

*R e t u r n*




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*of the*

# FISH HAWK

*Ospreys soar to new heights in New Hampshire recovery effort*



**T**his bird was long, strong, swift: in a flash, it went from a cool, arcing glide over the lake into a plummeting feet-first splash, winging up off the water a split second later with a plump yellow perch in its claws. The keen-eyed osprey's nestlings ate well that day.

In the last several years, many of us in the Granite State have had a chance to witness the thrilling spectacle of a “fish hawk” providing for its family. This hasn’t always been possible — just a few decades ago, environmental toxins almost caused the species to be wiped out in New Hampshire.

Many are familiar with the story. In the 1960s, widespread use of the now-banned pesticide DDT caused devastating declines in populations of ospreys and other raptors. Ospreys occupy a niche near the top of the aquatic food web, feeding almost exclusively on live fish. All types of fish had been contaminated from feeding on DDT-poisoned insects; after eating the fish, the ospreys laid eggs with shells so thin they broke under the weight of the nesting adults. In New Hampshire, only a small handful of nesting pairs remained, and these were unable to reproduce successfully.

Bringing the ospreys back wasn’t simply a matter of ridding the environment of DDT, though that action was a prerequisite for their eventual recovery and health. The species — powerful and well-adapted as it is — needed a helping hand. It got not one, but many, and the dramatic comeback of the fish hawk is one of the great wildlife success stories of our time.

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BY CASSANDRA HEMENWAY BRUSH

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## Gimme shelter

How would we entice ospreys to come back and nest again near New Hampshire's waters? Recognizing ospreys as "living barometers" of general environmental conditions in aquatic systems, scientists first asked, is the environment safe enough for them to come back? How would we foster an osprey population that would return year after year, that could sustain itself into the future?

As a first step, in the early 1980s, Fish and Game and New Hampshire Audubon, in cooperation with the U.S. Fish and Wildlife Service and the paper company that owned the land, worked on protecting existing osprey nests around Lake Umbagog. Early osprey recovery efforts in the state included monitoring the birds and installing predator guards, an important factor in increasing nest productivity.

In later years, the focus was on attracting new ospreys to various locations in New Hampshire. We needed to show the birds some real estate with sweeping views, ample hunting opportunities and a safe place to live and raise young. We needed to put up some irresistible nests in perfect habitat — figuring, to paraphrase a famous movie line, "if we built it, they would come."

From time to time, Public Service of New Hampshire (PSNH) had partnered with the New Hampshire Fish and Game Department and other agencies on projects designed to mitigate the company's impacts on our natural resources. Occasionally, the company had to make accommodations for ospreys, such as lowering power lines or raising nest structures higher above power lines, in consultation with Fish and Game and with New Hampshire Audubon. If ospreys required nests on tall, sturdy poles that wouldn't fall down like dead snags in a storm — if they were already attempting to use active utility structures as nesting sites — could this be a partnership in the making?

And so it was. As ospreys slowly repopulated New Hampshire, the state's largest electric company donated equipment and crews to erect artificial nesting platforms — typically, 3- to 4-foot wide wooden platforms perched on top of a utility pole — at appropriate sites throughout the state. As Chris Martin from N.H. Audubon said, "Who's better to do that but the power company that has the trucks and poles?" In 2000, the three organizations — PSNH, Fish and Game and N.H. Audubon — formalized their partnership and stated their mutual goal: to get ospreys off the state's threatened species list. They called their endeavor Project Osprey.

## Pole partners at work

Biologists from New Hampshire Audubon helped determine where to put nesting sites and provided expertise on how best to manage and



## OSPREY MIGRATION PATTERNS



## OSPREY

(*Pandion haliaetus*)

Ospreys are large: each adult bird weighs up to 4 pounds and has a wingspan of 4 to 6 feet. Ospreys typically breed and nest in the vicinity of large lakes, major rivers and coastal estuaries, and suitable nest sites contain trees or other structures — usually in wetland areas — that can support predator-free nests. The nests themselves look like very large stick piles balanced near the top of a dead tree.

Migrating patterns take the birds thousands of miles annually; their winters may be spent in Florida, Cuba, the Caribbean, Central or South America. Ospreys returning to New Hampshire from the tropics start to appear on breeding territories in late March and early April; eggs are laid in May, young hatch in June and in August; fledglings make their way into the world on their own.

After their first southern migration, ospreys do not return north until they are two years old. When they come back and attempt to establish their first breeding territory, young adult ospreys often settle near where they were born. Ospreys usually have only one mate per breeding season.

*Most ospreys mate for life and return to occupy the same nesting site year after year.*

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monitor them. With Fish and Game, Audubon staff and volunteers worked to install predator guards on natural and human-made nest sites.

Fish and Game coordinated the siting of the new platforms, working with Extension Foresters from the University of New Hampshire to identify landowners willing to have the platforms placed in promising locations on their property. The agency, in conjunction with N.H. Audubon, also worked with volunteers, training them to monitor ospreys in various locations and report on the birds' progress. N.H. Audubon volunteers have monitored ospreys on Lake Umbagog and elsewhere for some 20 years. John Kanter, coordinator of the Nongame and Endangered Wildlife Program at Fish and Game, calls one volunteer group — Project Osprey Stewards, based at Sandy Point Discovery Center — “the best spinoff of this project so far.” The Stewards keep meticulous logs of nest sites and osprey activity. (See what they're up to on the web: <http://ourworld-top.cs.com/projosprstewards>.) Kanter asserts, “That's what we need for recovery: local people watching. The Project Osprey Stewards provide us with real local support in Great Bay, so we know what's happening there. We can use the Stewards' results in conjunction with other state and regional data and get a really good idea of whether the population is thriving and stable over the long term.”

PSNH contributed trained crews and the equipment necessary to put up the platforms that will attract ospreys for decades to come. In addition to people power, the company donated \$95,000

spread out over the life of the project, enabling wildlife biologists from N.H. Audubon and Fish and Game to focus on recovery efforts with renewed vigor.

Other Project Osprey activities included the construction of an observation platform in the seacoast town of Stratham, where people can watch ospreys as they fish, breed and nest; and the creation of a middle school science curriculum — available at Fish and Game's website — that focuses on ospreys and ecological concepts.

“Yes, humans were originally responsible for the osprey's decline,” reflects Kanter. “But our work is proof that what people do, they can often un-do with some effort and cooperation. When people get together to solve a problem, they make a difference. We *can* recover wildlife populations at risk.” He adds, “On their own, the project partners didn't have the resources to get the job done. But as a team — the three entities, and especially the individuals involved, made things happen.”

All of the Project Osprey partners benefit from its positive results — and the public education and awareness that are a central part of their mission. From a corporate perspective, PSNH spokesperson Nury Marquez puts it best: “New Hampshire's quality of life and its economic vitality are inherently connected to the quality of the  
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*Biologists prepare to band an osprey chick, which will help monitors identify and track the bird over its lifetime. After banding, chicks are returned to the nest (left).*

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environment. In turn, the environment impacts the health of our communities and influences PSNH's ability to thrive as a company... Project Osprey is much more than an environmental project, it is an investment in the well-being of our state and our company."


proposition, since ospreys are more likely to nest in the vicinity of existing nests; but so far, the strategy of adding more platforms farther from familiar territory has been a success. Kanter remarked, "Two new platforms were erected last year, and ospreys started occupying both almost immediately. It's very gratifying." Not all of the nest sites are occupied and producing, but there's plenty of room to grow.

## Blueprint for recovery

In just a few short years, Project Osprey has achieved many of its goals for the state's osprey population. With the formal part of the project coming to a close, project coordinators are putting the final touches on the first-ever recovery plan for an endangered species in the state. The plan is designed as a blueprint for recovering the population to the point where ospreys can be removed from New Hampshire's list of endangered and threatened wildlife.

As one might expect, the recovery plan includes continued work with landowners to install additional nest poles and platforms, and mount predator guards on nest trees and poles. These activities should increase the total number of osprey pairs breeding in New Hampshire as well as the number of pairs nesting in those watersheds that currently have few; and maximize the number of young fledged each year. The team will continue to

monitor known nests, engage in cooperative research and provide outreach and educational materials.

Project partners say that more volunteer help and coordination will be needed, and that continued success in osprey recovery depends on long-term monitoring and stewardship of both natural and human-made nest sites. But because of the groundwork laid to date, the future looks bright for the fish hawk, and young ospreys that return to establish territories in New Hampshire will have a safe place to hold up their unwritten but fundamental part of the bargain — growing the population. 

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*Above, a foraging osprey adult brings a meal back to its nest. Osprey are "fish specialists," relying primarily on fish for their diet. Biologists (right) are lifted up to band osprey chicks, while an adult circles the nest platform.*

## Soaring to new heights


The state has seen its population of the much-loved fish hawk soar. In 2003, New Hampshire had a record number of ospreys — 30 active nests and 54 young fledged, more than 10 times the number in 1980, when the state first started counting, and the most ospreys fledged since the state's previous high mark of 44 young back in 1994. Ten nesting structures have been placed in strategic sites all over New Hampshire. Ospreys were also observed nesting on platforms that had been erected more than a decade earlier, an encouraging sign that the structures built today will serve the birds far into the future.

Most promising of all, the birds moved into several new areas outside their core nesting sites; they now raise young in four of the state's five watersheds: Androscoggin, Merrimack, Connecticut and Great Bay, signaling an impressive expansion of their breeding range. "An essential part of total recovery for ospreys here in New Hampshire is spreading breeding sites further across the state," said Kanter. It's also a tricky

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