TRAILBLAZERS

Camper's Guide to Common Trees of the MASHIPACONG FOREST

"Trees are poems the earth writes upon the sky"
(Kahil Gibran, 1926)

TREES

I think that I shall never see
A poem lovely as a tree.

A tree whose hungry mouth is prest
Against the earth's sweet flowing breast;

A tree that looks at God all day,
And lifts her leafy arms to pray;

A tree that may in Summer wear
A nest of robins in her hair;

Upon whose bosom snow has lain;
Who intimately lives with rain.

Poems are made by fools like me,
But only God can make a tree.

--Joyce Kilmer, 1913

INTRODUCTION AND ACKNOWLEDGMENTS

This "Camper's Guide to Common Trees of the Mashipacong Forest" (GUIDE) is one of three booklets about trees created for Trail Blazer Camps (TBC) by a group of TBC alumni to share their knowledge about many of the trees at TBC's Mashipacong Estate in Montague, New Jersey. The authors include: Juanita Barrena, Deb Dolph, Suzanne (Levy) Graver, Jane Kortz, Mary Kay Inserra, Martha Grace (Price) Lawrence, Diane Schaefer, and Deborah Willis. Since forests are constantly changing, members of the tree project team (Juanita, Jane, and Martha Grace) were joined by TBC Executive Director Riel Peerbooms and alums Tom Riddleberger, Connie Robson, and Vince Milea, Jr, on a "Vagabond" to TBC's Mashipacong Estate to verify whether the trees described in this Guide are still present and identify locations where they are likely to be found in the current forest. The front cover photo was taken by TBC alum Matthew Hommez.

Trees included in this GUIDE are limited to those that were included in a tree key titled "Clues to Trail Blazer Camp Trees" that Dr. William Harlow created for TBC in the early 1950's. That key was updated by the tree project group and reprinted in 2022 by TBC in a separate booklet titled "Key to Common Trees of the Mashipacong Forest," which is designed to accompany this GUIDE. The third booklet in the project series, "Exploring Trees With Your Campers," includes general information on the biology of trees, activities to engage campers in learning about trees, and additional resources that staff may wish to explore to enhance their own knowledge about trees and discover ways to engage children in learning about trees.

ABOUT THE MASHIPACONG FOREST

Land Acknowledgment

Since 1939, Trail Blazer Camps (TBC) has had the privilege of operating its summer overnight program and other outdoor educational programs at a magical property in Montague Township, NJ, that TBC often refers to as our "Mashipacong Estate." Trail Blazers acknowledges that this property is part of the Lenapehoking (land of the Lenni Lenape Indians) that included present-day northeastern Delaware, New Jersey and eastern Pennsylvania along the Delaware River watershed, New York City, western Long Island, and the Lower Hudson Valley; and was taken away from them by European colonists in the 17th century. Trail Blazers pledges to remember that we owe a great debt of gratitude to the Lenape people, past, present, and to come, for allowing us the opportunity to enjoy the land that they lived on and preserved, and we commit to preserving it for future generations.

History of the Mashipacong Forest

Like most forests, the forest at Mashipacong has changed over time, and will continue to change. In fact, there was a time when the land, along with most of the Northeastern U.S was covered by a glacier of ice hundreds to thousands of feet deep. When the ancestors of the Lenape people first came to the land over 12,000 years ago, the glacier had retreated. However, the climate was still too cold and the growing season too short to sustain the kind of forest we see today. Instead, the land was like the Arctic Tundra covered with marshes, moss and lichens, scattered shrubs, and a few small conifer trees. As the climate continued to warm, different types of plants were able to grow. The first types of trees to be successful were conifers like the black spruce and tamarack trees that still grow in the Lost Lake Bog at Camp, and other conifers like Eastern hemlock and Eastern white pine became plentiful in other areas. By about 4000 BCE/BC (6000 years ago), hardwood trees like chestnut, oak, and hickory became the most abundant trees, replacing most of the conifers. These types of changes in the forest were the result of a natural process called "forest succession."

The Lenape people lived in harmony with the forest for thousands of years. The trees provided an abundance of food (e.g., acorns and nuts) for both people and small game animals. They also provided wood for tools, weapons, canoes, and homes. And, although there were some changes in the forest over this time period because of fires, weather changes, endemic tree diseases, and human use (including some farming by the Lenape

people), the impact on the forest was minimal. So, when the first European colonists arrived in the 1600's, the land was still a densely wooded "old growth" forest with many large trees that were 150 to 300 years old. However, the colonists (first the Dutch, then the Swedes, then the English) placed greater demands on the forest, clearing large areas of the forest for settlements, roads, farms, and pastures. Trees were also cut for fuel, timber for homes and ships, and other tree products (e.g., pine tar).

After the Revolutionary War, as the population increased and new needs for lumber developed (e.g., to build railroads) deforestation intensified, reaching a peak around the time of the Civil War. During this time, Great Lot #15 (the 1000 acre parcel of land we now know as the Mashipacong Estate) was owned by a man named John Rutherfurd, who purchased the land (in 1844) for its lumber potential. In 1848, Rutherfurd impounded (dammed) one of the swamps on the property to provide waterpower to spin the water wheels of two sawmills that he built down-stream. Although the downside of this "development" of the land was that it led to loss of a large part of the swamp and many more trees, the upside was that the dredging and impoundment of the swamp created our beautiful 46 acre Lake Mashipacong. You can still see the dam on the south side of the lake (before you get to the road that leads to the Wanagan); and the remains of the foundation of one of the mills can be found along the side of Pioneer Brook, a little beyond where the bridge crosses the brook below the site where the small camp named Trail Blazers was located.

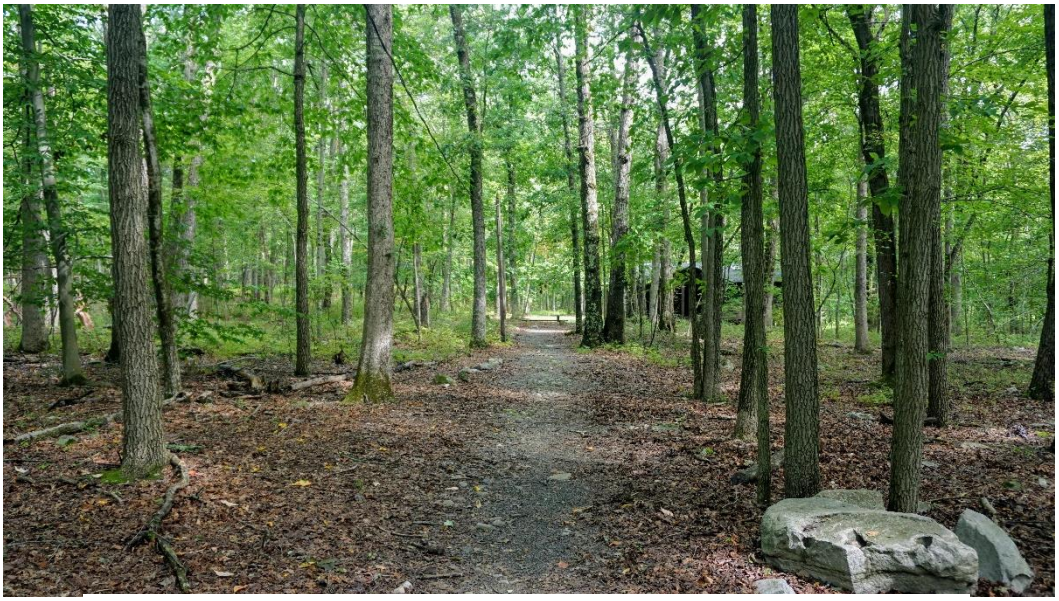
By 1870, both because most of the large trees had been cut down and because the demand for charcoal (made from burning wood) was replaced by coal (a fossil fuel of sedimentary rock), wood harvesting from the Mashipacong forest decreased and the sawmills were shut down. And, fortunately, the forest began to recover. This recovery was helped by the fact that people and governments in the 1890's and early 1900's, especially during Theodore Roosevelt's administration, became more conservation minded. At Mashipacong, it was specifically helped by the purchase of the property in 1901 by a group of New York City investors who converted the abandoned farm that was there at the time into a place in the country where people could get away from the city. They called their retreat center "The Mashipacong Club." Also, in 1907, land adjacent to the property was acquired to create Stokes State Park; and in 1923, a prominent New Jersey family (the Kusers) donated thousands of acres of their land, also surrounding Mashipacong, to create High Point State Park. Although the Mashipacong club didn't last very long, the next person (Charles Orben)

who purchased Great Lot #15 in 1929 also wanted to use the land as a summer resort. But, his venture also failed; and, in 1938, Doris Duke purchased the land for use by Life Camps (the predecessor of Trail Blazer Camps). In 1991, Ms. Duke transferred ownership of the property to the Nature Conservancy with the provision that Trail Blazers be allowed to continue to operate its programs on the property.

So, for the past 150 years, the Mashipacong forest has been protected from excessive lumbering and commercial development. However, there were, and still are, many threats to the forest. These threats include invasive plant species, exotic pests and diseases, over-browsing by deer, and climate change. Although many trees grew back during this period, many types of trees were unable to grow in the changed landscape, and many trees were killed, mostly by pests and diseases that came from other countries and were introduced into our forests accidentally. Therefore, the forest at Mashipacong is different now from the forests of the past (even from the time that Life/Trail Blazer Camps moved to the property in 1939 and from the time that the authors of this Guide were campers or counselors at TBC); and it will continue to change. As you read the descriptions of trees in this booklet, you will learn about some of the diseases and pests that currently threaten specific types of trees in our forest. Although these are killing many trees and changing the forest, the biggest threat to the future of our forest and forests throughout the world is climate change. The earth's rapidly changing climate brings with it more extreme temperatures and the potential for more extreme weather, such as prolonged droughts and associated wildfires, excessive rainfall with associated flooding and more severe windstorms such as larger tornadoes and hurricanes. For example, the Mashipacong forest suffered the impact of one of these mega storms in 2012, when hurricane Sandy downed hundreds of thousands of trees across the state of New Jersey, especially in Morris and Sussex Counties (where Camp is located). Since trees are long-lived and slow-growing, it is difficult for them to respond to rapid climate change. And, even if adult trees are able to withstand increased temperatures and weather extremes, their seeds may not be able to establish in the changed environment.

And yet, despite all the challenges our forest has faced, it remains a beautiful haven of the natural world that TBC campers have the opportunity to enjoy, while learning about its flora and fauna and ways to protect not only the Mashipacong forest but forests everywhere.

COMMON TREES OF THE MASHIPACONG FOREST



Path to Chimney Corner, TBC Photo Archives

Currently, most of the forest on the Mashipacong Estate is a **mixed oak**, forest, which means that different types of oak trees are the most common trees. However, as you will learn on pages to follow, there are lots of other types of trees, especially other deciduous hardwood trees like maples, hickories, ash, and birches. You will also learn that certain types of trees are more likely to be found in different locations at Camp. For example, some types of trees mostly grow in low swampy areas, while others mostly grow on the hillsides, the ridge, or near the lake or brook. This is because different types of trees have different requirements for soil composition, moisture, and sunlight. In the tree descriptions, we have included information about the tree's preferred habitat and some of the places at Camp where you are most likely to find them. To help you find these places, we have included a map of Camp on the inside of the back cover of this booklet. However, keep in mind that the trees may also be found in other places and that some trees might no longer be in the places where they were found when this Guide was written.

INDEX TO DESCRIPTIONS OF COMMON TREES OF THE MASHIPACONG FOREST

American Beech

Scientific Name: *Fagus grandifolia*

"Grove of American Beech Trees in New England Woods," by Robert Winkler; iStock ID:1182474500

Habitat: American beech trees grow on moist, well-drained slopes and rich bottomlands, near a river or stream. At Camp, several of these trees can be found at the site of the old small camp that was known as Awanasa, by Pioneer Brook, and near Pahok (at the bog end of the lake, northeast side).

Description:

- Grows to 65-80 feet tall, with stout branches and dense crown.
- Leaves are alternate, simple, 3-5 inches, pointed, oval, shiny and papery.
- Flowers in small, greenish clusters.
- Its fruits, 1-3 nuts in a prickly husk.
- Its bark is light gray and very smooth.

American beech leaves. by R. A. Nonenmacher; CC BY-SA 4.0

Interesting Facts:

- Many animals, including squirrels, chipmunks, black bears, deer, and turkeys eat the tasty beech nuts.
- People don't usually eat the nuts, but they sometimes roast them and make them into a kind of coffee.
- Unlike most trees, the bark remains smooth and gray as the tree ages.
- Early settlers gathered beech nuts to extract the oil, which is similar to olive oil and was used as both food and lamp oil.

American Chestnut

Scientific Name: *Castanea dentata*

"American Chestnut Saplings" by Nicholas A. Tonelli; CC-BY-2.0

Habitat: American chestnut trees are mostly found in wooded areas with acidic soils, on mountain ridges and well-drained hillsides. Although all of the large chestnut trees at Camp were killed by the chestnut blight, young saplings growing from the roots of old trees can found at Camp, especially along Ridge Road (e.g., near Homestead) and near Cayuga and Pahok.

Description:

- 10-100 feet tall. Old trees are tall, with big trunks and small crowns; young trees are short and slender, with narrow crowns.
- Leaves are alternate, simple, 6-10 inches, narrow, pointed, oval, and heavily toothed.
- Flowers are pale yellow, arranged in long slim clusters called catkins.
- Fruits are round, prickly husks around large seeds.
- The bark is smooth and chestnut brown when young; older trees develop distinctive large, interlacing ridges and furrows.

Interesting Facts:

In the 19th century, at least one out of four trees in the Eastern U.S. were American chestnut. Now those trees are almost extinct. Chestnut trees of a different type that were brought into the United States around 1900 carried a disease called chestnut blight, which spread and killed almost all the mature trees within 50 years. However, they still sprout up from old roots, but usually die within a few years. Scientists are trying to breed trees that will fight the disease.

The Fallen Chestnut Song © TBC

This original TBC song was sung by the small camp Outpost (established in 1940, dissolved in 1944) and later by Hermit Glen, but soon became incorporated into the core repertoire of LC/TBC original songs to sing at major gatherings. When the song was written the small camp's campfire circle was surrounded by large limbs from a giant American chestnut tree that had been killed by chestnut blight. One of the limbs curved around the circle (the "curved embrace" at the end of the song). The giant American chestnut tree stump in the photo below was located for many years at the site of the old small camp named Trail Blazers until its trunk finally returned to the earth. Although there are no longer any giant chestnut trees in the Mashipacong forest, young samplings continue to grow from the roots of the ancient trees we hope that, someday, American chestnut trees resistant to blight will again flourish.

Once the tree was green and brown,
Now it's gray and bare.
A fallen giant silvery smooth,
We see it lying there.
Sleeping in the forest still,
Silhouette in light.
Sharing secrets with the moon,
Guardian of the night.

Secrets of the woodland folk,
Elves and Pixies too.
Secrets of the timid deer,
Browsing in the dew.
From its branches I would swing,
Far out into space or,
Sit with quiet thoughts and rest,
Within its curved embrace.

American chestnut trunk at Trail Blazers;
by Jane Granzow,
TBC Photo Archives; ©TBC

American Elm

Scientific Name: *Ulmus americanus*

American Elm Leaf, by Matt Lavin; CC SA- 2.0 Generic license

Habitat: This tree is found in many habitats, but prefers rich bottomlands, floodplains, stream banks and swampy grounds. Like the American chestnut, large American elm trees once grew in the forest at Camp. However, most, if not all, of the wild trees have been killed by a disease called “Dutch elm disease,” which was introduced in the 1930’s. If any remain at Camp, they would most likely be found along Pioneer Brook.

Description:

- 60-100 feet tall. Straight trunk branching into a V shape, broad crown.
- Leaves are alternate, simple, 3-5 inches, pointed oval, double toothed edges; asymmetric leaf base.
- Flowers are small, green to red.
- Fruits are rounded samaras (wing-like structure with seeds).
- Bark is grayish-brown, with deep fissures and broad ridges.

Interesting Facts:

- The grand American elm was once common in woods, parks, and avenues across much of the United States.
- They were long-lived trees that could grow in a wide range of places.
- Now, Dutch elm disease has killed most American elms. This disease is caused by a fungus carried from tree to tree by beetles. Scientists are working on breeding American elm trees that resist the disease.
- More than a thousand American elm trees still stand in Central Park in New York City. They were planted in 1860. Tree scientists work hard to keep Dutch elm disease from spreading to these famous trees.

American Hornbeam

Scientific Name: *Carpinus caroliniana*

American Hornbeam Leaves. by Sherief Saleh. CC BY-SA **3.0**

American Hornbeam Bark. By Famartin, CC BY-SA 4.0

Habitat: American hornbeam (also known as blue beech) can be found in a variety of settings from moist soils to well-drained soils. It prefers wooded and shaded areas as an "understory" tree and deep moist soils. American hornbeam is not a very common tree at Camp, and you will have to go deep into the woods to find one (e.g., to the bog side of the lake near Pahok).

Description:

- 20-35 feet tall.
- Leaves are 3-5 inches, alternate, simple, elliptical to oval.
- Flowers are green catkins, male and female on the same twig.
- Fruits are ⅓-inch winged nutlets attached to 3-lobed bracts.
- Bark is blue-gray, smooth, tight, thin, sometimes blotched, and fluted into muscle-like ridges.

Interesting Facts:

- American hornbeam is often also called "Ironwood" or "Musclewood" because of the hardness of the wood and sinewy look of the bark.
- The whitish, extremely hard wood of the American hornbeam does not crack or split easily and was used by pioneers for bowls and dishes.
- Its wood is used today to make golf clubs, tool handles and mallets, as well as furniture and flooring.
- The American hornbeam does not shed all of its leaves in winter, so it provides shelter for wildlife throughout the cold winter months.

Ash Trees (White Ash and Black Ash)

Scientific Name: *Fraxinus* spp

White Ash Leaves
by “aarongunnar;” CC-BY 4.0

Black Ash Leaves
by “botany08;” CC-BY-4.0

Habitat: **White ash** (*Fraxinus americana*) prefers full sun in moist, but well-drained, soils. Look for a grove of white ash trees along the road between the Big Dipper and the Lodge. **Black ash** (*Fraxinus nigra*) typically grows in bogs, along streams and in poorly drained soils. Look for black ash at the bog end of the lake. If you see the ash tree at the bottom of the Great Lawn near the Lodge, try to determine whether it is a white or black ash.

Description:

- The white ash grows to about 80-90 feet tall with a trunk of 2-3 feet.
- The black ash is smaller, averaging 60 feet in height.
- Both white ash and black ash have opposite compound leaves.
- The white ash usually has 7 leaflets that are attached by a stem to the central leaf stalk and the black ash has 7-13 leaflets (usually 9) that are attached directly to the central leaf stalk.
- The fruits are samaras (wing-like structure with seeds).
- The white ash bark is yellow brown to gray with deep furrows; the bark of the black ash is more commonly gray.

Interesting Facts:

- White ash wood is quite hard and used for making baseball bats.
- The wood of the black ash is darker in color and is used for cabinets; the wood splits easily and has also been used for making baskets.
- Currently, all types of ash trees are being killed by a green beetle called the emerald ash borer that was introduced into the U.S. in 2002.

Aspen Trees (Quaking and Bigtooth)

Scientific Name: *Populus* spp

Quaking Aspen: "Populus tremuloides" by St. John; CC BY 2.0.

Bigtooth Aspen "*Populus grandidentata*" by Superior National Forest; CC BY 2.0

Habitat: **Quaking aspen** (*Populus tremuloides* grow in many soil types from rich, moist to dry, sandy, and gravelly, and at different elevations from sea level to 10,000 feet. They are often the first to grow in open disturbed areas. At Camp, there used to be several large quaking aspen near the Great Hall, but other types of trees have replaced them. However, if you look close to the ground, you might still find saplings growing from the roots of old trees. You will also find quaking aspen in open areas by the Barn. **Bigtooth aspen** (*Populus grandidentata*) have a more limited distribution and habitat preference. They usually grow In sandy upland soils and floodplains of streams. It is unlikely that you will come across a bigtooth aspen at Camp.

Quaking Aspen Description:

- Usually grows to 40-60 feet (though they can be taller).
- Leaves are alternate, flat, round in shape with a short point, 2-3 inches in diameter, with many small, rounded marginal teeth and a long, flattened leaf stem.
- Because of their flattened leaf stems, the leaves flutter in the slightest breeze, at wind speeds well below what it takes to move other leaves.
- Flowers are in the form of long clusters called catkins.
- Fruits are capsules in long, hanging clusters.
- Seeds are tiny and cottony in appearance.
- Bark is smooth, white to pale green becoming dark gray and furrowed in older trees.

Bigtooth Aspen Description:

- Bigtooth aspen are usually taller than quaking aspen, typically reaching heights of 60 to 80 feet.
- The leaves of bigtooth aspen are slightly longer (up to 3½ inches), but not as wide, and are marked with large, irregular teeth on the leaf margins.
- Bark is smooth, yellow-green turning to furrowed and dark green in older trees. The root systems also differ.

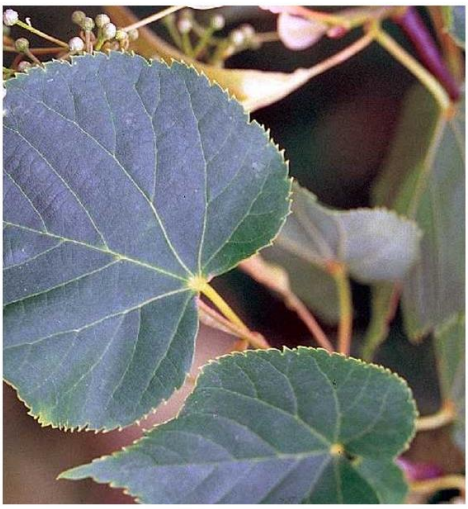
Interesting Facts:

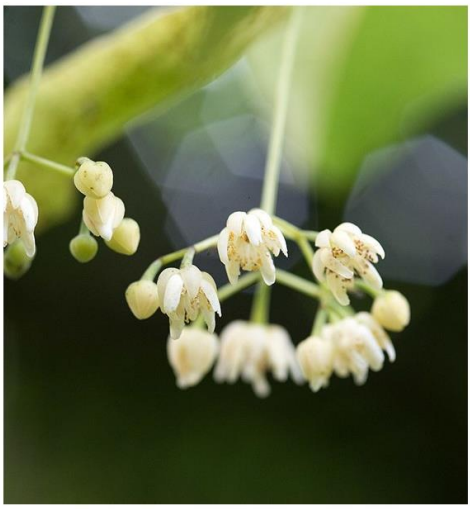
- Quaking aspen is the most widely distributed tree in North America.
- The flat leaf with long, flattened leaf stem enables the quaking aspen leaves to tremble in the slightest breeze.
- Quaking aspen trees grow in winter as well as summer because their bark has an inner layer of tissue that continues to produce sugars (food) and after the leaves have fallen.
- The root system is the main lifeforce of aspens. One root system can produce over time, many branches (tree forms) above ground. Each branch can live to 100 -130 years. As branches die, new ones are produced, enabling the root system of a single aspen organism to live for thousands of years, and become very large in size.
- An aspen root system can lie dormant for long periods of time until above-ground conditions become suitable for growth. Thus, they can quickly re-establish after forest fires, droughts, or other major environmental disturbances.
- A single quaking aspen tree named “Pando” is believed to be one of the oldest (14,000- years) and largest of organisms on earth today.

A section of the” Pando” colony of quaking aspen, by Intermountain Forest Service, USDA Region 4 Photography-121003-FS-Fishlake-JZ-002, Public Domain.

Basswood (also known as American Linden)

Scientific Name:*Tilia americana*





Left: Basswood leaf, by Herman, D.E., et al, ND State Soil Conservation Committee, United States, North Dakota, -USDA Plants Database; Right: Basswood Flowers, Plant Image Library, CC BY-SA 2.0.

Habitat: This tree grows best in moist, upland woods and slopes. It prefers a balanced amount of water and a rich, loamy soil, but can sometimes be found on dry, coarse soils and exposed ridges. At Camp, you are most likely to find these trees close near Pioneer Brook, around the old small camp Trail Blazers, and around the Wanagan and Doubletree.

Description:

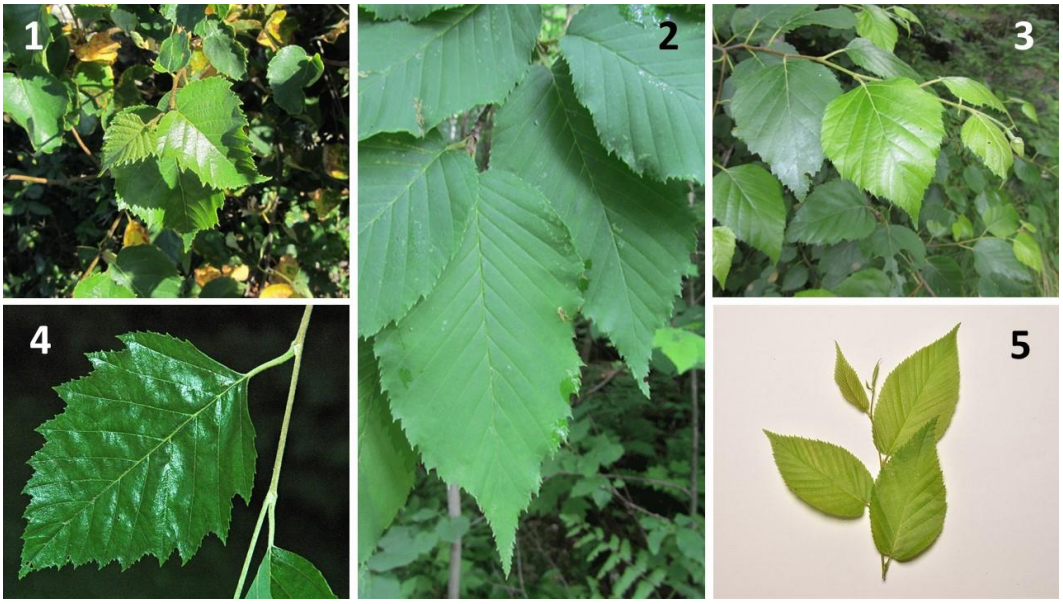
- This tree can get to be 60-80 feet in height.
- It has asymmetrical, heart-shaped leaves.
- In the late spring it has small fragrant greenish flowers.
- It takes up to 15 years for the tree to bear seeds which produce clusters of small, round fruit.
- Its bark is dark, gray, and smooth.

Interesting Facts:

- Its wood is important for timber in the Great Lakes states.
- Its flowers are a favorite for bees in the production of honey. It is known as the bee-tree.
- The name basswood came from a use by Native Americans. They used the tough inner-bark or “bast” for making cords and ropes. Pioneers named the tree “bastwood.”
- The wood is soft and a favorite of wood carvers.

Birch Trees

Scientific Name: *Betula* spp



(1) Gray Birch, by Homer Edward Price, CC BY 2.0; (2) Yellow Birch, by homeredwardprice, CC BY 2.0; (3) White/Paper Birch, by Homer Edward Price, CC BY 2.0; (4) Red/River Birch, by James St. John, CC BY 2.0; (5) Black/Sweet Birch, by John Stockla, CC BY-SA 4.0

Habitat: Birches are found in temperate zones in the Northern Hemisphere. Most birch trees love water and like moist soils.

Description:

- In general, birches are smaller trees averaging about 40 feet in height.
- Leaves are egg or triangular in shape with small toothy margins. They are arranged alternately on the branches.
- Flowers are arranged in slim cylindrical clusters called catkins.
- Fruits are in cone-shaped clusters.
- They have smooth, resinous varicolored or white bark, marked by horizontal pores (lenticels), which usually peels horizontally in thin sheets, especially on young trees. On older trees, the bark may be thick, deeply furrowed, and broken into irregular plates.

Interesting Facts about Birch Trees:

- Most types of birch trees live only about 40 - 50 years in good conditions.
- A single birch tree can release around 1 million seeds each year.
- Native Americans valued these trees using its bark for construction of light, strong and waterproof canoes as well as bowls and housing.
- Rabbits, deer, and birds eat the seeds and bark of birches.
- The bark is HIGHLY flammable. It can catch fire even when wet.

Gray Birch (Scientific name: *Betula populifolia*)

by Sue Sweeney, CC BY-SA 3.0

- Mature trees have a smooth, grayish-white bark. The outside of the bark has numerous black flecks and wide horizontal dark strips that look like burn marks.
- Most of the birch trees at Camp that appear “white” are are actually gray birch.
- Needs full sun, and is a “pioneer tree,” meaning that is one of the first types to grow in a disturbed area. At Camp, they may be growing over the lake and in open areas. There is a large gray birch on the Doubletree lawn.
- Strips of bark from fallen trees are great to use as tinder for starting campfires, but should never be taken from a living tree.

Yellow Birch (Scientific name: *Betula alleghaniensis*

by K.P. McFarland, CC BY-NC 2.0

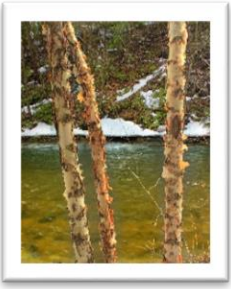
- This tree is named for its yellow bark, which tends to peel off in thin papery ringlets.
- It is a longer living birch that can live between 150 - 300 years.
- The sap of the yellow birch has a high sugar content and can be used to make a syrup. It is also a favorite of the yellow-bellied sapsucker.
- Many parts of the tree are an important food source for birds and mammals.
- Look for yellow birch trees near Pioneer Brook and in the low area between Cayuga and Pahok.

White Birch or Paper Birch (Scientific name: *Betula papyrifera*).

by Plant Image Library, CC BY-SA 2.0

- Mostly found in the cold northerly regions of North America and Canada, but they can grow at Camp. There is a large white birch on the Doubletree lawn.
- The tree has lovely white bark that curls up, and peels into thin, papery sheets. The outside of the bark looks "cleaner" and ‘whiter” than gray birch because white birch has fewer dark flecks and fewer horizontal dark horizontal strips.
- The bark has lots of oils in it and is especially waterproof, which is why Native Americans made footwear and canoes with the bark.

River Birch or Red Birch (Scientific name: *Betula nigra*)



Young bark, by Nicholas A. Tonelli, CC BY 2.0

Old bark, by Greg Hume, CC BY-SA 4.0

- This tree likes growing near water. Look for this tree close to Pioneer Brook and the lake, and in other swampy areas. There is a very large river birch in the Unami small camp.
- The bark of young trees is bronze or pinkish, and peels and curls.
- More mature trunks are rough and irregularly dark gray with deep fissures that may have some pink color in the crevices.
- Like the yellow birch, river birch sap also has a high sugar content and can be boiled to make a sweetener like maple syrup.

Black Birch or Sweet Birch (Scientific name: *Betula lenta*)

- It is valued for its wood that resembles a mahogany wood as well as being a source of wintergreen oil.
- On young trees, the bark is smooth and shiny, and reddish brown to dark gray. Also, the bark does not naturally peel like it does on many other birch trees. On older trees, the bark is almost black and is deeply furrowed into irregular scales.
- Black birch trees are the most common type of birch trees at Camp. They can be found just about everywhere on the property, but are most concentrated in the low-lying wet areas.
- The twigs of black birch can be boiled to make a pink “tea” that tastes like bubble gum when a bit of sugar is added.

Young bark, by K.P. McFarland, CC BY-NC 2.0

Old bark, by Dan Keck from Ohio, CC 0, Public Domain

Black Cherry

Scientific Name: *Prunus serotina*

(1) Upper left: Black Cherry Leaves by Eagle Pudding, CC BY-SA 4.0; (2) Lower left: Berries: by aga7ta iStock ID:1335812125; (3) Center: Young bark, by Kenraiz; CC- BY-SA-3.0; (4) Old bark: by Jaknouse at English Wikipedia, Public domain, via Wikimedia Commons

Habitat: These trees are found mixed in with hardwood forests along the forest edge and roadsides. It does best in well-drained soils but can be found in a variety of soil types. At Camp, there is a beautiful black cherry where the path on the Garden side of the Great Hall crosses the road.

Description:

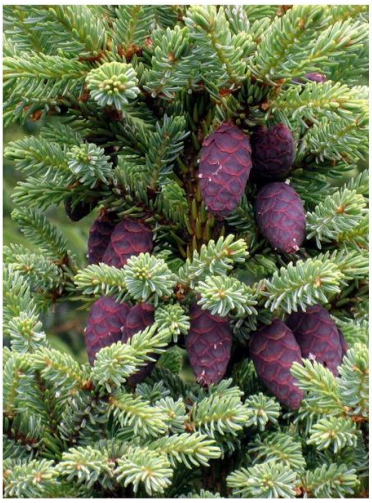
- 30-110 feet tall. Straight, thick trunk; crown narrow to broad.
- Its leaves are alternate, simple, 2-6 inches; oval, pointed, and toothed.
- Its flowers are white, 5 petals, in hanging clusters.
- Its fruits are round, small, red to purplish black, in hanging clusters.
- The older the tree, the more distinctive the bark becomes, turning more scaly and darker in color. The bark scales tend to have upturned edges.

Interesting Facts:

- Black cherry leaves, bark and seeds have some poisonous chemicals. Deer can eat them, but only the fruit is safe for humans to eat.
- The tree's small cherries have a sharp taste. With sugar they are often made into jams and juices.
- The black cherry tree is valued for its gorgeous red-brown, hard wood.

Black Spruce

Scientific Name: *Picea mariana*



(1) Left: “Picea mariana foliage and cones,” by Kylo Woods, CC BY-SA 3.0;
(2) Right: Black Spruce Forest, by John Van Atta; CC BY-NC 2.0

Habitat: Black spruce prefers wet, organic soils. It is found in peat bogs and swamps. The roots are shallow and wide spreading, and invade sphagnum moss mats in lake bogs. At Camp, this tree will be found in swampy areas like the bog at “Lost Lake” or the Mashipacong Pond swamp at the northeast end of the lake between Bakers Acre and Pahok.

Description:

- Small upright pine tree with a straight trunk.
- Height: 15 - 50 feet.
- Trunk diameter: 6-20 inches.
- Leaves: ½ inch blue-green needles.
- Cones are small ½ - 1 ½ inches long in a dense dark purple cluster at the top.

Interesting Facts:

- The Carrier people (Indigenous people for much of British Columbia, Canada) used black spruce wood to make fish traps.
- Some Native American tribes used the roots to sew baskets and snowshoes, and the pitch (sticky tree sap) was used to seal seams on birchbark canoes.
- Today, long wood fibers of black spruce are mostly used for pulpwood, especially for producing high quality papers.

Butternut (also known as White Walnut)

Scientific Name: *Juglans cinerea*

Butternut leaves, by Galina Sharapova; iStock ID: 1263880349.

Butternut fruits by Nekrasov.ig, CC BY-SA 3.0,

Habitat: Butternut is often found in mixed forests with well-drained soils. It also grows along well-drained stream banks. Butternut is not very common at Camp, but it might possibly be found along Ridge Road.

Description:

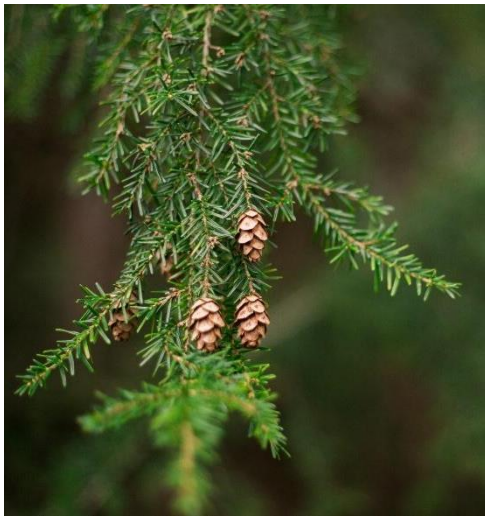
- 40-60 feet tall, and a spread of 35-50 feet.
- Leaves are alternate, compound, 10-20 inches long. They typically have 11-19 stalkless leaflets.
- Male flowers are in catkins, female flowers are in a short spike on the same tree.
- Its fruits are 1½-2½ inches in diameter, oblong and pointed (football shaped) nuts wrapped in a fuzzy green husk, growing in clusters on the trees.
- Young trees have smooth, gray, or greenish-gray bark; mature trees, ash-gray bark with dark gray between the platy ridges.

Interesting Facts:

- The seeds of the butternut are sweet, oily, and edible, easy to process and delicious to eat. They are nicknamed lemon nuts.
- The inner bark was once used as an orange or lemon dye.
- It is a soft wood, great for carving because it shows its beautiful color and grain pattern.
- Butternut is now threatened everywhere by a canker disease, and in many places it very rare.

Eastern Hemlock

Scientific Name: *Tsuga canadensis*



Hemlock leaves and cones, by Jennifer Gauld; iStock ID:1308193961

Underside of the needles of the Eastern Hemlock, by Sdetwiler; CC Attribution 3.0 Unported

Habitat: This tree grows well in the shade and is usually found in ravines and on hillsides with high levels of moisture. At Camp, these trees were once very common at the Vesper Glen site on the Great Hall side of the lake. However, many were killed by the encroachment of the swamp or the hemlock wooly adelgid . At the time this Guide was written, there was still a very large hemlock in this location, and we hope you will get to see it.

Description:

- The tree reaches heights of approximately 60-100 feet.
- The needles are flat and very short (typically ⅗- ⅘ inches); they have a dense row of white dots on the underside.
- The cones are less than a ½ inch long.
- The bark is a grayish-brown color with a scaly texture that tends to peel. As the tree matures, the bark develops deep ridges and rounded plates.

Interesting Facts:

- The Eastern hemlock is a slow-growing, long-lived tree, with many living up to 500 years. However, these trees are now threatened by the spread of the hemlock woolly adelgid (an aphid-like insect).
- Its thin bark and shallow roots make it very sensitive to fire.
- As the needles fall, the soil becomes more acidic which stops other species of trees from growing.
- In the winter, deer shelter under the dense foliage. Porcupines, turkeys, grouse, and other songbirds enjoy the oil-rich seeds from the cones.

Eastern Hophornbeam

Scientific name: *Ostrya virginiana*

Hophornbeam leaves with nutlet sacs by Bob Corson, iStock ID:917024974

Hophornbeam bark, by Famartin, CC BY-SA 4.0

Habitat: Eastern hophornbeam (also known as “Ironwood”) tolerates drought and heavy clay soils, and is found in dry, rocky forests as well as well-drained bottom lands. This tree likes full sun. It prefers fairly dry, rocky soils with shallow soils. At Camp, Eastern hophornbeam is a common type of tree found near Cayuga and Pahok.

Description:

- Height: 20 - 35 ft.
- Diameter: 7 - 10 inches.
- Leaves: the leaves are similar to and can be confused with birch leaves.
- The bark is brownish, rough, finely flaked, and appears shaggy.
- Fruit: a nutlet borne in a papery sac that resembles hops that are used for making beer.

Interesting Facts:

- Eastern hophornbeam is often called “Ironwood” because its wood is especially strong and hard.
- The wood was once used for sleigh runners and is still used for making used for fence posts and tool handles.
- The inner wood was used to treat toothaches and sore muscles.

Eastern Red Cedar

Scientific Name: *Juniperus virginiana*

Left: Branch of *Juniperus virginiana* tree by Marina Denisenko, iStock ID:1288395642; R. Photo of leaf types from Plate XLV of American Medical Botany, by uwdigitalcollections, CC

Habitat: This tree prefers ridge-tops and flatlands that are dry and exposed. It is also found in abandoned fields. Because the Mashipacong forest has matured and the Eastern red cedar usually grows in newly disturbed areas, it is unlikely that you will find one at Camp now.

Description

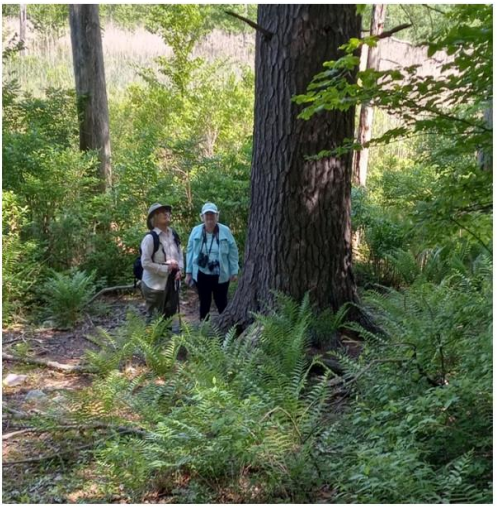
- It is a slow-growing, triangular shaped tree that may never become more than a bush on poor soil, but is ordinarily from 16–66 feet tall.
- The Eastern red cedar produces two kinds of leaves: awl-shaped and scale-shaped. Awl-shaped leaves (short stiff margins narrowing to a point) occur on trees only 1-3 years old. Scale-shaped leaves are found on older trees. Awl-shaped leaves are ⅛ - ½ inch long and linear, while scale-shaped leaves are 1/16–⅛ inch long and lanceolate-ovate shaped.
- It has small (⅛-¼ inch) dark purple berry-like seed cones with a white wax cover that gives them an overall sky-blue color.
- The bark is reddish brown and has a shredding nature to it.

Interesting Facts:

- Eastern red cedar is actually a type of juniper tree (not a cedar).
- The twigs and foliage are eaten by rabbits and other browsing animals.
- Birds love nesting and roosting in this tree as well as eating its berries.
- The tree can live quite long, some dating to 500 years old.
- The wood is used for furniture and fences as it weathers well. The wood was used for making pencils until the supply of trees became a problem.

Eastern White Pine

Scientific Name: *Pinus strobus*



Left: Martha Grace and Connie, looking up at white pine at Vesper Glen, by J, Barrena.
Right: Eastern White Pine Needles)" by James St. John, CC BY 2.0

Habitat: It can be found from dry ridges to sphagnum bogs but prefers humid areas with full sun and well-drained soils. Although there are not many young white pines at Camp, there are several very large old ones in different locations on the property, including around the Great Hall, at Vesper Glen, at Homestead, along Ridge Road, along the Deckertown Turnpike to the Community Fire Spot, and between the Frontier and Cayuga campsites.

Description:

- It grows from 50-150 feet tall with a 20-40 foot canopy spread.
- Needles are bluish-green, 3 - 6 inches long, in bundles of 5.
- Its cones are very long, slender, brown, with smooth edges.

Interesting Facts:

- It can grow 2-3 feet each year.
- Mature trees are often 200-250 years old, and some live over 400 years.
- In colonial days, they were used to make ship masts and build homes.
- White pine is now used to make furniture.
- The seeds of the white pine are favored by black bears, rabbits, squirrels, and many birds.
- To the Iroquois people, the Eastern white pine is known as the “tree of peace.” Its bundles of five needles symbolize the five nations of the Iroquois, working together as one.

Flowering Dogwood

Scientific Name: *Cornus florida*



(1) Left: Dogwood, Samantha Locking, iStock ID:1340912731; (2) Center: Flowing Dogwood, by NajaShots, iStock ID:473940392; (3) Right: Dogwood flowers (yellow/green in the center) surrounded by pink “bracts (modified leaves), by jorgeantonio, iStock ID:147286500:

Habitat: This tree grows as an understory tree on lower to middle slopes. It prefers well-drained but not dry soils. It can also be found on deep, moist stream banks to well-drained uplands. At Camp, they can be found up on the ridge between Homestead and Timber Ridge.

Description:

- It is a small tree, usually no more than 36 feet tall, with crown of spreading or nearly horizontal branches.
- Its leaves are opposite, simple, 2-6 inches, and heart-shaped with smooth edges and pointed tips. Leaf veins run outward from a central vein, curving to follow leaf edge.
- The tree blooms in late winter and early spring, with clusters of greenish-yellow flowers that are surrounded by large, broad, rounded white or pink “petals” which are actually bracts (modified leaves).
- Its fruits are hard red berries.

Interesting Facts:

- Birds and mammals like its red-berried fruits.
- Native Americans and soldiers in the Civil War used dried and ground bark for treating fevers.
- Some Native American tribes used the roots to make a scarlet dye for coloring porcupine quills and eagle feathers.
- Dogwoods are under threat from a disease called the anthracnose fungus, which can gradually kill the trees.

Hawthorn (Thornapple)

Scientific Name: *Crataegus* spp

(1) Left: Hawthorn branch with thorns, by Alexandr Pankov iStock ID:1318931100, (2) Upper right: Hawthorn leaves and berries ("haws"), by Arkela, iStockID:1179862764 (3) Lower right: Hawrthorn flowers, by Amelia Coffen. iStock ID:1309473080

Habitat: Hawthorn is found in meadows, woods and along riverbanks. It generally occurs on moist, well-drained soils. These are hard to find at Camp, but they have been seen at the site of the old small camp named Trail Blazers, next to Pioneer Brook.

Description:

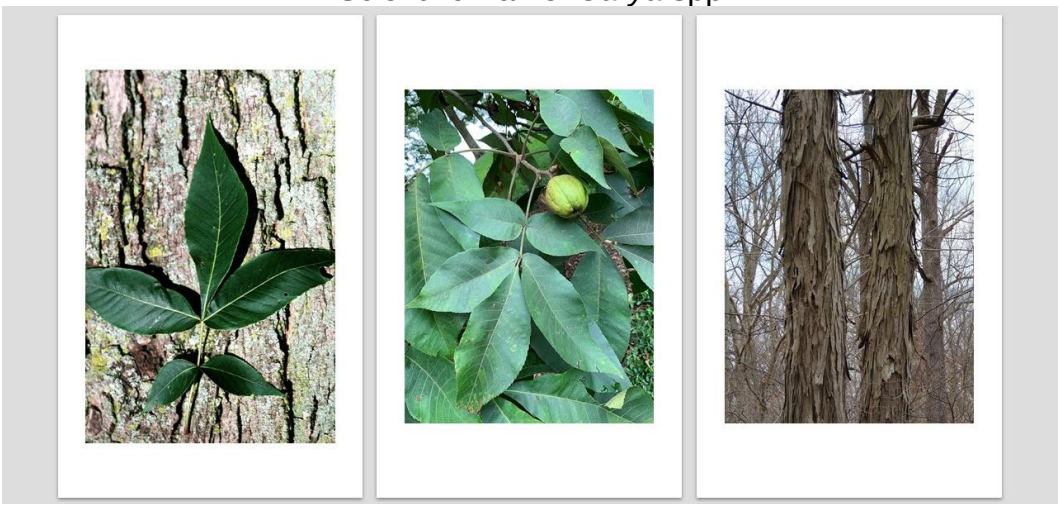
- 15-50 feet tall. Sometimes small and shrublike.
- Its leaves are alternate, simple, ¾ inch to 3 inches (depending on the species), toothed, usually oval, sometimes lobed.
- Its flowers are white, pink, or red, with 5 petals.
- Its fruits (called "haws") are round, red, and look like tiny apples.
- The bark of young trees is smooth and gray; mature trees are dark shades of brown with a rough, fissured texture.
- Branches of the tree are armed with long (up to 4 inches) sharp thorns.

Interesting Facts:

- Songbirds like to nest in the thorny branches and eat their haws.
- The fruit can be used to make jelly and jams.
- The leaves, berries, and flowers have been used for medicinal purposes for centuries and are still used today. They contain chemicals called flavonoids, which have antioxidant effects, and are believed to improve blood circulation, affect blood flow from the heart, and lower cholesterol.

Hickory Trees

Scientific Name: *Carya* spp



(1) Left: Pignut hickory leaf against mature bark, by Robert H. Mohlenbrock. USDA SCS. Southern wetland flora, Public domain; (2) Center: Shagbark hickory leaf with nut, by Katherine Wagner-Reiss, CC BY-SA 4.0; (3) Shagbark hickory bark, by Elmar Langle, iStockID:1361743298

Pignut Hickory (Scientific Name: *Carya glabra*)

Habitat: These trees are plentiful in mixed-oak forests. They can be found on dry ridge-tops, side slopes to moister woods. At Camp, pignut hickory is less common than shagbark hickory, but has been seen on the Ridge near the Homestead campsite.

Description:

- 50-80 feet tall. Medium size, straight trunk, irregular crown.
- Its leaves are alternate, compound, 8-10 inches.
- There are 5-7 finely-toothed, lance shaped leaflets on each leaf.
- Male flowers are drooping catkins 2-4” long and brightly yellow-green; the female ones, a small green pistil of tiny flowers with a few bracts
- Its fruits are oval or pear-shaped nuts.
- Its bark is smooth gray bark when the tree is young. As the tree matures, the bark develops scaly ridges and deep grooves.

Interesting Facts:

- Pignut hickory nuts, which contain a lot of fat, are a big part of the diet of many animals, including squirrels, turkeys, black bears, raccoons, foxes, and chipmunks.
- Pigs owned by early settlers liked to eat this hickory’s nuts, giving the tree its name. Most people think the nuts are too bitter to eat.

Shagbark Hickory (Scientific Name: *Carya ovata*)

Habitat: Shagbark hickory trees are found in humid areas with moist soils. They are usually scattered among oaks, pines, and maples. At Camp, shagbark hickory are plentiful and can be found just about everywhere on both the Great Hall and Wanagan sides of the lake.

Description:

- It can grow up to 100 feet in height, but averages between 60 and 80 feet tall. It has a straight trunk and an irregular crown.
- Its leaves are alternate, compound and very long (12-24 inches).
- There are 5-7 slightly rounded and pointed leaflets with toothed edges on each leaf.
- Its flowers are catkins.
- Its fruits are large nuts.
- The tree gets its name from the shaggy bark found on older trees.

Interesting Facts:

- Andrew Jackson, the 7th U.S. president was called “Old Hickory” because he was said to be as tough as a hickory tree.
- The hickory wood is used to make tool handles, ladder rungs, athletic equipment, and flooring because it is so strong.
- Humans consider the nuts of the shagbark hickory to be the best tasting type of hickory nut. They have a sweet buttery taste that improves by roasting, drying, or toasting the nuts.

Shagbark Hickory nuts,
by chengyuzheng, iStock
ID:1299088540

Maple Trees

Scientific Name: *Acer* spp

(1) Upper left: Red maple leaves in summer, by Bmerva, CC BY-SA 3.0; (2) Lower left: Red maple fruits (samaras), by Dcrjsr, CC BY 3.0; (3) Red maple leaf in fall, by Benny Mazur, CC BY 2.0.

Red Maple (Scientific Name: *Acer rubrum*)

Habitat: Red maple grows on diverse sites from dry ridges to peat bogs. Red maple trees are plentiful at Camp and can be found just about everywhere in the Mashipacong forest.

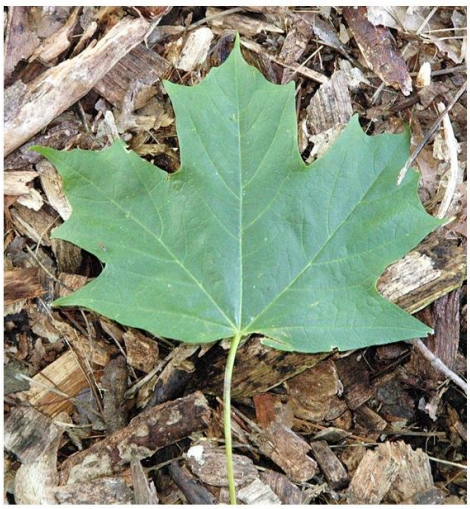
Description:

- 60-80 feet tall, straight, with a dense, curved crown.
- Leaves are opposite, simple, 2½ - 5 inches. Most leaves have 3 lobes (some have 5 lobes) with toothed edges.
- Its flowers are red or yellow, on bare branches.
- Its fruits are small samaras (wing-like structures with seeds) in pairs.
- Its bark is smooth and light gray on young and middle-aged trees, dark and rough on mature trees.

Interesting Facts:

- It is a favorite tree for people to plant in their yards because the leaves turn brilliant scarlet red in the fall.
- In spring, it is one of the earliest trees to flower.
- The white, fine-grained wood is used for furniture, flooring, cabinetry, paneling, tool handles, cutting boards, and many other uses.
- The seeds, buds, and flowers are eaten by wildlife. Squirrels and chipmunks store the seeds. White-tailed deer, browse red maple.

Sugar Maple (Scientific Name: *Acer saccharum*)




(1) Left: Sugar maple leaf, by James St. John, CC BY 2.0; (2) Right: Tapping and collecting Sugar maple sap for maple syrup, by Benoitle5, iStock photo ID:517930610

Habitat: Sugar maple are often found in woodlands and along stream banks. They do best in well-drained soils with cool, moist winter temperatures. Although there are likely to be sugar maple trees at Camp, they are not as common as red maple. This is because sugar maple is considered a "rich-site" species that grows where soils are rich in calcium and other nutrients.

Description:

- 70-100 feet tall. Medium to tall, with a straight trunk and dense, curved crown.
- Its leaves are opposite, simple, 4-6 inches with 5 lobes.
- Its flowers are yellow-green clusters.
- Its fruits are samaras in pairs.
- Its bark is smooth and gray when young, becoming irregularly furrowed, scaly, and dark gray on older trees.

Interesting Facts:

- Sugar maples are famous for their brilliant colors in autumn and sugary sweet sap.
- People tap into the trees and collect their sap, drip by drip, in the late winter. The sap is boiled down to make maple syrup or candy; it takes 40 gallons of sap to make 1 gallon of syrup.
- The sugar maple also has a fine wood used in furniture and musical instruments.
- Its leaf appears on the national flag of Canada.

Oak Trees

Scientific Name: Quercus spp

Red Oaks Group: (1) Left: Black oak leaf, by Chris Light, CC BY-SA 4.0; (2) Upper right: Northern red oak leaves, by Chris Light, CC BY-SA 4.0; (3) Lower right: Scarlet oak leaves, by James St. John, CC BY 2.0.

White Oaks Group: (1) Left: Chestnut oak leaf, by James St. John, CC BY 2.0; (2) Right: White oak leaves, by David J. Stang, CC BY-SA 4.0.

Habitat: Oak trees are the most common type of tree found in the Mashipacong forest, which is a “Mixed-Oak Forest/Woodland” type of forest. The types of oak trees at Camp include: Northern red oak, scarlet oak, black oak, white oak, and chestnut oak. They are scattered throughout the woods behind the Great Hall as well as near Unami small camp, and on the ridge between Homestead and Timber Ridge. Oak trees (especially white oak and chestnut oak) are also plentiful in all of the small camps on the Wanagan side of the lake, from Forest Tipi to Pahok. There are several large stately oaks on the front lawn of the Great Hall.

Northern Red Oak, **Scarlet Oak**, **and Black Oak** (Note: These three species are in a subgroup/section of oaks classified as “red oaks.”)

Descriptions:

- The leaves typically have sharp lobe tips with spiny bristles.
- The acorns have bristles, and the inside of the shell appears woolly.
- The actual nut is encased in a thin, clinging, papery skin.
- The acorns mature in 18 months and taste very bitter.
- **Northern red oak** leaves are oblong, have 7 to 11 lobes, are 8 inches long, and are dull green above and yellowish green and hairy beneath.
- **Scarlet oak** leaves are obovate (shaped like an egg), 2 ¾ - 6 ¼ inches long, 3 - 5 ⅛ inches wide, margins with 5 - 9 lobes extending more than ½ the distance to the midrib, upper surface a glossy green.
- **Black oak** leaves are obovate, 4 - 11 ¾ inches long, 3 - 6 inches wide, margin has 5 - 9 lobes ending in 1 - 4 bristle-tipped teeth,

White Oak and Chestnut Oak (Note: These two species of oaks are included in a subgroup/section of oaks classified as “white oaks.”)

Descriptions:

- The leaves have rounded lobe tips with no bristles.
- The acorns do not have bristly tips, and the inside of the shell is hairless.
- The acorns mature in six months and taste sweet or slightly bitter.
- **White oa**k leaves are obovate, 4 - 8 inches long, 2 ¾ - 4 ¾ inches wide, margin with 5 - 9 lobes that are widest beyond middle, deep sinuses extending a third or more to midrib, dull or shiny grayish green above, light green beneath.
- **Chestnut oak** leaves leaf blade obovate, 4 ¾ - 8 inches long, 2 ⅜ - 4 inches wide, margins have 10 - 14 rounded teeth, thick firm blade, shiny dark yellowish-green above, light green below.

Interesting Facts:

- Oak trees provide sanctuary and food for many animals.
- Some oak acorns can be dried and ground into flour for baking.
- **Northern red oak** is the most valuable timber species in the red oak group. It has been used in construction, flooring, and furniture.
- **Scarlet oak** is very susceptible to fire damage because of its thin bark.
- **Black oa**k bark was once used as a source for the yellow dye, quercitron, and for tannins to tan leather. It is also a used in construction.
- **White oak** is used to make wine and whiskey barrels as the wood resists leaking. It has also been used in construction, shipbuilding, agricultural implements, and in the interior finishing of houses.
- **Chestnut oak** leaves resemble the American chestnut.

Pitch Pine

Scientific Name: *Pinus rigida*

(1) Left: Pitch Pine Bark by Juanita Barrena.
(2) Right: Pitch Pine Needles by David J. Stang, CC BY-SA 4.0

Habitat: These trees can grow in woodlands and at the margins of wetlands. They can also grow on ridges and in poor, sandy, shallow soils. Although pitch pine is not plentiful at Camp, there is a beautiful pitch pine at the Hermit Glen campsite and there are several large pitch pines in the forest between Hermit Glen and Timber Ridge. It is also likely that pitch pine can be found near the Lost Lake and Mashipacong Pond bogs.

Description:

- Height 40-90 feet.
- 3-5 inch needles in bundles of 3; needles are thick and stiff.
- The bark is rough and plated, with deep fissures.

Interesting Facts:

- The pitch pine lives an average of 80 years, but some live 200 years.
- These trees will often regenerate growth with twisted trunks and branches after a fire or cutting.
- They have been a main choice for construction of radio towers, ships, and railroad ties because of the high content of pitch which slows the decay of the tree.
- The wood of the pitch pine is fairly soft but almost waterproof and Native American tribes used it for canoes and carvings.
- It has a storied medicinal value. The Iroquois tribes used it for healing wounds, burns and joint pain.

Sassafras

Scientific Name: *Sassafras albidium*

Sassafras leaves, by "kj2011," iStock ID:469767601

Habitat: These trees are found along the edges of mixed forests or in open fields. They can grow as an understory, but like patchy sun. At Camp, sassafras is common in the woods behind the Doubletree and along the paths to the small camps on the Wanagan side of the lake. It is also found close to the edges of the woods on the Great Hall side.

Description:

- Sassafras leaves have 3 leaf patterns: One is unlobed, like the palm of a hand; another looks like a mitten; and the third has two lobes.
- Its flowers are small, greenish clusters.
- Its fruits are blue, berry-like, on red stalks. Sassafras trees can grow from 9–35 m (30–115 ft) tall.
- Young trees and branches have a smooth, orange-brown bark or yellow bark; older trees have a deeply furrowed bark.
- The bark and root have an oil in them that gives off a spicy smell.

Interesting Facts:

- Historically, the sassafras tree was used by Native Americans in cooking and many medicinal ways.
- Sassafras roots and bark were boiled to create a tea and extracts are still used today as the main ingredient in root beer soft drinks. However, since there is a chemical in unpurified extract that has been shown to be a carcinogen in animals, only purified extract should be consumed.
- Leaves are dried and ground to make filé (a condiment used to thicken and flavor soups and stews like Gumbo).

Shadbush (also known as Serviceberry)

Scientific Name: *Amelanchier* spp

(1) Left: Shadbush leaves and berries, by Iva Vagnerova, iStock ID:1325889414.
(2) Right: Shadbush flowers, by NADEJDA2015, iStock photo ID:642265666,

Habitat: These trees grow in the understory near wet, swampy areas as well as well-drained moist soils. At Camp, shadbush mostly grows along the banks of Pioneer Brook and other low-lying wet areas.

Description:

- It is a small tree with a maximum height of 50 feet.
- Leaves are 1½ - 2½ inches, oblong-elliptic in shape, and finely toothed.
- It has showy flowers that develop into blue or purple.
- Its bark is smooth and bluish gray.

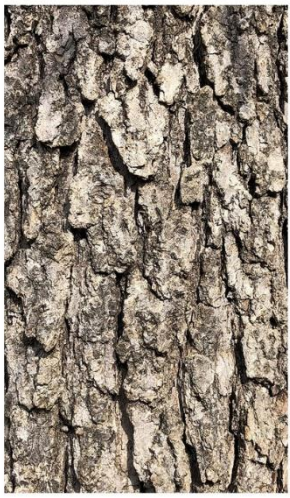
Interesting Facts:

- It is said that the first European settlers planned funeral services at the same time the tree bloomed. Its blooming was a sign that the ground had thawed enough to dig a grave. Because of this, the tree is also known as the “Serviceberry Tree.”
- It is also said the flowering of the tree along the Hudson River coincided with the yearly spring run of shad fish up the river to lay eggs.
- There is a children’s book called *When the Shadbush Blooms*, in which a young Lenape girl fishes for shad fish and remembers a time when her great, great grandmother did the same.
- Many Native American tribes used the tree for food and making arrow shafts.
- The berries that ripen in June are great in pies

.

Sour Gum (also known as Black Tupelo)

Scientific Name: *Nyssa sylvatica*



(1) Left: Sour gum bark, by Famartin, CC BY-SA 4.0 (2) Center: (2) Center: Sour gum leaves with berries, by Dynamoland, iStock ID:1216842324; (3) Right: Sour gum leaves in Fall, by :gardendata, iStock ID:92283242.

Habitat: These trees prefer well-drained, lightly shaded areas. They commonly grow near creek beds but also can be found on upland hillsides. At Camp, there are sour gum trees along the path between the Lodge and the Great Hall and they are also likely to be found along lightly shaded areas around the lake shore. There is a lovely spreading sour gum tree in the center of the Homestead campsite.

Description:

- It is slow growing and will grow up to 80 feet in height.
- Its leaves are simple, alternate, 2 - 6 inches, shiny, and leathery. They are clustered at the ends of branchlets.
- Its fruit is a black-blue egg-shaped stone fruit.
- The bark is dark gray and flaky when young, but it becomes furrowed with age, resembling alligator hide.
- It has brilliant, bright red, fall colors.

Interesting Facts:

- It contributes to honey production for bees.
- Its wood is very strong and can be used for pulleys, bowls and pallets.
- Juice and jams can be made with its fruit.
- It is one of the first trees to turn color in Fall. Its early color change is thought to attract birds to the available fruits, which ripen before many other fall fruits and berries.

Tamarack (also known as Eastern Larch)

Scientific Name: *Larix laricina*

Left: Tamarack in Fall, by ClubhouseArts" iStock ID 493866138; Right: Tamarack needles and cones by U.S. Fish and Wildlife Service; CC PDM 1.0

Habitat: These trees can be found in moist, well-drained soils by lakes, rivers, and swamps, as well as in poorly drained sites such as bogs. At Camp, this tree would be found in swampy areas like the peat bog at "Lost Lake" or the Mashipacong Pond swamp at the northeast end of the lake.

Description:

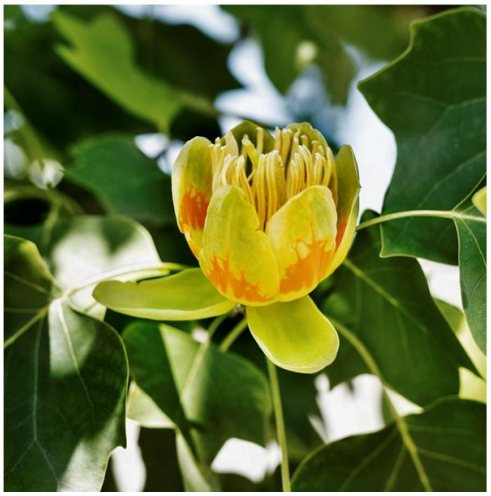
- Height is 40-80 feet; trunk diameter is approximately 2 feet.
- This is a deciduous conifer whose 1 inch needles turn golden in the fall and drop off the tree. The cones are tiny and start out as pink and then turn a deep red to a crispy brown.
- Its bark is sometimes reddish.

Interesting Facts:

- The tamarack lives between 150-300 years.
- Its needles and bark can be made into a tea.
- The Ojibwe Indians crushed the leaves and bark and either applied it to a wound or sore body part as a poultice (soft paste) or placed it on hot stones and inhaled the fumes to help relieve headaches.
- The name of the tree is an Algonquian term which means "the wood used for snowshoes."

Tulip Tree (also called Yellow Poplar)

Scientific Name: *Liriodendron tulipifera*



(1) Left: Tulip tree flower, by victimewalker, iStock ID:1334850048.
(2) Right: Tulip tree leaves, by Alexander Denisenko, iStock ID:1175523824

Habitat: This tree prefers rich, well-drained soils of bottomlands or gentle hillsides and slopes near streams. It is a dominant tree of mature forests. At Camp, there is a beautiful tulip tree growing along the Deckertown Turnpike on the way between the Lodge and the Wanagan (see cover photos). It is said to be at least 300 years old. There are also several large tulip trees on the path to the site of the old small camp named Trail Blazers, and in the low-lying areas near Pahok.

Description:

- It can grow more than 100 (up to 200) feet in height and 7 feet or more in diameter. It grows almost perfectly vertical.
- This is a large, beautiful tree with unique bluish-green leaves.
- The leaves are alternate, simple, 3-7 inches wide, have four lobes and resemble a tulip.
- In the spring it displays handsome tulip-shaped greenish-yellow and orange flowers. The flowers start forming after about 15 years.
- Its fruits are narrow cone-like aggregates of 4–9 cm long of samaras.

Interesting Facts:

- It is a member of the magnolia family.
- It reaches its full height in about 200 years.
- The Great Smoky Mountain National Park has several tulip trees over 20 feet in circumference.
- It was also known as canoe wood as it was used for dugout canoes by the Native Americans.

Witch Hazel

Scientific Name: *Haramelis virginiana*

(3) Left: Witch hazel flower, by Billy_Fam, iStock ID:1303484469; (2) Right: Witch hazel leave and seed pods, by seven75, Stock photo ID:1188239791

Habitat: This tree is found in rich, loamy, moist soils. It will tolerate wet and poorer soil. It likes full sun. At Camp, it is plentiful in the low, moist areas behind the Awanasa small camp, the swamp below Hermit Glen, the low-lying areas around the Community Fire spot, and at Cayuga and Pahok.

Description:

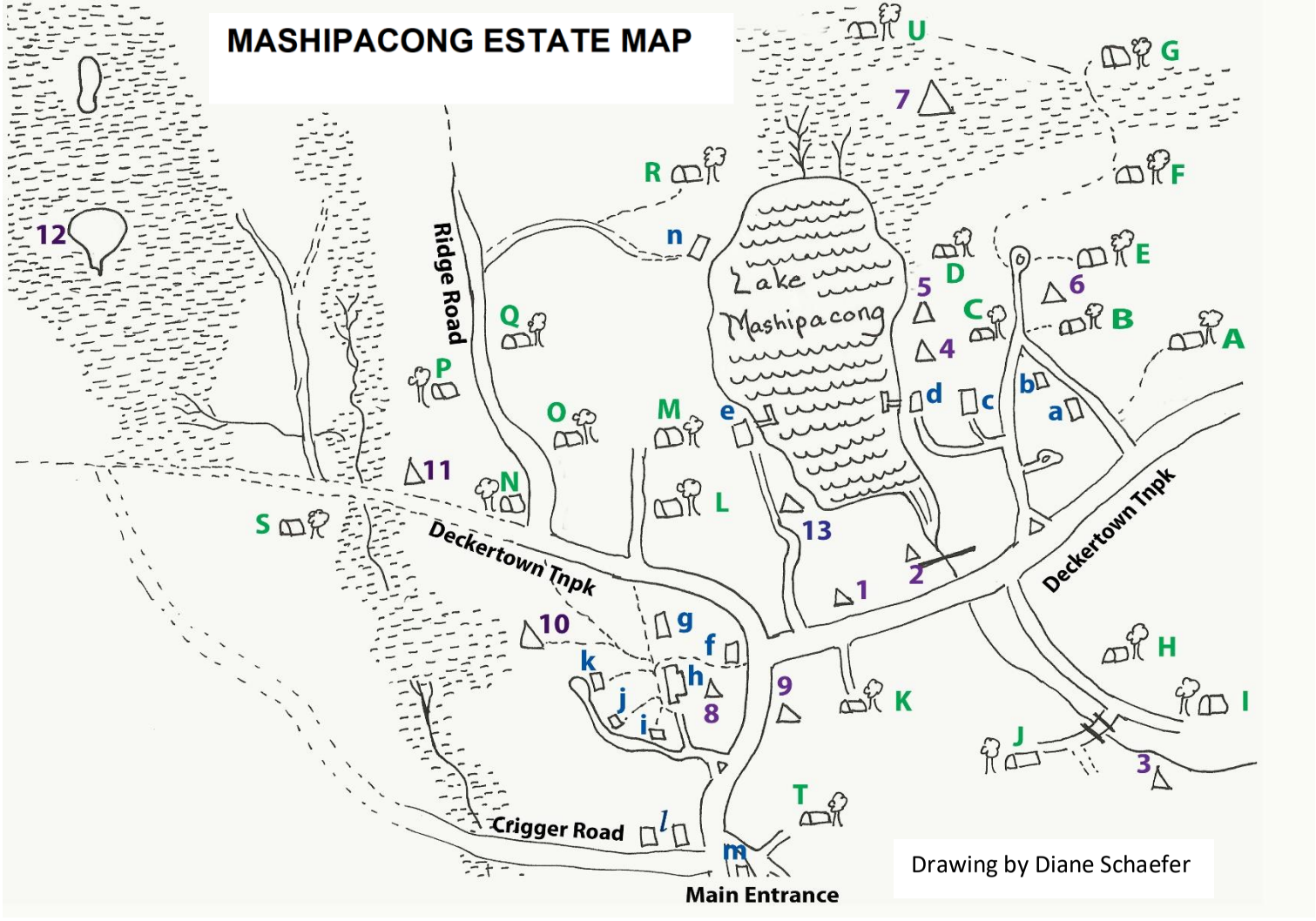
- It is a small tree or shrub growing between 10 -25 feet tall.
- Its leaves are alternate, simple, 3-6 inches, oval, scalloped edges.
- Its bright yellow flowers are fragrant and spicy smelling, blooming in mid to late fall.
- It has black seed pods that take a year to mature and will “explode” in October/ November, scattering the seeds up to 30 feet.

Interesting Facts:

- Witch hazel contains anti-inflammatory properties that reduce redness and soothe the skin. A liquid made from witch hazel bark and leaves can be used on sunburns, diaper rash and many skin conditions.
- The word “witch” came from the Middle English word *wiche* meaning pliable and bendable. Its forked twigs were used as divining rods to help find underground sources of water.
- The flowers of the witch hazel are pollinated by a moth.
- It was used in the past at Camp to make small brooms. About a 2 inch in diameter section was soaked in a bucket and then the wood would easily separate into strips to create a small broom stick.

SMALL CAMP SITES		BUILDINGS	OTHER SITES
A. Forest Tepee*/ Forest Tipi	K. Awanasa*/ Free Play Area	a. Doubletree	1. Oldest Tulip Tree
B. Backwoodsmen*/ Backwoodies	L. Fern Hill Farm*/ Farmers	b. Singletree	2. Stone Dam
C. Pathfinders	M. Pixies	c. Wanagan	3. Pioneer Brook and Historic Saw Mill
D. Lumberjacks*/ High Ropes Area	N. Homestead*/ Cooking Site	d. Sluiceway	*4. Old Boys' Vesper Glen*
E. Conestoga	O. Brae Tarn	e. Big Dipper	5. Old Boys' Council Fire*/ Christopher's Theatre
F. Frontiersmen*/ The Frontier	P. Hermit Glen	f. Lodge	6. Skidway*/ Archery Range
G. Cayuga*/ Building Site	Q. Timber Ridge	g. Chimney Corner	7. Lake Swamp
H. Trail Blazers*/ Cooking Site	R. Bakers Acres	h. Dining Hall*/ Great Hall	8. Garden
I. *Pioneers*	S. Aquila	i. Broadaxe	9. Old Donkey Pen*/ Firefly Field (septic)
J. Unami*/ Building Site/APEX	T Old Timers	j. Linen Room*/ Goodrich House	10. *Old Girls' Camp Vesper Glen*
	U. *Pahok*	l. Barn Area	11. Council Fire Spot*/ Community Fire
		m. Caretaker's House	12. Lost Lake Bog
		n. Fisherman's Cabin	13. Old Dock

Names and/or uses of some sites have changed over time. The first name listed is the original site name. Sites in *italics* are no longer in use. Sites with name/use changes are noted by */ and followed with the current name/use.


MASHIPACONG ESTATE MAP
Lake Mashipacong
Ridge Road
Deckertown Tnpk
Deckertown Tnpk
Crigger Road
Main Entrance
Drawing by Diane Schaefer

TRAIL BLAZER CAMPS'
WOODLAND BY THE LAKE

(THE TBC BRAE TARN SMALL CAMP SONG)

How beautiful our woodland by the lake,
Beneath the swaying branches of the trees/
Where deer creep past at night,
And birds at morn awake.
What friendships we have found at Brae Tarn.
La La, La La, La, La La
La La, La La, La, La.
We all have fun each day.
In both our work and play.
What friendships we have found at Brae Tarn