



PROTECTED SPECIES SPOTLIGHT



Photo: Allen Barlow

Brook Snaketail

In what is hoped will be the first of many articles about odonates (dragonflies and damselflies), I would like to highlight the beautiful brook snaketail dragonfly (*Ophiogomphus aspersus*). The Latin root *Ophio* means snake-like or serpent, hence the very appropriate common name applied to this group. The snaketails were given this name because males have sinuous or snake-like claspers at the end of the abdomen which are used during mating.

Snaketail adults usually emerge from rivers and streams from late May to early June in New Jersey. They are generally active through mid-June though stragglers have been observed into August. Five species of this group have been reported in our state although one has not been observed since the early 20th century. These are among the most environmentally sensitive

dragonflies in North American and as such are outstanding indicators of water quality and overall watershed health.

Snaketails belong to the greater clubtail family (the Gomphids). All clubtails have widely spaced eyes that do not touch at any point. Most have a widening at the tip of the abdomen, also called a club. While most clubtails have simple patterns or dull coloration, the snaketails are mostly bright green. Other color patterns vary subtly, but they are stunning insects and among our most beautiful dragonflies. The majority of clubtails inhabit rivers and streams. Many North American species are declining or are severely imperiled due to water quality degradation. Toxic run-off, siltation from erosion and the construction of dams are among the greatest threats facing clubtails and other odonates. The snaketails are

generally the most sensitive to any environmental changes. Even minor increases in the silt or mud content in streams can alter dissolved oxygen levels and harm or kill snaketail larvae. Like most odonates, snaketails also need undisturbed fields and wooded uplands adjacent to breeding waters. It is here that critical foraging and breeding occurs. This habitat also provides vital shelter for fragile newly emerged adults during severe weather events and protects them from predators.

Of the four snaketail species known to breed here, the rarest is the brook snaketail. The first New Jersey colony was not discovered until 1986 in the Whippany River watershed in Morris County. Since then, an additional four colonies have been found in the Skylands and Ridge and Valley regions. This highly localized species also

continued on page 3

Editor's Commentary

In late 2008, a young supporter named Owen came to our office in Trenton to present a contribution to Conserve Wildlife Foundation of New Jersey. This contribution – some from Owen's savings and a matching amount from his parents – was made to support our work protecting rare wildlife in the state. Owen, whose parents encourage him to make one such contribution per year, chose Conserve Wildlife Foundation of New Jersey as the non-profit he wanted to support because he loves wildlife. Owen loves birds. The red-tailed hawk is his favorite. Owen's contribution is one of many generous contributions we receive from all sorts of people during the year, from 2nd graders to senior citizens and everyone in between. These contributions make our work possible and our successes happen.



As we start into yet another year and gear up for yet another season of field work, we extend a huge thank you to Owen and everyone else who made a contribution to our efforts to keep the birds, bats and butterflies in our future and our children's future.

Get Out and Look

Winter: You Might As Well Enjoy It

During the annual “off-season” for wildlife watching, we must remind ourselves that there are plenty of amazing things about wildlife in winter, too.

Some of these amazing things we see; others we don't. We don't see our resident bats tucked away in their deep, dark dens. We won't see our songbirds and raptors because they've flown south and we won't see our wood frogs as they freeze and thaw countless times beneath the leaf litter...and survive, thanks to glucose-packed cells, a useful adaptation at this time of year.

Winter also reveals as much as it hides. Do you ever wonder what incredible wildlife sightings you've missed by just a moment? With a layer of snow on the ground, we can view a record of activity in the form of tracks, long after the scene has unfolded. Most people will never see a bobcat in the woods – they're too rare and even more elusive. But their paw prints linger behind, and you can almost visualize the phantom cat walking that snow-covered log like a tightrope.

For many animals from the far-north, New Jersey is their warm, sunny south in winter. At your bird feeder you will see chickadees, juncos, white-throated sparrows, pine siskins, and other northern and local birds. Remember to keep your feeders clean.

Harlequin ducks are beautiful. They summer in high-gradient northern streams but can be found along the New Jersey coast in winter – reliably along the rock jetty at Barnegat Lighthouse State Park until mid March. Other seasonal wildlife can be found at Alpha Grasslands in Pohatcong Township, Warren County, where harriers and short-eared owls winter. At Sandy Hook and Brigantine, you may spy a shy harbor seal between November and May. Poke around a dense cedar grove for wintering saw-whet and long-eared owls, or at least their pellets of undigested bones and fur or their “white-wash.” Tundra swans make their annual visit to the New Jersey Pinelands and can be seen on frozen cranberry bogs throughout the region.

Winter is pretty lovely, and pretty interesting. So get dressed for the weather, get out in the cold and get looking around you. 



The PROTECTED SPECIES SPOTLIGHT – Brook Snaketail

Photo: Allen Barlow



inhabits small segments of the Musconetcong, Wallkill and Flat Brook watersheds.

The brook snaketail has very specific habitat requirements while the other three related species are slightly more elastic. This species inhabits clean, relatively quiet or slow moving streams with an abundance of sandy sediments. It shares this habitat requirement with the federally endangered dwarf wedgemussel and co-exists with it at two locations in New Jersey. It is often

associated with the harpoon clubtail (*Gomphus descriptus*) and river jewelwing (*Calopteryx aequabilis*).

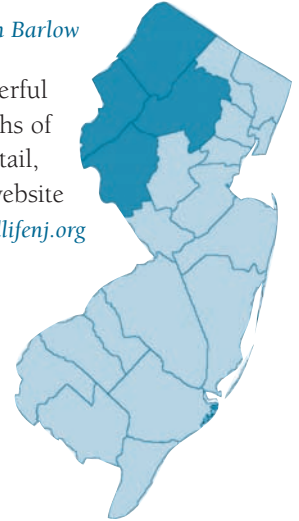
The individual populations of brook snaketail in New Jersey are referred to as colonies due to the limited amount of appropriate habitat in our area. Unlike more common or generalized species, breeding is restricted to relatively small sections of the rivers and streams they inhabit.

Due to the many challenges facing this species, and the small size of the five known colonies, the brook snaketail has been proposed as a threatened species in New Jersey. This species will be carefully monitored to ascertain whether its status is changing. Further colonies are also being sought, particularly in the Ridge and Valley region. A study will be undertaken

next year that will hopefully quantify the actual distance from breeding streams that this species travels while foraging. This information will eventually allow for the establishment of effective protective buffers around known brook snaketail colonies and their critical habitat areas. ➤

written by Allen Barlow

*To see wonderful color photographs of the brook snaketail, please see our website www.conservewildlifenj.org



You Make the Difference

Recently, I called one of our generous members to thank him for renewing his support. I wanted him to know just how important his contribution was to our work in these uncertain times. “You are welcome,” he said. “In spite of the slowdown in the economy, I don’t think conservation should have to suffer.” I hope you feel that way, too.

We are lucky to live in a state that is full of an amazing variety of animals. New Jersey is located at the northern end of the range for some wildlife species and at the southern end for others. Despite its small size, our state is home to several different types of habitat from coastal marshes and estuaries to forested mountains, ridges and valleys. Our location along the Atlantic Flyway provides an important stopover for migrating birds of all kinds.

As a Conserve Wildlife Foundation member, you make a big impact on conservation in our state. You help maintain our rich diversity of wildlife and support the need for balance between land development and habitat protection. Your membership support helps provide protection for more than 70 species of wildlife whose lives are at risk.

With the slowing economy, our conservation efforts will face a big challenge—the lack of resources to protect our rare animals. Funding from some sources will simply not be available. In the

past, our members have kept us strong and helped us meet new challenges. I hope we can continue to count on you. Among the many projects we are working on, we will especially need your help to:

- Recruit and train more volunteers to monitor bald eagle nests, protect beach nesting birds and identify frogs and toads for a nationwide survey.
- Expand our work with landowners to manage and restore more prime habitat for vanishing species like grassland birds and bog turtles.
- Build, install and monitor bat boxes, osprey nesting platforms and kestrel nest boxes to encourage these rare animals multiply and thrive.
- Broaden our education programs to help people of all ages learn to appreciate Indiana bats, peregrine falcons, blue-spotted salamanders and many more of New Jersey’s rare animals.

As 2009 begins, please consider a special tax-deductible gift to Conserve Wildlife Foundation to support the conservation work that is important to you. Just add your check or credit card number to the enclosed envelope and write the words “New Year Gift” in the Special Donation section. Thank you for continuing to keep our wildlife efforts strong. ➤

Wildlife Action Plan in action

New Jersey's Wildlife Action Plan is a blueprint for managing rare and declining species of wildlife across the state. The plan is designed for all land stewards in the state to take action to protect, preserve and enhance habitats and the wildlife populations that depend on them. It is a comprehensive approach to rare wildlife management with a list of actions we can all take towards the common goal of healthy wildlife populations.

In this occasional series in TRACKS, we will highlight projects implementing the Wildlife Action Plan. We will present work carried out by our biologists and projects by other groups working to protect our wildlife. In this issue we present our Backyard Habitat Demonstration Site.

Habitat Treatment:
Nectar producing plants

Plants that produce nectar are important food sources for pollinators, such as bees, butterflies, moths, and hummingbirds. Pollinators help transport pollen from plant to plant which helps many food crops and flowers produce fruit and seeds. Some of the species used include Common milkweed, Purple coneflower, Seaside goldenrod, phlox, and New England aster.



Photo by Clay & Pat Sittler



Photo by MacKenzie Hall



Photo by MacKenzie Hall

For more information visit:
www.ConserveWildlifeNJ.org

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Conservé Wildlife
Endangered and Nongame
Species Program

NJ Division of
Fish and Wildlife

Promoting the creation and management of backyard habitat for wildlife is an important and easy action that many people can take to implement the Wildlife Action Plan. We want to help people take this action, so we are creating a backyard habitat demonstration site in partnership with the Division of Fish and Wildlife at Villas Wildlife Management Area in Cape May County.

We are restoring 4.3 acres of habitat to create a small backyard demonstration site. We will create a small woodland of native trees to provide forest cover for nesting and migrating birds. The woodland will give way to a transitional area called scrub-shrub habitat that will provide food and cover for migrating birds. A wildflower meadow will add color and be home to songbirds, and because we will plant nectar-producing plants like purple coneflower, New England aster and phlox, pollinators such as bees, butterflies, moths and hummingbirds will visit. We will also create wildlife brush piles to give cover and nesting sites for garter snakes, sparrows and other creatures. Throughout the site, we are placing signs that will tell visitors how the habitat helps wildlife.

We hope to start this work in the spring of 2009 and look forward to showing you how easy it is to create wildlife habitat in your backyard. ➤

If you know about a project that is advancing the Wildlife Action Plan, please let us know. We would like to feature it through this occasional series.



Wood Frogs in amplexus



American Toad

Photo: NJENSP

Amphibian Crossing Survey

As we enter our 6th year as partners on the Amphibian Crossing Survey Project with the state's Endangered and Nongame Species Program and New Jersey Audubon, we need volunteers to help us monitor sites in Warren County and identify additional crossings throughout the northern region of the state in March 2009.

In 2009, The Amphibian Crossing Project will focus on two important Warren County locations. Volunteers helping with these stationary, road rescue-surveys should live locally since amphibian migrations are triggered by warm, nighttime spring rains that can come on suddenly and result in much scrambling! Other volunteers will be enlisted in drive-around surveys (in Warren County and beyond), helping to identify other important amphibian crossings for future protection. If you're amphibian-friendly and don't mind getting rained on, we would love to hear from you! Please be in touch before February 11.

What is an amphibian crossing?

Amphibians (frogs, toads and salamanders) spend their winters underground in upland areas. Each spring they migrate to nearby wetlands and vernal pools to breed, returning to their own aquatic birthing area to meet a mate of their own. They travel directly to these breeding sites, often through our yards and across our roads. As New Jersey's landscape changes and more residential communities and commercial development spread across the state, these critical migration corridors are increasingly splintered by roads that make safe passage to the breeding areas difficult and in some areas, impossible. Entire populations of amphibians have already been eliminated due to road mortality and increased scavenger presence along the migration routes that cross roads.

Why are amphibians important?

Amphibians are regarded by many scientists as indicators of a region's health and as the first indicators of harmful environmental changes such as pollutants and higher aquatic temperatures. Basically, if we see problems in the amphibian community, it's just a matter of time before larger organisms (such as birds, mammals, and humans) will be affected as well.

Amphibian populations are declining worldwide as a result of a number of factors, including water pollution, increased pesticide use, and habitat loss, the most significant factor for all of New Jersey's species of conservation concern. Amphibians depend on both terrestrial and aquatic habitats throughout their life cycles. The loss of forests and wetland habitats includes clearing forests and filling in vernal pools. Development can lead to changes in the water table that dry out critical wetlands and add to these critters' plight. Finally, fragmentation of habitat also plays a critical role in the demise of an amphibian population as they attempt to travel from one area to another. Amphibians become easy prey targets in open habitats (lawns, driveways, roads) and at barriers such as curbs and fences that are often impossible to cross.

While many amphibians are killed by vehicles during the spring migration, this massacre often goes undetected as scavengers clean our roads before our early morning commute.

We need you!

We are in search of volunteers willing to participate in the survey. The surveys are conducted at night during March (nights to be determined, weather dependent) and are sometimes done on short notice. Attendance at a volunteer training is mandatory.

We need two types of volunteers.

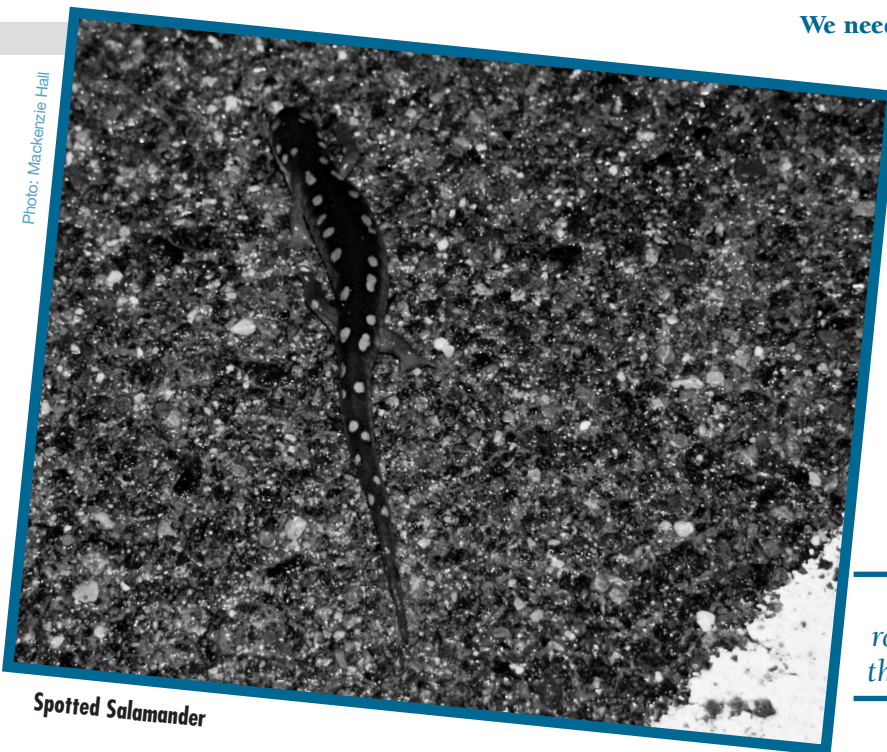
Volunteer A: Attends 1 – 2 night crossings in March (approximately 4 hours/night) to monitor and rescue amphibians crossing roads in Warren County.

Volunteer B: Conducts drive-around searches at assigned locations during all misty to rainy nights in March. This activity must be conducted with 2 people, so please sign up with a partner as we may not be able to assign one.

If you are interested in participating in the Amphibian Crossing Survey Project in 2009, please email amphib.ENSF@yahoo.com before February 11. Thank you! ✍

“Fragmentation of habitat also plays a critical role in the demise of an amphibian population as they attempt to travel from one area to another.”

Photo: Mackenzie Hall



Spotted Salamander

A Quiet Winter for the Bats

Winter challenges the fitness and endurance of every organism living in the cold, nivean environment (or “snow world”). While New Jersey is seldom covered in snow for long, it still gets very cold, and cold weather without snow’s insulation can be even tougher on wildlife. Animals have interesting means of solving their winter shelter and food needs – keeping their bodies warm and that inner furnace running.

New Jersey’s bats take a passive approach to surviving winter. Of our nine bat species, six hibernate in caves and abandoned iron mines (the remaining three head to southern states). Active bats have voracious metabolisms; their hearts beat over 1,000 times per minute in flight, and they easily consume half of their own body weights in insects each night. To pass six months of hibernation without running out of stored energy, bats drop their heart rates down to about one beat every four or five seconds and take on the ambient subterranean temperature (around 50°F). A little brown bat may go more than forty minutes without taking a breath.

Teachers:

Great activities to explain hibernation can be found on the internet. Students can compare the wintering habits of different animals. They can think about how their behavior changes during the winter period. They can consider what makes a good hibernation den for bats, bears and other species.

Bats hibernating in a cave

Meanwhile, back on the surface we don’t hibernate and we work hard to make the world a better place for our bats. We are educating school children, landowners, and pest control professionals about the astonishing lives and benefits of bats. We are building and installing bat roost boxes that you could put on your property or in your town. We will be working with private landowners to improve habitat for the state and federally endangered Indiana bat and using acoustic monitoring to identify species using well- known summer roost areas.


When our resident bats emerge from their dens in April and the migrants return from the south, we’re working to make sure they receive a more respectful welcoming than in years past. And if you know of a bat roost, let us know! We’d love to include you in our Summer Bat Count. 



Photo: Melissa Craddock

**We Are Always Happy to See You
Anytime We Are Out and About**



BEHIND THE SCENES *Allen Barlow*

What is the best thing you get to do with this job?

I enjoy traveling all over the state exploring new and interesting habitats. Working primarily with freshwater animals, I spend a lot of my time with wet or muddy feet, for which I consider myself fortunate.

What has been your biggest success in your current job?

Having the opportunity to write a field guide about our dragonflies and damselflies has been a wonderful experience. Helping, even in the tiniest way to expand our knowledge of aquatic invertebrates and their ecological importance is the success of a lifetime.

What delights you in your daily work?

The thrill of discovery and the chance to make new observations that challenge current conventional wisdom. I take great pleasure in having my “comfort zone” of knowledge completely un-done by field observations. It keeps me honest and humble to be reminded that that I really don't know everything.

What is the one tool or resource that makes your job easier?

I would have to say that GPS is a big life-saver for me. I spend a lot of time surveying tiny woodland streams. Most of these are not clearly or correctly shown on standard maps. Without GPS, documenting such places would be rather arbitrary. Re-visiting such sites would be difficult if not impossible.

What is the best thing anyone ever taught you?

My father always stressed that you can learn anything if you are diligent and really want to acquire the knowledge.

What is one thing you've learned in your working life that has surprised you?

There have been many surprises actually, another perk of the job. The biggest surprise is how much remains to be learned. Having studied dragonflies and damselflies for over 20 years, not a year goes by without some stunning new observation that leads to a long list of new questions.

What wildlife “lives” in your office?

For the most part I work with insects and freshwater mussels. Over the years I have accumulated a small “museum” of insect specimens. This collection is a very helpful learning resource in many ways though I tend to “collect” with my camera more than a net these days. 🦋



Allen Barlow

Explorations

In addition to TRACKS, we also produce an electronic newsletter called Explorations. This newsletter tells more stories about New Jersey's wildlife enabling us to take advantage of electronic communications to present more full-color photographs and more links to information. The most recent edition of Explorations featured a report from Champagne Island on the challenges to our beach nesting birds, an article about a deadly disease affecting bats and information about how to report a rare species sighting

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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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.

Share your seasonal observations by visiting our blog at www.conservewildlifenj.blogspot.com.

January

First week: Eastern tiger salamanders begin breeding in vernal pools in southern New Jersey.

Third week: Long-tailed salamanders mate in underground tunnels near freshwater springs. The female will secure her clutch of approximately 90 eggs to stones or wood within the water.

February

Third week: Bald eagles begin laying eggs. Clutches consist of one to three eggs. Incubation lasts approximately 36 days.

Bobcats begin breeding. Breeding will continue into April. The gestation period for bobcats is about 60 days.

Fourth week: Wood frogs may be heard calling from their vernal pools in the southern part of the state. They are the earliest frog to call in New Jersey. Have you heard the quacking call of *Rana sylvatica*?

March

First week: Wood frogs, the earliest frog to breed in New Jersey, can be heard calling from vernal pools in the northern part of the state. When did you first hear the quacking call of *Rana sylvatica*?

Second week: The high-pitched whistling call of Northern spring peepers can also be heard early in March. *Have you heard the call of New Jersey's smallest treefrog this season?*

Bald eagle chicks begin to hatch. Hatching will continue throughout March and April depending on when the eggs were laid.

Fourth week: Barred owls begin their mating rituals and can be heard calling throughout their wetland territory. *Have you heard the "who cooks for you, who cooks for you alllll" song of the barred owl?*