

Pictured Rocks

National Lakeshore
National Park Service
U.S. Department of the Interior

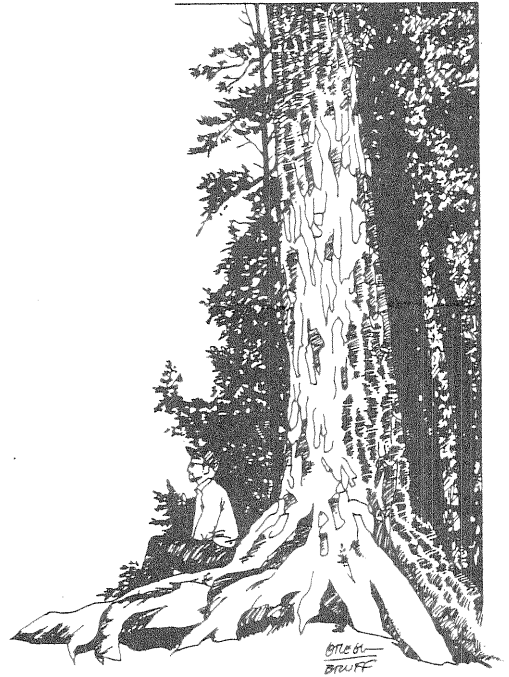
WHITE PINE TRAIL

A Trail in the Woods

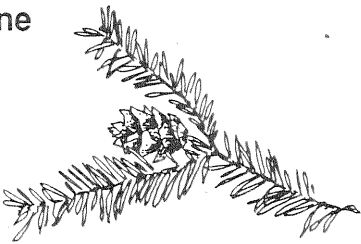
Welcome to the Beaver Basin area of Pictured Rocks National Lakeshore. This guide corresponds to the numbered posts along the White Pine Trail. The 0.7 mile long stroll takes about an hour.

This natural basin borders Lake Superior for about 6.5 miles and reaches inland about three miles. Geologists believe it was formed by the turbulent waters of a meltwater river as it swept along the edge of a receding glacier. You are standing in what was once a river channel!

Enormous trees once grew in these glacial soils. Most of the forest was logged in the late 1800's and again in the 1940's and 1950's. Beaver Basin was for a time the site of a resort owned by the Michigan-Wisconsin Pipeline Co. Little remains of that development today. This forest environment is now protected as a portion of Pictured Rocks National Lakeshore. Let's explore a part of it.



One



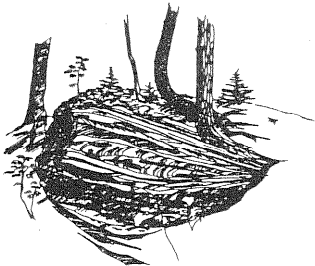
Eastern Hemlock seedlings (*Tsuga canadensis*) require deep shade, moist conditions, and a thick organic seed bed to become established. Pioneers learned from the Anishinabe (Ojibwa) Indians that the bark's high tannin content made a valuable curative for burns and sores. In the early 1900's many of these trees were harvested to provide bark used in the tanning process at a large shoe leather tannery located in Munising.

Two



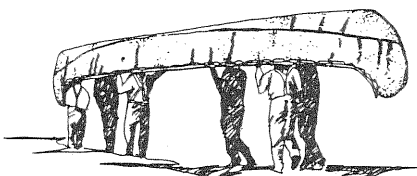
The roots of this fallen hemlock form the type of place where a black bear (*Ursus americanus*) might hibernate for the winter. Black bears are frequently found in thick maturing forests where they scavenge for grubs, berries, nuts, or other vegetation. Their diet is largely vegetarian except for an occasional mouse, chipmunk, or carrion. Studies indicate the population may be one bear per three or four square miles in this area. Watch for bear claw marks in beech tree bark along the trail.

Three



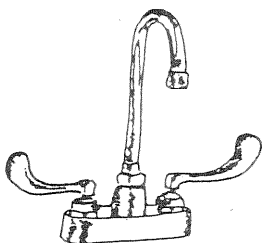
Here we see an exposed layer of sandstone which was deposited in shallow seas during the late Cambrian or early Ordovician age some 500-600 million years ago. This outcrop has been exposed by creek erosion and is the same rock formation found in the Pictured Rocks cliffs. The cliffs were named for mineral deposits and organic matter which have stained the rock creating colorful "pictures". Visible along 15 miles of the Lakeshore, the cliffs reach heights of up to 200 feet above Lake Superior.

Four



This plant association is called a wetland since the soil is saturated with water most of the year. Wetlands are valuable for many reasons. They store and filter surface water like a huge sponge. Wetlands provide habitat for wildlife including bobcat, snowshoe hare, pine marten, and bear. One common tree species in this type of wetland is northern white cedar (*Thuja occidentalis*). Its thin, grey-brown bark is tough and stringy, and the wood is light and rot resistant. American Indians and voyageurs used cedar for canoe paddles, and components of birch bark and wood and canvas canoes were crafted from it. Many Upper Peninsula cabins have been shingled with cedar shakes.

Five



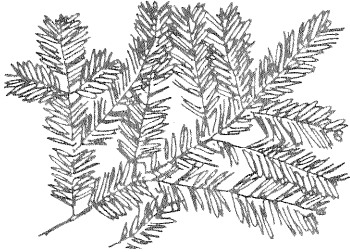
A mile upstream from here the water table meets the surface creating a small marsh. It is the source of Little Beaver Creek which flows into Little Beaver Lake. The Lakeshore includes most of the watershed of this and six other streams. Forests within a watershed help sustain a constant flow of water through the landscape. Can you estimate how much water will flow past this spot today? Compare it to the fact that Americans use an average of about 200 gallons of water a day.

Six



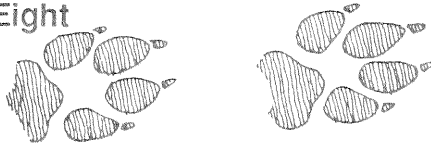
Look closely at the ground to discover a miniature world of plants...and perhaps an animal or two. Notice the thick cushion moss (*Leucobryum glaucum*) and different kinds of fungi on this cool, moist, hillside. The forest is filled with these "gardens of lilliput", particularly in autumn. The south shore of Lake Superior is considered by experts to be one of the best mushroom hunting areas in the nation. Remember, though, that wild mushrooms should be identified by an expert before eating.

Seven



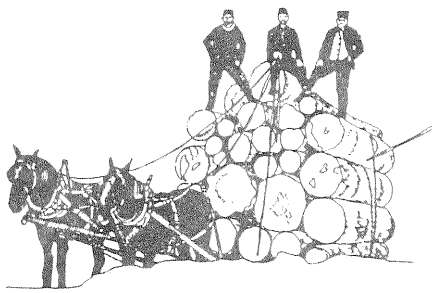
Balsam fir (*Abies balsamifera*) is a common tree of the boreal forest, an ecological region which extends from the northern Great Lakes to Great Slave Lake in Canada. Where conditions are too severe for other trees, conifers like balsam, spruce, tamarack, and pine thrive. The spicy fragrance of balsam is one of the finest in the outdoors. Resin blisters on the bark yield sap which is made into turpentine and varnish. It is also used as a mounting medium for preserving microscope specimens.

Eight



As you move upstream watch for tracks of some of the other residents of the forest. Like you, coyote, deer, fox, pine marten, and other mammals use these trails.

Nine



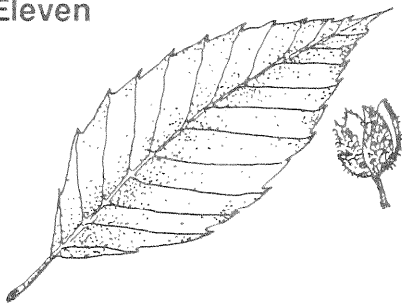
On top of this hill stands the former "king" of trees in the northeastern U.S. – the white pine (*Pinus strobus*). For over 100 years white pines were the premier timber trees in the nation. The wood is strong yet light and no other tree played as great a role in the development of the midwest as the white pine. Few virgin stands remain today, though large white pine were once common from Maine to Minnesota. Alarmed by the depletion of pine, citizen groups around the turn of the century began calling for preservation of our nation's forest resources. Please stay on the trail to view these 300 year old giants.

Ten



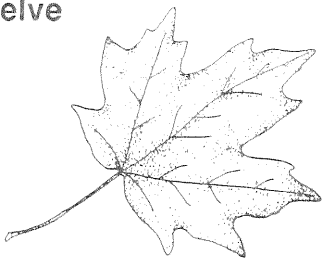
Yellow birch (*Betula allegheniensis*) can grow to 100 feet, a height surpassed only by white and red pine. Yellow birch thrive in moist soil where their "feet are wet". They are often toppled in wind storms which create "light gaps" in the forest where other trees can then begin growing. Several are found here in an old stream bed. Sapsuckers drill horizontal rows of holes in them where oozing sap attracts insects. Long ago North Americans dried the decaying wood to use as tinder, and yellow birch can be tapped for sap like sugar maple. Today, yellow birch are harvested for veneer.

Eleven



Easily identified by its smooth bark, many animals depend on the American beech (*Fagus grandifolia*) for food. In autumn black bear climb larger trees, perhaps to obtain the nuts. Woodpeckers probe the bark for insects. Prior to their extinction, passenger pigeons also depended on this tree for food. Painter-naturalist John James Audubon wrote, "The sound which they make, though yet distant, reminded me of a hard gale at sea...as the birds arrived I felt a current of air surprise me...the pigeons arriving by the thousands alighted everywhere, one above another, until solid masses, as large as hogsheads, were formed in the branches all around."

Twelve



Here we find a thick stand of sugar maple (*Acer saccharum*). A hike through a maple forest of brilliant crimson, scarlet, or orange contrasted with a bright blue sky must be one of the most pleasing sights of a north country autumn. Its hard, dense, wood warms us in the stove on long winter nights, and who can forget the taste of syrup over pancakes? Maple-beech forests are common from Michigan to Maine and in the higher elevations of the Appalachians.

Thirteen

As you leave the trail, think about what you have seen and experienced walking through this old river bed forest. To the north and west in Canada lie the great conifer forests of spruce and pine. To the south and east deciduous trees thrive. Here the forest is comprised of both. Here too we see evidence of a variety of animals. Standing at the crossroads of two worlds, we are reassured to know that this area has been preserved for future generations.

