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Interpretive Trail Guide



Brickyard Creek Interpretive Trail

We are drawn to places such as this woods, this creek, this lake, because our kinship to the wilderness compels us to come. As we walk reflectively down this path, along the singing waters of Brickyard Creek, through the quiet breeze-swept branches of the Boreal Forest plant community, over ground traveled by native peoples and creatures alike for thousands of years, we become reacquainted with who we are as we ourselves are reflected in these wild environments.

Northern White Cedar Marker 11

Thuja occidentalis

This unique tree is also known as the *arbor vitae*, or “tree of life,” as it is rich in Vitamin C. It was used by Native Americans and early explorers to fend off the common cold and even scurvy. Cedar trees are not as easy to find these days as they have been in the past. In fact, young cedar stands have been all but eliminated from the Northwoods by a combination of logging and heavy deer browsing. The young cedars growing along the trail are a rare and exciting sight.



Canada Yew Marker 12

Taxus canadensis

It is a rare sight to see this coniferous shrub in Northern Wisconsin unless you travel offshore to the Apostle Islands. Canada Yew typically only grows in stable, healthy forests – called “climax forests.” It is very sensitive to disturbances such as logging and fires, as well as deer browse.



Blue Bead Lilly Marker 13

Clintonia borealis

This plant is also referred to as “cow’s tongue.” It is edible while young, and said to have a flavor similar to a cucumber. But be careful – the bright blue berries are actually mildly poisonous to humans!



This interpretive trail is a central feature of the Brickyard Creek cabin community as an expression of our desire to know, preserve, and to experience this wilderness environment. Its path meanders slowly through the forest floor and creek bed basin. It reaches one way for the forest and then the other for the creek, guiding a stroll down the path which holds in each bend the potential to understand better what we share in common with this woods and watershed community. Its simple hope is that each time a hiker reaches the end of the path, one will emerge with a little more of the knowledge held within the trail’s experience.

A full experience of this path through the wilderness requires us to be open, to allow our busy lives to fall away, to be fully present to what we will find. It beckons us to be silent for a moment, to listen and see with senses free from distraction. It fills us with a sense of belonging to something far larger and more extraordinary than our everyday lives permit us to know. Even more, it asks us to be humble so as to respect its vulnerability and its majesty.

Some of the plants, trees and shrubs are named along the path. Some suggestions and interpretations will be offered. By learning more about each plant, the workings of the creek and the makeup of the forest, we will better understand these wilderness communities and ecosystems. But beyond the names, descriptions and words are more essential expressions of the natural wilderness environment. This interpretive trail is sometimes best experienced through the senses unfiltered by the “named” and “described”. Walk, listen, look, smell, feel...even taste...but mostly, relax, belong and be renewed.



Geologic History

Approximately 11,000 years ago, a glacier known as the Laurentide Ice Sheet covered the entire Great Lakes region. When the glacier melted and receded north, a depression was formed in the ground. As this area filled in with water, the Great Lakes began to take shape. However, before Lake Superior existed, there was Glacial Lake Duluth.



Glacial Lake Duluth was the Western most lake in the basin and was isolated from the other Great Lakes by the tip of the glacier. The water levels of Glacial Lake Duluth were 500 feet higher than Lake Superior is today; meaning Brickyard Creek would have been underwater!

Glacial Lake Duluth, and eventually Lake Superior, was responsible for creating the clay and sandy soil mixture found on the Bayfield Peninsula today.

Point 3: Riparian Boreal – Welcome to the floodplain once again. Riparian boreal forests are very similar to the upland boreal forest, although they “get their feet wet” a little more often. If you take a look around, you will see an abundance of species that love moist soils. On a flood plain, not only is there more moisture, but also more organic nutrients. This extra rich soil is created by the deposition of suspended sediments from flooding on the floodplain.

From the trail, you can see some great examples of tree and plant species that are typical for this ecosystem. A rather large Eastern Hemlock (and a few smaller ones), Northern White Cedar, Balsam Fir, Yellow Birch, and even a small Sugar Maple are visible. The herbaceous layer is also typical of this ecotype – Blue-bead Lilly, Big-leaf Aster, and Beech Fern are the more common species in front of you. These species grow in large patches and are the easiest to notice. Also growing within sight of this point is the Star Flower, Canada Mayflower, Wood Anemone, False Solomon’s Seal, Pyrola, Wood Fern, and Oak Fern.

Some of the prettiest breeding birds in the boreal forest are found here, as well. Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Red-eye Vireo, Canada Warbler, and many other birds can be heard at this point. Here are a few of the plants at Point 3.

Beech Fern
phlegopteris connectilis



Marker #9

Big-Leaf Aster
aster macrophyllus



Marker #10

White Pine Marker #7

pinus strobus

White Pines can be identified by their long needles. They also have 5 needles in each cluster, while other pines typically have 4 or less. Although it is common for a White Pine to reach 200 years of age, some can live up to 450 years! White Pines are valuable to a wide range of wildlife. Porcupine and deer eat the bark, small mammals feed on the seeds, and bald eagles will often nest in the higher branches of the tree. Even standing dead White Pines provide valuable habitat for cavity-nesting animals such as pine martins, peregrine falcons, and many species of songbirds.



Paper Birch Marker #8

betula papyrifera

This tree is home to early successional forests and open areas. It will eventually give way to more boreal species as the forest develops. This tree was invaluable to Native Americans who used the bark for mats, canoes, baby carriers, and many other items. The wood was also a prized resource because of its durability and flexibility.



When streams of glacial runoff discharged into the Lake, they carried with them the finest types of sediments: silt and clay. The clay was so fine that it stayed suspended until it reached the deep calm waters of the Great Lakes, where it finally settled out. This is how the clay plain of the entire Lake Superior basin was formed. If you were to trace the clay plain on a map, you would be tracing the ancient shoreline of Glacial Lake Duluth. This old shoreline is found at approximately 1100 feet above sea level.

Eventually, the Laurentide Ice Sheet melted away and allowed most of the water that was in Glacial Lake Duluth to drain south into the other Great Lakes and the Mississippi River Basin, which lowered Lake Superior to its current water level of 600 feet above sea level. Still, at the current level, Lake Superior is the world's largest freshwater lake!



Glacial Lake Duluth once covered Brickyard Creek in over 500 feet of water. Today, water levels have dropped to approximately 600 feet above sea level..

Original Vegetation



The original and present vegetation of Brickyard Creek form a unique continuum, very much related to the geology and history of the area. When we speak of the “original vegetation,” we are referring to the pre-settlement and pre-logging habitats. We know what was here by studying records left from the original surveyors who traveled the region in the mid-1800’s. Their surveying was surprisingly accurate: they marked trees every mile and a half by scraping into the bark and recording the tree species that were marked. Also, we can analyze the records of tree species that were logged in each area. These notes give us a fairly accurate picture of the ecosystems in the Northwoods before they were settled.

So what was around Brickyard Creek you might ask? And what does this have to do with local? The answer is simple: both the written and photographic records documented

as compared to trees with broad leaves. Add to this the shorter growing season and it is no wonder we have boreal forests in this cold country. Here at point 2, you can clearly see the difference between older mature forest and young brushy forest simply by looking up the trail to the west. Some of the trees seen at this point are Yellow Birch, Balsam Fir, Green Ash, Paper Birch, Quaking Aspen, Sugar Maple, and American Basswood. Though most of these are broadleaf species, the majority of this ecotype is dominated by Balsam Fir, White Cedar, and White Pine. Keep an eye out for these species along the trail. The presence of broadleaf trees such as aspens shows that this area was either cut or there was a disturbance such as a storm around 40 to 50 years ago.

To the East of the fork in the road are the younger brush species; these include Staghorn Sumac, Highbush Cranberry, American Elderberry and Mountain Maple. Some of the herbaceous species seen here are Currants, Wood Fern, Lady Fern, Tall Buttercup, Cow Parsnip, Nodding Trillium, Downy Yellow Violet, Jack-in-the-pulpit, Wood Anemone, Enchanters Nightshade, Thimbleberry, and False Solomon’s Seal.



Balsam Fir Marker #6

abies balsamea

As you can see from the photo, balsam fir needles have two white stripes on their under side. The needles are soft, and lay out flat from the branch. Balsam firs are known for their pleasant scent (you may recognize the smell from your last Christmas tree).



Highbush Cranberry

viburnum trilobum

You guessed it - another native shrub! This plant is a sign of forest succession; it grows in open areas, and in the understory of coniferous forests. Its growth is actually stimulated by

wildfires. Seeds stored in the soil germinate after a low-severity fire, and sprouts will appear in the weeks following the fire. **Marker #4**

American Elderberry

sambucus canadensis

The name *sambucus* comes from the Greek word *Sambuca*, which was a stringed instrument made from elder wood. The berries from this native shrub can be used to make a tasty jelly. **Marker #4**



Point 2: Upland Boreal- In the clay plain, this is a very common ecotype. In fact, it was probably the most abundant forest type in the Lake Superior region of Wisconsin at one time. Upland boreal species are common on poor soils – not surprising as boreal plants are usually the only ones hardy enough to grow. Trees with needles have the advantage of being able to photosynthesize during the winter. Their waxy needles are better adapted to the cold dry conditions of the area

boreal forests throughout the clay plain. The boreal forests followed the clay plain in a belt that went from Duluth all the way east to the Upper Peninsula of Michigan, extending as far inland as the highest levels of historic Lake Duluth (about 30 miles).

Geology explains why this forest type was so successful in such harsh conditions. Because clay is so dense, only the hardiest of plants could grow on the clay plain. Boreal forests consisted of White Spruce, Balsam Fir, White Cedar, White Pine, Eastern Hemlock, Paper Birch, and Poplars. The understory consisted of large patches of Canada Yew, Mountain Maple, and other species that did well in moist, shady conditions (conifer forests have a rather tight canopy, shading out the forest floor below).



A young white cedar – a rare sight in this region due to heavy deer browse

Marker #1

Now here's an interesting fact about these "clay" soils that seems to contradict common sense – clays are actually some of the most fertile soils that exist. They are virtually loaded with nutrients. However, the clay particles are so small in size that they lock together and form impenetrable layers. The roots of plants are unable to reach the nutrients locked in the clay.

Also, water moves through clay at a sluggish rate of 0.3 inches a year, making it either very wet, or very dry.

So what happen to change the vegetation of Brickyard Creek from this boreal forest? The logging era of Northern Wisconsin stripped most of the timber in the area in the early part of the 20th century. However, parts of Brickyard Creek appear to have been spared. In these areas, large old growth trees can still be found. In the early part of the century, these stands were probably only small groves of younger trees that didn't interest the loggers. In the last 100 years, the land has slowly healed itself from the intensive timber harvests. Those trees left standing have grown up to the size that you see today.

Present Ecosystems

Note - As you walk along the nature trail, please refer to the list of plants and trees that have been described for each type of ecosystem. If you would like to learn more about the other species along the trail, please refer to plant and tree guide books to properly identify each species.

Point 1: Shrubs- Welcome to nature's band-aid! Here, you can see how a natural ecosystem is disturbed, and also how it can begin to heal itself. If you look around, what you will notice are tree stumps, wood chips, "slash" and species of plants and trees that are common in disturbed areas. You will also find shrub species that thrive in open areas. In contrast to a forest, where most of the plants do well with minimal sunlight, shrub species require lots of it!

Another interesting fact is that at least half of the species in this area aren't native to this continent. Many of them are actually native to Europe and Asia. This is evidence of how rare open areas like this were before the logging era in the north country. The majority of tree species taking hold here

are Paper Birch, Quaking Aspen, Black Willow, American Mountain Ash, Green Ash, and Choke Cherry. All of these species are pioneer species, meaning they are the ones who reseed disturbed areas first until more shade tolerant trees have a cover under which they can sprout. "Succession," a term used to describe the progression from one ecotype to another, typically evolves from these pioneer plants to more long-lived species like the ones described at points 2 and 3. The herbaceous layer at point 1 consists of Stinging Nettle, Cow Parsnip, Raspberry, Blackberry, Skullcap, Jewelweed, Common Burdock, Gooseberry, Winter Cress, European Grasses, Curly Dock, Mullein, Bindweed, Horsetail, and many other sun-loving species. (Note: take a look at the plant list and notice the number of non-native versus native species.) Shrub species thrive in this area - here are a few to look for:



Red-Osier Dogwood *Marker #2*

cornus stolonifera

This shrub is native to North America and common in previously glaciated areas. It can be easily identified by its red bark (especially in the fall and winter) and white flowers. It was a valuable plant for the Native Americans. They used it for dye, basket-weaving, and medicine.

Speckled Alder *Marker #3*

alnus incana

This shrub gets its name from the small orange speckles on its bark. It is also a native shrub in the Lake Superior basin.

