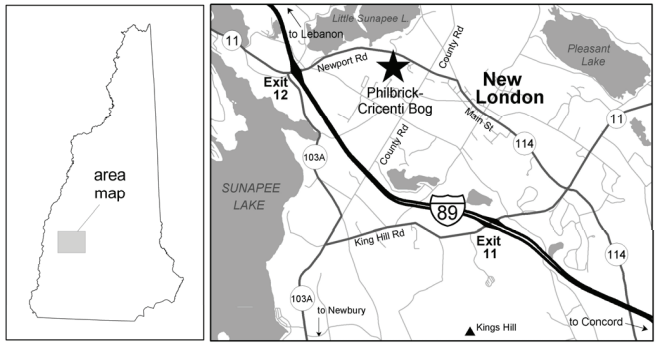
DIRECTIONS

From exit 12 on I-89, take Newport Rd (old Rte. 11) east towards New London for 1 mile. Park at the small turnout on the right (south) side of the road.

From the center of New London, take Newport Rd (old Rte. 11) west about a mile (or half a mile past the hospital). Park at the small turnoff on the left (south) side of the road.

Look for the trail sign partly hidden in the trees. There is currently parking here for several vehicles.



PROPERTY USE GUIDELINES

Please, for the protection of the area and its inhabitants, and for everyone's safety and enjoyment:

- FOOT TRAVEL ONLY
- STAY ON THE WALK
- NO DOGS

The loose moss/sedge mat is only a thin layer in some areas beyond the boardwalk. It is unsafe for anyone to stand on, and animals *have* reportedly fallen through in the past!

NEW LONDON CONSERVATION COMMISSION

The bog walk at Philbrick-Cricenti Bog was made possible with the concerned assistance of the Cricenti family, the Philbrick family, the James Cleveland family, the (Federal) Heritage Recreation Commission, and the Town of New London Conservation Commission.

New London's Conservation Commission members are appointed by the town's Selectmen for staggered terms of 3 years. They are responsible for all environmental matters in the town. They review Wetlands Board Applications, work closely with the Planning Board, maintain hiking trails both on town land and on private land under easement agreements, and lead educational walks.

On the web: www.nl-nhcc.com/

KETTLE HOLE BOGS

About 18,000 years ago, New Hampshire was covered by a continental ice sheet almost a mile thick. Kettle hole bogs are found where big chunks of glacial ice were stranded and partially buried in the landscape as the glaciers melted. The ice chunks subsequently melted, leaving ponds in depressions in the ground, with no hydrologic inlets or outlets. Over thousands of years, peat moss progressively crept from the edges inward toward the pond centers. Most still have a central bog pond with a floating mat border, while some (such as this one) have filled the kettles entirely with peat, obscuring the former ponds under floating or grounded peat mats. Precipitation is the primary water source for these peatlands, but their watersheds are often small and they receive very limited terrestrial runoff.

A typical natural community sequence from the upland border towards the center of the kettle hole is marshy moat (not present here), tall shrub fen or black spruce swamp, followed by a dense leatherleaf - black spruce bog zone, and then a floating, reddish-colored open moss carpet with extremely dwarfed shrubs, and patches of *Sphagnum* moss pools and mud-bottoms. In many examples, there may still be open water in the center of the bog.

The vegetation of kettle hole bogs is dominated by species indicative of nutrient-poor conditions, such as scattered, stunted black spruce, numerous dwarf heath shrubs (such as leatherleaf, small cranberry, sheep laurel, and bog laurel), liverworts, bladderworts, and white beak-rushes. Kettle hole bogs often occur in isolation of other wetland systems. They are broadly distributed in the state, but concentrated in the central and southern portions where kettle hole formation in glacial outwash was more abundant.

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. For more guides, visit: www.nhnaturalheritage.org

New Hampshire Natural Heritage Bureau

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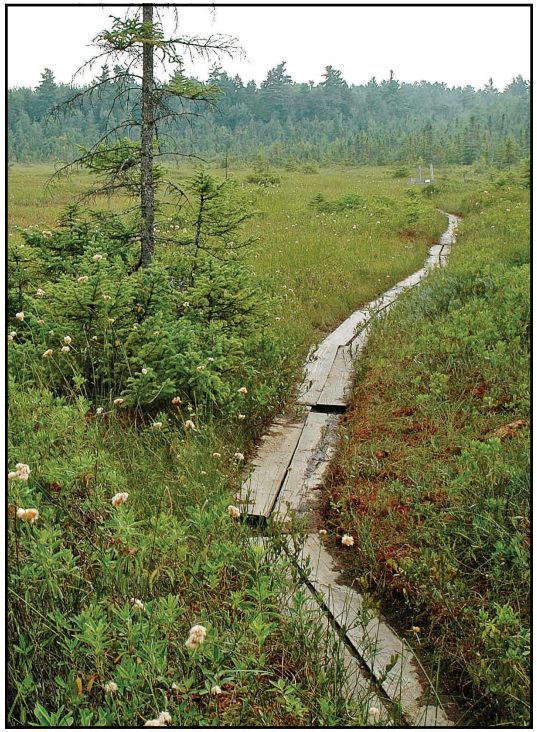
NH Natural Heritage Bureau

Visiting New Hampshire's Biodiversity

PHILBRICK-CRICENTI BOG



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and its Conservation Commission

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

TRAIL DESCRIPTION:

Philbrick-Cricenti Bog is a good example of a kettle hole bog system, composed of several distinct but intermixed natural communities. The trail network here is about a mile long and takes around an hour to complete at a leisurely pace. The numbered posts you will see are described in a separate brochure, obtainable at a kiosk near the entrance.

Access Path

Leaving the road on a gravel path, you enter a transition zone where the upland forest meets with the edge of a boggy marsh. White pines give way to more moisture-tolerant red maples here. Among the maples are occasional stunted gray birches, black spruce, larch, and balsam fir trees, as well as a wide variety of ferns, including sensitive fern, cinnamon fern, and royal fern. Highbush blueberry, meadowsweet, chokeberry, cattails, and marsh asters also thrive here. The primary natural community type along the Access Path is ***black spruce swamp***, transitional to ***red maple - Sphagnum basin swamp*** nearer the upland.

At the first trail junction, you will begin to see several classic bog species, such as the spongy *Sphagnum* moss and carnivorous pitcherplants. Larch trees (also called tamarack) grow well in bogs. Their soft, bunchy needles turn bright yellow in the fall. These trees are actually deciduous, and lose all of their needles each year. Bluebead lily, bunchberry, and wild calla occur here as well.

Tundra Garden Loop

The vegetation along this aptly named path is similar to what you would see much farther north, where boreal taiga forest meets open tundra in the Arctic. Particularly noticeable are the deep blue-green colored leaves of the bog rosemary plant. This pink- or white-flowering shrub grows well in this environment and blooms in the spring. Pitcherplants grow in profusion out on the bog mat, as well as other typical peatland species such as white-tufted cottongrass, red cranberries, tiny sundews, several orchids, and white beakrush. Leatherleaf is another common plant here; it is a shrub frequently found where the peat mat is thin and wet.

One of the reasons why bogs host such a different group of species than the surrounding forest is the relative acidity of the water. Plants and trees that grow in bogs are tolerant of saturated, acidic conditions. This environment also slows the decay of dead organic matter, which accumulates as peat and creates a low-oxygen, nutrient-poor setting.

Peek Hole Loop

Pull up the wooden pole at post #8 and see how deep the peat mat is beneath you. The official depth at this spot is 20 feet! Please replace the pole when you are through.

Quaking Loop

Here you can experience the full range of the bog's ecological development. Along the small eyelet spur at the southeastern portion of this boardwalk loop, the peat mat is quite thin, and relatively young. As recently as 150 years ago this was open water where people fished. Since then, mosses and sedges have grown out across the surface, turning the former pond into today's open peat mat. It is called a *quaking mat* because it floats and you can feel it jiggle with your footsteps. Below is still open water, however, and it is very important that you stay on the boards.

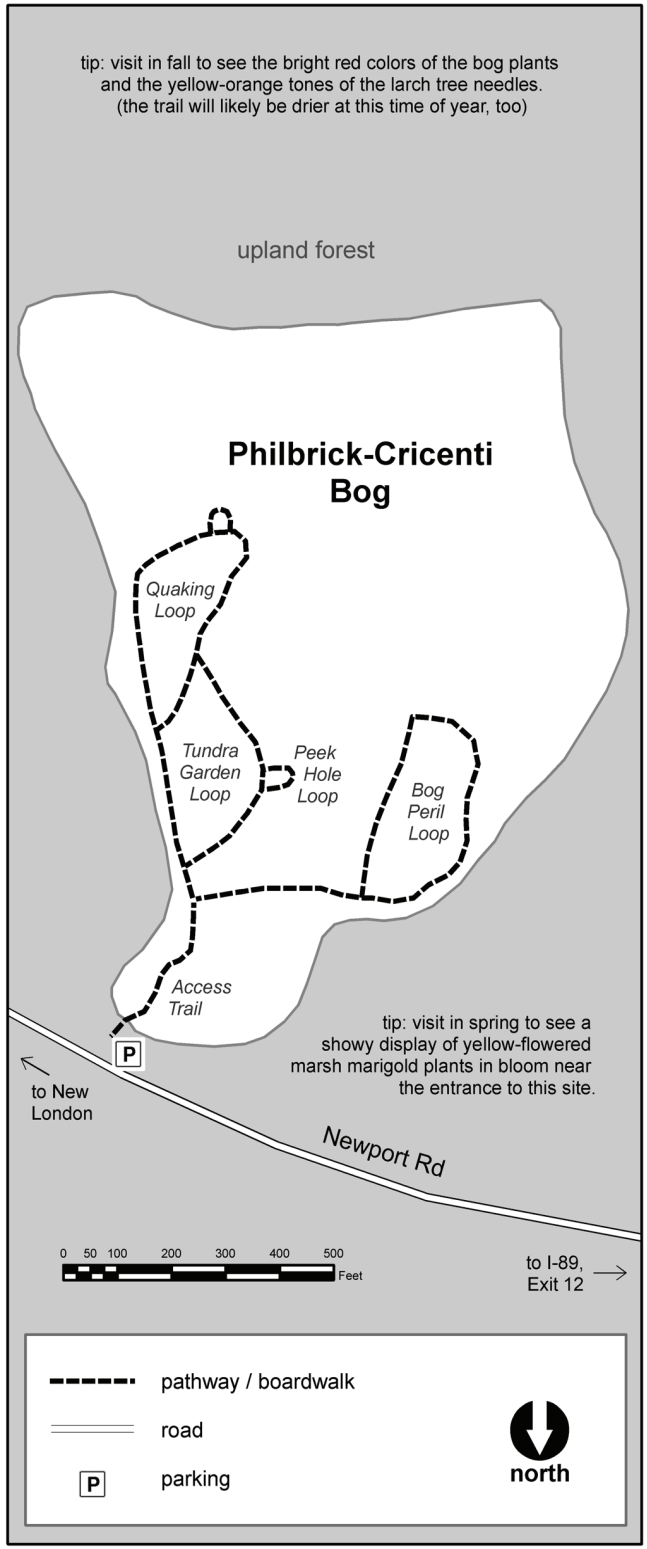
Two primary natural community types intermix in this open section of the peatland: the ***large cranberry - short sedge moss lawn*** and ***Sphagnum rubellum - small cranberry moss carpet***. Common within this community matrix are slight depressions, occupied by a natural community called ***liverwort - horned bladderwort mud-bottoms***. These hollows are actually wet, floating "lawns" dominated by low, turfy mats of a leafy liverwort, which turns black and looks like mud from a distance.

Closer to the woods, the firmness and thickness of the peat mat increase. Trees such as black spruce and larch begin to take root, and a variety of new plants appear, including the odd dwarf mistletoe, a semi-parasitic plant growing on black spruce. This small (<1") plant appears like a short, lateral woody branch and causes "witches broom" to form on spruce and other softwoods. The natural community here is a ***leatherleaf - sheep laurel shrub bog***. This community is gradually encroaching farther and farther out on the open peat mat, and will eventually cover it over.

Finally, the path passes through a transition zone near the edge of the woods. Shaded by larger coniferous trees is a lush undergrowth of cinnamon ferns, Canada mayflower, three-seeded sedge, bunchberry, and pink lady's-slipper, among others. The final stage of the peatland's development, once peat (mostly dead *Sphagnum*) has accumulated thickly enough below the surface, will be succession to the natural community type of the surrounding upland forest.

Bog Peril Loop

From the Access Trail, this path leads through the shady cover of spruce trees and across a small drainage channel. Many trees have died and fallen down along this section due to damage from the 1998 ice-storm. Next, you will come out to the open peat mat. Once again, it is very important that you stay on the boardwalk along this loop. Not only is the vegetation fragile here, but the peat mat is very thin in places and will not support you! The light green patches in particular are only thin skims of vegetation over many feet of open water below.



Maps and photo by Ben Kimball, 2005.