



Photo: MacKenzie Hall

ENDANGERED SPECIES SPOTLIGHT



Photo: Nick Scobel

Blue-spotted Salamander

As winter draws to a close, there is perhaps no more faithful a reminder of the onset of spring than the return of amphibians to woodland vernal pools. Among the earliest to arrive is the State endangered blue-spotted salamander.

The blue-spotted salamander, *Ambystoma laterale*, is a member of a family of salamanders called “mole salamanders,” because they spend most of their lives underground in abandoned small mammal burrows or similar cavities under rocks or logs. Blue-spotted salamanders average 3 to 5 inches in length. They are stout bodied and have a broad head with a wide mouth. They have a dark background color with light-blue flecking. Blue-spotted salamanders have a very limited range in New Jersey, occurring only in the Passaic River basin and in a few remote sites in

Warren and Sussex counties. Due to their “endangered” status and predominantly subterranean existence, they are not often seen. They are most likely to be observed during their remarkable breeding season migrations to temporary wetlands know as vernal pools.

Vernal pools are isolated depressions with no inlet or outlet stream. They are created from excessive surface water like rainfall or flooding, or from the intersection with seasonal high groundwater. Since these sources vary dramatically throughout the year, the depth of water changes with the seasons. Vernal pools function much like a small pond for as many as 9 months of the year. But by late summer, they dry out completely. This means a resident fish population cannot be established which makes them safe places for salamanders.

As blue-spotted salamanders evolved, they developed adaptations which made it possible to breed in these temporary pools to avoid predatory fish. One of the most evident adaptations is the remarkably early start to their breeding season, allowing the species to take maximum advantage of the limited life of a vernal pool. Once early March rains thaw the ground, adults emerge from their subterranean dwellings and embark on nighttime migrations of as far as 600 feet to reach a vernal pool – typically returning instinctively to the very same pool from which they were born. Another adaptation is the “explosive” pace of the breeding season, which may last for as few as three days and seldom more than 2 or 3 weeks. During this brief period, adults court and mate and females eventually deposit a modest 200 or fewer eggs

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Conserve Wildlife Foundation Supports Mapping Habitat to Protect Wildlife Species

To conserve rare wildlife species over the long-term it is necessary to protect the habitats they depend on to survive. The first step is to identify where such habitats occur. On a statewide scale, this involves combining animal location information with land-use/land-cover data and sound scientific research on wildlife and landscape ecology. The results can then be used to guide planning, regulation and acquisition efforts that protect habitat. This approach, incorporated in New Jersey's Landscape Project, has been employed in our state for over a decade.

Yet misconceptions remain about what the Landscape Maps actually depict and how regulators in New Jersey use the maps. Recently, the DEP Transition Subcommittee characterized the habitat mapped in the Landscape Project as areas where threatened or endangered species "could theoretically exist."

Landscape Maps are based on actual species occurrences derived from surveys and reports that are reviewed by biologists. Mapped habitat is not based on theoretical assumptions but on actual occurrences, peer reviewed literature and a quality assurance protocol that ensures that the information in the Landscape Project is as accurate as possible.

The transition report also suggests that DEP should regulate a smaller area in the immediate vicinity of an occurrence instead of extending additional protection to the surrounding habitat. This recommendation is problematic not only because animals move throughout their preferred habitat, but also because an occurrence of a particular animal is a likely indicator of the presence of a population. The Species Spotlight article in this issue of Tracks clearly shows how the habitat needs of an animal can change with the season. While it is important to protect individual animals – and in some instances we take this approach – it is critically important that we protect habitat, and the full suite of ecological communities that make up a habitat, to secure the long-term survival of wildlife populations.

The Landscape Map is a robust tool that uses science and species occurrences to show us what habitats are important to support our rich biodiversity. It is our hope that DEP continue to use the Landscape Maps to protect habitat and conserve rare and imperiled wildlife throughout New Jersey.



You can adopt a blue-spotted salamander as a gift for a loved one. Visit www.conservewildlifenj.org or call (609) 984-6012 to adopt today.



ENDANGERED SPECIES SPOTLIGHT – Blue-spotted Salamander

singularly or in small clusters on leaf litter or twigs on the floor of the pool. Typical of amphibians, parental care is absent, and adults quickly return to the upland forests, often returning to the same borrow in which they formerly took refuge.

And now, the real race for survival is on! Despite the cold, eggs mature within one month and hatch into quarter inch larvae. The bushy-gilled larvae are mouths with a tail, and for 2 to 3 months will eagerly consume any living organisms they can fit into their ever-growing mouths. Zooplankton and small aquatic invertebrates sustain them to a size of 1 to 2 inches. At this point, their lungs have finally developed and they

can metamorph into terrestrial juvenile salamanders, no longer dependent upon the pool. It is a risk-filled reproductive strategy. Occasionally seasonal rainfall and weather anomalies such as droughts result in the vernal pool drying too early, before any of the salamander larvae are able to mature. But by adapting to a breeding ecosystem which cannot be used by most other amphibians, blue-spotted salamanders allow their offspring to develop in an environment with significantly reduced risks of predation or competition for resources.

The current “endangered” status of blue-spotted salamanders reflects the fact that both the vernal habitats upon which they

depend on for breeding, as well as the mature upland forest they reside in for the remainder of the year have been frequently impacted by development or habitat fragmentation. Blue-spotted salamanders are remarkable species, and an important component of New Jersey’s natural heritage. Their emergence this time of year from their wintery dens reminds us that spring always follows winter, bringing with it the promise of a new season. ✈

written by John Heilferty,
Principal Environmental Specialist, NJ DEP

ENDANGERED OR THREATENED

What’s the difference?
An endangered species is in danger of becoming extinct throughout all or most of its range. A threatened species is likely to become endangered in the foreseeable future.



Conserve Wildlife Foundation Helps New Jersey’s Bald Eagle Population to Soar

If you haven’t yet spotted a bald eagle in New Jersey, keep looking because you’re bound to see one soon. Eagles have been seen in all 21 New Jersey counties and are nesting in all but three counties. The largest nesting and wintering bald eagle populations are found in Cumberland and Salem counties. During the 2009 nesting season a new record high of 84 bald eagle pairs was monitored in New Jersey. To put this number in perspective ten years ago there were 25 bald eagle pairs being monitored and in the eighties there was only one eagle pair left in our state.

Conserve Wildlife Foundation of New Jersey and New Jersey Division of Fish and Wildlife’s Endangered and Nongame Species Program (ENSP) biologists and volunteer observers locate and monitor bald eagle nests and territories. In 2009, 69 eagle nests were active (with eggs) and fifty-six nests were successful in producing 99 young. You can learn more details about the 2009 nesting season in the New Jersey Bald Eagle Project, 2009 report, which can be found on our website.

Not only does New Jersey have a resident nesting eagle population but we also have a wintering eagle population. Eagles from northern states spend the winter months in New Jersey where the weather isn’t as harsh and they can hunt over open unfrozen waters. Each year volunteers spend two days in January counting eagles. The midwinter eagle survey is part of a national survey that monitors bald eagle levels. In January 2010, 328 eagles were counted statewide.

The 2010 nesting season is underway and as of this writing, three nests are currently incubating eggs and several possible new nests have already been located. New Jersey eagles lay their eggs January through March. The eggs hatch 35 days after the start of incubation and the young birds leave the nest when they are around 12 weeks of age. Young eagles remain in their nest areas for two to three months after fledging.

If you want to spot an eagle, get outdoors and start looking. Adults aren’t too difficult to spot with their white heads and tails, but eagles aren’t fully mature (with white head and tail) until their fifth year. Up until then the immature eagles can be anywhere from all dark brown to white on the breast and variations in between. Nesting eagles are very sensitive to disturbance. Never approach a nest. Coming too close to a nest can actually cause the eagles to abandon the nest.

Another great way to view eagles is via the Duke Farms EagleCam which records the happenings at a New Jersey nest and streams the image right into your home, office or classroom. The EagleCam Project is a collaboration between CWF and Duke Farms. This is a great way to be able to observe eagles up close and see what goes on at the nest. Visit our website to view the EagleCam. ✈

CWF Launches an “Endangered Generation”


In the Spring of 2008, CWF was contacted by an enthusiastic young woman, Alex Kasdin of Princeton, New Jersey. Alex was creating a short documentary film entitled “Endangered Generation” as part of her Girl Scout Gold Award project, the highest award in Girl Scouting. Alex wanted to interview young people about their views of the environment and endangered species as a means to educate others about the plight of the world’s endangered wildlife. We were thrilled to help Alex create this video. We allowed Alex to interview the 5th grade student winners of our 2008 Species on the Edge Art & Essay Contest and the two women honored at our 2008 Women & Wildlife Awards Winners, Diane Nickerson and Dr. Barbara Brummer.

Alex spent the following year editing the interviews and compiling it into the newly released 21-minute documentary, Endangered Generation. The world premiere of Endangered Generation took place at the Princeton Environmental Film Festival.

The plight of endangered species has always been an issue close to Alex’s heart. She has wanted to work in endangered species conservation since her first grade teacher told her that her favorite animals, penguins, were endangered. She sees this film as the first step in her long conservation journey. Alex explains that “working with the students from the Conserve Wildlife Foundation of New Jersey’s Species on the Edge contest inspired me to continue my documentary. Like me, each of the winners was inspired to learn about endangered species by someone, whether a teacher, a friend, a parent, or someone from CWF. After this initial exposure, they

Alex Kasdin, Princeton, NJ, directed and produced Endangered Generation, a documentary about kids views of endangered species. Conserve Wildlife Foundation helped Alex with the movie.

were all determined to find a way to protect endangered wildlife. It is a striking example of how education is key to raising a new generation of environmental stewards. I hope my film can help accomplish this critical task.”

Conserve Wildlife Foundation of NJ is happy to help promote Endangered Generation and its common mission to educate people about endangered species and loss of biodiversity. To view the documentary, please visit www.conservewildlifenj.org. 



Get Out and Watch!

We all know that “April showers bring May flowers,” but the earlier rains of March stir beauties of a different kind. When the first Spring raindrops hit the barely-thawed ground and night falls on the forest, a menagerie of frogs, salamanders, and toads emerge from their winter burrows to jump-start the season. These amphibians – the spotted salamanders, wood frogs, spring peepers, and others – are anxious to get to their breeding pools and lay their eggs. The pools that they choose will dry up in summer, so those eggs must hatch, metamorphose, and leave the water before it is gone.

Under perfect conditions, there may be hundreds or even *thousands* of amphibians moving at once toward the same breeding pool. Most people will never notice it. Are you ever out in the woods on a rainy March night?

Unfortunately, in modern-day New Jersey many frogs, salamanders, and toads must take on traffic in order to get where they need to go. A single vehicle can crush dozens of these slow-moving animals as they try to cross the road during migration. It doesn’t take long for a population to nose-dive.

You can help! Choose not to drive on rainy nights in Spring when amphibians may be on the roads. Assist amphibians across the road when it’s safe to do so. Even better, you can help us find and protect amphibian road-crossings by letting us know where you’ve seen them or by volunteering with our Amphibian Crossing Survey Project. Please contact mackenzie.hall@conservewildlifenj.org or check our website for details. 

This season, learn more about the incredible lives of amphibians found right here in NJ! For field guides and CDs, visit our website and click on “Shop.”



CWF is creating a meadow at this former sawmill site within Bass River State Forest.

CWF's Stimulus Grant Enhances Habitat

In late 2009, CWF received a grant from the American Recovery and Reinvestment Act of 2009 (ARRA) through the US Forest Service. The grant is intended to create both jobs and wildlife habitat in New Jersey. The scope of the project includes enhancing wildlife habitat and controlling invasive species inside Bass River State Forest. The restoration site is located along Ballanger Creek, the former site of an old saw mill owned by the French family in the early 1900's.

We plan to restore 5.5 acres of grassland habitat, create 0.3 acres of scrub-shrub habitat, and enhance 6 acres of freshwater wetland edge habitat. Planting native warm-season grasses and wildflowers will enhance grassland habitat and provide both food and cover for small mammals, invertebrates, songbirds, and small

gamebirds. We will create scrub-shrub habitat by planting a variety of native fruit-bearing shrubs that offer both food and cover for migratory birds. Shrubs will be chosen to provide food during different seasons. We will enhance the wetland edge by removing Common reed (*Phragmites australis*) and planting native shrubs and herbaceous plants to create a better habitat for wildlife, including egrets, herons, and songbirds. The design of this project maximizes the site for use by wildlife and people for outdoor recreation, wildlife viewing and environmental education.

We hope to start work on this project this spring.


To learn more about this project visit:

www.conservewildlifenj.org/projects/BallangerCreekProject.html 

CWF Collects Acorns for the Allegheny Woodrat

This Fall, Conserve Wildlife Foundation organized a collection of acorns to help feed endangered Allegheny woodrats. A special thank-you to all of the students who collected acorns! The following schools participated in this year's project:

- Acorn Montessori School, Clinton (Hunterdon Co.)
- Ethel Hoppock Middle School, Bethlehem (Hunterdon Co.)
- Unity Charter School, Morristown (Morris Co.)
- Bedminster School, Bedminster (Somerset Co.)
- Ridge and Valley Charter School, Blairstown (Warren Co.)

You can read more about the project in Explorations, our e-magazine: www.conservewildlifenj.org/explorations/Winter2010/ and click on the article "The Other Rat." 

Please Join us for Conserve Wildlife Foundation's
Women & Wildlife Awards Reception
Sunday, March 28, 2010
Visit www.conservewildlifenj.org for details




Olivia presents MacKenzie Hall with some of the acorns she and her classmates collected to help feed endangered Allegheny woodrats.

Kate O'Neill Marks Special Day by Asking Facebook Friends to Support Cause

What if you could turn your birthday into an opportunity to help protect New Jersey's imperiled wildlife? That is exactly what Kate O'Neill did last December by sending out a call to her Facebook friends to donate to one of her favorite causes, *Protect New Jersey's Rare Wildlife*. While raising awareness of the great diversity of wildlife in New Jersey, she raised over \$400 to support Conserve Wildlife Foundation of New Jersey's conservation work.

Kate successfully encouraged donations with good humor by posting, "Did you know we have beautiful, but endangered, animals without Social Security or Medicare who would directly benefit from birthday gifts to me?" She asked for \$25, or whatever people could afford, and quickly met her \$250 goal. Kate continued to post friendly reminders of her cause, such as "Cape May, New Jersey. Last rest stop before Mexico. It's true. Ask any migratory bird." Kate was not alone in drawing attention to the state's threatened biodiversity. Her friends' responses echoed her concerns. They spoke of frogs and snakes, butterflies and bats, and other important creatures. Before long, a dozen of Kate's friends had donated \$350 online, while others mailed checks directly to Conserve Wildlife Foundation. Margaret O'Gorman, Conserve Wildlife Foundation's Executive Director, gratefully responded on Facebook by asking Kate to "imagine a chorus of frogs, eagles, songbirds and bats singing you happy birthday."

Social networking presents an unprecedented opportunity to spread the word and keep people updated on the important issues related to our cause, but it only works with the help of supporters like Kate and you. Facebook fundraising efforts have tremendous potential to raise money needed to enhance and expand our programs. Follow Kate's lead by inviting your friends to join and support our cause, *Protect New Jersey's Rare Wildlife*. It will make a meaningful impact on the wildlife that live in the state, especially the over 70 species that are protected by state or federal threatened and endangered species laws.

A special thank you goes out to Kate O'Neill and her friends for strengthening Conserve Wildlife's mission by increasing our number of supporters and our bottom line. Kate set out to use her birthday "to do something good for the world." We hope her story encourages those who share her vision for New Jersey's rare wildlife to do the same. 



Follow us on Facebook

Join our Cause Protect NJ's Rare Wildlife, www.causes.com/conservewildlife
Become our Friend on Facebook, www.facebook.com/conservewildlife

BEHIND THE SCENES

Rick Weiman, Jr.

Rick Weiman is a board member for Conserve Wildlife Foundation of NJ. He is a fundraising dynamo helping to bring many corporations out to our annual golf outing. Rick works for Menshen USA located in Waldwick, New Jersey.

What is the best thing you get to do?

I get to travel to some cool places. I've been to Greece, Hong Kong and China, setting up new Quality programs for Menshen. I have some pretty nice bird lists from these trips as well, as I try to experience the natural areas in these new places.

What delights you in your daily work?

My job as a Quality Assurance Manager allows me to meet many new people. This has led to both new and long term friendships.

If you couldn't do what you are doing now, what profession would you attempt?

Probably a conservation philanthropy position. Raising money to help New Jersey's wildlife is a strong passion of mine. One of these days I hope to figure out how to make it a career.

What wildlife "lives" in your office?

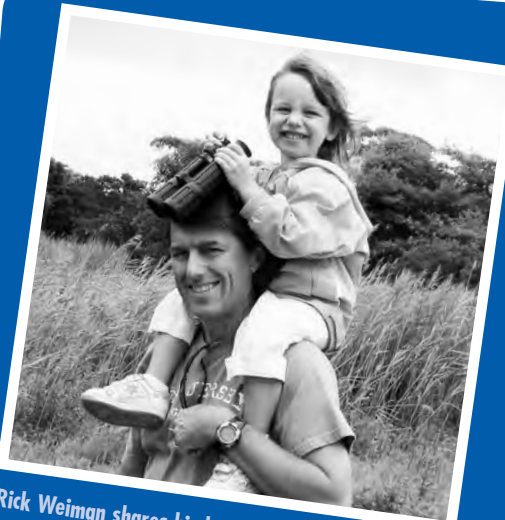
I've got some decent pictures I've taken of a Red-Shouldered Hawk and some fishing Snowy Egrets from Ding Darling Refuge, Sanibel Island, FL, one of my favorite places. And of course my Conserve Wildlife Foundation's Adopt a Species certificate featuring New Jersey's coolest frog, the Pine Barrens treefrog.

If you could be one animal (that lives in New Jersey, of course) what would you be and why?

An Osprey. I've always been drawn to birds of prey and their grace and power. I also love to vacation at the Jersey shore and to fish. It seems like this bird has it all figured out. Plus, they migrate south every year to the Caribbean and South America, which I could get used to really quick.

What were you doing before you answered these questions?

Designing a pallet pattern for a new urinal deodorizer product. Hey, somebody's got to keep the world's bathrooms smelling clean and fresh. 🦅



Rick Weiman shares his love of birds with everyone including his daughter, Annabel.

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Explorations

In addition to TRACKS, we also produce an electronic magazine called Explorations. This e-magazine tells stories about New Jersey's wildlife, enabling us to take advantage of electronic communications to present full-color photographs and links to more information. The most recent edition of Explorations featured reports about Nesting Platforms for Peregrine Falcons, Results from the 2009 Summer Bat Count, and an article about being a Bald Eagle Nest Monitor Volunteer.

If you would like to subscribe to Explorations, please send your email address to info@conservewildlifenj.org and put "Explorations" in the subject line.

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Our mission is to protect and preserve the rare and imperiled species of wildlife that live, breed, and migrate through our state by restoring habitat, managing species, educating and engaging citizens, and conducting research.

TRACKS TRACKS

CONSERVE WILDLIFE FOUNDATION OF NEW JERSEY • VOL. 03 NO. 01



PHENOLOGY FUN

Phenology is the study of the timing of natural events. The word comes from a Greek word that means "coming into view." Events like the first openings of leaf and flower buds and the first calls of frogs and toads are all considered phenological events. The timing of these events indicates local and global weather and climate changes, as well as other changes to the landscape and habitat. These events are also fun for you and your family to discover and record.

March

Second week: Wood Frogs (*Rana sylvatica*) and Northern Spring Peepers (*Pseudacris crucifer crucifer*) can be heard calling throughout New Jersey wetlands. Can you tell the difference in their calls?

Second week: Warming temperatures and increased precipitation triggers the movement of blue-spotted salamanders (*Ambystoma laterale*) to breeding ponds. Watch out for amphibians crossing the road on rainy nights.

Fourth week: Bald eagle chicks begin to hatch. Have you witnessed the hatching of eagle chicks?

April

Second week: Hibernating butterflies begin to appear. There are seven butterflies considered either endangered or threatened in New Jersey.

Third week: Bats begin to emerge from hibernation. Of New Jersey's 9 species of bats, 6 species hibernate in New Jersey caves, mineshafts, and abandoned railroad tunnels. Have you spotted any flying mammals yet this year?

Fourth week: Elusive American Bitterns (*Botaurus lentiginosus*) begin calling from their breeding marshes. Their booming "pumper-er-lunk" call echoes throughout the otherwise silent marsh.

May

Second week: Neotropical migrants begin courting each other, forming pairs and building nests. Neotropical migrants are birds that breed in the United States and Canada and spend the winter in Mexico, Central and South America, and the Caribbean. There are over 200 species of birds that make this tremendous journey each year.

Third week: Black skimmers (*Rynchops niger*) begin laying eggs on New Jersey beaches. The female lays a clutch of two to six eggs which will be incubated by both adults for 21 to 25 days.

Fourth week: Timber rattlesnakes (*Crotalus horridus*) have emerged from hibernation. At this time of year, much of their time is spent foraging and basking. They may also shed their skins.