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# Wildlines

FALL 2010

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

## New England Cottontail Habitat Work Underway

Over 200 acres of habitat have been slated for management as part of the effort to protect the endangered New England cottontail in New Hampshire – before it is too late. Work started this summer on four Wildlife Management Areas (WMAs) owned and managed by the N.H. Fish and Game Department and is scheduled to be completed by 2012.

“Our goal is to prevent New England cottontails from becoming so rare that they need to be listed at the federal level,” said Steve Fuller, a biologist with Fish and Game’s Nongame and Endangered Wildlife Program. “Protecting species populations while they are still present is much more effective and costs substantially less than trying to restore a population that is already gone.”

Habitat work began this summer at the Bellamy River and

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## Biologists and Veterinarians Team Up to Track Threatened Black Racers

It was an exciting summer for Nongame and Endangered Wildlife Program biologists and the staff of two local veterinary hospitals: Weare Animal Hospital and Russell Animal Hospital in Concord. The biologists and veterinarians teamed up to track state-threatened northern black racers to learn more about these elusive snakes.

“A total of 12 racers were radio tracked over the summer and an additional 24 were captured and marked with PIT tags,” said Brendan Clifford, a biologist with the Nongame and Endangered Wildlife Program. “PIT tags are similar to microchips used on pets,” Clifford explained. “They allow us to identify individual snakes if they are recaptured in the future and also help us estimate population sizes.”

Those that were tracked using radio telemetry had small radio transmitters surgically implanted by

*RACERS continued on page 4*



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*Glossy black with a white chin,  
black racer snakes can grow up  
to five feet long.*

# Protecting People and Wildlife

## Upland sandpiper study underway at Pease International Airport

The only known location where state-endangered upland sandpipers breed in New Hampshire is in the extensive grasslands at Pease International Airport. Since 1990, Pease authorities have worked with N.H. Fish and Game; NH Audubon; and the US Department of Agriculture, Wildlife Services to reduce aircraft and wildlife strikes while also protecting nesting sandpipers.

“While the upland sandpipers themselves do not pose much of a threat to aircraft, other wildlife attracted to the extensive grasslands in the airfield do,” said John Kanter, Coordinator for the Nongame and Endangered Wildlife Program at N.H. Fish and Game. “In order to maximize airport safety, the grass needs to be kept short enough to limit seed production that attracts wildlife such as wild turkeys, yet long enough to keep it from being an attractive foraging area for Canada geese and gulls,” he said.

In 2009, the New Hampshire Department of Transportation Aeronautics Division awarded a \$40,000 grant for the partners to research whether or not upland sandpipers may nest in other areas off the airfield, how far they travel during the nesting season, what type of habitat they prefer and to identify alternative areas that may provide suitable habitat for upland sandpipers to breed.

The first year of the surveys revealed no nesting sandpipers outside of the airfield. “The birds will always be attracted to the airfield grasslands,” said Kanter. “We located and marked nest sites to help mower operators know exactly where nests were, so they could mow around them.”

Funding from the N.H. Conservation License Plate program (Moose Plate) and N.H. Fish and Game’s Nongame and Endangered Wildlife Program also supported the project. Biological aide Heather Kleczek worked all summer to locate upland sandpiper nests and track the birds using radio telemetry.

“Because they are ground nesters, they

are very difficult to find in the tall grass,” said Kleczek. “When we flushed a bird, we marked the location, then went back at night and used nets to capture the birds when it was dark and they couldn’t see us.”

Assisting with banding and applying transmitters to the birds were Kate Zimmerman, a graduate student from Michigan, and Kevin Kalasz, the Shorebird Project Coordinator for the Delaware Division of Fish and Wildlife.

Researchers located four nests and five upland sandpipers were banded and had transmitters applied to their backs. Kleczek and others went out every day to track the birds and find their locations. GPS coordinates were recorded to map how far the birds moved during the breeding season and vegetative data were collected to determine what type of habitat they prefer.

“Each of the transmitters fell off, as planned, before the birds left for migration,” Kleczek said. Looking back over the summer, Kleczek was happy with what they accomplished during this first year of the study. “The runway is 2 miles long and there are over 800 acres of land. To find four nests and radio track 5 birds was incredible,” she said.

Once the results are analyzed, a management plan will be developed to



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*Biologists are studying breeding and nesting behavior of N.H.'s only population of upland sandpipers.*

determine the best conservation strategy for the birds. These strategies will fit within the airfield management safety guidelines prescribed by biologists at Wildlife Services.



# Seabirds and Shorebirds

Two of the longest-running projects to restore and protect rare wildlife in New Hampshire continued this year with positive results. Since 1997, these two projects have shown that, with consistent and effective management, species can be protected and remain a part of our natural world now and into the future.

*The Seabird Restoration at the Isles of Shoals* experienced another successful breeding season this summer, with a record-high 2,615 pairs of state-threatened common terns, 53 pairs of state and federally endangered roseate terns, and 6 pairs of Arctic terns returning to breed and raise their young. Fair weather, abundant food supply and deterrence of predatory gulls by biological staff all contributed to another successful breeding season for the terns. Feeding studies documented that herring was the most common prey for the terns, for the second year. Biologists are not sure why this is so, since hake had previously been the primary food source since the study began in 1997.

*The Piping Plover Protection* effort along New Hampshire's seacoast saw positive results in 2010, despite a decrease

*SHOREBIRDS continued on page 8*

NEW HAMPSHIRE TERN TOTALS			
Year	Common Tern Nests	Roseate Tern Nests	Arctic Tern Nests
1997	6	–	–
1998	45	–	–
1999	141	–	–
2000	446	–	–
2001	809	1	–
2002	1687	26	1
2003	2414	65	6
2004	2582	112	7
2005	2480	67	9
2006	2464	38	8
2007	2539	57	6
2008	2227	40	8
2009	2377	40	7
2010	2615	53	6

Tern chicks are banded just days after hatching so they can be identified if sighted later as a fledgling or adult. The bands help biologists learn about the birds' distribution and lifespan.

## COTTONTAILS continued from page 1

Martineau WMAs in Dover, the Beaudette WMA in Durham and the Palmer WMA in Rye. Forestry practices included selective cutting of trees, mowing grasslands, removal of invasive species and seeding to stimulate shrub and young forest growth.

"This habitat management work will benefit a variety of species that use early successional shrub and forests, including New England cottontail," said Fuller.

The work in New Hampshire to protect state-endangered New England cottontails is part of a much larger initiative throughout the species range. Six New England states, the U.S. Fish & Wildlife Service, the Natural Resource Conservation Service and the Wildlife Management

Institute have all partnered to protect New England cottontails and their habitat throughout the Northeast.

All of the partners involved are using habitat maps of the species' entire range. The maps allow researchers to identify the best places for habitat restoration from Maine to New York.

Protection and restoration of the New England cottontail has received substantial financial support, including state wildlife grants awarded to New Hampshire Fish and Game through a nationally competitive USFWS program. Habitat management will continue and a potential captive breeding program is being considered as a way to supplement the wild population.

As range-wide habitat restoration takes place, Fish and Game is evaluating ways to ensure that isolated New England cottontail populations are able to colonize newly restored habitats.



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*RACERS continued from page 1*

local veterinarians Dr. Michael Dutton at Weare Animal Hospital and Dr. James Payne at Russell Animal Hospital. Dutton has assisted with snake research projects for several years, including both the black racer and Eastern hognose snake studies. Payne is new to the project this year, and has a long history of helping wildlife. “Over the years our practice has treated bear, deer, raptors and turtles,” he said. Payne and his staff, including veterinary technician Sarah Blackman, who assisted with the surgeries, were happy to participate in the black racer research project and offered their services at no cost.

“It is a simple surgery,” said Payne. “The hardest part is getting them to go to sleep, because they are slow to respond to the inhalant anesthetics.” Each of the snakes recovered well after having transmitters implanted. “They recovered more quickly if they were kept warm,” Payne noted. “Because they are cold blooded, they are temperature dependent.”

**Welded Matting  
Dangerous for Wildlife**

Welded plastic matting, commonly used at construction sites to control erosion, injures and even kills many wildlife species, including snakes, every year. Snakes that become trapped while passing through the plastic mesh cannot back out and will eventually die if not rescued. Fish and Game encourages landowners, consultants and developers to use a tightly woven organic mat that is less likely to kill wildlife, yet still provides suitable erosion control.

The black racers were located one or two times each week, from the time they were captured in the spring until hibernation. Each time a snake was located, specific habitat characteristics were recorded, as well as the activity of the snakes. Survey sites were in the towns of Weare, Hopkinton, Webster, Nottingham, Deerfield and Raymond.

“We were excited to find as many racers as we did during our first year of surveys,” said Clifford.

The results of the survey will help biologists to assess the distribution and abundance of racers in New Hampshire and to identify what habitat areas are necessary for their survival. Before the surveys began this year, biologists knew very little about racer populations in the state. Most records prior to this year were incidental observations reported to N.H. Fish and Game’s Nongame Program through the volunteer Reptile and Amphibian Reporting Program (RAARP).

“Those volunteer observations were critical when we were identifying target areas to begin surveying,” said Clifford.

Biologists plan to continue black racer surveys next year and hope to expand the survey area to include more locations throughout southern N.H., including towns in Cheshire County and the seacoast.



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*Loren Valliere, a UNH wildlife biology student, worked for the Nongame Program this past summer, radio tracking state-threatened black racer snakes to learn more about the species’ abundance, distribution and habitat use in southern N.H.*

“We encourage people to send any racer observations to RAARP. These sightings are extremely valuable in accurately assessing the status of northern black racer snakes in New Hampshire,” Clifford said. Any observations can be emailed to: [raarp@wildlife.nh.gov](mailto:raarp@wildlife.nh.gov).

To learn more about black racers, visit [www.wildnh.com/nongame](http://www.wildnh.com/nongame).



# Thank You, Volunteers!

Restoring threatened and endangered species and their habitats cannot be accomplished by a single person or even a single government agency. Looking back, it is amazing to see the difference that has been made because of the many hands that helped. True conservation happens when people come together to meet

## Karner blue butterfly captive rearing

Sean Ford  
Ericka Shimkonis  
Kathy Conners  
Kevin Naughton  
Student Conservation Association  
Boston Museum of Science  
Roger Williams Park Zoo  
USFWS Parker River Refuge  
Albany Pine Bush Preserve Commission

## Pine Barrens habitat management

Concord YES Team  
Zoo New England  
Buttonwood Zoo  
Kids for Karners - Concord Schools

the challenges that threaten our most treasured natural resources. It is with the greatest appreciation from all of us at the Nongame and Endangered Wildlife Program that we say thank you to all those who volunteered their time (and their hands!) to work together to protect some of New Hampshire's endangered species this summer.

## Piping plover monitoring

Don Felix  
Len Medlock  
Elizabeth Monsees  
Kevin Fleming  
Pam Failing  
Eva Powers  
Sandy McMillan  
Galen Beale

## Black racer project

Russell Animal Hospital  
Todd Aubertin



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## NH Dragonfly Survey Is Moving North

2011 marks fifth and final year for project

The start of the fifth and final year of the N.H. Dragonfly Survey next spring will be somewhat bittersweet. Prior to the survey, little was known about dragonflies in New Hampshire. But thanks to a dedicated group of volunteers and the biologists who worked with them, we now have the most up-to-

date and comprehensive data collection ever for the dragonflies and damselflies of New Hampshire.

“Prior to 2007, there had been no systematic effort to collect data on dragonfly distribution in New Hampshire,” said Pamela Hunt, of NH Audubon, who coordinates the survey. N.H. Fish and Game, NH Audubon and the UNH Cooperative Extension partnered to create the N.H. Dragonfly Survey in effort to gain a better understanding of dragonfly and damselfly distribution in New Hampshire, especially those species of potential conservation concern.

“Little did they know how wildly popular this would be,” said Mike Bartlett, the President and CEO of NH Audubon. Just this year, volunteers spent over 1,500 hours, drove more than 12,000 miles and surveyed at least 120 towns throughout the state!

“Not all of the data has been submitted yet,” said Hunt, who expects those numbers to rise. “The number of records

will probably be off the charts.” Hunt estimates that as many as 6,000 new records of dragonfly observations will be added.

The volunteer-based N.H. Dragonfly Survey has provided a wealth of data for the southern part of the state. In its final year, the focus of the N.H. Dragonfly Survey will shift northward.

“Next year, it will be important to keep the momentum going to update the information for the northern parts of the state,” said Hunt. “Although there are lots of old data from the north, some of those records are over 30 years old. It will be important to revisit many locations to determine the current status of these northern species.”

To learn more about the N.H. Dragonfly Survey, visit [www.wildnh.com/Wildlife/Nongame/dragonflies](http://www.wildnh.com/Wildlife/Nongame/dragonflies).

To learn more about NH Audubon, visit [www.nhaidubon.org](http://www.nhaidubon.org).



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# Celebrating 10 Years of Conservation and Karner Success on the Concord Pine Barrens

This summer marked the 10th anniversary of the Karner blue butterfly and Pine Barrens Habitat Restoration projects in Concord, N.H. Over 13,000 adult butterflies were raised in captivity and released into the wild and more than 1,800 nectar seedlings were planted this season.

“One of the highlights this year was that we were able to send 2,150 Karner blue butterflies to New York for release in the Albany Pine Bush Preserve,” said Lindsay Webb, a biologist with the Nongame and Endangered Wildlife Program. “Giving the butterflies to N.Y. was especially significant, because that is where the first butterflies came from ten years ago when New Hampshire had none.”

Over the past decade, biologists have witnessed a continuing trend of increasing numbers of wild Karner blue butterflies in N.H. This year, over 400 individual wild butterflies were observed during surveys, and they represent only a portion of the actual population of wild Karner blue butterflies that is now thriving in the area.

Approximately 320 acres of pine barrens in Concord are managed using a combination of methods, including heavy equipment and prescribed burns to clear the land, and planting native nectar plants such as wild blue lupine to provide a food source.

“We had read about how Karners respond to controlled burns in other research, but this was the first year we observed it for ourselves,” said Heidi Holman, a biologist with the Nongame and Endangered Wildlife Program.

After burning a section of the pine barrens, biologists witnessed a large number of Karner blue butterflies concentrated on that specific area. “The interesting thing was that the butterflies had not used this area at all before,” Holman said. “When the wild blue lupine came up, it may have contained more nutrients from the recent burn, which may be why the wild Karners were so attracted to it.”

A big contributor to the habitat restoration effort’s success was the collaboration among the N.H. Fish and Game Department, the Federal Aviation

Administration, the N.H. Department of Transportation, and Concord Airport to modify mowing procedures to allow nectar plants and seasonal grasses to grow. Just recently, over 750 wild Karner blue butterfly eggs were found on approximately 13 acres of grassland that borders the Concord Airport.

Both Webb and Holman recognize that much of the project’s success can be attributed to the tremendous support the project has received from many partners, including the N.H. Army National Guard, the U.S. Fish & Wildlife Service, the N.H. Division of Resources and Economic Development – Forest and Lands Bureau, the City of Concord and Concord Airport, the Concord Fire Academy, the Concord School District, Zoo New England, the Roger Williams Park Zoo, Buttonwood Zoo and the Albany Pine Bush Preserve.

A 10-year Karner study report summarizing activities from 2000-2010 should be complete this winter. Captive rearing and habitat management will resume next spring.

## 2010 HABITAT HIGHLIGHTS

Controlled burn = 17 acres

Seedlings transplanted = 1,800

Acres seeded with lupine = 6

Acres mowed = 8

Selective cutting = 25 acres



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Volunteers such as these students from Roger Williams Park Zoo in R.I., have played a key role in both captive rearing the Karner blue butterfly (right) and restoring the pine barrens habitat (left), including planting and growing wild blue lupine (above).



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# 2010 Annual Fund Campaign Success

Thank you for your support!

The Nongame and Endangered Wildlife Program is pleased to acknowledge over 1,000 donors for their generous support of our 2010 Annual Fund Campaign. Each spring, committed supporters like you make the protection and restoration of New Hampshire's threatened and endangered wildlife and their habitats possible. Your continued support helps preserve for generations to come the diversity of wildlife that makes New Hampshire so special.

To view the complete roster of these donors, visit us online at [www.wildnh.com/wildlife/nongame/hall\\_of\\_donors.htm](http://www.wildnh.com/wildlife/nongame/hall_of_donors.htm). On behalf of everyone at N.H. Fish and Game, thank you.



John J. Kanter  
Nongame and Endangered Wildlife Coordinator





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*SHOREBIRDS continued from page 3*

in the number of nesting pairs and the theft of four eggs from a nest at Hampton Beach State Park. Four breeding pairs of state-endangered and federally threatened piping plovers successfully raised six fledglings this year.

“Much of the success is thanks to volunteers who were consistently there throughout the summer, to beach residents and visitors who were respectful of the birds during the breeding season, and to town

and state park officials who supported habitat management efforts,” said Heather Kleczek, a biological aide with the Nongame and Endangered Wildlife Program. “We wouldn’t be able to do this project without their support, and we appreciate their help tremendously.”



**NEW HAMPSHIRE PIPING PLOVER TOTALS**

Year	Nesting Pairs	Chicks Hatched	Chicks Fledged	Productivity
1997	5	18	3	0.6
1998	5	16	12	2.4
1999	6	20	16	2.7
2000	6	18	14	2.3
2001	7	19	15	2.1
2002	7	12	1	0.1
2003	7	15	7	1.0
2004	4	11	4	1.0
2005	3	7	0	0.0
2006	3	9	2	0.7
2007	3	4	1	0.3
2008	3	11	6	2.0
2009	5	8	2	0.4
2010	4	11	6	1.5
<b>Avg.</b>	4.9	12.8	6.4	1.2
<b>Total</b>	68	179	89	



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*Piping plovers are state endangered and federally threatened. Although only a few pairs nest in N.H. each year, they are part of a much larger population that expands up and down the East coast.*

**FALL Wildlife Almanac**

**OCTOBER**

- State-endangered marbled salamanders continue to breed and lay eggs this month. Except for the breeding season, marbled salamanders live mostly underground. Because they cannot swim, they lay their eggs at dried up vernal pools just before the autumn rains fill the pools again.

**NOVEMBER**

- Golden eagles can be seen from southwestern hilltops early this month, as they pass by on their migration route from northern locations like Quebec, Labrador and Greenland.

**DECEMBER**

- Start your holiday shopping with a visit to a local bird supply store. Bird feeders, seed and suet make a thoughtful holiday gift for both people and wildlife!

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