TABLE ROCK NATURE TRAIL

History of the Forest

Before the arrival of Europeans, New York was predominantly a vast virgin forest dominated by old-growth timber. After the American Revolution, the wilderness began to shrink quickly as settlers began conquering the forest, both for lumber and to clear land for farming. This trend continued until the late 1800's when NY's open areas reached a peak of about 75%. Farming then started to decline, and the second growth forest began its comeback. NY is now around 63% forested. All tree species that were present in the old growth forests of NY are present today, with the notable exception of American chestnut (see #7 below). Most of Otsego County and the majority of NY is the forest type, "Northern Hardwoods." In our region, it's composed primarily of sugar maple, black cherry, yellow birch, and red maple. The forest type here at Table Rock and the southwestern portion of the county is "Oak-Hickory." This type extends south-easterly, to and across the Hudson Valley. The dominant species that occupy the canopy here at

Table Rock, are red and white oaks. White Pines are scattered and rise above the oak canopy. Common associated species are black birch, white pine, and red maple. The Table Rock forest was last logged in 2009.

#1 Devonian Sandstone

The rocky layers at Table Rock are from the Devonian Period (419-360 million years ago). At that time mountains were rising to the north and east. Erosion of the uplands supplied sand, silt, and clay to the Oneonta area. These sediments formed part of an extensive delta system at the edge of the Devonian Sea. The rock layers seen here were deposited on a broad floodplain. The undercut of the large rocks is due to the erosion of underlying, softer shale.

#2 Lichens

Lichens are "dual organisms" composed of 2 kinds of plants: a fungus and an algae. They live together for mutual benefit (symbiotic). The fungus, usually the most conspicuous part of the plant, supplies the alga

with water and minerals and may prevent it from drying out. The alga in turn manufactures carbohydrates. Lichens evolved around 350 million years ago and play a significant role in breaking down rocks into soil. They produce a weak organic acid that slowly dissolves the minerals, forming tiny cracks into the rock's surface. The threads of the fungus then dig deeper into the rock. Some lichens live over 1,000 years. There are estimated to be between 20,000 and 30,000 species in the world. The oldest known one is a Map Lichen with an estimated age of 8,600 years!

#3 Susquehanna Valley

Below is the Upper Susquehanna River Valley. It has been modified by glaciers of the Pleistocene age (2.6 million to 11,000 years ago) forcing the river's source at Otsego Lake and tributaries of the Susquehanna, to flow north-south. The river has been filled with over 300 feet of glacial gravel and sand which provides a good source of drinking water from wells. The Susquehanna then continues southward from here

until it empties Into Chesapeake Bay, over 400 miles away.

#4 Ahtigua

Before white settlement, the Mohawks had a seasonal hunting and fishing village located at the confluence of Otego Creek and the Susquehanna River, named Ahtigua. Because the natives had no written language, the first white men to make contact (often missionaries), spelled their words as they heard them. During the Revolutionary War, in retaliation for the Cherry Valley Massacre, the Sullivan-Clinton Campaign burned to the ground native villages along the Upper Susquehanna, Including Ahtigua (which was vacant). According to some translations, the word Oneonta is Mohawk for "place of open rocks" or "rocks sticking out" as a reference to Table Rock. It is also a Mohawk name for girls.

#5 Burls

A burl is a cancerous-looking, sometimes large, roundish growth often located on the trunk of a tree. It

is formed from unsprouted bud tissue that was destined for a branch. From this point, in one of nature's mysteries, the exact cause is not fully understood. It is widely believed that the process begins when a tree Is under some form of stress, caused by bacteria infection, virus, fungi, insects, or physical trauma. This may cause the branch bud(s) to form wildly irregular wood growth and grain inside the burls, which Is highly coveted by artisans. If the exact mechanism of their cause was known, burls would probably be produced commercially. Although the outside of a burl may appear threatening, they do not harm the tree.

#6 Rock Oak

(Quercus montana)/Beech Family. Aptly named, rock oaks favor very rocky areas. As you can see, the bark on these trees is extremely thick. They are sometimes called chestnut oak since the leaves somewhat resemble those of American chestnut, which are much longer. The wood is fairly rot resistant and has been used for fence posts or anything that's In

contact with the soil. Logs are marketed as white oak. The acorns are favored by wildlife.

#7 American Chestnut

(Castanea dentata)/Beech Family. Chestnut was once king of the forest, a dominant & very valuable tree in the eastern U.S. Among its many uses were furniture, musical instruments, nuts for roasting and flooring. Early in the 1900's, a fungus bark disease began devastating chestnut trees. Around the end of the 1930's, it no longer existed as an important forest component. However, they are not completely gone. The root system may still be alive and shooting up sprouts from old stumps to attain at most, a small-sized tree. Before long, It is attacked by the blight and killed back again, at least to ground level. The fact that the species is still present gives hope that they may someday, again be a part of our forests. If you look on both sides of the trail, you'll see the long, narrow leaves of the chestnut trees with their heads just above a colony of black birch saplings.

Many are already Infected with the blight or are already dead, at least above ground.

#8 Sugar Maple

(Acer saccharum)/Maple Family. Sugar Maple is well known for producing sweet sap. While all maple species produce some sugar in their sap, sugar maple by far has the highest content. It Is a cherished tree of the Iroquois Nation, and the syrup-making process was passed on to Colonials. It is also a valuable timber species and can be used for flooring, furniture, musical instruments and more. Lumbermen know It as hard maple. The leaves of sugar maple have 5 to 7 lobes. Seeds are spread by means of a double-winged samara•, which holds 2 seeds. The double wings allow for the seeds to be carried great distances by the wind, spinning and giving the appearance of "whirly-birds" or "little helicopters".

*an enclosed seed at one end and a wing-like projection at the other

#9 Buck rubs

White-tail deer bucks rub the top of their heads on the base of small trees such as these striped maples. This is to mark territory, not only visibly, but by scent, from their pre-orbital gland at the top of their heads. It also tells other deer in the area which buck made the rub as well as for rubbing the velvet off their antlers.

#10 Beech bark disease

Is a disease complex that consists of an imported insect (beech scale) and two species of bark cankering fungi. The beech scale first punctures the bark with its feeding tubes creating openings for the fungi to enter. The fungi then cause bark lesions to grow and eventually girdle the tree, disrupting the transporting of nutrients and causing the tree to begin to deteriorate slowly. It may take as long as 10 to 20 years but is likely fatal. It is difficult to find a beech tree (Fagus grandifolia) that is disease-free. There are currently no feasible means of control.

#11 White Oak

(Quercus alba)/Beech Family. White oaks are stately trees and give the appearance of great strength. They may live for 300 to 500 years. Old white oak trees in open fields have very thick, horizontal branches and have been known to have lived for as long as 800 years. The wood of white oaks has many uses and because they are rot/moisture-proof they are used to build barrels for storing wine and whisky. The oak genus is composed of 2 sub-groups: white and red. The leaves of white oaks (of which rock oak is also a member) have leaves which are rounded on the lobes, while red oaks are pointed. White oak acorns are a favorite food of wildlife.

#12 Birch on Stilts

Birch trees enjoy very organic soil. When their seeds land on a stump, it can germinate and send roots down to true soil. Over the years, after the stump has rotted, the tree appears to be on stilts.

#13 Sweet Black Birch

(Betula lento)/ Birch Family. In our region, black birch trees are a common associate of oaks. The sweet aroma from a broken twig is reminiscent of winter-green or root beer. In Spring, black birch trees may be tapped like sugar maples (a month later) and the fermented sap made into birch beer. Black birch trees have male and female flowers (monoecious) called catkins*. The male catkin forms in early Autumn and hangs from the twigs in winter. It then opens in the spring to release its pollen. The female (pistillate) catkins are seen in early spring and emerge along with the leaves. When fertilized, they give rise to little green cone-like fruit. In early fall, they mature, turn brown and shatter to release their tiny seeds. Along this trail, you may notice several dense "birch colonies" of saplings or larger.

*a long, dangling single-sex flower.

#14 Striped Maple

(Acer pensylvanicum)/Maple Family. Striped maple is a small tree found throughout the Northeast. The bark is smooth and olive green with cream-colored vertical stripes. Another name is Goosefoot for the large, 3-lobed maple leaves that resemble the foot of a goose.

#15 Northern Red Oak

(Quercus rubra) / Beech Family. Red oaks are valuable trees of our northern forests and are used for furniture, flooring and much more. They may live to be 400 years old, but 300 years is more typical. The large patches of lichens on this tree do not harm it. Some lichen species are beneficial in that they leach nitrogen into the soil, which is a vital component for supporting plant growth. The acorns are bitter and not favored by wildlife.

#16 Witch-Hazel

(Hamamelis virginiana)/Witch-Hazel Family. A unique small tree or shrub, witch-hazel produces tiny, yellow flower blossoms during winter! The branches often have a lean to them and form graceful curves and arches. They are found throughout this forest. After the leaves drop in late autumn, their woody seed capsules split open. This causes pressure to build up and eventually a spring-loaded mechanism shoots seeds for 30 feet, like bullets fired from a rifle, at incredible recorded speeds of ½ a millisecond. Extract from the bark has long been used for medical purposes such as inflammation, insect bites, acne, etc.

#17 Bigtooth Aspen

(Populus grandidentata)/Willow Family. Bigtooth aspen is a shade-intolerant, fast-growing, but short-lived pioneer species (meaning very early successional). Pioneer species are among the first trees to seed into an area that has been opened to full sunlight. They provide enough shade for the next

species of forest succession to seed in. Bigtooth aspen cannot reproduce under its own shade. It is so named for its saw-toothed leaf margin (oval shape). The Iroquois used dust from the bark to relieve itching. Aspens are also known as popple (poplar genus). They are almost a necessity for beavers. It's their primary food source in winter. In the fall, they store aspen branches under their lodge and under-water to feed on in winter when the pond is ice-bound.

#18 Stump Sprouts

After a tree is cut down, many species of hardwoods send up sprouts from the edge of the stump. Typically, 2 or more sprouts will grow to maturity. Look around the woods and you'll notice that multi-stemmed hardwood trees are not uncommon, especially the red maples, such as this example. The sprouts have the great benefit of a well-established root system from the cut tree. Taking advantage of this fact, as far back 4,000 B.C., at the end of the Stone Age in Europe, humans developed the oldest known method of forest management: coppicing. This is

where trees are cut at the base to promote new sprout growth over several short rotations, over and over: a sustainable source of wood. The length of the rotations may be anywhere from 7-20 years, depending on species, growing conditions and the diameter desired. The many uses included fuel, fenceposts, building materials, baskets and so on. Much of the wooded lands of England were continuously used coppice forests. Coppicing continued for several thousand years until the Industrial Revolution. Yet, in England, it has become popular to coppice trees as well as shrubs for garden and landscape specimens.

#19 Pine Weevil

Tree growth Is regulated by 2 separate mechanisms, one that controls growth upwards (height) and one that controls growth outward (diameter). At the top of the tree (also called the leader) is the terminal bud. The pine weevil is a wood-boring beetle that seeks out white pine trees in open areas of full sun or along the edge of open fields. They feed on the terminal bud

and lay eggs just below, which then prohibits growth upward. In response, the tree sends up a new leader from the next lower branch. Weevils then move on to the new leader sent up by the tree and this process continues until the tree is taller than about 20 feet. This is too high for the weevils to climb down at night for water/moisture. They will then find a new host tree. Whenever you see a multi-stemmed white pine, it Is likely the result of pine weevil damage. In open areas of full sun, there may be many new leaders on a pine, giving them a round appearance which some call "cabbage pines". Although the health of infested trees is not seriously compromised from the damage, they no longer have much commercial value.

#20 White Ash

(Fraxinus americana)/Olive Family. Long a major and valuable component of the woodlands of NY state (7-8% of total forest cover), all ash species are currently under threat of attack by the Emerald Ash Borer (EAB). Of Asian import, EAB is a wood-boring beetle. The larvae build tunnels in order to feed on a

microscopic layer between the Inner bark and sap wood called the cambium. The cambium has the vital role of transporting water, minerals, and sugars up and down the tree. The larvae tunnels destroy the cambium which is soon fatal to the tree. Early signs of infestation are crown die-back and loosening of bark. As of 2023, the presence of EAB had been reported in all NY counties (including Otsego), but three. Pileated and other woodpeckers feed on the larvae and may cut local infestations by as much as 40%. While not saving the trees, they decrease the numbers of the next hatch. White ash is the largest of the ash genus and may grow to 120 feet tall. Some live as long as 300 years. The tree can be identified by the vertical diamond-shaped furrows in the bark. The wood of white ash Is strong and elastic making It ideal for production of sports equipment such as baseball bats, hockey sticks, canoe paddles, tool handles, as well as furniture and much more.

#21 Paper Birch

(Betula papyriflca)/Birch Family. Paper birch is a northern species that ranges primarily from the Northeast to the Great Lakes. It is short-lived and occurs early in forest succession. The white bark with its papery peels makes it a readily identifiable species. The bark is waterproof with a high oil content, with which the Iroquois and other tribes used large peels for crafting their canoes and building wigwams. The bark is also an excellent campfire starter, igniting and producing high temperatures, even when wet.

#22 Black Cherry

(Prunus serotlna)/Rose Family. The wood of black cherry has a beautiful dark hue and is highly prized for furniture, cabinetry, flooring, etc. The small cherries are bitter but used in Jellies and eaten by wildlife. However, the pit and wilted leaves contain low levels of cyanide but can be fatal to livestock. Cyanide is present Inside the seeds of all cherry species, which Is only

released if the seed is crushed. Chewing and swallowing several pits would not likely be fatal to humans but may cause headaches.

#23 Eastern Hop Hornbeam

(Ostrya virginiana)/Birch Family. Hop hornbeam is a small understory tree that prefers a bit of shade. It can be identified by Its shreddy grayish-brown bark. In late summer, small leafy dusters of seed-bearing cone-like pods form which resemble hops. Hop hornbeam is often confused with one of their cousins in the Birch Family, muscle-wood (carpinus caroliniana), which has smooth bark and resembles a muscle. Both are small trees made of dense, heavy wood and are both called "ironwood" as they are difficult to saw into. Both species are also known as "hornbeam". Their bark being so different, makes it easy to distinguish between the two.

#24 Red Maple

(Acer rubra)/Maple Family. Red maple is named for its red flowers in early spring, red fruit (samara) in

summer, brilliant red leaves in fall and red buds on twigs in winter. They can adapt to a wide range of site conditions (sunny, shady, dry, wet, high, or low). This makes red maples among the most abundant trees In the eastern deciduous forests. Unlike sugar maple which have 5-7 lobes, red maple leaves have 3 distinctive lobes. The fruit is a single-winged samara*. Red maple is a very usable timber tree. Compared to sugar maple, which is known to lumbermen as hard maple, red maple has softer wood and is called soft maple.

*an enclosed seed at one end and a wing-like projection at the other

#25 Eastern Hemlock

(Tsuga canadensis)/Pine Family. The Eastern hemlock is the third most common tree species in NY. More of them grow here than in any other state. It also has a long lifespan, often living much more than five hundred years. They are currently threatened by another import from Asia, the hemlock wooly adelgid.

This type of aphid does not spread by flying. It travels by wind, birds, animals, or humans. Signs of infestation are found on the underside of hemlock needles, where a wooly covering protects the adelgids and their eggs. After eggs hatch, the nymphs feed on the needles, causing them to desiccate which eventually kills the tree in 10 or 12 years.

#26 Deep Dark Forest

White pines tower above this dense stand of hemlocks, reaching for light above the canopy. The thick lower branching of the hemlocks completely shades the ground. Without any sunlight, there is no regeneration here. Eventually openings will occur in the canopy, man-made or natural, allowing enough light for other tree species to seed in. In NY, hemlock, sugar maple and beech are known as "climax species", meaning they are shade-tolerant and can still regenerate under shady conditions. The large crowns of mature red and white oaks contribute to the shade from above the hemlocks. This micro stand

is the last stage of forest succession where there is not enough light even for hemlock regeneration.

#27 Eastern White Pine

(Pinus strobus)/Pine Family. White pines attain the greatest height of any tree species east of the Mississippi River. In colonial times they were used for ship masts for the British Navy. Pines are divided into two sub-groups: white and yellow. White pines have 5 needles per group (fascicle) and the wood is quite soft. Yellow pines have 2 or 3 needles per fascicle and, while a softwood, it is harder than white pine. Most pine species are yellow pines. The lumber of white pine is commonly used for building materials.

#28 Hermit of Table Rock

This was the last known camp of the hermit of Table Rock. It's been many years since he's been seen, but evidence of some of his camps remain.

#29 Shagbark Hickory

(Carya ovata)/Walnut Family. Of hickories, the shagbark is easiest to identify, given its "shaggy" long peels of bark. The wood is very heavy, hard, dense, and strong. Some of the uses include wood for curing meat, charcoal, tool handles and athletic goods. Early in his career, Babe Ruth at one time used a hickory baseball bat. Their heaviness soon made hickory bats out of vogue. Hickory as firewood is very high in BTU's. Shagbark hickory nuts are delicious and have been called the "black truffle" of nuts. It is said their flavor is like a combination of their relatives, pecan, and walnut. They were highly favored by Native Americans. A large variety of wildlife feeds on them as well. Because the shell is very difficult to get into, they are generally not sold commercially.

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