

THE GNATCATCHER

Newsletter of Juniata Valley Audubon

Vol. 38 No. 5 — Sept/Oct 2006



Groundbreaking Legislation Would Expand Water Quality Protection on PA Farms

The REAP State Tax Credit Program First of its Kind in the Nation

New Pennsylvania legislation would establish an unprecedented water quality program and boost efforts to protect the Chesapeake Bay. The Resource Enhancement and Protection Tax Credit Program (REAP) would provide state tax credits to farmers who prevent pollution and restore habitat.

The legislation enjoys bipartisan support in both the House and the Senate. Introduced as Senate Bill 1286 by Senators Wenger, Waugh and O'Pake and as House Bill 2878 by Representatives Stern, Hershey and Daley, the companion bills have many co-sponsors.

The REAP proposal provides critically needed funding to farmers who install stream protection measures and it delivers that support through state tax credits that farmers can use to reduce their tax bill or sell to other taxpayers. REAP also creates a sponsorship program that allows businesses to sponsor projects on farms in exchange for tax credits. These and other features of REAP are based on the successful Educational Improvement and Research and Development Tax Credit Programs already enacted in Pennsylvania.

Farmers have long recognized the need to be good stewards of the land, but with today's slim profit margins, many critical environmental measures just aren't feasible for the farmer acting alone. The program gives higher tax credits for measures that provide the greatest benefit to the public and the environment, including

tree planting along streams and runoff controls on barnyards. Farmers benefit because improving pastures and barnyards provides healthier conditions for livestock as well as fish.

Applicants are eligible for tax credits up to \$150,000. The legislation caps the program in the first year at \$50,000,000 in tax credits and \$100,000,000 in each of the successive four years. The Pennsylvania Department of Revenue would administer the program.

"As we address water quality concerns, we must also find ways to help farm families deal with the financial squeeze of higher costs and lower returns," said Chesapeake Bay Foundation Pennsylvania Executive Director Matt Ehrhart. "We congratulate the bill's sponsors for addressing the needs of both."

The REAP Program will help Pennsylvania meet its obligations under the 2000 Chesapeake Bay Agreement to reduce nitrogen pollution going to the Chesapeake Bay by over 38 million pounds a year by 2010, as well as phosphorus and sediment pollution.

Please write your state Senator, Representative, and Governor Rendell and urge them to support this critically important proposal.

COUNTY PLANTS TREES TO CONTROL STORMWATER

Hoping to curb the amount of stormwater washing off streets, parking lots and lawns, officials in Baltimore County are trying to get homeowners to plant a small forest of trees. In a partnership with local businesses, its new Growing Home Campaign is distributing coupons that give homeowners \$10 off the price of most trees purchased from nurseries in the county. The goal: plant 10,000 trees.

County officials don't see the program as an expense, but rather as a big potential savings. Studies show trees can sharply reduce the amount of runoff, and therefore reduce the amount of costly stormwater improvements needed in older, developed areas. Of all the actions needed to control nutrients and sediments to meet Bay cleanup goals, retrofitting stormwater control systems in previously developed areas is among the most expensive items identified in state tributary strategies that guide cleanup efforts. For example, it cost \$400,000 to design and construct a single detention pond to retain runoff in an area that has already been developed on Frankstown Road in Frankstown Township, Blair County. Planting trees has the potential to greatly reduce those costs. Trees intercept rainfall, slowing the rate at which it hits the ground. That gives rainwater a greater chance to soak into the soil, rather than run off the land. In addition, trees soak up large amounts of water--as well as nutrients and other pollutants.

American Forests, a conservation group, in 1999 estimated that the tree cover lost in the Baltimore-Washington metropolitan area from 1973 to 1997 resulted in an additional 540 million cubic feet of runoff annually, which would have taken more than \$1 billion in stormwater control facilities to manage. Restoring tree cover can help to reverse that impact. In fact, the Chesapeake Bay Program is encouraging urban areas to set tree canopy cover goals in part to help reduce urban runoff. *Besides reducing stormwater costs, trees can help reduce air pollution, as well as reduce heating and cooling costs for homes.*

Studies suggest that urban areas should have between 25 percent and 40 percent tree canopy cover to maximize environmental benefits.

JVAS Bluebird Trail established at Fort Roberdeau County Park

This past spring JVAS members Tom Harvey and John Betting donated bluebird boxes to be used for the JVAS bluebird trail at Fort Roberdeau County Park in Sinking Valley. Because the Fort Roberdeau Association had recently purchased close to 200 additional acres of farmland for the park, a large area was available for the creation of a bluebird trail.

20 bluebird houses were mounted on poles protected with predator baffles. These houses were placed about 50' away from hedgerows separating fields in

the park. By placing the boxes in these open areas, it was hoped that competition from house wrens would be avoided.

Within a month of their placement, each of the 20 houses was occupied, half of them with bluebirds, half with tree swallows. Many boxes yielded a second brood during the summer. In total, close to 100 bluebirds and 80 tree swallows fledged from these boxes, showing that there definitely was a shortage of cavities in the hedgerows.

Blair County Roundtable Promotes Environmentally-Friendly Development

Communities in Blair County will now have guidance on how to protect their region's natural resources in the face of new commercial and residential development. On June 7th, representatives from seven municipalities, local engineers, local builders, environmental groups, and government agencies released the *Recommended Model Development Principles for Blair County, Pennsylvania – Consensus of the Local Site Planning Roundtable*.

This guidance document is the result of a 12-month roundtable consensus process to revise local building regulations to promote development that is sensitive to the area's watershed resources. The report includes a series of recommended changes to subdivision and land development and zoning regulations that will better manage stormwater, preserve and enhance existing natural areas, and reduce pollution in the streams that ultimately reach the Chesapeake Bay. This roundtable is the latest in a series of roundtable efforts called *Builders for the Bay*. Established in 2001 by the Center for Watershed Protection, the Alliance for the Chesapeake Bay, and the National Association of Home Builders, *Builders for the Bay* roundtables are designed to promote sound land use development throughout the Bay watershed.

The timing for this process in Blair County is crucial as improvements to I-99 in the northern region of the county will bring additional growth and development along this corridor in the near future. Reliance on small reservoirs for public water supplies makes protecting the recharge area to these supplies an important consideration in land use planning and development.

Builders for the Bay facilitators worked with Allegheny, Blair, Frankstown, Logan and Snyder townships, boroughs of Duncansville and Hollidaysburg, Blair County Builders Association and representatives from local conservation and planning organizations to:

- 1 adapt national model development principals to local development codes and ordinances,
- 2 examine changes and recommendations that would increase flexibility in site design standards, and to
- 3 foster development that better protects environmental resources while remaining economically viable for the development community.

The recommended code changes are based on the Better Site Design Principles developed at a National Site Planning Roundtable by the Center for Watershed Protection in 1996. Other roundtables have been held in James City County, VA, the Lancaster Area, PA, and four other areas in the Chesapeake Bay watershed.

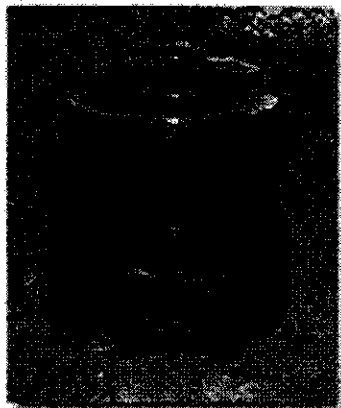
According to Bob Buddenbohn, Executive Officer of the Blair County Builders Association, the recommendations "are environmentally-friendly and seek to conserve the natural resources that are valued by all Blair Countians. At the same time, the recommendations offer builders, developers and engineers practical and cost-effective options that result in low impact development. When implemented, some of the recommendations might actually result in reduced development costs, which can translate into a more affordable home for new buyers. The Roundtable should be congratulated for producing a set of recommendations in which everyone is the winner!"

The Blair County Consensus Document can be downloaded from: www.buildersforthebay.net. Copies of the document can also be obtained from the Blair County Planning Commission and Blair County Conservation District.

The Blair County Builders for the Bay roundtable was made possible by the generous support of the Chesapeake Bay Program, Chesapeake Bay Small Watershed Grants Program through the National Fish & Wildlife Foundation, and the Western Pennsylvania Watershed Program.

For more information on Builders for the Bay, visit www.buildersforthebay.net or contact the Center for Watershed Protection, 8390 Main Street, 2nd floor, Ellicott City, Maryland 21043, phone (410) 461-8323, fax (410) 410-461-8324, email jat@cwpp.org; www.cwpp.org; or contact the Alliance for the Chesapeake Bay, 3310 Market Street, Suite A, Camp Hill, PA 17011; telephone (717) 737-8622; pdevlin@acb-online.org; www.alliancechesbay.org.

Blair County Compost Bin and Rain Barrel Seminar for Homeowners



Learn, Make and Take

Learn how to backyard compost from Jan Arnold, director of the Blair County Department of Solid Waste and Recycling and strategies to utilize stormwater from your homesite from Steve Putt, Resource Conservation Specialist of the Blair County Conservation District. You will then receive a 3'x3' compost bin made out of recycled materials (as seen on the left) and receive all the materials to make your own 30 gallon or 55 gallon rain barrel either on site or at home (as seen below). Light refreshments also provided. Come for just one session or stay for both, one low price.

WHEN: Thursday, September 21, 2006

Registration: 5:45–6:00 p.m.

Composting Session: 6:00 p.m.–6:45 p.m.

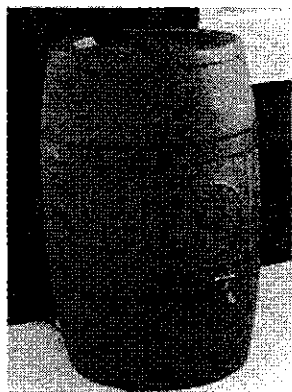
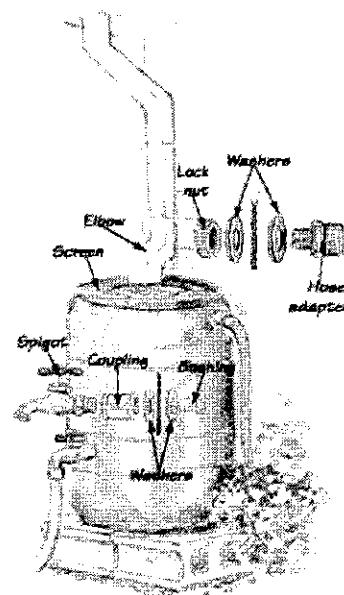
Stormwater Session and rain barrel construction: 7:00 p.m.–8:00 p.m.

WHERE: Blair County Research and Demonstration Compost Facility located 1/2 mile South of the intersection of Routes 22 and old 220 in Duncansville. (just south of Inlows Restaurant)

REGISTRATION: Space is limited, registration due by September 11, 2006

COST: \$10.00 if registered by 9/11 or \$15.00

SPECIAL NOTE: The compost bins are approximately 3' in diameter and the rain barrels are available in 55 gallon or 30 gallon sizes.



To register or for more information: contact The Blair County Conservation District office at: 814-696-0877 x5 at 1407 Blair Street, Hollidaysburg, PA 16648, or email: aritchey@blairconservationdistrict.org

Sponsored by: The Blair County Conservation District, Blair County Department of Solid Waste and Recycling, PA Department of Environmental Protection and the Penn State Extension Service.

Rain barrels from Spruce Creek Rain Saver as shown left also available for \$120.00

Rain Gardens Soak Up Urban Stormwater Pollution

Properly designed "rain gardens can effectively trap and retain up to 99 percent of common pollutants in urban storm runoff, potentially improving water quality and promoting the conversion of some pollutants into less harmful compounds, according to new research announced on Jan. 26 and scheduled for publication in the Feb. 15 issue of the American Chemical Society journal, *Environmental Science and Technology*.

The affordable, easy-to-design gardens could help solve one of the nation's most pressing pollution problems, according to the study's authors, Michael Dietz and John Clausen (<http://www.canr.uconn.edu/nrme/testing/bios/clausen.html>) of the University of Connecticut.

More than half of the rainwater that falls on a typical city block, one with 75 percent or more impervious cover — such as roads or parking lots — will leave as runoff, according to EPA, the Connecticut researchers said. This runoff includes metals, oils, fertilizers and other particulate matter. Easy-to-construct rain gardens — shallow depressions in the earth landscaped with hardy shrubs and plants such as chokeberry or winterberry surrounded by bark mulch — offer a simple remedy to this problem, they said.

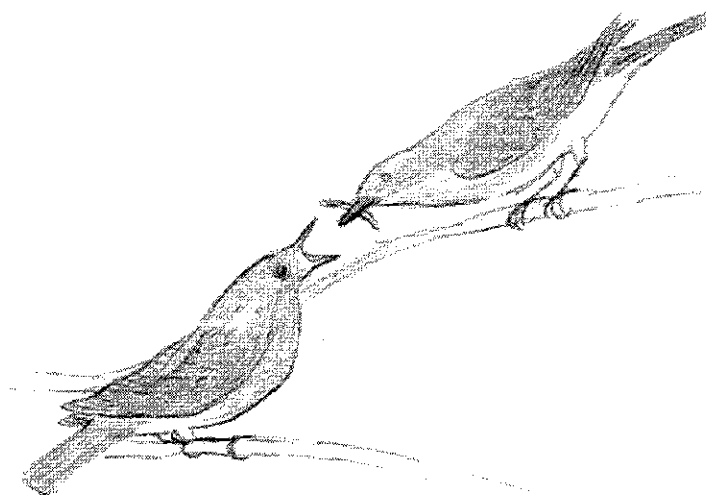
The gardens are designed to replicate the natural water cycle that existed before roads and other impervious surfaces were constructed, Dietz and Clausen said. As the water collects and soaks into the rain garden, it infiltrates into the ground rather than draining directly into sewers or waterways. The gardens work well year-round, they said.

In their two-year study of roof-water runoff, the researchers found that rain gardens significantly reduced concentrations of nitrates, ammonias, phosphorous and other pollutants reaching storm drains. In addition, design tweaks that allowed polluted rainwater to pool at the bottom of the gardens permitted bacteria in the soil to convert harmful nitrates into nitrogen gas, preventing them from entering the groundwater.

Dietz and Clausen hope their results will encourage developers and homeowners to create these low-tech rain water collectors. "Rain gardens are pleasing to look at, while they are performing an important function," Dietz said.

For more information about designing and constructing rain gardens, visit

<http://cleanwater.uwex.edu/pubs/\raingarden/rgmanual.pdf>.



Bluebirds by JVAS
staff artist
Emily Majcher

Lighting the key to energy saving

A global switch to efficient lighting systems would trim the world's electricity bill by nearly one-tenth. That is the conclusion of a study from the International Energy Agency (IEA), which it says is the first global survey of lighting uses and costs. The carbon dioxide emissions saved by such a switch would, it concludes, dwarf cuts so far achieved by adopting wind and solar power.

"Lighting is a major source of electricity consumption," said Paul Waide, a senior policy analyst with the International Energy Agency and one of the report's authors. 19% of global electricity generation is taken for lighting - that's more than is produced by hydro or nuclear stations, and about the same that's produced from natural gas. The carbon dioxide produced by generating all of this electricity amounts to 70% of global emissions from passenger vehicles, and is three times more than emissions from aviation, the IEA says.

Not many inventions last for more than 100 years without major modifications. The incandescent light bulb, developed a century and a quarter ago by luminaries including Sir Joseph Swan and Thomas Edison, is one, and still produces almost half of the light used in homes around the world. But incandescent bulbs are very inefficient, converting only about 5% of the energy they receive into light.

The biggest consumer, however, is the fluorescent tube. Commercial and public sector buildings account for 43% of the electricity used for lighting; and here, fluorescents dominate.

The IEA reserves particular ire for that favorite of the western middle-class lounge, the halogen uplighter. "This... is the least efficient of all commonly used electric lighting systems," it says. "They add a large amount of heat into the living space as a by-product... this heat might require additional air-conditioning energy for its removal."

Energy-efficient lighting can seem such an obviously good idea that it is hard to comprehend why it is not used everywhere. For the individual, the most obvious switch to make is from incandescent bulbs to compact fluorescent systems (CFLs), marketed in many countries as "energy-saving bulbs".

The future may see even more efficient systems. LEDs hold out the most promise; currently four times as efficient as incandescents, manufacturers are aiming for 80% efficiency by the end of the decade, which would represent a 16-fold improvement on the traditional bulb.

But, the IEA concludes, there is no need to wait for LEDs. Policy measures and individual action to bring the switch would slash 38% from the global electricity bill for lighting by 2030.

State College Bird Club to host Program about Industrial Windfarms

Audubon Pennsylvania's Important Bird Area Director Kim Van Fleet will present a program detailing the effects of industrial windplants on forests and wildlife in Pennsylvania at a State College Bird Club program to be held in the State College Municipal Building, Room 201 on Wednesday, September 27 at 7pm.

The State College Municipal Building is located on South Allen Street next to the Schlow Library in downtown State College.

Big Wind Companies want to build industrial wind turbines on every mountain top in Bedford County. Please join us in a FREE community awareness program to find out how wind development will affect you and your family.

WIND ENERGY IN BEDFORD COUNTY: FACTS, NOT FICTION

MONDAY SEPTEMBER 18, 2006 7 PM

**HEARTLAND HALL
BEDFORD, PA**

SPEAKERS:

**Dan Boone, biologist and wind policy expert
Todd Hutzell and Karen Ervin, Meyersdale residents
Beth Anderson, Snake Spring Township resident
Steve Wicks, SOAR attorney**

Program Sponsored by:



Do we want our mountains to look like this?

(Reproduction of photo taken at Bear Creek Wind Power Project, Bear Creek, PA.)

**SOAR is a grass-roots nonprofit group.
Donations will be accepted to offset expenses.
T-shirts will also be on sale.**

**Heartland Hall is located 2.5 miles north of the Bedford Turnpike Interchange
(exit 146) on Business Rt. 220, Bedford, PA**

**From PA Turnpike: Exit 146 (Bedford, PA): Turn left onto Business Rt. 220 North.
Heartland Hall is located 2.5 miles on the right.**

**From Rt. 30 (from the west: Greensburg, PA or from the east: Chambersburg, PA):
Exit onto Rt. 220/199 North. Travel about 2 miles and take Exit #1 (PA Turnpike) and
turn left onto Business Rt. 220 North. Heartland Hall is located 2.5 miles on the right.**

**From 99/Rt. 220 (from the south: Cumberland, MD or from the north: Altoona, PA):
Take Exit #1 (PA Turnpike) and turn left onto Business Rt. 220 North. Heartland Hall
is located 2.5 miles on the right.**

**From Rt. 56 (Johnstown, PA): Travel east to Cessna. Turn Right at the light across from Wal-Mart
Distribution Center and travel about ¼ mile before turning left onto Business Rt. 220 South.
Heartland Hall is ¼ mile further on your left.**

Industrial Windplants pose threat to Ridgetop Forest Wildlife

by Donald S. Heintzelman

The notion that industrial-size wind energy facilities — arrays of huge wind turbines — will solve America's increasing electrical energy demands, while simultaneously enjoying the benefits of being environmentally "green" technology, is inaccurate. These are not small windmills, or even Holland's more picturesque windmills. Instead, they range up to about 450 feet high and dominate the landscapes in which they are constructed. They also cause massive ridgeline and viewshed degradation on the forested Appalachian ridges in northeastern and southwestern Pennsylvania and in West Virginia.

That environmental damage is unacceptable. Nevertheless, more turbines are proposed for additional forested ridges in Maryland, Pennsylvania, Virginia and West Virginia, and may cause significant losses of tourism dollars. Another concern is that the 2003 voluntary siting guidelines from the U. S. Fish & Wildlife Service recommend that large turbines not be constructed on known bird and bat migration flight-lines and corridors. Both the American Bird Conservancy and Hawk Mountain Sanctuary Association include similar precautionary principles in their position statements regarding these wind-energy facilities.



However, the wind energy industry is ignoring these voluntary guidelines, and tidal waves of these facilities are proposed for forested Appalachian ridgetops in Pennsylvania and neighboring states. In Pennsylvania, for example, these ridges include the famous Kittatinny Ridge, on which major autumn hawk migration watchsites such as Bake Oven Knob, Hawk Mountain, and Waggoner's Gap are located.

All the forested Appalachian ridges are autumn raptor migration flight-lines and corridors for at least 16 species, including rare golden eagles, bald eagles and peregrine falcons. These migrations (and spring migrations of golden eagles along Tussey Mountain near State College) represent a cautionary danger flag. So, too, do substantial numbers of bald eagles and golden eagles wintering in the remote mountains of Highland County, Va.

In the East, however, almost no accurate and objective scientific information is available regarding potential impacts on raptors and other migrating birds by arrays of these wind energy facilities on the forested Appalachian ridgetops. At the Altamont Pass wind energy facility in California, however, about 5,000 industrial-size wind turbines have killed thousands of golden eagles, hawks and owls in the past 25 years, a devastating impact on raptors. That is why siting industrial-size wind energy facilities on forested Appalachian ridges is playing

"Russian roulette" with migrating raptors. Hence, it's necessary to employ a precautionary principle until accurate and objective scientific information is available.

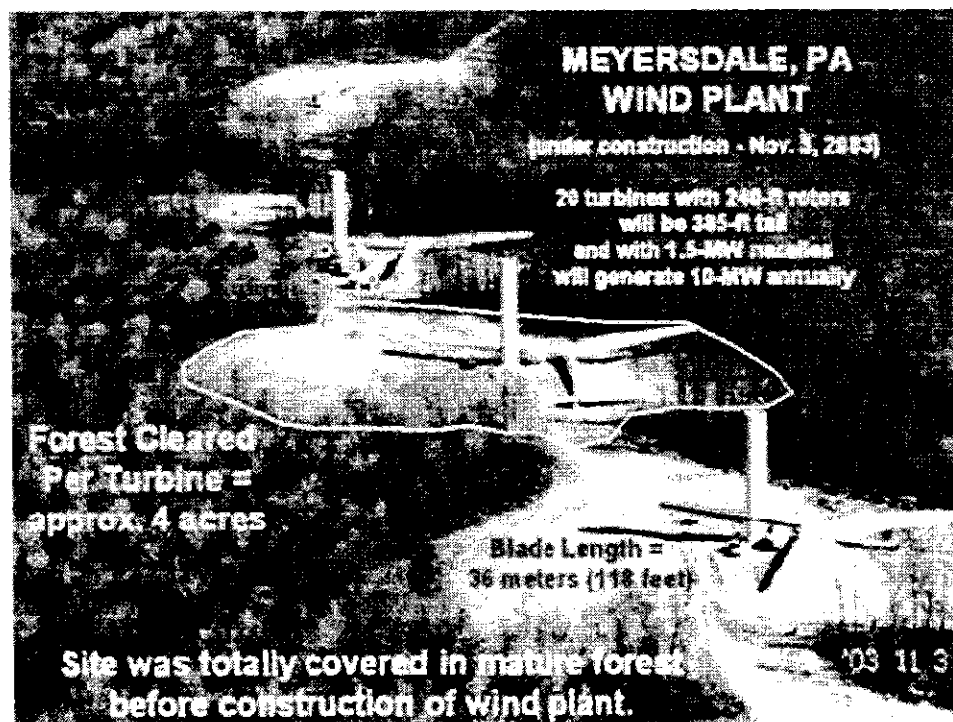
There also are other troubling problems. One is forest fragmentation. It's a major cause of declining populations of neotropical migratory forest interior songbirds, such as wood thrushes and cerulean warblers. Hence it's not helpful knowingly to build wind energy facilities on sensitive environment sites and add more stress to already declining populations of forest interior songbirds.

Bat Conservation International also discovered thousands of bats were killed at two large wind energy facilities near Meyersdale, Somerset County, and at the Mountaineer Wind Energy Center on Backbone Mountain in W.Va. Regretfully, the owner of these facilities, FPL Energy, banned bat biologists from conducting additional research at the sites after the large bat mortality was documented. Hence, efforts to discover why bats are killed at these facilities, and how to mitigate or avoid the mortality, are being hampered.

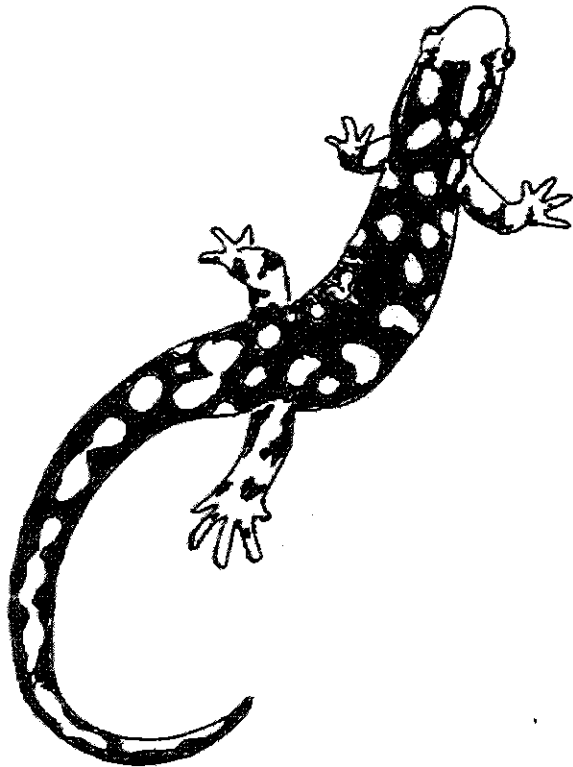
Additional concerns focus on necessary safety lighting on large wind turbines and the tendency, under some weather conditions, of lights attracting nocturnal migrating songbirds — resulting in their deaths.

Finally, industrial-size wind energy facilities are unreliable continuous sources of electrical generation. Hence, their impact on reduction of greenhouse gases and global warming is roughly equal to removing several drops of water as one fills a large tub. Is the tremendous potential damage to raptors, neotropical migratory forest interior songbirds, bats and the fragmentation of forests worth the tiny amount of electrical energy contributed to America's energy demands by siting these facilities on forested Appalachian ridges? Those are ethical and practical questions demanding accurate and objective answers.

Donald S. Heintzelman of Zionsville is an internationally-acclaimed professional ornithologist with 50 years of experience studying hawk migrations. He was a member of the curatorial staffs of two major state museums, and is the author of 21 books on raptors, other birds, and other wildlife.



Pennsylvania Reptile and Amphibian Atlas Resumes, Online This Time!



Pennsylvania is home to an incredible diversity of amphibian and reptile species. For many of these species, scientists and managers do not presently have sufficient information on their distribution and abundance to make informed management decisions. In 1997, Dr. Art Hulse of Indiana University of Pennsylvania began the **Pennsylvania Herpetological Atlas Project**. He established a network of volunteers to collect information on the distribution of amphibians and reptiles throughout the state. The project ran for six years, during which time a tremendous amount of important and useful information was gathered. For example, some of the data were used in the decision to designate two species as endangered in Pennsylvania. However, we still lack critical information on 36 of Pennsylvania's 73 native amphibian and reptile species. Therefore, it was decided to revitalize the **Pennsylvania Herpetological Atlas Project** in a new online form, as the **Pennsylvania Online Herpetological Atlas**

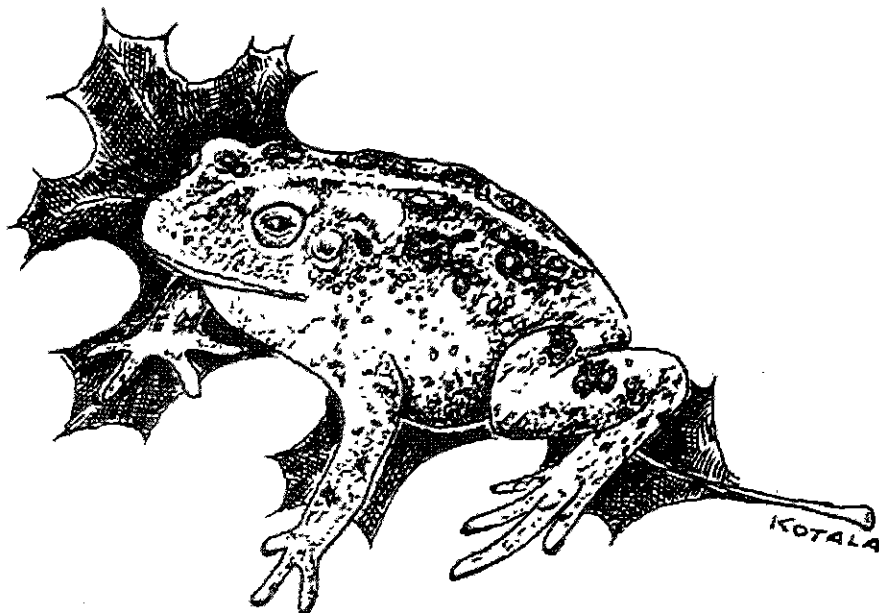
<http://www.ship.edu/~tjmare/herp.htm>

Why these 36 species?

In 2004, the Amphibian and Reptile Technical Committee of the Pennsylvania Biological Survey composed a list of 36 species of conservation concern. Species were listed for a number of reasons, including evidence of declining populations, restricted and/or patchy distribution, and susceptibility to threats such as habitat destruction or over collecting.

What are the 36 species?

The fourteen amphibian species of concern are the Jefferson Salamander, Marbled Salamander, Green Salamander, Hellbender, Four-Toed Salamander, Northern Cricket Frog, Fowlers Toad, Mountain Chorus Frog, Upland Chorus Frog, New Jersey Chorus Frog, Western Chorus Frog, Northern Leopard Frog, Southern Leopard Frog, and Eastern Spadefoot. The twenty two reptile species of concern are the Spotted Turtle, Blanding's Turtle, Wood Turtle, Bog Turtle, Common Map Turtle, Redbelly Turtle, Eastern Box Turtle, Northern Coal Skink, Broadhead Skink, Eastern Fence Lizard, Northern Copperhead, Timber Rattlesnake, Kirtland's Snake, Eastern Hognose Snake, Smooth Green Snake, Rough Green Snake, Queen Snake, Eastern Massasauga Rattlesnake, Shorthead Garter Snake, Eastern Ribbon Snake, Mountain Earth Snake, and Eastern Earth Snake. A short description of these species, including photographs, can be found on the project website.



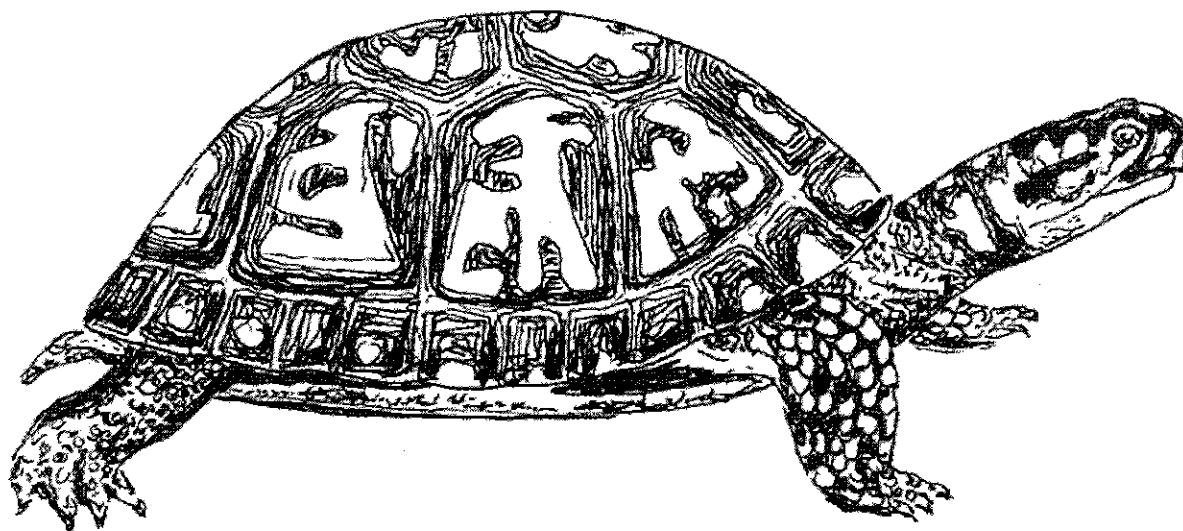
How can I participate in the Atlas Project?

Helping out is easy. When you see one (or more) of the species of concern, fill out the on-line form (click on the [Submit a Finding](#) link on the left side of the page) and submit the information electronically. If possible, please include GPS coordinates and a photograph of the animal. The GPS coordinates will provide a more exact location than directions to the site can provide. A photograph will help to positively identify the species, should questions arise as to its identity. The link to the on-line form can

be found on the left side of the page. Note: if you don't have GPS coordinates, type "none" in the coordinates spaces. If you don't provide coordinates, it is important that you provide detailed information on the directions to the site.

I have more questions. Who can I contact?

You can contact Tim Maret. He is a professor in the biology department at Shippensburg University and is responsible for the operation of the web page. You can reach him at tjmare@ship.edu.



KOTALA 99

The 'tween time

by Heidi Boyle

Subtle shades of yellows, rusts and browns in the greenery whispered of summer's retirement into autumn. The high rusty scraping of crickets seasoned the late summer fields as skippers, whites and fritillaries flowed and swirled over a quilt of knapweed, ironweed, wild carrot and golden-rod. Noticeably absent were the audacious Red winged blackbirds - the fields seemed incomplete without their strident calls. Through the golden-rod tiptoed a promenade of praying mantises, heads turning curiously to watch as I wound my way between Joe-pye weed and boneset. At the edge of the open water, a Great blue heron lurked, fierce eyes glaring at would-be dinner.

In a stand of scraggly black walnut saplings twitched and frittered three or four male cardinals, as ragged as the changing scenery. The cardinals were part way through their post-nuptial molt, sporting motley plumage and nervous dispositions. Darting through the undergrowth were more patchy looking birds - chickadees, song sparrows, catbirds - even the vainglorious Blue jays appeared disheveled, all having succumbed to the embarrassing but necessary late-summer molt.

The jays, cardinals, and sparrows I noted were gradually replacing their feathers by molting. Their feathers, which are critical to such life activities as flight, insulation, attraction or camouflage, wear out and must be replaced. Daily preening only goes so far in preserving plumage - thus molting is an essential part of a bird's annual cycle.

At this time of year, birds are responding to hormonal changes impelled by seasonal transition. The molt happens in the 'tween time, after the demands of breeding and raising young and before migration, when weather is still warm and food is still plentiful.

Most passerines take from 5 - 12 weeks to molt, but as with any principle in nature, variety is the key. Raptors may take two or more years; cranes molt every two years; some small songbirds will only go through a partial molt. Waterfowl are 'synchronous molters,' molting in short period that may leave them vulnerable, even flightless. This trade off ensures more efficient flight for a heavier body in a quicker time period. Mid-summer is when barn swallows delight in plucking shed feathers from the surface of a lake as ducks and geese molt while tending their young.

When transforming their vestments, birds are stressed from hormonal changes, lack energy, and their activities may be more 'low key'. The

unkempt looking cardinals flitting through the gray dogwood seemed overly anxious, scolding and warning me as I paused on the trail, while the normally brassy jays simply withdrew quietly into the woods.

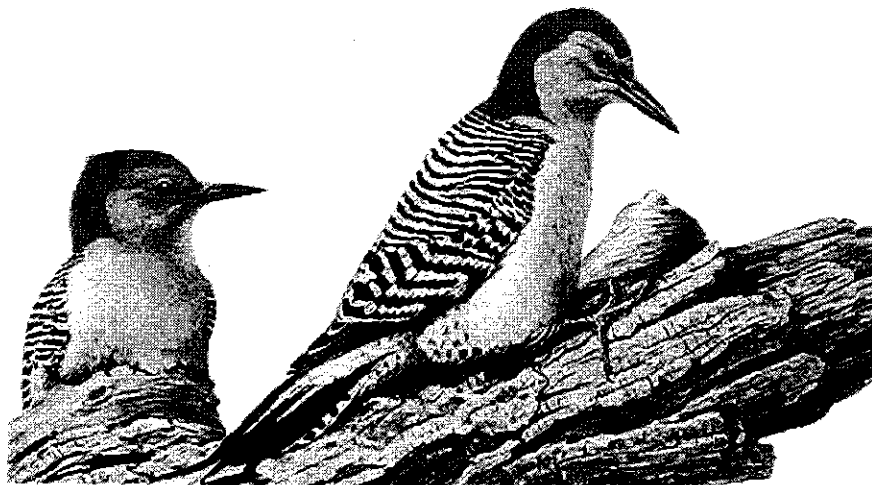
Because molting requires protein and calories, timing is critical and designed to address a mixed bag of needs. Birds that are residential may experience less feather wear, but must meet insulation needs of winter, requiring more feathers be produced in a molt. And since the number of feathers varies according to species, the manner and timing of molting is varied. Consider that a Ruby-throated hummingbird sports around 950 feathers, while a Tundra swan claims over 25,000. Therefore, timing and duration of a molt is specific to the needs and physiology of a species.

During the complete molt before migration, feathers are gradually replaced in symmetrical patterns to keep birds completely covered and in balance for flight. Generally, large wing and tail feathers are the first to be shed, followed by body feathers from rump to head. The shedding order of primary and secondary flight feathers is critical so as to not compromise flight ability.

Most birds molt either once or twice a year. Birds that go through one complete (fall, post nuptial) and one partial (spring, pre-nuptial) look basically the same throughout the year. Examples are buntings, warblers, woodpeckers, thrushes and owls. Birds that fall under the two-molt list have two definitive plumages, adult winter and adult breeding. Some examples are loons, grebes, herons, rails, some blackbirds, orioles, and the American goldfinch. Of course, molts progress from juvenile to adult plumage, so molting is an integral piece of identification.

Watching a Red bellied woodpecker attired in a mix of rusty and shiny feathers as it preened in an alder, I imagined molting would be an itchy process, unpleasant in the heat of late summer. However, in nature, penalty is often paired with progress and the resulting benefit of warmer plumage for winter would be well worth the wait.

As it was, the birds nervously hiding in the foliage muttered, a discontent bred of hormones and a molt that would last but a few more weeks. My binoculars revealed plumage well on its way to becoming the sleek covering of feathers that would see them through the winter months, shedding the memory of summer like so many worn feathers and tattered leaves.



JVAS assists Pennsylvania Game Commission with Golden-winged Warbler Monitoring on SGL 322 in Huntingdon County

This past spring, the Pennsylvania Game Commission requested that Juniata Valley Audubon assist them in monitoring the golden-winged warbler, a Species of Special Concern in Pennsylvania, on the recently-acquired SGL 322, "the Suppes tract," north of Huntingdon. Powerline rights-of-way crossing this 2,000 acre gameland are home to several early-successional bird species, including the prairie warbler, the yellow-breasted chat, the field sparrow and the golden-winged warbler.

15 points have been established in the early-successional habitat area of SGL 322 for annual monitoring according to the Cornell Laboratory of Ornithology Golden-winged Warbler Project protocols, which include three minutes of visual and auditory observation at each point, utilizing golden-winged warbler song recordings. Preliminary scouting trips this year revealed large numbers of prairie warblers and field sparrows, but few golden-winged warblers. These scouting trips, however, were made late in the season when many species had curtailed or ceased their singing.

If you'd like to assist with next year's Golden-winged Warbler Project at SGL 322, then please contact project coordinator Dr. Stan Kotala at 946-8840 or ccwiba@keyconn.net.

JVAS THANKS ITS CORPORATE SPONSORS



Tea Bar & Gift Shoppe

Olde Farm Office Centre
Duncansville, PA 16635

Phone: 814-696-0192
Fax: 814-696-9504
Email: tcamerchant101@aol.com

Hours: Tues., Wed., & Sat. — 10-3
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Joseph Doyle/Proprietor



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~Wildlife Photography by Helena Kotala~
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Canoe Creek Butterfly Garden

By Heidi Boyle

This has been a most successful year for the Canoe Creek butterfly garden. The JVAS voted to adopt the garden, hosting 'garden care' days once a month. Weeding, planting and overall garden maintenance has transformed the garden into a quilt of blossoms that attracts many visitors.

The garden was originally started as a native wildlife garden but plans are to slowly make it into a garden of native plants that is managed organically. The plans for transforming the garden into an organic, native plant garden are in several phases.

The first phase involves filling in plants and instituting chemical controls in the control of weeds. We now have enough plants that weed control can be effected manually rather than chemically.

The second phase involves moving towards organic management of the garden. By separating plants and spreading more plants, controlling weeds by manual pulling eventually will not be needed as native plants take over.

The last phase will simply be eradicating non-natives, cultivars and any invasive plant species. We hope to have as close to a purely native garden as possible.

Thanks so much to the following Audubon members who have attended garden care days or contributed plants or other services to our garden: Stan, Alice and Helena Kotala, Alice Fleischer, Barb Baird, Maxine Leckvarcik, Mabel Michael, Luis Moore, and Tom Harvey.

Next spring will bring the advent of the season's garden days and dates will be made available in the Gnatcatcher.. What can you do to help? Attend care days (even when not scheduled, although please check with Heidi Boyle regarding care of the garden), plant species NATIVE to this area, and spread the word about native gardening. Hope to see you there!



*Tiger swallowtail on purple coneflower by JVAS Gnatcatcher editor
Helena Kotala (Nature's Images).*

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

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 CBC Coordinator.....Heidi Boyle 949-9302
 <hboyle@state.pa.us>
 NAMC Coordinator...Dr. Stan Kotala (see above)

PROGRAMS

September 19 - "Wind Energy Development in the Appalachians: Promises and Problems" Utility-scale wind turbines are the region's fastest growing source of electricity. Nearly 2,000 huge machines are presently under consideration for siting within the Commonwealth, mostly on forested ridgetops. Dan Boone, conservation biologist and wind energy policy expert, will debunk myths and discuss the risks and tradeoffs associated with future development.

October 17- "Raptors of Western North and Central America"- Wildlife photographer and birdwatcher Don Bryant will share slides of raptor—and a few other winged creatures—from wilderness destinations in Montana, British Columbia, Washington State, and Panama.

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.

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.

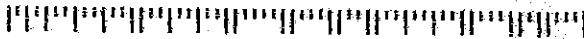
FIELD TRIPS

Saturday, September 23- Black Moshannon State Park- Bog & boardwalk hike. Meet at Uncle Joe's Woodshed in Altoona at 8 AM. Bring a bag lunch and drinks. 2 hour easy walk looking for early fall migrants. *Field trip leader-Terry Wentz, 693-6563, twentz2@verizon.net*

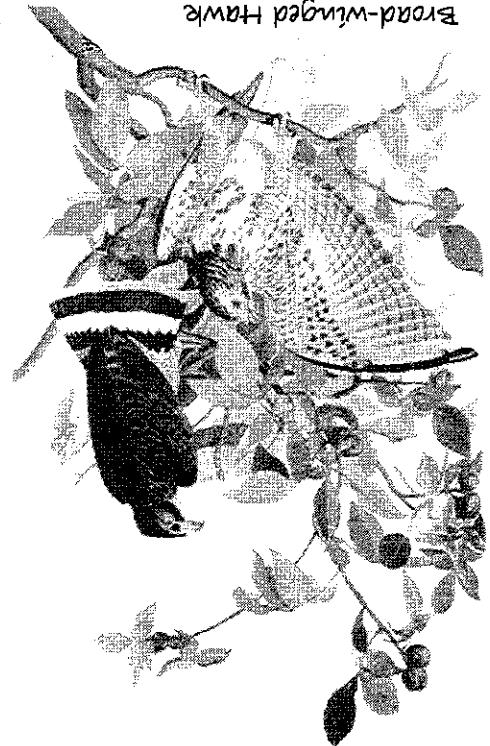
Sat & Sun, October 7 & 8- Cornell Ornithology Lab, Sapsucker Woods, Ithaca NY & Montezuma National Wildlife Refuge—Overnight— Visit the home of world renown bird research site and famous birding woods. Wildlife refuge is stop-over for fall migrating waterfowl and shorebirds. Meet at Uncle Joe's Woodshed in Altoona at 8 AM. Van transportation. Pre-register by September 22. *Trip leader- Terry Wentz, 693-6563, twentz2@verizon.net*

Saturday, November 4- Ned Smith Center- Sibley Exhibit- Meet at Uncle Joe's Woodshed in Altoona at 8 AM. Bring a bag lunch and drinks. Transportation by carpooling. *Trip leader- Terry Wentz, 693-6563, twentz2@verizon.net*

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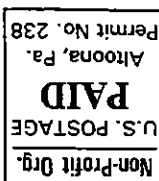
by John James and
Broad-winged Hawk



16686-0068

Marcia Bonta
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Waxwing Newsletter

WAXWING
ASSOCIATES LLC

Volume 1, Issue 3

Sept/Oct/Nov 2006

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COMING IN NEXT ISSUE December 2006

- Winter Birds
- Some Bird Feeding Tips
- Enjoy the Winter
- Preview to Spring

Fall Migration Begins

Most folks don't realize that fall migration begins in earnest with the noticeable shortening of daylight towards the end of July. In particular are the spring migrants that have gone the entire distance from the tropics to the Great Northwest. Here the days are 20 to 24 hours long and the adults have been working overtime to raise their young who have fattened up and are now ready to head south. Some birds continue on to South America while others take up winter residence in our area.

Listed here are some bird species that can be seen migrating south through the Alleghenies Region over the next 3 months.

Cavity Nesters:

- Eastern Bluebird
- American Kestrel

- Eastern Screech Owl
- Saw Whet Owl
- Wood Duck
- Chimney Swift
- Red Headed Woodpecker
- Red Bellied Woodpecker
- Downy Woodpecker
- Hairy Woodpecker
- Pileated Woodpecker
- Yellow Bellied Sapsucker
- Northern Flicker
- Tree Swallow
- Black Capped Chickadee
- Tufted Titmouse
- White Breasted Nuthatch
- House Wren
- Red Breasted Nuthatch

Lakes & Streams:

- Common Loon
- Great Egret



Bald Eagle

- Horned Grebe
- American Coot
- Double-crested Cormorant
- American Black duck
- Hooded Merganser

Hawk Watches in the Alleghenies

Four hawk watch sites have become very popular in Central PA as researchers and local bird clubs have taken roost on mountain tops counting accipiters as they soar by on their way South. Mountain tops where sites are located include Stone Mountain, Jacks Mountain, and Pine Grove Mountain in the Greater State College Area and

the Allegheny Front just west of Schellsburg in Bedford County. Each site offers up close and personal glimpses of a variety of hawks, ospreys, eagles, falcons, and others including butterflies. Hawk Watch season runs from September thru late November and viewing is best after cold fronts and strong northwestern winds. Please email Waxwing

Associates for details and directions to visit any of these sites.

Ospreys & Eagles:

- Osprey
- Bald Eagle
- Golden Eagle

Hawk Watches (cont'd)

Accipiters:

- Sharp-shinned Hawk
- Cooper's Hawk
- Northern Goshawk

Buteos:

- Broad-winged Hawk
- Red-shouldered Hawk
- Red-tailed Hawk
- Rough-legged Hawk

Falcons:

- American Kestrel
- Merlin
- Peregrine Falcon

Vultures:

- Turkey Vulture
- Black Vulture

Other Species:

- Canada Goose
- Tundra Swan
- Cedar Waxwing
- American Goldfinch
- Chestnut-sided Warbler
- Yellow-rumped Warbler
- American Crow
- Common Raven
- Black-capped Chickadee
- American Robin
- Blue Jay
- White-breasted Nuthatch
- Ruby-throated Hummingbird
- Downy Woodpecker
- Hairy Woodpecker

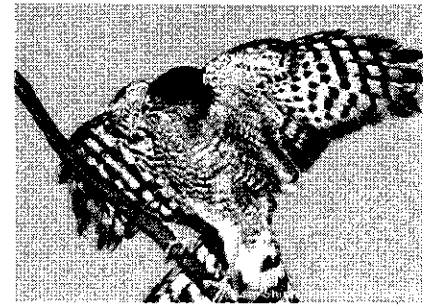
Fall Foliage & Wildflowers

The Allegheny Region boasts the largest number of tourists visiting to witness the fall foliage spectacular, second only to the New England States. The great variety of hardwood tree species provides a mired of color shades beginning with yellows, reds, oranges, and ending with burgundies and golden browns.

Wildflowers in the Alleghenies last until the first heavy frost in October. The same old fields, that provided great nesting habitat for birds, in late summer blossom with native perennial wildflowers. Many fields turn to a wave of yellow as more than 40 species of golden rod take over. Along stream beds and wetlands, jewelweed adds a

BATS and More Bats

Canoe Creek State Park hosts the largest nursery colony of Little brown bats in the Northeast United States. Each summer about 18,000 female bats take up residence in a park owned church and utilize the attic as their home to give birth and rear their pups through out the summer. Come October, all the bats leave the church and fly to caverns and mines to hibernate over the winter months. Six species of bats hibernate in a protected and secure deep limestone mine on park property all winter. You could say they settle in for a long winters nap!



Sharp-shinned HAWK

RECORD BLUEBIRDS

Canoe Creek State Park fledged a record 262 bluebirds this summer and 235 tree swallows from 101 nesting boxes. Boxes have been monitored for 24 years with more than 2800 bluebird fledglings over the years. Boxes are monitored by 8 volunteers, mostly members of the Juniata Valley Audubon.

touch of elegance as early morning dew drops look like opals when they collect on this plants shiny pale green leaves. Interspersed with all of these are the whites of daisy fleabane, ox eye daisy, and Queen Anne's lace. Towering above all are the baseball size blossoms of Joe pye weed, purple spikes of loosestrife, and aster like

flowers of New York ironweed. Then of course are the New England asters that are present in a variety of colors including whites, pinks, purples, and blues. Come to the Alleghenies this fall for hawks, fall foliage, and wildflowers. You'll fall in love with the area as we have!

Birding Guides Available

Waxwing Associates has a staff of expert birders available to seek out any of the bird species mentioned above. We are able to cater a 2 hour outing to an all day event including transportation from a local motel. We have the capability to plan an entire tour for van size to motor coach size groups including transportation to the Alleghenies motel reservations, meals, and of course expert guides.

RATES BY GROUP SIZE:

Van size groups

Minimum: 10 people / 2hours
\$120 plus transportation & amenities.

Motor coach groups

Maximum:
50 people/ 2 hours
\$350 plus transportation & amenities

For detailed information contact

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Terry Wentz holding a 3 foot long alligator in New Orleans during vacation July 2005.