The Natural History of the Rocky Hill Greenway and the Ice Pond

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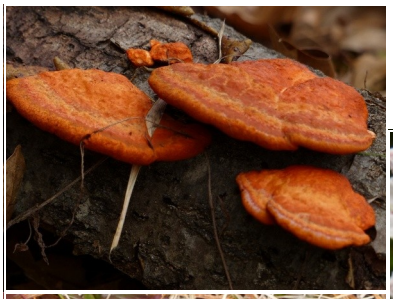
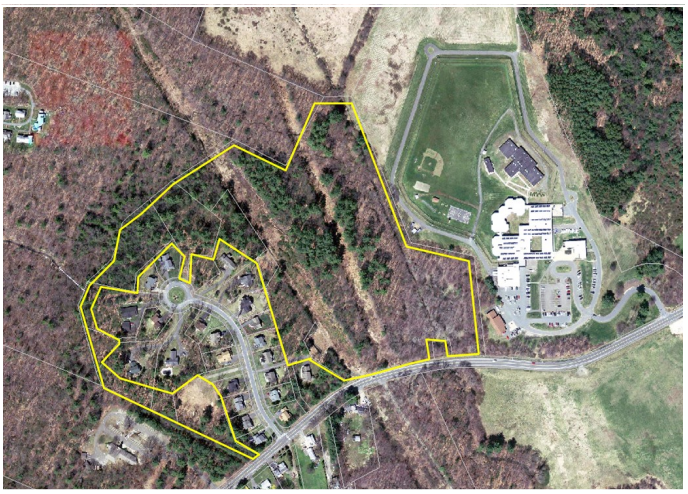


Ice Pond Conservation Area

Rocky Hill Greenway
Ice Pond Section

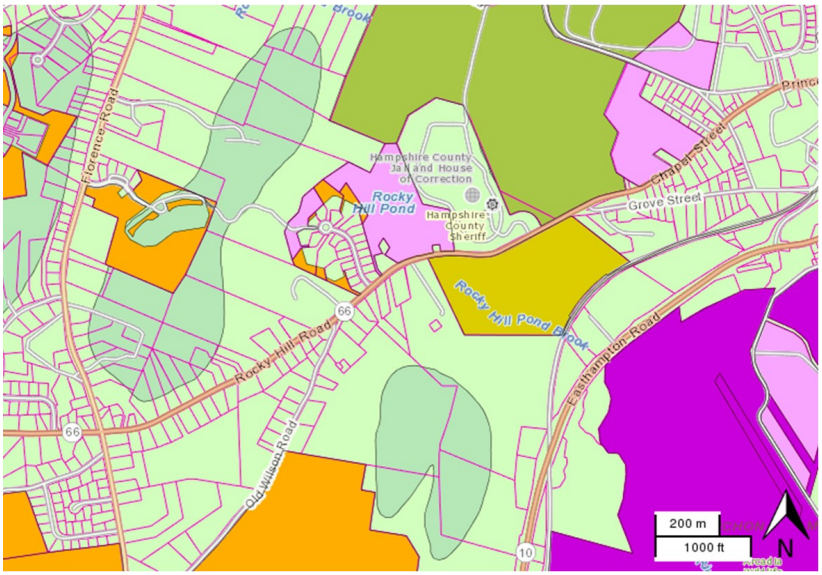


Wrapping around the Ice Pond subdivision, this conservation area is known to few people and appears to be used by even fewer. For the residents of the nearby cluster subdivision, there is no real trail that leads from the subdivision into the property and for the passer-by on Rocky Hill Road, the property looks private (there is no sign or designated parking). It also doesn't look too inviting, with two powerline right-of-ways (ROW) angling across it and a dense forested edge.

But like so many places, once you start rambling around and get to know it, the Ice Pond Conservation Area is an actually an interesting place, not only ecologically, but also geologically, historically, and even, aesthetically. The 22-plus acres include a pretty stream, nice woods, a vernal pool, and an unusual mix of plant species. And from a management and stewardship perspective, there's more good news: the property has relatively few invasive plants and so far, they occur in low numbers.

Geology & Soils

Located downslope from a drumlin, this property has mostly level terrain, with gentle slopes that gradually trend to the south. Most of the property is underlain by a thin layer of sandy loam, which was deposited on top of much thicker layer of glacial till. The sand was deposited in the shallow waters of Glacial Lake Hitchcock, and if we could have visited this property during that time, we would have been not far the lake's shoreline, in about 50 feet of water.

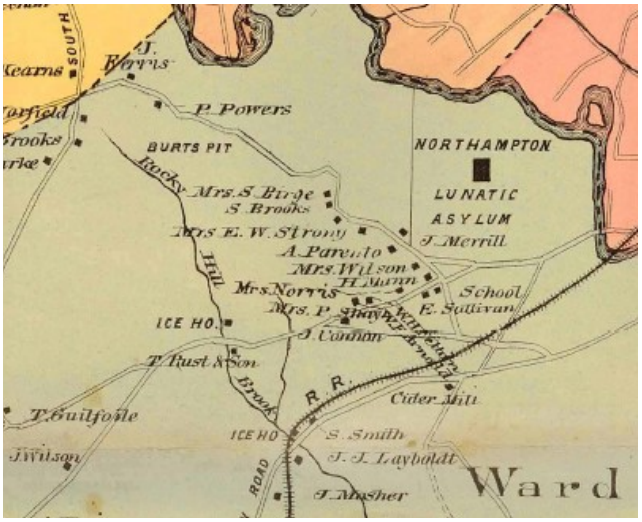


A map showing surficial geology and protected land., with light green being till and deeper green ellipses are drumlins. Other colors (mustard, olive, magenta, pink, orange) represent other kinds of land protection. The Ice Pond Conservation area is in the center, with the jail to the east.

Today the soils here are mostly very stony, fine sandy loams (Woodbridge, Scituate, Gloucester and Ridgebury). A band of Raynham silt loam hems the stream and bordering wetlands.

Past & Current Land Use

During the 1800s (and probably the century before), this property was used for agriculture—mostly as pasture and hay, but possibly for crops as well. During the mid-1800s, a dam was built on Rocky Hill Brook near what is now Route 66 and it created one of several ponds in town that were used for harvesting ice.



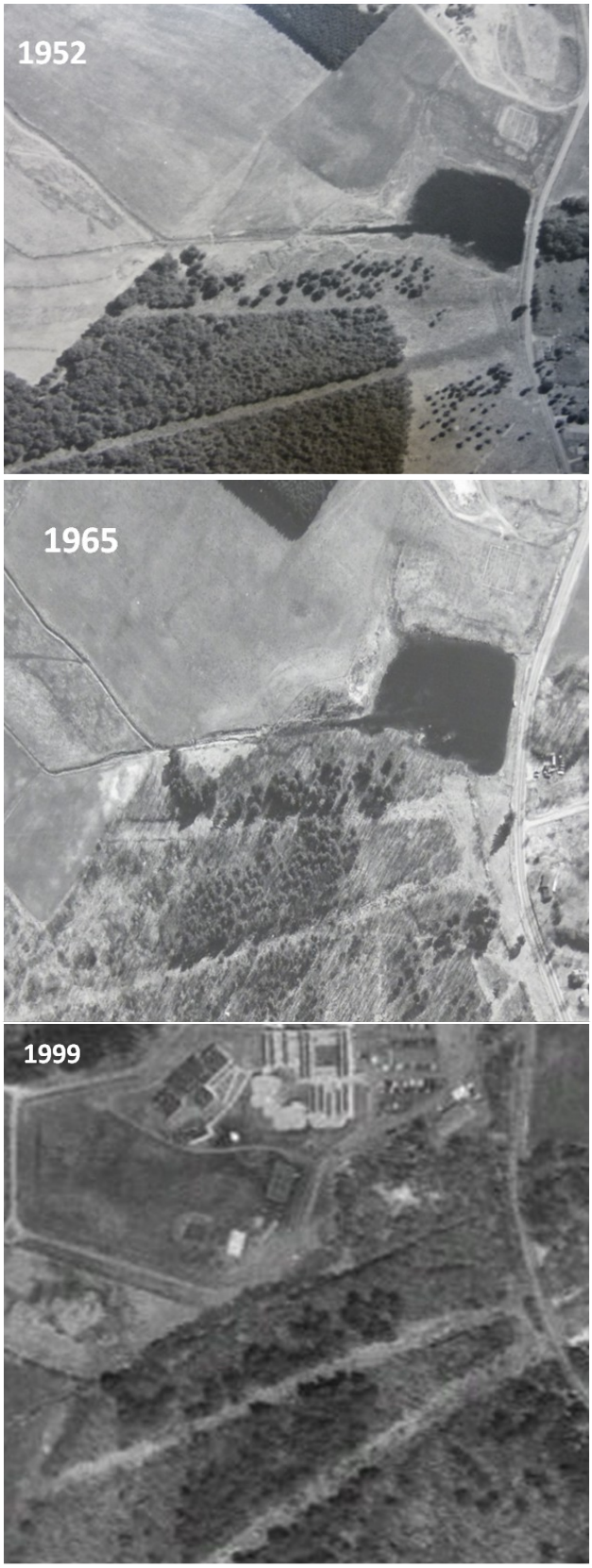
The 1884 maps shows an ice house next to the former 2.5 acre ice pond. *From the 1884, Atlas of Northampton, Massachusetts, published by Geo. H. Walker.*

Sometime in the early 1900s, a powerline was installed across the property and an-

other line was put in during the 1930s and 40s, this time at a slightly different angle. By then, household refrigerators were becoming commonplace, and the need for ice cut from ponds—a major industry in the 19th century-- disappeared. By the 1950s, this ice pond, like the others in town, had been abandoned. The rest of the property had also been let go too, and the former pastures began growing up into brush and young white pine.

As the years passed the dam fell into further disrepair. The level of the pond dropped, and locals began referring to the former ice pond as "the muckhole." In those days, before Route 66 was reconstructed, the old pond was easy to see from the road. In the 1980s, the remains of the dam gave way and for the first time in more than a century, the land beneath the "muckhole" was exposed. Today, what's even more remarkable about is that when you're at the site, it is hard to see where the pond even was! There is no obvious shoreline and what was once the bottom of the pond is now covered with a stand of good-sized red maples.

In 2002, this parcel was sold to Community Builders/TCB Hospital Hill LLC as part of the "surplus lands" associated with the clos-



Changes in the land during the last 50 years, from 1952 to 1999.

ing of the state hospital and the land's redevelopment. The following year, the Ice Pond co-housing project was given a permit for a cluster subdivision, which included 22-acres of conservation land, a right-of-way for a public multi-use trail between the subdivision and the co-housing project on Black Birch Trail, as well as another 3.5 acres that are permanently protected under a private conservation restriction. The protected land that wraps around the subdivision is a bit like of a checkerboard, jumping back and forth between small parcels under CR and conservation land. Public access is permitted throughout the entire property, but the conservation land along the western edge is so narrow and undefined that it feels like you're trespassing in someone's backyard.

Mud and silts cover the ground where the land floods during times of high water. The water backs up because of an undersized culvert and more or less is the same area where the ice pond once was. Today much of the former pond is covered with red maple.

In the decade since the conservation area was established, all of the land except for the powerline right-of-ways has been left unmanaged. The right-of-ways are maintained both by mechanical cutting and probably with herbicide. There is also an informal trail that connects the subdivision

White pine grows in many of the areas that were once cleared.

(near the stormwater detention basin) with the ROW, but the rest of the land does not have any trails, other than the relatively cleared ROWs.

The simplest access into the conservation area is from the edge of Rocky Hill Road. Parking is limited, but is possible near the powerlines, and by walking down either right-of-way, the forests and wetlands can be explored.

Vegetation Communities

Like so many conservation areas in Northampton, the property is a patchwork. In the drier upland sites, there are groves of white pine, blocks of oak-dominated woods, a richer hillside with hickories, oaks, and birch, and the shrubby, laurel-rich scrub along the powerline. In the wetter areas, there is swamp forest dominated by red maple, a small stand of hemlock, and the sand-bottomed brook itself—looping and meandering through the forest. Eventually Rocky Hill Brook, as it is known on the maps, flows into Arcadia Marsh, skirting the edge of a private transfer station (former burning dump) on Route 10.

The "trail" through the conservation area is via the powerline. Below, a rutted swale along the power line functions like a vernal pool for wood frogs in the spring. This wetland borders Rocky Hill Brook.

Vegetation Communities

1. Upland powerline and cut. Among the most common plants are mountain laurel, sheep laurel, bracken, hayscented fern, ground pine, dewberry, rough-stemmed golden rod, whorled loosestrife, and wintergreen.
2. Wetter powerline, with more grasses, Polytrichum moss , bracken, dewberry, hayscented fern. One of only two sites in Northampton for bunchberry.
3. Open marsh with stream. Lots of sedges. Marsh fern, sensitive fern. Some purple loosestrife, meadowsweet, spice bush. Breeding wood frogs and green frogs. Potentially functioning as a vernal pool.
4. White pine/oak mix, abundant mountain laurel. Canada Mayflower.
5. White pine dominated forest, with oaks, New York fern, Canada mayflower
6. Hemlock dominated woods, steeper slope transitioning to wetland
7. Red maple swamp, with hemlock, spicebush, stream, mossy hummocks, goldthread, sensitive fern, touch-me-not, scattered ironwood. A backwater along the brook may function as a vernal pool.
8. Disturbed area, with Morrow's honeysuckle, Asiatic bittersweet, Winged euonymus, and old fence line along a ditched section of the stream. A sand blowout at the end provides potential habitat for tiger beetles and native bees.
9. Open mixed with with oak, hickory, witch hazel, Canada mayflower, red maple, lots of fern, pinxter flower, maple-leaved viburnum, starflower, American hazelnut
10. Former ice pond, now red maple

Ice Pond Conservation Area

Based on land use, soils and hydrology, the conservation area can be separated into ten different vegetation communities (see Vegetation Communities map), but from a purely visual perspective, the most obvious "habitats" are the two linear power lines. Because they are brush-hogged every year or two, they are more open, have more exposed soil, and the vegetation is shrubby. And although most people don't think of powerlines as "special natural areas," it turns out that they are. If we look at the entire city of Northampton, most of the land is either forested or open grasslands. These powerlines are one of the few places where shrubby vegetation dominates the landscape.

Polytrichum moss (above) is common along the edges of the powerline ROWs.

Although the management of the two ROWs is similar, they are botanically different. The eastern ROW is shadier, generally wetter and only has about twenty species of plants. In contrast, the western line is twice as wide (so more open), includes both uplands and wetlands, and supports more than 70 plant species.

In addition to broad patches of *Polytrichum* moss, the most common vascular plants along the eastern ROW are hayscented fern, bracken fern, dewberry, ground pine, and Canada mayflower. Along the more diverse western ROW the common species include bracken fern, New York fern, ground pine, wintergreen, whorled loosestrife, rough-stemmed golden-

The powerlines are also good places to look for clubmosses. Two species can be seen in this image, including *Lycopodium tristachyum* (deep root clubmoss), which is only found in open, dry settings and is uncommon in Northampton.

rod, dewberry, as well as impressive clusters of mountain laurel and sheep laurel, which bloom beautifully each June.

The powerline with hayscented fern.

Close up of hayscented fern

Bunchberry in flower.

Mountain laurel in bloom in June.

Close up of sheep laurel.

Cinnamon fern.

Close up of mountain laurel, and northern arrowwood in flower.

The Rest of the Conservation Area

Heading north from the powerlines along the Rocky Hill, the uplands to the west of the western powerline include impressive stands of white pine, scattered hemlocks, as well as tracts of deciduous forest dominated by red oak, black oak, red maple and black birch. In these areas, the understory is sparse, with a few scruffy clumps of mountain laurel. The ground itself is almost free of plants, but instead is covered with fallen oak leaves. Of the plants that do grow here, the most common are ground pine and wintergreen.

Near the northern boundary of the conservation area, the composition of the canopy changes and includes white oak, beech and more hemlock. There is also more mountain laurel. A little further and the land slopes to a swamp forest that borders Rocky Hill Brook. Its vegetation here is much more diverse, and the canopy includes a mix of red maple, yellow birch, hemlock, black ash, and on the higher hummocks, red oak and white oak. The

shrub layer includes witch hazel, spicebush, and mountain laurel, while cinnamon fern, ragwort, marsh marigold, and goldthread grow in abundance in the mossy, seepy soils near the brook. An ATV trail cuts east-west through the wetland and then heads north along the powerline.

Where the wetland is crossed by the powerline, there is a small open marsh dominated by sedges (at least 6 species), ferns (especially marsh and sensitive), wetland wildflowers (wild geranium, Joe Pye weed, blue flag iris, swamp milkweed, goldenrods, grape, Virginia creeper), as well as winterberry, meadowsweet, spicebush and sapling red maples. Two non-native plants, multiflora rose and purple loosestrife, are also present.

Continuing east, the strip of upland forest between the two powerlines is mostly a mix of white pine and oaks. Closer to the former ice pond, however, the pine drops out and the forest is entirely deciduous. It is also more open and park-like, with impressive oaks and because the soils are slightly richer, with shagbark hickory and ironwood as well.

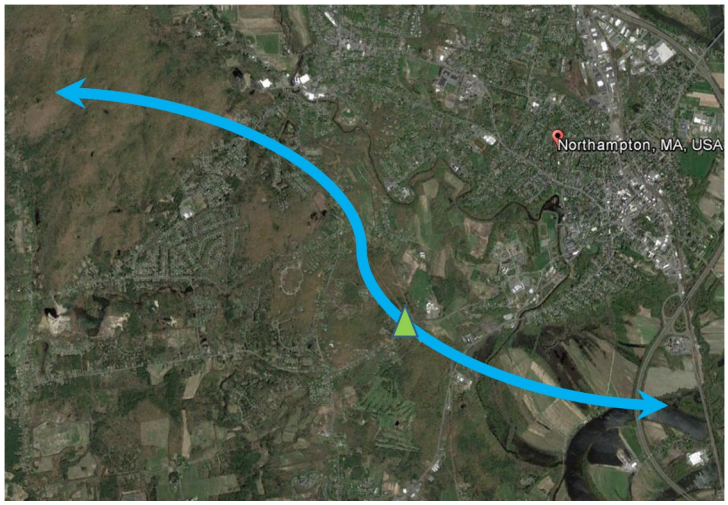
After crossing the second powerline, you pass through a band of woods and can follow the meandering path of Rocky Hill Brook. To the east of the brook, along the property's border is an

old fence line. The land in this area was altered years ago when the wet meadow to the northeast was ditched and routed into Rocky Hill Brook. The original ditching probably took place in the 1800s. Today, this altered area has the biggest patch of invasive plant species on the property, with tangles of Asiatic bittersweet and a thicket of Morrow's honeysuckle and winged euonymus.

This deeper side channel along Rocky Hill Brook may function as a vernal pool.

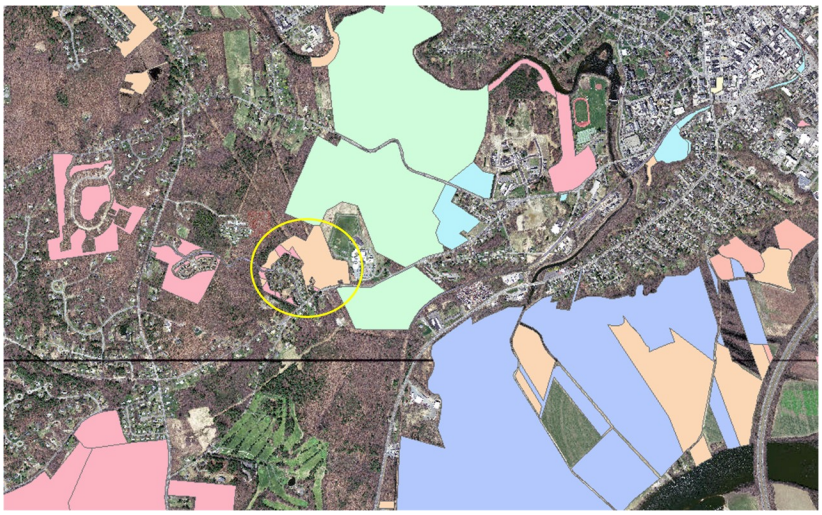
Wildlife

Because of the property's varied habitats—stream, marsh, forested wetlands, and piney woods, a variety of animals use the property-from butterflies taking advantage of the flowers in the sunny ROW to green frogs and wood frogs in the marshy places, to a mix of birds and mammals throughout. Wood thrushes, pileated woodpeckers, cedar waxwings, chickadees and many other species were heard or seen here. At the northern end of the eastern powerline is a 20' x 30' sand blowout,



The conservation area, marked with a triangle, is part of a mostly unfragmented wildlife corridor that extends from the Connecticut River west to the forested hills. Its wildlife value is also enhanced because of the presence of nearby protected land (former state hospital grounds, other private conservation restrictions.)

which is just the kind of bare ground preferred by some of our native bees for nesting and by certain kinds of tiger beetles.



The Ice Pond Conservation Area, circled, is in close proximity to many other protected parcels, which increases its value to wildlife.

What's more, this property has real value for wildlife because it is part of a larger block of protected land and although somewhat fragmented and interrupted, it is also part of an even larger corridor that extends between the Connecticut River and more extensive woodlands to the west.

At present, it does not fall within the estimated habitat for any rare species and is not considered supporting habitat for any rare wildlife.

Management & Stewardship Recommendations

Although this conservation area will always be most valuable to its nearest neighbors, it has some nice areas that other people would enjoy exploring too. To help facilitate this, it is recommended to:

1. Install a sign and create a small parking place along Route 66 (below the powerline).

Most of the invasive plants at the Ice Pond Conservation Area are found near the disturbed soils and fence line that marks its property boundary with the prison. The leafless shrubs in this photo are Morrow's honeysuckle.

2. Develop a trail that loops through the different habitats (see map) and connects with the DFA lands and multi-use trail.

3. Work with members of the nearby co-housing communities and/or jail to control the limited number of invasives on this property.

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