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# Wildlines

FALL 2011

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

## Productive Year For Piping Plovers

State endangered and federally threatened piping plovers that nest and raise their young on Hampton and Seabrook beaches did very well this year, with the highest breeding productivity in the past decade!

This year a total of 4 breeding pairs successfully raised 8 chicks. Seabrook was home to two pairs of piping plovers who successfully raised 3 chicks each; a third pair called Hampton home and successfully raised 2 chicks. The last pair also nested at Hampton, but abandoned their first nest and also their second nest. The reason is not known, but biologists assume

*PLOVERS continued on page 3*



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## Upland Sandpipers

Successful year for state-endangered upland sandpipers nesting in Newington

Among the N.H. Air National Guard refueling planes taking off and landing along with other air traffic at Pease International Tradeport in Newington, biologists were able to confirm 8 pairs of state-endangered upland sandpipers in the grassy areas between and around airport runways. The total may be as high as 12 pairs.

Two upland sandpiper adults and 2 chicks were successfully captured, affixed with radio transmitters, and tracked with radio telemetry this summer. The birds were found not only in the center strip between runways, but also to the east and west of the runways.

The most significant finding this year was the return of one upland sandpiper that had been banded at Pease last year. Sadly, the bird was killed when struck by an aircraft. Because it was banded, though, biologists were able to confirm that it had nested in New Hampshire last year, and that it successfully made the migratory flight all the way to South America and back!



*An adult upland sandpiper sports a new radio transmitter; a nest in the grass contains a clutch of sandpiper eggs.*



# Black Racers

It was a phenomenal year for learning about state-threatened black racer snakes in New Hampshire. Biologists used radio telemetry to track more than 20 racers in southern N.H. – from Weare up to Webster and New Boston over to Northwood.

“Last year I tracked the snakes that had transmitters until the end of September, when almost all of them had gone into hibernation,” said Loren Valliere of the Nongame and Endangered Wildlife Program. “This spring, we were able to locate them right away. One day in April we saw 8 snakes at the same location. We assume they had all just come out of hibernation.”

Immediately after hibernation, black racers move to find other snakes, mate and then begin to shed. “After about a week, once shedding is complete, they take off,” said Valliere. “We used radio telemetry to locate each snake twice every week.”

At most sites, there are at least 2 snakes with radio transmitters, including one male and one female. The longest known distance that one snake traveled was 3 miles. Males tended to travel further than females, and larger males rarely crossed into each others’ areas.

While biologists did not find any nesting sites, they did observe neonates (newly born snakes), which gave them an idea where nesting may have occurred. Potential nesting areas were marked with a GPS for future monitoring.

One of the most exciting things this year, according to Valliere, was talking with people while she was out in the field tracking the snakes. “We talked to so many people this year and made them aware of the snakes. Once you let people know that black racers are harmless and explain that they are part of the ecosystem, so many people were interested and wanted to chat!”

By mid-September, the snakes were moving back to their hibernation areas and getting ready for the upcoming winter. Thanks to the many federal, state, and private landowners who allowed Fish and Game researchers access on their property to study the snakes. Data collected from the last 2 years will be analyzed this winter. We hope to continue the study for one more field season to gain knowledge about additional sites.



*Biological aide Loren Valliere holds one of 20-plus black racer snakes that are being tracked for population and habitat research.*

# Boost for Blanding's

New grant to provide funding for range-wide protection

Blanding's turtles are listed as endangered here in New Hampshire, and are identified as one of the reptile species most in need of protection throughout the Northeast.

The New Hampshire Nongame and Endangered Wildlife Program authored a successful proposal to the nationally competitive State Wildlife Grants program for \$637,000. Of these federal funds, \$331,000 will come to the Granite State. The objective of the grant is to maintain and enhance wildlife habitat in New England, New York, and Pennsylvania by applying conservation practices needed to support a healthy Blanding's turtle population. Similar to other federal grants, N.H. Fish and Game will be required to raise funds to match these federal grant dollars with non-federal dollars.


Project partners include: four other



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state wildlife agencies (Mass., Maine, New York, Pennsylvania), transportation departments from each state, three universities (University of Massachusetts-Amherst, University of Maine-Orono, State University of New York), the U.S. Fish and Wildlife Service, the U.S. Department of Agriculture's Natural Resources Conservation Service, and multiple private and non-profit groups.


"This funding is critical in protecting Blanding's turtles – not just here in

New Hampshire, but throughout its entire range," said Mike Marchand of the Nongame and Endangered Wildlife Program. "Because of this grant, we will be able to work collaboratively with other states and look at the big picture across political borders. The long-term goal is to maintain viable populations of Blanding's turtles throughout the entire Northeast, as well as the many other species that use similar habitats." 

## PLOVERS continued from page 1

they may have been disturbed by feral cats in the area.

"Overall, most people seemed interested and enjoyed seeing the birds,"

said Toni Mikula of the Nongame and Endangered Wildlife Program. "They are so adorable and so easy to watch. You feel like you get to know each individual bird." 



"Exclosures" keep predators and people away from plover nests.

NEW HAMPSHIRE PIPING PLOVER TOTALS		
Year	Nesting Pairs	Chicks Fledged
1997	5	3
1998	5	12
1999	6	16
2000	6	14
2001	7	15
2002	7	1
2003	7	7
2004	4	4
2005	3	0
2006	3	2
2007	3	1
2008	3	6
2009	5	2
2010	4	6
2011	4	8
<b>Total</b>	<b>72</b>	<b>97</b>

# Freshwater Mussels Decline

Alarming results from recent studies of freshwater mussels in seacoast

Ethan Nedeau of Biodiversity LLC conducted several freshwater mussel surveys in southeastern New Hampshire, under contract with the Nongame and Endangered Wildlife Program (funded by State Wildlife Grants) this year. Monitoring focused on identifying locations of state-endangered brook floater mussels in the Lamprey and Exeter rivers and eastern pond mussels (a species of special concern) in several ponds and lakes in southeastern New Hampshire.

No brook floater mussels were located in the Exeter River; it is likely that the species is extirpated from the watershed. More surprisingly, after an intense effort, only 11 scattered individual brook floater mussels were found in the Lamprey River, including several locations where the species was robust just a decade ago. Mussel diversity, in general, was extremely low in the Lamprey River.

Eastern pond mussels were found in 6 of 18 waterbodies surveyed, including 3 waterbodies where the species had not previously been documented (Country Pond in

Kingston/Newton, Cobbetts Pond in Windham, and Little Island Pond in Pelham). Pond mussels were also located in Great Pond-Kingston, Powwow Pond-Kingston and Wash Pond-Hampstead. The most robust populations were found in Wash Pond, the only pond where juvenile pond mussels were detected.


Relatively low abundances of pond mussels were detected in the other ponds, and the species appears absent from one pond it historically occupied (Big Island Pond-Hampstead/Derry). The surveyors speculate that reduced mussel occurrence and abundance could be at least partially due to lake management activities in these waterbodies (e.g., intense drawdowns).

“There was a striking difference in mussel densities between shallow versus deepwater areas of Island Pond in Hampstead/Derry. Over 900 individuals of various other mussel species were found and all except one were located in deep water,”



Nedeau stated.


“Island Pond is intensively managed, including deep seasonal drawdowns to control aquatic nuisance plants. It is possible that these activities are having an adverse effect on native mussels,” added Nedeau.

Freshwater mussels are often considered good indicators of overall ecosystem health. One mussel species gone from the Exeter River watershed and almost gone from the Lamprey River – and another species that is in apparent decline – give reason for concern in the seacoast region. 

# Terns Fare Well

Another successful season for terns at the Isles of Shoals

2011 was smooth sailing for the tern colony out at the Isles of Shoals! Favorable weather and good productivity led to another successful breeding season. The chicks fledged and the biologists packed up and fled the island just before Hurricane Irene hit on Labor Day weekend.

The table at right shows an overview of tern colony numbers over the past 14 years. 



*Juvenile common tern*

## 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
2011	2811	49	5


# Karner Blue Butterflies

NH Karner Blue Team helps out New York

The Karner blue butterfly connection between New Hampshire and New York started a decade ago, when the fate of New Hampshire's population of the small blue butterfly rested on the shoulders of a few Karner blue butterflies from the Empire State. In order to bring back the Karner blue butterfly to Concord, N.H., in 2000 biologists worked with officials to bring butterflies from New York to start a captive rearing program, and this continues to occur on a yearly basis. This began the reintroduction of Karner blue butterflies on and around the Concord Municipal Airport.

Several years ago, the Albany Pine Bush Preserve Commission in New York partnered with N.H. Fish and Game to bring some of the captive-raised butterflies back to New York for release. Neil Gifford, director of conservation for the Commission, said, "The Commission's habitat restoration success resulted in more habitat than the remnant Karner blue butterfly popula-

tion could colonize; a task made increasingly difficult in a landscape where open space is heavily fragmented by roads and other development. To accelerate the colonization of newly restored habitat, the Commission partnered with the New Hampshire Fish and Game Department." Since 2008, more than 2,000 butterflies have been released at 12 sites throughout the Albany Pine Bush Preserve, all of which continue to produce completely wild populations.

"It's really wonderful that New Hampshire is in a position to help restore the Karner blue butterfly population not only here in New Hampshire, but also in New York," said Lindsay Webb, wildlife biologist with N.H. Fish and Game. "It is a reminder that while this butterfly's range in New England is only here in Concord, it's also a part of the diversity of wildlife found in New York and throughout the upper Midwest. We are proud to help the entire population of Karner blues." 




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## Thank You Volunteers!

Fall is a great time of year for us to pause and reflect on all that was accomplished during the busy field season; looking back, it is heartwarming to see the names of so

many people who took time out of their busy lives to volunteer for the Nongame and Endangered Wildlife Program.

It is with sincerest gratitude that all of the staff here in the Nongame Program say "Thank you" to each and every volunteer who helped out this year! 



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### 2011 Nongame and Endangered Wildlife Program Volunteers

Peter Abdu  
Sally Bird  
Canterbury 4-H Club  
Jaclyn Comeau  
Concord Area Schools  
Concord Youth Environmental Services Team  
Michelle Caraway  
Bonnie Curtin  
Cynthia Daigle  
Tina Davenport  
Brenda Davidson  
Sarah Demers  
Don Felix  
Kenna Foley  
Nick Fortin  
Cameron Gill  
Beth Gilmore  
Peter Good  
Adam Gravel  
Ian Hanley  
Hampton Beach State Park

Erin Hariman  
Deb Jaskula  
Brittany Leick  
NH Army National Guard  
Parker River National Wildlife Refuge  
Jamie Panunzio  
Riley Patry  
Claudine Pied  
Anne Purinton  
Ben Roberts  
Roger Williams Park Zoo  
Karen Rowland  
Russell Animal Hospital  
Matthew Scales  
Seabrook Civic Association  
Seabrook Department of Public Works  
Zak Smith  
Emily Spognardi  
Michelle Stover  
Student Conservation Association  
Manchester

# NH Dragonfly Survey completes its 5th and final year



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The past 5 years have been phenomenal for the N.H. Dragonfly Survey. When the project started, very little was known about dragonflies in New Hampshire. Now, there are more than 16,000 documented records of dragonflies for the entire state; 30 towns have more than 75 species documented, and 6 towns have more than 100!

“The volunteers have been so enthusiastic,” said Pam Hunt of New Hampshire Audubon, who is working under contract with the Nongame Program to coordinate the Dragonfly Survey. “This year we had 34 returning volunteers who put in over 1,400 hours and drove more than 10,000 miles – which is amazing!”

Because of those volunteers, and Hunt’s training and encouragement, biologists now know the statewide distribution for 164 species of dragonflies.

*DRAGONFLIES continued on page 8*

## Pine Marten

### American Pine Marten Study continues in the North Country

Summer 2011 was a busy but successful field season for researchers working on the American marten project in Millsfield, where 33 wind turbines are currently under construction. “We were able to recapture all of the marten we had previously collared and replace their transmitters and capture new individuals and collar them as well,” said Alexej Siren, a graduate student at the University of NH working on the project.

A total of 12 marten were captured including 5 that were recaptures (originally caught last year) and 7 new marten. Out of the 12 marten, 8 were males (1 juvenile) and 4 were females (1 juvenile). “Juveniles are not used for monitoring to determine home range because they often travel further than adults,” explained Siren. “Young are dispersing and trying to establish their own territory so if we tracked their movement it would appear they have a much larger home range than they actually do.”

Males were significantly larger than females in both weight and length. “Overall, summer weights were greater than winter and 2 of the females were lactating, indicating that the habitat is productive for marten,” Siren said.

Siren will continue to track the collared marten over the upcoming winter. “This will be the second winter tracking some of the same individuals from last year and the first winter tracking some of the new animals,” said Siren. “The increased number of animals will provide more information on winter habitat use, effects of wind development on marten activity and movements, home range size, and will also let us compare habitat use from one winter to the next.”

Several volunteers assisted with the pine marten project this summer. Please see the “thank you to volunteers” section for a complete list!



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# Successful 2011 Annual Fund Campaign


Thank you for your support!

The Nongame and Endangered Wildlife Program is excited and grateful to announce that the 2011 annual fund campaign was a success. Because of the generous donations made by more than 1,000 compassionate people and organizations, the Nongame and Endangered Wildlife Program reached its fundraising goal and met the state's challenge to qualify to receive \$50,000 in matching funds from the State of New Hampshire!

As we report in this fall issue of *Wildlines*, the variety of work going on in New Hampshire is tremendous. From new research on pine martens up north to continued monitoring of black racers down south, efforts are underway throughout the entire state to benefit nongame, threatened and endangered species in New Hampshire. All this work is made possible thanks to our generous supporters!

To view the complete Roster of Donors, visit [www.wildnh.com](http://www.wildnh.com) and type "nongame donor" in the search box.

On behalf of everyone at N.H. Fish and Game, thank you for your continued support!



John J. Kanter  
Nongame and Endangered Wildlife Coordinator



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Hunt noted that most of the target species biologists were hoping to find were in fact documented. And, most have been found to be more common than previously known. “Some species were thought to be rare but they actually are everywhere, we just never looked!” said Hunt.

The scarlet bluet, for example, was previously thought to be a coastal plain species, and there were only 5 records of it occurring before the Dragonfly Survey began. Now, there are more than 40 records of the species here in New Hampshire, being found as far north as Berlin!

Seven species had historic records of being here in New Hampshire, but were not found over the past 5 years of the Dragonfly Survey. “Some of the records were over 100 years old, some were of species that are only known to occur over 100 miles away. Some of them, the specimens were gone, so we could not verify the records,” Hunt stated.

One in particular was the zigzag darner, which is found in Maine and New York – but there was just a single old record of it being here in New Hampshire, at Hermit Lake, near the base of Tuckerman’s Ravine, 75 or 100 years ago. Zigzags were not seen during two visits to Hermit Lake this

summer. There was a possible sighting of one by a volunteer at Lonesome Lake in Lincoln; unfortunately, the volunteer was unable to capture it to get a close look and verify if in fact it was a zigzag darner. “It is likely they are present because of their close occurrence in Maine,” Hunt explained. “This is not a highly populated area so they may be here but just not being seen.”

Another interesting species is the rainbow bluet, which is expanding east from the Great Lakes. Hunt documented one in 2005, the year before the Dragonfly Survey began, but none were found again during the 5 years the N.H. Dragonfly survey took place.

The data collected from the survey will provide a baseline for dragonfly species distribution and abundance. “We don’t know how climate change will impact dragonflies, especially in high-elevation habitats,” said Hunt. “Twenty years from now, the project may be repeated and the results could be compared to see how dragonfly species have changed over time,” Hunt explained.

In the near future, however, the find-



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*Autumn meadowhawk dragonfly*

ings from the N.H. Dragonfly Survey will provide useful information for biologists to reassess what species we should be concerned about and what changes, if any, need to be made to the state list of threatened and endangered species.

As for Hunt and the volunteers, says Hunt, “We will keep looking!”

To learn more about the N.H. Dragonfly Survey, visit N.H. Fish and Game’s Nongame Program online at [www.wildnh.com/Wildlife/Nongame/dragonflies](http://www.wildnh.com/Wildlife/Nongame/dragonflies).

To learn more about N.H. Audubon, visit [www.nh.audubon.org](http://www.nh.audubon.org).



## FALL Wildlife Almanac

### OCTOBER

- Watch for a flutter of orange – it may be a monarch butterfly passing by on its 2,500-mile journey to Mexico for the winter!

### NOVEMBER

- Deer aren’t the only ones in the rut this time of year...the breeding season for porcupines peaks this month! Adults will remain active throughout the winter, feeding on woody vegetation such as buds and pine needles until young are born next April.

### DECEMBER

- The water may be a chilly 40 degrees, but round whitefish spawning peaks this month in Lake Winnepesaukee and Newfound Lake. A single female spawns 5,000 - 20,000 eggs!

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