

Welcome to IHT'S
CARRYING PLACE PRESERVE

Written by Ann Hooke, August, 2023

This is a small preserve which has many pockets of wonder – creating magical micro-climates for plants and creatures. Walk slowly, listen, look, touch gently. Walk with the spirit of a curious child. Consider how an indigenous person might walk upon these ancestral lands of theirs – as so many did here for hundreds of years.

From the parking area, you take the COVE VIEW TRAIL which rises gradually across a fairly steep hillside. Notice that there are spruce and fir trees but there are also birch, aspen, and oak trees. The woods are rather open as sheep were possibly pastured on this hillside a hundred years ago. From the top of the rock promontory, you get views out over Greenlaw Cove. The Wabanaki tribes might have hunted here. It was easy to lay this trail as it followed a quite well-worn path made by deer? coyotes? and probably other mammals.

At the junction with the CLIFF TRAIL, the topography and forest change. The forest is now predominantly spruce and fir. There have been lots of blowdowns. It is definitely a dynamic forest! Uphill from this trail junction, the hillside is even steeper and more rugged. Rocks of all sizes seem to be scattered about. But turn downhill toward the water and the land seems to flatten out somewhat. How did that happen? What's going on here? Just notice and begin to ponder, as we did, to understand how the glacier affected this hillside, and the topography of the preserve.

At the junction with the SHORE TRAIL, turn left. You get views out across the salt marsh of the actual "Carrying Place," where Wabanaki portaged their canoes between Long Cove and Greenlaw Cove for hundreds of years. The common route for Native Americans to reach Deer Isle from the mainland came across Eggemoggin Reach near the area of the current bridge from the mainland (as it is the narrowest spot) to the area of the Causeway and Scott's Landing. From there, it was a short paddle down to Northwest Harbor, the Mill Pond and then across "The Haulover" to Long Cove. In Long Cove, one could choose to go through the gut, "Bray's Narrows" on the map, to access Southeast Harbor and areas beyond, OR one could stop at WHIG ISLAND, to camp, fish, hunt and wait for the right tide to cross over at the Carrying Place to Greenlaw Cove. This bay at the east end of Long Cove has abundant fish, clams, and birds. Even today, there is an abundance of marine and land creatures living in this cove. You may see ospreys, eagles, seabirds, kingfishers, ducks, and shore birds hunting for prey. The small midden on Whig Island, now mostly washed away with rising sea levels, tells us that the Whig Island was used as a camping place by the Wabanaki.

Walk quietly as there are often shore birds, ducks and herons feeding in the shallows at the head of the cove when the tide is out. Shortly you will have to clamber over the rocks beside a spring where warblers may be seen drinking. Native Americans were surely aware of this water source as were the early settlers who relied on this spring when their own wells went dry. After the spring, there is an area of relatively flat terrain where Twinflower (*Linnaea borealis*), Three leaf Goldthread (*Coptis trifolia*), and Starflower (*Trientalis borealis*) bloom here in the spring, and at the shore there is a salt marsh covered with saltmarsh grasses.

A salt marsh? What is going on here? You probably know that Deer Isle was at one point totally covered with a 4000-5000 foot thick ice sheet that spilled down from Canada and extended all the way out to the

edge of the continental shelf. At this point (20,000 years ago), all of Deer Isle was submerged under water. As the mighty mass of ice moved over this landscape, a lot of boulders, cobbles, gravel, sand of all sizes were scattered over the landscape. This sort of deposit is called till and covers much of Deer Isle. Perhaps because BRAY'S MOUNTAIN – in this Preserve – was one of the highest points on Deer Isle, the ice left an even more enormous collection of debris – including 3 huge erratic boulders which are located along the trails. The ice reached its maximum extent about 22,000 years ago, but then the climate changed getting a lot warmer. The next 10,000-15,000 years tell a bizarre story – all of which impacted Carrying Place Preserve! As the ice front retreated by melting, enormous blocks of ice broke off becoming ice bergs and either floated away to melt or became grounded in the soft mud. Not far off the shore of this Preserve at the east end of Long Cove, one of these icebergs, stuck in the mud, simply melted in place while more mud was deposited around the mass of ice. Eventually all the ice melted and a deep hole remained. The result: a well-known deep hole in the east end of long cove that is 100 feet deep! *Meanwhile* across the State, the melting ice from the retreating ice sheet raised sea level so the ocean flooded all the way up to Millinocket!

Then around 15,000 years ago, the land started to rebound with the weight of the ice having been removed. Sea level dropped (!) to about 200 feet lower than it is today! As the land was rising out of the water, a lot of the sand and gravel in the glacial till was washed downhill leaving behind cobbles of all sizes and giant erratic boulders. Finally, around 12,000 years ago, the sea level began to rise again! But back to the spot on the trail where we started this digression – talking about a fairly flat place in the woods and a salt marsh offshore: you are standing where this fine sand and gravel was washed down slope and deposited.

Quoting from A Geologic History of Deer Isle, Maine, by Roger LeB. Hooke, 2016: “Over the past 5000 years, the rate of sea level rise slowed and as a result, salt marshes developed in many places along the coast. Mud that collects in sheltered areas such as estuaries and shallow bays is colonized by grass. By reducing current velocities, the grass collects more mud. As long as the mud supply is sufficient and the rate of sea level rise slow enough, the surface of the salt marsh can be built up at the same rate that sea level rises. At the same time, the seaward edges of the salt marshes are eroding, again as a consequence of sea level rise. The sea giveth, and the sea taketh away! Salt marshes can be seen in many coves along the coast of Deer Isle: one example is at the east end of Long Cove [here!], where the Sunshine Road crosses between Long and Greenlaw Coves.

“As (current) sea level rise accelerates, there is concern that it may, in some places, outpace sedimentation with the result that salt marshes are lost. Salt marshes provide a unique habitat for certain bird species and serve as nursery grounds for some fish species. They also filter water, removing many pollutants. Thus, their loss would deprive us of a number of valuable ecosystem services.”

Continuing westward along the SHORE TRAIL, the slope steepens and the forest is dominated by spruce and fir trees and feels quite open. As this is a north facing slope, it is cooler in the summer and has deeper snow in the winter. Ravens often nest along this stretch. The trail passes a large boulder with a ledge underneath it – was this a perfect place for someone to sleep out of the rain? You may also notice that the forest edge at the shore is now very steep, really a cliff.

At GRAND JUNCTION where the RIDGE TRAIL heads up into the woods, you can take that trail or you can continue on the SHORE TRAIL -now a spur trail that ends at a small creek. There is easy access to the shore at this point, (and also good fishing and swimming from the prominent off-shore ledge). This creek is also used by fox, otter, mink, rabbit, raccoon, deer and birds. In fact, one can often see otter slides in the winter crossing this spur trail and otter scat in the summer (looks like loose gray

mud full of shell bits!). Notice that the Preserve boundary is located just beyond this little stream. Please respect private property beyond.

If you decide to walk along the shore at low tide, be sure to turn east back toward the Carrying Place, look for caves and natural bridges along the steep cliff. There is even a place that looks like the results of a fault. What's that and why might it be here? Underneath all the glacially deposited rocks on the surface of the Preserve, is bedrock, the familiar Deer Isle Granite. The granite is seen at various points on the Preserve trails. Here, along the shore it is very visible. The Deer Isle Granite while it was still molten magma was injected deep (3-5 miles) in the earth's crust as part of the collision of tectonic plates about 375 million years ago. All along this stretch of Maine's coast, there were large volcanoes erupting at the surface that arose through the crust from deep sources of molten magma but most of this magma that was located at great depth cooled very slowly. Slow cooling yields bigger crystals in rock. We can clearly see crystals of quartz, white (Sodium) feldspar, pink (Potassium) feldspar, and mica in the Deer Isle Granite.

In regards to the magma of the Deer Isle Granite, it seems that during the collision of tectonic plates, the whole chamber was tilted on its side. After millions of years of erosion, the chamber is now at the surface as the 3-5 miles of rocks above the granite have now been slowly eroded away! Given the tilting that happened 375-400 million years ago, one can now see the bottom of the magma chamber over in Brooklin at Flye Point and the top of the chamber at Crotch Island! Roger Hooke made an interesting observation about the granite along the Carrying Place shoreline. First, he noticed that this stretch of shoreline from the entire south side of Long Cove out to Greenlaw neck is remarkably straight. Then he noticed that there are several similar east-west valleys that cross the island and that these valleys are asymmetrical: the south side is steeper than the north side – as at Carrying Place Preserve. These valleys appear to be in places where the granite was less resistant to erosion and may reflect a subtle large-scale compositional layering in the magma chamber. His hypothesis is that these layers developed (and were tilted) during the tectonic collision and now slope gently to the south. The weaker rock was stripped off the south-facing slopes of the valleys undermining the overlying rock that now forms the tops of the hills on the north-facing slopes. There is a spot along this north facing shoreline of Carrying Place Preserve where you can sense a break that may have happened along a layer of granite.

To get back to the Preserve trails, it is best to return to the brook at the west end of the Shore Trail (where you accessed the shore). The shore closer to the Carrying Place (and Sunshine Road) becomes very muddy and climbing the steep bank increases erosion of the bank and is also not very safe due to the steepness. The salt marsh is also quite fragile and easily degraded by walking on it.

FROM GRAND JUNCTION, take the RIDGE TRAIL up the hill. Notice that the woods here are very open as there are more deciduous trees. Keep an eye out in June for tiny wildflowers, like *Pyrola* (*Pyrola secunda*). Part way up the hill, you come to the trail junction with the OLD SHORELINE TRAIL. You have a choice: you can take this trail or continue on the RIDGE TRAIL.

About the OLD SHORELINE TRAIL: as we explored the area of the trail, we realized that there was a topographic "bench" part way up the hillside from the shore that extends across the hillside, and that there was a remarkable scattering of medium size boulders and smaller rocks. It looks like the trace of an old shoreline! During that phase of post-glacial history when the land was slowly rising out of the ocean, the uplift was not even. There is evidence along the coast in other places where the uplift of the land was uneven: a pause, if you will, in the uplift of the land giving the sea a chance to cut a beach or bench. Thus, the "OLD SHORELINE TRAIL" was created and named as it may be following an old shoreline!

This OLD SHORELINE TRAIL will also be of much interest to people who enjoy seeing many different ferns and lichens, and forest evolution. See how many different kinds of ferns you notice. Possibilities are Hay-scented Fern, Oak Fern, Marginal Wood Fern, Common Rock Polypody, Crested Fern, Northern Beech Fern. As this is a north facing slope, lichens grow well on the rocks, trees, and ground. Look for Rock Tripe, Reindeer Lichen, and Beard Lichen. There is also an abundance of moss species as well: Haircap Moss, Stair-step Moss, Cushion Moss, Sphagnum Moss to name a few. In June, there are many tiny wildflowers: Foamflower (*Tiarella cordifolia*), Goldthread (*Coptis groenlandica*) along this trail. Near the east end of the trail, you come to a giant old tree with remnants of large branches low on the trunk, a “wolf tree,” that marks the edge of an old sheep meadow. Beyond that there are several spruce trees with double tops, twisted trunks, all sorts of weird shapes and a couple of very mossy glens that often have abundant Twinflower (*Linnaea borealis*) and Starflower (*Trientalis borealis*) in late June. Just before the trail meets the CLIFF TRAIL, you come to a narrow slot in the rocks where ground water collects (and drains) which was named Slot Lake. In the winter the “lake” may overflow spilling a short river of ice down the trail!

The OLD SHORELINE TRAIL is also an excellent place to observe forest evolution. This trail follows roughly the boundary between areas up-slope from the trail that were used for sheep pasturing, and down slope areas that were less disturbed by farming. During the winters of 2001 and 2002, there were two very large winter storms that left a large area of blow-downs. The OLD SHORELINE TRAIL goes along the lower edge of the impacted area which extended up toward the crest of the hill. Whole trails were obliterated and lost in those storms. To help the forest recover, a forester was hired to work on the area nearer the crest of the hill. He brought the leaning trees down to the ground, and cut them into shorter pieces to accelerate decay. Some of the wood was sold as saw-logs and some went to a pulp mill. But given the steepness of the hillside, the lower area of the blow-down along this trail was not touched. You can still see areas of an impenetrable mass of blowdowns, and you can see younger trees trying to grow through the messy woodland in a natural way. On this trail you get a clear sense of nature’s way of healing after large storms. Compare the forest on this trail with the forest along the RIDGE TRAIL higher up the slope if you walk that trail. The forestry work in the area of the RIDGE TRAIL has greatly speeded the recovery of the forest. This is a text-book example of the effect of forestry intervention.

Moving up the RIDGE TRAIL above its junction with the OLD SHORELINE TRAIL, the forest becomes thick as it enters what remains of a mature forest – also impacted by the storms of 2001 and 2002. Before long, it makes a sharp turn near the Preserve boundary as the property beyond is privately owned. The RIDGE TRAIL winds its way up through the woods, passing through a thick grove of hay-scented fern, just before coming to the junction with the BRAYS MOUNTAIN TRAIL. If you continue on the RIDGE TRAIL, it passes through a deep mossy forest of tall trees, before abruptly changing. The change marks the boundary of the area that was devastated by the 2001 and 2002 storms which was subsequently “cleaned up” by foresters. The young forest, mostly firs, is growing up despite the very bouldery terrain. In time, spruces will take over from the firs. Eventually you come back into a predominately spruce forest and to a very large erratic boulder that the campers of the French Camp called, “Council Rock,” as at that time you could easily see Blue Hill from the top. This huge boulder dropped here by the glacier is at the junction with the CLIFF TRAIL which continues upwards over the hill. However, continue along the RIDGE TRAIL, and you find that the old forest has many reindeer lichen covered openings in the forest – almost like rooms. Eventually it ends abruptly at the BRAYS MOUNTAIN TRAIL.

However, let’s go back to the start (west end) of BRAY’S MOUNTAIN TRAIL. After cutting up through the forest, the trail bends sharply left and roughly follows the crest of the ridge leading to the actual “top” of Brays Mountain. You may notice that this is the most bouldery section of the Preserve. It

is along the crest of a ridge and obviously the glacial was “slowed down” by the higher elevation and dropped even more of its load. The rocks come in all sizes and create small, almost magical, openings in the forest. The forest floor is covered with deep moss and lichens. The deer are also particularly fond of these hidden openings. Eventually you come to a “top” which is really not very spectacular and there is no view from the top – but it is the highest point of Brays Mountain. Bray, by the way, is the name of one of the island families that live in this area of Mountainville in Deer Isle. Shortly after crossing this top, the trail intersects with the CLIFF TRAIL. The BRAYS MOUNTAIN TRAIL continues onward through the forest with more of the lichen and moss-covered openings. After passing one of the metal corner pins of the Preserve, a huge old spruce, one of the oldest in the Preserve and it also passes another huge glacial erratic on your right. The erratic is covered with interesting mosses and ferns. At a trail junction just beyond, there is a relatively short spur trail that continues onward to its junction with French Camp Road. This spur trail is used solely by IHT stewards to access trails for maintenance. It is not to be used for public access from French Camp Road.

Continuing on the BRAYS MOUNTAIN TRAIL, you pass through an area also devastated by the 2001 and 2002 storms – huge trees that came down in a dense mess! Cutting the trail was challenging! There are frequent views into an open area of downed trees, but there are also surprising areas of forest with deep moss and ferns. The trail slowly bends around to the north and eventually back toward the west and turns down the hill. However, don’t miss another enormous glacial erratic just off the trail and enjoy the abundant wild flowers that bloom in the spring on this north-facing slope. This area of the forest gradually changes to a largely deciduous forest of oaks, aspen, and birch before it goes back into conifer forest and joins the CLIFF TRAIL.

However, going back up to the “top” of the CLIFF TRAIL where it joins the BRAYS MOUNTAIN TRAIL near the summit of Brays Mountain, following that trail crossing several of the moss and lichen covered openings until you come to COUNCIL ROCK at the junction of the CLIFF TRAIL with the RIDGE TRAIL. However, continuing on down the CLIFF TRAIL through what the French Campers called “Glen Elsa’s Mossy Glen,” (named after the beloved director of the French Camp, Elsa Zelle), the forest is indeed deep and mossy. You will pass the junction with the OLD SHORELINE TRAIL right beside SLOT LAKE. As the hillside becomes particularly steep, the trail cuts across the slope to meet the BRAYS MOUNTAIN TRAIL before continuing down the steep slope and meeting the COVE VIEW TRAIL. Now! you are back where you started! Follow the COVE VIEW TRAIL back to the parking area. Come again soon!