

Owls (*Otis asio*), a common year round resident in our forests. Even though they are quite small (8-10 inches tall), eastern screech owls are birds of prey, hunting other small birds and mammals. Their call is a series of quavering whistles, descending in pitch.

10 The Dynamic Forest

This is a wonderful spot to observe the dynamic forest. Facing south you see where the meadow meets the forest edge. Abundant sunlight supports an edge filled with fast growing black birch, witch hazel, autumn olive, and beech saplings. These pioneer trees will continue to advance across the meadow creating new forest if left unchecked by man.

Between the meadow edge and the trail, maples, oaks, white pine, and hemlock saplings are slowly maturing. As they achieve height and breadth, they will crowd out the younger edge species.

Facing north is a classic mature northern hardwood forest. It contains specimens of the 12 common tree species in New York State, which are red maple, sugar maple, eastern hemlock, white pine, ash, beech, red oak, white oak, black cherry, aspen, yellow birch, and basswood. These species make up 80% (by volume) of the trees in the state.

Signs of a mature forest include a diversity of tree species, trees of varying age, abundant debris on the forest floor from fallen trees, and a variety of mosses, lichens, and ferns.

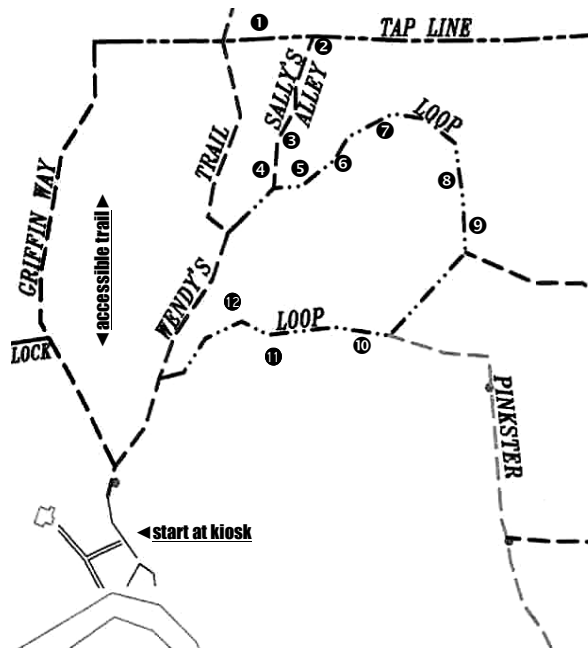
11 Bark Disease in American Beech

To your left about 15 feet you'll see a beech tree suffering from beech scale disease. Notice the cankers and patches of thickened bark on the tree. This disease comes about through a combination of a scale insect (*Cryptococcus fagisuga*) and an associated fungus (*Nectria ditissima*). The insect feeds on the sap, which weakens the beech. The serious damage occurs

when the fungus invades and kills patches of the bark and sapwood. Heavy infestations may girdle the beech.

12 Nature's Condominium

This dead white pine is now home to many different types of birds and animals. Some animals that might be found living here are white-footed deer mice, flying squirrels and chipmunks. A wide variety of bird species depend on standing dead trees for both nest sites and winter homes. Nuthatches, chickadees, and several owl species live in snags such as this. The many insects that dwell here are food for animals such as woodpeckers.



PFEIFFER NATURE CENTER

SELF-GUIDED WALK NORTHERN HARDWOOD FOREST

Revive your senses.
Renew your energy.
Refresh your spirit.
Reconnect with the planet..



www.PfeifferNatureCenter.org
14 South Main Street
Portville, NY 14770
716.933.0187

Did you know? We offer monthly guided nature walks on both properties with our Naturalist. Learn more about the natural world at www.PfeifferNatureCenter.org.

The self-guided trail and accompanying brochure was updated in 2008 as part of a Boy Scouts of America Eagle Scout project conducted by Matt Martin of Allegany NY.

**PFEIFFER NATURE CENTER
SELF-GUIDED WALK THROUGH
THE NORTHERN HARDWOOD FOREST**

The wonderful natural space you are about to enter is a rare remnant of an "old-growth" forest. Typically trees in old-growth forests are older than 150 years and were not disturbed by settlers. Many trees in this section of the forest have been aged at more than 300 years old.

The **accessible interpretative trail** will lead you through some of the oldest trees here, primarily eastern hemlock and white pine. The trail has seven stops to introduce you to features of the old-growth forest.

This **self-guided trail** picks up at the end of the accessible interpretative trail and it will guide you to great giants of red maple, sugar maple, ash, beech, red oak, white oak, chestnut oak, cucumber magnolia, and tupelo.

The self-guided trail begins at the intersection of Wendy's Trail and Tap Line. Travel north on Griffin's Way and head east up the Tap Line to the start of the self-guided trail. Each stop is marked a numbered post. Interpretative information is contained in this brochure.

For a less strenuous walk, the trail route can be reversed, starting at post 12 and ending on Griffin's Trail. Enjoy your walk!

**American Chestnut Sapling
*Castanea dentata***

In the early 1900's American chestnut trees accounted for at least one in four trees in eastern hardwood forests. Chestnut blight, a disease caused by the fungus *Cryphonectria parasitica*, introduced from Asia in the first years of the 20th century, attacked and girdled trunks and branches of virtually all the large chestnut trees by 1940.

Chestnuts persist throughout much of their former range, however the blight keeps most from reaching maturity. New stems sprout from old, disease-ridden roots. Chestnut leaves are lance-shaped, similar to those of the beech tree but with

longer teeth. Compare the leaves of this sapling with those on the beech to your right.

2 Canopy Opening

When a large tree falls, the "canopy" or ceiling of the forest opens up. All plants in the forest compete for space and sunlight. The opening affords tree seedlings and other sun loving plants a brief opportunity to grow. At this post you will notice abundant ferns and beech saplings taking advantage of the opening overhead. If you look upwards you will also note that the surrounding trees are growing out into the light gap as well. These trees will win the battle for sun, leaving the ferns and beech in the dark in a few years.

**3 Striped Maple
*Acer pensylvanicum***

Easily recognized by the distinctive bark that explains its name, the striped maple doesn't grow very large, usually no taller than 35 feet, and is a shade-tolerant, understory plant. There are other interesting features at this site. Notice the lightning struck tree ahead of you. There is also a large wind-thrown White Pine to the left of the lightning-struck tree. A large stand of club moss can be seen on the ground to your right. Club moss is a member of the *Lycopodiaceae* family, all of which are protected in New York State.

**4 American Beech
*Fagus grandifolia***

Useful field characteristics of American beech are its smooth, light gray bark, and elliptical, coarse-toothed leaves. Toward autumn, beeches develop unmistakable long, sharply pointed tan buds. A prominent forest species, beech seedlings are shade-tolerant and are the most common sapling growing in many of our northern forests. Seeing a beech tree grown this large is rare because of the species' susceptibility to disease. Beechnuts, which appear in early fall, are a favorite food of a wide variety of wildlife, such as foxes, deer, bears, and squirrels.

**5 Witch Hazel
*Hamamelis virginiana***

Directly in front of the post is a witch hazel tree; it is another shade-tolerant understory species. This tree

produces small yellow flowers in the fall, unlike most other plants that flower in the spring or summer. The witch hazel tree's fruit, flowers, and next year's leaf buds all appear on the branch simultaneously, a rarity among trees.

**6 Red Maple
*Acer rubrum***

Surrounding post #6 is a number of Red Maples (*Acer rubrum*). Although they are slim in diameter, they are older trees that can be identified by the distinctive "turkey tail" pattern of their bark. If you look closely, the bark has a series of concentric upward curving semi circular markings that look like the pattern of an expanded turkey tail. Young red maples have smooth grey bark. As it ages the bark darkens and the turkey tail pattern appears. Finally the bark of an old red maple will separate from the trunk creating wisps of bark that look very similar to shagbark hickory.

**7 Cucumber Tree
*Magnolia acuminata***

The cucumber tree is the northernmost magnolia. It can be identified by the red-brown furrowed bark, large, elliptical, smooth-margined leaves, and, unusual seedpods, thought to look like small cucumbers. The beautifully colored and grained wood of the cucumber tree is a popular material for use as trim or paneling.

**8 White Oak
*Quercus alba***

To the left of the post you'll see a white oak, identified by its scaly, light gray bark, the rounded lobes of the leaves, and small acorns. The tree to the right of the post is another oak – one in the red oak group. Members of the group are distinguished by feather lobed, bristle tipped leaves. It is probably a northern red (*Q. rubra*) or a black (*Q. velutina*) oak. These two species are difficult to distinguish, but the black oak leaves tend to be more thickened and glossy on the upper surfaces. The bark of the Red Oak may be slightly reddish in color.

9 Screech Owl Box

The birdhouse on the cucumber tree directly in front of you was installed as a home for Screech