

Wildlines

New Hampshire Fish and Game's quarterly newsletter of the Nongame and Endangered Wildlife Program

State's First Pine Marten Study Continues

The state's first assessment of pine marten distribution continued for a second year over the summer, with researchers searching the Jefferson/Lancaster/Gorham area for these reclusive mammals that are as beautiful as they are secretive. Members of the weasel family, pine marten are on New Hampshire's threatened species list.

The project began last year, when the research team, led by Jillian Kelly, a biological technician with the Nongame and Endangered Wildlife Program, live-trapped 34 pine marten in order to see what kind of habitat they're using and to get an idea of their overall distribution.

The first phase of the study was conducted in the area north of Route 26 in the towns of Pittsburg, Clarksville, West Stewartville, Columbia, Colebrook and the Dartmouth Land Grant.

This year's more southern study area yielded only three pine marten. Two were caught in the Nash Stream State Forest, while the third was caught near a recent clearcut in higher elevation habitat in the Dixville Notch area.

The methods used were identical to last year's: the research team set up five baited trap lines and kept them in place for two weeks before moving them to a new spot. The traps were checked daily.

Further study is needed to draw conclusions about the vast difference in capture rates between last year's sampling and this year's, but Kelly noted some interesting possibilities. Because of fewer logging roads, the team could not set the trap lines in the higher elevation forests they had targeted in the first part of the study. The three pine marten that were captured were in higher elevation habitat that was more accessible.

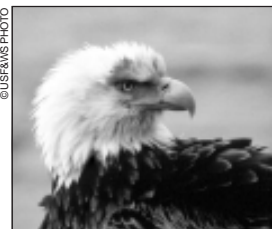
"The farther south you get, the more important that higher elevation habitat is for pine marten," Kelly said, noting that higher elevation forests have many unique qualities. "The structure of the forest is important,

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Phenomenal Year for Bald Eagles



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It was a record-setting year for bald eagles in New Hampshire. Bald eagles fledged 11 young this breeding season, the most eaglets ever in the history of the recovery effort, which began in the mid-1980s. The past

productivity record was six fledglings.

Eight territorial pairs arrived in New Hampshire in early spring; this has occurred just once before. Seven pairs nested and six of those nests were successful – all record highs. One pair even raised three chicks to fledging age, a rare feat since most bald eagles raise just one or two chicks per season.

Successful recovery efforts around the region

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Project Osprey

A threatened bird's best friend

In its fifth and final year, a groundbreaking partnership called Project Osprey has not only achieved its ambitious goal to restore osprey to the state, but also is being held up to conservation leaders around the nation as a model for public-private partnerships.

Project Osprey is a collaboration between the Nongame and Endangered Wildlife Program, Public Service of New Hampshire and the Audubon Society of New Hampshire. The osprey themselves really started the project when they began hijacking PSNH's utility poles for nesting sites. PSNH came to the table with money, equipment and manpower to help erect poles with manmade nesting platforms for the osprey to use instead. As a result of the partnership, poles were erected all over the state, some to attract osprey to areas they were not yet using, but that offered suitable habitat.

These efforts, in addition to monitoring and protection actions by Audubon and the Nongame and Endangered Wildlife Program, have resulted in New Hampshire's ospreys making significant progress over the last five years.

This year's numbers tell a wonderful story. Fifty-

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Conservation partners and volunteers work to monitor the health of New Hampshire's breeding osprey and to construct nesting platforms for future nesting pairs.



three young osprey fledged this summer from a record high of 34 active nests. These nests covered four out of five watersheds in the state. Prior to the initiation of the recovery program in 1990, osprey breeding activity was concentrated in just one watershed — the Androscoggin.

"It was a great year. Osprey are starting to spread out across the state and become more abundant in other watersheds, especially the Merrimack, which did great this year with eight active nests and 17 young fledged," said Nongame and Endangered Wildlife Program biologist Mike Marchand. Osprey numbers in other watersheds for the


2004 breeding season include:

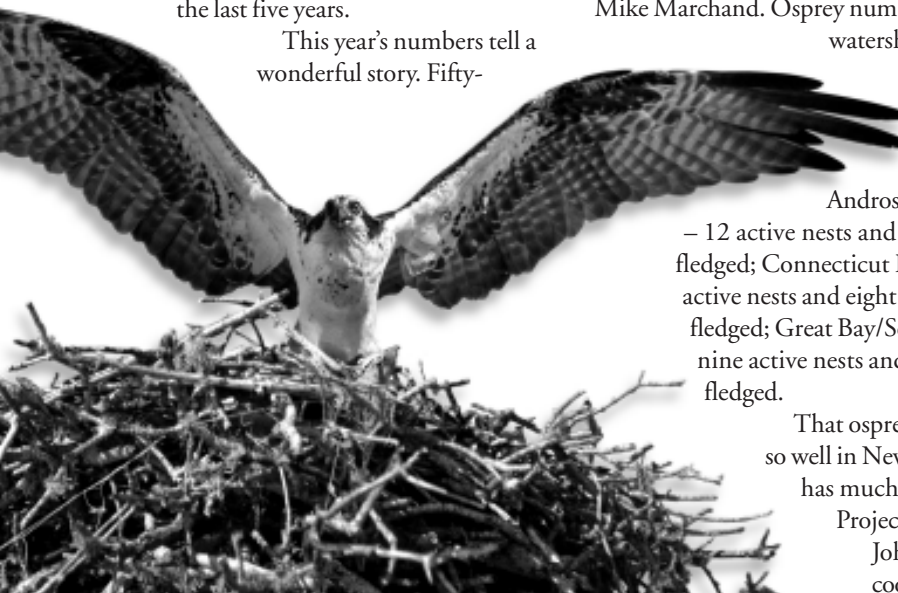
Androscoggin River – 12 active nests and 14 young fledged; Connecticut River – five active nests and eight young fledged; Great Bay/Seacoast area – nine active nests and 14 young fledged.

That ospreys are doing so well in New Hampshire has much to do with Project Osprey.

John Kanter, coordinator of

the Nongame and Endangered Wildlife Program, realized the full impact of Project Osprey earlier this year when the director of the U.S. Fish and Wildlife Service used Project Osprey as an example of successful public/private partnerships at a national wildlife conservation meeting. "That clearly showed how significant this partnership really was," Kanter said. "I hope that learning about and celebrating osprey restoration will inspire an increased commitment from people – and from potential future wildlife partners – to work toward conserving all New Hampshire wildlife."

One last goal to be accomplished through Project Osprey is the completion of a formal recovery plan. The plan will identify management guidelines to help ensure continued breeding success for osprey and lead to steps for removing them from the state's threatened and endangered wildlife list. 



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Wildlife Enthusiasts Protect

Squam Lake Bald Eagles

A pair of bald eagles that are the first to nest on Squam Lake in 71 years can now do so without the constant threat of human disturbance, thanks to a coalition of lake residents, local conservation organizations and wildlife professionals.

The coalition has built a robust and aesthetically pleasing floating fence around Little Loon Island to keep boaters and swimmers a safe distance from the eagles' nest, which is clearly visible in a tall pine tree. The system of buoys features signs alerting boaters to the eagles' presence and their need for peace and quiet. The redwood buoy system replaces a makeshift one built last year, the first year the eagles nested on the island.

It quickly became clear last year that the eagles needed protection. People swam near the nest, boated close to the shoreline and even climbed up onto the tiny island to get a peek at the eagles or to have a picnic.

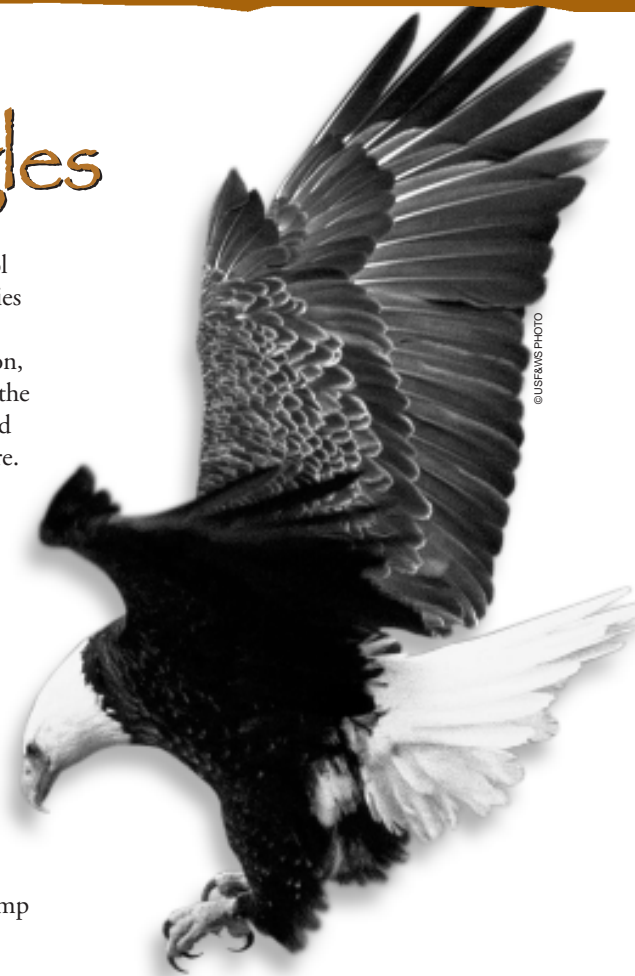
"That would likely have led to nest failure," said Jim Oehler, the Nongame and Endangered Wildlife Program biologist who coordinated the protection effort.

Several individuals and organizations were instrumental in building the fence,

including local residents Rick Van de Pol and Will Grinnell, who procured supplies and built the buoys with help from members of The Squam Lakes Association, the Squam Lakes Conservation Society, the Squam Lakes Natural Science Center and the Audubon Society of New Hampshire. The fence was paid for with money raised from New Hampshire's conservation license plates, or "moose plates."

The Squam Lakes Association hired two interns from Plymouth State University to monitor the eagle nest on weekends. Jeremy Mears and Chris Martin held vigil from a boat, handing brochures to boaters to educate them about the eagles. They also noted both eagle and human behavior and any effect the people seemed to have on the eagles.

Joe Kabat, who owns a nearby camp and is a member of the Squam Lakes Association, said people respected the floating boundary during a four-hour stint that he spent monitoring the eagles. "I was pretty impressed with the people who came through," he said. "They stayed outside [the boundary], and they were respectful."



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The eagles successfully raised their one chick to fledging age this year. Last year, they hatched two eggs, but only one chick survived to fledge.

Seeing bald eagles nesting on Squam Lake again is a thrill for the people who love the lake and have striven to improve its water quality for decades, Kabat said. "It means we have a healthy ecology here, and that has taken a number of years to come about ... it's not an accident," he said.

The Squam Lakes Association, now 100 years old, and other groups have worked to overcome damage to the watershed from harm done to it in the past, such as unenlightened farming practices near the lake.

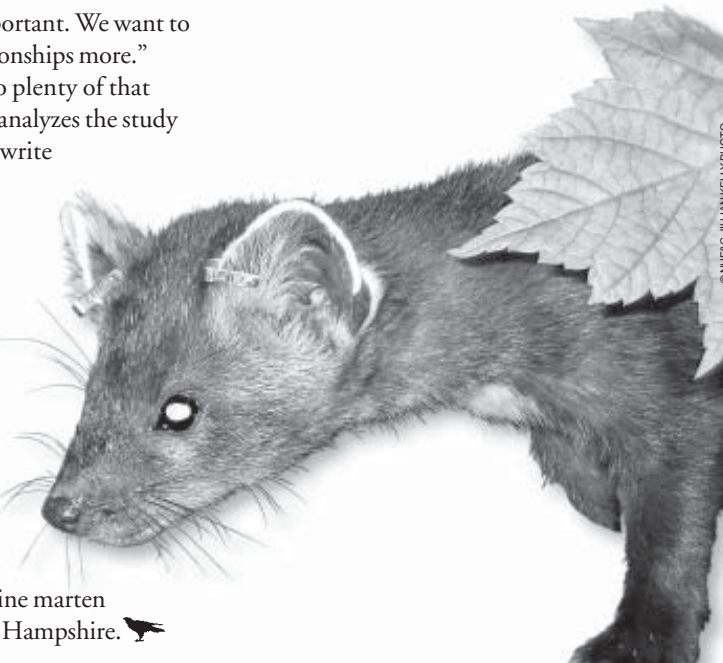
It all seemed worthwhile one Saturday in August, when the bald eagle chick stretched its wings and took off from the nest. Kabat and others were lucky witnesses. "People were cheering — quietly — to see this immature eagle fly by itself," he said.

For more information on Squam Lakes and the eagles, visit The Squam Lakes Natural Science Center at www.nhnature.org or The Squam Lakes Association at www.squamlakes.org.

PINE MARTEN continued from page 1

the amount of deadfall... and the amount of snow is also important. We want to explore these relationships more."

Kelly will do plenty of that exploration as she analyzes the study data and uses it to write her master's degree thesis for the University of Massachusetts at Amherst. Meanwhile, the study, funded in part with conservation license plate dollars, will form the foundation for further research that will ultimately shape pine marten protection in New Hampshire. 🦉



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Piping Plovers

Productivity Holds Steady

Five pairs of piping plovers arrived in New Hampshire to breed this year, down from seven pairs in the previous three years. Of the five pairs, four established nests, two at Seabrook Beach and two at Hampton Beach. The female from the fifth pair disappeared soon after arrival, so that pair didn't nest. A total of 15 eggs were laid. Four

were lost to a high tide, leaving 11 to hatch.

Biologists believe the decrease in the number of nesting pairs this year may be a matter of lifespan. Piping plovers generally live for five to eight years. The species was discovered nesting in New Hampshire eight years ago, which means those first breeders would likely have died by now.

"We believe that pairs that have been nesting here for years are dying out, and new pairs are coming in. This is a transition year for New Hampshire's plovers," said Jessica Dill, who monitored plovers for the Nongame and Endangered Wildlife Program over the summer. However, despite the fewer numbers of nesting pairs, productivity held steady this year with an average of one chick fledged per pair.


Piping plovers face several challenges as they attempt to nest and raise their young. They arrive on New Hampshire's beaches in April when the weather is still cold and, in many years, snow is still present. Then as the breeding season is in full swing, the weather is warmer and the beaches become popular summertime destinations for thousands of people.

Balancing human uses with endangered species management is an effort the

N.H. Fish and Game Department has been working towards for eight consecutive years, together with other state departments, the U.S. Fish and Wildlife Service, local town officials and several dedicated volunteers. Each spring, recovery team members erect temporary fencing around piping plover habitat and nests and educate beach users about the birds. The Nongame and Endangered Wildlife Program hires a monitor to help protect the birds each season.

Of the 11 plover eggs that hatched, four chicks made it to fledge. Three tiny chicks, about the size of a cotton ball, were lost during a spring storm that brought heavy rains and high tides. In addition, four chicks were lost to unknown causes, which may have been the result of human-related impacts. Overall, more than 70 piping plover chicks have successfully fledged since protection efforts began eight years ago.

Piping plovers that successfully breed in New Hampshire will help the overall Atlantic Coast population to reach full recovery.

For more information on the current status of the Atlantic Coast population of piping plovers visit <http://pipingplover.fws.gov/status/index.html>. 



© EVA POWERS PHOTO

EAGLES *continued from page 1*

greatly factor into New Hampshire's increase. Since eagles don't recognize boundary lines, birds from surrounding states often may breed here in New Hampshire. Maine, New York and Massachusetts have strong recovery programs. Vermont, however, doesn't yet have a breeding population of bald eagles.

This year, biologists determined to fill that gap by bringing nine eagle chicks from other states to Vermont's southern Lake Champlain. Eight of the eaglets were successfully "hacked out," or cared for by humans until they fledged. Since eagles imprint on the area in which they fledge and often return to the general vicinity to breed later, the effort bodes well for the recovery effort in the entire region, said Michael Amaral, an endangered species specialist with the U.S. Fish and Wildlife

Service who is helping to jump start the Vermont program.


Longevity is also playing a big role in increasing New Hampshire's breeding bald eagle population, according to Amaral. "What's sustaining our eagle recovery is that we've got pretty good survival of our adult breeders," he said.

These adults who are living long, full lives form the base of New Hampshire's recovery as they return year after year to breed. As their young mature to breeding age at about five years old, they start to seek out breeding sites near where they fledged, allowing the state and region to increase the numbers of breeding bald eagles each year, Amaral said.

The Nongame and Endangered Wildlife Program continues to partner with the U.S. Fish and Wildlife Service and the



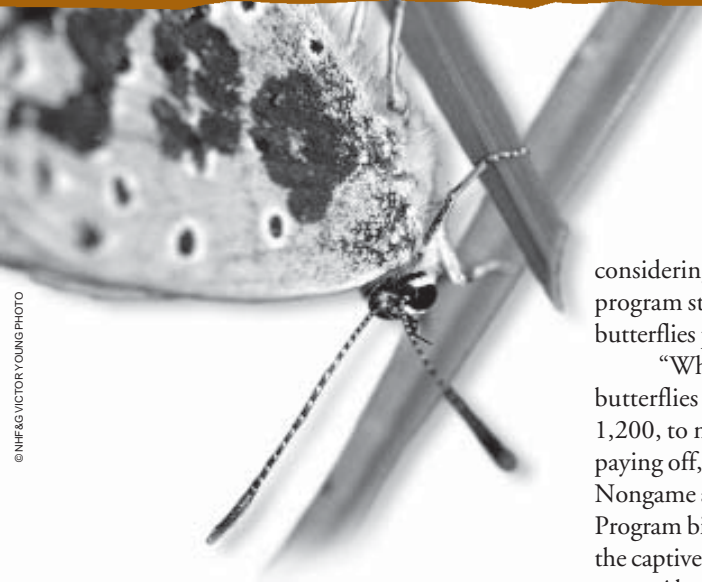
© U.S. FWS PHOTO

Audubon Society of New Hampshire to monitor and protect bald eagles, which are considered state endangered and nationally threatened. For more information on the current status and distribution of bald eagles visit <http://endangered.fws.gov> and search for bald eagles. 

Back from the Brink

Karner Blues

© NHFG VICTOR YOUNG PHOTO



New Hampshire's only population of Karner blue butterflies is coming back steadily. Karner blues, the state's official butterfly, are both state and federally endangered. The Nongame and Endangered Wildlife Program works with the U.S. Fish and Wildlife Service, the N.H. Army National Guard and many other agencies and volunteers to protect and strengthen the population, located at the Concord airport and an abutting conservation easement.

This summer, the Karner blue captive-rearing program enjoyed an outstanding breeding season. During the first brood in May, biologists released about 200 butterflies that resulted from eggs they had protected inside over the winter. Before releasing them, they collected about 4,000 eggs that they kept protected until they hatched into larva and then turned into butterflies. This process yielded about 1,200 butterflies for the second brood in July, an astounding increase

considering that just a few years ago, the program struggled with fewer than 50 butterflies per season.

"When you start with about 50 butterflies and in a few years have over 1,200, to me it shows all the hard work is paying off," said Alina Pyzikiewicz, the Nongame and Endangered Wildlife Program biological technician carrying out the captive-rearing program.

About 500 of the butterflies were kept in captivity until their eggs could be collected (3,000 of the eggs will be protected over the winter). For the first time, biologists this year were able to release the rest of the butterflies, about 750 in all, directly into the wild to lay eggs there instead of in captivity.

"I think this was a breakthrough year for the program," said Michael Amaral, endangered species specialist with the U.S. Fish and Wildlife Service. "When we saw that those animals released directly into the wild survived and laid eggs and reproduced in the wild ... that's what this project is all about. That was really exciting for everyone involved."

In another first for the program, butterflies actually laid eggs on the wild blue lupine plants that schoolchildren have been planting on the easement property for the past several years.

Biologists are continuing to bring Karner blue eggs from a larger population in

Saratoga, N.Y., to Concord in order to increase genetic diversity and strength. They are also providing New Hampshire larvae and eggs to New York for the same purpose.

To learn more about Karner blue migration patterns and survival rates and birth rates, the recovery project team recaptured many of the released butterflies, which had been marked on their wings for identification. One of the interesting results

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A volunteer assists the Nongame Program in releasing adult Karner blue butterflies into a restored wild blue lupine area planted by Concord-area students.

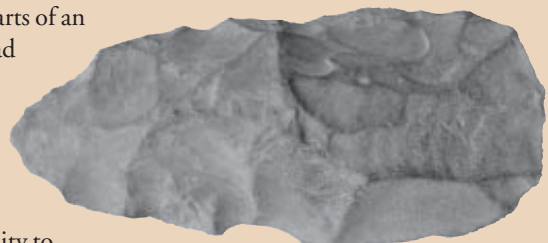
Butterflies and Archeology?

The Concord conservation easement where Karner blue butterflies are making a comeback is to be the site of an archaeological exploration this fall. Richard Boisvert, New Hampshire's state archaeologist, plans to team up with Nongame and Endangered Wildlife Program staff to explore the site, where biological aide Celine Goulet made a surprise find while planting wild blue lupine over the summer.

Goulet was digging a hole for the lupine when she uncovered two stones that looked distinctively formed by some human hand. She consulted with Boisvert, who made a preliminary identification that the stones, made of hornfels, were parts of an incomplete tool, possibly the head of a spear or knife, and could be anywhere between 700 and 9,000 years old.

Nongame and Endangered Wildlife Program staff are looking forward to the opportunity to

help Boisvert find out more about possible Native American activity at the site while continuing to protect the area for the endangered Karner blue butterfly. 



© RICHARD BOISVERT PHOTO



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More

Endangered Terns

Nest on Seavey Island

increase over last year's 2,414 nests.

"Our colony is now officially the largest common tern colony in the Gulf of Maine and tied for first for roseates," said Dan

Hayward, the Nongame and Endangered Wildlife Program's lead biologist on the project. The growing colony has played an increasingly important role in buffering the impact of distant environmental disasters, like oil spills and other forms of pollution, and has provided refuge for birds abandoning collapsing colonies across the Gulf of Maine.

"Our colony is now officially the largest common tern colony in the Gulf of Maine"

The productivity of the common terns was down significantly from last year, though compared to the exceptionally low productivity seen this year in many seabird and shorebird colonies across the arctic and northeastern region, the Seavey Island colony fared very well, thanks to the Nongame Program's persistent crew. There are several possible reasons for this decrease, Hayward said. Clutch sizes were smaller than previous years; the cold spring may have affected hatchlings as well as the timing of the terns' major food source, forage fish migrating past Seavey; and predatory gulls were particularly damaging this year, he said. Gulls kill chicks and eat

the terns' eggs.


"We saw the heaviest gull pressure that we've seen out there so far," Hayward said. "We documented more predation this year than in most years combined. We even saw an adult tern eaten by an adult black-backed gull."

The gull pressure is one of the reasons the Nongame and Endangered Wildlife Program hires two tern monitors to live on the island each breeding season. The pyrotechnics they use and their mere presence remain an integral part of the

project. This year, Melissa Barney, who returned for her second year, and Martin Bean were the tern

biologists who lived on the island, kept the gulls in check and monitored and documented the tern breeding season. Hayward spent about seven weeks there as well.

All of the terns usually leave the island by the end of August. New Hampshire's visiting common terns have now returned to Argentina and Brazil; the roseates have gone back to central and northern South America; and the Arctic terns have headed for the southwest coast of Africa.

For more information on this project and others involved in the Gulf of Maine Seabird Restoration effort, please visit www.projectpuffin.org or www.nhaudubon.org. 

The number of federally and state-endangered roseate terns nesting on Seavey Island in the Isles of Shoals nearly doubled this year. In the fourth year roseate terns have chosen Seavey for nesting, 106 chicks fledged from 112 nests (there were 65 nests last year). Roseate terns tend to make their nests in established common tern colonies. The Nongame and Endangered Wildlife Program and the Audubon Society of New Hampshire re-established a common tern colony on Seavey in 1997, and the roseates are increasingly taking advantage of it.

Arctic terns, a state-endangered species, are also showing interest, with seven nests this year, one more than last year.

Common terns, a state-endangered species, continue to be the main breeders on the island by far, fledging 1,936 chicks from about 2,580 nests, which is a conservative estimate that represents an

KARNER continued from page 5


of this study was that Karner blues are starting to spread out a bit and make use of some of the habitat created or restored for them.

"They stayed mostly within the release site, but some did disperse into abutting management areas and, more importantly, some went over the fence onto the airport land and were using lupine that had been transplanted to that area," said

Celine Goulet, the Nongame and Endangered Wildlife Program biological aide in charge of habitat restoration.

To continue improving habitat for Karner blues and other rare butterflies and moths, the recovery team has continued planting wild blue lupine and other plants required for the creatures' lifecycles and will conduct a controlled burn on part of the easement this fall to stimulate the growth of

these and other important plants.

The Army National Guard, which has a facility next to the easement, has been an important partner in Karner blue protection. The Guard has improved habitat for Karner blues, and provided a captive-rearing facility and restoration money through land-use mitigation agreements. 



NONGAME AND ENDANGERED WILDLIFE PROGRAM

2004 Annual Fund Campaign

Roster of Donors

4/1/04 - 8/27/04

New Hampshire's threatened and endangered wildlife once again asked for your help, and this year more people responded than ever before. We are privileged to thank more than 950 donors for generously supporting the 2004 Annual Fund Campaign. Because of your continued support, there are now record numbers of ospreys in the Granite State, a restored common tern colony at the Isles of Shoals and Karner blue butterflies surviving in the wild! And, working in partnerships throughout the state, we can continue the important work of protecting and restoring the

many other threatened and endangered animals and birds in New Hampshire. On behalf of the staff of the Nongame and Endangered Wildlife Program, thank you for your generous support!

John J. Kanter
Nongame and Endangered Wildlife Coordinator

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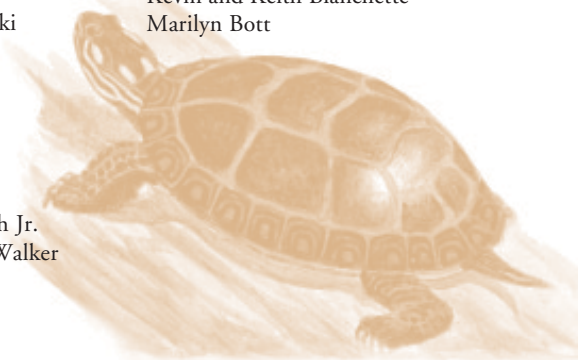
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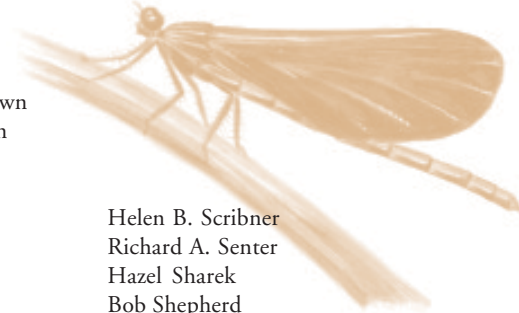
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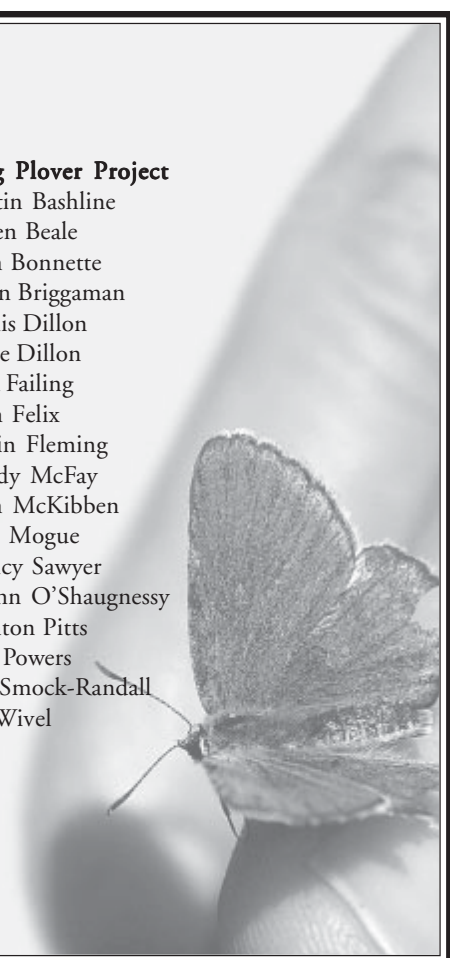
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FALL Wildlife Almanac

OCTOBER

The fall hawk migration makes an excellent reason to take a hike up your favorite mountain to view the brilliant colors of fall and catch a glimpse of these fascinating birds of prey as they soar over the mountaintops.

NOVEMBER

Aquatic frogs head for the bottom of ponds to dig into the mud. Their metabolism and heart rates slow as they settle in to spend the winter under the ice. American toads, meanwhile, dig themselves into dry ground for the winter.

DECEMBER

Pine marten, found in high elevation areas, are active both above and below the snow surface. Long hair between the pads of their feet helps keep them warm.

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