

Wildlife

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www.njfishandwildlife.com

Researchers' Goal: Find More Rattlesnakes

Major research is under way to find more of New Jersey's endangered timber rattlesnakes and their dens before burgeoning development disrupts or destroys the species' sensitive habitat.

The New Jersey Department of Environmental Protection's (DEP) Endangered and Nongame Species Program (ENSP) is focusing its research within the Highlands and the Pinelands regions, where several new dens were discovered in recent years, and more likely exist. ENSP biologists are particularly concerned about these regions because much of the open space is unprotected, and some areas are slated for development.

Timber rattlesnakes typically forage for food in the same areas year after year, and female rattlesnakes use the same gestation sites for generations. Young snakes follow adult scent trails to dens, and will return to these dens throughout their lifetime. Once these critical habitats are destroyed, the snakes may struggle to adjust, but often are unable to survive.

Under the leadership of Governor James E. McGreevey, the DEP this spring is expected to propose new regulations that will strengthen New Jersey's 1973 Endangered Species Conservation Act by extending protection of rare wildlife to upland habitats such as those favored by rattlesnakes. These rules require habitat conservation plans for any new development occurring in areas inhabited by threatened or endangered species.

ENSP Senior Biologist Kris Schantz said researchers use small radio transmitters implanted in the rattlesnakes to locate

new dens and learn more about the species' critical habitats. During the past three years, rattlesnakes with radio-transmitter implants revealed previously unknown dens in the Highlands and the Pinelands.

"Once new den sites are located, we attempt to work with landowners and developers to help them understand how human activity and land use changes can affect the snakes' habitat and, ultimately, the species' survival," Schantz said.

Although the current size of New Jersey's rattlesnake population is unknown, ENSP biologists say the species' numbers have dwindled drastically in recent decades.

Expanding development and its accompanying acres of lawn and paved roads have replaced open lands that the snakes had long established as grounds for foraging, basking, gestating and denning.

Despite their seemingly invincible image, rattlesnakes also fall prey to black bears, coyotes, hawks, owls, eastern king snakes and

black racer snakes. Further, in the Northeast region, the female rattlesnake does not reach maturity until she is 8 or 9 years old. Then, she may produce six to 10 young only once or twice during her lifetime, and survival of the young is generally uncertain.

ENSP biologists work to educate communities about living safely in venomous snake country. "Years of misinformation and Hollywood movies have portrayed rattlesnakes as evil, aggressive animals, encouraging people to kill them," Schantz said. "They're actually passive animals."



Timber rattlesnake.

Stay safe in rattlesnake country

Red Knots May Be Abandoning Delaware

Message from Larry Niles, Chief
Endangered and Nongame Species Program

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"To actively conserve New Jersey's biological diversity by maintaining and enhancing endangered and nongame wildlife populations within healthy functioning ecosystems."



Why did last May's peak count of migrating red knots on the Delaware Bay decline precipitously, from 2002's already low total of 32,000, to 16,000 birds? Did they die before they got to the Delaware Bay, or did insufficient quantities of horseshoe crab eggs force them to stop elsewhere en route to their Arctic breeding grounds?



That's the fundamental question a team of scientists, led by the Endangered and Nongame Species Program, tried to answer during a two-week research expedition to Tierra del Fuego in February. The 15-person team included experts from Chile, Canada and the Netherlands. We discovered that the total number of red knots at the principal wintering ground on Bahia Lomas, along the Straits of Magellan, had not declined significantly. They totaled about 29,000, compared to 33,000 last year.

Because the number of adults had not declined significantly, we determined there hadn't been enough horseshoe crab eggs available during the birds' stopover on the Delaware Bay last May. As a result, the adults were forced to feed elsewhere on something else, which is why the number of birds on the bay was so much lower than the number of birds in Chile this winter.

Since nothing the red knots can eat contains a comparable amount of caloric energy as the crab eggs, the red knots either weren't able to eat enough to get to the Arctic or they didn't have enough energy to breed once they arrived. The result was a decline in productivity that resulted in virtually no juveniles this winter in Tierra del Fuego. Of the 112 red knots we were able to capture there in mist nets and tag, only one was a juvenile or first-year bird. While a larger catch to strengthen our sample would have been preferable, that lone bird clearly represented a significant decline in juveniles. In previous years, we were catching an already low ratio of just six juveniles per 100 adults, and this past fall our surveys only counted one juvenile per 100 adults during their southbound migration.

These developments also do not bode well for at least five other species that rely upon the Delaware Bay crab eggs: ruddy turnstones, sanderlings, semi-palmated sandpipers, short-billed dowitchers and dunlins.

Besides horseshoe crab overharvesting, last year's dearth of crab eggs on the Delaware Bay was partially a result of the spring's unusually cold water and rough wave action, which delayed the egg laying. If there are sufficient eggs laid this spring, we expect the number of red knots on the bay could rebound. To provide an optimum environment for the horseshoe crabs this spring, we plan to minimize disturbance from people and dogs by stepping up beach-protection efforts. We're also trying to figure out how to minimize feeding competition from gulls.

Significant Conservation Strides In South America

Fortunately, our trip also resulted in significant strides toward preserving the critical Bahia Lomas wintering grounds. These included:

- Provincial authorities in Bahia Lomas enthusiastically provided written support for a proposal the Division of Fish and Wildlife's Endangered and Nongame Species Program has submitted to the U.S. Fish and Wildlife Service to fund a new research and education facility on Bahia Lomas.

- National Chilean officials with whom we met indicated they would endorse the designation of Bahia Lomas as a wetland of international significance through the U.N.'s Ramsar Convention on Wetlands.

- Local officials in the nearby town of Punta Arenas agreed to create a new foundation to guide the continued conservation of Bahia Lomas.

We extend our congratulations to all the Chileans responsible for these preservation efforts, including biologists Ricardo Matus, Olivia Blank and Carmen Espoz and Punta Arenas businessman Jorge Jordan.

For more details on the expedition, please visit www.njfishandwildlife.com.

Annual Wildlife UPDATE

Keeping in mind that unusually cool and wet weather last spring reduced productivity for many species, the New Jersey Department of Environmental Protection's Endangered and Nongame Species Program offers the following brief review of the status of some wildlife populations.

BALD EAGLES: Record number of nesting pairs (40), active nesting pairs (35) and young (41).

OSPREYS: Record number of pairs (366) approximates estimated historic statewide population.

PEREGRINE FALCONS: Two nests on historic Palisades cliffs produced first cliff-fledged peregrine since 1973 ban of DDT.

ALLEGHENY WOODRATS: State's lone population continues to thrive at base of the Palisades, with yet another record sample trapping last fall.

SOUTHERN GRAY TREE FROGS: Surveys uncovered new breeding locations.

PINE BARRENS TREE FROGS: Leaped off state's endangered species list; status upgraded to threatened.

PIPING PLOVERS: A record 144 nesting pairs, but poor productivity.

LEAST TERNS: Adults increased, but productivity extremely low.

BLACK SKIMMERS: Adults reached 10-year average, but productivity moderate.

TIMBER RATTLESNAKES: Number of new dens located in Highlands, but species still faces significant development pressure on private lands statewide.

AROGOS SKIPPERS: Maintaining known breeding sites, but no new sites found.

SHOREBIRDS: Peak count of 16,255 red knots was lowest ever recorded on Delaware Bay.

EASTERN MUD SALAMANDERS: Survey of historic locations uncovered no individuals.

CLIFFSWALLOWS: Survey along Delaware River found only 330 pairs, a 66 percent decline from 1994. Will be resurveyed this year.

With Ongoing Support, Outlook For Ospreys 'Excellent'

The recovery of the osprey is one of New Jersey's rousing wildlife success stories.

When the New Jersey Department of Environmental Protection's Endangered and Nongame Species Program first began its work 30 years ago, ospreys faced extinction; only 50 to 60

pairs remained in the state. Their dwindling productivity was linked to the eggshell-thinning effects of DDT, a pesticide widely used for mosquito control beginning in 1946. Though DDT was banned nationally in 1973, ospreys and other raptors, including bald eagles and peregrine falcons, were slow to recover from its effects.

To bring back the endangered ospreys, state biologists in 1974 transplanted eggs from the healthier Chesapeake Bay population into nests around New Jersey's Barnegat Bay. As part of a program that continues today, biologists and volunteers also began erecting nest platforms in the marshes to replace trees lost to coastal development during the ospreys' decline.

Those efforts – and a cleaner environment – made the ospreys' comeback possible.

Last year's biannual aerial survey tallied 366 nesting pairs statewide. That represents a seven percent increase from the 2001 census and a modern record that falls within a pre-DDT estimate of 350 to 450 pairs. Most of the osprey pairs (298) are along the Atlantic Coast. Another 64 occupy the Delaware Bay region, while four inland pairs nest along the upper Delaware River.

"Ospreys, and possibly bald eagles, are arguably the first decimated species that have recovered to their approximate historic population levels," said Kathy Clark, a principal zoologist who has worked with ospreys since 1985. "Their recovery is the direct result of a great deal of work, particularly the efforts of Osprey Project volunteers who put up nest structures."

Ironically, ospreys' productivity last year was down by a third from the 1997-2002 average of 1.18 young per nest. The most likely cause of nest failure was the unusually cool and wet spring weather. Cooler waters might have delayed fish migration and spawning, resulting in lower fish stocks, and rainstorms caused water cloudiness that hindered the ospreys' hunt for fish. As hunting demanded more time and yielded less success, incubating partners may have been forced to leave their nests frequently, exposing eggs and young chicks to weather and predators. In June and early July, many nestlings died, apparently from starvation.

Other productivity concerns include a new generation of contaminants, widespread flame-retardant polybrominated diphenyl ethers (PBDEs), and the decline of certain fish stocks, especially Atlantic menhaden.

"Their long-range prognosis is excellent, if they continue to get support from those people who maintain the nest structures and give these birds some level of protection," Clark said.



Purchase Of Wildlife Prints Benefits Beach Nesters

Wildlife artist Phyllis Frazier will donate 10 percent from sales of two signed prints to benefit the Endangered and Nongame Species Program's work with beach-nesting piping plovers, least terns and black skimmers. The artist, based in New York City, pledged the donations to the Conserve Wildlife Foundation.



Sandwashed Shores – Winter Least Tern

© Phyllis Frazier

The artwork for sale features a 7- x 10-inch horizontal print of an original oil painting entitled "Sandwashed Shores – Winter Least Tern." The price is \$195 for a signed and numbered limited-edition print, or \$235 for a signed and numbered limited-edition artist's proof. There are no shipping and handling charges.

A signed archival-quality, 8- x 11-inch print of Frazier's "Piping Plover" drawing is available for \$25 and matted (9 x 12) for \$35. Both require an additional \$3.75 for shipping and handling.

"If I'm painting animals, I feel I should give something back and honor the animal itself," Frazier said of her pledge.

Learn more about Frazier and her artwork by visiting her Web site: www.pfrazier.com. To purchase one of her prints by either check or credit card, e-mail her at pfrazier@pfrazier.com; write to her at 66 Madison Avenue, New York, N.Y., 10016; or call her at (212) 779-7495.

The Endangered and Nongame Species Program is grateful for her gesture. It's a great way to add to your art collection while doing something to benefit New Jersey wildlife.

Watchable Wildlife

This spring, check out the following relatively unknown sites, which are also among 87 prime sites featured in the *New Jersey Wildlife Viewing Guide*.

TENAFLY NATURE CENTER

The nature center's diverse habitats include wetlands and deciduous forests. Frogs and turtles are common at Pfister's Pond in the spring and summer. Wood ducks and green herons breed at the pond, while black-crowned night herons and kingfishers are also present. For excellent songbird viewing, take the longer walks to the buttonbush swamp and through the woods in the spring. Trail maps are available.

Directions: From U.S. Route 9W, take East Clinton Avenue 1.9 miles west to Engle Street. Turn right and travel 0.7 miles to Hudson Avenue and turn right. Follow road until it ends at the nature center.

Information: Tenafly Nature Center Association (201) 568-6093.

BRIDGETON CITY PARK

Established in 1898, the park has two lakes and a pond connected by a waterway known as the Raceway. Canoes can be rented. Other attractions include the Cohanzick Zoo, Nail House Museum and Swedish Farmstead Museum. Great Blue herons are seen in the spring and river otters are present year 'round. Muskrats and wetland birds ply the marshes, while sand roads and trails around the lakes cut through an upland pine-oak forest, which harbors Fowler's toads, hognose snakes, southern leopard frogs and eastern box turtles. Spring and fall migrations offer great birding.

Directions: From the intersection of New Jersey Routes 49 and 77 in Bridgeton, go west on Route 49 for 0.2 miles to Atlantic Street. Turn right and go a long block to the park entrance.

Information: City of Bridgeton, (856) 455-3230.

To get your copy of the "New Jersey Wildlife Viewing Guide," send a \$14.90 check (\$10.95 plus \$3.95 s/h) payable to the Division of Fish and Wildlife to: New Jersey Department of Environmental Protection, Division of Fish and Wildlife, PO Box 400, Trenton, NJ, 08625-0400. Att: N.J. Wildlife Viewing Guide.

May

First week:

- Peregrine falcons hatch.
- Sanderlings and ruddy turnstones arrive.

Second week:

- Red knots begin arriving.
- Neotropical songbirds begin courting each other, forming pairs and building nests.

Third week:

- Shorebird numbers peak on Delaware Bay.
- Piping plovers begin hatching.

- Songbirds begin hatching.

Fourth week:

- Ospreys begin hatching.
- Least terns begin nesting.

June

First week:

- Shorebirds leave quickly for Arctic breeding grounds.
- Songbirds begin to fledge.
- Black skimmers begin nesting.

- Peak of heron/egret nesting.

Second week:

- Northern pine snakes begin laying eggs.

Third week:

- Piping plovers begin fledging.
- Territorial songbird singing begins to quiet down.
- Peregrine falcons start fledging.

July

First week:

- Bald eagles begin fledging.
- Herons and egrets begin fledging.

Second week:

- Ospreys start fledging.
- Least terns and black skimmers begin fledging.

Third week:

- Adult shorebirds begin migrating southbound through NJ coastal areas.

Calling All Teachers:

Reptile, Amphibian Teachers' Manual Available

Under the guidance of Endangered and Nongame Species biologists, New Jersey teachers have put together the "New Jersey Reptile and Amphibian Teacher's Manual."

"The manual offers 10 activities teachers can use to educate students about reptiles and amphibians in New Jersey," said Dave Golden, ENSP senior biologist. "The activities are primarily geared toward grades five to nine, but can be tailored for any grade level."

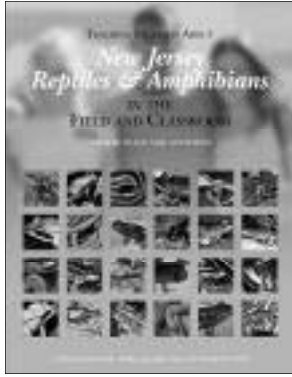
For \$24.95, teachers receive the following to enhance their curriculums:

"New Jersey Reptile and Amphibian Teachers' Manual," with a resource CD; ENSP's "Field Guide to Reptiles and Amphibians of New Jersey," and its companion CD, "Calls of New Jersey Frogs and Toads"; and The "Vernal Pool Field Guide"

The reptile and amphibian field guide and CD regularly sell for \$18. ENSP staff recently developed the vernal pool field guide.

The Sewell-based Educational Information and Resource Center (EIRC) worked with eight New Jersey teachers and ENSP biologists to produce the manual.

To order the instructional package, send a \$24.95 check payable to: Conserve Wildlife Foundation, P.O. Box 400, Trenton, NJ, 08625-0400. Att: Reptile and Amphibian Teachers Manual. For more information, call Pat Shapella at (609) 292-3707.



Touring Wildlife Exhibit Comes Home to Pequest

A unique traveling exhibit celebrating three decades of wildlife protection in New Jersey has reached its final destination following a nine-month, statewide tour.

In April, the New Jersey Endangered Wildlife Traveling Exhibit was permanently installed at the Pequest Trout Hatchery and Natural Resource Education Center in Oxford, Warren County. The exhibit features an interactive sliding screen that uses video, sound and photographs to showcase the 30-year history, achievements and challenges of endangered species protection in New Jersey.

Wildlife Conservation Corps Citizen Scientists Wanted

Are you an experienced birder who can identify a wide range of birds by both sight and sound? If so, the Endangered and Nongame Species Program anticipates needing your help on one or more research projects during this year's field season. Consider becoming a Wildlife Conservation Corps Citizen Scientist.

For more information, call Sharon DeFalco at ENSP's Assunpink office (609) 259-6963.



Learn more about rattlesnakes, fear them less

New Jersey's timber rattlesnakes are emerging from their dens now, just as people are spending more time in the great outdoors.

The Endangered Nongame Species Program (ENSP) wants to help people learn more about these snakes and fear them less.

ENSP Senior Biologist Kris Schantz said rattlesnakes rely mostly on their coloration as camouflage to protect themselves from predators, including people. If that fails, they may rattle and coil or attempt to escape. A rattling snake is signaling that you are threatening it, so retreat. "Striking and biting are an absolute last-ditch effort at self-defense," Schantz said.

If you encounter a snake, here's what you can do:

⊙ Carefully move away from the snake, and continue on your way, keeping your children by your side and your dog on a leash. The snake will not follow you; instead, it often will seek cover.

⊙ Never attempt to move a rattlesnake. An inexperienced handler risks injuring himself, others nearby and the snake.

Schantz said the ENSP has organized a Venomous Snake Response Team. Trained experts are available to safely move venomous snakes off private property.

If you find a timber rattlesnake or a northern copperhead on your property and want it removed, contact the ENSP immediately. Anyone who spots a rattlesnake within the Highlands or Pinelands regions is also asked to call ENSP; biologists may want to include the snake in their research.

Reporting Snake Encounters

Weekdays 8:30 a.m. - 4:30 p.m.

North Jersey: Kris Schantz or Mike Valent:
(908) 735-8975, 735-9281 or 735-2931

South Jersey: Dave Golden at (609) 628-2103 or
Kris Schantz at (908) 735-8975 or 735-9281

After hours and weekends

New Jersey Department of Environmental Protection
Action Hotline

1-877-WARNDEP (1-877-927-6337)

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Conserve Wildlife Foundation News

Message from Linda Tesauro, Executive Director

Foundation plays an increasingly critical role

DID YOU KNOW that before the Conserve Wildlife Foundation (CWF) of NJ was founded in 1998, it was very difficult for the Endangered and Nongame Species Program's biologists to raise critical funding for their important conservation work? Donations were sparse, and few people knew about the plight of New Jersey's endangered and threatened animals. As the nonprofit arm of the Endangered and Nongame Species Program, CWF assists with fundraising, public education and outreach. In just a few short years, we have grown significantly – thanks to people like you.

Every dollar we raise through membership, foundation grants and corporate contributions goes toward helping rare wildlife. We support the salaries of more than 10 biologists and Geographic Information Systems specialists. We work with teachers and students, heightening biodiversity awareness through contests and special classroom projects such as our peregrine falcon outreach in Jersey City. We also recruit volunteer Citizen Scientists to help conduct wildlife inventories that enhance habitat protection plans.

But these projects and others like them can only be done with the support of committed and caring people like you. If you are a member, thank you! If not, please mail your contribution in the enclosed envelope today! Help restore New Jersey's wildlife species and habitats, and contribute to a lasting legacy for future generations.

A big thank you to some of our major supporters

Thank you to the Geraldine R. Dodge Foundation for their continued support of CWF's Citizen Scientists Project. A special welcome to Waldwick Plastics, a new member of Corporations for Conservation of Wildlife. And very special thanks to the following Partners in Protection who contributed \$250 or more last year to protect our precious wildlife:

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(Left to right) Richard Weiman, Jr., CWF trustee; Linda Tesauro, CWF executive director; Manfred Riegg, president of Waldwick Plastics Corporation.

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