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Delaware River Is Key to Eagle Recovery and Challenges

he Delaware River plays a vital role in the comeback and continued viability of the bald eagle in New Jersey. During their near disappearance, one of the river's bay shore tributaries was the birds' last stronghold. Benefiting in part from the Endangered and Nongame Species Program's (ENSP) release of 60 Canadian eaglets during the mid-1980s, that historic breeding area has also proved to be the key staging area for the birds' comeback.

Today, there are a few bald eagle nests on reservoirs in central and northern New Jersey, and several more along Atlantic Coast streams. However, from a nest above the Delaware Water Gap to the nests

clustered along the Delaware Bay, about three-quarters of this year's record 40 active bald eagle territories depend upon the river's waters and its tributaries for habitat and sustenance.

The Delaware River's waters, both above the Water Gap and along its bay shore tributaries, also



New Jersey eaglets in their nest.

provide the greatest winter refuge for the birds in the state.

Yet, the Delaware River also graphically illustrates the challenges -- from development, human disturbance and lingering contamination -- that continue to plague some nests and keep the bald eagle listed as endangered in New Jersey. Despite the birds' comeback, these impacts continue to require significant efforts by ENSP biologists, other Division of Fish and Wildlife staff and Wildlife Conservation Corps volunteers, who monitor the nests daily

Concerned about the adverse effects of development on the state's natural resources, the New Jersey Department of Environmental Protection (DEP), under the leadership of Gov. James E. McGreevey, is developing tougher regulations to protect the habitats of the state's threatened and endangered species. These new regulations will make New Jersey a national leader in wildlife protection and will also be a key tool in Governor McGreevey's war on sprawl.

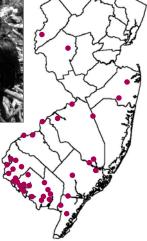
The most recent development challenge has been generated by

plans for residential housing, a marina and a golf course on Petty's Island, a partially post-industrial tract in Pennsauken Township along the Camden waterfront. This year, a pair of eagles erected a first-year nest in a wooded lot sandwiched between an abandoned tank farm and an active shipping container facility.

As a result, the DEP entered into negotiations with Pennsauken. "The goal is to develop a plan that preserves the most important areas for the bald eagles while minimizing the effects on the redevelopment efforts," said Larry Niles, ENSP chief.

It's a delicate situation. The nesting pair abandoned their nest several days before their eggs were expected to hatch – possibly when nearby shipping containers were moved. Development and its accompanying disturbances have also affected unproductive pairs in Burlington, Salem and Atlantic counties, indicating that the problem is not limited to a particular region. Also this year, a Salem County nest was blown out of a tree when a helicopter buffeted the nest. Amazingly, two fledglings survived.

Meanwhile, years after the banning of contaminants such as DDT and PCBs, their residues still show up in eagle blood, organs, addled eggs and fish samples, and curtail or prevent chick production in a half dozen nests. These nests are situated along the most polluted section of the river, from Philadelphia to the mouth of the bay in Salem.



Active bald eagle territories

"Each year there are at least one or two nests that are very hard to manage, mostly because of development pressures, and even nests on protected public lands can be affected by disturbances, such as illegal all-terrain vehicle use," said Kathy Clark, principal ENSP zoologist.

"The bald eagles are impressing us with their population recovery," Clark said. "But given these significant, ongoing impacts, at this point I don't think we're ever going to be able to walk away and say they are recovered."



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ENDANGERED AND NONGAME SPECIES PROGRAM MISSION

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





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Sourland Mountains:A New Protection Model

Message from Larry Niles, Chief Endangered and Nongame Species Program

annah B. Suthers has the longest privately run bird banding station in New Jersey. For most of the past three decades, the results of her survey and banding project, conducted within the heart of central New Jersey's Sourland Mountains, has stood in stark contrast to the drastic, historically unprecedented ecological changes occurring elsewhere in the state.

Thirty years ago much of the Sourlands, a low ridge nearly 20 miles long that covers more than 60 square miles between the Delaware River and the Raritan River and Delaware & Raritan Canal, was just one of many large patches of forest in the central New Jersey Piedmont. These large patches of unbroken forest supported a healthy population of interior forest-nesting birds such as scarlet tanagers and barred owls. They also provided much-needed resting and feeding areas for all the forest birds migrating throughout the vast megalopolis between Boston and Washington, D.C.

Much has changed during Suthers' project. During the past three decades, sprawling development has crept northward from Philadelphia and southward from New York, engulfing many of the



courtesy of Green Acres Progran

valuable wildlife habitats in the central part of the state. Most of the large forests that once supported interior or migrant birds have shrunk so small that cats, raccoons, blue jays and other suburban wildlife have been able to overwhelm the most sensitive forest dwellers. Small patches of woods remain, but they are no longer good habitat.

Except for the Sourlands. By some elegant twist of fate, much of the forest remains intact. Suthers still finds most of the species that were there 30 years ago. But even their numbers are rapidly diminishing. Sprawl has reached the Sourland Mountains. Although there have been protective measures including land acquisition, the vanguard units of sprawl, the McMansions, are creeping up the mountains from the valleys below.

Fortunately a group, the Sourland Planning Council, has taken up the fight to save the Sourlands, along with a coalition that includes the three counties the ridge straddles — Mercer, Hunterdon and Somerset — five townships, citizen volunteers on the planning boards, environmental commissions and members of local watershed and conservation groups. With a smart plan and good support from New Jersey's Department of Environmental Protection and the Department of Community Affairs, which provided an \$80,000 smart growth regional planning grant, the group has made great strides. It is developing a comprehensive management plan designed to preserve natural and cultural resources and encourage consistent land-use strategies in the entire region for state, county and local governments.

What most distinguishes this plan is that it is resident based. This is not a case of outside environmental groups trying to gather support for protection from residents, but rather local residents banding together and seeking help for protection from environmentalists and environmental agencies. In one of the state's most contentious land-use regions, this is a true test of a new model for protection. To facilitate the effort, the Endangered and Nongame Species Program is providing technical assistance, including conducting wildlife surveys and supplying critical habitat mapping, to the Sourland Planning Council. Hopefully, the council's resident-based actions will be emulated by citizens throughout New Jersey.

Crossing Guards Aid Amphibians The first evening spring rains that pro-

The first evening spring rains that prod amphibians from their winter upland habitats toward their breeding ponds can also cause them to become road kill.

But last March 20, two biologists with the Division of Fish and Wildlife's Endangered and Nongame Species Program (ENSP) and eight Citizen Scientist volunteers prevented a loss of life on the aptly named Shades of Death Road in Independence Township, Warren County.

With help from the township, which provided fluorescent cones and road signs, the biologists and volunteers closed down one lane of the two-lane road for 100 yards as it cuts through an area known as Great Meadows. Some team members alternately waved traffic through, while others made sure the roadway was free of salamanders and frogs. Any amphibians lingering in the lane were carried out of harm's way. In an hour and a half, about 265 spotted salamanders, 275 spring peepers and 210 wood frogs were safely escorted toward their breeding ponds, said ENSP assistant biologist Melissa Craddock.

"People in the cars couldn't have been more wonderful," said Kris Schantz, ENSP senior biologist. "They were really interested in what we were doing, and no one was angry about being delayed."

Next spring, the ENSP will partner with the New Jersey Audubon Society to expand the program to include more



Spotted salamander

prime amphibian breeding migration sites in Warren, Morris and northern Hunterdon

counties. If you

are interested in being summoned on a last-minute notice to help at a road crossing in these areas, please call the ENSP's northern regional office at (908) 735-9281. State biologists are also interested in learning of prime amphibian crossing areas elsewhere in New Jersey that might benefit from similar efforts in future years.

Going Batty Public Enjoys Fall Bat Tours

ne final caution,"
Melissa Craddock,
Endangered and Nongame
Species Program assistant
biologist, warned about 30
people gathered in the dark
outside an abandoned iron
mine earlier this fall. "Don't
look up at the bats with your
mouth open."

With knowing guffaws echoing along the rocky path to the mine, Craddock trained a small battery-powered spotlight on the Hibernia Mine entrance. Through the lattices of an iron gate flitted a dozen or so little brown bats. They circled outside the mine entrance and flew low over visitors' heads.

The ENSP conducts a series of nighttime public tours each fall at Bats hibernating in Hibernia Mine. the mine, which is part of the state's Wildcat Ridge Wildlife Management Area. The mine is New Jersey's largest known bat hibernaculum, sheltering six species totaling more than 30,000 bats, including one or two dozen federally and state-endangered Indiana bats. Beginning in October every year, the bats hibernate, suspending themselves from the same spot on the ceiling in the half-mile long mine shaft and halving their body temperature to the mine's 48 degrees Fahrenheit.

Before hibernation, however, the bats emerge from the mine, as they did during Craddock's tour, not to feed but to engage in mating rituals. Storing the sperm they receive, the females do not fertilize their single eggs until the spring. They then disperse to nursing colonies – trees, attics or barns –where most species have one young, called a "pup." Males also disperse during the summer.

"Lots of birds eat insects, but bats are the only major predator of night-time flying insects," Craddock said. "A nursing mother can eat 4,500 insects – more than her weight – in a single night."

Human disturbances during hibernation, the commercialization or closing of caves and mines and pesticide contamination have all been factors in the decline of some bat species. In 1989, the then-owner of the abandoned Hibernia Mine grew concerned about liability issues involving unwanted intruders, and sealed the mouth of the mine with concrete, entombing thousands of bats.

In response, New Jersey's Division of Fish and Wildlife convinced the owner to create a small opening for the bats in the concrete wall. Two years after endangered Indiana bats were found in the mine, Fish and Wildlife biologists, in cooperation with the U.S. Fish and Wildlife Service and Bat Conservation International, installed a bat-friendly iron gate. Ultimately, the New Jersey Department of Environmental Protection (DEP), through its Green Acres Program, purchased the mine and surrounding area to establish a state wildlife management area.

If you are interested in taking a guided bat tour next fall or you know about a summer bat roost and want to participate in our 2004 summer bat survey, call (908)735-9281.

Photo by Tony McBride

Watchable Wildlife

With its open waters, New Jersey offers excellent habitat for wintering bald eagles and waterfowl.

Following are some excellent locations to check out this winter. Additional information about all but the Cohansey River can be found in the *New Jersey Wildlife Viewing Guide*. To order a new copy see the next page.

BALD EAGLES

Delaware Water Gap National Recreation Area: From Interstate 80 Exit 1, turn left to the Kittatinny Point Visitor Center or go right and follow the Old Mine Road upstream. Info: National Park Service, (908) 496-4458.

Maurice and Cohansey rivers: The Maurice, in southeastern Cumberland County, and the Cohansey, farther west in the same county (from Bridgeton to Greenwich and the Delaware), both harbor year-round resident and wintering bald eagles. Check out any safe vantage point you can find on roadways along the rivers. Info: Endangered and Nongame Species Program (ENSP), (609) 628-2103.

Stow Creek Viewing Area: West of Greenwich on County Road 623 (New Bridge Road), on the boundary between Cumberland and Salem counties. A viewing platform south of the road, just west of Stow Creek, offers a view of a productive stream that now boasts two bald eagle nests. Info: ENSP, (609) 628-2103.

WATERFOWL

Edwin B. Forsythe National Wildlife Refuge: The eight-mile Wildlife Drive at the Brigantine Division of the refuge near Atlantic City offers one of the country's best opportunities to see thousands of migrating and wintering snow geese and other waterfowl, including brant and green-winged teal.



w geese at Forsythe refuge.

On Great Creek Road, off U.S. Highway 9 in Oceanville. Info: U.S. Fish and Wildlife Service, (609) 652-1665.

Whitesbog Village: Between mid-December to mid-March, as many as 500 tundra swans winter in the abandoned cranberry bogs outside of this historic cranberry and blueberry village near Browns Mills in the Pinelands. From NJ Route 70, take County Road 530 west 1.2 miles to village entrance, then follow any of the old bog roads out of the village. Info: Whitesbog Preservation Trust, (609) 893-4646.

Need A Speaker?

he Endangered and Nongame Species Program's Speakers Bureau offers interested groups an informative slide presentation and discussion on the program's efforts to research, manage and protect endangered and threatened species in New Jersey.

More than 50 trained volunteers from the Division of Fish and Wildlife's Wildlife Conservation Corps are available to conduct the half-hour presentation geared toward adult audiences.

For more details, or to schedule a presentation, call (609) 628-2103, or send an e-mail to: nongame@gtc3.com.

Wildlife Book Honored for Excellence

Endangered and Threatened Wildlife of New Jersey, an indepth, full-color guide produced this year by the Endangered and Nongame Species Program, has been named an "Outstanding Academic Title" by Choice magazine. The book, published by Rutgers University Press,



was singled out for excellence in scholarship and presentation, the significance of its contribution to the field and its value as an important treatment of its subject. To order a copy, see the next page.

November

Third week:

■ Peak of snow geese migration at Edwin B. Forsythe National Wildlife Refuge.

December

First week:

Harbor and gray seals begin appearing on New Jersey barrier islands and in estuaries. See them now through April.

Second week:

Wintering raptors, such as northern harriers, Cooper's hawks and short-eared owls, present throughout the state.

Final week:

Breeding bald eagle pairs begin courtship rituals and nest rebuilding.

January

First week:

Eastern tiger salamanders begin breeding in their breeding ponds.

Second week:

■ Wintering and resident bald eagles active, particularly near the Delaware Water Gap and along Delaware Bay tributaries, such as the Maurice and Cohansey rivers. Last year's Mid-Winter Bald Eagle Survey counted 149 bald eagles.

Give The Gift Of Wildlife This Season

he Division of Fish and Wildlife, the Endangered and Nongame Species Program (ENSP) and the Conserve Wildlife Foundation of NJ – the non-profit organization that supports the ENSP – is offering a handful of excellent gifts this holiday season. They include:

Endangered and Threatened Wildlife of New Jersey A richly illustrated, 336-page color guide to the state's 73 endangered and threatened wildlife species. Produced by the ENSP, the 7-inch-by-10-inch paperback retails for \$29. All author royalties benefit the Conserve Wildlife Foundation. It is available in bookstores, from online booksellers or directly through Rutgers University Press at http://rutgerspress.rutgers.edu or by calling (800) 446-9323 or (732) 445-7762. For phone orders, there is a \$5 shipping charge per book within the United States. Shipping is free for online orders.

Wild Places and Open Spaces - A Wildlife Enthusiast's Guide to Finding and Using Public Open Space in the Garden State This road map offers a wealth of information on exploring New Jersey's open spaces. It highlights public areas, such as state parks, forests and wildlife management areas. An accompanying chart features information about wildlife and activities, such as boat launches, canoeing, kayaking, hiking, biking, bird watching, fishing and hunting.

To order, send a \$4 check payable to: Division of Fish and Wildlife, PO Box 400, Trenton, NJ 08625-0400. Att: Wild Places Map. For discounted bulk orders of 50 or more, call (609) 292-9450.

New Jersey Wildlife Viewing Guide This 165-page guide is full of beautiful color photos and illustrations and provides directions to 87 of the state's best watchable wildlife viewing areas. It also offers information on site facilities, best viewing seasons and animals and habitats to see. Also includes five "Wildlife Diversity Tours" that link multiple sites and are ideal for two- to three-day trips.

To order, send a \$14.90 check (\$10.95 plus \$3.95 s/h) payable to: The Division of Fish and Wildlife, PO Box 400, Trenton, NJ 08625-400; Att: N.J. Wildlife Viewing Guide.

Field Guide to Reptiles and Amphibians of NJ and companion CD, Calls of NJ Frogs and Toads The extremely popular field guide and CD produced by the ENSP are \$10 each, or \$18 for both purchased together. To order, send a check payable to: Conserve Wildlife Foundation, PO Box 400, Trenton, NJ 08625-0400; Att: Reptiles and Amphibians Field Guide/CD.

See the Endangered Wildlife Traveling Exhibit

To commemorate the 30th anniversary of the New Jersey Endangered Species Conservation Act, the New Jersey Endangered Wildlife Traveling Exhibit is currently touring the state. The exhibit features a unique I-Wall, an interactive sliding screen that uses video, sound and wildlife photos to tell the story of the Endangered and Nongame Species Program's successful work in managing rare wildlife species during the past three decades. See why New Jersey is a leader in bringing back from the brink of extinction key species such as the bald eagle, peregrine falcon, bobcat, and osprey.

Produced by the Conserve Wildlife Foundation of NJ, in partnership with the New Jersey Department of Environmental Protection, the exhibit was funded by the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency and supporters of the Conserve Wildlife Foundation.

EXHIBIT SCHEDULE

11/26-1/30/04 • Meadowlands Environment Center, Lyndhurst
2/1-2/26 • PSE&G Headquarters, Newark
3/1-3/30 • Newark International Airport, Terminal B
Final Destination • Division of Fish and Wildlife's Pequest Trout Hatchery, Oxford

5th Grade Artists and Writers Wanted

2nd "Species on the Edge" contest launched

The Conserve Wildlife
Foundation of NJ is pleased to
announce its second "Species on
the Edge — Art & Essay Contest" for
fifth graders throughout the state.

Children must choose a species from the state's endangered and threatened list, research that species, draw a picture of the animal in its natural habitat, and write an essay about the animal's decline and what we can do to protect it from extinction. Winning entries will be used to produce the 16-month, full-color 2005 Conserve Wildlife of New Jersey Calendar. Ten thousand copies of the calendar will be distributed statewide to schools, companies and families.

Last year, nearly 1,500
fifth-grade students from 100
schools throughout New Jersey's
21 counties participated in the
first "Species on the Edge" contest. Teachers thought the contest and its accompanying lesson
plans fit perfectly into their
classroom studies and generated
great enthusiasm among their
pupils. Winning entries from each
county are currently featured in the
New Jersey Endangered Wildlife



Atlantic loggerhead, Mara Beth Ranson, Mercer County



Peregrine falcon, Danielle Grochowicz, Ocean County



Short-eared owl, Ako Matsuhashi, Essex County

Traveling Exhibit, commemorating the 30th anniversary of New Jersey's Endangered Species Conservation Act. The exhibit is now touring the state (see story on this page) and getting an excellent response from schoolchildren.

The contest runs from Nov. 3 to Jan. 31, 2004. All entries require a contest kit. To get one, please call (609) 984-6012. Contest kits may also be downloaded at www.ConserveWildlifeNJ.org.

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Conserve Wildlife Foundation News

Message from Linda Tesauro, Executive Director

Join CWF as a Member Today - Special Offer

If you haven't joined the Conserve Wildlife Foundation as a member yet, now is the time to do it! Basic membership is only \$25, - \$10 off the basic membership fee. We are offering this special rate because we need your support more than ever to help build capacity for rare wildlife conservation. Please take a moment to fill out the enclosed envelope and become a member today. You'll have the personal satisfaction of knowing that your contribution is helping to protect New Jersey's fragile and precious wildlife.

New \$10,000 Grant Presented for Wildlife Conservation

This fall, the Mushett Family Foundation presented the Conserve Wildlife Foundation with a generous gift of \$10,000 toward wildlife conservation. Created by the late Dr. Charles W. Mushett, a former research director of Merck & Co. Inc., the foundation recognizes the need to fund institutions that work to preserve land and wildlife, provide enlightened stewardship of these natural resources and educate the public on the importance of environmental stewardship. We thank the Mushett Family Foundation for their support and welcome them as a Partner in Protection of New Jersey's rare wildlife.



Linda Tesauro, executive director of the Conserve Wildlife Foundation of NJ, receives a donation from the Mushett Family Foundation Vice President John Engelhart (center) and President Henry Daaleman.

Attention Teachers! New Art and Essay Contest Announced

The Conserve Wildlife Foundation of NJ is proud to announce the 2004 *Species on the Edge Art and Essay Contest* open to all New Jersey fifth graders. Contest sponsors are the New Jersey Education Association, Benjamin Moore and Co., Conectiv, ShopRite Supermarkets, and Volvo Cars of N.A. There will be one winner from each county and the winners and the students' teachers will be featured on a new calendar for 2005. Please see previous page to find out how to enter.

Give a Gift of Meaning This Year: Adopt-A-Species

Do you know a child or an adult who loves snakes, frogs, turtles or birds? This year give a unique gift - Adopt-A-Species. Choose the animal of your choice and send the information to us <u>before December 16</u>. All gifts are sent with an attractive gift card, picture, and fact sheet about the animal. See www.conservewildlifenj.org for details or call Pat at 609 292-3707 for a brochure. Happy holidays and thank you for your support!

N.J. Department of Environmental Protection Division of Fish & Wildlife Endangered & Nongame Species Program PO Box 400

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