Natural Heritage Hikes

Ferry Beach State Park

Tupelo Trail, Red Oak Trail, White Oak Trail - 1 mile, easy

Most of the world's beaches get their sand from ocean currents running along the shore, but Ferry beach's sand was a special delivery. Approximately 10,000 years ago, the last of the glaciers had just withdrawn its icy fingers from Maine, leaving dirt, sand, and rocks that had been trapped in the ice. The Saco River picked up this debris and dumped it at the river mouth, providing sand for Ferry Beach.

In the damp hollows behind Ferry Beach's Atlantic dunes, an unusual and striking variety of environments await you. The east coast's most extreme tupelo trees tower above four different kinds of wetland, two nemesis plants, a sea monster, and a witch. All of these wonders can be found within an easy one-mile loop.

Getting There

From US Route 1 in Saco, head east on I-195 toward Old Orchard Beach. I-195 becomes ME Route 5. In another 0.8 miles, ME Route 5 bears left, but continue straight onto Temple Avenue and follow Temple Ave 1.2 miles to a blinking stop light at ME Route 9. Turn right on ME Route 9/West Grand Ave, and continue a mile before turning right onto Bayview Road. Continue on Bayview Road 0.3 miles to the park entrance which will be on your left. Follow park entrance road to parking lot. Trails depart from the northern edge of the parking lot; look for a large brown trailhead sign.

① A Tree in a Pocket *-70.387526 43.475825*

to map

The first boardwalk overlooks a Pocket Swamp.

For many people, the term "swamp" conjures eerie visions of a dark, wet forest shrouded in fog. To an ecologist, a "swamp" is a forest in which the soils remain wet or flooded for all or part of the year, providing good footing for specialized wetland plants like cinnamon fern, green sphagnum moss, and Ferry Beach's iconic tupelo tree. Because these plants thrive here, we know that we are standing in a swamp.

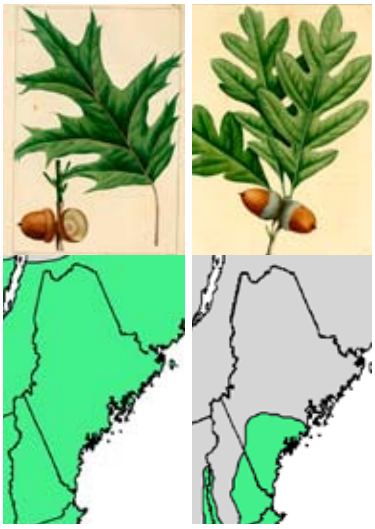
Green sphagnum moss

This type of small swamp, known as a Pocket Swamp, is a rare sight in Maine; it occurs here because of Ferry Beach's unique hydrology. Water travels to the coast via inland streams, but it pools behind dunes that block it from reaching the ocean.

Keep right at the first fork. The forest canopy thins slightly, beaming light onto a robust understory of alder and chokeberry.

Naturalist's Notes

Look for other species typical of Pocket Swamps. Red maple, red oak, white pine, and eastern hemlock preside over a few scattered highbush blueberry, wild raisin, and goldthread.



Northern red oak's range (L) vs. white oak's range (R) in Maine

② Where North Meets South *-70.387052 43.476991*

to map

The second boardwalk deposits hikers on a sandy mound running parallel to Long Pond.

The vegetation of this oak forest scarcely conceals the secret of this pile of sand; it was dredged from the bottom of nearby Long Pond in the 1960's to make the pond deeper. Because water flows easily through sand, this raised mound is especially dry, providing good footing for oaks and bracken fern.

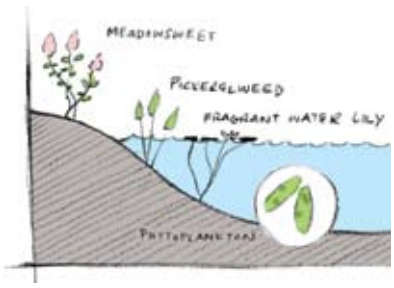
Find a northern red oak leaf and a white oak leaf (pictured to the left) and compare them. The most obvious difference is that the lobes of the red oak leaf are pointed, while the lobes of the white oak leaf are rounded. These species have overlapping ranges; both oak species are more frequently found in warmer climates, but northern red oak is better adapted to Maine's cold weather than is white oak, which can't survive much farther north than Ferry Beach. White oaks can be found as far south as the Florida panhandle!

③ Wet Feet, Dry Feet *-70.386927, 43.4777*

to map

A picnic table nestled in a low spot offers a great view of Long Pond.

From the picnic table, observe the gradient of plant species in and around Long Pond; each is adapted to live at a unique water depth. The shore is lined with high-bush blueberry, meadowsweet, and other woody plants that can tolerate spring flooding but grow best if they are above the waterline. In the shallows, triangular tongues of pickerelweed jut out of the water. This stiff, emergent plant with lavender flowers is rooted in the pond floor and has no floating parts. In deeper water, the leaves of fragrant water lily float on the surface of the water; long stems tether them to their roots in the substrate far below. In the deepest parts of the pond, only submerged aquatic plants and rootless photosynthetic organisms, like phytoplankton, are able to thrive.



Long Pond plant gradient
Illustraton by Kelly Finan

④ The Toughest Tupelos *-70.387448, 43.477802*

to map

Around the corner, another boardwalk leads hikers into the famous tupelo swamp.

If tupelos were humans, this stand of tupelos (black gum trees) would be the Sherpa people who live on the flanks of Mount Everest. In other words, these tupelos are living in the coldest part of their range. Any farther north, they would not survive. Tupelo is an extremely rare tree in Maine, where seasonal low temperatures confine it to the southern end of the state. Drive south, and you will find tupelo in greater abundance until you reach the Gulf of Mexico. Tupelos are easily identified by thick, blocky bark resembling alligator hide and branches that grow horizontally without drooping or pointing upward .

Tupelo bark and leaves

Naturalist's Notes

Tupelo trees are among the longest-lived deciduous (broadleaved) trees in North America. One tupelo found in a swamp in New Hampshire was nearly 700 years old.

Across the boardwalk from the tupelo swamp, trees and large shrubs give way to a small fen, a type of wetland that is groundwater-fed and characterized by sphagnum moss and sedges atop partially decomposed plant bits. In late summer, white tufts of cottongrass seem to float above the fen, resembling plants from a Dr. Seuss book. They are a good indicator of a spongy, waterlogged site.

The ground rises to meet the descending boardwalk and the trail curves into an upland forest. When the trail splits, keep right on the Tupelo Trail. Cross the bridge to remain on the

Jewelweed flower

Tupelo Trail.

⑤ Chemical Warfare among Plants *-70.389250 43.478619*

to map

The trail crosses a bridge overlooking a streambed.

Like the wetlands in Ferry Beach State Park, the water level in the stream peaks in spring when snow is melting. By mid-summer, this stream is reduced to a slow trickle in an oversized, sandy streambed. This is a great place to look for two plants: one harmful and one helpful.

Rivaling poison ivy, wood nettle is one of the most dreaded plants in the woods, sometimes covering bare legs of hikers in small, painful welts. Brushing against nettle breaks its tiny vial-like hairs, each one injecting a tiny dose of stinging chemicals. This unique adaptation protects the plant from being eaten by hungry forest animals.

Should you brush against a nettle, jewelweed is waiting to help, recognizable in summer and fall by its orange or yellow flowers. It contains a chemical that helps combat bee stings, insect bites, and of course, nettle rashes.

⑥ Stories from Stumps *-70.388944 43.47888*

to map

Across the bridge, stumps whisper that the forest has been logged.

Many hardwood trees are able to regenerate from only a stump. After a red maple is cut, it sends up a cluster of new shoots. Over many years, the shoots grow into a tight cluster of trees that share a root system .

Look for multi-trunked trees along this stretch of the trail. A particularly good example grows directly next to the trail about 30 feet before the next junction.

At 0.4 miles, turn left at the T to start the Red Oak Trail.

⑦ Sea Monsters and Witches *-70.387991 43.479599*

to map

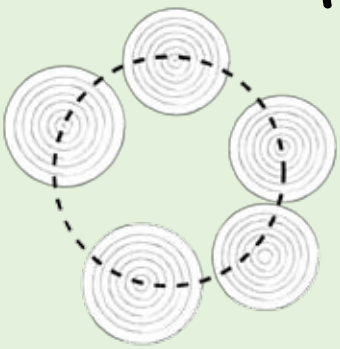
Follow the Red Oak Trail.

They reach up from the forest floor like the tiny tentacles of bright orange sea monsters. They are yellow spindle coral mushrooms and you can sometimes find them here in late summer. Like most mushrooms, their growth is mainly underground but when conditions are right, they develop these garish orange structures to reproduce.

Above the monsters, an exploding witch is poised in the understory. When most other plants are getting ready to drop their leaves in fall, witch hazel's flowers are blooming with skinny yellow petals that resemble the contents of a used party popper. As the flowers are slowly opening, seeds burst from last year's seedpods, soaring like tiny bullets across the forest.

At 0.55 miles, turn left to take the White Oak Trail into the shadiest section of the loop.

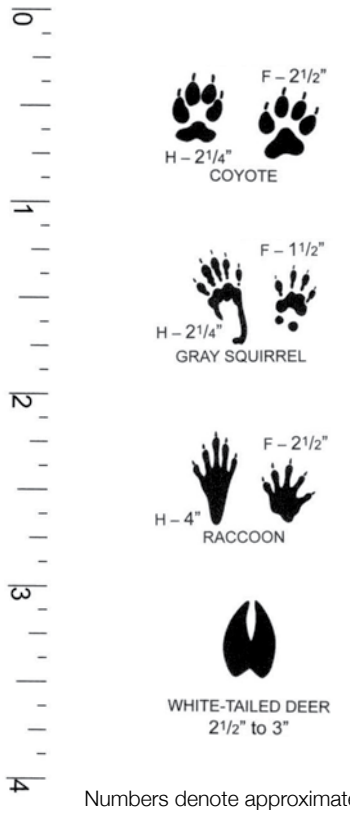
Naturalist's Notes



To estimate the size of the original tree, make an imaginary circle that connects the centers of all of the new trunks at their bases.

Coral mushrooms

Witch hazel flower



Numbers denote approximate length of footprint in inches.
F = Front, H = Hind.
Track images courtesy of the MDIFW.

⑧ The Forest's Most Patient Tree *-70.389960 43.479949*

to map

Follow the White Oak Trail through a hemlock forest.

This even-aged stand of eastern hemlock blocks light so successfully that hardly any plants can grow beneath it, save a few partridgeberry and sarsaparilla. This is a strategy for the patient hemlock, the most shade-tolerant tree in northern New England. It grows slowly in the understory of a hardwood forest until it reaches the canopy. Here, it can smother young hardwoods by depriving them of light.

⑨ Trail Tails *-70.390215, 43.478759*

to map

At 0.65 miles, another bridge crosses a stream channel.

When the water is low, the sandy streambed is a great place to look for animal tracks. Raccoons, white-tailed deer, chipmunks, coyotes, and gray squirrels are likely visitors to this stream. Many mammals use streams as a source of drinking water and as a highway for traveling in the woods; look for tracks that parallel the streambed as well as tracks that cross it.

At the trail junction shortly after the stream, continue straight to remain on the White Oak Trail.

⑩ Nurse Logs *-70.389000 43.476951*

to map

For the last 0.3 miles, the hemlock forest grades slowly back into a hardwood-dominated Pocket Swamp.

In this final stretch of the walk, watch for unusual trees that appear to grow atop short stilts.

Birch that germinated atop a nurse log

These trees, often hemlock or birch, had germinated atop fallen "nurse logs" or stumps of other fallen trees whose moss or decomposing wood provided an inviting, wet environment for germination. As years pass, the stump or log decomposed, leaving strange-looking gaps beneath the root systems of these trees.

Remain straight on the White Oak Trail here; it will return you to the parking lot.

Naturalist's Glossary

Canopy: The highest layer of branches in the forest.
Decomposer: Organisms (like worms, bacteria, or fungi) that break down a dead organism (like a stump).
Hydrology: The movement and distribution of water.
Range: The geographical distribution of an organism.
Understory: The layer of vegetation that grows between the ground and the highest layer of tree branches in a forest.

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.

Funding for this project was provided by the Maine Outdoor Heritage Fund (MOHF) and the Recreational Trails Program (RTP), an assistance program of the U.S. Department of Transportation's Federal Highway Administration administered by the Maine Bureau of Parks and Lands.

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Map sources: Maine Office of GIS, Esri