

THE GNATCATCHER

Newsletter of Juniata Valley Audubon

Vol. 38 No. 2 — Mar/Apr 2006

www.juniatavalleyaudubon.org



JVAS Spring Banquet to feature Program on Eastern Cougars

Join Juniata Valley Audubon Society members at our annual dinner at Fort Roberdeau on April 18 to hear acclaimed author and cougar expert Chris Bolgiano who will present a program titled **Looking in Our Window: The Many Faces of Eastern Cougars.**

The eastern cougar ranks as a world-class wildlife mystery, along with Nessie of Scotland and the Yeti of Nepal. It used to be that state and federal wildlife officials simply dismissed reports of cougars in the East as deception, delusion, or drink. Not any more. Chris Bolgiano, who has been reporting from the eastern cougar front for more than 20 years, examines the hard evidence for reappearance of the East's top native predator in her PowerPoint presentation, "Looking in Our Window: The Many Faces of Eastern Cougars." Illustrated by a wide array of historic and contemporary images, this talk covers the past and the present and raises some pointed philosophical questions about the future.

Chris Bolgiano is a freelance writer living in excellent cougar habitat in the mountains of eastern Virginia. In addition to serving as vice-president of the Eastern Cougar Foundation, she has written nature and travel articles for *The New York Times*, the *Washington Post*, *Sierra*, and numerous other publications. She is also the author of the books *Mountain Lion*, *The Appalachian Forest*, and *Living in the Appalachian Forest*, which won the Philip D. Reed Memorial Award for Outstanding Writing from the Southern Environmental Law Center. *Audubon* columnist Ted Williams called *Mountain Lion* "an astonishing piece of research, well told." Her latest book, co-edited with Jerry Roberts, is *The Eastern Cougar: Historic Accounts, Scientific Investigations, and New Evidence*.

The JVAS Spring Banquet will be held on Tuesday April 18th in White Oak Hall at Fort Roberdeau County Park in Sinking Valley . Come join Stan Kotala for a nature walk at 4:30PM, our social at 6:00pm, the buffet dinner at 6:30pm, and our featured speaker at 7:00pm.

There will be an opportunity to buy prize tickets (one dollar a piece or 6 for 5 dollars) to use toward your favorite donated item, such as plants and shrubs, and an afternoon of kayaking at Canoe Creek with a picnic lunch for two, a book donated by Heidi Boyle and a framed, matted picture by Helena Kotala just to name a few. **The cost for the evening is \$ 14.00 a person. Use the form below to make your reservation.**

valley Cougars Club, and the Juniata Valley Audubon Society. The length is 4 miles. Meet at the Canoe Creek State Park Environmental Education/Visitor Center at 2pm on Saturday, May 13.

Call Dr. Stan Kotala at 946-8840 home or 239-2988 work for details.

**"It is necessary to sacrifice the greater value to the less.
I would rather never taste chicken's meat or hen's eggs than
never to see a hawk sailing through the upper air again."**

Henry David Thoreau

Ridge and Valley Raptor Migration Project Launched

The JVAS has joined the State College Bird Club, Shavers Creek Environmental Center and The National Aviary in sponsoring a raptor migration monitoring project to be conducted this spring along the ridges of west central PA.

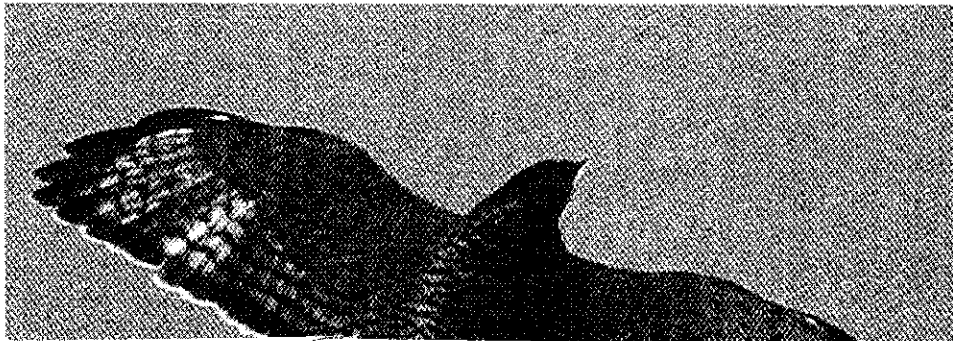
It has long been known that hawks concentrate along the ridges of the Appalachians during their fall migration southward. It is a more recent discovery that hawks also concentrate along ridges during their journey north. This is partly because world famous hawk watching sites like Hawk Mountain along the easternmost portion of the ridges see little to no raptor migration during the spring. Hence early observers expended little effort to monitor the spring raptor migration, believing it was a more diffuse movement.

Spring observation at sites like the Allegheny Front west of Bedford, Tussey Mountain south of State College, and Jacks Mountain south of Belleville have shown that raptors can and do concentrate on the ridges during spring, albeit generally to a lesser degree than in fall. Included in this spring movement are a large number of golden eagles.

A review of hawk watch data hints that a large percentage of eastern North America's golden eagles migrate through a relatively narrow band of mountains of central Pennsylvania (including Jacks Mountain, Stone Mountain, Tussey Mountain, Bald Eagle Mountain, and the Allegheny Front). However, very little data has been collected and relatively little is known about the spring passage of golden eagles through Pennsylvania.

The long term goal of monitoring each of the five mountains during the peak of the spring golden eagle migration has been proposed. In an effort to determine the viability of the project we are continuing collection of full-time data at the Tussey Mountain site and adding a roving counter to collect additional data during 2006. It is proposed that the roving counter collect data from the Allegheny Front east of Black Moshannon, and Bald Eagle Mountain northeast of Port Matilda. We hope the additional data will demonstrate the importance of the ridges of west central Pennsylvania, and allow us to seek additional funding for counters to cover each of the other ridges in future years.

For additional information, questions or comment, please contact Dan Ombalski at ombalski@juno.com



ABOUT JVAS PROGRAMS: Programs are presented on the third Tuesday of each month. They begin at 7 land County. Meet at Unkel Joe's Woodshed in Altoona Natural History's Biological Field Station in Westmore- Powdermill Nature Reserve—Join us for a day of bird watching and bird banding at the Carnegie Museum of

Middle Creek Wildlife Management Area—Join us for our annual trip to the PA Game Commission's staging area in Lebanon County for amazing looks at snow geese, swans, and migrating waterfowl. Meet at the McDonald's in Huntingdon at 9 AM. Bring binoculars, boots, and a bag lunch. Supper on the way home.
April 22, 2006
Middle Creek Wildlife Management Area—Join us for our annual trip to the PA Game Commission's staging area in Lebanon County for amazing looks at snow geese, swans, and migrating waterfowl. Meet at the McDonald's in Huntingdon at 9 AM. Bring binoculars, boots, and a bag lunch. Supper on the way home.
April 22, 2006

MARCH AND APRIL FIELD TRIPS

April 18
JVAS Spring Banquet
 Please see page 1 for details.

Dragonfly-watching—Cynthia Berger, the author of *Wild Guide: Dragonflies* (Stackpole Books, 2005) and producer of "Pennsylvania Radio Expeditions" will present a program about dragonflies.
March 21, 2006

MARCH & APRIL PROGRAMS

Frogwatch USA Training Session scheduled at Canoe Creek State Park

Scientists are concerned about the recent decline in many of the world's amphibian species. Amphibians, such as frogs, toads, and salamanders, have porous skin and porous eggs that make them very vulnerable to toxins. Because their life cycles require both aquatic and terrestrial environments, amphibians are among the first species to suffer the consequences of environmental threats such as air and water pollution, destruction of habitat, and increased ultraviolet radiation. Since amphibians are indicators of ecosystem health, declines in their populations raise concerns about the health of our environment.

Tim Maret of Shippensburg University's Department of Biology and chair of the Pennsylvania Biological Survey's Herpetological Technical Committee states that "for many amphibian species in Pennsylvania, we just don't have the data to adequately determine their present status. We are lucky to have such a diverse assortment of amphibians in Pennsylvania. The first steps toward preserving these species should be to conduct inventory and monitoring programs to determine their present status and track future trends."

You can help scientists learn more about amphibian populations in the United States by becoming a volunteer for Frogwatch USA, a long-term frog and toad monitoring program managed by the US Geological Survey (USGS) and the National Wildlife Federation. You do not have to be a frog and toad expert to make an important contribution.

On Sunday, March 26, 2006, from 3-5 pm, join Juniata Valley Audubon for a fun and informative program that will introduce you to Frogwatch, feature a slide show of the frogs and toads of our area, let you know how you can be involved, and take you into Mary Ann's Marsh to find frogs and toads. Be dressed to get your feet wet! The program begins in the Canoe Creek State Park Education Center basement.

JVAS FIELD TRIP TO HIGHLIGHT THREATENED VERNAL POOLS AND WILDFLOWERS AT CANOE CREEK STATE PARK

Join JVAS president Dr. Stan Kotala for a hike along Moore's Hill trail at Canoe Creek State Park to observe wildflowers including the rare yellow lady's slipper. We'll also see bloodroot, trillium, and hillsides covered with flowering redbud. **Special emphasis will be on the 1/2 mile of the trail along Canoe Creek which is rich in wildflowers and vernal pools but which DCNR Region 3 has proposed converting into a hard-surface bike trail.** This will be a joint field trip with the Pennsylvania Native Plant Society, the Ridge and Valley Outings Club, and the Moshannon Group of the Sierra Club. Hike length is 4 miles. **Meet at the Canoe Creek State Park Environmental Education/Visitor Center at 2pm on Saturday, May 13.**

Call Dr. Stan Kotala at 946-8840 home or 239-2988 work for details.

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Henry David Thoreau

Rapid and Reckless Windplant Development threatens Interior Forests, Bats

by JVAS member Laura Jackson, Everett

In 2005, the grid manager for our electricity, PJM Interconnection, received over two dozen wind project requests. These requests represent over 1,700 MW of electricity, which translates into 1,000 or more turbines. If approved, most of these turbines will be placed on Pennsylvania's forested ridge tops. Just last week, another wind project applied to PJM, which will add another 60 turbines. Unfortunately, DEP and DCNR do not have any siting criteria, so there isn't any land that is safe from development. Even the Game Commission has been approached by the wind companies, since it owns many acres of ridge tops.

According to the American Wind Energy Association, Pennsylvania does not even rank in the top 20 states for wind energy potential. Why are big companies like Florida Power and Light (FPL) trying to get leases from local landowners? One reason is that our state offers huge financial incentives. Wind energy is a top priority of the Rendell administration. Rendell must have taken the claims made by the wind energy at face value. Wind energy is promoted as "clean and green", but that is only if many other environmental costs are ignored.

One cost is bat kill. Researchers, funded by Bats and Wind Energy Cooperative (which includes Bat Conservation International, federal agencies, and wind industry groups), set up thermal imaging cameras in West Virginia to study bat conflicts with wind turbine blades. Another study was conducted at Meyersdale, Pennsylvania. FPL, which owns both facilities and is America's largest wind producer, offered those sites for the study. Results were released last June (see www.batcon.org/wind/reach/). Researchers calculated that 1,364 to 1,980 bats were killed in the West Virginia site. In Meyersdale, 400 - 660 bats died during the six-week research period. These studies showed that wind turbines built on forested ridges are an extreme risk to bats.

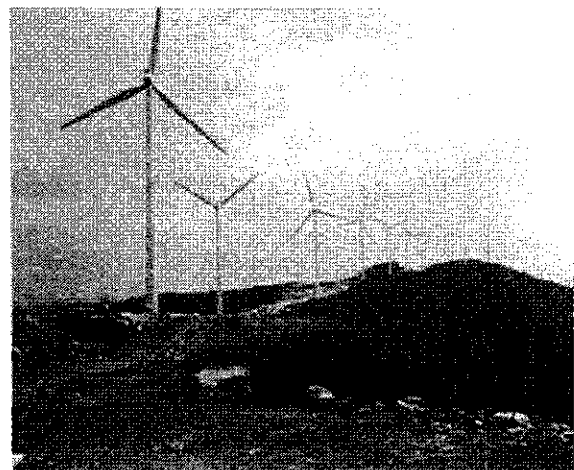
When FPL officials were presented with the research results, they refused to allow any more research studies at any of the FPL facilities nationwide. Since FPL owns more than half of all U.S. wind plants, this is especially alarming. It is estimated that 900 turbines placed on our ridges could kill more than 50,000 bats a year. While this is a prediction, it should be a wake-up call to all of us who are concerned about wildlife. Bats play a very important role in maintaining healthy ecosystems, since one bat will eat thousands of insects during just one summer night.

Wildlife problems should not be ignored when promoting new wind energy projects. Pennsylvania needs to develop siting criteria so that proposed wind energy projects undergo a rigorous evaluation process by state agencies before they can be funded.

If you are concerned about the lack of state regulations on wind plant siting, perhaps the best action to take is to write a letter requesting a moratorium on windplant development in Pennsylvania until wildlife conflicts are reduced and the state is able to develop proper siting regulations. Address your letter to:

Ms. Kathleen A. McGinty, Secretary
Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063

One mile of 30-50 foot wide road must be built on the ridgetop to accommodate every eight wind turbines. Each turbine requires the clearing of 3-5 acres of forest around it.



VOLUNTEERS NEEDED FOR EDUCATION AND TRAIL MAINTENANCE AT FORT ROBERDEAU COUNTY PARK

Juniata Valley Audubon has long been a strong supporter of the 200 acre Fort Roberdeau Historic Site and Natural Area in Sinking Valley, Blair County. Hosting thousands of school children and other visitors each year, the Fort and its surrounding fields and woodlands are important for cultural and environmental education in Blair County.

Volunteers are needed to help with environmental education programs at the site. Whether guiding school groups or visitors to the nature trails, you'll be able to impart your knowledge to an appreciative group. Volunteers also are needed to maintain the trails (e.g.: cutting, mulching, and grooming the trails) as well as monitoring the planned 20 house blue-bird trail.

If you are interested in helping with these activities, please call Fort Director Peggy Goodman at 946-0048 or email her at roberdeau@alt3.com or contact Fort Roberdeau board member and JVAS president Dr. Stan Kotala at 946-8840.

SPECIAL OFFER TO JVAS MEMBERS!

My name is Tom, and I live in Huntingdon. I make birdhouses for all cavity nesting birds of Pennsylvania. I make both plain and fancy birdhouses, and all are specially made for the bird you are trying to attract. All of my birdhouses are well made, and all open easily for cleaning.

I offer a **10% discount** for Juniata Valley Audubon Society members, and can work with you to supply birdhouses for fund raisers, etc.

Shortly I will be able to email pictures of some of the houses I have made.

I can be reached at trv@pennswoods.net or via phone at 814-643-7118.

JVAS THANKS ITS CORPORATE SPONSORS

Nature's Images

~Wildlife Photography by Helena Kotala~
~Custom Framing~



Altoona, PA

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Study: Even One Mile Of Forest Makes Positive Difference In Water Quality

The quality of water in streams from an area heavily affected by urbanization was significantly improved by its passage through streams flowing in undeveloped forested areas, according to a study announced on Jan. 27.

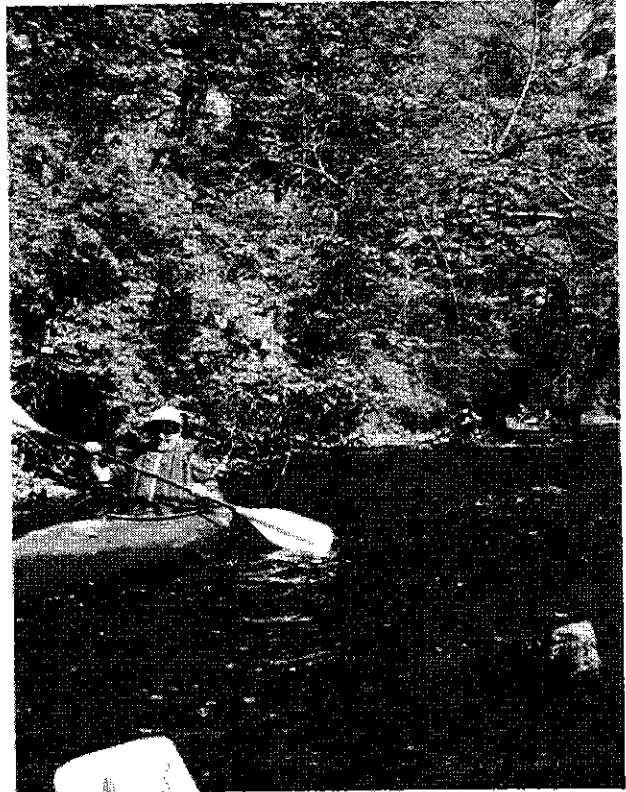
Results from a small-scale experiment in western North Carolina -- conducted by scientists from the U.S. Department of Agriculture (USDA) Forest Service Southern Research Station (SRS) -- illustrate the importance of National Forest lands in ensuring high water quality in the Southern Appalachian region, officials said.

For the experiment, Jim Vose (<http://www.srs.fs.usda.gov/staff/614>) and Barry Clinton (<http://www.srs.fs.usda.gov/staff/119>), researchers from the SRS Coweeta Hydrologic Laboratory (<http://www.srs.fs.usda.gov/index.htm>) in Otto, N.C., located a setting where a stream carried water from a small town into a fork of the Chattooga River while passing through National Forest land. They set up three sampling sites: the first below the town where the stream enters the National Forest, the second about a mile further down where the stream (now a fork of the Chattooga River) exits the National Forest, and the third reference site on a small, undisturbed stream which lies entirely in the National Forest.

"There's a waste treatment facility a little over half a mile up from where the stream enters the National Forest," Clinton said. "We chose the first sampling site to pick up the cumulative effects of wastewater treatment and other non-point pollution sources such as housing developments, stormwater runoff, and roads."

Samples were collected weekly for over a year using automated samplers. Data was collected on water chemistry and total suspended solids, particles that range from soil to various types of organic matter. Coming from a wide range of sources, these solids increase after storms, the proportion of this increase one indication of conditions around a stream. The researchers also collected streamwater samples from all the sites to determine bacterial populations.

Findings showed a definite "cleaning" affect on the stream from passing through just a mile of National Forest, with evidence of significant reductions in concentrations of chemicals such as nitrates, ammo-



Extensive streamside forests play a critical role in maintaining the health of the Little Juniata River, allowing kayakers, canoeists, fishermen, and birders to enjoy the stream's bounty.

nium, and phosphorous, the researchers said. In response to storms, total suspended solids increased to a higher level at the urban sampling site and stayed higher longer, probably due to more impervious surfaces and land disturbances that increase sediment loading into streams. Bacterial populations did not change much between the two sites, and, though differing greatly from those at the reference site, were well below standards established by EPA, the researchers said.

"Factors affecting water quality vary so greatly across landscapes, and we advise caution in applying the specific results of this study to all situations," Vose said. "But the patterns we observed do fit with those found in other studies, and suggest that stream sections in undeveloped forests can improve water quality in areas where the headwaters have been heavily affected by urbanization or other land uses."

GROUPS RAISE CONCERN OVER EFFORTS BY WIND INDUSTRY TO REVISE USFWS' INTERIM GUIDANCE OUTSIDE FEDERAL LAW

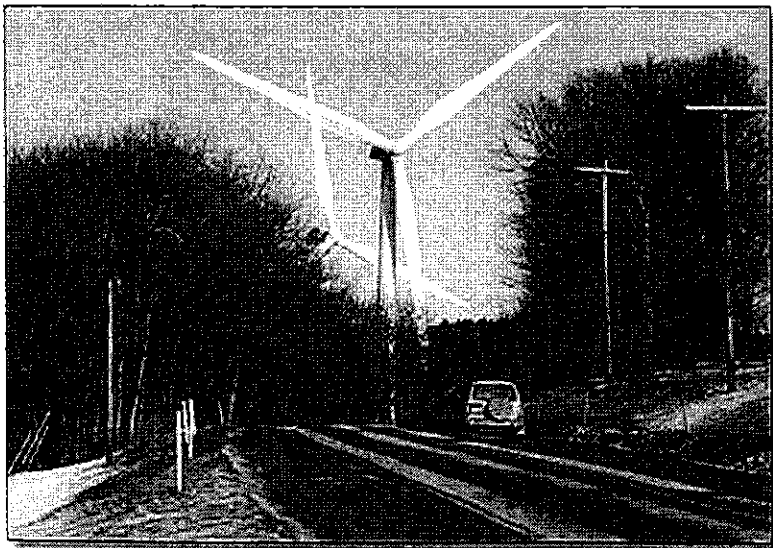
National Wind Watch, Inc., the Humane Society of the United States, the Alliance to Protect Nantucket Sound, and Juniata Valley Audubon called on Interior Secretary Gale Norton and other federal officials to confirm whether the Fish and Wildlife Service intends to comply with the basic openness and accountability of the Federal Advisory Committee Act (FACA) with regard to the "collaborative process" being pushed by wind energy proponents to revise the Fish and Wildlife Service's (FWS) Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines.

In a letter to Secretary Norton and others, the groups cited the critical importance of the FWS adhering to FACA requirements for public access and accountability given the "significant public controversy surrounding the impact of wind turbines on our nation's treasured wildlife - in particular on bats and birds - and considering the current rapid expansion of wind power throughout the country and the potentially devastating impact this expansion could have on wildlife if the turbines are not properly sited." In the letter, the groups stated "We are very concerned that if the FWS does not fulfill this FACA requirement, then the process will simply be an opportunity for the wind power industry to force its views on the agency, and will result in the agency revising its Interim Guidance in a manner that makes turbine siting and operation easier for the industry, but detrimental to wildlife."

The first meeting of the Policy Group for the collaborative was scheduled for February 9, 2006 in Washington, DC. The meeting was canceled when the Fish and Wildlife Service advised participants that it needed more time to evaluate the applicability of the Federal Advisory Committee Act (FACA) to the collaborative process.

National Wind Watch spokesperson, Lisa Linowes, was pleased with the FWS response to the letter but expressed concern that the collaborative effort was permitted to go as far as it did. "The groups represented by the letter have consistently raised legitimate and important conservation concerns about industrial wind power projects. It is essential that there be a fair representation of our views and expertise," she said. The letter was submitted to the Interior Department by Meyer, Glitzenstein & Crystal, a public-interest law firm in Washington D.C. A copy of the letter is available at <http://www.windwatch.org/documents/1499>.

National Wind Watch, a nonprofit corporation, seeks to promote knowledge and raise awareness of the risks and damaging environmental impacts of industrial wind energy development. Information and analysis on the subject is available through its website, www.windwatch.org.



Massive industrial wind turbines require extensive fragmentation of ridgetop forests for their construction, maintenance, and operational efficiency. Each turbine is forty stories tall, with 120 foot blades attached to a 60 ton nacelle filled with 200 gallons of oil.

Species of Concern Spotlight: Barn Owl

by Dan Mummert, PGC Wildlife Diversity Biologist

The barn owl is one of the most widely distributed of all land birds throughout the world. With 36 subspecies, they are found in a broad range of open habitats on every continent except Antarctica. Though widely distributed, here in Pennsylvania barn owls are very rare and, being nocturnal and secretive, are extremely difficult to locate. Seeing a wild barn owl requires knowledge of their behavior, habitat preferences, and--unless you know of a specific nest site--a lot of luck.

In Pennsylvania, barn owls primarily are associated with open grasslands such as meadows, hayfields, and fallow croplands. Open grassland habitat is essential for barn owls because meadow voles, which make up about 70% of their diet, are their primary food. Barn owls will round out their diet with other rodents such as mice, rats, and shrews. In rare instances when rodents are locally rare, barn owls may also take small birds that roost in open habitats such as European starling and red-winged blackbird. Because a typical family of barn owl will eat about 3,000 rodents during the course of a breeding season, they are exceptionally valuable to farmers.

Barn owls have several adaptations that make them excellent nocturnal predators. First, they have excellent low-light vision and are able to fly over fields during hunts that typically begin an hour after sunset and end an hour before sunrise. Even more exceptional is their hearing. Barn owls have been found to be the animal with the greatest ability to locate prey by sound alone. The barn owl's is so keen that they can locate and capture a meadow vole under a layer of snow or hidden by a thick layer of vegetation. Barn owls also are able to fly in complete silence. This adaptation is possible because the forward edge of their feathers is serrated rather than smooth as in other birds. This serration disrupts the flow of air over the wing when they fly eliminating the vortex noise created by air flowing over a smooth surface. With such adaptations the barn owl is a formidable predator, comparable to a stealth bomber flying low over fields in complete darkness, scanning for prey, while remaining undetected.

When not searching for food at night, barn owls often are at a daytime roost or nest site. Barn owls are cavity nesters and will use natural cavities such as holes in trees, rock crevices, and even burrows in river banks. As their name implies, barn owls also commonly use artificial structures such as barns, silos, church steeples, and as I have witnessed, the occasional attic.

The proportion of natural to artificial structures barn owls use differs greatly depending upon geography and nest site availability. For example, a study in Holland found that 96% of barn owls nested in artificial structures while another study in New Jersey found that 50% of nesting occurred in tree cavities and 31% in nest boxes. In southcentral Pennsylvania I've confirmed nearly 20 active barn owl nest sites and each was in an artificial structure. This is not to say that our local barn owls favor buildings and nest boxes, but likely a result of landowners being more aware of barn owls nesting in these structures compared to owls that nest in tree cavities or other natural sites. The availability of suitable nest sites and adequate grassland habitat that support prey populations probably are the most important factors that determine the presence of barn owls at a given location as well as their distribution and density across the landscape. These two factors also may determine the long-term future of Pennsylvania's barn owls.

Consistent with regional findings in the Midwest and Northeastern portions of the U.S. where barn owls have declined by over 2% annually since 1966, barn owls appear to be declining at a drastic rate in Pennsylvania. A large part of this decline likely is due to loss of open habitats. From 1982-1997, over 420,000 acres of cropland in Pennsylvania were lost to development while more than 767,000 acres of pasture were lost. Also causing barn owl declines are a loss of appropriate nest sites. Clearing of field borders have resulted in the loss of old, mature cavity trees. In addition, many of the older barns and silos, which inherently have numerous openings and nesting platforms, are being replaced with tightly built structures that are screened to prevent access by pigeons.

To maintain Pennsylvania's barn owl population at current levels, locating and monitoring active nest sites is an important step to help determine population trends and the landscape factors that influence barn owl breeding success. Interested landowners with appropriate grassland habitat should be given nest boxes to provide additional nest sites.

It is for these reasons that the Pennsylvania Game Commission has created the Barn Owl Conservation Initiative. By finding and monitoring active nest sites and distributing nest boxes to appropriate locations, the barn owl is one species of concern that has great conservation potential. We may even reverse its population decline

If you are aware of barn owl nest sites or for more information about how you can help with the Barn Owl Conservation Initiative, please contact Dan Mummert at (814) 542-8759.

JVAS to participate in SHAVER'S CREEK BIRDING CUP

The Shaver's Creek Birding Cup was established fifteen years ago as a fund-raiser for educational programs, research, and raptor care at the Shaver's Creek Environmental Center in northern Huntingdon County. Nestled within the Penn State Experimental Forest and adjacent to the Rothrock State Forest, Shaver's Creek is central Pennsylvania's premier environmental education facility, presenting close to two hundred programs each year at schools, sponsoring the record-breaking Tussey Mountain Golden Eagle Watch, caring for two dozen non-releasable injured raptors at the center, training environmental education interns, providing an ongoing series of nature programs for visitors, conducting saw-whet owl banding, and hosting summer camps for elementary, junior high, and high school students.

The Shaver's Creek Birding Cup competition consists of teams birding for a 24-hour period, this year from 8:00pm on Friday, May 5 till 8:00pm Saturday, May 6, with the cup being awarded to the team that sees the most species. Each team solicits pledges - either a flat amount or on a per species basis - that go the Shaver's Creek Environmental Education Center.

Juniata Valley Audubon's team, the Gnatcatchers, will again be in the field for this fun event. Our team will confine its birding to Blair County, with particular emphasis on State Game Land 166 and Canoe Creek State Park, where we hope to see at least one hundred species of birds during the assigned 24-hour period. The JVAS Gnatcatchers won the County Cup in 2002 with 132 species and in 2004 with 116 species.

If you'd like to make a Birding Cup contribution to help the Shaver's Creek Environmental Center, please fill out the form below and send it to JVAS Gnatcatchers, RR 3 Box 866, Altoona, PA 16601-9206. Make checks payable to the Shaver's Creek Environmental Center/PSU.

YES! I'd like to sponsor the JVAS Gnatcatchers in their bid for the Shaver's Creek Birding Cup. I understand that all proceeds will be used for educational programs at the Shaver's Creek Environmental Center, central Pennsylvania's premier environmental education facility.

I've enclosed a check for _____

Name _____

Address _____

Send this form to

JVAS Gnatcatchers
c/o Dr. Stan Kotala
Gnatcatchers team captain
RR 3 Box 866
Altoona, PA 16601-9206.

Make checks payable to the Shaver's Creek Environmental Center/PSU.

The Gathering

By Heidi Boyle

All nature's creatures join to express nature's purpose. Somewhere in their mounting and mating, rutting and butting is the very secret of nature itself.

—Graham Swift

Five of us crouched in the sudden blast of wind, shielding our faces from whips of rain. As branches flailed overhead in the darkness, we trudged clumsily down the railroad tracks, shining our lanterns and flashlights into the icy ditch water at 11:30pm on a Sunday night.

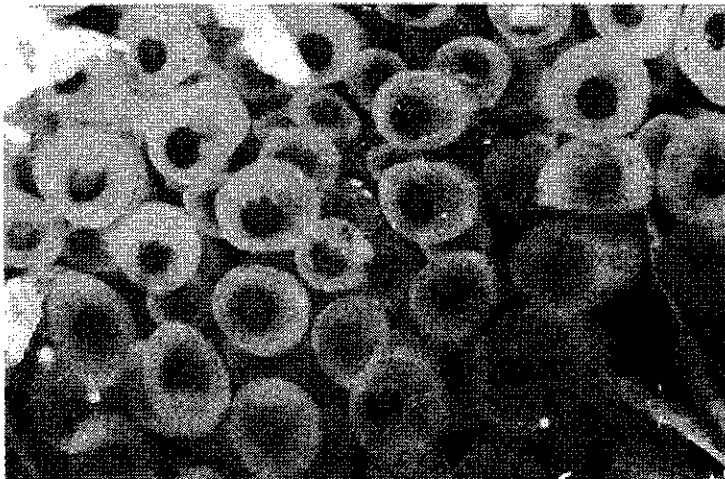
This was the hardest part, this mind-bending cold and damp of a late winter evening – still too cold to call it early spring, I thought sleepily. The March rains were miserable but on this, our third night of searching, a triumphant shout of “Got ‘em!” brought the reward for which we had been searching.

We stumbled forward, aiming our beams into a pool edged in grainy, sloppy snow. Our lights revealed a world of wonder as glistening black bodies writhed in silent ecstasy – spotted salamanders (*Ambystoma maculatum*) looking for a mate. Intense dabs of sun yellow glowed on the fleshy bodies moving in their sinuous dance. Hundreds of the amphibians had emerged from burrows and from under rotting logs and crawled over the cold leaf litter to get here, the pool where they were born. Amazingly enough, spotted salamanders use the same routes each year to find their natal pool.

The ‘salamander rains’ that mark the passing of winter are an annual invitation for the elusive spotted salamanders. Called by an elemental promise of progeny, they had arrived from their lonely lives to gather in great riotous throngs, find a mate, lay eggs, and crawl quietly away to seek the dark protection of leaf litter and burrow once again.

Turning my light from the main mass of salamanders, I found several pairs leaving the group. *A. maculatum* gather for only a short period each year, so time is of the essence. The males were leading their mates toward their spermatophores (small packages of sperm) stuck to the leaves at the bottom of the pool. A few females were already moving off, having picked up the whitish packages. The females would leave the pool after laying anywhere from several dozen to several hundred eggs.

Returning to the pools on Wednesday afternoon, I saw no trace of the many spermatophores, instead greenish egg masses had appeared in the pools. Frequently algae colonize the egg masses of spotted salamanders, giving the mass a greenish tint. It is thought that the embryos provide carbon dioxide to the algae, and in turn the algae provide the oxygen needed for embryonic development. Most egg masses are affixed within six inches of the surface of the pool; deeper masses having less algae.



Spotted salamander egg mass

In one pool I could see five baseball-sized egg masses secured to submerged grasses or sticks. When first laid, the eggs are small and tightly packed, but swell quickly in the cold water, forming a dense jelly-like mass. This is the end of the mother's relationship with her young – the eggs are left for nature to decide their fate.



Salamander larva

The pool was strangely calm in contrast from the revelry of a few nights before. I squatted gingerly at the edge, my boots sinking into wet leaves. Warily I reached into the frigid water and prodded an egg mass, noting the tiny black dots of young within. Around the time violets and spring beauties will be nodding in the sunshine, these salamander larvae will hatch and become predator and prey to the life of the pool.

Looking like tadpoles, but sporting large feathery gills just behind their jawbones, they will explore their pool, eating insect larvae, water fleas, and other small critters. When prey is short, they'll even eat each other. Life in a vernal pool is a tenuous proposition; salamanders, frogs, birds, raccoons, skunk – the dangers of the pool are many, and life is influenced by the changing level of water.

As the larvae change into young salamanders, they'll leave the pool to seek out the dark moist underworld of leaf and log. It will be several years until these young salamanders will reach sexual maturity, but, as spotted salamanders live 15 – 20 years, they will return many times to answer spring's call to join in the annual breeding frenzy.

As I stretched my cramped legs, feeling the chill of winter still in the air, I regarded the pool, now free of ice. It was a comforting thought that with the passing of the salamander rains winter was giving way to the quickening of pool and forest and the warmth of spring.

The world is mud-luscious and puddle-wonderful.

--e. e. cummings



Spotted salamander

Canoe Creek Butterfly Garden

The JVAS board has voted to adopt the butterfly garden at Canoe Creek State Park!

You may have visited the Canoe Creek State Park education center and adjoining butterfly garden. The garden, enjoyed by so many visitors, is in trouble. Non-native plants are taking over and unless the garden can be maintained, it may have to be turned over to grass. To that end, Garden Days are being set in order for volunteers to help save the garden.

Our goals include:

- 1 Establishing routine maintenance and weeding of garden
- 2 Increase diversity by purchasing and planting more native species in the garden
- 3 Removing non-native plants
- 4 Controlling plants such as Canada thistle, hedge and black bindweed, and grasses that are intruding
- 5 Controlling natives that are spreading, such as American germander, by planting more native species
- 6 Purchasing and putting up attractive rabbit fencing to protect new plants.

Garden Days will be:

Saturday, May 27 from 8 am – 10am

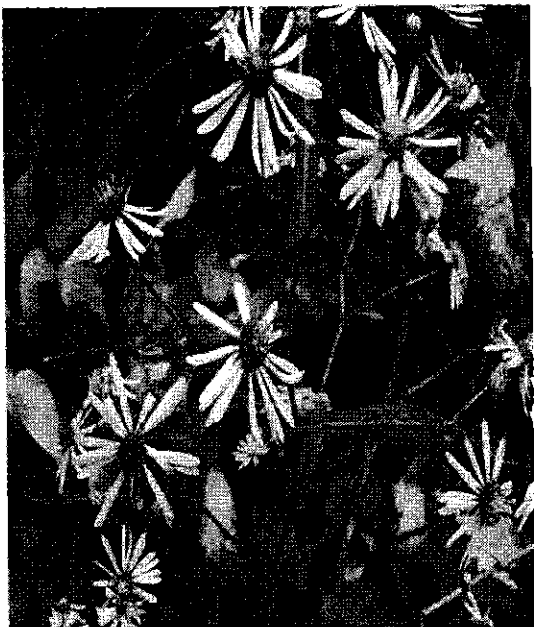
Saturday and Sunday, June 17 & 18 from 8 – 10am

Saturday and Sunday, July 15 & 16 from 8 – 10am

Saturday, and Sunday, August 12 & 13th from 8 – 10am

If you are unfamiliar with what plants to weed, we'll be making it easy by marking the plants we want to keep. Trowels and gloves will be provided, along with cold water.

Call Heidi Boyle at 696 6025 or Stan Kotala at 946 8840 if you are interested in signing up to help on these days.



Asters are an important nectar source for migrating butterflies.

Monarch butterfly on Blazing Star (*Liatris spicata*).



JOIN JUNIATA VALLEY AUDUBON!

Juniata Valley Audubon membership provides you with the following benefits:

- Notification of Juniata Valley Audubon's exciting activities including nature programs, field trips and other events
- Subscription to the bimonthly chapter newsletter, *The Gnatcatcher*
- Opportunities to participate in conservation projects and environmental advocacy, and have fun!

Become a chapter-only member: _____ Individual: \$15 _____ Family: \$20 _____ Supporting: \$35

_____ Friend of JVAS: \$50 _____ Corporate: \$100

_____ Life Membership: \$500— JVAS Life Membership provides you with all the benefits listed above for a once-in-a-lifetime fee of \$500.

Name _____
 Street _____
 City _____ State _____ Zip _____
 Phone _____
 E-mail _____

Mail this form to
Juniata Valley Audubon
c/o Dr. Stan Kotala, President
RR 3 Box 866
McMullen Road
Altoona, PA 16601-9206

JVAS BOARD MEMBERS

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| | | | | | |
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| Vice-President..... | Dave Bonta | 684-3113 | Publications..... | Helena Kotala | 946-8840 |
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| Treasurer..... | Warren Baker | 684-4549 | Hospitality..... | Maxine Leckvarcik | 669-1329 |
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COMMITTEE CHAIRS

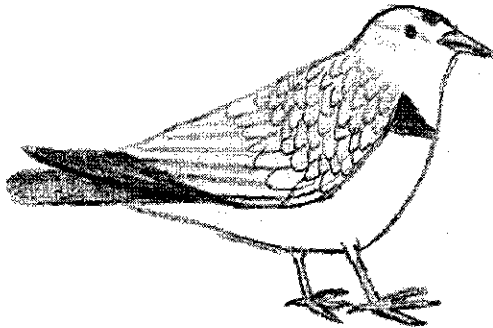
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 Education.....Jody Wallace 684-2425
 <jwaljshiel@aol.com>

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Piping plover by JVAS member Emily Majcher

Marcia Bonta
 P.O. Box 68
 Tyrone PA

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JVAS Juniata Club River Trips take place according to weather and water levels. If you would like your name added to the Juniata Club roster, contact Helena Kotala at ccwiba@keyconn.net or 946-8840. She will notify you of upcoming trips by email or phone.

ABOUT JVAS PROGRAMS: Programs are presented on the third Tuesday of each month. They begin at 7 PM in the chapel at Alto-Reste Park on Plank Road, Altoona. Our programs are designed for a general audience, and are free and open to the public.

Powdermill Nature Reserve—Join us for a day of bird watching and bird banding at the Carnegie Museum of Natural History's Biological Field Station in Westmoreland County. Meet at Unkel Joe's Woodshed in Altoona at 9 AM. Bring binoculars, boots, and a bag lunch.

April 22, 2006

Middle Creek Wildlife Management Area—Join us for our annual trip to the PA Game Commission's staging area in Lebanon County for amazing looks at snow geese, swans, and migrating waterfowl. Meet at the McDonald's in Huntingdon at 9 AM. Bring binoculars, boots, and a bag lunch. Supper on the way home.

March 11, 2006

MARCH AND APRIL FIELD TRIPS

Dragonfly-watching—Cynthia Berger, the author of *Wild Guide: Dragonflies* (Stackpole Books, 2005) and producer of "Pennsylvania Radio Expeditions" will present a program about dragonflies.

March 21, 2006

MARCH & APRIL PROGRAMS

April 18
JVAS Spring Banquet
 Please see page 1 for details.