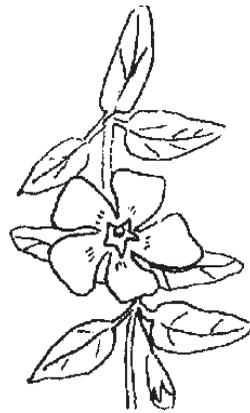


Welcome to the self-guided *Mountain Brook Nature Trail* at Elmore State Park. It has been created to explore some of Elmore's natural and cultural history. As you follow the path, look for numbered posts which correspond to the numbers in this brochure. The trail is approximately 1/2 mile in length (about 30 minutes for a leisurely stroll). Please leave everything as you find it for the enjoyment of others. If you don't want to keep this guide as a memento or for a future walk, please return it. Enjoy your visit!

1. Apple Trees and Periwinkle

The town of Elmore, like much of Vermont, was intensively farmed in the middle of the 19th century. The apple tree to the right is evidence of these earlier homestead farms. So is the ground-covering trailing plant with shiny leaves to the left. Periwinkle, or *Vinca*, has purple flowers in the spring. It was a favorite planting in farmhouse gardens of the 19th century. You may have noticed a stone chimney on the left side of the trailhead. This too is evidence of human presence here. The chimney was part of a camp built here in the 1930's by the Civilian Conservation Corps (CCC). Learn more about the legacy of the CCC at Stop 10 on this trail.



periwinkle

2. Paper Birch Pioneers

Paper birch, also known as white birch, is known as a pioneer species, meaning that it is often one of the first trees to grow

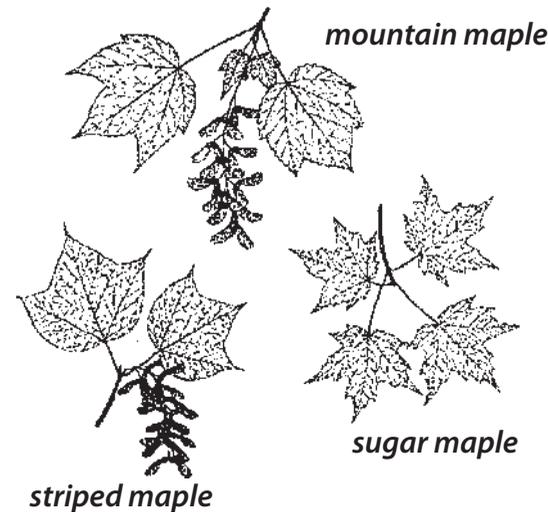
and colonize bare ground. These trees get established after a disturbance that opens up the forest canopy and exposes mineral soil to sunlight and solar heat. Paper birch commonly sprouts after intensive logging, forest fires or other forest disturbances. Paper birch saplings have tight reddish-brown bark with many lighter oval spots, called lenticels. Lenticels allow oxygen to pass through the bark. As the trees reach pole size, the bark begins to take on its characteristic white to salmon color and stringy appearance. Paper birch twigs are an important food source for ungulates like deer and moose and smaller herbivores like snowshoe hare and porcupine. Birds such as grouse and finches will feast on the tiny seeds; grouse also favor the buds. Please only collect paper birch bark from the ground where it has fallen, as peeling it from the tree will scar and kill it.

3. Three Maples

Can you see three different species of maples here? Mountain and striped maple are small, shrubby trees found in the forest understory. They typically don't get more than twenty or thirty feet high. Striped maple gets its name from its bark which is typically a vertical pattern of green and white stripes. Striped maples have large, palmate leaves with small serrations along the leaf margin. Mountain maple has smooth, grayish bark and tends to have multiple stems adding to its shrubby appearance. The leaves of mountain maple are typically smaller than those of striped maple, and have coarser serrations along the margins. Both species are most important as a wildlife food source.

Sugar maple, Vermont's state tree, is a dominant component of the northern hardwood

forest type. Sugar maples can live to be several hundred years old, get to 80 feet tall and have trunks several feet in diameter. Sugar maples are tolerant of shade and can grow slowly in the shade of other mature trees until a canopy opening is created. Sugar maple can be considered Vermont's most commercially valuable tree species, providing sap for maple syrup and beautiful grained wood used in furniture and flooring.



4. Vermont's Forest History

Much of Vermont has been logged several times since European colonization. As Vermont was settled in the late 18th and early 19th centuries, trees were cleared to make way for agriculture and settlements. By 1830, Vermont was about 80% open land. Farms were quickly abandoned, and the land reverted back to forest. Often, the forest came back as white pine and other softwoods. Logging boomed in the late 19th and early 20th centuries. Axes and cross-cut saws were used by hardy loggers who lived in winter logging camps and used horses and sometimes logging railroads

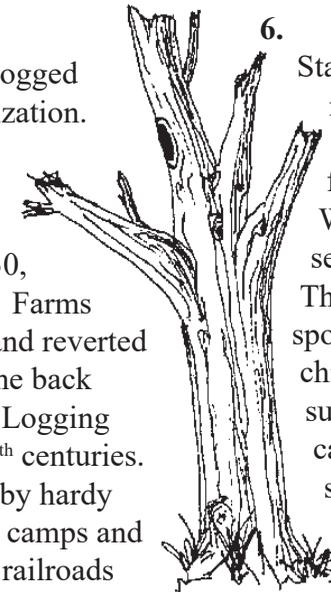
to haul out millions of board feet of timber. A few places in Vermont, especially along the White River and in the Northeast Kingdom, used springtime log drives on rivers to get timber to mills in southern New England. These first commercial harvests released many hardwood trees growing beneath the softwoods; this influenced the mature forest that exists today.

5. Growth and Decay

Lichens and fungi grow on decaying tree stumps. Lichens are unique organisms composed of algae and fungi growing in an association called symbiosis. Both benefit, as the alga produces food and the fungus provides structure. Fungi do not photosynthesize to make their own food. Instead, they must depend on other plants, animals or decaying matter to survive. Fungi perform an extremely important role in the natural world by decomposing dead plant material, and breaking it down into mineral elements that may be then used by other plants.

6. Homes in the Woods

Standing dead trees, or "snags," are more important than it may seem. They are an important source of food and cover, especially for birds. Woodpeckers make holes in snags searching for ants, grubs or insects. These holes can then provide nesting spots for birds such as nuthatches and chickadees, and for small mammals such as mice and squirrels. Larger cavities in snags can become nesting spots for owls or wood ducks, or dens for porcupines or raccoons or maybe even a bear!



7. Watering Hole

Many forest animals visit this brook to drink. Muddy banks or small sand bars can be great places to find animal tracks. Look for more hidden clues of animals, such as trampled plants or small paths that lead to the brook. While this is a great place for animals to get a drink, humans and pets should not drink untreated water from streams in the forest. The water could be contaminated with bacteria like *Giardia*, a microbe that causes an uncomfortable illness in people. Other viruses and bacteria may be harmful to dogs. From this stop, briefly follow a trail to the left to see a small waterfall before continuing up the trail.

8. Wildflowers

Wildflowers are abundant in Vermont's forest from early spring through the end of summer. The earliest flowers bloom before trees leaf out to take advantage of abundant sunlight reaching the forest floor; these are called spring ephemerals. Examples are Dutchman's breeches and trout lily. In early summer, you may see pink lady slippers and trillium. Later in the summer plants like false Solomon's-seal and Canada lily are in



lady's slipper

bloom. There are also many types of ferns in these woods. Most woodland wildflowers are perennials, living for years and blooming annually.

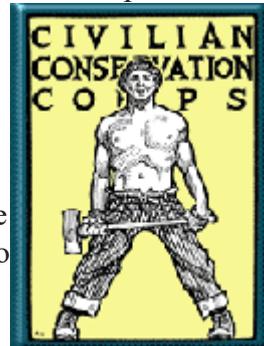
9. Stream Processes

Mountain Brook starts out as a tiny, spring-fed rivulet near the top of Elmore

Mountain. High elevation, swift-flowing streams like this cut relatively deep, straight channels. Notice the lack of fine sediment in the stream channel. Only coarser soil particles are left behind, indicating that the water flows with high energy. Water in this stream eventually makes its way to the Lamoille River, which empties into Lake Champlain more than 40 miles away. The mouth of the Lamoille looks very different than this tiny mountain stream, because the water has lost much of its energy; its channel is filled with fine sediments as it meanders back and forth across the floodplain near Sand Bar State Park in Milton.

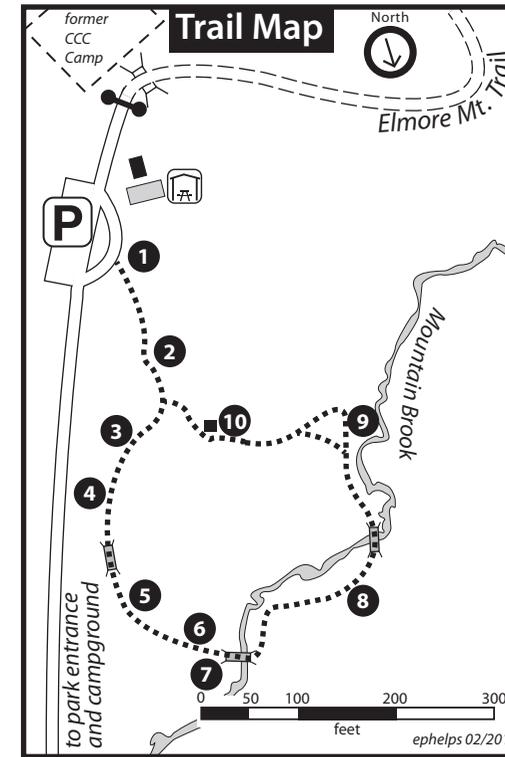
10. A Forest Army

At one time, there were over 20 buildings near here, housing men enrolled in the Civilian Conservation Corps (CCC). The CCC was a national public-works project during the Great Depression from 1933-1942. Most of the enrollees were young unmarried men. They built dams, planted trees, mitigated forest fire hazards and constructed much of the nation's public recreational infrastructure in local, state and national parks. In Vermont, nearly one-third of our state parks were built by the CCC. Here at Elmore, members built the beach house, hiking trails, original campsites and fireplaces and even a sugarhouse (now gone). This section of trail follows part of the water system that served the CCC camp and park developments. Water flowed by gravity from a small impoundment in the brook to this water storage building, and then down to the original campground bath house which used to



be located part way down the mountain.

Follow the trail a short distance back to the starting point.



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