



BIG OAKS

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

Summer 2004

Refuge Manager's Corner "My Top 10 Big Oaks NWR Places"

By Joe Robb

Visitors to Big Oaks NWR frequently ask me what my favorite places are on the refuge. Whether they are trying to ascertain my secret fishing spots or generally interested, I try to lead them to an enjoyable refuge experience. When they check out at the refuge office I either get kudos for leading them to a long beard or mess of fish or they give me sideways glances on where I led them on their refuge journey. Although many of our refuge visitors have their own favorites, I have compiled my own list of special places since I first arrived back in 1998. Some of these are scenic, but others are born of a time and experience that make them memorable to me. The diversity of the refuge spans swampy flat woods to steep ravines with cascading streams, and I see beauty in both. Diversity in large expanses of habitat gives the refuge floral and faunal diversity, but it also gives it room for special places.

The refuge is currently studying the influence of the periodic 17-year cicada hatch on bird productivity, so staff and interns are spending lots of time deep in areas 3, 7, 8, 13, and 14. These areas offer large expanses of forest, where cerulean warblers nest. Nests of cerulean warblers that were monitored during the last 2 years usually failed.

Hopefully the current cicada outbreak will allow us to test reasons why these nests fail, and whether predation is the key factor. This study will be a part of Dusty Varble's master degree thesis. Dusty has worked as a refuge fire-fighter and as an intern. As I walk up and down the ridges and into the bottomland valley of Falling Timbers, I see birds gorging themselves on cicadas. Many of the shy species are so overcome by the feast that they ignore me. I watched a summer tanager which was preoccupied with nest building become preoccupied with cicada chasing. I feel fortunate to witness such occurrences and believe that cicadas, birds and the forest are part of a cycle that has gone on for eons. With that in mind, and the sound of cicadas outside my window, here are my top 10 places on Big Oaks NWR:

10. Beaver ponds and grassland in Area 52
9. A certain snag at Old Timbers Lake where I like to fish
8. Mature flatwoods in Area 13
7. Grapevine Branch of Little Graham Creek
6. My Henslow's sparrow transect on Center Recovery Road
5. Little Otter Creek's waterfalls and riffles
4. Spring wildflowers in Area 7
3. The bottomland of Falling Timbers
2. Benville Bridge (actually all of the stone arched bridges)
1. Otter Creek Corridor



Periodic cicada

photo by Dusty Varble



Little Otter Creek

photo by Scott Flaherty

BIG OAKS CONSERVATION SOCIETY MISSION

To support the goals of wildlife conservation and habitat restoration at Big Oaks NWR; develop environmental education programs; enhance public awareness; encourage use and appreciation for the natural and cultural assets unique to Big Oaks.

BOCS is doing great things in support of the refuge. We hope to continue to grow and offer the community a chance to improve their refuge experience. The group is seeking more members to support a variety of activities. Some of the committees need more help: membership, newsletter, grants, hunting concessions. If you would be willing to serve, please let us know.

If you have an interest in Big Oaks National Wildlife Refuge and would like to receive future issues of this bi-annual newsletter, please consider joining Big Oaks Conservation Society. You can contact them at bocs_collier@hotmail.com or by calling the refuge.

MEMBERSHIP INFORMATION

FOR THOSE INTERESTED IN JOINING OR RENEWING THEIR BOCS MEMBERSHIP, A MAIL-IN MEMBERSHIP FORM CAN BE FOUND ON PAGE 7.

President's Comments By Rick Collier

BOCS is looking forward to our second year supporting Big Oaks National Wildlife Refuge. Each member deserves our thanks for their contribution, whether as a monetary contribution, volunteer contribution, or both. Special recognition is due to Diane Carson, who was honored as the BOCS Friend of the Year.

There are many exciting things on tap for this year. We partnered with Wal-mart to co-sponsor our Take a Kid Fishing Day. This was an even bigger event than last year. Jim Leveille and Dale Carson co-chaired the event.

Membership has grown to over 100 members. If you have not joined or renewed your membership for 2004, please use the form on the back page. If you have any questions or comments, please contact me at bocs_collier@hotmail.com.

BOCS Friend of the Year Diane Carson

Diane Carson was voted Friend of the Year by the BOCS members for her many hours of volunteer service during numerous BOCS events.



Diane Carson

photo by Rick Collier

Big Oaks Conservation Society Charter Members

Erin Adams, Rebecca Beyerle, Kirsten Carlson, Dale Carlson, Diane Carson, Rick Collier, Sharon Collier, Ketia Collier, Brent Collier, Steven Dugle, Jeanne Dugle, Brandon Dugle, Ashley Dugle, Nyla Dugle, Dan Herron, Jean Herron, Richard Hill, Janet Hill, Daryl R. Karns, Pamela Middleton, Bob Kimball, Dorothy Kimball, Jan Kleopfer, Mike Modisett, Laura Lake, Raymond Lake, Jim Leveille, Sara Leveille, Jimmy Leveille, Kenny Leveille, Joey Leveille, Jason Lewis, Candy Miller, David Miller, Donnie Miller, Eddie Miller, Steve Miller, Steve A. Miller, Melody Miller, Judd Miller, John Moody, Bill Poindexter, Joe Robb, Amber Fields, Ed Schaefer, Judy Schaefer, Dale Sides, Liz Sides, William Smitha, Donna Stanley, Teresa Vanosdol, Brian Winters, Elizabeth Winters, Clate Winters, Daniel Winters



Charter Plaque

photo by Laura Lake



BIG OAKS NOTES BIG OAKS NOTES BIG OAKS NOTES

Refuge Bird Counts

On December 20th, 2003 refuge staff and volunteers braved the cold to participate in the National Audubon Society's 104th **Christmas Bird Count (CBC)**. CBC data are compiled by thousands of volunteers throughout North America and provide an index of bird abundance and species distribution. The 104th count was Big Oaks NWR's 3rd count. Approximately 1165 individual birds comprising 51 species were counted on the refuge. Highlights of the count included common snipe, eastern phoebe, gray catbird, and a count week northern saw-whet owl, the refuge's first record for this species. The owl was caught and banded on December 17th as part of a pilot research project. On May 8, 2004, a refuge-wide **May Day Count**, administered by the Indiana Audubon Society, was conducted to survey migratory birds and represents their effort to survey spring birds as they head north. A total of 1207 individual birds were counted with 90 species identified. The highlights of the count included cerulean warbler, orange-crowned warbler, savannah sparrow and American bittern. These species illustrate the habitat diversity on the refuge and the significance of the refuge to migratory birds. In 2003, the Indiana Department of Natural Resources (IDNR) implanted a roadside **Whip-poor-will Survey** to monitor species distribution and relative abundance in Indiana. In an effort to determine the status of whip-poor-wills throughout the state, the IDNR initiated the survey. Big Oaks NWR counted 98 birds in 2003 and 122 birds in 2004 with the help of BOCS volunteers and others. If you would like to assist with this survey or any others, please contact the refuge office.

Private Lands Assistance Program

Big Oaks NWR provides funding for wildlife habitat restoration projects on private lands through the 'Partners for Fish and Wildlife' (PFW) program, which is a national program administered by the U.S Fish and Wildlife Service. Wetland restoration, stream-side renovation, reforestation and native warm season grass re-establishment are among the program's habitat accomplishments. To date, Jason Lewis, Big Oaks NWR's PFW biologist, has assisted dozens of landowners in the establishment of wetland, forest, and warm season grass restoration projects. Cost share funding is provided to landowners to offset the expense of the habitat restoration. Anyone interested in establishing wildlife habitat on their private lands should call Jason at the refuge office.

Deer and Turkey Hunt Synopsis

During October and November 2003, hunters harvested 545 deer: 306 bucks, 41 button bucks, and 198 does. Hunters were drawn by the state and through local lotteries to hunt at Big Oaks NWR. The refuge can accommodate up to 426 deer hunters each day within the 25,000 acres open to hunting. A total of 5,286 hunter use-days (number of hunters per day, multiplied by 15 days of deer hunting) took place during the deer hunt. During April and May 2004, 59 turkeys were harvested over the twelve-day turkey hunting season, with a total of 1018 hunter use-days.



Prairie warbler

photo by Ron Austing

Project Owl Net

Indiana University researchers have been conducting fall migration monitoring of northern saw-whet owls in Hoosier National Forest for the past two years. This monitoring has been conducted in conjunction with Project Owl Net. The Hoosier sites have banded approximately 200 owls since the banding stations were established. Big Oaks NWR will conduct a pilot northern saw-whet owl banding study in the fall of 2004 and become only the third saw-whet owl migration banding station in Indiana. The refuge will need volunteers to man this station. If you are interested please contact the refuge office for training and project commitments.



Saw-whet owl

photo by Ron Weiss

Army Presence at Big Oaks

Three Army staff members remain at the former Jefferson Proving Ground. They are Ken Knouf, Yvette Hayes and Phil Mann. Because of munitions contamination, the refuge was established with the "overlay" concept (designating the refuge over Army land). The reason there remains an Army presence, is because the Army retains ownership of the range/refuge, and with that, the ultimate liability. The Army Staff believes it has a very good relationship with the refuge staff and hopes to be considered a helpful resource.

The official responsibility of the Army Site Staff (no longer referred to as a caretaker staff) is to monitor the activities of both the Big Oaks staff and the Air Guard operation to ensure that both are in compliance with the existing memorandum of agreement and supplemental agreements. While the Army is comfortable with both operations, it retains a site presence because of liability associated with depleted uranium and munitions. The staff resolves issues such as fence maintenance, mowing, and repair work taking place in contaminated areas. The local staff also support the JPG environmental coordinator, Paul Cloud, who works out of Aberdeen, Maryland. Regarding this, they deal with environmental contractors, make arrangements with the JPG Restoration Advisory Board, add material to the Federal Repository of documents and reports at the Hanover College library, and relay information on re-use issues in the old south cantonment area.

Phil Mann, Engineering Technician, was JPG's Roads & Grounds foreman. Before that, he was the Carpenter Supervisor. He has the best knowledge of the buildings and site maintenance. He also notices everything that goes on, so he is great at monitoring activity at JPG.

Ken is the Army Commander's Representative (site manager) and Yvette is the Management and Program Assistant (administrator for the site staff). Currently, both are



Phil, Ken & Yvette

Army Staff Photo

also working part-time at the Indiana Army Ammunition Plant in Charlestown, assisting the government staff of two people still there. Ken is helping Kerry Dupaquier, the Charlestown plant's Commander's Representative, with natural and cultural resource responsibilities. He will be overseeing the property transfer of another 2,500 acres to the state, which will be incorporated into Charlestown State Park. Next time you are in Building 125, stop in and say hello to Ken, Phil, and Yvette.



BOCS Members

photo by Sara Leveille

Visitor Information

All visitors must annually view a safety video and sign a release form. This will give you access to the areas designated as public use. There is a \$3 fee for a daily access permit, or users may purchase an annual refuge permit for \$15, or a \$10 hunter access permit. The day-use area covers 4,170 acres. An additional 22,500 acres is open to the public for special hunts and guided tours. The public may access the refuge from mid-April to the end of November every Monday and Friday, and the second and fourth Saturdays of each access month from 7:00a.m. to 4:30p.m.

VOLUNTEER OPPORTUNITIES

Contact the refuge if you are interested in any of these volunteer activities:

- Guide wildlife and educational tours at the refuge and speak about Big Oaks.
- Office help. This could involve checking in visitors, answering phones, or aiding in the refuge's safety-briefing program.
- Bi-annual litter pick-ups along the refuge roadsides.
- Speakers who can visit schools and civic groups.

The opportunity to become involved is open to all. Other opportunities will become available as the refuge develops its plans for the future.

Stone Arch Bridges at Big Oaks

By Ken Knouf

Visitors to Big Oaks are initially exposed to the stone-arch bridges as they view the safety video, but most are caught off guard by the splendor of these wonderfully crafted limestone structures when they first cross them. Having traveled over miles of simple, narrow, and sometimes rough gravel roads, typically the first reactions people might have are those of wonder and disbelief.

Four stone-arch bridges are found on the refuge, and all are listed on the National Register of Historic Places. Visitors are most familiar with the Collin's Ford Bridge, the double-arch bridge that crosses Big Graham Creek, on their way to Old Timbers Lake. This structure was constructed in 1907 for \$2,775. It was originally intended to carry traffic between New Marion and Butlerville.

Marble Creek Bridge, located on G Rd. 1 ¼ miles east of West Perimeter, is a single arch limestone bridge constructed in 1905. It was designed to provide easy access over Marble Creek in Shelby Township as residents traveled to and from Marble Corner, but little is known about its construction.

The most impressive bridges are the two triple-archers, the Benville Bridge over Graham Creek on J Road and the Edward's Ford Bridge over Otter Creek on Northwest Exit Rd. After local resident Ulmer Smith petitioned the county for a crossing over Graham Creek, Charles W. Miller engineered the Benville Bridge. As with all of the stone-arch bridges, local materials were to be used. Construction of the bridge was contracted to Thomas Brolley, who submitted a bid of \$5,194.35. The bridge took less than a year to construct and was completed December 24, 1908. What a spectacular Christmas present it must have been to the residents of Bethel and the surrounding area!



Edward's Ford Bridge

USFWS File

Last, but certainly not least, is the 194' long Edward's Ford Bridge. It was also designed by Charles W. Miller. Construction of this three-arched structure was contracted to Harry Harmon, who worked on it from 1909 through 1911 for \$6,664.50. Rumor has it that some of the stone came directly out of Otter Creek. Visitors can still see evidence of the quarrying along the stream.

These bridges exist in dramatic contrast to the simple roads developed throughout the region. It was certainly fortunate to the US Army that they did. As you cross any of the bridges, take note of the load limit signs. Who would have ever thought that these wonderful and aesthetic masterpieces designed to carry wagons and Model T's would someday carry 60-ton tanks when Jefferson Proving Ground was in operation - with absolutely no problem. Today they serve as locations of solitude and beauty, and with a little maintenance, these bridges should be around for hundreds of years for future visitors to enjoy.

Take a Kid Fishing Day

By Jim Leveille



Prize winners

photo by Sara Leveille

BOCS and Big Oaks NWR held their second annual "Take a Kid Fishing Day" on June 5, 2004. This year brought a new co-sponsor when Wal-mart agreed to join BOCS in helping the refuge stage the event. Fifty-one youth participated in the derby and over 100 people attended the event. Free meals were prepared by BOCS volunteers. Wal-mart manager, Jim Gilley, assisted in the awarding of prizes donated by Wal-mart and Big Oaks NWR. BOCS co-chairmen Jim Leveille and Dale Carson were pleased with the turnout and are already planning next year's event.

Species Spotlight

Climbing Fern

By Teresa Vanosdol

Big Oaks NWR is home to many unique plants, some of which are found nowhere else in the state. One of the rarest plants found on the refuge is *Lygodium palmatum*, or climbing fern. Climbing fern does not resemble a typical fern. Its leaves are hand-shaped and paired along a twining stem that often climbs up neighboring vegetation and even partly up small trees. Fertile leaves are located at the top of the vine and are much smaller, very deeply cut and much constricted. Climbing fern prefers open



woods with moist, acidic soils. Prescribed burning practices formerly carried out by the Army and now the refuge appears to be beneficial in producing climbing fern habitat by controlling succession.

Climbing fern photo by Steve Miller

Climbing fern is classified as an endangered plant in the state of Indiana. Another common name for climbing fern is Hartford fern because of its initial discovery near Hartford, Connecticut. Climbing fern ranges from southern New Hampshire to eastern New York to Ohio and southwest Michigan, south to Florida and Mississippi. It is a rare plant throughout most of its range.

The Indiana Department of Natural Resources Division of Nature Preserves conducted an inventory of Special Plants and Natural Areas on the former Jefferson Proving Ground in 1992 and 1999. They listed forty-six species of special plants. Nine designated as endangered, three threatened, six rare, and twenty-eight on the watch list were found on the refuge. Endangered plants include elliptical rushfoil (*Crotonopsis elliptica*), narrow-leaved sunflower (*Helianthus angustifolius*), clasping St. John's wort (*Hypericum gymnanthum*), northern bog clubmoss (*Lycopodiella inundata*), climbing fern (*Lygodium palmatum*), thread-like naiad (*Najas gracillima*), broom panic-grass (*Panicum scoparium*), Maryland meadow beauty (*Rhexia mariana var. mariana*), and weakstalk bulrush (*Scirpus purshianus*). Two of these plants, climbing fern and narrow-leaved sunflower, are only found in the state here at Big Oaks NWR.

Big Oaks NWR has been described as a "natural treasure that contains a full array of the region's natural communities and species assemblages" by the Indiana Department of Natural Resources Division of Nature Preserves. Take some time this upcoming year to see it for yourself. Our staff can give you a guided tour, or point you in the right direction to experience the beauty of Big Oaks NWR. We look forward to seeing you this summer!

Spring Prescribed Fire at Big Oaks 2004

By Diana Shuler

It was another busy and productive burn season this year at Big Oaks. A total of about 9,500 acres was burned on the refuge, and this year we were also able to do several prescribed burns on private lands off the refuge. We assist private landowners in establishing warm-season grasslands on their property to benefit migratory birds and game birds. In addition to local burns, part of the fire crew also traveled to Minnesota, Wisconsin, and Ohio to assist with prescribed burning on other refuges, including Minnesota Valley NWR, Leopold Wetland Management District (WMD), St. Croix WMD, and Ottawa NWR.

Burning helps us to maintain the grasslands on the refuge. Hardwood encroachment and invasion of exotic species are the biggest threats to the grasslands. Previously, the Army created and maintained the grasslands by mechanical disking, chemical application, and burning. They used these areas to test weapons and munitions because the low vegetation created better observation. The refuge is limited to prescribed fire as a management tool to maintain these areas, due to the presence of unexploded ordnance.

BOCS Items for Sale

Show your Big Oaks Conservation Society membership card and get a 10 % discount on these items.



The Big Oaks Conservation Society is selling Big Oaks hats and Indiana refuge license plates to raise money for projects that benefit the refuge. The hats are \$12 each. Colors to choose from are camouflage, hunter orange and tan. The hats can be purchased at the refuge office. Indiana National Wildlife Refuge plates are \$8. Topographical maps of the refuge are also available for \$12.

Big Oaks National Wildlife Refuge
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 Madison, IN 47250
 Phone: 812-273-0783
 Fax: 812-273-0786
 E-mail: bigoaks@fws.com
 Website: Midwest.fws.gov/bigoaks

REFUGE STAFF

Dr. Joe Robb - Refuge Manager
Jason Lewis - Wildlife Biologist
Teresa Vanosdol - Wildlife Biologist
Janet Pike - Administrative Technician
Brian Winters - Prescribed Fire Specialist
Laura Lake - Fire Program Technician
Dale Sides - Firefighter
Dustin Varble - Firefighter
Diana Shuler - Firefighter
Cory Herr - Intern
Lizzy Berkley - Intern
Beth Hauersperger - Intern
Lisa Maas - Intern
Kasie Lessley - Intern
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Newsletter Committee
 Janice Kleopfer
 Jeanne Dugle
 Sara Leveille
 Karen Terlinden

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 Joe Robb and
 Big Oaks Staff

Contributing Members



BIG OAKS
Conservation Society

Membership Benefits

10% discount on merchandise

opportunities to participate in special refuge events

contribute to the improvement of the refuge for all visitors

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 renewal _____

Yearly Membership Form (Oct. to Sept. 30) Please select a category.

___ Youth \$5
 ___ Individual \$15
 ___ Family \$25
 ___ Supporting \$25
 ___ Lifetime (per Individual) \$150
 ___ Corporate \$500

Name(s) _____
 Address _____
 City _____
 State/Zip _____
 Phone _____
 E-mail _____

2004 CALENDAR OF EVENTS



July	Butterfly survey
August	Squirrel season starts
September	Migration begins!
October	Deer archery season
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!
June	Breeding bird surveys

BIG OAKS
Conservation Society
P.O. Box 935
Madison, IN 47250

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Kristen Carlson, Secretary and
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