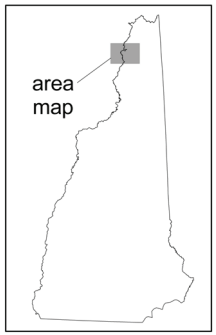
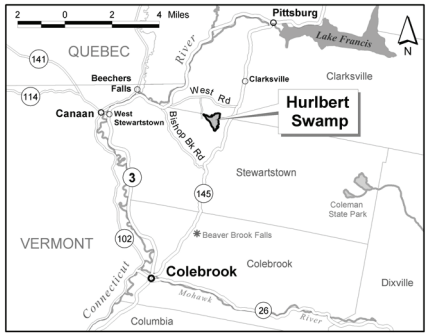
DIRECTIONS

From Colebrook, take Rte. 145 north for 9 miles. Just beyond the Clarksville town line, turn left onto West Road. Go 1.5 miles to a dirt road on the left at a small, artificial pond. Follow this dirt road 1.1 miles south to the preserve on the left (follow wooden signs with "TNC" and oak leaf). Park at the gate and hike east on an old road to a grassy clearing with a sign-in post.





PRESERVE USE GUIDELINES

This preserve is open to the public for recreation and education. Please, for the protection of the area and its inhabitants, and for everyone's enjoyment:

- -Foot travel only; please stay on the marked trail (snowmobiling is permitted on some trails in winter)
- -Walk only on the boardwalk in the swamp
- -No pets, horses, bicycles, or motor vehicles allowed
- -No camping, fires, swimming, or smoking
- -Do not collect or disturb plants or animals

THE NATURE CONSERVANCY

The Nature Conservancy is a leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. To date, the Conservancy and its more than one million members have been responsible for the protection of more than 14 million acres in the United States and have helped preserve more than 83 million acres in Latin America, the Caribbean, Asia, and the Pacific. Since 1961, The Nature Conservancy in New Hampshire has helped protect more than 265,000 acres of ecologically significant land and currently owns and manages 28 preserves across the state. For more information, visit:

The Nature Conservancy
22 Bridge Street 4th Floor
Concord, NH 03301-4876
(603) 224-5853
www.nature.org/newhampshire

NORTHERN WHITE CEDAR SWAMPS

Northern white cedar (*Thuja occidentalis*) is a boreal tree species that approaches the southeastern limit of its range in New Hampshire, where it occurs only sparingly south of the 44th parallel. It is particularly abundant in the Stewartstown and Colebrook vicinity. Although it sometimes occurs in nearly pure, closed-canopy stands, northern white cedar is often associated with other conifers and to some extent northern hardwoods.

At least six natural community types, not all of them wetlands, contain a significant amount of northern white cedar. At Hurlbert Swamp, the primary community is called a ***northern white cedar - balsam fir swamp***. This type of cedar-dominated peatland swamp is generally moderately acidic and restricted to northern New Hampshire.

In mature examples like this one, the typical natural community structure consists of overstory canopy heights of 40-60 ft. (12-18 m) with occasional to frequent leaning trees and blowdowns. Also look for a moderately well developed tree subcanopy, a sparse shrub understory, well developed hummock-hollow topography, a dense carpet of diverse mosses and liverworts, and sparse to moderate herb cover. Water level fluctuations often change the appearance of the swamp from season to season.

Potential rare plant species of cedar swamps (often found in fen-like openings within the swamps) include several varieties of lady's slippers, sweet coltsfoot, chestnut sedge, fairy slipper, and Loesel's twayblade. These rare species are not present in most cedar swamps.

This brochure was created by the New Hampshire Natural Heritage Bureau as part of a series designed to educate the public about the state's special plants and natural communities. More site guides and profiles are available on the Visiting New Hampshire's Biodiversity program page at: www.nhnaturalheritage/org.

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NH Natural Heritage Bureau

Visiting New Hampshire's Biodiversity

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This brochure was paid for with funds from the NH Conservation License Plate
www.mooseplate.com

TRAIL DESCRIPTION: Hurlbert Swamp sits in a basin surrounded by low hills in northern New Hampshire. It supports an exemplary ***northern white cedar - balsam fir swamp*** community as well as several rare plant species. A boardwalk trail leads into the cedar swamp, providing a great way to get a feel for the lushness and darkness of the swamp's interior. Signs of moose, deer, beaver, birds, and other wildlife are often easy to spot.

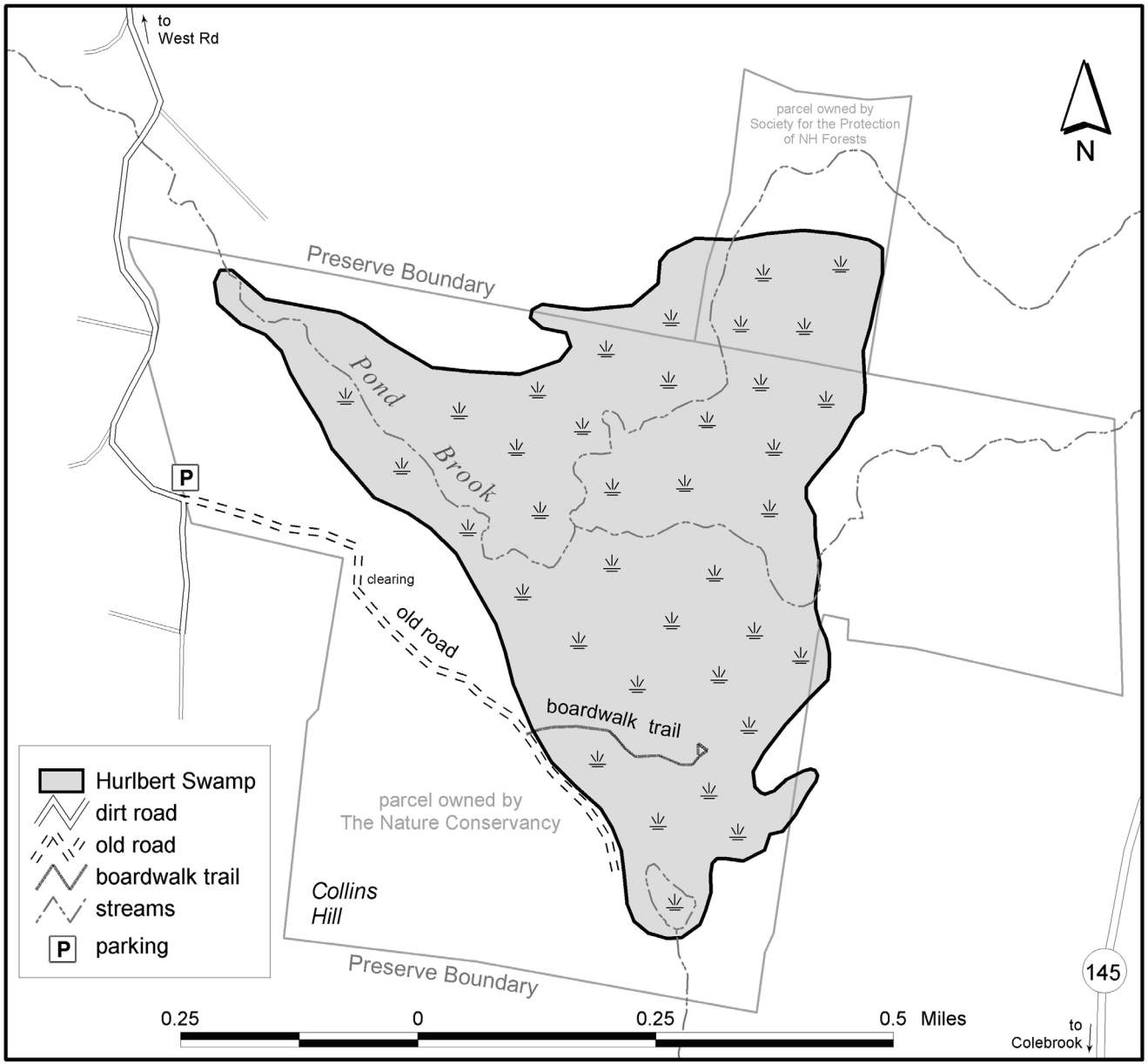
From the TNC sign by the gate, walk in along the grassy road on the swamp's western edge. The old road is nearly flat and quite easy to follow. Soon you arrive at a grassy, open area. The old road continues at the far end, by a mailbox post with a sign-in sheet. Growing in and along the roadway here are perfect-awned sedge (*Carex gynandra*), red osier dogwood (*Cornus sericea*), golden alexanders (*Zizia aurea*), intermediate wood fern (*Dryopteris intermedia*), and purple avens (*Geum rivale*).

In about a quarter of a mile, a marked trail veers off to the left (east), into a narrow band of dense, young ***lowland spruce - fir forest*** community. The distinctly "northern" understory shrubs and herbs here include creeping snowberry (*Gaultheria hispidula*), twinflower (*Linnaea borealis*), and velvet-leaf blueberry (*Vaccinium myrtilloides*).

Soon the ground becomes wetter and you step onto a boardwalk path. Be careful of your footing as the boards can often be very slippery, especially when wet. Here you'll see speckled alder and birch trees, often with their "feet" wet. This is a small strip of ***alder wooded fen*** community. The few trees here include spruce (*Picea* spp.) and larch (*Larix laricina*), with scattered northern white cedar (*Thuja occidentalis*). Growing in the understory are plants such as three-leaved false Solomon's seal (*Maianthemum trifolium*), starflower (*Trientalis borealis*), wood horsetail (*Equisetum sylvaticum*), and Billing's sedge (*Carex billingsii*).

A ***black spruce swamp*** community occurs beyond this area, before the stream crossing. The tree canopy is dominated by black spruce (*Picea mariana*), with lesser amounts of balsam fir (*Abies balsamea*) and larch. Scattered herbs growing out of the *Sphagnum* carpet include bunchberry (*Cornus canadensis*), goldthread (*Coptis trifolia*), cinnamon fern (*Osmunda cinnamomea*), three-seeded sedge (*Carex trisperma*), three-leaved false Solomon's seal, and creeping snowberry. Peat depths here average about 3 ft. (1 m).

An open-canopy shrub zone with alder, mountain holly (*Nemopanthus mucronatus*), and some small, scattered trees occurs where the path crosses a small, quiet channel of open water. Just beyond this stream crossing, you make a dramatic entrance into the exemplary ***northern white cedar - balsam fir swamp***, the dominant natural community type at Hurlbert Swamp, by passing right through the middle of a cluster of cedar trees on a mossy hummock. Several wildflower species, including marsh marigold (*Caltha palustris*) and green-bracted orchis (*Coeloglossum viride*), can be seen near the ground level observation deck at the end of the boardwalk.



Map and photo by Ben Kimball, 2006.

Although most of this seepage swamp contains mature canopy cedar (some individuals are unusually large), rotted stumps from past logging episodes can still be found throughout. The leaning or horizontal trunks of blowdown trees are a common sight here, and the tipped-up root mats frequently expose the mucky substrate below. Alder, spruce, fir, and cedar saplings colonize the open areas caused by these blowdowns, all a part of the natural cycle of disturbance and regeneration in the swamp.