

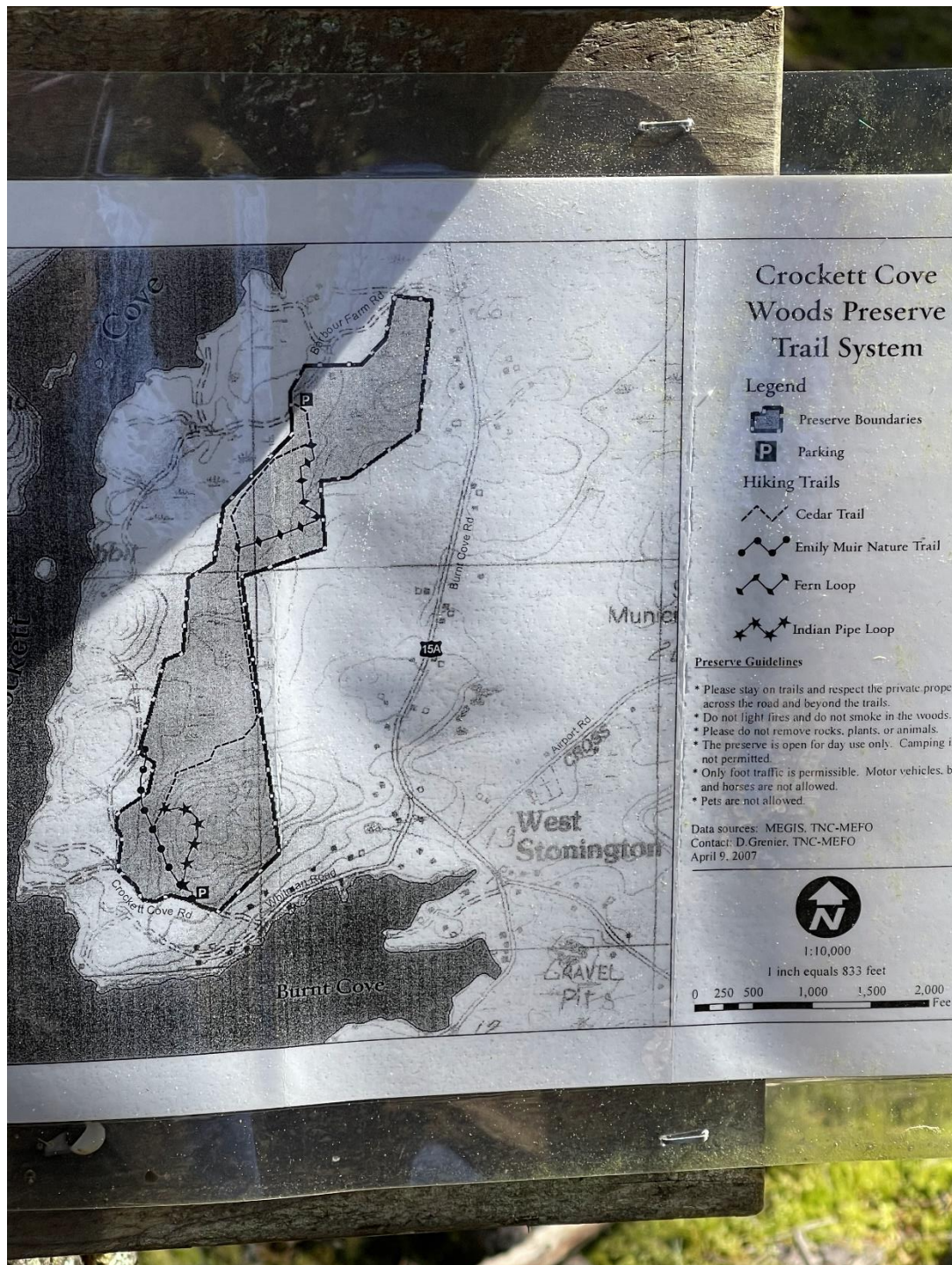


VIRTUAL GUIDED NATURE WALK

CROCKET COVE WOODS PRESERVE



The **Emily Muir Nature Trail** is a short trail, down and back, which takes the visitor past boulder faces at eye level. A small bog is the destination and two kinds of insectivorous plants are the reward. The **Ghost Pipe Trail**, a loop branching off from that trail explores the looming granite outcrops. These heights are good places to look for stands of Indian pipes in midsummer. Even more ambitious, with a couple of scrambles up the boulders at first, is the **Cedar Trail**, a mile mostly level trail crossing a white cedar swamp to the Barbour Farm entrance. With planning you can make the trip one way by leaving a car at either end. The bog, the mossy boulders, and the swamp of this preserve are equally attractive year round, rain or shine.



As you walk along the trail, the boulder faces beckon. Island Heritage Trust office has superb triplex magnifying hand lenses for purchase or for borrowing. Visitors are always being urged to “Bring your eye to the specimen rather than the specimen to your eye”, which of course means Please do not pick but lean over to look. Here at Crockett Cove where so many interesting specimens are at eye level, that is easy to manage. Bryologist Ralph Pope visited here and led a walk pointing to each moss specimen saying what page it was on in the field guide that he wrote. We offer a PDF on Learning Our Mosses – see [Learning Mosses](#).



When she built the houses along the shore of Crockett Cove, Emily Muir donated the 98 acres of back land for this preserve to The Nature Conservancy because she was so struck by the diversity of mosses and lichens here. It would take a specialist to identify all the species; but just marvel at the variety of colors and textures on the ground, rocks, and trees. They flourish because of the exposure to the prevailing moist southwesterly breeze.

On both the rocks and the ground are many species of lichens, those symbiotic partnerships between a fungus and a cyanobacterium or green algae. Many are popularly named with such descriptive words as soldiers, bayonets, pixie cups and the like, but it takes chemical analysis for most to be accurately identified. Color will often tell you when you are looking at lichen, an association of a fungus and its photosynthetic partner, cyanobacteria or green algae. All are a somewhat grayish green.

Bryophytes, our mosses and liverworts, are fascinating viewed up close. Their cell walls are only a single layer thick. They do not have true roots or leaves with veins, specialized

conducting vessels. From near or far you can make some deductions just by color. The mosses will be fairly deep green but none are as true emerald as the liverwort *Bazannia trilobata* (below), which is not a moss but another interesting early plant form.



Sharing ancestry with green algae, the liverworts are thought to have been among the earliest plants to colonize the land some 400 million years ago.

Pincushion moss (below) forms silver-white mounds that are quite recognizable.



A mat of Schreber's or Red Feather moss (below) has a coppery cast even before you look close enough to see the red central stem. On dry heights here on Deer Isle, the understory of spruces may be almost entirely an extensive carpet of this moss, below.



Along paths, especially where foot traffic - from humans or deer - compacts the soil, you will often find tiles of a green or brownish velvety moss, *Dicranella*, (below). Common as this species is, there does not seem to be much agreement as to common name, so perhaps it is best to stick to the Latin name *Dicranella*.



Dicranum, Windswept Broom moss (below) looks combed or windswept. The genus names of this moss and the previous one alert you to the fact that one looks like a diminutive version of the other.



In some places, dry sandy roadsides for example, the most common moss of all may be Haircap, named for the cap-like lids of its spore-bearing structures (below).



The starry rosettes may be mistaken for tiny spruce seedlings. For much of the year the spore stalks are not in evidence but in fact they are the structures that bryologists use to make positive identification. This is not a problem for us with our common species here. They are not only common, they are quite distinctive.

If you get no farther than the first few hundred feet of trail on this preserve, you will make the acquaintance of an amazing number of mosses and lichens. Even if you are not able to negotiate the boulder heights farther on, this flat stretch will give you a glimpse of the drama to come. The shapes of the Stonington granite outcroppings on this preserve should stir even the most jaded imagination.



The Ghost Pipe loop here will give you a short hike up among the moss-carpeted boulders. It is the ideal circle for a short visit to this preserve. On either side of the Ghost Pipe loop trail in

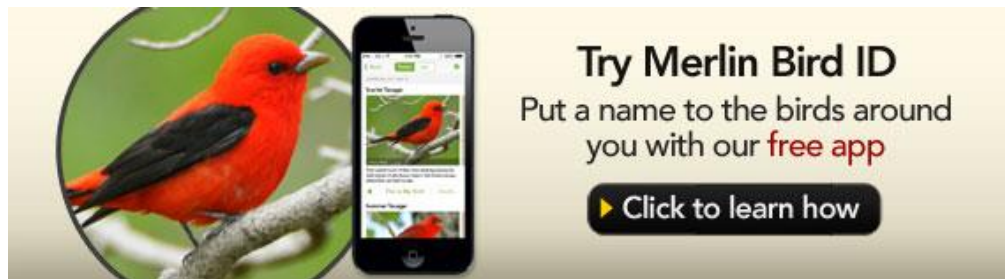
early July you may find the upturned stems of what were once called Indian Pipes, *Monotropa uniflora*, a member of the heaths that contains no chlorophyll (below). Native Americans have asked that we change the common name. As common names vary, the scientific community has given organisms Latinized names which are honored throughout the world.



Instead the plant is parasitic on tree roots and in association with fungi that are in mycorrhizal with the tree roots. Some of the nodding flowers have a faint pink color. After they are fertilized their blooms turn upward and you can see the bright colors of the reproductive parts. When the blossoms and stems wither, the dried dark brown stalks remain for quite some time.

This height of land is a good place to listen for the voice of the Northern Raven, which varies from harsh croaks to bell-like calls. Larger cousin of the crow, this is a bird of northern forests and coasts. With practice, you can usually tell it from the crow by the raven's flared tail and heavy beak. Crows are more apt to be seen traveling in groups than the more solitary ravens.

Use your browser to link to the Cornell Laboratory of Ornithology for bird songs and other information at www.birds.cornell.edu.



In high summer, spattered here and there on the mossy trail sides are what look like pale yellow scrambled eggs, a tiny version fit for fairies. You are looking at *Physarum polycephalum*, the most common slime mold.



For part of its life this plasmodium streams like an amoeba looking for microorganisms to ingest. For the reproductive phase the slime mold forms upright sporangia, the bright yellow form (above). How to classify these organisms that are plant-like and animal-like and sometimes act unicellular and sometimes aggregate like a bunch of cheerleaders in a tower formation?

The forest floor is covered with a beautiful carpet of moss, *Pleurozium schreberi*, which you met on the boulder face as you entered the preserve. This is the most common moss in our woodlands wherever the landscape is fairly dry.



Herr Schreber was a contemporary of Linnaeus. Imagine how excited Linnaeus must have been each time a packet of specimens arrived from a naturalist visiting the new world.

Where the underlying granite forms a basin that catches rainwater, the mosses give way to other species. At one point you can see cinnamon ferns ringing such a tiny pool



and on the other drier side of the trail are the distinctive three-part fronds of bracken ferns.



You may choose to sit awhile on the bench and enjoy the solitude before wending your way down the trail. The granite rock faces on both sides of you give you a close-up view of what they must have looked like before so-called higher plants evolved. Before you make your way down, look to your right at the short spur trail.



If you follow the rock faces for just a few steps you can see what is perhaps one of the most impressive of the lichens which populate the rocks. At the crest of the rock are the leathery folds of Rock Tripe, *Umbilicaria esculenta*.



Returning to where the Ghost Pipe trail leads you down hill, you encounter the Cedar Trail fork and the Island Heritage Trust letterbox. The orange blazes of the Cedar Trail continue all the way across the preserve to the Barbour Farm Road. The blue blazes of the Ghost Pipe loop will rejoin the Emily Muir trail to return you promptly to the parking lot.

THE CEDAR TRAIL





Suppose you have chosen not to follow the Indian Pipe loop trail back to the parking lot but have opted instead for the lovely Cedar Trail longer hike out to the white cedar swamp. This is a dramatic forest. In the '30s and '40s, much pulpwood was cut here on the Island. In the years after the war, many large trees were spared because they were too big to tackle with ax and bucksaw.

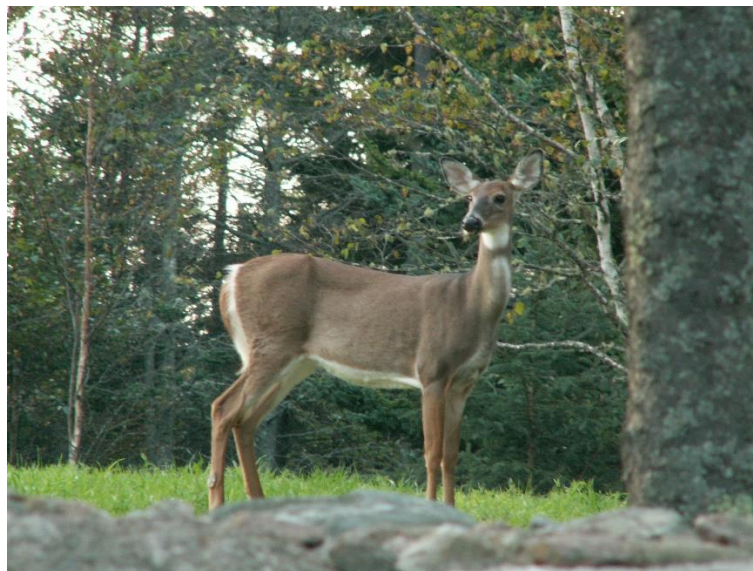
However, mature spruce trees face another challenge: the spruce bark beetle. The beetle bores into trees stressed by age or other factors and lays its eggs under the bark. The larvae tunnel in the sapwood, eventually killing the tree. You may see the pitch tubes and bits of bark frass that indicate beetle infestation.

Because cutting near the coast often results in a domino effect of blowdown, and blowdown trees stress their standing neighbors further, inviting spruce beetle, forest management is especially challenging on Deer Isle. One of the benefits of standing trees is carbon offset through photosynthesis. Indeed, the great boreal forests of the northern hemispheres fix as much carbon as do the forests of the tropics.



The white cedar swamp is one of the centerpieces of this preserve. You may recognize the northern white cedar, or arbor-vitae, as the species that is often found on the shores of lakes. The straight-grained wood resists rot and is used for fence posts, shingles, clapboards, and even decks and outdoor furniture. The native peoples used it for the interior ribs of their birch bark canoes.

At the Barbour Farm end, the final part of the Cedar trail runs through a mixed forest with many hardwood trees. In dry, rocky areas you will find bracken fern, lambkill or sheep laurel, and sweet gale – which despite the name is not a fern, but a relative of bayberry.



A glance at the map shows how irregular the preserve boundary is. Across the Island is a mosaic of private land, conserved and open to the public. Animals of course perceive habitat, not ownership; and conservation organizations can rarely protect enough land to provide sufficient habitat for all species. Large animals such as deer, and carnivores such as bear and foxes and bobcats have large home ranges. The river otters consider miles of coast their territory. Therefore, good stewardship by private land owners is essential. The more we “suburbanize” our yards, the more our Island mosaic of suitable wildlife habitat shrinks.

If you now retrace your steps you can enjoy once again the dramatic beauty of this preserve. When you find yourself once more back at the Emily Muir Trail, this time turn right to take a look at this part of the water’s pathway to the sea.



As you approach the wetland, notice the clumps of cinnamon fern and also tall stately fronds of royal fern, pictured here (above).



Several young Red maples, also called Swamp maples, are part of this wetland association. In autumn they announce themselves with their brilliant red colors.

There are Skunk Cabbage plants scattered through this brushy swamp and mossy little bog. Just after the ice melts in spring the interesting flowers of Skunk Cabbage (below) bloom. They are remarkable in their ability to generate their own heat. The process is called thermogenesis. The starch in the plant's roots reacts with oxygen to break molecular bonds apart releasing energy in the form of heat.



Through the whole summer their large leaves are quite conspicuous and if you break them off, a decidedly skunk-like smell will explain their name.

Bogs are characterized by Sphagnum moss, the starburst-like rather soggy moss (below).



Where it accumulates, sphagnum becomes peat and is marketed as such. Because bogs have poor drainage, the slowly-decaying vegetable matter renders them acidic. That means that only certain plants are likely to thrive here.

Among the shrubs associated with bogs are Viburnum or Wild-raisin, with shiny dry leaves, Speckled Alder, and Winterberry, our native holly (below).



Retrace your footsteps. Right beside the trail stands a dead tree trunk with a shelf fungus called Lacquer Conk, *Ganoderma tsugae*. Notice that it is oriented to use gravity to disperse its spores.



Nearby a log lies on the ground. Notice that it too has a Lacquer conk, but this one grew after the tree trunk had fallen. How do you know? Because it is oriented to send its spores DOWN.



As the trail ascends, the mixed forest becomes drier, and here we find many familiar wild flowers. Wild Lily of the Valley, *Maianthemum*, is a pretty sure possibility (below).



When the rest of the Island is blooming with showy apple blossoms and rhododendron, here on the shady heights Starflower, *Lysimachia borealis*, (below) obligingly blooms along as it does on most of our preserve trails.



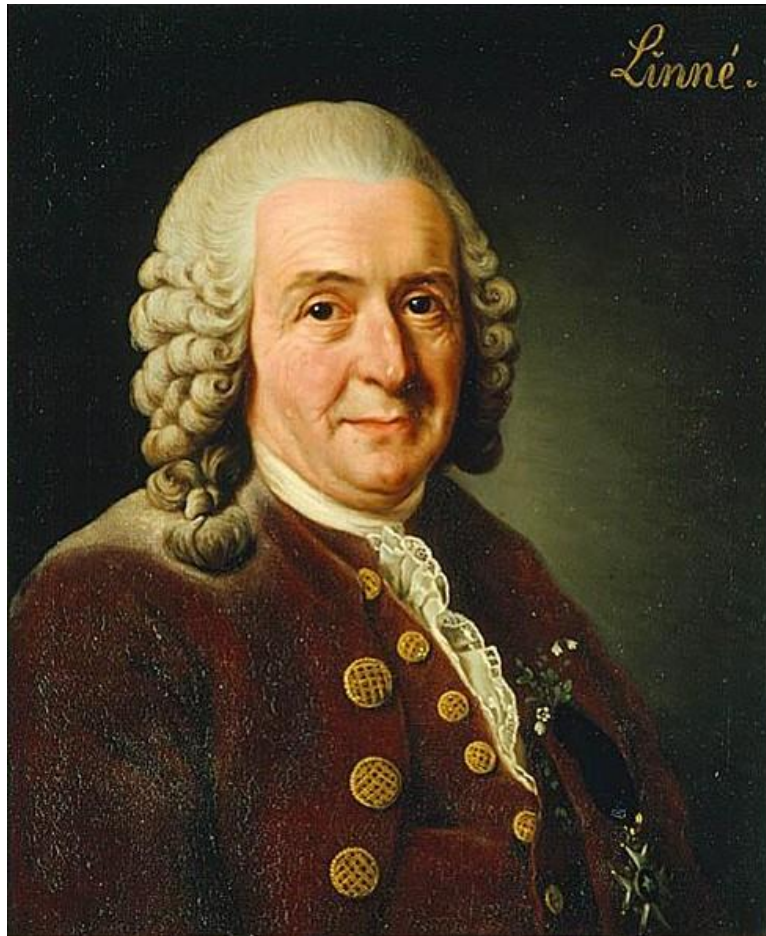
Others such as Bunchberry, *Cornus Canadensis*, are well worth searching out in May and early June.



You can find Twinflower, *Linnaea borealis*, in most of our preserves when spring is in full bloom, in June.



This pretty little bloom is of special interest because Alexander Roslin, Swedish painter of the French aristocracy, painted it in a formal portrait of Linnaeus which is now in Sweden's National Portrait Gallery in Gripsholm Castle. The great Swedish scientist is pictured with a sprig of twinflower in his button hole just above the Order of the Polar Star.



Linnaeus may have taken the name of this flower sent to him from the new world as an emblem celebrating his work on binomial nomenclature, but we may also think of it as symbolizing the partnerships that almost always lie behind successful conservation projects.

When Emily Muir gave this preserve to The Nature Conservancy in 1975, land trusts had not yet come into being in this country. The Conservancy itself had only been founded in 1951 by ecologists. Author of Audubon field guides, Richard Pough was one of the founders of TNC and its first president. In 1945 Pough had warned the world about studies by the National Audubon Society and the US Fish and Wildlife Service showing that DDT was killing birds. (It took until 1962 for the public to be ready to hear Rachel Carson.)

Garden clubs, government agencies, natural history museums—all were becoming allies of conservation organizations. Locally, talks at Dr. Ralph Waldron's nature lodge at Goose Cove and a series of volunteer nature walks for the Maine chapter of the Nature Conservancy helped the public come to understand that a conservancy is not a jelly or jam and an easement is not necessarily for power lines.

As TNC expanded nationally and internationally, it was realized that more local management would be key to the future of preserves. The land trusts that were developing around the country and here on Deer Isle made Island Heritage Trust the logical managers of both Barred

Island Preserve and Crockett Cove Woods. In 2014 the trust assumed ownership of the preserves.

It is these interrelationships which make possible civic action to initiate and sustain preservation of our environment. Won't you join Island Heritage Trust and add your voice to this effort?

We hope you have enjoyed your outing.



ISLAND
HERITAGE TRUST

By Dr Kenneth L Crowell and his wife Marnie Reed Crowell

With thanks to Ralph Pope

Photos

Marnie and Ken Crowell