

BIG OAKS

Newsletter of Big Oaks National Wildlife Refuge & Big Oaks Conservation Society

Fall/Winter 2004

Refuge Manager's Corner

Your Flowers Are My Weeds (or Conversely My Flowers Are Your Weeds)

By Joe Robb

Recently a frustrated private landowner stopped by our office to discuss her warm-season grass restoration. She thought that the first seeding had not gone as planned; perhaps the seed drill had gone too deeply or the weather did not cooperate. Understandably, she had questions for my staff. "The field is all weeds," she exclaimed, "and my husband thinks this is a total failure, what should we do?" I explained that native plant restoration is never an overnight project, and even successful plantings can take several years before the plants become firmly established.

What someone has labeled a failure often can become a success, if time or certain techniques are applied on the parcel. Sometimes a closer look will reveal that the seed has actually germinated, and the plants will flourish after several years. She also interjected that her field was "full of ragweed and broomsedge and I don't see hardly any of the wildflowers we planted." To this I replied that I liked ragweed and broomsedge, because they were good wild-life plants. Teresa Vanosdol, one of our expert wildlife biologists, then further explained that many songbirds and bobwhite nest in broomsedge and eat ragweed seeds, which are especially high in nutritious oils.

Annuals, like ragweed, usually are released and grow vigorously when fescue or other perennial cover crops are removed by disking or herbicide application. They produce an abundant crop of seeds, which is another reason they are beneficial to wildlife, but as those prone to allergies can attest, they are also heavy pollen producers. These annual plants become less dominant and in a few years an area dominated by ragweed, if not continually disturbed (mowed, disked, etc.), will become dominated by perennials.

Broomsedge, a perennial grass long disdained by those with pastures, is actually 3 local native species of *Andropogon* that are closely related to big bluestem and little

bluestem. All of these species have similar seeds and structural growth form that birds take advantage of when the field is not overgrazed. Broomsedges flourish in acidic, wet soils or those that develop from old farm fields in southern Indiana. The broomsedges found in the grasslands at Big Oaks were the dominant component of the nests we found of bobwhite quail and Henslow's sparrows, a rare grassland bird that is commonly found at the refuge.

Although I appreciate the lowly broomsedge, I dislike the often-planted tall fescue, an European hybrid especially developed by a Kentucky horticulturalist (discovered in 1931, aka, "Kentucky 31") to plant in pastures or along newly constructed roadways, dams, or lawns. This aggressive perennial plant out competes native plants and is often infected with a fungus that causes problems with livestock (fescue toxicosis). I have also noticed a new exotic invasive grass growing on the refuge, Japanese plume grass (*Miscanthus*), that is fast becoming a problem in wildlife areas throughout the southern Midwest. This grass is commonly sold as a landscape plant, and is often found tenderly cared for in lawns around Big Oaks. I hate it, along with the sweet smelling exotic honeysuckle, the pretty periwinkle, and the tasty garlic mustard, with all my heart. (continued on page 2)



Blazingstar at Big Oaks NWR

Managers Corner (from page 1)

As you have surmised, I am a firm believer in using native plants in restoration projects and at home. The plants that I love are openly disgusted by a large segment of the population, who are openly at war with ragweed, goldenrod, ironweed and beggarticks. On the refuge I like these natives, but fear I will lose a war with the escaped exotics, and the cost of this battle will be the loss of native diversity and those wildlife species that depend on these native plant communities. With the help of the Big Oaks Conservation Society, we will continue this battle. Please support this effort to bring back our native plants.

Mentoring Team Report

By Rick Collier

In July, Big Oaks Conservation Society was presented with an opportunity to meet with a friends' group mentoring team. BOCS was assisted by a group of people with a wealth of experience related to maintaining and operating friends' groups, which promote and assist National Wildlife Refuges. The group members were: Janet Kennedy - Refuge Manager, Parker River NWR, Curt Buchholtz - Executive Director, Rocky Mountain National Park Associates, and Darlene Moegerle - Friends of Midway Island NWR. Members of the mentoring team gave presentations on Parker River NWR, and on Rocky Mountain National Park.

During a two-day visit, the mentoring team met with members of the BOCS Board of Directors to obtain information they needed in order to evaluate our mission, as well as guide us in future endeavors. They received a guided tour of our facility, followed by a picnic that offered time for them to become better acquainted with the staff of Big Oaks NWR and members of BOCS in a relaxed setting.

Following the picnic, the mentoring team met again with refuge staff and BOCS members. They offered input on ongoing efforts, as well as future opportunities for our group to increase membership, thereby enabling us to better assist Big Oaks in their mission. Their suggestions and observations are a valuable tool that we will use in order to continue to grow and achieve our purpose.

We would like to thank the mentoring team for all of their valuable work and assistance; not only to our friends' group, but also to all the other groups they

assist nationwide.



Mentors Darlene Moegerle and Janet Kennedy and Joe Robb examine a turkey poul.

Big Oaks NWR Restores Wildlife Habitat

By Jason Lewis

The 2004 fiscal year proved to be a great year for wildlife habitat restoration on private lands. With the help of countless partners which included the Indiana Department of Natural Resources and the Natural Resource Conservation Service (NRCS), I worked with local private landowners to restore over 229 acres of wildlife habitat under the Partners for Fish and Wildlife Program. Wetland restoration, bottomland and upland reforestation, and prairie restoration were the types of habitat restored in 2004. Habitat was restored in nine counties within southeastern Indiana at a cost of \$39,589 to the U.S. Fish and Wildlife Service and all partners. In addition, refuge staff assisted private landowners with the prescribed burning of 55 acres of grasslands and prairie. These prescribed burns were conducted as prairie management or to prepare an existing grassland site for prairie restoration. If you would like to restore wildlife habitat on your property or need technical assistance, please contact the refuge office.



Dusty Varble, refuge Firefighter assisting with prescribed fire on private land.



BIG OAKS NOTES BIG OAKS NOTES BIG OAKS NOTES

Invasive Species Control

The Big Oaks National Wildlife Refuge staff and BOCS volunteers worked to control woody, invasive species, namely autumn olive and bush honeysuckle, on the refuge. The Invasive Species Control project was developed in an effort to eradicate plant species identified as a threat to native flora and fauna. The number of invasive plant species that are threatening refuge native plants are astounding. Garlic mustard, periwinkle, Japanese stilt grass, Japanese and bush honeysuckles, and many others invade thousands of acres on the refuge.

Approximately 6 BOCS members and our refuge biologist, Jason Lewis, used herbicide to treat nearly 15 acres. Invasive species eradication will be an annual event that will rely on BOCS volunteers to apply both mechanical and chemical control methods. Future work days will be scheduled to treat additional areas within the refuge. If you are interested in helping with Invasive Species Control projects, please contact the refuge office.

North American Butterfly Count

By Jason Lewis

Why is Big Oaks National Wildlife Refuge such a great place to watch butterflies? Habitat heterogeneity and an abundance of flowering plants are just a few reasons. But for whatever the reason, one can not dispute that Big Oaks is a great place to observe a diversity and abundance of butterflies that has even the most novice of butterfly watchers marveling at the spectacle. This has been demonstrated annually since 1999 when the refuge first conducted a North American Butterfly Association (NABA) July count. This held true at the 2004 Big Oaks NWR butterfly count and a new species record was established at 48. The 2,347 individual butterflies counted in 2004 was the second highest count total in the history of the refuge, only more individual butterflies (2,915) were found in 2002. With the addition of two new species (sleepy orange, salt and pepper skipper) in 2004, a total of 61 species of butterfly have been

observed during the refuge's NABA counts. Without volunteers from around the state to assist the refuge staff, the Big Oaks count would be difficult to conduct. Volunteers make events such as this possible. If you would like to be a part of the NABA count or any other refuge count, survey, or event, please contact the refuge office for details and volunteer opportunities. The 2005 Big Oaks NABA count will be held July 16.

Forest Birds and Cicadas

By Dusty Varble

With a great deal of help from the staff, interns, and members of the Big Oaks Conservation Society, I started the long process of studying how successful nests of forest birds were on Big Oaks NWR last summer. Refuge staff and interns have investigated this question in the past, but we had a one-time opportunity to add a twist to the project in 2004.

Everyone in southern Indiana and many other states noticed the periodic cicada outbreak this past spring and summer, and many were shocked to see pets gorging themselves on the millions of insects covering the ground and trees. What many may not have noticed were the many birds that were also feeding on these slow moving "protein packets". It seems obvious that if birds have more food, their young should be stronger and survive better, but what if predators of eggs and nestlings are also eating cicadas? Blue jays, crows, and even squirrels may eat so many cicadas that they don't disturb as many nests as they would in a normal year. Would you spend an hour searching for food if you are surrounded by a buffet with a million items? We were hoping to see whether this event caused a dramatic increase in nest success.

The periodic cicada outbreak affected more species than songbirds. Hunters may notice more turkeys than usual next year because of the same reasons we suspected songbirds would be more successful. Joe Robb examined the crop of a turkey last spring and found it was scratching cicadas out of the ground (continued on next page)

Forest Birds (from page 3)

before they had even emerged. The millions of burrows left in the ground as cicadas emerge aerate the soil and could impact overall forest health, which in turn would affect everything that depends on that environment at Big Oaks.

This project will resume in spring of 2005, but will focus on the high canopy nests of cerulean warblers. Cerulean warblers are a species of extreme interest to avian conservationists, because their numbers appear to be declining every year. Big Oaks is home to one of the few significant populations of cerulean warblers in Indiana. I will be learning to climb trees at the University of Tennessee this winter, so I can place cameras on cerulean nests to determine what is actually causing some nests to fail. Bad weather and other unknown factors may cause as many failures as nest predators, and could help explain our results from 2004 if cicadas did, or did not, have a significant impact on the forest bird community.



Wood thrush fledgling

photo by Dusty Varble

Hanover College Ecology Project

By Beth Hauersperger

Although the existence of crawfish frogs at Big Oaks National Wildlife Refuge has been confirmed, very little is known about this local population. I am conducting a study to gain more insight into the breeding ecology of this secretive species. Two questions are being investigated, the first regarding the sites where crawfish frogs lay their egg masses and the second involving the identification criteria for tadpoles. I observed that this species lays their eggs in areas of open grassland containing shallow depressions or crater holes created by previous ordnance testing. Due to the shallow nature of these ponds, it would seem that there is some risk that the pond would dry up before crawfish frog tadpoles can transform into young frogs.

I will also study characteristics of these ponds to determine what factors may influence frog reproduction. I will test how competition with other tadpoles and predation by fish and newts affect crawfish frog reproduction at these sites in spring of 2005.

Tadpole identification has proven difficult in the past because there is coloring and size variation between crawfish frog tadpoles found in different locations. To help with future studies of this species and to increase understanding of the larval ecology of the population located at Big Oaks, I created and tested tadpole identification methods. I reared crawfish frog tadpoles at the refuge office to accomplish this task. I found several visual cues from these tadpoles that will aid in future identification in the field.



Crawfish frog eggs

photo by Zach Walker

Species Spotlight

Indiana Bat

By Teresa Vanosdol

The Indiana bat is a federally endangered species found throughout the Midwest and eastern United States. This medium-sized bat is often mistaken for the little brown bat. In fact, the Indiana bat was not described as a distinct species until 1928. The presence of short, inconspicuous toe hairs, a keeled calcar (an area associated with the hind foot), and pinkish brown fur, rather than bronze, distinguish it from the little brown bat.

Indiana bats utilize 2 different habitats depending on the time of year. Indiana bats can be found hibernating in caves like many bats in the winter, but in the summer are found in colonies consisting of adults and young under the loose bark of large trees. Big Oaks NWR has not documented winter habitat use by the Indiana bat, but numerous summer breeding colonies have been documented. Refuge staff conducted a two-year study (1998 and 1999) to locate maternity roost sites and evaluate breeding habitat selection on the area. Indiana bats were caught by placing mist nets at bat foraging sites (stream corridors and roadways) and upon capture, a radio transmitter was placed on females to track them back to the maternity roost site tree. A total of 9 Indiana bats were radio tagged over the two year period with 8 maternity roost trees located. Other bats documented using the refuge during the 2-year study included the little brown bat, big brown bat, hoary bat, eastern pipestrelle, Keen's bat, and the red bat.

Nearly 90% of Indiana bats hibernate in only 7 caves, making this species very susceptible to extinction despite the large number of bats (approximately 500,000) that still exist. Population declines of the Indiana bat have been attributed mainly to loss of summer habitat and the disturbance of wintering caves by cave tours, vandals, and researchers. Disturbance that alters airflow or blocks entrances can also make caves unsuitable for over-wintering. Controlling access to these caves will be critical in the conservation of this species. Current conservation efforts include: (1) the installation of properly designed gates across the cave entrances to control the access of people, (2) informing and educating people about this species, and (3) monitoring population levels and habitat.



An Indiana bat with radio transmitter

Oakdale School Receives Some TLC

By Ken Knouf

Eight individuals representing the Jefferson Preservation Council and the JPG Heritage Partnership rolled up their sleeves and completed some basic maintenance and repairs at Oakdale School on Saturday, October 2nd. Oakdale, a one-room limestone structure built in 1869, is listed on the National Register of Historic Places, and is located on the refuge just north of the Army's former firing line west of Morgan Road. Due to its location and the potential for unexploded ordnance around the school, public access is restricted to guided refuge tours, but there remains community interest in preserving and protecting the historic structure.

Among the volunteers who helped to scrape, glaze, and paint windows was George Bayless who actually attended Oakdale as one of the last students. Gayle Ferris and Eddie Kidwell from the Preservation Council painted the door and frame and also worked on the windows. Restoration carpenter David Cart, Ron Grimes, and Louis Munier successfully replaced two rotten windowsills using aged poplar lumber taken from the old Pearl Packing factory in downtown Madison. Elbert Hinds coordinated the work party and arranged for the group to have a great lunch at the newly renamed Big Oaks Restaurant (he didn't know about the Big Oaks fish fry—our loss!). Special thanks is due to the Indiana Air National Guard who provided the paint and other materials.

The work party appreciated the refuge's tour participants stopping by as this allowed local experts to do a little bit of historical interpretation. All in all, Oakdale is in a little better shape thanks to the interest of these individuals. More needs to be done and another work party will be held this spring. Maybe some of the Society members can be enticed to join us—partnering is the key.

NEW STAFF AND INTERNS

Dan Matiatos **Refuge Operations Specialist**

I started as the new Refuge Operations Specialist (ROS) at Big Oaks NWR on October 19th. I have worked as a biologist, or ROS, for approximately 15 years. I am originally from North Dakota, where I started my career working on wetland and native grassland restoration projects, and associated wildlife surveys. I moved to Colorado and worked as a biologist, and later as ROS at the Rocky Mountain Arsenal NWR. The years I worked at RMA NWR provided me with an opportunity to work on a diversity of wildlife studies, especially studies of various species of raptors and deer. In my duties as ROS at the Arsenal, I oversaw the public use/environmental education, maintenance, and law enforcement programs. I have a Bachelor of Science Degree in Wildlife Biology from the University of North Dakota. I have never lived east of the Mississippi River and I am excited to be working in, and learning about, a new environment. I will be overseeing the fire program, various maintenance programs, and providing support for other programs at Big Oaks. I currently live in Madison. I enjoy many outdoor activities and reading. I am looking forward to exploring and experiencing the sites and culture of Madison, southern Indiana, and Kentucky.

The Summer Interns

Hello, my name is Lizzy Berkley. I began my internship at Big Oaks in March before the migrant birds arrived. I spent the first month in the office helping with the turkey hunt, getting a wildland fire certification, prescribed burning experience, and getting to know the crew. As the cerulean warblers arrived for the breeding season, I spent the work day searching for nests in the beautiful deciduous forest of the refuge. For the first week of nest searching, I was scanning the tree canopies hoping that by some miracle I would find an almost impossible-to-see cerulean nest before Teresa or Dusty. After finally finding my first nest, the pressure was off! By that

time the rest of the interns had arrived and we started searching for other songbird nests and eventually worked on cicada and vegetation surveys. My experience at Big Oaks was a great learning experience and is certainly unforgettable. I will always have fond memories of everyone at Big Oaks and would like to thank Joe for giving me that opportunity.

Howdy. I'm Lisa Maas, a Madison native and an Environmental Science major at Dickinson College in Carlisle, PA. I had an excellent and very educational time interning at Big Oaks this summer. I learned how to find Acadian flycatcher nests (thanks Joe), differentiate between cicada species, and identify trees. I am not sure what career I wish to pursue in the future, but I am positive that my valuable experience at Big Oaks will come in handy.

My name is Lindsey Hesch. I am from Ft. Mitchell, Kentucky. I am about to complete my last year at Hanover College. I will be receiving a B.A. in Biology in the spring. Last summer I helped run a science camp for kids, but I also had worked at BB Riverboats as a senior steward and deck hand since 1999. I was very excited this summer to do something that was more closely related to what I plan to do in the future. I really enjoyed helping Dusty with his cerulean warbler study. My favorite part of the study was evaluating the vegetation around the nests. This is probably because I hope to attend graduate school next year in Plant Science or Botany. However, I am also highly considering joining the Peace Corps. Whatever I may do, I am extremely thankful for this past summer. Not only did I learn so much, but I also had the best time with my fellow interns and the staff!



Staff and interns in the field (l to r): Laura Lake, Corey Herr, Teresa Vanosdol, Beth Hauersperger, Lizzy Berkley, Lisa Maas

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Dan Matiatos - Refuge Operations Specialist
Jason Lewis - Wildlife Biologist
Teresa Vanosdol - Wildlife Biologist
Janet Pike - Administrative Technician
Brian Winters - Prescribed Fire Specialist
Vacant - Fire Program Technician
Kristina Baker - Intern
Shawn Crimmins - Intern
Alison Mynsberge - Intern
David Watts - Intern

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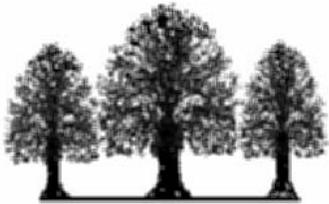
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Big Oaks Newsletter

If you would like to join, or rejoin, the **Big Oaks Conservation Society**, to support the refuge,
 please fill out this membership form and send along with your check to:

Big Oaks Conservation Society
P.O Box 935
Madison, IN 47250

Check here if this is a
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Yearly Membership Form (Oct. to Sept. 30) Please select a category.

<input type="checkbox"/> Youth \$5	Name(s) _____
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<input type="checkbox"/> Family \$25	City _____
<input type="checkbox"/> Supporting \$25	State/Zip _____
<input type="checkbox"/> Lifetime (per Individual) \$150	Phone _____
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2005 CALENDAR OF EVENTS



November	Deer shotgun season, Youth Deer Hunt, Last chance to fish
December	Christmas Bird Count
January	River Otters slide in the snow
February	Great Horned Owls nest
March	Big Oaks is smokin' - prescribed burning
April	Migrating birds, wildflowers, turkey hunt, fishing begins
May	Sign up for a refuge tour, International Migratory Bird Day
June	Breeding bird surveys, Take a Kid Fishing Day
July	Butterfly survey
August	Squirrel season starts
September	Migration begins!
October	Deer archery season, National Wildlife Refuge Week

BIG OAKS
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