

## BORESTONE MOUNTAIN

Fox Pen Loop Trail, Summit Trail - 2 miles round trip, moderate

*Between the birdsongs and Borestone Mountain's remarkable, peaceful silence, the landscape whispers of Robert Thomas Moore, an amateur ornithologist who bought a swath of mangled, clear cut land over a century ago to establish a fox farm and a fish hatchery. Moore knew that he would not see the reward of his long-term plan—thousands of acres of recovered, mature forest—during his lifetime; such foresight was unheard of in 1908 and was still revolutionary mid-century when Moore willed Borestone Mountain to the National Audubon Society. An oasis of 120-year-old mature forest surrounded by active timber harvesting, Borestone Mountain is now conserved, critical wildlife habitat thanks to this generosity.*

### Getting There

Head north out of Monson on ME Route 15/6. Bear right on to Elliottsville Road and continue for 7.6 miles. Immediately after a bridge crossing Wilson Stream, turn left up a hill on Mountain Road (there should be a sign at the turn for Borestone Mountain). 0.6 miles later, cross railroad tracks and continue for another 0.1 miles. The parking lot will be on the left side of the road and the gate to Borestone will be on the right.

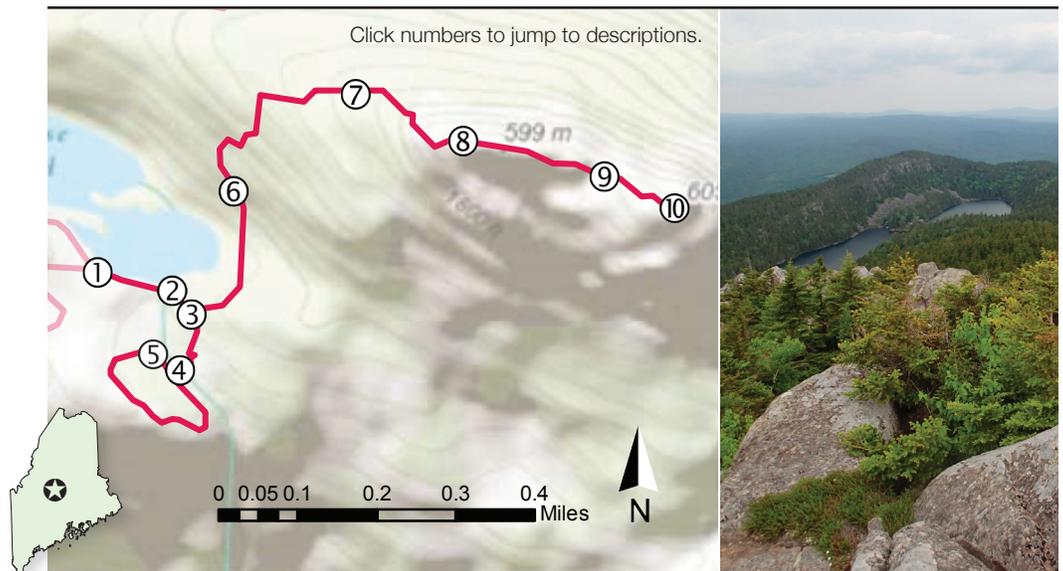
Walk up the access road beyond the gate for about a mile to reach Sunrise Pond, where the Summit Trail begins. For a more scenic route to the Summit Trailhead, you can turn left just beyond the gate and hike the Base Trail until it rejoins the access road 0.2 miles below Sunrise Pond.



Chalk-fronted corporal dragonfly



Ebony jewelwing damselfly  
Image by D. Gordon E. Robertson,  
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#### ① Damsels and Dragons -69.414634, 45.376380 [to map](#)

Beyond the [white pines](#) on the eastern edge of Sunrise Pond, the northern summit of Borestone Mountain is an inviting sight. But before you begin the Summit Trail, pause for a moment at the dock. In early summer, it is swarming with dragonflies and damselflies in the peak of their breeding season, safe from aquatic predators because this pond is uniquely fishless.

Unlike bees, flies, and beetles, dragonflies and damselflies are part of an “ancient” group of winged insects (Odonata) that never developed wings that fold flat against their backs. However, unlike bees, flies, and beetles that must move their wings in pairs, dragonflies and damselflies have the ability to move each of their four wings independently, making them incredible aerial acrobats. Dragonflies can be distinguished from damselflies by the way they position their wings when they land; the wings of dragonflies remain straight out to their sides, while the wings of damselflies, usually more delicate, are held together above their slender bodies.

Check the edges of the dock for an incredible transformation act; you might find dragonflies that are morphing from the aquatic nymph stage to the adult flying stage right before your eyes! First, the [nymphs](#), looking more like flattened crick-

ets than dragonflies, crawl out of the water to position themselves on the dock or a nearby plant stem. Over the course of several minutes, an adult dragonfly will emerge through a split in the back (thorax) of the nymph. The adult emerges head first, and in a backbend-like maneuver, it leans backwards until it has almost fully emerged. At the last moment, it leans forward and grasps the empty nymph “skin” with its legs, and pulls out the rest of its long, skinny abdomen. Newly emerged individuals must wait quietly for their brand new, glistening wings to dry before they can fly, a process that can last for hours depending on the weather. The dry empty “skin” of the nymph, called an exuvia, often remains attached to the dock or pondside vegetation long after the adult dragonfly has emerged.



Beaver-chewed cedar



Bullfrog

## Naturalist's Notes



People began classifying plants and animals centuries ago, organizing them into groups based on how closely related they are to each other. Only recently have we started applying this science of classification to habitats, or what ecologists call natural communities. Natural communities are assemblages of organisms that share a common environment, and that recur across the landscape. Some natural communities, like this Northern Hardwoods Forest, are common and widespread in Maine, while other natural communities, like Pitch Pine - Heath Barrens or Subalpine Meadows are rare.

### ② **Borestone's Furry Architects** -69.413415, 45.376103

to map

*The Summit Trail, blazed with green triangles, skirts the edge of Sunrise Pond and crosses the outlet on a wide plank about 100 yards after the trailhead.*

It cuts down trees to build its empire. It's the torment of landowners and the muse of naturalists. It's America's largest rodent, the beaver, and it's working hard to ensure that Sunrise Pond suits its needs.

Beavers have evolved to modify their own habitats; they work at night carrying mud, stones, and sticks to dam up streams and ponds to guarantee their food and safety. Clumsy on land, beavers may be relatively easy meals for coyote, fisher, and bobcat. In the water, they are completely safe. Beavers progressively increase the size of their dams to widen their ponds, shortening the distance they must travel over land to find their favorite winter food: hardwood tree bark.

Beavers prefer to eat the bark of hardwood trees, like poplar, alder, and ash, over soft-wood trees, like pine and spruce. As they deplete the supply of hardwood bark in an area, widening their ponds can bring them closer to more. Look for beaver-chewed sticks blocking the outlet of Sunrise Pond. If you look northeast across the pond from here, you may spot the beaver's dome-shaped lodge, made of mud and sticks at the base of a leaning white pine. On the Fox Pen Loop Trail, later, you may spot fallen [white ash](#) stripped of bark by beavers for food.

In addition to beaver sign, look here for green frogs, bullfrogs, [kingfishers](#), and [pileated woodpeckers](#).

*After you cross the outlet, the trail leaves the edge of the pond for a [Lower-elevation Spruce - Fir Forest](#) . Turn right onto the Fox Pen Loop Trail .*

### ④ **Wanted, Dead or Alive** -69.413168, 45.375049

to map

*60 yards after the junction with the Summit Trail, a [Sweetgale Fen](#) makes a dramatic appearance on the other side of a rocky ridge. Stop in the middle of the boardwalk.*

Water leaving Sunrise Pond makes a brief stop at R.T. Moore's fish hatchery, not visible from the trail, before it trickles ever-so-slowly into this Sweetgale Fen. Sweetgale is a densely growing wetland shrub easily identified by its teardrop-shaped leaves, narrow at the base and toothed near the tip, which have a sweet smell when crinkled. Both Europeans and North American natives have been using sweetgale as an in-



Sweetgale



Black-backed woodpecker  
Illustration by Kelly Finan



Red fox  
Image courtesy of Dave Small, photosbychance

sect repellent for many centuries by infusing it in water or hanging whole branches nearby.

To you, this fen may be attractive as an unexpected open view in the midst of a dense forest, and as an opportunity to see wildlife. For the birds, the appeal is dense shrubs and snags, and the proximity to open water.

In the right circumstances, dead trees are just as valuable to wildlife as live trees. Snags, or standing dead trees, offer food, perching, and nesting opportunities for birds in this fen. **Black-backed woodpeckers** remove the bark from snags in small flakes while searching for their favorite food, beetle larvae. **Black-capped chickadees** nest in cavities that they excavate or enlarge after another species has left.

*After the first fen crossing, turn right at the “Loop” sign, cross a green carpet of sphagnum moss, and enter the forest on the other side.*

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⑤ **Foxes in Boxes** -69.414287, 45.375242

to map

*Enter the forest on the north side of the fen.*

More than any other place on this walk, this patch of forest is reminiscent of the 1920s and 1930s, when R.T. Moore walked these woods tending to his fish hatchery and fox pens. The hatchery is hidden just beyond two massive, beaver-felled ash trees to the right of the trail, and the fox pens are visible around the corner. As the founder of the Borestone Fox Farm Company, R.T. Moore bred silver foxes. Silver foxes are a special variety of red foxes often bred for the darker coloration of their fur. Today, you are far more likely to see a typical red version of this fox species trotting wild through these woods.

But Borestone Mountain wasn't just a business venture for Moore. Despite his father accusing him of having purchased a “wasteland,” Moore built his family home here. Known as “The Woodpeckers,” it was constructed in 1909 on Midday Lake, almost entirely from trees that had fallen naturally. Today, groups looking for a summertime escape to this peaceful place can rent the lodge.

*0.2 miles after the last junction, a short spur trail leads to an overlook offering an incredible view of Greenwood Pond. At the end of the loop, turn right to cross the fen again and return to the Summit Trail. Turn right and follow the green blazes to continue toward the summit.*

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⑥ **A Forest for the Birds**

to map

*Hardwood trees mingle with softwood trees as the Summit Trail begins to ascend.*

Before the trail begins to climb, examine the Lower-elevation Spruce – Fir Forest around you. This site is relatively flat and sheltered from harsh winds that could blow down large trees, so the **red spruces** in the canopy create a shady forest floor. Make a note of this forest's structure; the trees vary widely in size from large elders to small saplings and seedlings, and represent nearly every size, and age, in between. A mixed-age stand is a good sign that the forest is approaching maturity, as this one, last cut in the 1880s, certainly is. The variety of tree sizes and years of accumulating debris on the forest floor provide birds with a selection of nesting habitats, and are just a couple of the characteristics that make mature forests so valuable. Look and listen here for



Blackburnian warbler male (top) and female (bottom)

### Naturalist's Notes

Boreal counterparts are similar to species found in warmer (temperate) climates but with differences that make them better adapted for the cold. Other examples include gray jays (blue jay's boreal counterpart) and boreal chickadees (black-capped chickadee's boreal counterpart).



Spruce grouse  
Image courtesy of Dave Small, photosbychance



White-throated sparrow



Wild raisin

blackpoll warblers, blackburnian warblers, and spruce grouse, a boreal counterpart of ruffed grouse .

### ⑦ **Waiting for the Sun** -69.409830, 45.378742

 to map

0.4 miles into the Summit Trail, several fallen logs have been cut to accommodate the trail. Young birch, spruce, and fir form a thicket on both sides of the trail.

If you peer through this thicket, you can catch glimpses of the surrounding mountains on either side of the ridge. Trees that grow on this narrow ridge are vulnerable to damage or toppling from strong winds, especially in the spring when the ground is thawing.

Eager to inherit the new patch of light, broadleaved yellow birches were the first trees on this scene after the wind event. The lightweight yellow birch seeds can travel long distances in the wind and contain a special chemical that prevents them from germinating unless they are exposed to sunlight from a gap in the canopy. More tolerant of shade, red spruce and balsam fir, both evergreens, grow in the shadow of the yellow birches. Eventually, the spruce and fir will reach the canopy of this forest, and their shade will prevent birches from germinating here until there is another disturbance.

Listen here for the ascending, flute-like call of the Swainson's thrush.

*The trail swings left to follow the easiest route up an outcrop. From here to the first summit, look for metal steps and railings drilled into the rock.*

### ⑧ **Bald is Beautiful** -69.407797, 45.378127

 to map

Stop on the first summit, a Mid-elevation Bald surrounded by flag trees.

From the first summit, Sunrise, Midday, and Sunset Ponds are all clearly visible. Look closely and you can see the boathouse and R.T. Moore's former family lodge nestled between Sunrise and Midday Ponds. In the summer, look for turkey vultures riding the rising currents of air beside the mountain. It's easy to tell a turkey vulture from other large soaring birds; turkey vultures hold their wings in a slight V-shape when they soar, while other soaring birds hold their wings relatively flat. September is an excellent time to view peregrine falcons here as they migrate south.

If you can peel your eyes away from the incredible view, take a moment to admire the unique vegetation here. Bent and broken by the snowy, icy winds of winter, the spruce trees that surround the summit are stunted versions of the taller, healthier trees that you passed downslope. Horizontal branches are unable to grow into the periodically harsh summit winds, producing lopsided trees with limbs only on the leeward (downwind) side. Flag trees, like these, are commonly seen in mountain areas with the greatest wind exposure. Heart-leaved birch, wild raisin, sheep laurel, and mountain holly grow among the spruce, above patches of blueberry and alpine bilberry. Three-toothed cinquefoil, with its tiny, five-parted white flowers and three-parted leaves, is tucked into crevices on and near the trail. Together, these plants represent a Mid-elevation Bald, an uncommon natural community in Maine. Listen here for white-throated sparrow, with its "old sam peabody peabody peabody" call, and the soft trilling of the dark-eyed junco.



Sheep laurel



Mountain holly



Alpine bilberry



Wood thrush  
Image ©Ron Logan, all rights reserved



Ovenbird  
Image ©Ron Logan, all rights reserved

### ⑨ **The Forest of Eternal Youth** -69.405100, 45.377605

[to map](#)

*Descend into the saddle between the two peaks.*

Imagine a forest that has never been logged. Most people, when they picture an old forest, think of the wildly tall sequoias of the west coast or of a forest filled with trunks so thick that they are impossible for one person to embrace. This ordinary-looking forest between the two peaks of Borestone Mountain, however, may have been untouched by loggers, even when Moore purchased the property in 1908. Steep slopes on all sides of this notch, or saddle, make it extremely difficult to access, let alone harvest for timber.

But where are the big trees? While its location atop Borestone Mountain protects this site from logging, the trees here are exposed to strong winds that sometimes carry snow and ice. When these trees grow large enough to break rank with their neighbors, they are blown down, leaving a gap to be filled by younger trees. The result is a perpetually young-looking forest.

### ⑩ **Borestone: The Great Oasis** -69.403656, 45.377256

[to map](#)

*Stop on the second summit.*

Look for signs of human activity on the surrounding hills. Timber harvesting is the most conspicuous here in the North Woods; the landscape is a patchwork of clear cuts, the striped pattern of more selective harvests, and darker regenerating spruce forest.

When sustainable practices are used, timber harvesting can benefit birds and certain wildlife in a region. Even clear cutting, sometimes regarded as ugly or environmentally unsound, provides shrubby “early successional” habitat essential to the breeding of certain bird species like [brown thrasher](#), [eastern towhee](#), and [field sparrow](#). As the area continues to recover, it slowly transitions into a young, even-aged forest and eventually into a mature forest.

The problem is, many bird species, like [ovenbird](#), [wood thrush](#), and [rose-breasted grosbeak](#) need mature forest to survive and reproduce. With its well-developed understory, its ground covered in logs, sticks, needles, and leaves, and its high, robust canopy, the forest found within Borestone Mountain Audubon Sanctuary is a safe place for these forest interior birds to forage for food, build nests, and begin new generations.

*Follow the Summit Trail to return to the trailhead at Sunrise Pond.* To explore and share more of Maine’s extraordinary natural features, be sure to check out the other Natural Heritage Hikes covering dozens of trails from the coast to the western mountains.

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## Naturalist's Glossary

**Nymph:** The immature form of some invertebrates (animals without backbones), including dragonflies and damselflies, which must undergo stages of metamorphosis to reach the adult form.

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*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](http://www.mainetrailfinder.com).*

*Designed and written by Kelly Finan*

Map sources: Esri, DeLorme, HERE, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community