Natural Heritage Hikes

Reid State Park

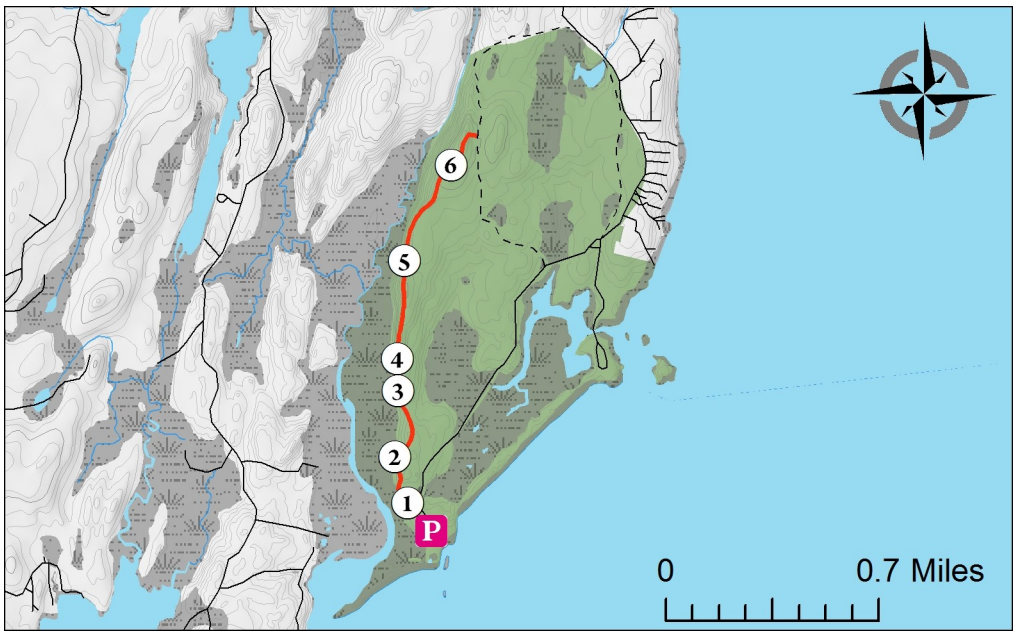
Little River Trail– 2.8 miles, easy

Whether to float in the ocean swells, explore rocky headlands, or catch a glimpse of least terns and piper plovers among the dunes, visitors are drawn to Reid State Park to experience dramatic interactions with the sea. Though the Little River Trail draws visitors away from Reid's dramatic beaches and headlands, the influence of the ocean is also imprinted here. Indeed, the vegetation occurring in the uplands of Reid State Park is largely a product of the millennia of human history, retreating glaciers, and their interaction with the sea.

Getting There

Reid State Park is located on Seguinland Rd. in Georgetown. After entering Reid S.P., stay right and park in the half mile beach parking lot. The trail entrance is located at a picnic area at the back side of the parking lot.

Oak pine woodlands occur on rocky terrain in Maine. However, following the retreat of the continental ice sheet in Maine, this areas was once a wave battered coastal headland.



① **Oak-pine woodland** *–69.735138, 43.776417*

The trail begins among rocky terrain, shaped by a glacial past.

The Little River Trail begins by passing through an oak-pine woodland. This habitat is characterized by the dominant tree species for which the community is named (red oak and white pine), but is shaped by geology— soils in this area are highly eroded and very thin, with trees only growing between spaces in the rock.

Numerous factors contribute to thin topsoil in coastal regions of Maine. While historic clearing, livestock grazing, fire, and intense coastal storms may accelerate erosion, many areas of exposed bedrock and thin soils exist as a result of the interactions between the retreating ice sheet (glacier) and the sea ~14,000 years ago. The weight of the continental ice sheet, which covered Maine with ice over a mile thick at its historic maximum, was great enough to cause the surface of the earth's crust to sink. When the continental ice

Shells on the forest floor, evidence of nature's litterbugs— racoons.

sheet melted, retreating inland from the Maine coast, the sea was as much as 150 feet above present levels, relative to land. Upland areas, such as those along the Little River Trail, became coastal headlands and islands during this period, regularly washed and eroded by intense wave action. Relieved of the weight of the ice sheet, the land mass slowly rebounded over thousands of years and sea level dropped to its present elevation. Geologists call this process 'isostatic rebound'. In low lying areas, fine sediments deposited on the seafloor were now exposed (clay soil), and islands and headlands in areas exposed to wave action were now further from the shore and today exist as exposed and rocky uplands. These processes shape natural communities that occur all along the Little River Trail.

② **Shells on the forest floor** *–69.735973, 43.778599*

Evidence of a seafood snack.

While geologic interactions with the sea characterize the landforms and therefore the large-scale patterns of ecology along this trail, daily species interactions between land and sea are also important for natural systems. A keen observer may find evidence of these interactions including piles of shells discarded in uplands. Many animals, including those not normally associated with the coast, utilize the abundant food sources of the Little River Marsh. Raccoons are known to gather and feed on clams at low tide and deposit shells in the uplands, thus bringing nutrients to upland forests.

Large tree cavities are uncommon in Maine forests, but provide valuable feeding and nesting habitat for a variety of species.

③ **Tree cavity** *–69.735973, 43.778599*

Large hollow trees provide important wildlife habitat.

With the history of land use and forest clearing in southern Maine, trees are modest in size, even aged and relatively young. This can be problematic for cavity nesting species such as flying squirrels, wood ducks, barred owls, and pileated woodpeckers which rely on large dead trees for feeding and nesting. Here is an excellent example of a cavity tree— if you pass carefully and quietly, you may be lucky enough to spot one of the many species that utilize this habitat.

Polypody grows on cliffs, boulders and other rocky habitats.

④ **The ledges** *–69.735893, 43.783255*

Among the spruce and fir, there are also niches for other specialists of rocky terrain.

At the height of the ridge, the forest is dominated by red spruce and balsam fir. The moderating influence of the ocean on climate has benefited red spruce and balsam fir in many areas along the coast. Spruce-fir forest is well adapted to the thin soils that occur along this ridge. While the understory is

Natural pools and channels within the little river salt marsh. A recent study shows that marshes not impacted by ditching may be more resilient to impacts of sea level rise.

Spotted– salamander egg mass, submerged in a vernal pool.

Naturalist's Notes

Pitch pine can be distinguished from Maine's other pine species by its needles which occur in bundles of 3. Needles of white pines occur in bundles of 5, while jack and red pine needles occur in bundles of 2.

Pitch pine branch .

sparse and dominated by tree regeneration, the varied terrain provides niches for certain species with specialized habitat needs. If one dares to peek over the edge of some of the ledges, rock polypody (*Polypodium virginianum*) can be seen growing abundantly. This evergreen fern specializes on rock habitats, including cliffs and boulders.

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⑤ **A tale of two wetlands** *–69.735466, 43.78793*

From a small boardwalk, one can observe a small freshwater wetland at close quarters and the Little River saltmarsh from above.

This vantage point is an excellent place to take in the varied wetland habitats at Reid State Park. Below is the Little River salt marsh, one of the state's few salt marshes to have never been ditched to control surface water. Early colonists ditched and drained east coast salt marshes to enable the harvesting of salt marsh hay (*Spartina patens*) for livestock, and later (during the 20th century) marshes were also ditched for mosquito control. Ditched marshes are relatively homogenous with little animal habitat variety. In contrast, the Little River marsh contains numerous natural salt pannes and pools that provide homes for numerous fish, shellfish, and insect species—important food sources for wading birds. On the east side of the trail is a pocket wetland providing habitat for freshwater species. Pocket wetlands in coastal Maine often provide important breeding habitat for vernal pool dependent species such as wood frogs and spotted salamanders. Search for their egg masses from the boardwalk in early Spring. By late summer, the standing water will have drained and abundant highbush blueberries will be in fruit!

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⑥ **Pitch pine woodland** *–69.732452, 43.792506*

Reid state park supports some of the best examples of a rare, fire adapted natural community.

To determine how the landscape and climate have changed following the retreat of the last glacier in Maine, scientists have depended on analyzing 'cores' of accumulated peat from wetlands to examine pollen, charcoal and other evidence of changing vegetation and climate patterns. Using these techniques, it is understood that spruce and fir were some of the first tree species to colonize the state but were quickly replaced by pines and oaks—for a period between 12,000 and 8,000 years ago pines and oaks were the most common trees in Maine. During this period, warm, dry conditions and a frequency of lightning strike wildfires provided conditions to which pines and oaks were well adapted. It was during this period that Maine's fire adapted species, such as pitch pine, became established and were most abundant. Over the last several thousand years, the climate cooled and wildfire became more

Pitch pine woodland.

infrequent. Today, pitch pine communities persist only on certain dry outcrops or outwash sand barrens. These habitats and the species that specialize upon them are now very rare in Maine. Pitch pine woodlands are characterized by having a sparse canopy of pitch pine with a dense understory of heath shrubs including black huckleberry (*Gaylusaccia baccata*), lowbush blueberry (*Vaccinium angustifolium*), rhodora (*Rhododendron canadense*) and sheep laurel (*Kalmia angustifolia*). Pitch pine woodlands are important habitat for many species of wildlife including several rare butterfly and moth species.

Natural Heritage Hikes is a project of the Maine Natural Areas Program in partnership with the Maine Trail Finder website.

For more Natural Heritage Hikes, please visit www.mainetrailfinder.com.

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Map sources: Maine Office of GIS, Esri