the name "birch." Saplings have shiny brown bark, but develop white, horizontally peeling bark as they age. In early spring, yellow male dangling catkins and green upright female catkins appear on the same tree. The female catkins mature into small brown hanging conelike fruit in late summer. Doubly toothed oval leaves have pointed tips and turn yellow in the fall. The leaves can be used for a tea, but it's not as good as that made from black or yellow birch. If you peel the white bark from this birch, it will leave a black scar that will never grow back white. <u>If you peel it too deep and girdle the tree, it will die</u>.

Photo by Paul Wray, Iowa State University, bugwood.org

Photo by Jackson Thomas

**AMERICAN CANCER ROOT (Squawroot, Bear Corn)** (*Conopholis americana*)

This parasite has nothing to do with cancer. The bumpy pinecone-like beige spikes appear in late spring, growing from a tumor-like knob on an oak root. The bumps turn into hooded yellowish flowers on a 6-7" plant during June. The flowers ripen into oblong brown seed capsules which shrivel and blacken by winter. Each plant flowers for several years before dying. New plants pop up in another place.

Photo by Nancy Peek

**STOP 14**

## LEATHERY LEAVES

Sign #14 is on a **black oak** tree. Across the road is a small patch of **TRAILING ARBUTUS.** A larger arbutus colony grows on the Blue Spur trail.

**TRAILING ARBUTUS** (*Epigaea repens*)

Arbutus has evergreen oval leathery leaves that creep close to the ground. Tiny pink or white tubular flowers bloom in late April-early May, and a few develop into a small white berry-like fruit.

Deer eat arbutus.

Photo by Nancy Peek

**Protected Plant**

**STOP 15**

## GLACIAL INFLUENCE

In spring before leaves come out, this is a clear overlook into the bog, an unusual wet spot at the top of the hill. It was formed by a fragment of a glacier, which remained longer than the lowland ice. As it melted, it left behind some odd things such as the pink granite boulders and some seeds of northern plants. This explains the **BLACK SPRUCE**(**18**) that dot the bog. **HIGHBUSH BLUEBERRY**(**18**), those twisted brittle bushes, begin to appear. They form the main growth in the bog and provide the "huckleberries" of local lore. Highbush blueberry bog thickets grow in acidic wet areas with few nutrients, as does **SPHAGNUM**(**18**) moss.

Directly behind the sign for Stop 15 at the edge of the bog is a pink granite rock next to a mossy log. Just beyond these in the water near the bog's edge are two **BUTTONBUSHES.**

*This bog had its beginning nearly 11,000 years ago when the most recent glaciers began to retreat.*

In early April, right after the snow has melted, you may hear the quacking sound of wood frogs calling in the bog or in vernal pools. Wood frogs can survive up to 60% of their bodies being frozen while they over-winter in the ice. When the ice thaws, they start calling and mating, so that their young can mature before the shallow vernal pools dry up.

**BUTTON-BUSH**
(*Cephalanthus occidentalis*)

This shrub grows in sunny parts of swamps or edges of ponds. The oval leaves are pointed on the ends and grow opposite each other along the stems. The flowers are round pincushion-like balls clustered at the end of the stems, blooming from May to August. Bees, butterflies, and hummingbirds eat the nectar. The flowers develop into ball-like seed clusters in September and October and stay on the plant through the winter.

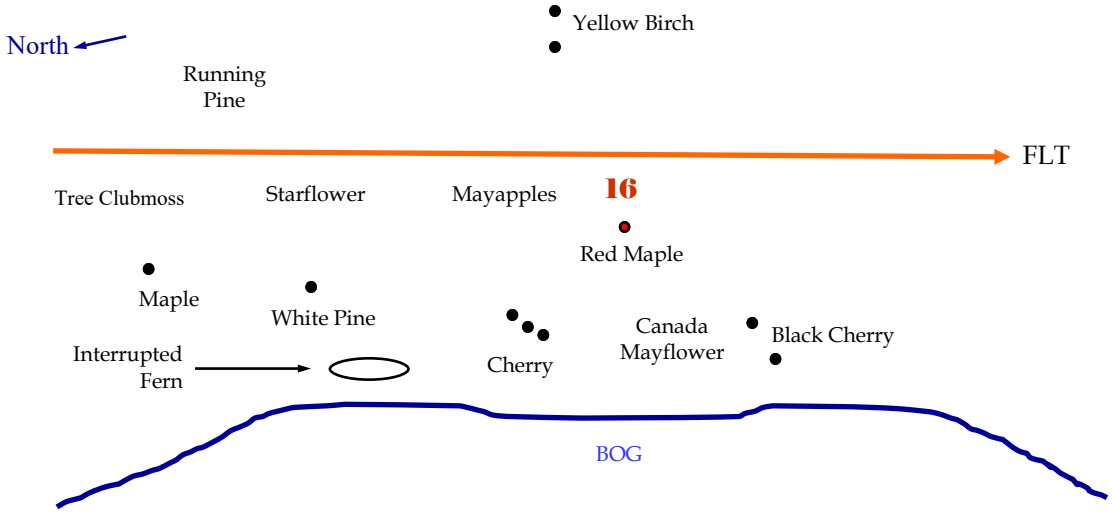
Photo by Anne Keddy

**STOP 16**

# CLUBMOSSES

Stop #16 features two species of ground cover. On the bog side of the trail is **TREE CLUBMOSS** and on the opposite side is **RUNNING PINE.** Club mosses are some of the earliest vascular plants; they make spores instead of seeds. In the warm, swampy Carboniferous period of the Paleozoic Era, way before dinosaurs, some types of clubmosses, called scale trees, grew up to 100 feet tall. When they died, they became peat and over millions of years compressed into coal. As the climate cooled and became drier, scale trees became extinct. Today's clubmosses grow low to the ground, less than 10" high. Clubmosses form colonies from roots that run along the ground; a colony 12 feet in diameter may be over 100 years old. Since clubmosses are evergreen, people used to pick them for Christmas decorations, reducing their numbers. By state law, it's now illegal to pick either of these clubmosses without permission.

When the **MAYAPPLES**(**39**) at this stop are in season, they are surrounded by **STARFLOWERS (34)** and **CANADA MAYFLOWERS(38).** Look for **INTERRUPTED FERN**(**28**) at the water's edge.



**TREE CLUB-MOSS** (*Dendrolycopodium spp*)

**Protected Plant**

These plants look like tiny pine trees with "cones" at the top. The main stem runs underground, connecting the tiny "trees". The "cones", really strobili (spore cases), are stemless and appear on the tips of the upper branches.

Photo by Jackson Thomas

**RUNNING PINE (Ground Cedar)** (*Diphasiastrum complanatum*)

**Protected Plant**

Running Pine is at the southern limit of its range here. Leaves are in scales similar to the northern white cedar, arranged in flattened fronds which fan out in one plane. Spore-bearing small stalks (strobili) rise above the leaves like little candelabra.

Photo by Jackson Thomas

**STOP 17**

# RED PINE, WHITE PINE

Sign #17 is on a **WHITE PINE** on the east side of the trail opposite the bog. Look 30 feet beyond it to see a lone **RED PINE. TREE CLUBMOSS(16)** lines the east side of the trail, and **RUNNING PINE(16)** grows on both sides.

**WHITE PINE** (*Pinus strobus*)

The soft, flexible needles of the white pine grow in clusters of five. Cones are long and thin. Young bark is smooth greenish-brown, while older bark is fissured and dark grayish brown.

Photo by Jackson Thomas

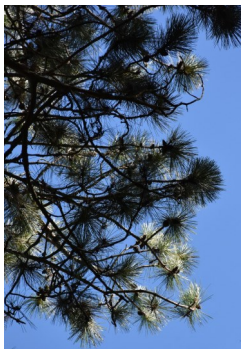
The tallest tree in the northeast, the white pine can reach 200 feet and live 400 years. In colonial times, the English used these tall trees for ship masts, so white pine timbers were a valuable product of the colonies and Canada. But white pines seldom grow that tall or straight now, due to a weevil that kills the lead stem. The tree responds by branching out into multiple trunks.

The trail angles southwest here.

To the Haudenosaunee the white pine was the tree of peace, and the five needles in a cluster symbolized the original Five Nations.

**RED PINE**
(*Pinus resinosa*)

Red Pine's flexible needles are 4-6" inches long and grow in clusters of two in tufts at the end of branchlets. Its bark is reddish-brown with flat scales, and its egg-shaped cones are small, about 2" long. Red pines can live for 350 years, growing to over 100 feet tall with trunk diameters up to three feet. Although it's often called Norway pine, it's native only to North America.



Photos by Jackson Thomas

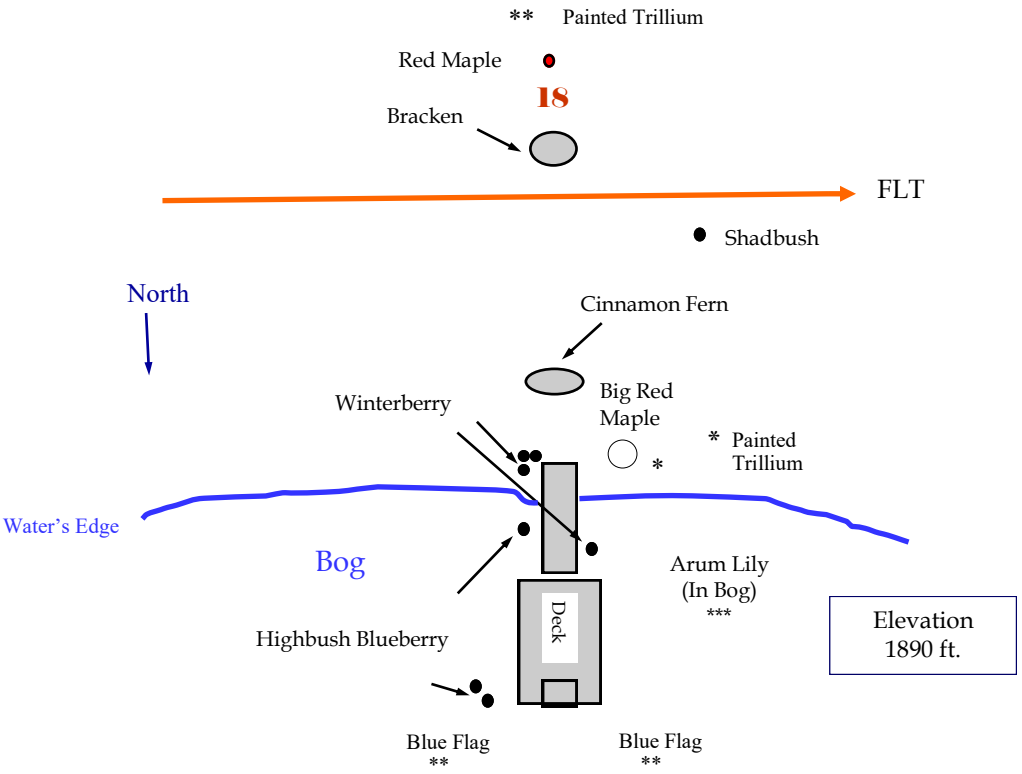
**STOP 18**

*The observation deck was built by members of the FLTC and volunteers from Eastern Mountain Sports.*

*The Northern Waterthrush may be heard in the bog and may be seen perched atop a black spruce. Its song is a loud "Sweet Sweet Sweet Swee wee wee Chew chew chew."*

# BOG VIEW TERRACE

As you approach Stop 18 you can see the three-pronged fern, B**RACKEN (**and a **STRIPED MAPLE(31)** to the left. Sign #18 is opposite the observation deck that was built in 1997 as a National Trails (three-)Day Project. Outdoor Research, a clothing manufacturer, funded the project. Here is the best view of the bog, a highbush blueberry thicket. This bog is acidic, so the plants you see here are ones that can grow in acid conditions. **WINTERBERRY** frames the ramp to the deck, and **HIGHBUSH BLUEBERRIES** grow in front of the deck. On either side of the deck grow **ARUM LILIES** and **BLUE FLAG,** as well as **SPHAGNUM MOSS**. **BLACK SPRUCE** and **WHITE PINE(17)** dot the bog in the distance. In May look for **PAINTED TRILLIUM** blooming west of a big red maple tree near the deck as well as behind the red maple tree south of the trail.



## BRACKEN FERN
(*Pteridium aquilinum*)

This large fern has three triangular fronds growing out from the main stem, bending almost horizontally to the ground. It often grows in colonies, usually on poor soil. It dies back in the fall.

Photo by Jackson Thomas

## WINTERBERRY
*(Ilex verticillata)*

**Protected Plant**

This shrub often grows in highbush blueberry bog thickets and other wetlands. Although it's a holly, its leaves are not evergreen, but die off in the fall. The oval leaves have small toothed edges, unlike the prickly edges of Christmas holly. The small greenish white flowers on the female plant develop into red berries very like Christmas holly berries. The berries are inedible for people, but birds eat them.

Photo by Jackson Thomas

## HIGHBUSH BLUEBERRY
(*Vaccinium corymbosum*)

This is the "Huckleberry" in our bog's name. It is a tall gangly brittle woody shrub. In mid to late May, dangling whitish jar-shaped flowers with five tiny petals on the open ends appear. These develop into small blueberries by late July. Leaves are oval and turn maroon to red in the fall. People, birds, and, as told by local resident Marcia States, bears like them. She recalls childhood trips to the bog with her aunt, who refused to be put off her mission with a bucket by a mere bear. Most of the head-high shrub layer across the bog is this bush, plus there are some scattered throughout the surrounding forest.

Photo by Anne Keddy

## WATER ARUM
**(Water-dragon, Wild Calla)**
(*Calla palustris*)

Although this is a water lily, it doesn't have lily pads. Its heart-shaped leaves grow up vertically out of the water. What looks like a large white petal is actually a spathe surrounding a spadix (spike) of tiny yellow flowers which bloom in May and June. The flowers develop into tiny red berries in July and August.

Photo by Nancy Peek

## BLUE FLAG
(*Iris versicolor*)

This iris grows in sunny spots in water near the bog's edge. In late June, a small violet iris blooms atop a graceful sword-leaved plant that looks like the common garden iris.

Photo by Jackson Thomas

## SPHAGNUM
(*Sphagnum* spp .)

This coarse moss has no roots but grows in mats in acidic wet areas. It soaks up water like a sponge. It takes in minerals from the water and in the process releases hydrogen ions, making the water more acidic. As new moss grows on top of older moss, the old moss dies and compacts into peat. It takes about 100 years to make a cubic foot of peat moss. That's something to think about when buying a bag of peat moss at the garden store.

Photo by Jackson Thomas

## BLACK SPRUCE
(*Picea mariana*)

This tree is a glacial leftover from northern forest bogs; it's close to its southern limit here. It's spire-like with short horizontal branches, dark stiff needles and stubby 1-2" cones that cluster near the trees' tops.

It grows very slowly, living up to 300 years. A 100 year-old tree may be only 10 feet tall. Most black spruce here are distant in the bog, except for one clump next to the Blue Spur trail on the right, just before the end at bog's edge.

Photo by Jackson Thomas

**PAINTED TRILLIUM**
*(Trillium undulatum)*

**Protected Plant**


Photo by Nancy Peek

In May before the trees fully leaf out, this white flower with a magenta center and 3 wavy-edged petals blooms atop three large smooth-edged leaves on a stem about 12" tall. Insects pollinate the flower, which ripens to a red seed pod in early fall. When the seeds are ripe, the pod splits open.

Trilliums depend on ants to spread the seeds. Each seed has a blob of fatty ant food attached to it. Ants take the seeds home where they feed the food to ant larvae and then discard the seeds on their compost heap, just like we discard the pits after eating cherries. The compost heap provides a fertile place for the seeds to grow. After wintering, the seed sprouts and grows roots underground The second year, the first leaf appears. The plants grow for several more years before they flower.

The painted trillium is much less common than the white and red trillium species. It grows in moist, shady woods with a very acidic humus layer. Deer eat trillium; wherever many deer browse, trillium is scarce.

**STOP 19**

# TRAIL JUNCTION

Stop #19 marks the intersection where the orange trail turns southeast away from the bog and where the short (.1 mi.) one-way blue spur trail curls around the west side of the bog. The Blue Spur trail is the best place to see **AMERICAN CHESTNUT**(**27**) trees and also to see more of the bog and bog plants.

American Chestnut trees are not related to horse chestnuts, but belong to the beech family. Take a look at the young **AMERICAN BEECH** trees across the trail from the #19 sign, and compare them to the chestnut trees along the Blue Spur trail. The beech has distinctive smooth, light gray bark. Both beeches and chestnuts have oval leaves with toothed edges, but chestnut leaves are more oblong than beech leaves and have longer, curved sawtooth-like edges. In mid-May you may see **GAYWING**(**37**) blooming across the trail from the trail sign.

**AMERICAN BEECH**
(*Fagus grandifolia*)


Photo by Rob Routledge, Sault College, bugwood.org


Photo by Joseph Obrien, USDA Forest Service, bugwood.org

The beech's smooth light gray bark resembles elephant legs. The bark may tempt some to carve initials in it, but this makes an entrance for the beech scale insect to eat the cambium layer, the growing part of the tree. *Nectria* fungus can follow, causing beech bark disease which can eventually kill the tree.

The oval leaves are pointed at the tip and have parallel veins extending from the center vein to the even-toothed leaf edges. The leaves turn yellow to bronze in the fall, some staying on the tree through winter. In the fall, small, spiny triangular burs holding two beechnuts drop to the ground and are eaten by many birds and animals. The brown winter buds are long and pointed.

The beech can grow over 80 feet tall and live 300-400 years, with a trunk over three feet thick.

BLUE SPUR

# BLUE SPUR DEAD END TRAIL

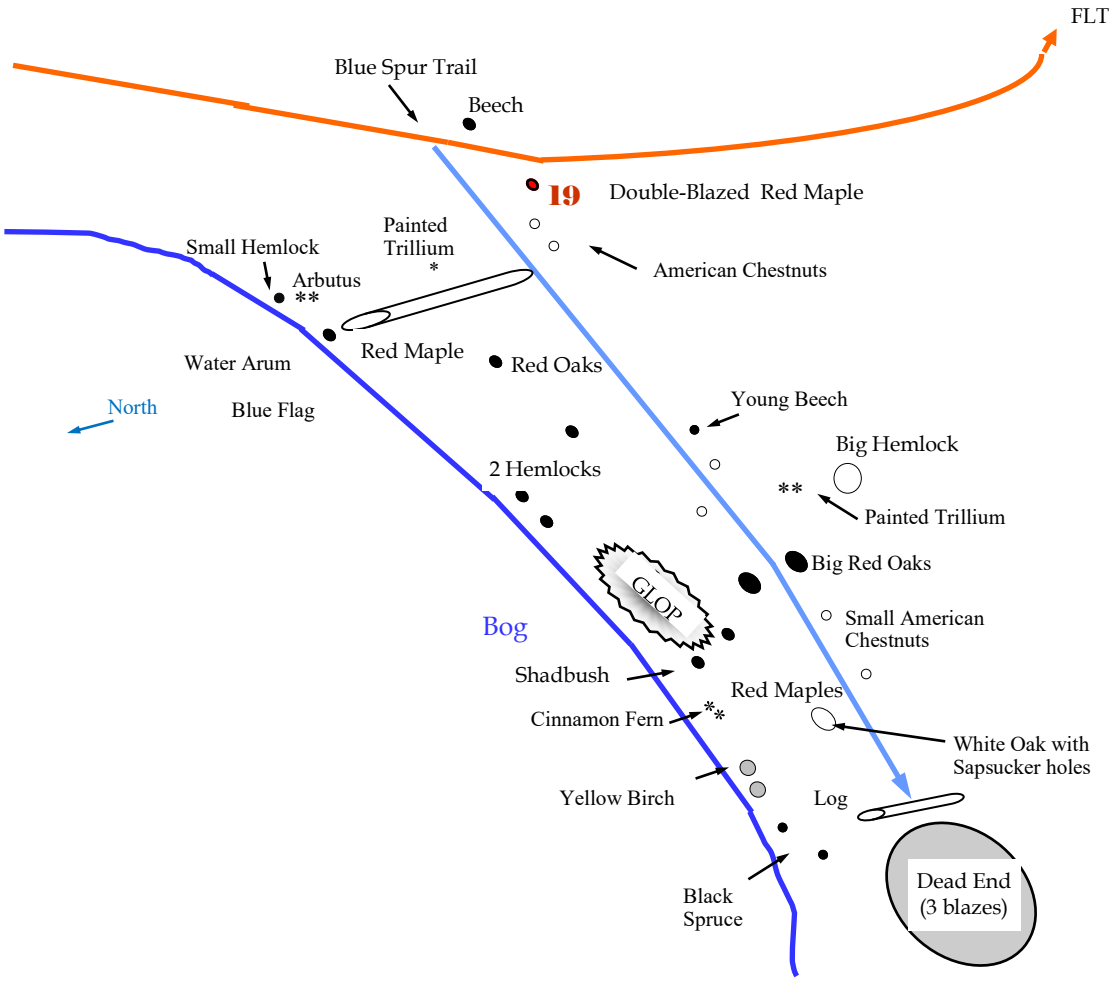


A narrow path carves through the nearly constant ground cover of **LOWBUSH BLUEBERRY**(**37**) By a downed log near the beginning of the trail, look for **TRAILING ARBUTUS**(14) blossoming in late April-early May and **PAINTED TRILLIUM**(18) blooming later in May**.** More painted trillium appear near a large hemlock farther down the trail. Look for both small and large **WHITE OAK( 1 )** in contrast to **RED OAKS(3)** at the beginning of Blue Spur, as well as a number of **AMERICAN CHESTNUTS(27)** lining the trail. A clump of **BLACK SPRUCE**(**18**) mark the trail's end on the bog side. Also near the trail's end is a white oak with rows of sapsucker holes. At its base are **MAPLELEAF VIBURNUM**(**30**) and **LOWBUSH BLUEBERRY**(**37**). **BRACKEN FERN**(**18**) grows on both sides at the trail's end. Handsome large red and white oaks and **HEMLOCK**(**25**) grace the outer end of the Blue Spur, while **WITCH HAZEL (2)** bowers line the earlier portion. Look for the great hemlock on the left with an opening at its bottom.

The Blue Spur trail ends at the log across the trail and three blue blazes on a small tree. Return the same way to the orange trail after the Blue Spur ends at a group of black spruce at the bog's edge.

*At the turn of the 20th century, one in every four trees in the East ern US was American Chestnut, but within 40 years, 3.5 billion of them died.*

*When exploring the Blue Spur dead end, be careful not to venture onto the private land to the west.*

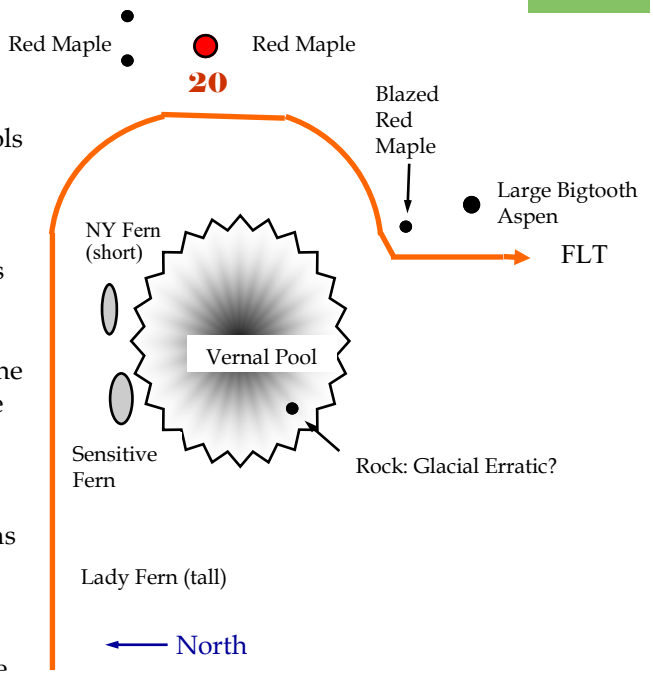


**STOP 20**

# A SPRINGTIME SWIM

Here is one of many vernal (springtime) pools along the trail. Vernal pools form when the ground can't absorb any more melted snow. They often dry up in the summer. In April and early May, look for jelly-like egg masses in these pools. Vernal pools are ideal places for insects, salamanders, frogs, and toads to lay their eggs, since there are no fish to eat the babies. Tadpoles grow up quickly before the pools dry out.

Sign 20 is on a **RED MAPLE(1).** The spiderweb-like cracks in the bark identify this as a red maple. These cracks are caused by a fungal infection which doesn't hurt the tree much. Red maples section off the infection, resulting in a circular pattern of cracks in the bark.




Quaking Aspen seedlings

Wood frog eggs in this pool, April 10, 2023
Photo by Christine DeGolyer

Salamander egg mass in this pool May 9, 2022
Photo by Jackson Thomas

Tadpoles in this pool May 9, 2022
Photo by Jackson Thomas

On the north side of the pool are three types of ferns: **NEW YORK FERN** (short), Lady Fern (tall), and **SENSITIVE FERN** (smooth, wavy leaf edges, rather than feathery ones). This area features the first stages of successional trees, those that crop up first in the open sunlight of a disappearing field, such as the aspens between the main bog and this wet spot. They are soon replaced by more shade-tolerant species when the **QUAKING ASPENS** die young or fall over easily in the wind. The **BIGTOOTH ASPEN,** however, often live to great size.

## NEW YORK FERN (Tapering Fern)*(Thelypteris noveboracensis)*

**Protected Plant**

The phrase "New Yorkers burn the candle at both ends" helps to ID this small fern. The fronds are widest in the middle while **the rows of leaflets near the bottom of each blade shorten dramatically to tiny leaflets. They also taper at the tip.** The delicate yellow-green leaflets are twice-cut and feathery. In fall, the leaflets turn gold-brown and die back . The roots are black and wiry.

Photo by Jackson Thomas

## SENSITIVE FERN (Bead Fern) *(Onoclea sensibilis)*

In spring thin pale red fiddleheads of this fern appear in damp places. It grows to 1– 3 feet in height. Its leaflets are not cut into feathery sections, but are whole with wavy edges. The fertile fronds grow on separate stalks with clusters of beadlike spore cases that start out green, but soon turn brown. This fern is sensitive to cold—the green sterile fronds die with the first frost. The fertile brown stalks last through the winter.

Photo by Jackson Thomas

Photo by Nancy Peek

## QUAKING ASPEN (*Populus tremuloides*)

Young aspens have smooth, pale gray-green bark which can actually photosynthesize when temperatures are above freezing. The trunk gets furrowed with age, but younger upper branches still have smooth, pale bark. Powder on the bark reflects sunlight, helping the tree moderate temperatures. Native Americans used this powder for sunscreen. Because the bark is pale with dark markings, people sometimes confuse it with yellow or paper birch, but unlike birch, aspen bark doesn't peel.

Photo by Nancy Peek

Catkins appear before the leaves in April with male and female flowers on separate trees. Leaves are almost heart-shaped, pointed at the end with small toothed edges and flattened stems that make the leaves "quake" in the breeze and show their pale undersides. Leaves turn yellow in the fall.

This tree grows in colonies in old fields in full sun. It grows quickly, and lives only 50-60 years in the eastern US. Larger trees soon shade it out as forests take over the fields.


Photo by Paul Wray, Iowa State University, bugwood.org

**BIGTOOTH ASPEN** (*Populus grandidentata*)

Photo by Paul Wray, Iowa State University, bugwood.org

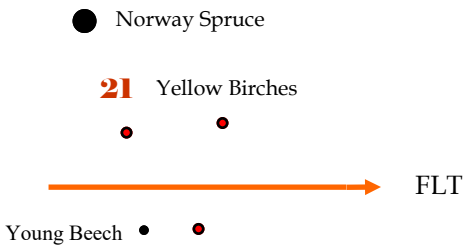
Photo by Jackson Thomas

Bigtooth aspen looks similar to quaking aspen and grows in similar places. The easiest way to tell them apart is by the leaves, which have larger curved teeth along the edges. It grows a little larger and lives a little longer than the quaking aspen. Bark is the same pale color, developing dark furrows on older trees. The lenticels (breathing pores) on the bark are diamond-shaped. The bitter inner bark of aspens contains salicin, similar to the active ingredient in aspirin. Salicin helps the tree repel bacteria, fungi, and insects. The leaves turn yellow, sometimes with a red tinge, in the fall.

**STOP 21**

# NORWAY SPRUCE

Sign #21, on a yellow birch, marks a patch of **YELLOW BIRCH**(13) across the trail. A lone **NORWAY SPRUCE** resides near the sign. The only way this odd little tree came into existence was with the help of a squirrel...or bird… in 19??.




**NORWAY SPRUCE** (*Picea abies*)

This is the only spruce in our area with drooping branchlets and large cones. Spruce needles are short and sharp, dark green and 1 inch or less in length. The cones are 4-6" long and fall soon after maturation.

Although not native, this spruce has been planted in yards and parks and forests and has spread on its own.


Photo by Judy Slater, bugwood.org

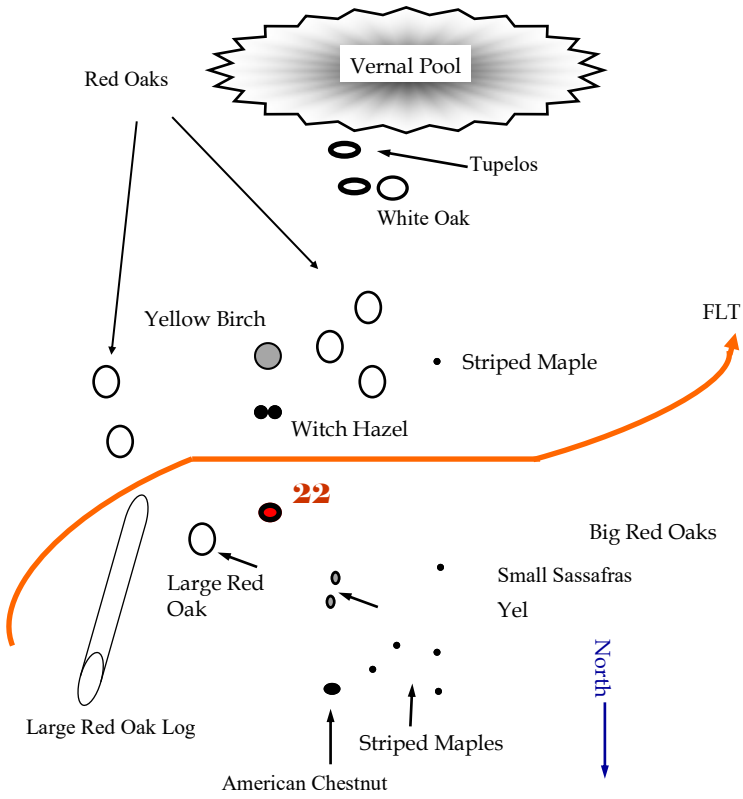
STOP 22

# PASSPORT HIKES

#22 is on a post holding the passport stamp for our **PASSPORT HIKE** series, which you can learn about online or from the FLTC office.

A line of large **RED OAK (2)** surround a damp area just after the trail leaves an area of younger trees, mostly aspen and smaller **YELLOW BIRCH(13)**.

Some very small **SASSAFRAS** grow on the north side of the trail. Will they survive to become trees?




## SASSAFRAS
(*Sassafras albidum*)

Sometimes called Mitten Tree because of its mitten-shaped leaves, although some of those mittens have two thumbs or no thumbs. Green twigs and leaves have a spicy smell when broken. This smell is from safrole, which protects the tree from insects and may be carcinogenic. Cajuns dry the very young leaves to make file´ powder for gumbo. The bark of young roots was originally used to flavor root beer, and can be used to make a spicy tea—best sipped in small amounts. Oil of sassafras from the bark and root bark is used for perfumes and soaps.

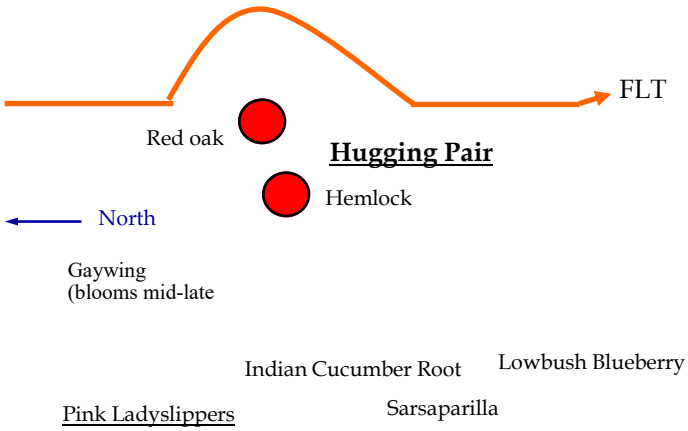
Photo by Jackson Thomas

The bark has rope-like ridges that crisscross diagonally. The inner bark is orange. The tree can grow over 50 feet tall, but is usually much shorter and somewhat curvy and spindly. The trees usually grow in groups and may look more like bushes than trees when young. Little yellow-green flowers bloom in the spring and develop into blue, berry-like stone fruits on red stalks. The leaves turn beautiful shades of yellow-orange-red in the fall.

**HUGGING TREES**

# HUGGING TREES

No need to put a numbered tag on the Hugging Trees, an unusual entwined **RED OAK(2)** and **HEMLOCK(25)** probably over 100 years old. Logger whimsy in the past must have spared this pair, since they are bigger than their neighbors. Beneath these giants no young trees grow, but there is an understory of interesting plants: **INDIAN CUCUMBER ROOT, SARSAPARILLA(40)**, **GAYWING(37)** and a few **PINK LADYSLIPPERS(38)**, an orchid blooming in late May-early June. The trail heads south.




## Woodwide Web

*For more information, see "The Social Life of Forests" by Ferris Jabr, New York Times Magazine, December 2, 2020.*

Trees communicate in other ways than "hugging." Mycorrhizal networks, or a "Wood-Wide Web" make connections among trees. Underground white threads of fungi called mycelia connect to tree roots, and receive some of the sugars that trees' leaves have photosynthesized. In return, the mycelia provide some water, nitrogen, and other minerals to the trees. Mother trees provide some food for baby trees through these threads. By exchanging substances through the mycelia, trees "talk" to each other. In the right moist conditions, usually after a rain, the mycelia grow fruiting bodies above ground or on tree trunks to send spores on the wind to find a new home. We call these fruiting bodies mushrooms. When we see a mushroom, we're seeing only a small part of the whole fungus. Mycorrhizal fungi are especially important for ladyslippers whose tiny seeds won't sprout and grow without specific fungi providing nutrients.

As you walk the trail, look for the many types of mushrooms that appear especially after a rain. It's hard to predict where they will pop up.

## INDIAN CUCUMBER ROOT

(*Medeola virginiana*)

This plant grows in moist woods. It has a single slim stem with six or so leaves radiating in a whorl at the top of the stem. The oblong leaves have parallel veins, smooth edges, and pointed tips. If the plant is going to flower, it grows a second whorl of usually 3 shorter leaves above the first whorl. In late spring the ½ " greenish-yellow flowers nod from the center of the top whorl of leaves. In July the flowers develop into small green berries that turn bluish-purple as they ripen. In the fall, leaves fade to yellow with a purplish tinge. Although the berries are inedible, the white root is edible, tasting somewhat like cucumber. BUT, eating it kills the whole plant, and this plant is now scarce.

Photo by Nancy Peek

Photo by Anne Keddy

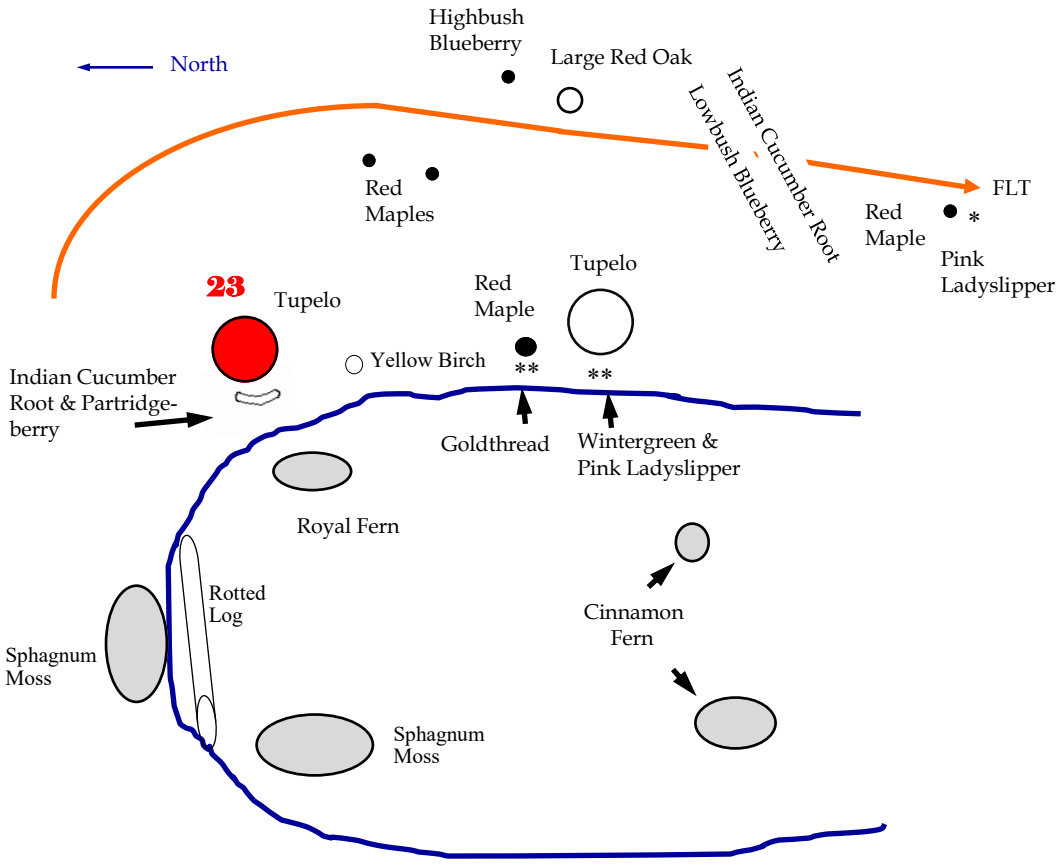
STOP 23

# SWAMP OF THE TUPELOS

The **BLACK TUPELO** tree at #23 was special enough that this trail was slightly rerouted to pass by here. While the main bog features plants from the north, the tupelo is more common in the south. Walk all the way around the tupelo to see the deeply furrowed bark. Look for the low **PARTRIDGEBERRY(34)** under the tupelo. A second tupelo grows midway along the pool. Two tall ferns that grow in swampy places live here—the **ROYAL FERN** and the **CINNAMON FERN.**

*The furrows in the bark of the Tupelo tree are deepest on its pool side. Freeze-thaw cycles and weathering have broken off outer bark on the other, more exposed side of the tree. (See Bark, p.66, 68.)*

*An extensive spread of Indian Cucumber Root lines the trail just south of the tupelo tree, mixed with Lowbush Blueberry.*




## BLACK TUPELO
**(Sourgum, Pepperidge)**
(*Nyssa sylvatica*)

Photos by Jackson Thomas

Branches of the tupelo grow out horizontally from the strong main trunk. Mature bark is gray and heavily furrowed. Oblong oval leaves are shiny with smooth edges. Tiny greenish-white flowers bloom in late spring and ripen into sour fruits that birds love. Leaves turn brilliant red in the fall.

Black tupelos grow in damp areas mostly in southern states, but do grow in lower elevations in New York state. They can grow to 100 feet tall and live 600 years.

## ROYAL FERN
(*Osmunda regalis*)

**Protected Plant**

The royal fern's widely spaced smooth-edged leaflets look more like locust tree leaves than the usual lacy fern. It grows in water or wet areas in vase-shaped clusters up to 6 feet tall. The rusty-red to brown fertile fronds grow on separate stems from the sterile fronds. Royal ferns die back in winter. This fern has existed since the dinosaur age.

Photo by Nancy Peek

## CINNAMON FERN
(*Osmunda cinnamomea*)

**Protected Plant**

This six-foot tall fern grows in swampy places, usually in colonies. In the spring, silvery, furry fiddleheads sprout from black root clumps and grow into vase-shaped clusters. Fronds' leaflets are pointed at the ends and are twice-cut into deep lobes. Fertile fronds with woolly tufts grow up in the middle of the cluster and turn cinnamon-colored as they mature (no cinnamon scent or taste though.) In June the fertile fronds wither and lie on the ground at the base of the cluster. The fronds turn rusty orange in the fall before dying back for winter.

Photo by Nancy Peek

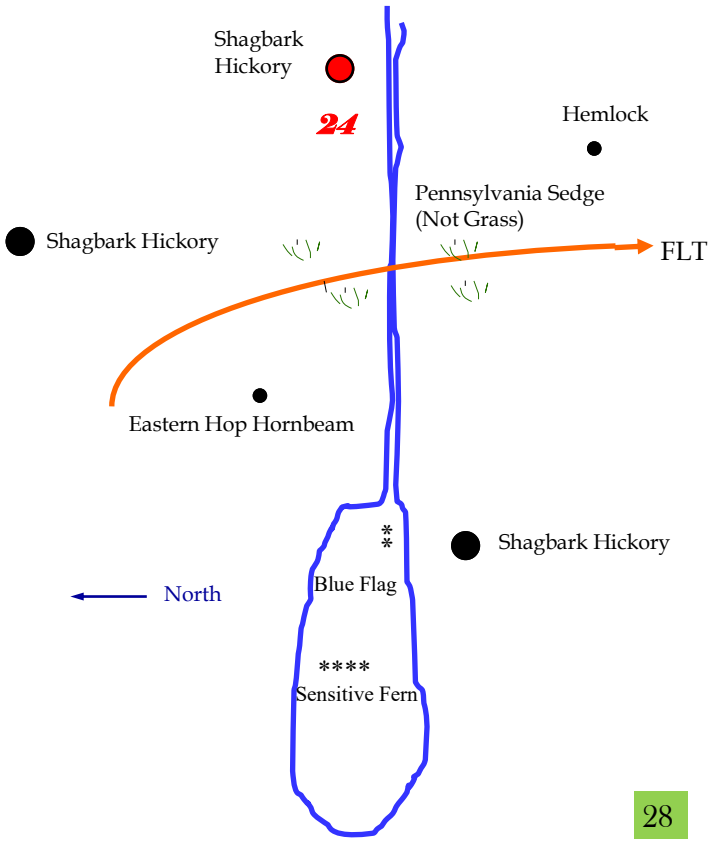
**STOP 24**

*"Sedges have edges, Rushes are round, Grasses have nodes from the top to the ground."*

# HICKORY & SEDGES

Sign #24 on a **SHAGBARK HICKORY** marks another special spot. Pennsylvania sedge carpets this sudden hickory garden. Sedges look like grass, but cross sections of sedge stems are triangular and the stems are solid. Grass stems are cylindrical and hollow with solid nodes. Rush stems are cylindrical and solid with no nodes.

**SHAGBARK HICKORY** and a Bitternut Hickory are scattered throughout this sedgy glade with a seasonal streamlet across it.



**SHAGBARK HICKORY**
(*Carya ovata*)

Very young hickory trees have smooth gray bark with vertical lines that soon crack, causing vertical strips of bark to hang from the trunk, making the trunk look shaggy. Each leaf usually has five, or rarely seven, leaflets. The three leaflets at the end of the leaf are larger than the pair at the base of the leaf. Crush a leaf to get a whiff of hickory. In autumn, the leaves turn yellow, and thick-husked nuts fall. The husk breaks into four pieces, releasing a light beige nut. As squirrels and chipmunks know, these nuts are delicious. Hickory wood is tough and strong and has been used for tool handles and baseball bats. Early settlers used the expression "tough as hickory."

Photo by Jackson Thomas

**STOP 25**

# HEMLOCK HAVEN

Sign #25 is on a **HEMLOCK.** Hemlock trees grow on steep slopes and other shady places in the woods mixed with other kinds of trees. Every Finger Lakes gorge is lined with hemlocks which shade water, keeping it cool for trout, salamanders, and other creatures as well as providing shelter and food for birds, squirrels, grouse, rabbits, and deer. Its roots hold the soil on steep hillsides. It develops its root system while growing slowly in the shade of other trees. When an older tree shading it dies and leaves an opening, the small hemlock shoots up, reaching for the sunshine, growing up to 100 feet tall. This can take several hundred years, but since it can live to 900 years, it's in no rush.

The Hemlock Woolly Adelgid (HWA), a tiny aphid-like insect from Japan, arrived in downstate New York in 1985 and has spread to the Finger Lakes, including Urbana Township. The weird thing is, only female adelgids have appeared in the US. Even without mating, they lay many eggs that hatch into crawlers which grow into nymphs, then adults that can fly. The tiny crawlers attach themselves to the base of needles and eat the tree's stored starches, depriving the branches and twigs of their own food and killing the tree, usually within 10 years. Look for the small white wool-like bundles on the underside of twigs at the base of the needles; they're especially noticeable in the winter. If you see them, write a note in the log book at the trail register.

Photo by Anne Keddy

It's hard to imagine what Finger Lakes forests and gorges would be like without this sheltering tree. Scientists are researching ways to control the adelgid. Foresters are both importing insects that eat adelgids and applying insecticides.

**EASTERN HEMLOCK**
(*Tsuga canadensis*)

This evergreen has very short needles, but they are much more flexible than spruce needles and not prickly. The cones are tiny, less than 1" long. The real giveaway is the 2 white stripes on the underside of the needles.

Photos by Jackson Thomas

STOP 26

# A Mysterious Disappearance

Sign #26 is on a **WHITE PINE (17)**. A small patch of **POISON IVY(42)** grows just beyond the pine on the same side of the trail. Across the trail, a patch of **WHITE TRILLIUM** blooms in mid -May. Back to the north, in the bushes, at least a half dozen young **PINK LADYSLIPPERS(38)** are growing. A tall trunk of a hemlock hosted hemlock varnish shelf fungus (aka hemlock reishi) in 2021-2022. Many **INDIAN CUCUMBER ROOT** (Hugging Trees) grew near this trunk, but they disappeared in July 2021, with only small holes in the ground showing where they had been. Did an animal or a hungry hiker dig them up? Digging them up destroys the plant. Although their roots make a refreshing snack, never dig up Indian Cucumber Roots unless there are at least three other plants within three feet to carry on for the future. Luckily, a few small plants re-appeared here in Spring 2022.

**BRACKEN(18)** and mats of **WINTERGREEN** also grow near the trunk.

**WHITE TRILLIUM (Large-Flowered Trillium, White Wakerobin)** *(Trillium grandiflorum)*

**Protected Plant**

This beloved spring wildflower has three large white petals over three broad leaves on a stem about a foot high. The petals turn pale pink as they age. It can take five to seven years for a trillium to grow from a seed to producing a flower. Luckily, it also spreads from its underground rootstalks. Unfortunately, deer love to eat trillium.

Photo by Anne Keddy

**WINTER-GREEN (Eastern Teaberry, Checkerberry)** *(Gaultheria procumbens)*

This low creeping ground cover has shiny, leathery oval smooth-edged evergreen leaves which may turn purplish in cold weather. In early summer, it blooms with small white nodding flowers, bell-shaped with 5 little teeth at the edges, similar to blueberry blossoms. The bright red edible berries that follow have a wintergreen or teaberry flavor, similar to the black birch. Teaberry flavoring was made from this plant, but is now chemically synthesized. Birds and mammals eat the berries, and deer browse the leaves in winter.

Photo by Jackson Thomas

STOP 27

# American Chestnut—Can It Make a Comeback?

Sign #27 is on a large **RED OAK**(2). Opposite this tree is an **AMERICAN CHESTNUT,** 4" dbh (diameter at breast height.) Unfortunately some of its branches have died, because chestnut blight has found it. It 's hard to imagine now that the American chestnut tree was once a long-lived giant in eastern forests, growing sometimes to 100 feet tall with very thick trunks. Its rot-resistant wood was excellent for furniture and buildings. Its nuts were tasty to people and animals. Farmers made money selling the nuts. In 1904 an Asian fungus appeared on chestnut trees in New York City. and by 1926 the blight had spread through the eastern US, killing most chestnut trees. But the roots survived. New chestnut trees sprout from the roots, but usually die from the blight before they grow large enough to make chestnuts. The American Chestnut Foundation (TACF) and universities have been researching ways to control the blight, mainly

*For more information on reviving the American chestnut, see https://acf.org/ny*

by cross-breeding American chestnut trees with Asian chestnut trees. The fungus exudes oxalic acid which kills the tree. Many plants have a gene that breaks down oxalic acid. SUNY-ESF in Syracuse inserted this gene into the chestnut DNA. The US Environmental Protection Agency is testing these trees to be sure they're safe before allowing them to be planted in the wild. Meanwhile, TACF is searching forests for large chestnut trees to interbreed with the genetically engineered trees and offers a reward to those who find large trees.

**AMERICAN CHESTNUT**
(*Castanea dentata*)


Photo by Jackson Thomas

Chestnut's paper-thin canoe-shaped leaves resemble beech leaves, but are longer, with curved sawtooth-like edges. Like beech leaves, they are pointed at the tips, with parallel veins running from the midribs. The bark is grayish-brown with long irregular furrows and flat ridges. Stems are smooth chestnut brown to dark green with small white lenticels. Sprays of white male catkins appear on trees five-plus years old in early summer. Female catkins are shorter and grow on separate trees. In early fall, leaves turn yellow and then brown; some leaves hang on the tree through winter. Chestnut burs fall early; each holds three small nuts. Most chestnut trees have sprouts around the trunk because they are stressed from the chestnut blight and will likely die before old enough to flower and bear nuts.

**STOP 28**

# BLACK BIRCH AND MORE

Sign #28 is on a **young BLACK BIRCH**. . **INTERRUPTED FERN** lines the trail. **AMERICAN CHESTNUT**(**27**) sprouts and **LOWBUSH BLUEBERRY**(**37**) grow here and there.

**BLACK BIRCH**
**(Sweet Birch, Cherry Birch)**
(*Betula lenta*)


Photo by Rob Routledge, Sault College, bugwood.org


Photo by Jackson Thomas

The easiest way to ID this tree is to smell the delightful wintergreen odor of the broken twigs. Oil of wintergreen used to be made from its inner bark, but is now synthesized. The sap used to be made into syrup and birch beer.

The young trunk bark is smooth reddish brown to black with thin horizontal stripes (lenticels). The bark cracks and grays with age. In early spring, hanging yellow male catkins and smaller greenish female catkins bloom. The female catkins ripen into 1" brown conelike fruits in the fall. The oval leaves, pointed at the ends and with serrated edges, grow in pairs alternately along the twigs. They turn yellow in the fall. This tree can grow up to 75 feet tall.

**INTERRUPTED FERN**
(*Osmunda claytoniana*)

**Protected Plant**

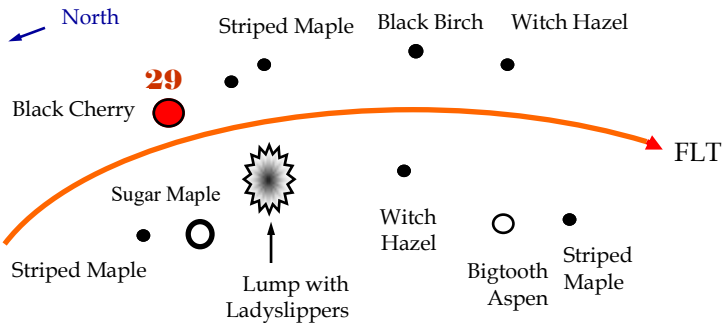
This large fern grows in vase-like clumps in wet areas. In the spring, woolly fiddleheads appear and develop into large fronds. All-green sterile fronds grow on the outside of each clump. The leaflets have oval-lobed edges. On some fronds inside the clump, brown fertile (spore bearing) leaflets grow in the middle of the frond, **interrupting** the green leaflets above and below on the same stem. These ferns die down in winter. This is one of our oldest fern species, living with the dinosaurs 200 million years ago.

Photo by Anne Keddy

**STOP 29**

## LOSING ITS FOOTING

Sign #29 is on a **BLACK CHERRY(7).** In very early June, **PINK LADYSLIPPERS (38)** bloom on the rotting stump across from the black cherry**.** Notice the **STRIPED MAPLE(31)** with its green-striped bark. You can also see a blazed **BLACK BIRCH(28)** with an unusual root system. What conditions do you think led to such a strange sight? Hint: the title of this stop gives you a clue.




**STOP 30**

## PINK LEAVES

Sign #30 is on a **BLACK BIRCH(28)** . Check out the **MAPLELEAF VIBURNUM** bush growing in front of the birch and another one growing behind. Young chestnut trees grow north and south of here.

**MAPLELEAF VIBURNUM**
*(Viburnum acerifolium)*

The leaves of this small shrub look like maple leaves, and they turn a beautiful pink in the fall. The twigs grow opposite each other along the stem. Flat-topped clusters of tiny yellowish-white flowers bloom in late spring. They become first red, then blue-black egg-shaped berrylike stone fruit by fall.

Photos by Jackson Thomas

STOP 31

# MANGLED MOOSEWOOD

Sign #31 is on a **RED OAK(2).** In front of a nearby **WHITE PINE(17)** grows a small **MOOSEWOOD,** aka striped maple, starting over after a severe injury. It appears to have grown a branch into the ground, perhaps to make a new trunk and roots. How long will it survive and what shape will it develop?

**MOOSEWOOD (Striped Maple, Goosefoot Maple)** (*Acer pensylvanicum*)

Photos by Jackson Thomas

This small tree grows only in the shade. It has smooth, green-striped bark and large leaves shaped like a goose's foot. In fall the leaves turn yellow. The twigs grow opposite each other on the branches, as they do on other maples. In May or June, separate greenish male and female flowers appear in dangling clusters on the same tree and develop into clusters of seeds in winged pairs. Rabbits, deer, moose, and beaver eat the bark in the winter.

STOP 32

# BECOMING ONE WITH NATURE

When the nature trail & guide were created in the 1990s, the numbered ID tags were made of plywood. Local fauna promptly ate them. Apparently, lots of critters like the taste of the glue used to make plywood, particularly porcupines.

In response, metal tags were nailed to the trees. This held them firmly in place- a little *too firmly though, since pressure from the trees' growth caused the bark to slowly envelop some of the more stubborn intruders.*

If the trees live long enough, these embedded tags will eventually become completely covered. Removal would do more harm than good at this point, since it would leave an open wound vulnerable to pests & rot.

In 2023 new tags were installed with a slight modification. Screws replaced the nails, allowing future FLT volunteers to unscrew them a few turns to relieve the pressure as needed.

STOP 33

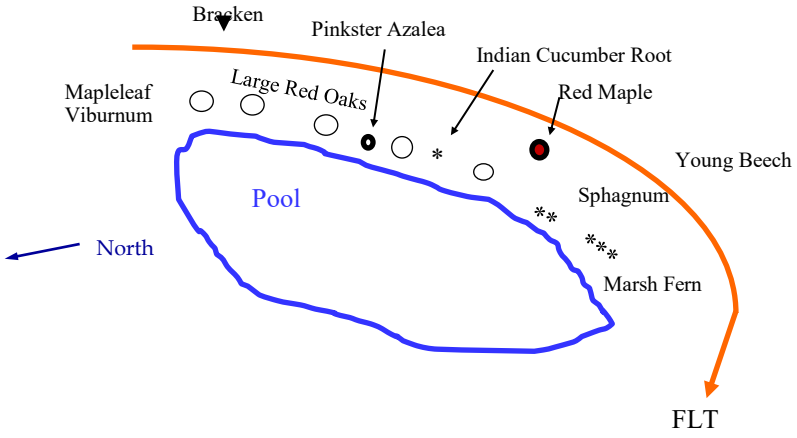
# Newt Nirvana

With the first warm soaking rains in early spring, frogs, toads, and salamanders warm up enough to emerge from their winter hiding places under leaf litter and logs. They head to pools like this to mate. In early April, you will probably hear wood frogs here, although they will go quiet as you approach. **EASTERN NEWTS** also mate in this pool. In early May 2022, two wood ducks were seen here. On damp spring and summer days you may see red efts, the teenage stage of the eastern newt, roaming the trail. Another amphibian you may see along the trail in spring and summer is the **AMERICAN TOAD.**

*You may hear a Wood Peewee in the spring and summer, saying its name in a drawn out "Pee-ee-wee,", the second note lower than the first and third notes, followed by "pee-oh," the second note lower.*

Big **RED OAK(2)** trees line this pool's edge. About a third of the way along the pool's edge grows a large **PINKSTER AZALEA** which blooms in mid-to-late May. **HIGHBUSH BLUEBERRY(18)** bushes also grow along the pool's edge. Much younger trees, including many **WHITE PINES(17)**, grow across the trail from the pool, in what was once a field. Remnants of fencing were found along the pool when this trail was built in 1992, so there was grazing in the field.

Between here and stop #34, the trail wanders through an area of young trees typical of first growth from open fields. While the area near Stop 20 grew up into aspens, this spot was seeded by some older neighbor trees to **WHITE PINE(17)**, **RED MAPLE(1), BEECH(19)** and **HICKORY(24).** Some young **QUAKING** and **BIGTOOTH ASPEN(20)** grow farther along the trail. This area will change greatly in the next few decades.




## EASTERN NEWT
**(Red Spotted Newt)**
(*Notophthalmus viridescens)*

This salamander spends most of its life in water, but you're most likely to see it in the eft stage when it lives on land. The green babies are less than 1" long and have gills, but when they become teenagers, they grow lungs. They turn orange-red and have a new name—Red Efts. Because their skin is toxic, they don't need camouflage. They wander on the moist forest floor for 1-3 years. When they become adults, they turn olive-green to brown with red spots and grow a tail fin. They find a pool to live in and spend the rest of their lives in the water unless their pond dries up. They eat tiny animals such as tadpoles, worms, and mosquito larvae. They can live up to 15 years.

Photo by Nancy Peek

**AMERICAN TOAD**
*(Anaxyrus americanus)*

In the spring, you may hear the toad' s mating call—a high trill. After mating, the females lay eggs in long strings in small pools and shallow streams. Although the dark tadpoles eat algae, adult toads eat insects. The adult toad has bumpy, warty skin in different shades of brown that make good camouflage. In the winter adult toads stay sluggish in the soil or under leaves.

Photo by Jackson Thomas

**PINKSTER AZALEA**
(*Rhododendron periclymenoides)*

**Protected Plant**

The pinkster is a slender bush with dark gray branches. Most of the pinksters here are very small. Showy pink flowers with long stamens appear in late May, sometimes before the oval leaves, and have a subtle spicy aroma. Dried blossoms and seed cases may hang on through winter.

Deer eat this plant, but it is highly toxic to people.

Photo by Nancy Peek

**STOP 34**

# PARTRIDGEBERRY & STARFLOWER

Sign #34 is on a maple tree. **PARTRIDGEBERRY** grows nearby. In May, **STARFLOWERS** bloom at the base of the **WHITE PINES(17)** on the same side of the trail. More partridgeberry lines both sides of the trail between here and Stop 35.

**PARTRIDGE-BERRY**
(*Mitchella repens*)

Partridgeberry is a low evergreen creeper. Its rounded green leaves are less than 1" long and have tiny white veins. In mid to late June, small twin flowers with four white or pink petals appear at the end of a short stem. The two flowers ripen into a single bright red berry with two tiny dimples.

The berries are tasteless but edible—birds and animals eat them.

Photo by Jackson Thomas

**STARFLOWER**
(*Trientalis borealis*)

Starflower is a low spring wildflower with five to ten lance-shaped leaves growing in a whorl around the stem. The white star-shaped flower has six to seven petals and blooms, usually in pairs, above the leaves in May and June.

Photo by Nancy Peek

*You may hear the Ovenbird , Wood Peewee, and woodpeckers near here.*

**STOP 35**

# FLOWERS THAT LOVE THE DAMP

Sign #35 is on a **RED MAPLE( 1)** just before a tiny intermittent stream. Many purplish-pink **WILD GERANIUM**(**36**) also bloom here in May. Purple violets grow streamside. A small patch of **JEWELWEED** grows next to the stream on the right side of the trail. **JACK-IN-THE-PULPIT** grow in this area, although their placement changes annually. More **WHITE PINES** (**17**) follow. The trail heads west from here.

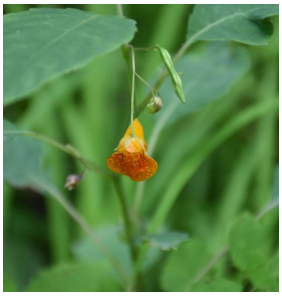
**JACK-IN-THE-PULPIT**
(*Arisaema triphyllum*)

In spring, an unusual flower grows in between two 3-part leaves; the spadix (Jack) is covered by a green or maroon-striped spathe (the pulpit.) The flowers ripen into bright red clusters of berries. Plants that don't flower die back in summer. Leaves, berries, and roots have calcium oxalate crystals that sting the skin and mucous membranes; it's best not to touch it.

Photos by Nancy Peek

**JEWELWEED**
**(Touch-Me-Not)**
(*Impatiens capensis*)

Although the jewelweed growing here in 2021 was small, this annual plant can grow in large clumps 3-5' tall in wet areas. It has tender, semi-translucent stems, and small lightly toothed oval leaves that hold droplets of water like shining jewels. Caterpillars and deer eat the leaves.



Photos by Jackson Thomas

Orange flowers with reddish spots are shaped like a cornucopia with a nectar spur at the end. They bloom from midsummer until frost. Hummingbirds and insects love their nectar. One-inch-long spindle-shaped seed pods fatten as the seeds ripen and turn brown inside. Pinch the end of a fat ripe pod, and watch it shoot out the seeds which mice and birds eat. Another tiny (1 millimeter) self-pollinating flower may grow at the base of leaf stems in the fall. It produces much smaller plants than the showy flowers.

(Jewelweed Continued next page)

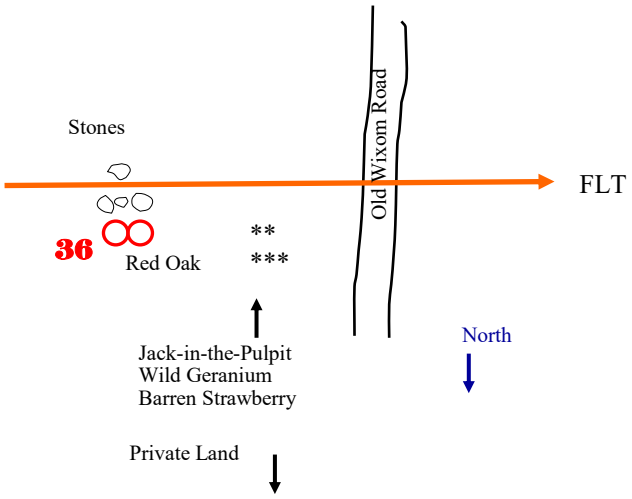
Jewelweed
(Continued)

Mash jewelweed stem and leaves and rub their juice on the skin to relieve itching from poison ivy skin rashes and other contact dermatitis. This has been scientifically tested and verified, but the tests also revealed that some people are allergic to jewelweed. The sap also has a fungicide that can be used for treating athlete's foot.

STOP 36

## OLD WIXOM ROAD

Before crossing what remains of old Wixom Road, note where rocks were tossed at the edge of what once was a field, under the **RED OAKS(2)** holding Sign #36. Look on the north side of the trail for **JACK-IN-THE-PULPIT**(**35**), **WILD GERANIMUM,** and barren strawberry blooming near the end of May. Wixom Road led to the Freewill Baptist Cemetery, near the intersection of Wixom and Reservoir Roads.




This old field "nursery" area was selectively logged to improve the timber stand in 1988. Logging is part of the DEC's mandate for state forest lands.
Building the trail through here took an inordinate amount of work to clear the post-logging debris. Bob Muller and Steph Spittal deserve ribbons for the several days' work they put into clearing in order to create a path here to show post-logging growth. Thirty plus years later, it's hard to tell where the logging took place.

**WILD GERANIUM (Spotted Geranium, Cranesbill)** (*Geranium maculatum)*

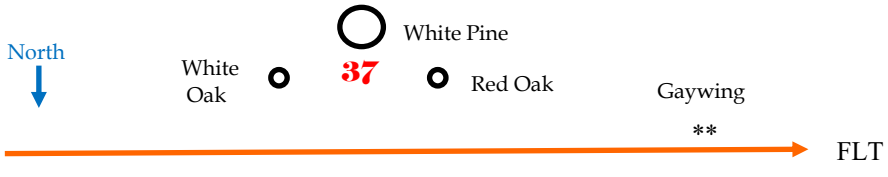
These purplish pink flowers have five petals and bloom in late spring. Lines in each petal guide insects to the flower's center for nectar and pollen. About a month after blooming, the flowers develop into seed capsules with a slender central stalk resembling a crane's bill with five seed compartments around the base. When the seeds are ripe, the capsule springs open and shoots the seeds 10-30 feet. Leaves, which have about five lobes and rounded teeth, grow at the base of the hairy flowering stems.

Photo by Nancy Peek

STOP 37

## SMALL TREATS

A young **RED OAK**(**2**) and a young **WHITE OAK**(**1**) grow side by side here to the left of the trail. This is a good place to compare the two. Just past these on the same side is a patch of **LOW-BUSH BLUEBERRY** thickly mixed with **GAYWING,** a bizarre low-growing magenta flower shaped like a flying insect. It blooms in May. As you approach Stop 38, look for **PINK LADY-SLIPPERS**(**38**) blooming in late May to early June.



**GAYWING**
**(Fringed Polygala)**
(*Polygala paucifolia*)

This delicate low creeping plant has small oval smooth-edged evergreen leaves similar to wintergreen. Although the magenta (or rarely white) flower resembles an orchid, it's not—it's a milkwort. Bees fertilize these showy flowers, but the plant also has smaller underground flowers that self-fertilize. The tiny fruits are a treat for ants who carry them away, dispersing the seeds.

Photo by Nancy Peek

**LOWBUSH BLUEBERRY**
*(Vaccinium angustifolium)*

This low shrub can grow to two feet high. Small narrow oval leaves are red-green in spring and turn to blue-green in summer then maroon in fall. With enough sunlight, small white flowers appear in May-June. They're jar-shaped with tiny ruffles at the open end. The berries still have ruffles on one end; they ripen from green to pinkish to blue in late summer. Birds and animals love blueberries and usually find them before we do.

Photo by Nancy Peek

Photo by Jackson Thomas

**STOP 38**

*A "coppice" or copse is a cluster of trees, in this case maple, that most likely grew from multiple sprouts out of a cut stump.*

# WOODLAND ORCHIDS

Sign #38 is on a coppice maple. It is likely that a few of the shoots will survive to form a several-trunked tree. A half dozen **PINK LADYSLIPPERS**, a surprising forest orchid, bloom in the area between stops 37 and 38. **DON'T TOUCH—for several reasons!** They are a protected treasure and require the just right delicate combination of conditions in order to flourish. They depend on specific mycorrhizal fungi (see Woodwide Web, page 22) to provide nutrients to their roots and to their seeds. They will not survive when transplanted, so don't even think about it. **Also, touching the leaves and stems can cause a rash similar to poison ivy rash.**

**PINK LADYSLIPPER**
**(Moccasin Flower)**
*Cypripedium acaule*)

**Protected Plant**

If you miss the magic moment in late May-early June when the 2-3" pink bladder of a bloom is out, train your eye to notice two waxy green oval leaves that lie flat on the ground the rest of the year, with distinctive stripes or vertical pinches in the texture of the leaf. Found typically in acid soils.

Photo by Anne Keddy

## CANADA MAYFLOWER (Wild Lily of the Valley)

(*Maianthemum canadense*)

This plant grows 3-6" high and has two to three shiny heart-shaped leaves that attach directly to the stem. Clusters of tiny white four-pointed flowers bloom above the leaves in May and develop into a speckled, then pale red berry which rodents and grouse eat. The plants often grow in colonies on the forest floor.

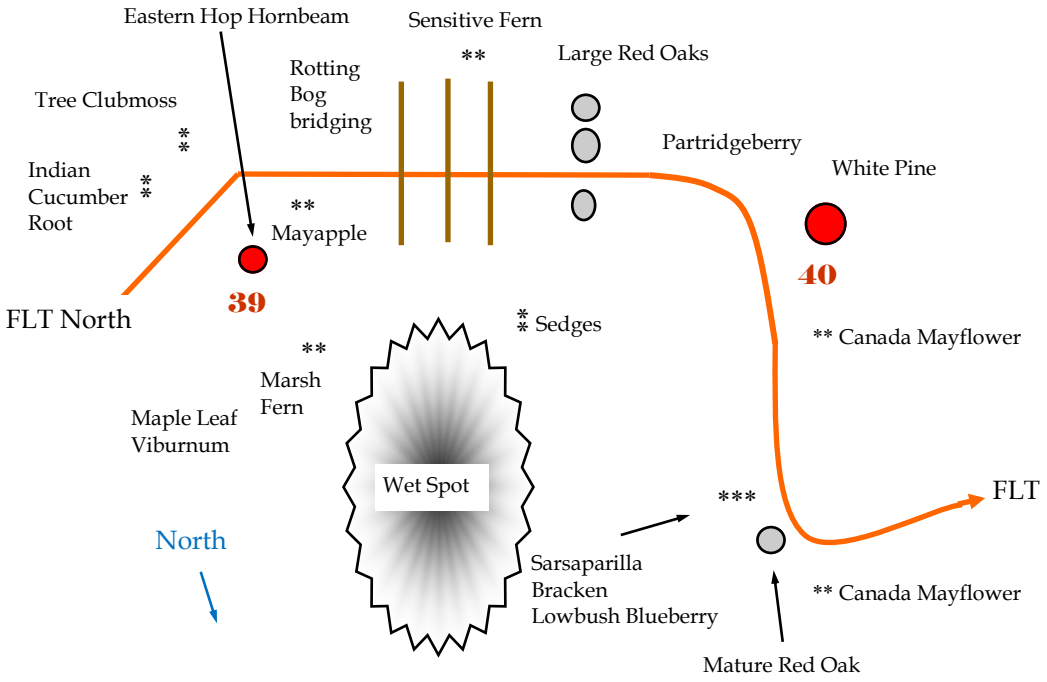
Photo by Nancy Peek

**STOP 39**

*Map for Stops 39-40*

# HOP HORNBEAM

Sign #39 marks an **EASTERN HOP HORNBEAM. MAPLELEAF VIBURNUM**(**30**) grows behind. **SENSITIVE FERN**(**20**) and **MAYAPPLES** grow around the bog bridging.




## EASTERN HOP HORNBEAM

(*Ostrya virginiana*)

This small tree usually grows in the shade of taller trees. Its bark is light grayish-brown and is divided into thin, vertical, rectangular strips that are loose on the ends. Younger branches and twigs are a very dark red. The oval leaves are pointed at the end and have doubly serrated edges; they turn yellow in the fall. Flowers appear in mid-to-late spring. The dangling seedpods look like hops and appear in August-September.

Photos by Nancy Peek

Birds, squirrels, deer, and rabbits eat the seeds. The wood is very hard and was used for making tool handles and runners on sleighs.

**MAYAPPLE (Wild Mandrake)** (*Podophyllum peltatum*)

Photo by Nancy Peek

Photo by Jackson Thomas

When mayapple leaves first emerge in early spring they look like closed umbrellas and then unfurl like open umbrellas. Most plants grow just one leaf, but when mature, they grow two leaves and a flower in May. The white flower hides under the two leaves at the crotch of the stem. The lemon-shaped fleshy fruit is yellow when ripe. It's edible, **but the seeds inside are not.** Leaves, roots, and seeds contain podophyllotoxin, which is poisonous to mammals. It's used in an ointment to remove plantar warts. Turtles eat the fruit. Mayapples grow in colonies, spreading from one root in acid, humus-y soils under deciduous trees.

**STOP 40**

## SASSY SARSAPARILLA

Sign #40 is on a **RED OAK** (**2**). Long pine cones from this tree may litter the trail. **PARTRIDGEBERRY(34)** grows close to the ground beneath the tree. To the right of the trail at the base of a large **RED OAK(2)**, **BRACKEN(18)** and **LOWBUSH BLUEBERRY(37)** grow, along with **SARSAPARILLA**.

**SARSAPARILLA** (*Aralia spp*)

Photo by Anne Keddy

Photo by Jackson Thomas

Sarsaparilla grows about 1-3 feet high with three leaf stalks growing from the top of a central main stem. Each stalk has five oval leaflets with fine-toothed edges. The leaflets are bronze when they first appear, but turn green, then yellow to deep red in the fall. A separate flower stalk, shorter than the leaf stalk, divides into three rounded clusters of tiny greenish-white flowers that bloom in late spring. In summer the flowers develop into small purple-black berries, said to be spicy and sweet and eaten by birds, deer, bears, chipmunks, and foxes.

The large root contains safrole, which has the same spicy smell as the sassafras tree. It was sometimes used as a substitute for the true sarsaparilla plant (*Smilax ornata*), a prickly tropical vine that flavored the original sarsaparilla drink.

STOP 41

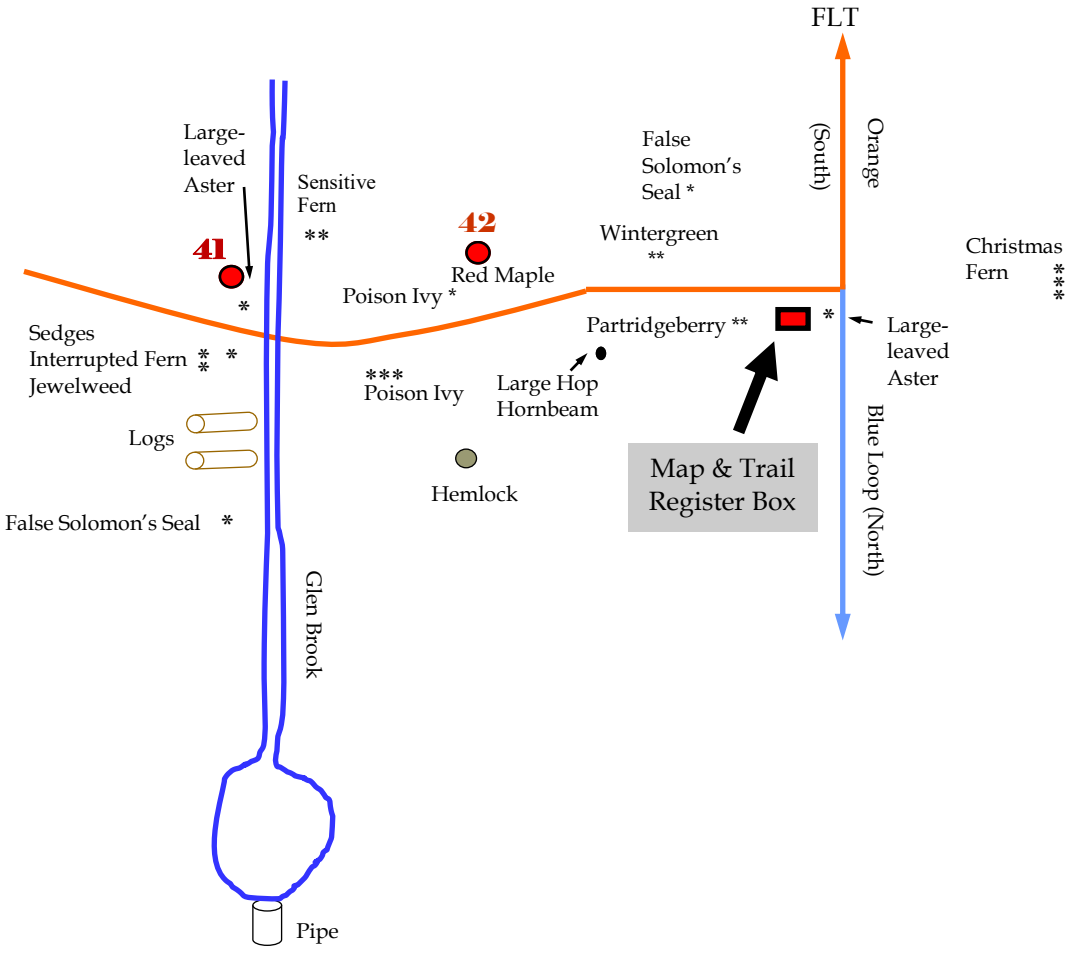
# WATERSHED DIVIDE

Sign #41 is on a **BLACK BIRCH**(**28**) at a continuously flowing stream, Glen Brook. Unlike water flowing through the culvert at Stop 11, which eventually flows south to Chesapeake Bay, water in this stream goes in a different direction. At the top of the hill, a small rise between Huckleberry Bog in the north and a privately owned wetland south of it makes a watershed divide. This stream starts at the private wetland and runs south into Glen Brook, creating a spectacular glen in Hammondsport. This water then flows northward to Keuka Lake, into Seneca Lake, then on to Lake Ontario, northeast through the St. Lawrence River and into the North Atlantic.

The stream bank hosts several types of ferns. **INTERRUPTED FERN**(**28**) grows on the same side of the creek as Sign 41, **SENSITIVE FERN**(**20**) grows on the opposite side, and lady fern grows on both sides.

A small patch of **JEWELWEED**(**35**) also grows by the stream. Rubbing this plant on the skin may relieve the itching from **POISON IVY** that grows at stop 42. Just beyond two logs by the stream **FALSE SOLOMON'S SEAL** blooms in May.

*Map for Stops 41-42*



**STOP 42**

# LAST STOP

Sign #42 is on a **RED MAPLE(1)** just beyond the stream. ***Beware*** the **POISON IVY** at the tree's base and across the trail from the sign. Beneath a **HEMLOCK(25)** opposite the trail register, **FALSE SOLOMON'S SEAL** blooms in May. Many other plants that we have identified along the trail grow in this area. How many do you recognize?

## POISON IVY
*(Toxicodendron radicans)*

"Leaves of three, let it be." Steer clear of this one. All parts of the plant contain urushiol, which causes contact dermatitis, an itchy, blistery rash in most people. Each stem has 3 leaflets with irregularly notched edges. On the Huckleberry Bog trail, the poison ivy grows in low clusters on the ground, but it can grow as shrubs or even big hairy vines that climb trees. (The hairs are aerial rootlets.) This plant seems able to grow almost anywhere. The leaves turn red in fall. Birds and animals eat the whitish berry-like fruits.

Photo by Jackson Thomas

## FALSE SOLOMON'S SEAL
**(Feathery False Lily of the Valley)**
*(Maienthemum racemosum)*

This spring wildflower grows to 3' high in moist woods. Broad oblong leaves with pointed tips, parallel veins, and slightly wavy edges alternate along a stalk that zigzags a bit from leaf to leaf. The tiny feathery white flowers bloom at the end of the stalk in May and develop into speckled greenish berries that turn red by late summer. Birds and mice eat the berries.

Photo by Anne Keddy

Photos by Nancy Peek

*The distance to the other guide box along the blue trail is 1.22 miles.*

# FINAL NOTE:

Please return this guide to the Trail Register box **OR RETURN TO THE BEGINNING BOX IF YOU PLAN TO COMPLETE THE LOOP. WE PREFER THE BOOKS BACK AT THE NORTH END.**

## DO NOT TAKE THESE BOOKLETS!

Download a free copy at fingerlakestrail.org instead.

# PARTING THOUGHTS:

This is the end (or beginning) of the 1.8 mile orange-blazed nature trail, with another wooden box for the guide booklets. If you are continuing on the Bristol Hills Branch Trail (orange), PLEASE leave your booklet in the box. Or you can return via the blue-blazed 1.2 mile loop back to the original booklet box and return it there. PLEASE DO NOT TAKE THESE BOOKS; **PRINT YOUR OWN COPY FOR FREE** from the FLT website at **fingerlakestrail.org**, or send $10.00 to cover copying and mailing costs to the Finger Lakes Trail Conference, 6111 Visitor Center Road, Mt. Morris, NY 14510. Quantity rates for school groups can happily be negotiated. FLTC 585-658-9320 (fax 2390), or FLTinfo@fingerlakestrail.org.

The blue trail was the original route through here, but a suggestion in the DEC's Unit Management Plan that the FLT build a trail over to the "Huckleberry Bog" started our creative juices flowing, especially once we saw the varied and special forest around it. The new orange trail around the bog was built in the winter of 1992 by **Stephanie Spittal**, **Irene Szabo**, and **Bob Muller**, volunteers with the FLTC. **Douglas Bassett**, park naturalist at Letchworth State Park, helped us with many early identifications. Irene built the blue spur around the west side of the bog in the winter of '96 -97, and wrote this booklet mostly from Steph's material.

In 2000, **Wayland-Cohocton High School** science teacher **Rob Hughes** transformed the previous crude, homemade booklet (done on a *typewriter!* with hand-drawn little maps) into a computerized beauty as a project in designing interpretive nature trails for his Advanced Placement Biology classes of 99-00. Without all these gifts of time and materials, this booklet would not exist.

By 2020, the woods had changed enough to require a new revision. In 2021-2022, **Christine DeGolyer** and **Aaron Havill** made the revisions with Irene's guidance. **Tim Kasser** currently maintains the trail. For the photos in this edition, we thank **Jackson ("Jet") Thomas**, **Nancy Peek**, **Anne Keddy**, and the contributors to **bugwood.org**. We thank **Randy Weidner** for sharing his natural history expertise. We also thank **Joan Young**, **Donna Noteware** and **David and Elaine Brundage** for their help. All of us who enjoy this hilltop thank our benefactors. Irene especially thanks **Charlie Mowatt**, a DEC forester who took the time to help her see both the trees AND the forest.

Send questions, corrections, concerns, and suggestions to **degolyerchris@gmail.com** .

## We gratefully acknowledge information from the following:

All About Birds allaboutbirds.org Cornell Laboratory of Ornithology, Ithaca, N.Y.

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