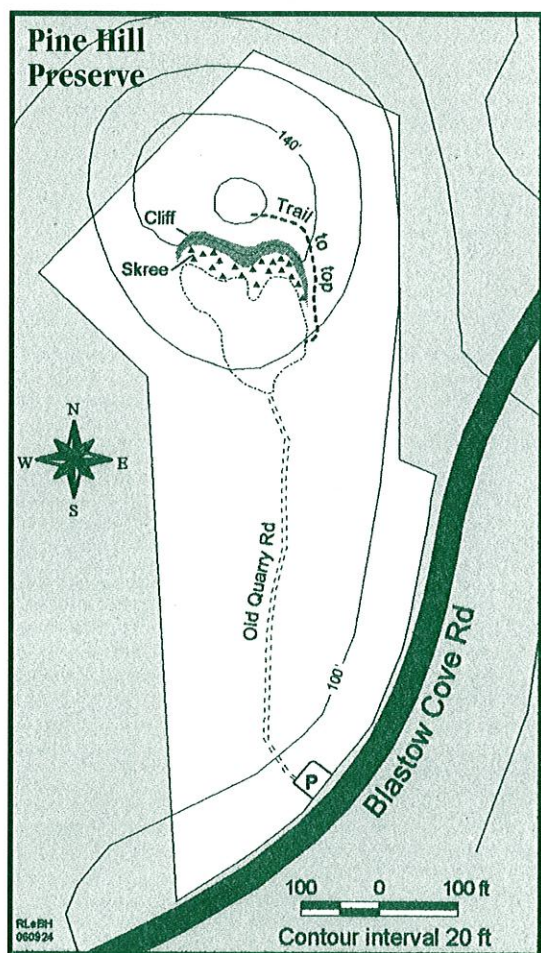


View from Pine Hill

The steep, rocky trail to the top of Pine Hill provides a short, steep, difficult climb. Be prepared to use hands and feet. The rocks are slippery and treacherous when wet or icy. To protect rare plants, stay on the trail and walk on rock when possible.



About the rocks and plants

Pine Hill contains a key piece of Maine's geological heritage. The uncommon rock type is known as serpentized peridotite. Peridotite is a coarse-grained igneous rock consisting mostly of the mineral olivine, an iron-magnesium silicate. It has less silica than common volcanic rocks like basalt, and is also distinguished from basalt by its coarser grain size.

It crystallized from a magma (hot liquid rock) similar in composition to the magma that is upwelling from deep beneath the ocean floor in spreading centers such as the mid-Atlantic Ridge. Hot fluids moving through the rock altered the olivine to serpentine by addition of salt water.

For many years, it was assumed that Pine Hill was the throat of a volcano, and its nearly circular outcrop pattern does little to dissuade one from this hypothesis. However, it may simply be a window into a dike, a tabular sheet of magma that forced its way into a crack in the surrounding rocks and crystallized there. We just have no idea of its three-dimensional shape.

There are other dikes in the region that are of similar composition and that are about 200 million years old. Recent studies have also raised the possibility that Pine Hill is a chunk of oceanic crust caught up in the tectonic collision between the ancient core of North America and tectonic plates that swept against its shores about 400 million years ago during the Acadian orogeny (mountain building event) that occurred during the Devonian period. This

possibility is based on the fact that the Pine Hill rock is similar to another larger serpentine-rich rock body, the Torrey Pond Serpentinite, in North Deer Isle which is believed to be of Silurian age, having formed only a few million years before the collision.



Selaginella

Owing to the unique chemistry of the rocks, extreme soil conditions are found on serpentized peridotites. The soil cover is often thin or absent. Without thick soil, moisture is quickly lost, creating an even harsher climate for plants. The soil tends to have low levels of all major plant nutrients (particularly calcium and nitrogen), and tends to be rich in magnesium, iron, chromium and nickel – elements that are toxic to many plants. Plants growing on these soils are often distinct from their closest relatives on more normal soils. This provides a unique situation for study of the role of natural selection in plant diversification.

You will see many familiar trees and plants, but they may be smaller. There are also many unusual plants. For example, 70+ species of lichen have been identified, sixteen of which have never been reported before in Maine. There are unusual flowering plants, mosses, ferns, spikemosses, and liverworts.

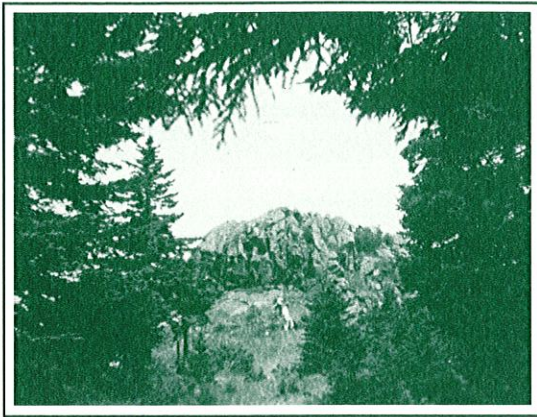
Scientific groups should notify the IHT office in writing of planned research visits and projects prior to visiting the quarry.



Cedar



Woodsia fern



Early photo of Pine Hill, an Island Heritage Trust preserve donated by Pat and Kurt Fairchild.

The bold outcrops on Pine Hill, in Little Deer Isle, have provided generations of islanders with superb views of Deer Isle, Eggemoggin Reach, and distant mountains. The Deer Isle causeway was built in the 30's. It was constructed of field stone from old walls. When winter storms and high tides eroded its edges, the familiar edging of rocks, quarried from Pine Hill, were placed along the edge of the roadway in 1947. For generations, Pine Hill has been a favorite place to climb for the view from the top.

More recently Pine Hill has been recognized as a site of national geological and botanical significance. Both the rock (peridotite) and the plants that grow on this type of rock are very unusual. Some plants growing here occur no where else in Maine.

In 2006, Pat and Kurt Fairchild, recognizing Pine Hill as a place treasured by islanders and scientists, generously donated seven acres, including access to the quarry and the hill, to Island Heritage Trust to insure that this place would be available to the public forever.

Please help us protect this unique, very special, and nationally recognized place.

Use Guidelines

- Day Use Only.
- No Dogs.
- No Fires.
- Do not remove or damage plants.
- Do not remove, collect rock samples or deface the rock.
- Climbing at quarry is not recommended. The rock is unstable and loose.

Directions to Pine Hill

On Little Deer Isle, turn off Route 15 at the Chamber of Commerce Booth onto Eggemoggin Road. Continue 0.2 mile until you come to Blawie Cove Road (at the church), turn left. Go 0.2 mile to Pine Hill parking area on the right.

ISLAND HERITAGE TRUST



IHT conserves land for public benefit on Deer Isle. Its mission is to conserve significant open space, scenic areas, wildlife habitats, natural resources, and historic and cultural features that preserve the island's special character. Pine Hill is owned and managed by Island Heritage Trust.

Because IHT is a small non-profit organization, it depends on the financial resources and volunteer skills of its members to carry out its mission. Become a member by sending a donation to the IHT office and receive our two newsletters and other member benefits.

ISLAND HERITAGE TRUST

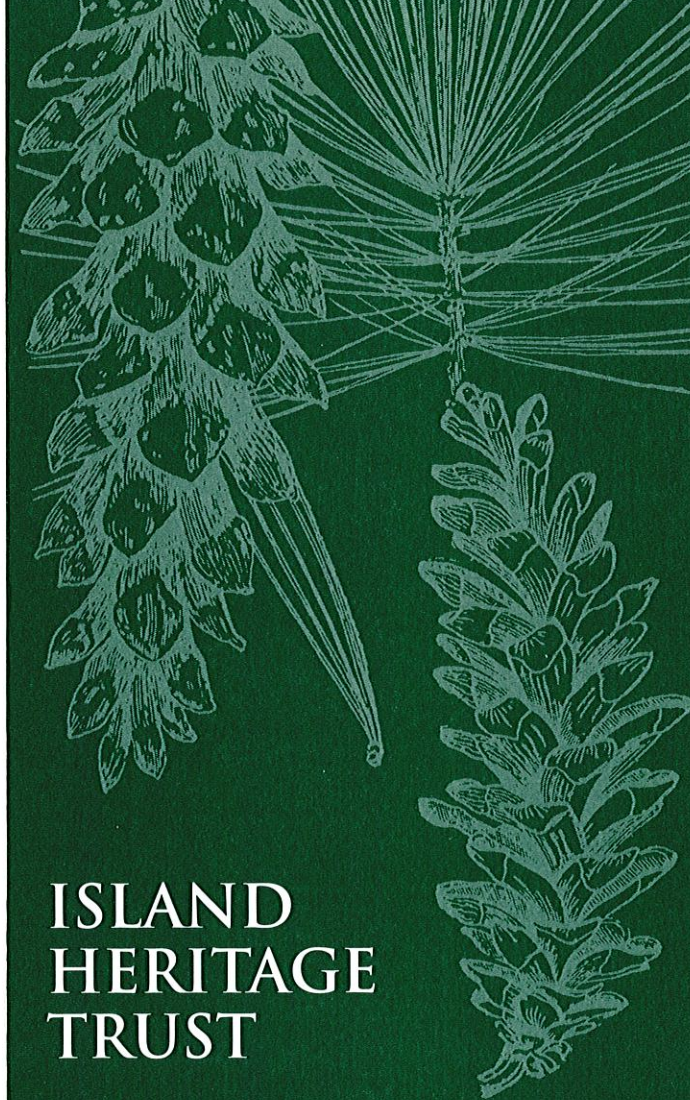
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PINE HILL PRESERVE



ISLAND HERITAGE TRUST

The Conservation Land Trust
of Deer Isle and Stonington, Maine

Working to protect the environmental and scenic qualities
that make the Deer Isle and Stonington communities special...