

U.S. Fish & Wildlife Service

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U.S. Fish & Wildlife Service  
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<http://www.fws.gov>

March 2017



# Umbagog

*National  
Wildlife Refuge*



*An essential link in the network of conserved lands in the Northern Forest, Umbagog National Wildlife Refuge manages wildlife habitat in a place where forest types, lakes, rivers and wetland systems meet .*

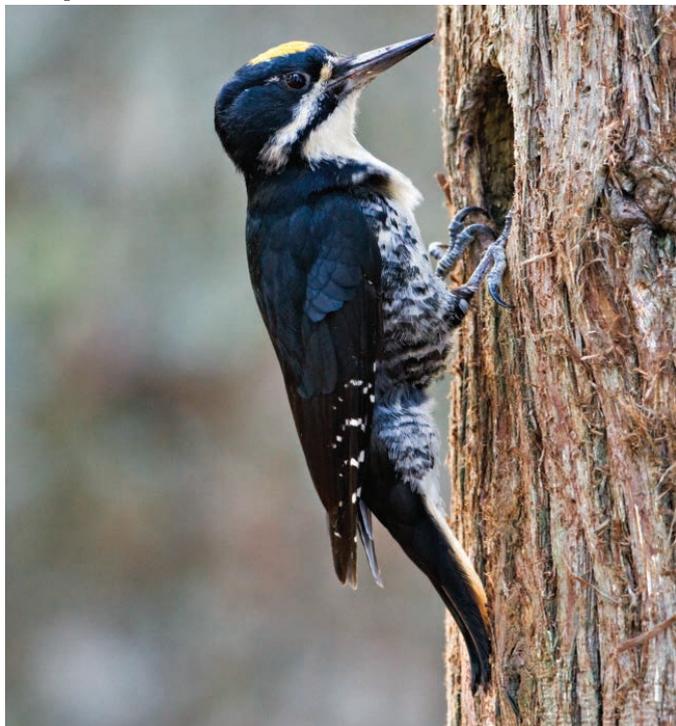
## Welcome



This blue goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Umbagog National Wildlife Refuge (NWR) was established in 1992 as a result of a long-term cooperative effort between the states of New Hampshire and Maine, conservation organizations, timber companies, and the United States Fish and Wildlife Service. The refuge is located on the border of New Hampshire and Maine, in the 26-million acre region known as the Northern Forest. It was established to conserve and manage high-quality wetland and upland habitats essential to the success of migratory birds, species of special conservation concern, and rare plant communities. There are over 200 species of birds found on Umbagog NWR with approximately 100 species breeding here. The refuge includes one of the largest inland freshwater wetland complexes in northern New England, as well as important surrounding upland forest habitat.

*Black-backed woodpecker*



Mary Konchar

Umbagog NWR is one of more than 560 wildlife refuges managed by the United States Fish and Wildlife Service. Wildlife refuges have the primary purpose of conserving, protecting, and managing wildlife and wildlife habitat. Umbagog NWR is an important part of the National Wildlife Refuge System because of its varied habitat and location at the transition zone between the southern deciduous forests and northern coniferous forests.

## Human History of the Umbagog Region

This region has been continuously inhabited by humans for over 11,000 years. The Anasagunticooks, an Abenaki Native American tribe, lived in the Umbagog area on the Androskoggin River. These Native Americans relied on the waterways for transportation and food, and hunted and lived in the river valleys.

When the early European settlers arrived, they harvested timber and built dams to transport logs to mills farther south. The logging camps supplied materials for the development of this country's building and paper industries. Prior to the refuge, much of this land was privately owned by large paper companies. The stewardship of these large paper companies resulted in the Umbagog Lake region's relatively pristine condition, which the refuge now conserves.

## A Variety of Habitat Types

Although it is hard to believe, the Umbagog region was once covered by a glacier that was one-mile thick. As the glacier retreated, it shaped the land into the rugged hills and valleys you see today. Weathering and erosion created soil that enabled plants and animals to re-populate the land over thousands of years.

Umbagog (pronounced Um-BAY-gog) is an Abenaki word for "clear water." When a dam was built on



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### *Umbagog National Wildlife Refuge*

the Androscoggin River upstream of Errol in 1853, the size of Umbagog Lake increased significantly. Today, Umbagog Lake is nearly 8 miles long and covers over 8,000 acres, with an average depth of only 15 feet.

There are many habitat types on the refuge, including forested wetlands, such as northern white cedar and black spruce swamps, bogs, and scrub shrub and sedge wetlands. Uplands are primarily covered by spruce-fir, mixed wood, and northern hardwood forest. Floating Island, a large peatland bog complex, was designated a National Natural Landmark in 1972 in recognition of the floating bog mat that provides habitat for wildlife and supports rare plant communities.

The refuge is home to pristine northern white cedar swamp communities with trees ranging from 120 to 200 years in age. The northern white cedar is a boreal species that primarily occurs farther north of Umbagog NWR, but

extends into the northern part of New Hampshire and Maine. The white cedar swamps at Umbagog NWR provide habitat for northern bird species such as boreal chickadee, gray jay, and spruce grouse, as well as mammals like moose and white-tailed deer that find cover and food within the refuge boundaries.

The refuge also contains red and silver maple floodplain forests. Unlike northern white cedar swamps, maple floodplain forests reach their northern-most extent on Umbagog NWR, where this habitat type can be found along the Magalloway River. Floodplain forests are created and maintained by the natural flooding cycle of the river. Moose, beaver, great blue heron, kingfisher, osprey, bald eagle, and several species of waterfowl may be found in this habitat.

Jack pine, another northern tree species more typically found at high elevations in New Hampshire, can be found occurring at low elevations as individual trees or in small groups along the shoreline of Umbagog Lake.

### **Management**

Refuge staff engage in research and monitoring to manage the wildlife and habitat within the refuge. Biologists monitor marshbirds, songbirds and other species. Active habitat management occurs primarily in upland forested areas where commercial timber management techniques are used to rehabilitate and maintain habitat for migratory songbirds and wintering white-tailed deer. These areas are managed to sustain critical habitat over time. Other areas are specially designated for woodcock management and are harvested on a forty-year rotation to provide nesting, display and feeding areas for this declining migratory bird species.

## Wildlife

The habitats that are in and around Umbagog Lake are ideal for a wide variety of waterfowl, birds, and mammals.

### *Water Birds*

The open water and shorelines of Umbagog Lake offer high-quality habitat for breeding common loons, which are frequently found on the lake. In addition, waterfowl such as black duck, ring-necked duck, common goldeneye, wood duck, common merganser, and hooded merganser, as well as blue-winged teal, green-winged teal, and mallard, can all be found in the wetlands and marshes around Umbagog Lake. Good places to observe ducks are in the backwaters of the Magalloway and Androscoggin rivers, as well as in the coves and marshes around the north end of the lake.

### *Common goldeneye*



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### *Marsh and wading birds*

The Virginia rail, American bittern and Sora are marsh birds that commonly breed on the refuge. Pied-bill grebes and great blue herons can also be seen as they occasionally breed on the refuge.

### *Shorebirds*

Shorebirds congregate on the margins of wetlands and lakeshore mud flats during migration in late spring and early fall. Shorebirds that breed on the refuge include spotted sandpiper, common snipe, and American woodcock. Common migrants that use the refuge for

resting and feeding include greater yellowlegs and solitary and semi-palmated sandpipers. William Brewster, an ornithologist in the Umbagog area from 1871 to 1909, observed autumn days in which shorebirds “rose in clouds like swarming flies whenever a gun was fired” (Brewster as quoted in Quinn & Richards).

### *Osprey*



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### *Bald eagles, Osprey, and other birds*

Since 1989, bald eagles have made a strong comeback in the Umbagog area. The last nesting site for bald eagles before they were extirpated from New Hampshire in the late 1940's was on a white pine tree on an island in Leonard Pond. When they returned to New Hampshire after an absence of forty years, they nested in that very same tree. Today, several nests can be found on the refuge. Osprey are also commonly observed throughout the refuge, often nesting on the tops of dead white pine trees. Peregrine falcons, merlin, and golden eagles may occasionally be sighted. The boreal peatlands and spruce-fir habitats of Umbagog NWR provide habitat for many birds that are rare elsewhere in NH such as the gray jay, spruce grouse, black-backed woodpecker, boreal chickadee and palm warbler.

### *Mammals*

Mammals that may be seen on the refuge include moose, white-tailed

deer, and beavers. Carnivores such as black bear, eastern coyote, red fox, fisher, marten, and river otter also live on the refuge and may be seen from time to time.

### *Amphibians*

The refuge supports a healthy population of vernal pool, pond and stream amphibians. Multiple species of salamander may be found, such as spotted, blue-spotted, dusky, and northern redback salamanders. Red-spotted newts may also be found. Wood frog, spring peeper, American toad, mink frog and leopard frog choruses can be heard in refuge wetlands in the spring and early summer.

### **Wildlife Calendar** *January-March*

Birds that breed farther north are wintering here, such as snow buntings, tree sparrows, and pine grosbeaks. Red and white-winged cross-bills are commonly seen on the refuge. In March, bald eagles begin building nests near the tops of tall white pine trees. Owls are also busy nesting. Moose, white-tailed deer, fisher, and marten can be found in the refuge forests where they spend the winter. Moose and white-tailed deer shed their antlers. Small mammals are active under the snow.

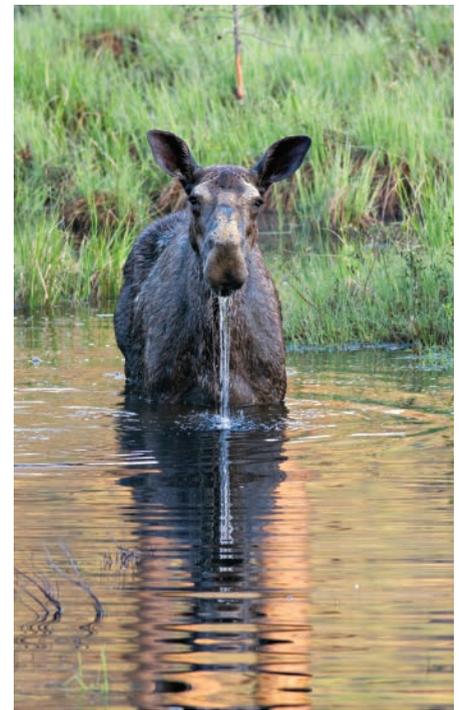
### *April-Early May*

Migratory birds come to the refuge. In April, woodcock return to the Umbagog area from the southeastern states and begin their courtship rituals. After the ice melts, loons return to Umbagog Lake and begin to call. Bald eagles lay their eggs in April, which hatch in May. Osprey return to their nesting sites

### *Common loon eating crayfish*



Derrick Z. Jackson/The Boston Globe



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### *Moose taking a drink*

and lay eggs. Wood frogs and spring peepers begin to call. Spotted and blue-spotted salamanders lay their eggs in vernal pools. Moose give birth to their calves. Snowshoe hares and weasels, which turn white in winter, begin to turn brown again over a period of ten weeks.

### *Late May-August*

Breeding songbirds set up their territories. Ring-necked ducks nest in June on the marsh edge. From July through October, shorebirds start to migrate south through the refuge. Most loon eggs hatch in July, and chicks can be seen with their parents. Bald eagle young fledge during the first two weeks of August. White-tailed deer and moose antlers are covered in velvet as they grow.

### *September- December*

Loons migrate to coastal New England for the winter. Waterfowl, warblers, and hawks head south for the winter. Sea ducks migrate

through the refuge on their way south. Moose and white-tailed deer shed the velvet on their antlers and mating season or rut is in full swing. Black bears gorge themselves to put on enough fat reserves to see themselves through the long winter. Bald eagles overwinter in the area wherever there is open water and carrion available. Snowshoe hares and weasels begin to turn white in mid-October. In November and December, black bear go into hibernation.

### **Enjoying the Refuge**

#### *Headquarters:*

The headquarters office is located at 2756 Dam Road on NH Route 16, 5.5 miles north of Errol, NH. Office hours are Monday-Friday, 9:00 a.m. to 4:00 p.m. with limited weekend hours in the summer.

#### *Hunting and*

#### *Fishing:*

#### *Camping:*

Visitors must follow New Hampshire, Maine, and refuge regulations. Waterfowl hunting blinds are available by reservation. Please contact refuge headquarters at 603/482 3415 for more information or visit [www.fws.gov/northeast/lakeumbagog](http://www.fws.gov/northeast/lakeumbagog).

Camping is by reservation only. Campsites are managed by the State of New Hampshire. For refuge campsite information or reservations contact the State of New Hampshire at [www.reserveamerica.com](http://www.reserveamerica.com) or at Umbagog Lake State Park 603/482 7795. For off-refuge camping, contact the Umbagog Area Chamber of Commerce.

#### *Harper's Meadow*





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*Pitcher plant*

*Hiking Trails and  
Wildlife Viewing  
Areas*

The entire refuge is open to explore and view wildlife by hiking. For visitors who prefer trails, the 1.5 mile Magalloway River Trail winds through a spruce fir lowland and leads to an observation blind overlooking the blackwaters of the river; and the main access trail is handicap-accessible. The 1.6 mile Roost Trail leads up to a ledge overlooking the Magalloway River, Umbagog Lake and surrounding mountains. Wildlife viewing areas exist at the Steamer Diamond boat launch and Bear Brook. Plans exist for future hiking opportunities, for more information on trails within the refuge please call or stop by the refuge headquarters.

*Refuge Office  
In Winter*



USFWS

*Wildlife  
Observation and  
Photography*

You are welcome to observe and photograph wildlife on the lake or on refuge land. Many animals are most active at dawn or dusk. The refuge has several blinds available for wildlife observation and photography.

**Guidelines for  
Enjoying the  
Refuge**

- Please keep your distance from wildlife; it is better for you and them! Binoculars can bring wildlife closer without disturbing them. Coming too close to animals, especially young animals, may cause them undue stress and jeopardize their chances of survival.
- Learn about the invasive species that can travel on your boat. By stopping the spread of these pests, you can keep lakes clean.
- Avoid using lead sinkers when fishing. They can contaminate the waters and lead to the death of loons and fish-eating birds.
- Consider how your children might like to use the land here. Try to ensure that these wonderful resources of fish, forest, and wildlife remain for them.
- Please do not feed the wildlife.

*Ring-necked ducks*



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