

U.S. Fish & Wildlife Service

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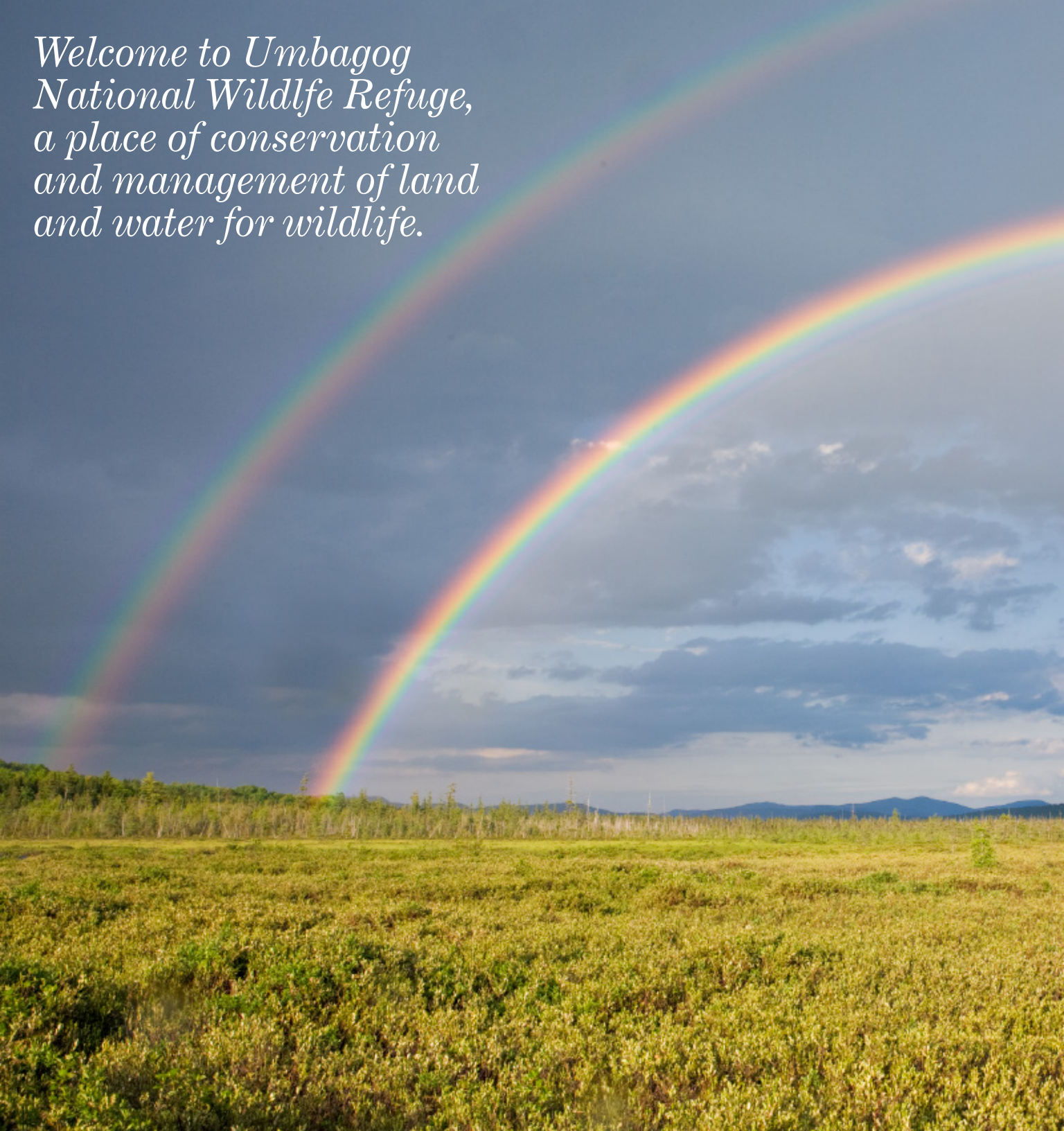


Umbagog

*National
Wildlife Refuge*



*Welcome to Umbagog
National Wildlife Refuge,
a place of conservation
and management of land
and water for wildlife.*



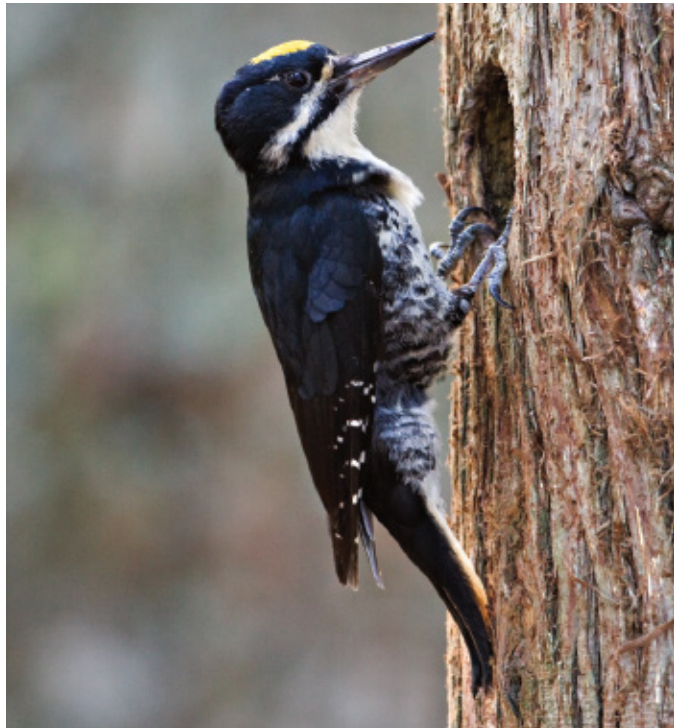
Welcome



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

As a result of a long-term cooperative effort between the states of New Hampshire and Maine, conservation organizations, timber companies, and the United State Fish and Wildlife Service, Umbagog National Wildlife Refuge was established in 1992. The refuge is located on the border of New Hampshire and Maine, in the northern reaches of a 26-million acre region known as the Northern Forest. It was established to conserve and manage high-quality wetland and upland habitats integral to the success of migratory birds, species of special conservation concern, and rare plants. There are over 200 species of birds found on Umbagog National Wildlife Refuge and approximately 100 species of birds that breed 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 is one of over 548 wildlife refuges managed by the United States Fish and Wildlife Service. Wildlife refuges have the primary purpose of managing wildlife and wildlife habitat. Umbagog is an important part of the National Wildlife Refuge System because of its varied habitat and location at the transition zone between southern deciduous forests and northern coniferous forests. Because of its location, several species of wildlife such as black-backed woodpecker and gray jay can be found on the refuge that are rare elsewhere in New Hampshire.

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 Androscoggin 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 further south. The logging camps were integral to the development of this country's building and paper industries. Until recently, much of this land was privately owned by large paper companies. The contributions of these loggers remain with us as we harvest wood and use the dams they built for today's hydropower.

A Variety of Habitat Types

Although it is hard to believe, the Umbagog region was once covered in 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.



Mary Konchar

Umbagog National Wildlife Refuge

Umbagog (pronounced Um-BAY-gog) is an Abenaki word for “clear water.” When a dam, completed in 1853, was built on the Androscoggin River outside of Errol, the size of Umbagog Lake significantly increased. Today, Umbagog Lake is nearly 8 miles long and covers over 8,000 acres, with an average depth of only fifteen feet.

There are many habitat types on the refuge, including forested wetland, such as northern white cedar and black spruce swamps, shrub and sedge wetlands and bogs, and mixed spruce fir 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 rare habitat for wildlife and unusual 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, but extends into the northern part of New Hampshire and Umbagog. The white cedar swamps at Umbagog provide habitat for northern bird species such as boreal chickadee, gray jay, and spruce grouse, as well as mammals like white-tailed deer that find cover and food within its bounds.

The refuge also contains red and silver maple floodplain forests. Unlike white cedar swamps, the maple floodplain forests reaches its northern-most reach on Umbagog, where it can be found along the Magalloway River (Sperduto & Nichols, 2004). Floodplain forests are created by the natural flooding of the river. Moose, beaver, great blue heron, kingfisher, osprey, bald eagle, and several species of waterfowl may be found in this habitat.

Umbagog also has jack pine which is a northern species. In New Hampshire, this tree is typically found at high elevations. Jack pine trees at Umbagog are in the southern part of their range and are the only low-elevation occurrences in New Hampshire (Publicover, Tetreault, & Ring, 1997). On the refuge they can be found on islands and along shorelines.

Management

The refuge staff currently conduct research and monitor wildlife and plant communities of the refuge. In the summer months, biologists monitor marsh bird and land bird populations, as well as those of other species. In addition, refuge staff put predator guards on trees to reduce predation on bird nests.

Active habitat management occurs primarily in upland forested areas, where commercial timber

management techniques are used to optimize and maintain habitat for migratory songbirds. These areas are managed to sustain optimal habitat over time. Other areas are specially designated for woodcock management and are harvested on a twenty-year rotation to provide nesting, display, and feeding areas for this declining gamebird.

Wildlife

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

Aquatic Birds

The backwaters 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



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common goldeneye, wood duck, common merganser, and hooded merganser, as well as blue-winged teal, green-winged teal, and mallard, can all be found on 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.

Marsh birds

The Virginia and sora rails and the American bittern are marsh birds that commonly breed on the

refuge. One may also see pied-billed grebes and great blue herons, which occasionally breed here.

Shore birds

Shore birds group together on the margins of wetlands and lakeshore mud flats when they migrate through the refuge in late spring and early fall. Some shore birds that may be found here are spotted

Osprey



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sandpiper, common snipe, and American woodcock, all of which breed on the refuge. Common migrants are 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 shore birds “rose in clouds like swarming flies whenever a gun was fired” (Brewster as qtd. in Quinn & Richards).

Other birds

Since 1989, bald eagles have made a strong comeback in the Umbagog area, where they were seen in New Hampshire for the first time in forty years. Today several nests can be found on the refuge. Ospreys are also commonly found throughout the refuge, often nesting on the tops of dead white pine trees. Peregrine falcons and golden eagles are occasionally sighted on or near the refuge. The boreal environment of Umbagog provides habitat for many birds that are rare elsewhere in New

Hampshire. These birds include gray jay, spruce grouse, black-backed woodpecker, 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 and stream amphibians. Amphibians that may be seen on the refuge include wood frogs and spotted and blue-spotted salamanders. Stream habitats support spring salamanders, as well as dusky and two-lined salamanders. Mink frog and leopard frog choruses can be heard in refuge wetlands in early summer.

Wildlife Calendar *January-March*

Birds that breed further 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 February and March, bald eagles begin building nests near the tops of tall white pine trees. Moose, white-tailed deer, fisher, and marten can be found in the refuge forests where they spend the winter. Small mammals are active under the snow.

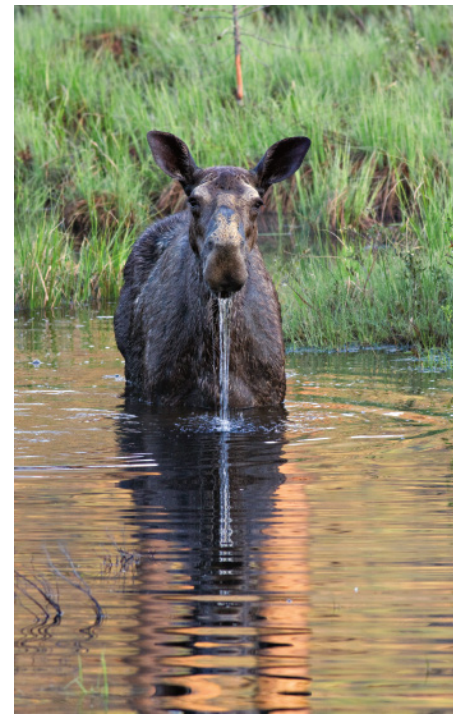
April-Early May

Migratory birds come through 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

Common loon eating crayfish



Derrick Z. Jackson/The Boston Globe



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Moose taking a drink

begin to call. Bald eagles lay their eggs in April, which hatch in May. Ospreys return to their nesting sites and lay eggs. Spotted and blue-spotted salamanders lay their eggs in vernal pools. Wood frogs and spring peepers begin to call. Vernal pools open up. 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 nests hatch in July. Bald eagle young fledge during the first two weeks of August.

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 shed their antlers and begin the mating season. Snowshoe hares and weasels begin to turn white in mid-October. In November and December, black bear go into hibernation.

The timing of bird migrations and animal behavior can vary from year to year.

**Enjoying the
Refuge
Headquarters:**

The headquarters office is located 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.

Harper's Meadow

*Hunting and
Fishing:*

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.

Camping:

Camping is by reservation only. Campsites are managed by the State of New Hampshire. For campsite information or reservations through the State of New Hampshire, contact the state reservation line at 603/271 3628. For off-refuge camping, contact the Umbagog Area Chamber of Commerce.

*The Magalloway
River Trail:*

A handicapped-accessible trail is located on NH Route 16, 1.5 miles north of the refuge headquarters. The trail leads to an observation





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Pitcher plant

platform overlooking the backwaters of the Magalloway River. This is a good place to view moose, boreal birds, and waterfowl.

Wildlife Observation and Photography

You are welcome to observe and photograph wildlife out 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.

Refuge Office In Winter



USFWS

- 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.

Sources

Publicover, D., Tetreault, M., and Ring, R. (1997). *Ecological Survey and Management Plan for Crown Vantage Lands Within the Lake Umbagog National Wildlife Refuge*. New Hampshire: Appalachian Mountain Club.

Sperduto, D. & Nichols, W. (2004). *Natural Communities of New Hampshire*. New Hampshire: The New Hampshire Natural Heritage Bureau.

Quinn, B. & Richards, T. (1998). The Birds of Lake Umbagog. *Bird Observer*, 26(3), 127-129.

Ring-necked ducks



Mary Konchar