BIG OAKS

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

Fall 2013

From Interns to Wildlife Professionals

By Laura Lake

It was the summer of 1999 and my first internship after college was about to begin. I had applied to do bird work and was driving to the old Jefferson Proving Ground with a friend to check out the place. As we left the main highway, the hair stood up on the back of my neck and I was overwhelmed with the uneasy feeling that I was entering into some foreign territory. Everywhere I looked there were army signs and military buildings. The bunkers warned that danger loomed ahead and each new building had an aura that screamed, "We've seen more historical events than you even realize exist!" What kept me going at that point, I'm not sure, because I was pretty scared. But, when I reached the little building that the FWS was using as an office, I met the some of the first people who would shape my career in wildlife.

I was among the first handful of people to call themselves interns at Big Oaks NWR. That summer was one of hard work, lessons learned, experiences, and excitement. Big Oaks NWR had not even been born officially, but the Refuge was alive. I experienced the thrill of finding Henslow's Sparrow nests (as well as bragging rights that go along with it), the camaraderie of mist-netting bats, and the satisfaction of working hard every day to count birds, find nests, and keep track of their success. The folks that worked in the office at that time were very talented and offered so much to us interns as our mentors.

Lisa Maas, Former Intern Featured on Pg 4.
Photo credit: FWS

Time has passed and through the years, I've been privileged to witness the Refuge bloom and grow. Big Oaks NWR has developed a top notch fire program that enables the Refuge staff to better manage the grasslands for Henslow's Sparrows in spite of the many hurdles they face. The public use opportunities now include fishing, hunting, hiking, and guided tours to name just a few. In addition, the Friends Group, Big Oaks Conservation Society, is responsible for several fun activities on the Refuge each year. During this time, my involvement with the Refuge has morphed from an intern, to a seasonal employee, to a permanent employee, and finally, now, to a part time intermittent employee.

What I am most glad to have witnessed through the years, though, is the promise that there is hope for wildlife in our future when I see so many of our interns positively affected by their time at Big Oaks NWR. Many interns that have called Big Oaks NWR their home have gone on to have highly successful careers in conservation

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A Word from the President

By Jim Jackson

Once again the beautiful autumn season graces southern Indiana and Big Oaks National Wildlife Refuge; we are fortunate to bask in the warmth of the autumn sun, savor the crisp fall air, and enjoy the annual deciduous fall color show. As nature's creatures prepare for winter, we at Big Oaks Conservation Society look forward to the fall hunting seasons, and to one of our premier events, the annual Youth Deer Hunt. We are proud to co-host this event with BONWR. It is likely the largest dedicated youth deer hunt and workshop of its kind in the country and is made so by the dedicated staff of the Refuge, the BOCS volunteers who provide dinner and prizes for the participants, and the generosity of our community sponsors and supporters.

All of us await the annual BOCS Christmas party event, which will take place this year on Saturday, December 7 at Old Timbers Lodge; the details of this event will be forthcoming, announced at the November BOCS meeting, and by email updates. There may need to be some modification of this event due to the anticipated construction at Old Timbers Lodge, so look carefully for these updates and announcements.

The BOCS Board of Directors will change its composition this fall as well, with election of four board members at the BOCS annual meeting. The new members will undoubtedly bring new ideas, new perspectives, vigor and energy to our organization. Our goals for this coming year will be to bring more fun into our activities and meetings, to have more events and activities on the refuge for members and their families, and to increase membership. Success in achieving these goals will likely result in a healthier, more robust organization that will continue to grow and to continue its success in supporting the Big Oaks National Wildlife Refuge.

Calendar of Events

Big Oaks National Wildlife Refuge and Big Oaks Conservation Society
2013/2014 Fall and Winter Calendar of Events

October	19-20.....State Drawn 2-Primative Muzzleloader Hunt
	26-27.....State Drawn 2-Day Archery Hunt
November	2.....Public Use Day
	2.....Youth Hunt Workshop
	3.....Refuge Drawn Youth Hunt
	4.....State Drawn 1-Day Gun Hunt
	5.....State Drawn 1-Day Gun Hunt
	10-11.....State Drawn 2-Day Gun Hunt
	17-18.....State Drawn 2-Day Gun Hunt
	20-21.....State Drawn 2-Day Gun Hunt
	23.....Refuge Closed to Public Use Until Mid-April
December	7.....BOCS Christmas Party at Old Timbers Lodge at 6:00pm (Caveats—see page 8).
	14.....Christmas Bird Count
January	6.....Winter Speaker Series begins at BOCS meetings.

Are you a current BOCS member? Join our meetings at the Jefferson County Public Library on the first Monday of every month at 6:30pm.

Huge Deer Skull Found at the Indiana Air National Guard's Jefferson Range

By Beth Black

Here at Big Oaks, it seems as though deer season starts around the first week of August. That week is when the phone calls begin. Deer hunters call with all sorts of questions such as; when does the season start, how can I get my name in for the drawing and what are the new rules and regulations. The phone calls from deer hunters are seemingly non-stop throughout the season. In November of 2012, we had a huge influx of calls. As it turned out, these calls were inspired by a couple of photos that were making the rounds on the internet. The two photos that sparked so much interest in deer hunting here at the Refuge were of a huge non-typical deer head that was found on the Indiana Air National Guard (ANG). For those that may not know, the Indiana ANG operates a 1,033 acre air-to-ground gunnery range surrounded by Big Oaks. This is often noted by the A-10 airplanes that fly overhead from time to time and the sound of strafing rounds and other testing that accompanies those planes at the range. The ANG employs approximately 10 people who have a wide variety of duties, including range maintenance. It was on a range maintenance outing that two ANG employees discovered the deer head. SSgt James Berger made the initial find when he noticed something tall sticking up above the grass. When he investigated further, he found that not only was it a huge set of antlers attached to a skull, but that there was an entire deer skeleton as well. SSgt Josh Petrowski, who was accompanying SSgt Berger on the maintenance patrol, went over to see the find as well. The two speculated about what might have caused the giant to die. One theory is that the deer may have succumbed to epizootic hemorrhagic disease, also known as EHD. A similar disease affects cows and is known as "bluetongue." To define the disease further, epizootic means an epidemic that affects animal populations and hemorrhagic means to bleed. Affected deer often have bloody noses. The disease is most prevalent during drought years like the one we had in 2012. Deer contract the disease when they are bitten by gnats that emerge from the muddy areas associated with receding water. At the end stages, deer are lethargic, emaciated and oblivious to humans. They become dehydrated and it is near water that they tend to die.

Trail cam photo of living deer.

SSgt Berger collected the head and antlers and was subsequently photographed at the air guard office by a co-worker using a cell phone camera. From that point the photo was forwarded around and became a sensation on the internet, especially among Indiana hunters. SSgt Berger reports that the head and antlers has become an urban legend of sorts, with all kinds of speculation about who found it and where. There's even a rumor that Bass Pro Shop offered him $60,000! What SSgt Berger can confirm is, "the official Boone and Crockett score is 229 5/8 and it has 26 points".

Photo of SSgt Berger holding the deer skull.

Are you a BOCS member who attends every meeting? Please bring a friend or family member to our next meeting. Help our group grow!

Refuge sign that welcomes new interns and visitors . Photo credit: FWS

From Interns to Wildlife Professionals - *Continued from Page 1*
By Laura Lake

and wildlife related fields. Those of us here at the Refuge couldn't be more proud. Lisa Maas, Kirk Roth, Matthew Krausher, Melissa Ernst, Abe Bear, and Kely Mertz are just a few former interns that I had the privilege to contact for this article, and their stories are featured throughout the newsletter. As you will read, these fine folks share some of the similar emotions and attachments to Big Oaks NWR and to the Fish and Wildlife Service as I do. Although I live far from the Refuge and only work part time, I enjoy my time working at Big Oaks. The Refuge and its staff have a special place in my heart. My hope for the future of the Refuge and the future of wildlife lies in my belief that there is good in the heart of each one of us and we can chose to live and work to achieve better things. Our former interns are living proof of this.

Where are They Now?
Former Interns Share Their Stories

Lisa Maas - (Originally from Madison, IN) Photo on Page 1

"I greatly enjoyed working there (enough to make my lifelong career with the USFWS) and with all of the BONWR staff. Thanks for the wonderful experience and wonderful memories!" -Lisa Maas

I interned at Big Oaks NWR during the summer of 2004 and in 2009 (Winter-Summer). I have many memories from my time at Big Oaks, mostly fond ones. Something I'll never forget, though, is nest searching with Joe Robb. During the summer of 2004 we searched for and monitored woodland bird nests as part of a research project on nest success during a cicada year v. non-cicada year. Joe and I were walking one of the transects when we heard an Acadian Flycatcher chipping at us. "Find that nest!", Joe commanded, "And don't come back until you do!" With a sense of doom, I wandered in the direction of the chipping bird, thinking I'd be spending the night in the woods. This was the first field job I'd had, and I had heard horror stories of interns being left in the woods until 8pm. Fortunately, I found the nest within 30 minutes and caught up with Joe no problem, my concern dissipating and my confidence rising.

I am currently working at the Upper Mississippi River National Wildlife and Fish Refuge, McGregor District as a wildlife biologist in McGregor, IA. My job primarily consists of wildlife surveys (bald eagle nests, aquatic vegetation, pollinators) and habitat restoration (floodplain forest, blufftop prairie, algific talus slopes). I also work with a variety of partner organizations, attend a lot of meetings, and drive motor boats around the river.

I actually owe my current position to Joe Robb, who nominated me for SCEP (Student Career Experience Program), saying, "Don't let me down." SCEP places accepted individuals into term or permanent positions within the UFWS after they complete 640 internship hours and receive a master's degree. I completed my internship hours at Necedah NWR in central Wisconsin and the WI Private Lands Office in Madison, WI. I received my master's degree in Conservation Biology and Sustainable Development from the University of Wisconsin-Madison in 2011. I am originally from Madison, IN, so Big Oaks NWR will always feel like my home Refuge. I greatly enjoyed working there (enough to make my lifelong career with the USFWS) and with all of the BONWR staff. Thanks for the wonderful experience and wonderful memories!

Matt Kraushar applying a basal bark herbicide application (Article on Pg. 5) Photo credit: Weston Schrank

Kirk Roth - (Originally from Greensburg, IN) I interned at BONWR during the summers of 1999 and 2000, and did graduate research in 2001 and 2002. When I began my path in field biology, I was "green as grass," and learned much from the field, from Joe Robb and other Refuge staff, and from the more-than-just-occasional vehicular mishap. By the end of my tenure at BOWNR, I was accomplished at working independently in field conditions and had developed skills which have benefited me in all jobs since. It is difficult to be brief when thinking of all the fond memories I have at the internship. Having lived in a bombing observation bunker, navigating around unexploded ordinance, and dealing with exotic parasites provide lots of stories to tell. However, I have countless lasting memories of my work with nests and baby birds, of discovering an incredible diversity of plants and wildlife on a daily basis, bat mist netting, and of the great camaraderie with the Refuge staff and fellow interns.

Kirk Roth working at Cypress Creek.
Photo Credit: Sarah Baty

Since the JPG/Big Oaks internship, I completed my bachelor's degree at Hanover College and my Master's Degree in biology at Ball State. For my Master's research, I returned to Big Oaks NWR to study the nesting behavior and territoriality of Cerulean Warblers and published several articles. After school, I worked in the environmental consulting industry. My first job was to study fish impacts from power plants in Ohio and West Virginia. Currently, I work for Corradino, LLC as an environmental scientist and customer service representative. I focus primarily on the I-69 extension in southern Indiana, working not only on the environmental impacts and compliance, but also meeting with affected property owners and guiding them through the acquisition and relocation processes. I remain active in biology both professionally and as a hobby. I've conducted and been a team leader in several Bioblitzes sponsored by the Indiana Academy of Science, and I return most years to BONWR for the NARBA butterfly count. I'm still an active birder - this year I'm trying to see 300 species in Indiana during the course of a year. I only have 11 more to go!

Matt Kraushar - (Originally from Milan, Indiana) Photo on Pg. 4. I was an intern in 2005. I have many fond memories of my internship at Big Oaks including early morning work and some late nights doing frog call surveys, owl surveys, Henslow's Sparrow projects and bird nest checks. I remember bombs in the trees and ditches and **g**etting buzzed by jets- they know where you are and it seems like their flight path was directly over your head at the tree level! This was my first experience working with folks in the federal and state level of government. I had only recently transitioned from education to wildlife science at Purdue when I somehow managed to land the intern position at Big Oaks. I had kind of an odd ball experience as I had another summer job while working at Big Oaks so my hours didn't mesh well with some of the others. I got to do some of my own projects like wood duck banding (since then I have helped to start the Purdue Ducks Unlimited Chapter which was ranked 5 in collegiate chapters last year! I even serve on the Indiana State Committee for Ducks Unlimited now). I helped with invasive species control, vegetation identification, and was introduced to fire for natural areas. I met all kinds of contacts that I still regularly hear from and even consult for vegetation management issues. What a great place to spend a summer working - great people at a really neat place. I'm glad that I had the chance to work down there (if you could even call it work, more like a fun learning experience!!)! Even though most of the faces have changed since I worked down there, I have been down nearly every year to look at some helicopter spraying and I always feel very welcome.

For the past 5 years I have worked on my Master's degree in Wildlife Science/Restoration Ecology at Purdue University which I finally finished in May! While working on my degree, I also served as the Extension Habitat Specialist where I tried to help folks with vegetation management issues ranging from selective weeding on roadsides to aerial applications of herbicide for habitat management. My Master's research focused on invasive species control and native warm-season grass management. I conducted field days and workshops regarding the various aspects of habitat management. Currently, I am job searching.

Melissa Ernst - (Originally from Coldwater, OH) I work for Indiana Department of Natural Resources with Fish and Wildlife as a Wildlife Staff Specialist. I've only been here a month so I'm just now getting my feet wet and there is tons to learn. I work for the Chief of Wildlife here and my job has a lot of variety. Soon I will be doing a lot of land acquisition work including budgeting and grant writing. I work with communications to get material published on the website and post news releases. In addition I do some GIS work and help provide the public lands managers throughout the state what they need from our central office.

Melissa Ernst as an intern at Big Oaks NWR. Photo Credit: FWS

There were many things I enjoyed when I worked as an intern at Big Oaks, but I would say the main thing was the people! I met some of the best people during my time down there and still have been able to remain close to many of them, even ones in the Friends group (Bill and Wilma are like adopted grandparents to me). I really learned so much and was exposed to so many different things from the very comical lessons given by Dan in driving a manual truck (which I was terrible at) to the field surveys with Joe. I guess one of the main things I learned down there was that we all have the strength to face our biggest fears if we just put our minds to it. Mine was SNAKES! I still don't care for them but by the end of summer I was able to hold them, which I never thought possible. Honestly it was the best summer of my life down there hands down!

Abe Bear. Photo Credit: Ada Bear

Abe Bear - (Originally from Madison, IN) I was an intern at Big Oaks NWR during the summer of 2003 while attending Purdue University. During my internship I spent most of my time working on Cerulean warbler research, but I was also exposed to many other aspects of the Refuge. The internship was my first work experience in the natural resources field. I remember being amazed at the knowledge level of the staff members and other researchers. It seemed they could pick out a specific bird song amongst 20 other singing birds and tell you what that bird ate for breakfast, where his nest was, and how many chicks were there. As an intern, I learned some skills that I still use today such as distance measurement through the woods by pacing, beaver pond control, and the basics of using prescribed fire as a management tool. The work I did at Big Oaks helped me to better understand the concepts when they were later explained in wildlife courses at Purdue. Following my internship, I completed my Forestry and Wildlife Science degrees and am now working for the Indiana DNR as a forester at Martin State Forest.

Kely Mertz - (Originally from West Harrison, IN) Currently, I am with POWER Engineers, Inc. as a Senior Biologist and Supervisor out of Cincinnati, Ohio. I have been with the company for over 13 years and have had the wonderful opportunity to work on a very diverse, interesting, and challenging set of projects across the US. My clients include renewable energy developers and operators, natural gas pipeline companies, and Department of Defense (DoD) agencies. Currently, I am the Technical Project Manager for development of the largest Habitat Conservation Plan in the US, which is being developed under Section 10 of the Endangered Species Act (ESA). The Plan addresses approximately 30 federally listed wildlife species across a nine-state region and is being completed on behalf of the American Wind Energy Association and 17 wind industry developers to address wind development over the next 45 years. It's a very large, complex, and tremendously challenging – and rewarding! – project involving hundreds of stakeholders. I have also managed, and conducted, natural resources investigations and manage-

Kely Mertz on Mt. Bierstadt in Colorado. Photo Credit: Chad Sauerland

ment planning on all (about 300) US Army Reserve Command facilities in the 19-state region of the 88th Regional Support Command in compliance with the ESA, National Environmental Policy Act, and DoD environmental policy and regulations. Environmental policy has become my area of expertise and my professional "love," and in my time with POWER, I have completed hundreds of successful projects all driven by my client's need for compliance with environmental laws and regulations. I'm thankful to have had the opportunity to travel, to see some terrific places, to meet some of the best minds in the field, and to present featured projects and policy discussions at various conferences across the country.

> *"There's nothing more rewarding than figuring out that in most all cases, there really is a solution."* *–Kely Mertz*

My time spent at Big Oaks surveying for songbirds and bats and working alongside natural resources professionals was a wonderful building block for my career. Big Oaks was where I first had the opportunity to apply college textbook and classroom concepts, and to learn how potential conflicts between protected resources and anthropogenic activities were addressed in the "real world." Big Oaks, and more importantly the folks for whom I worked there, also gave me my first confirmation that "yes, there really ***are*** jobs for people who love the same things I love!" My time at Big Oaks, though brief, truly helped propel me into this professional career I love so much. That career? Finding the "sweet spot" - where current environmental laws, regulations, and guidance, intersect with – and compliment – project activities. There's nothing more rewarding than figuring out that in most all cases, there real-

New Display in Indianapolis

By Ken Knouf

Computer display at the History Center. Photo credit: Ken Knouf

Next time you travel up to Indianapolis to visit the Eugene and Marilyn Glick Indiana History Center, better known as the Indiana Historical Society, stop by the Indiana Destinations interactive computer module area and view the newest display funded by the Jefferson Proving Ground Heritage Partnership. The 13 panel interactive display was just completed and helps to fill a very noticeable void.

Last year the group ventured up to the Historical Society, and although the exhibits are excellent, we noticed a lapse in the information---no mention of the proving ground or Big Oaks. Members decided this was unacceptable so we met with Society staff personnel who informed us that for a mere $5,000 this could be rectified. Although at first taken back, we discussed payment options (the society offered a 3-year payment plan), and we ultimately decided to proceed ahead. When informed that we were willing to fund the exhibit and provide photos and draft text, the Society reduced the cost to $4,000. Member Mike Moore started to assemble photos and draft text—the challenge was keeping under the 500 character maximum per panel and we were restricted to 13 panels. Progress was slow at first, but one effort accomplished at the request of Bob Irwin was to pay off the total cost. Bob knew his time was short and he didn't want any debt to hang over the JPGHP.

By the early summer of 2013, the presentation took shape and was submitted to Indianapolis for their tweaking and massaging. In August we were informed the display was ready, and we again traveled to Indy, this time anxious and excited. The computer display traces the evolution of the property from early settlement and farming to a large military installation to Big Oaks. As mentioned there are 13 display panels with narrated text. The display can be accessed by touching the Jefferson County portion of the big screen and then WWII under subject. The JPGHP was very pleased with the final product, our mission completed in making sure people do not forget, and we invite all of you to visit the History Center at 450 West Ohio.

Old Timbers Lodge Septic System Project Approved

By Jim Leveille

Old Timber's Lodge. Photo credit: FWS

The Indiana Air National Guard (INANG) Detachment at Jefferson Range recently announced procurement of funds to install an engineered mound system for the waste waters from Old Timbers Lodge. BOCS played an assisting role by working with local firm FPBH, Inc to provide Indiana Department of Natural Resources (IDNR) approved plans and soil samples for the site.

Though the formal application for the funds just occurred in July, planning for the system has been ongoing since the first days of joint BOCS/INANG Lodge cooperation in 2008. That year BOCS paid for soil sample tests on the southern side of the Lodge, the first site proposed for a new system. Excavation of the original 8" ceramic septic system pipes, accomplished with Army approval as part of a BOCS project to replace damaged roof down spouts disclosed that the original septic system installed by the Thomsons in 1932 had collapsed and filled in. The use of porta-potties for Lodge functions was the interim solution to a longer term fix. When BOCS installed the new waterline to the Lodge in 2010, that excavation provided further insights into the Lodge's former plumbing. BOCS was offered professional assistance by Dan Wright, CEO and geologist of FPBH Inc. In 2011, Dan was instructing at the Outdoor Women at Big Oaks program and noticed Lodge restrooms were not being used. FPBH is a full-service environmental, engineering, surveying, planning, and inspecting firm located in North Vernon, IN. Bernie Hauersperger, president and lead engineer, took on the task of supervising multiple surveys and analysis of the Lodge and its surrounding area. It quickly became clear that the first site could not comply with state requirements. In order to obtain approval, the system had to move to the northwest side of the Lodge. BOCS paid for another soil test in the new area, and Bernie and his team went to work.

In early July of this year, SMSgt Todd Bass, NCOIC of Jefferson Range, Bernie Hauersperger and John Megel of FPBH, and Jim Leveille and Jim Jackson of BOCS met at the Lodge to confer on the size, capacity, and placement of the proposed new system. At that meeting, SMSgt Bass suggested that federal money may be available to assist with this project, but only a two-week window was available to submit a request. The request would require a completed and approved plan for the new system. FPBH took on the task, donating over 100 hours of professional services and putting other jobs aside to meet the deadline. Their efforts were successful. The completed plans and BOCS soil sample results were turned over to the INANG, whose funding request was approved.

With contracts being awarded in September, the construction may begin later this fall. Having clean water from the BOCS waterline project and proper sanitation facilities from the INANG sand mound septic system will greatly enhance our ability to utilize the Lodge in support of Refuge, BOCS and INANG activities. This project highlights how BOCS and the INANG at Jefferson Range can work together to preserve and improve the Lodge. The contributions of Bernie Hauersperger, Dan Wright, John Megel, and the staff of FPBH were the critical factor that allowed that cooperation to come to a successful end.

Due to the hazards of excavation and heavy equipment, SMSgt Todd Bass, IN ANG, has directed that Old Timbers Lodge will be off limits to all BOCS members and unauthorized personnel during installation of the septic system.

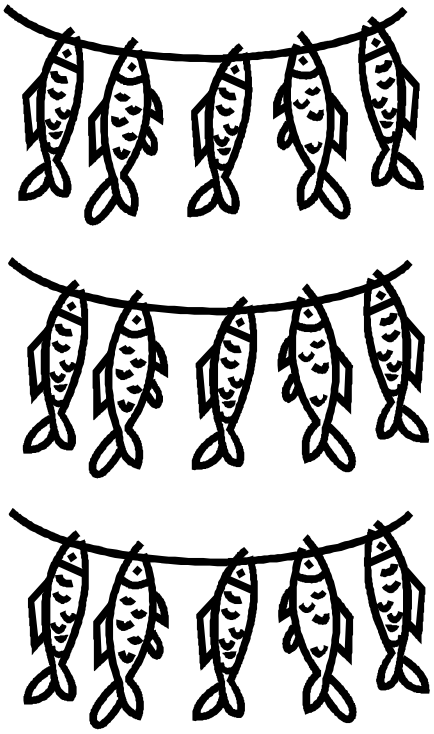
Take A Kid Fishing Day 2013

by Jim Leveille

Joe Robb advertising for TAKFD. Photo credit: FWS

This year's July 20 Take A Kid Fishing Day (TKFD) brought 115 kids to Old Timbers Lake for a successful day of fishing and new events. Numerous changes, implemented with the help of BOCS TKFD co-chairman, Bob Dixon, welcomed this year's participants. The biggest change was extending the event, so that families had until 4:30 to fish and enjoy the lake. Last year's "snake tent" display of local reptiles and amphibians was again run by crowd favorite Andrew Hoffman. Dave Bear guided young anglers on constructing their own cane poles, and Bob Dixon and Gary Stegner ran the "improved" all-day casting contest tent. Tournament Bass Fisherman, Randy Spry (Chelsea Bass Club), provided tips to the youngsters. Bait was provided courtesy of DMF Bait Co. Plenty of food, drinks and prizes were available courtesy of our primary sponsor, Keith Olson of RKO Enterprises. Additional donations of tackle and drinks were provided by Madison's Wal-Mart store. Bass Pro of Clarksville contributed new and used rods and reels for the always popular raffle draw. Most of the young anglers went home with prizes that ranged from rod and reel combos to tackle boxes and fish cleaning boards. If you know of a young angler and family who would enjoy a free day of fishing, food and fun on beautiful Old Timbers Lake, have them mark their calendars for next year's July 19, 2014 event.

Photo at the Lake of TAKFD 2013
Photo credit: FWS



Manager's Corner - The Need for Growth

By Joe Robb

I remember the early days of the Big Oaks Conservation Society. At that time the group did not have a name and those who attended the early meetings were full of questions. Anglers sat next to science teachers, and hunters warily conversed with non-hunters. All who attended those early meetings saw a need for the group to help the fledgling Refuge. The anglers loved Old Timbers Lake, the hunters sought the game habitat within the Refuge, and the birders enjoyed seeing the rare warblers to add to their annual lists. We encouraged what we had in common over things that we disagreed with and we compromised for the future of the Refuge. It wasn't always smooth and sometimes the discussions grew heated, but the need for inclusiveness over exclusivity won out. Everybody was welcomed, because we needed everybody. We have had continued success with wonderful events like Outdoor Women at Big Oaks, Take a Kid Fishing Day, and our Youth Deer and Turkey Hunts. Old Timbers Lodge's infrastructure and grounds are in better condition now then anytime in the past 20 years due to the hard work of members like Jim Leveille and Bill Hughes.

Fall Scene. Photo Credit - FWS

Inclusiveness, the need for everyone's input was the key as it is now. The Refuge welcomes all who support the mission of the National Wildlife Refuge System. Conservation is hard pressed with habitat being swallowed up and put into smaller and smaller parcels of land. As the demands for the world's resources increases, the needs of wildlife often become the lower priority. We face threats that appear faster and faster, just as the demand that TV commercials generate for faster, bigger and more for the buying public. I was in Ohio visiting friends and I was amazed that all the ash trees were already dead from the Emerald Ash Borer, which is quickly headed our way. Within 5 to 10 years the ash trees on Big Oaks NWR will most likely be gone. Yes, I will mourn the loss of the ash trees, but instead of hanging our head the best way forward is to adapt and to positively face these threats and challenges with new ideas and approaches. Even with the recent government shut down and it's effects on the Refuge, we need to stay positive.

We need to reach out to all of our members and previous members to increase the energy of the group and shared enjoyment of what Big Oaks has to offer. We also need to reach out to the local communities that surround Big Oaks to find new members who will share our enthusiasm for crisp autumn mornings, abundant wildlife, historic legacies and a sense of volunteerism to add to our group. We might not agree on everything, but our shared enjoyment and vision can add to diverse approaches that actually are usually better for the resource in the long term.

Photo at the Lake. Photo credit: FWS

Sometimes when discussing the Society with potential members, the question comes up, "Well, what is in it for me?" Depending on the person, my response could be, "Well, you can see the smile on a kid's face as they catch a fish on a cane pole that you helped them make." Or, "Keeping a trail open can be downright relaxing, especially after staring at a computer all day." There is truth in the adage that by giving thru your volunteer efforts, you will get back many rewards. The ability to fund raise and to reach out to others, will allow us to grow and to help the Refuge survive. Please join us in these efforts.

Where have all of the bats gone?

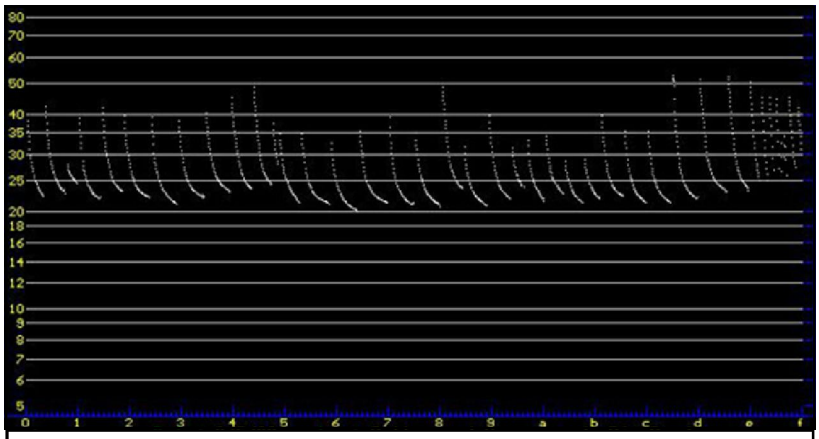
White Nose Syndrome and Monitoring Bat Populations on Big Oaks National Wildlife Refuge.

By Benjamin Walker

White nose syndrome (WNS) is an illness that has killed over a million bats since it was first discovered during the winter of 2006-2007. The disease received its name due to the distinctive "white nose" observed on infected bats (Figure 1). WNS is caused by a fungus (*Geomyces sp*.) that thrives in caves that bats use to hibernate. Once infected, a bat may prematurely wake from hibernation and starve in or outside of the cave. Researchers believe that the disease likely spreads from bat to bat contact or possibly by humans during caving activities. In a hope to mitigate the spread of the disease, the U.S. Fish and Wildlife Service called for a moratorium on caving activities in the affected areas.

A hibernating bat infected with white nose syndrome. Photo credit: fws

The U.S. Fish and Wildlife Service and its partners have three primary WNS focus areas in which they are investigating: 1) research, 2) monitoring and management, and 3) outreach. Big Oaks National Wildlife Refuge (Big Oaks NWR) is currently focusing on the second focus area, by participating in a region wide bat diversity survey during the spring and early summer. Due to the difficulty of surveying bats, traditional techniques are not always effective. Therefore for this project, we have adopted a monitoring plan using a device that records the echolocation calls of bats as they pass over a recording device called an AnaBat. Each bat species emits a unique echolocation call which can be graphically displayed as an image called a sonogram (Figure 2). Once sonograms are created, we look for unique "signatures" to identify the bat species that created it. Computer programs further aid this process by processing and identifying thousands of sonograms in mere seconds. This advance in technology has allowed staff at Big Oaks NWR to survey and monitor large areas using relatively little effort. By collecting this data at Big Oaks NWR, we will create a foundation for long-term monitoring of bat populations on the Refuge. We are also able to directly integrate this data with other monitoring initiatives at regional and national levels with our partners. Currently, we have finished our surveys for the year and are analyzing our data. Last year we conducted a single pilot survey and we detected the big brown bat, eastern red bat, hoary bat, little brown bat, northern long-eared bat, Indiana bat, evening bat, and eastern pipistrelle! If you have any questions about our survey effort or are interested in participating in a survey, please contact me at the office.



An example of a sonogram created from a bat echolocation call. Photo credit: asu.edu)

Hummingbird Migration… To Feed or Not To feed?

By: Lisa Jones

Aside from a few year-round residents in the warmer coastal and southern desert regions in the United States, most hummingbird species of the U.S. and Canada migrate south in fall to spend the winter in northern Mexico or Central America. This migration provides an opportunity for some of the best hummingbird watching due to concentrated numbers passing through.

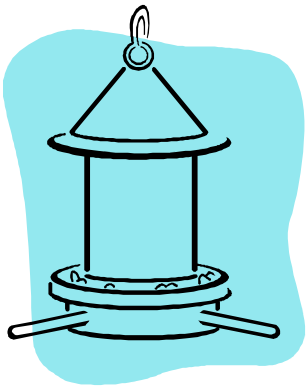
Ruby throated hummingbird. Photo credit: National Park Service

With the exception of insects, hummingbirds while in flight have the highest metabolism of all animals, a necessity in order to support the rapid beating of their wings. This expends enormous amounts of energy and requires nourishment apart from nectar. Protein consumption is a vital part of their diets too. Like insects! However, as days begin to shorten and flowers become scarce the hummingbirds will inevitably begin their journey.

To not only increase your chances of seeing them, but to also provide the nourishment they need, it is important to leave your feeders up and full at least three weeks after seeing your last bird. This will NOT keep the birds from continuing their journey south. Migrating birds need all the quick and easy nourishment they can find to sustain the incredible energy demands of migration. It is vital that hummingbirds fatten up for their extended trips, particularly those crossing the Gulf of Mexico.

Yes, you may see some hummingbirds well after freezing temperatures have chased most hummingbirds south! It is unknown why or how these little dynamos survive for days in freezing temperatures but they do. We all worry when this happens but DON'T take your feeders down. The hummingbird seems to know it needs to fatten up for several days before leaving.

Eventually, hummingbirds do get sick and too old to make the journey. It is difficult to tell the difference between a late migrant and a hummingbird that isn't going to finish journey, so leave those feeders up.



Consider This…

"Many people notice that adult males migrate earlier than females, because in the last month or so there may be no birds with red throats at feeders. However, remember that immature Ruby-throats of both sexes look much like their mothers. Young males often have a "5 o'clock shadow" of dark throat feathers in broken streaks, and many develop one or more red gorget feathers by the time they migrate. Immature females may have much lighter streaks in their throats, but no red." http://www.hummingbirds.net/migration.html

Big Oaks CONSERVATION SOCIETY

Mission Statement: *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.*

An Editorial From the President -Threatened or Endangered?

By Jim Jackson

A threatened species is defined as a species that is likely to become an endangered species in the foreseeable future throughout all or a portion of its range. An endangered species may be defined in two ways: any species which is in imminent danger of extinction throughout most or all of its range; or, a species whose numbers are so small that that the species is at high risk of extinction.

When I first joined BOCS about six years ago, neither of these definitions would have applied to our organization. BOCS had nearly 150 members with many willing volunteers to plan and assist in projects and in events co-hosted or co-sponsored by BONWR and BOCS. The program schedule was dynamic, and attendance at meetings filled the majority of space in the Madison Library auditorium.

Approximately four years ago our membership began to diminish. Although the range of topics and quality of the programs and speakers remained high, the meetings were progressively less well-attended. Member involvement in our projects and events declined, and volunteerism dwindled. Dedicated members were willing to volunteer for almost every event, but few others stepped forward to help. Enthusiasm waned. We were becoming a threatened species. Nevertheless, our signature events remained successful because fewer and fewer members were doing more and more work.

Presently, our active membership is 94 – a 33% decline in six years. The specific reasons for this are many, and will require study, discussion and corrective action if we are to survive. Our mission to support Big Oaks National Wildlife Refuge is in jeopardy. The work of our Refuge goes on, with increased work being done despite a significant reduction in staff and decimated funding. And now the Friends Group is weakened and less able to support the Refuge and staff.

Solutions to this problem are suggested elsewhere in this newsletter. We at BOCS must understand we are no longer a threatened species. Urgent and aggressive action and increased participation by all of us are crucial to our survival. Our numbers are so small we are at high risk of extinction. We have become an endangered species.

BOCS Yearly Membership (Oct. 2013 - Sept. 2014)

New Member _____ Renewing Member _____

Please select a category:

___ Youth $5 Name(s)_____

___ Individual $15 Address_____

___ Family $25 City, State, Zip _____

___ Supporting $25 Phone(s) _____

___ Lifetime (per Individual) $150 E-mail _____

___ Corporate $500

___Number of Tickets for the Dec 7th Christmas Party - $15 per person (must be a BOCS member to purchase tickets)

Name of BOCS Member attending_____

Spouse's Name (if attending)_____

Dependent Children's Names (if attending)_____

If you would like to join, or rejoin, the Big Oaks Conservation Society, please fill out this membership form and send along with your check to: **Big Oaks Conservation Society, P.O. Box 935, Madison, IN 47250**

Big Oaks Conservation Society
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Madison, IN 47250

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