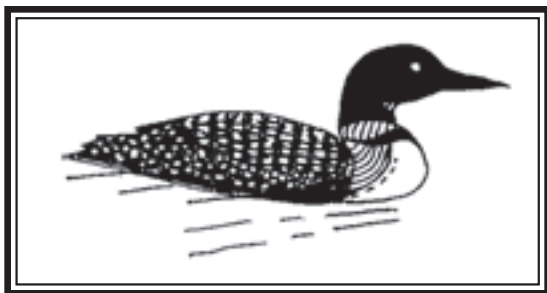


Northeast Kingdom Nature Trail

a self-guided interpretive trail with 15 stations



Brighton State Park
Island Pond, Vermont



AGENCY OF NATURAL RESOURCES
Department of Forests, Parks and Recreation

Brighton State Park Northeast Kingdom Nature Trail

Brighton State Park lies in the heart of Vermont's northeastern highlands. This remote corner of the state is known as the "Northeast Kingdom." A deep evergreen forest blankets much of the surrounding hills. Ponds and lakes are nestled in the wide valleys.

This is the wildest and most isolated area in Vermont, rich in legends of Indians and loggers, railroads and rum-runners. According to local lore, Five Iroquois Nations and the St. Francis Abenakis camped here and used Indian Point as a meeting ground.

The forest surrounding you is the result of centuries of change. It is vastly different from the forest encountered by the first European settlers. Logging, agriculture and development continue to shape the forest.

Despite, or perhaps because of human influence, the forest to the west of Spectacle Pond has been transformed into a unique collection of plants and animals. The mature red pine stand and its understory of boreal plants is a unique natural community that has hosted nesting ravens. The fifteen-acre site is a state designated Natural Area.

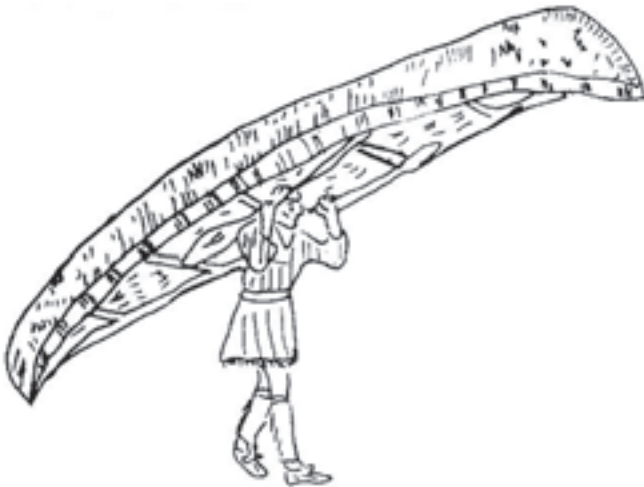
Along this trail, you will be able to explore some of the nature and history of Brighton and the Northeast Kingdom.

See Map in Center of this Guide

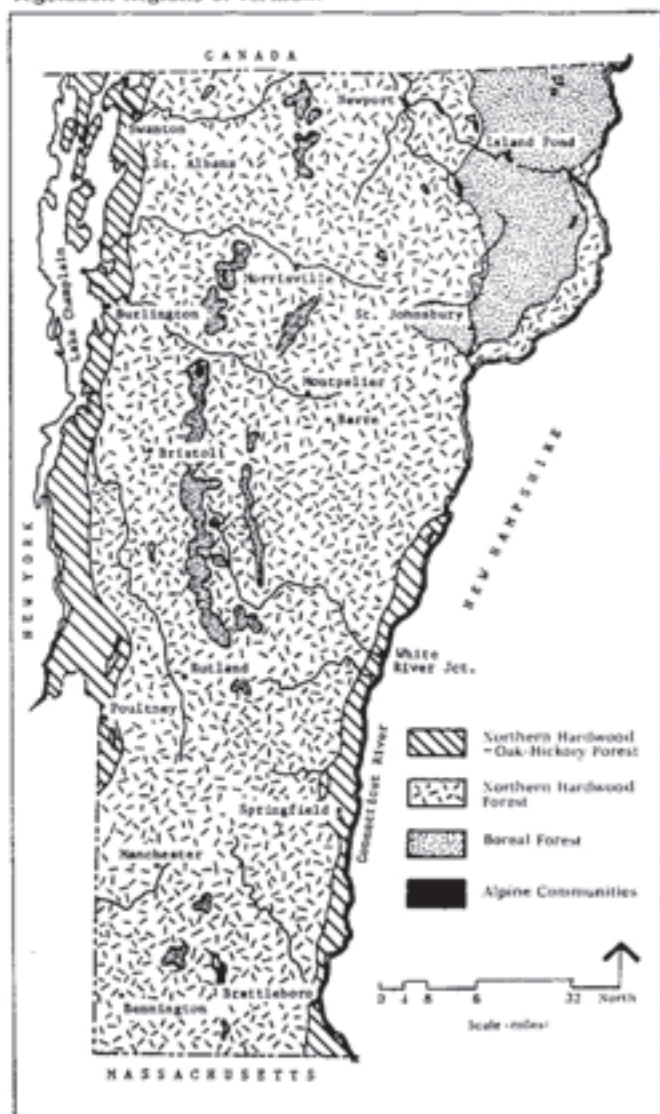
Spectacle Pond

“The short portage between the pond and the boatable waters of the Nulhegan pointed out this as the route of the Indians in their annual pilgrimage between the great river and the seas from time immemorial. Marks of Indian encampments and of their trails through the woods still remain; and a point which makes out into the pond, now called the Old Man’s Nose (Indian Point) bears evidence of its use as the seat of their council fires. The rounded point, clear of underbrush and smooth as a shaven lawn, is overshadowed by a growth of ancient pines, forming a complete shelter from the sun, while on either side and in front, the sheltered waters of this miniature lake are the picture of calmness and repose.”

Excerpt from a railroad guide of 1853.



Vegetation Regions of Vermont



Main Trail – Stations 1-6

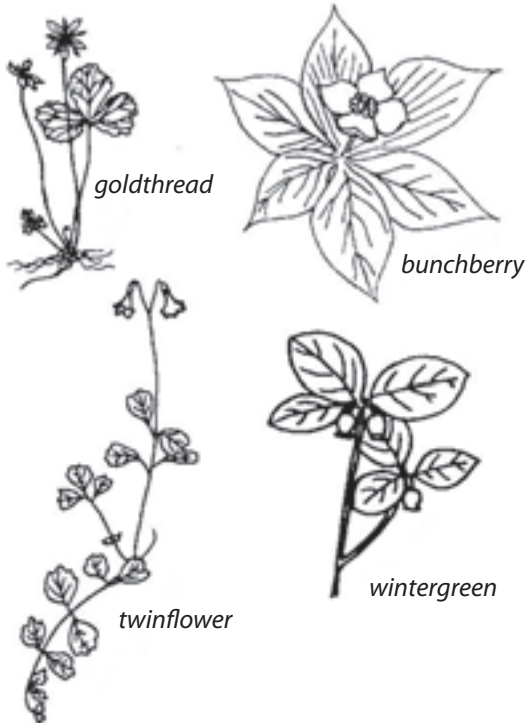
1. THE BOREAL FOREST

The plants and animals in the boreal forest inhabit one of the coldest forested regions on earth. Winters are long and growing seasons short.

Boreal forests stretch across northern regions to the arctic. In Vermont, boreal forests are found in the higher mountains and in the Northeastern Highlands.

The deep shade under the evergreen canopy and the acidic soils derived from slowly decomposing needles make this forest a difficult place for most plants to grow.

Goldthread, bunchberry, wintergreen and twinflower are among the hardy plants found in Brighton's woods.



2. AT HOME IN THE TREES

These trees house a community of insects, birds and mammals. The holes in this white spruce were probably made by a hairy woodpecker looking for insects. Woodpeckers also hammer dead limbs as part of their courtship rituals and to proclaim territory.



Along the trail, look for tree cavities. Small holes are nest sites for wrens and chickadees. Larger ones may be used by woodpeckers, while owls and hawks seek out the largest holes.

Look for the many evergreen cones on the forest floor. Red squirrels and seed-eating birds such as evening grosbeaks and crossbills eat the seeds from cones.

If you stop and listen, you may be able to hear woodpeckers tapping or chickadees calling.

3. RED PINE

The tall tree in front of you with the reddish, puzzle-like bark is a red pine. This straight, fast-growing tree does well in the dry sandy soil around Spectacle Pond. The brittle red pine needles are borne in bundles of two, unlike those of white pine in which the more flexible needles occur in groups of five. Red pine is called “hard pine” as its wood is harder than that of white pine. Red pine bark was once used to tan leather. The beautiful pure stand of red pine at Indian Point and along the Red Pine Trail is designated as a “Vermont State Natural Area.”



4. THREE EVERGREENS

Three important evergreen trees are found at this stop. Balsam fir and red, white and black spruce are common in boreal forests of eastern North America. The diagram below indicates the tree species at X when you face the marker:

B (red spruce)

C (white spruce) X (you) A (balsam fir)

- A. Balsam Fir** – The smell of its soft needles is reminiscent of Christmas in the Northwoods. Deer and moose are among the animals that use fir for food and cover. Note the bumpy resin blisters on the trunk. The resin was once collected to cement glass, including cover slips on microscope slides. Fir cones are rarely found whole on the ground; the erect ones are usually pulled apart by birds.



balsam fir

- B. Red Spruce** – A red spruce's needles are short and sharp. Its cones are small, papery and hang down from rough and prickly twigs. Spruce wood is made into flooring, musical instruments and dimension lumber. Spruce and fir are used extensively for paper products. Hardened spruce gum was chewed by loggers and pioneers.



red spruce

- C. White Spruce** – This tree is found in cold northern forests. Native Americans dug its long, slender roots to use for lacing birch-bark canoes and baskets. The roots were steamed in hot wood ashes, then split and soaked in hot water before using.

white spruce



Brighton State Park Trails

LEGEND



Park office



Campground



Parking



Nature Center



Self-guiding trail



Self-guiding trail station
(corresponds to this booklet)



Park Road



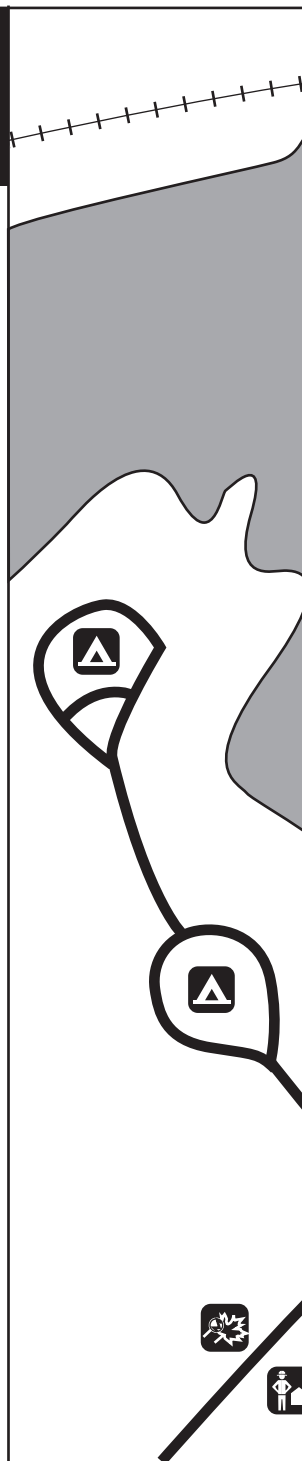
Foot trail

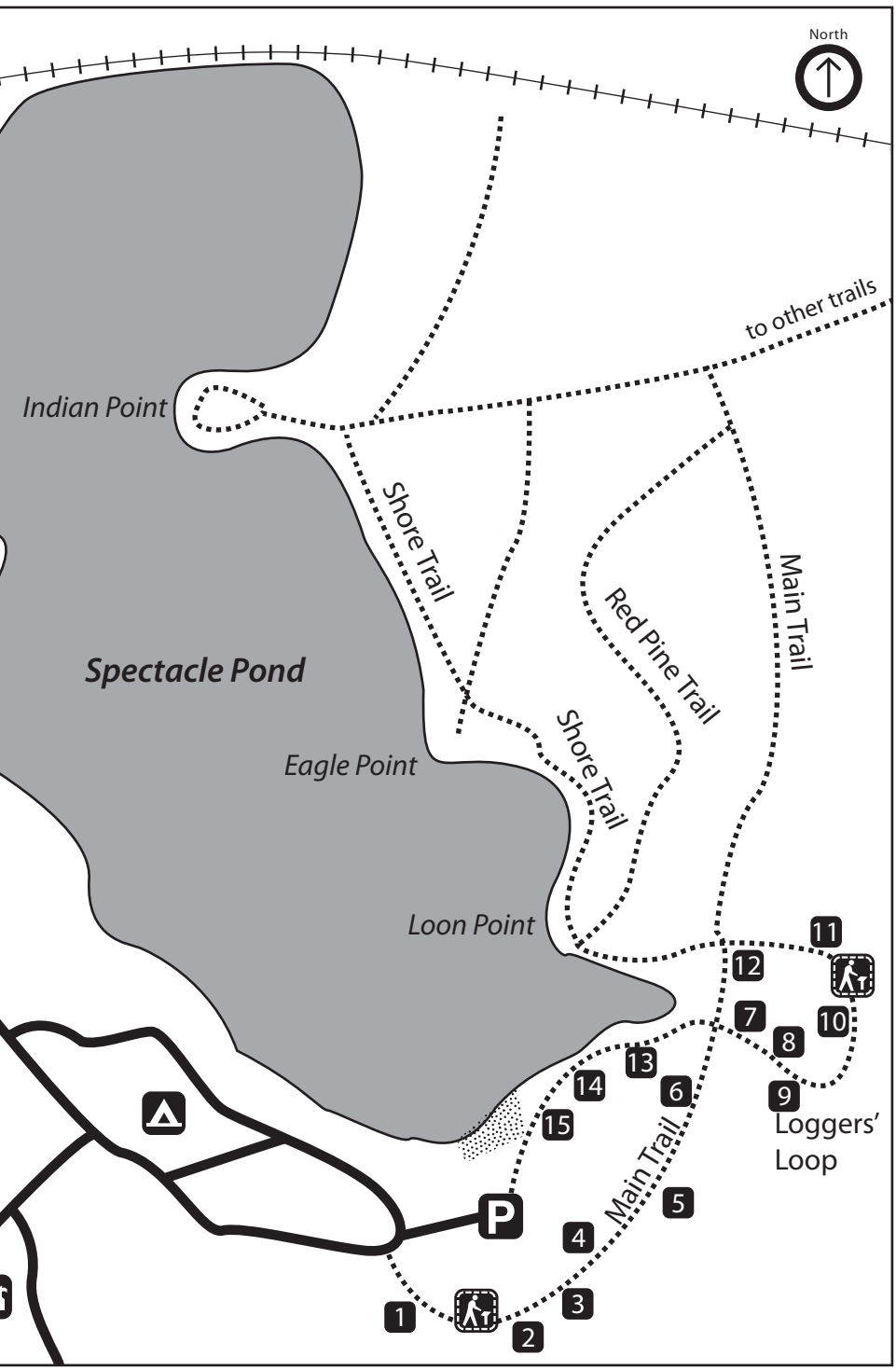


Active railway



Beach





5. WITCH'S BROOM

Behind this post is a mass of tangled twigs in a tree that resembles a poorly-made bird nest. This is actually an old “Witch’s Broom,” a common name for the profusion of twig growth caused by a parasitic plant called “dwarf mistletoe.” This plant does not produce its own chlorophyll, so it invades the tissue of a tree host that does, always a conifer species. Dwarf mistletoe can reduce the tree’s vigor and can, over time contribute to the death of a tree.

*dwarf
mistletoe*

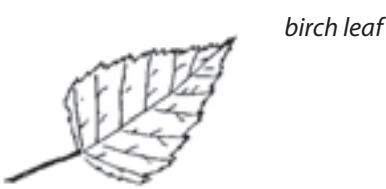


6. NORTHERN HARDWOODS

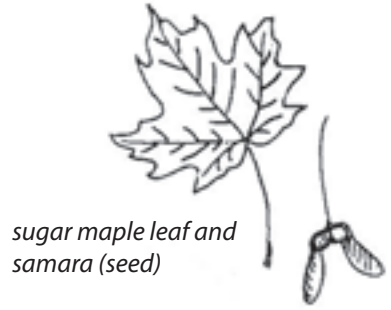
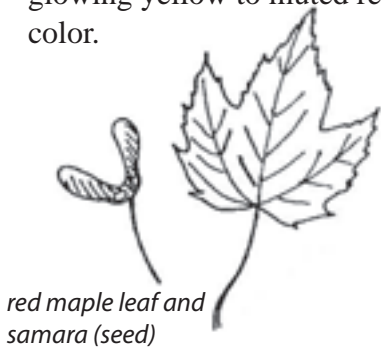
This young forest, growing from formerly cleared land, is thick with the white trunks of birches and the smooth boles of maples and aspens. These hardwoods lose their leaves in a blaze of color every autumn.

Birch – Paper or white birch has a peeling white bark. It quickly reseeded areas cleared by logging or fire. Native Americans used birch bark to construct shelters, canoes and baskets. Standing birches shouldn’t be peeled. Stripping the bark can scar and eventually kill the tree.

Aspen – Aspen has yellow-gray bark and heart-shaped leaves. Beavers eat the bark of aspen and use its branches to build dams and lodges. The leaf stem is flat where it attaches to the aspen twig. This causes the aspen leaf to tremble in even the slightest breeze, hence the name “trembling aspen.”



Maple – Red maple grows in wet areas and is one of the first trees to change color in the fall. Its leaves range from dull to red to flaming scarlet. Sugar maple, Vermont’s state tree, is famous for the sweet sap gathered to make syrup in the spring. In the fall, its colors range from glowing yellow to muted red. Warm oranges are the most common color.



LOGGERS LOOP (Stations 7-12)

Signs of a Once-Magnificent Pine Forest

7. REGROWTH

In front of you, a white birch pushes up from a decaying white pine stump. Along the trail there are many stumps supporting new growth. When coniferous forests are cleared, white pine seedlings and rapidly-growing hardwoods such as pin cherry and aspen are often the first to reclaim the land. As the forest grows taller and the understory gets shadier, spruce and fir begin to appear. Eventually, if there is no disturbance, these shade-tolerant evergreens will replace the hardwoods. This natural process is called “forest succession.”

8. THE WAY IT WAS

The large stumps throughout the area are the remnants of a white pine forest that was logged off in the early 1900s.

The Northeast Kingdom was relatively unsettled until the coming of the “iron horse.” In 1853, the Grand Trunk Railroad, the first international railway, was established in Island Pond to join Montreal, Canada, with Portland, Maine.

From those days until the Great Depression in the 1930s, Brighton was a place of great activity and prosperity.



Several lumber mills operated in the area, including one near the lake in Island Pond. Thousands of board feet of timber were brought to the mill, much of it white pine from the present site of the state park. At one time, more than 500 loggers were working in the Brighton area. These stumps are evidence of their toil.

After the logging was done, fires swept through the logged-off lands, many started by sparks from the railroad. In 1903, 1,200 acres in Lewis, Ferdinand, Bloomfield, Brunswick and Brighton were burned. The remaining tree stumps were left charred and brittle, evidence of the early fires like the black charcoal on the left side of this stump.

9. NORTHERN ANIMALS

The forest is habitat for many different types of animals. Trees and shrubs provide food in the form of fruit, nuts, leaves, bark, twigs and buds. Look for signs that animals have eaten here.

The forest is also habitat for birds such as ruffed grouse, wild turkey, northern goshawks and many songbirds. Although park visitors see and hear the busy red squirrels and chipmunks, other park animals are more elusive. You may spot signs of black bear, bobcat, red fox, coyote, deer and even moose as you walk Brighton's trails.



10. RELICT OF THE PAST

Before you stands a relict of the extensive white pine forests that once reached from the Atlantic Ocean to the Great Lakes. White pine prefers to grow in full sunlight on well-drained soils. This tree may have been spared because it had too many knots for good lumber.

Tall, straight pines were once prized for ship masts. During Britain's rule of the American colonies, the finest pines were marked with the Broad Arrow as the "king's pines" for the Royal Navy. The colonists were less than respectful of the practice, however.

The orange blazes you see mark the boundary of the state park.

11. FERNS AND CLUBMOSES

The Northeast Kingdom is rich with ferns and their relatives, the club mosses. Bracken fern is one of the most common ferns you will see around the park. Look in moist woods to find the beautiful spinulose woodfern and others.

Club mosses derive their name from the bristly spore-producing “clubs” or strobiles that grow atop these little evergreen plants. Also called ground pine, they have no relation to either pine or mosses. The long-running stems of club moss help hold thin forest soil in place. Four club moss species are readily found in Brighton State Park.



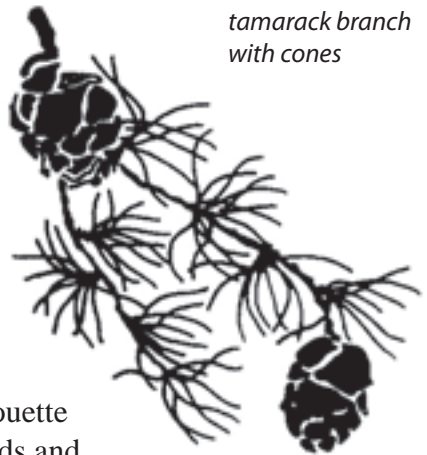
bracken fern frond



clubmoss

12. TAMARACK

About 40 feet behind this sign stands a large tamarack or eastern larch. Many people think this tree is dying when they see this tree turn yellow in the fall. This unique tree is the only conifer to shed its needles annually, just as hardwood trees shed their leaves. Tamarack is found in cold northern bogs and moist woodlands where its lacy silhouette stands out in the evening fog. Its seeds and inner bark are eaten by deer, rabbits, squirrels and birds. Tamarack wood is very strong and hard for a conifer wood.



*tamarack branch
with cones*

SHORE TRAIL (Stations 13-15)

13. WHITE CEDAR

This tree, white cedar, is also called *arbor vitae* (the tree of life) in reference to its evergreen habit. The foliage is rich in Vitamin C. Native Americans showed early European explorers how to make a tea with it to cure scurvy. Cedar also provides food for deer in winter. Moose and rabbits will also browse the twigs and foliage. The seeds of its tiny cones are eaten by red squirrels and songbirds.

Cedar is often found in lime-rich swamps and along shorelines. Its wood is highly rot-resistant and is used for utility poles, shingles, fence posts and boats. Cedar swamps are good places to observe birds and other animals.

white cedar branch with cones



14. BURL

The bulging growth on this birch is a burl. It was caused by a fungus that stimulated wood-producing cells in the tree's inner bark to grow abnormally. The wood in most burls is sound, and has a swirling grain that makes a beautiful pattern used in bowls, clocks, tables and other furniture.

15. SPECTACLE POND

The Northeast Kingdom has an abundance of lakes and ponds created when the glaciers retreated.

Spectacle Pond is a "kettle hole," a lake formed when a huge chunk of ice was trapped in glacial sediment. The ice melted, creating a basin. The pond is a shallow kettle, 8-10 feet deep, with no major stream inlet.

The warm pond waters are home to yellow perch, pumpkin seed and chain pickerel. The pond is a good place to observe loons, mallard and black ducks, great blue herons and osprey.

For more information on Brighton State Park or wildlife viewing and nature watching in the Northeast Kingdom, contact the Park directly. In addition to this self-guided nature trail, two driving tours are available.

If you do not wish to keep this brochure, please return it so it others may use it.

Brighton State Park
102 State Park Road
P.O. Box 413
Island Pond, VT 05846
(802) 723-4360
Open Memorial Day Weekend to Columbus Day

www.vtstateparks.com



This document available upon request in
large print, braille, and audio cassette.
VT TDD Relay 1-800-253-0191
Printed on recycled paper
RRA/ERP- 03/09