



A R E I

AVIAN RESEARCH & EDUCATION INSTITUTE, INC.

The Cuckoo

Unusual Birds Banded at Hueston Woods State Park

It was late November, and Dave and I set up the mist nets around 9pm, turned on the MP3 player and listened to the call of the saw-whet echo through the air. Would a bird answer the call and fly in to investigate? Northern Saw-whet owls have not been documented in Hueston Woods State Park for decades, and we were about to see if any were in fact using the Park as their wintering grounds.

In a group known for inconspicuous behavior, the tiny Northern Saw-whets easily achieve the distinction of being our most secretive owls. Since they normally watch people as they pass only a few feet away, it understandable why so few have been documented in Hueston Woods.

The night was cold, and we huddled around an electric heater in our plastic-wrapped, screened-in tent; anxiously awaiting the next net run. There were several of us now, and each person silently hoped one of these tiny avian teddy-bears would be caught in a net. Quietly, we made our way through the dark, avoiding dark muddy divots, back to the mist nets. As we approached the nets we saw that a clump of leaves had fallen into the net. Drat - that

would be a mess to untangle. But, wait, it wasn't leaves, it was a wee female Northern Saw-whet owl. We couldn't believe our luck! Weighing in at a hefty 91.2g, this beautiful HY (hatch year) female was incredible. What a score! If you look closely at the feather pattern on her wing, you can see the lack of molt limits that indicate her age.

This little lady was the motivation we

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Female Northern Saw whet Owl banded in December at the Hueston Woods Biological Station

A Bird's Eye View on Chris Betrus

The AREI banding stations cannot survive without our extremely talented and dedicated crew of volunteers. Each issue will honor one of our volunteers to show our appreciation for the long hours of selfless work they do.

Chris Betrus is a man of many talents. His interest in birds stems from a love of

the out-of-doors he discovered at an early age. He has long enjoyed walking through the woods, exploring and investigating all the wonders of nature from the smallest bug to the largest tree. While on a field trip with his animal behavior class at the State University of New York College at Fredonia, Chris began to notice the many varieties of birds that surrounded him. Shortly

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Chili Challenge teams highly competitive this year!

- 9 teams actively competing for the coveted title of "Skyline Chili Challenge Champions" in this year's annual birding competition.
- Teams "Cuckoo" and "A Rose Between Two Thorns?" are currently tied as leaders, but "Under the Radar" is giving them strong competition. Check out current team standings at www.avianinstitute.org.

What is AREI?

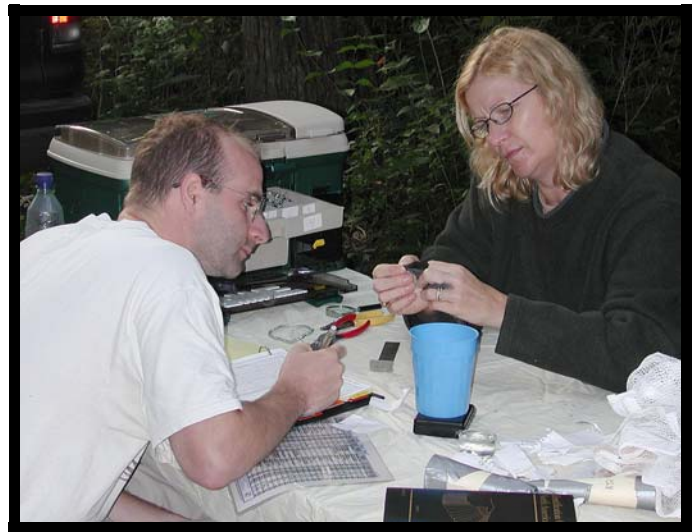
The Avian Research & Education Institute, Inc. (AREI) is a non-profit institute whose mission is to enhance avian populations through research, education and advocacy. To this end, AREI is committed to establishing biological stations that will provide bird banding and environmental education to the public. The specific research goals of AREI are to monitor migratory and breeding bird populations through banding and molecular studies. The specific education goals are to provide a classroom without walls to students of all ages and, educate students and community members on the environmental and conservation issues affecting avian populations. The specific advocacy goals are to use the knowledge gained from research to better manage bird populations and habitat and, to design land management strategies that will enhance our natural heritage.

Hueston Woods Biological Station (HWBS) is a field research station of AREI, and the first of several AREI biological stations in the Miami Valley of Indiana and Ohio. Located in Hueston Woods State Park, the station was established in 2004, through the vision and leadership of the Directors of AREI, Drs. Jill and David Russell. HWBS is active most of the year with migratory banding

Banding together to protect and conserve avian populations.

from April – May, MAPS June – August, and migratory banding again from August – September. When the weather permits, banding continues throughout the winter.

AREI's bird banding program is a combination of two separate projects, 1) Monitoring Avian Populations and Survivorship (MAPS) and 2) migratory bird banding. The MAPS program is organized to fulfill three tiers of goals and objectives: monitoring, research, and management. This program focuses on 100 target species, including Neotropical-wintering migrants, temperate-wintering migrants, and permanent residents. The specific monitoring goals of MAPS are to provide: estimates of adult population size, adult survival rates, proportions of residents, and recruitment into the adult population from mark-recapture data on adult birds; and indices of post-fledging productivity from data on the numbers and proportions of young and adult birds captured. The specific management goals of MAPS are to: 1)



Chris Betrus and Jill Russell banding at HWBS in 2004

determine the proximate demographic cause(s) of population change; 2) suggest management actions and conservation strategies to reverse population declines and maintain stable or increasing populations; 3) and evaluate the effectiveness of the management actions and conservation strategies actually implemented.

The second banding project, migratory bird banding, is different from MAPS in that it is vital for determining both species diversity and migratory pathways of birds passing through HWSP. To date, over 220 species of birds have been recorded stopping at Hueston Woods State Park on their trek to either their breeding grounds or over-wintering grounds. As habitat is degraded, birds are forced to seek new areas to rest, nest or refuel. By banding and recapturing banded birds, it is possible to identify those birds using the park either for nesting or as a stopover. In addition to recapture data, several other methods; such as genetic and stable isotope analysis, are being implemented in order to determine the origins of the birds passing through this important migratory corridor. As we better understand the movements of the birds passing through our area, we are better able to adopt strategies that maximize their success and initiate working relationships with individuals and organizations that are equally interested in “our” birds, but in other parts of their journeys.

Bird migration is a fascinating and exciting process. This enthusiasm can be harnessed and shown first-hand to kids, both young and old. The use of the migratory banding station as a classroom without walls - to introduce nature and the environment through a bird's eyes - allows us to reconnect ourselves with our wild heritage. Small, brightly colored avian gems create an immediate bond that opens minds and allows us to discuss important environmental concepts and issues. Understanding where birds go, how they get there, and what they need to survive, all allow for open discussions on habitat, pollution, geography, physiology, and conservation - concepts that are usually only words in a classroom textbook.



Vertebrate Zoology class from Miami University visiting the Hueston Woods Biological Station, Summer 2004

Technical Corner - By David E Russell, PhD

I have watched birds since I was a small lad—my first bird, as I remember, was a Cedar Waxwing; which I identified with my *Golden Guide* at age 5. Even with nearly 40 years of observation and practice, I am still overwhelmed by the details in our common species. What I hope to accomplish in this technical column is to introduce everyone to some of these discoveries we now, through banding, have the opportunity to observe up close. Bird identification can be challenging, however, when banding it is assumed you can identify the bird - the challenge frequently becomes not the identification but the sexing and aging of the individual. In this issue we will focus on a method of aging birds that applies to most of the perching birds (passerines) we band.

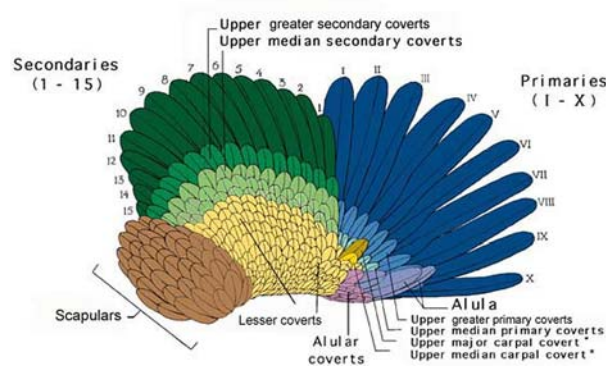
Let's begin with an *Indigo Bunting* that fledges (leaves the nest) in July. Young birds will retain their main flight feathers

Program Summary

We have initiated a number of very exciting projects associated with the banding station. *Samantha Hammer*, a Miami University senior, constructed a number of lesson plans for our use with high school curriculum in geography. Our school season kicks off this Spring, as we welcome *Ben Mattox's* Biology classes from Talawanda High School. *David Huff*, a Masters student at Miami University, is using bird feathers to develop a DNA method of separating and identifying Willow and Alder Flycatchers; species that are indistinguishable in the hand. *Andy Aucoin*, a Miami junior, has begun an independent study project, using bird feathers for DNA extraction, and ultimately developing a field test that will allow us to sex individuals from species whose plumages and external anatomy are not sexually dimorphic.

Chris Betrus (continued from page 1)

after that experience, Chris spent three weeks working as a bird banding assistant during the height of spring migration, and his love of birds was solidified. With his biology degree in hand, Chris accepted a position with the Maui Forest Bird Recovery Project in Hawaii, where he used both his experience as a bird-bander and his bit of training as a wildlife rehabilitator to fulfill his roll as a volunteer wildlife biologist (A.K.A. grunt, indentured servant, and gopher). Just as Chris' time in Hawaii came to an end, his then-fiancée Melissa accepted a job in Southeast Alaska. During their year in Ketchikan, they hiked the old growth forests, saw the Northern Lights, watched black and brown bears, seals, and bald eagles alike enjoy a fish dinner, and



Feathers of the dorsal (top side) of the wing of a chicken

* Carpal coverts are unique to Galliformes

(primaries, secondaries, and tail) until the following fall - over 14 months! However, within their first couple months and before fall migration, Indigo Buntings molt their juvenile body feathers (the ones grown in the nest). They have their standard pre-basic molt (molt into their winter plumage) upon arrival in their wintering grounds. Buntings then start their pre-alternate molt (molt into their breeding plumage) prior to leaving on their northward flight in the Spring (many don't complete this molt for a week or two after their arri-

(Continued on page 5)

Volunteer Training

For the protection of both our birds and our volunteers we are initiating a certification process for those that are interested in actively working at the banding stations. You DO NOT have to be certified to observe. Each volunteer interested in certification will have a training sheet kept in a notebook we take to each session. Volunteers will practice and then be observed conducting progressively more difficult levels. You can stop at any level that is safe for the birds and you feel comfortable with (you don't have to take Pileated Woodpeckers or Cooper's Hawk out of the nests!). Levels will include: Data recording, carrying bagged birds, putting up and taking down nets, removing large, non-aggressive birds, and then moving up to the more difficult and aggressive birds. For more info, see avianinstitute.org.

Banding Summary 2004

This is the annual report (2004) of the bird-banding efforts of the Avian Research & Education Institute, Inc. (AREI). Banding occurred at three locations: Hueston Woods State Park (HWSP), Shakertrace Wetlands, Miami Whitewater Forest, OH (STWL), and Cottage Grove, IN (CGIN).

HWSP: Bird banding occurred at the migratory banding station below the dam at HWSP on 38 days (3078 net hours) between April 7 and December 21. Additionally, on 7 days (840 net hours) between June 2 and August 13, banding occurred in the Preserves area of the Big Woods as part of our Monitoring Avian Population and Survivorship (MAPS) program. A grand total of 1200 individuals were captured and released; 971 banded and 229 recaptured (previously banded). Seventy-nine species were banded during 2004; three species were released without banding for a total of 82 species captured in the mist nets. The busiest banding days below the dam were: in Spring (May 11) 71 individuals banded and, in Fall (September 19) 69 banded. The most abundant species were Gray Catbird (224 individuals [ind.]), Northern Cardinal (107 ind.), White-throated Sparrow (71 ind.), and Swainson's Thrush (34 ind.). Sixteen species were represented by only one or two individuals banded. Overall, this was a very successful year with

over 75 people volunteering or visiting the banding station.

STWL: 151 individuals from 11 species were banded during



Nelson's Sharp-tailed Sparrow banded October 9, 2004 at Shakertrace Wetlands, OH

two banding days (recaptured 3) [1.08 birds/net hr] in 2004. On Oct 9, 2004 we set-up two lines of 10- 10 m x 2.6 m mist nets along net lanes cut in the prairie to the west and north of the bat house. We banded and released 67 individuals of eight species (1.12 birds/net hr). The eight species included Palm Warbler, Common Yellowthroat, Field, Savannah, Song, Lincoln's, and Swamp Sparrows. **We also banded one Nelson's Sharp-tailed Sparrow!** On Oct. 17, we banded and released 84 individuals from 10 species (1.08 birds/net hr). Although, no more Nelson's Sharp-tailed Sparrows, we banded 48 Song Sparrows and a Northern Bobwhite.

CGIN: Banding occurred on 3 days in 2004: Oct 14, 15 and Dec 27. A total of 63 birds were banded from 10 different species of birds. These species included: 36 American Goldfinch, 6 White-Crowned Sparrows (including 2 rare Gambel's race), 4 Tufted Titmouse, 3 each - Northern Cardinal, Carolina Chickadee, Horned Lark and Song Sparrow, 2 White-breasted Nuthatch and Dark-eyed Junco and 1 American Tree Sparrow.

Support AREI



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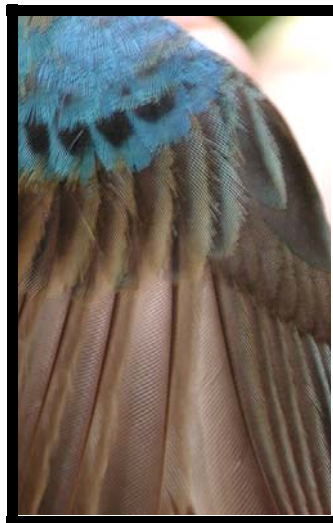
Please make checks payable to: Avian Research & Education Institute, Inc. Thank you.

The Avian Research & Education Institute, Inc. is a 501(c)3 nonprofit organization, Federal Tax ID #35-2235817. Your donation to AREI is tax deductible.

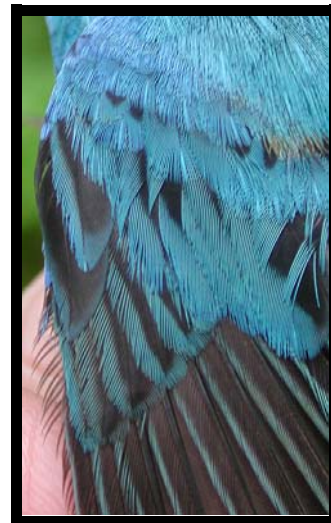
Technical Corner (continued from page 3)

val here). In essence, a young Indigo Bunting has molted its body feathers three times prior to its 14-month birthday and yet has not molted its main flight feathers! A group of feathers called the primary coverts (because they cover the base of the primaries, like shingles on a house) are retained in the same fashion as the primaries, consequently we can determine whether or not the bird was hatched the previous Summer even if it has a completely blue body. Male Indigo Buntings banded in Spring can be aged either as a bird that hatched the previous Summer, called a second-year (SY) bird [in a bander's aging system all birds have birthdays Jan 1, so a second year bird is in its second calendar year] or as an after-second-year (ASY) bird [has been living at least three calendar years] by looking at the primary coverts. If these feathers are brown they are the original flight feathers. If the primary coverts are black-centered with wide blue edging they are the newer, replaced flight feathers. In many species, the plumage of the young males closely resembles the plumage of the adult female, however, a look at the primary coverts quickly determines both the age and sex of these individuals!

Young birds will retain their main flight feathers for over 14 months!



Male Indigo Bunting banded 21 May 2004. Original brown coverts and flight feathers. This bird is aged SY [second year]



Male Indigo Bunting also banded 21 May 2004. Dark centers with blue trim on both coverts and flight feathers. This bird is aged ASY [after second year]

Unusual Birds (continued from page 1)

needed, and next year (2005) we are planning on participating in Project OwlNet; a program designed to improve the knowledge of the migration of the Northern Saw-whet Owl (*Aegolius acadicus*) in North America. For information on Project OwlNet, see www.projectowl.net.org.

Other unusual birds banded in 2004 include the Nelson's Sharp-tailed Sparrow at Miami Whitewater State Park, Yellow-billed Cuckoo, and the Hooded, Mourning, Wilson's and Orange-crowned Warblers.

Few birds are as erratic in their seasonal migrations as Yellow-billed Cuckoos. These birds are typically caterpillar feeders and were in our area in large numbers this year because of the cicada invasion. Yellow-billed Cuckoos are difficult to observe as they

sit motionless in tall trees, concealed by the abundant foliage, preferably in riparian zones and brushy woodland borders. They are mostly detected by their distinctive loud, throaty Cow-Cow-Cow calls. Because we banded two YBCUs in 2004, we decided to name our newsletter *The Cuckoo*. Our logo

bird is an after-hatch-year female, band #0962-63111, who was banded on May 21, 2004. She so captivated us that we decided to make her our emblem. For photos of all our unusual birds from 2004, visit our website at avianinstitute.org.

Jill Russell, PhD, Executive Director

It was a wee female Saw-whet owl lying in the net

Appreciation

Thank you to the **Wakeman Foundation** for their outstanding support of our Hueston Woods banding station in 2004. We appreciate the support! We are also grateful to the **Oxford Foundation**, for a grant of \$2,000 to support our education program this Spring. Thanks also to the following for their recent gifts:

Benefactor - 4 Leaf Development and Mary & Bill Heck for supporting the saw-whet owl banding program

Patron - HDS, LLC., Brian Keane & Katherine Yutzey

Adopt-A-Net Sponsorship - Whistle Stop

Regular - Jim Reid, Jeanette Jaskula, Richard Munson



L-R: Dave & Jill Russell birding southern Texas with Bill Heck, July 2004

Student - Susan Sprunt

And last, but certainly not least, a really big thank you to Chris Betrus for getting up before dawn to help us put up mist nets all Summer and Fall and for getting us online & managing our web site.

Thank you to everyone!



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UPCOMING EVENTS

Saturday, February 5

Dawn until 11:30am

Bird Banding—*dress warmly*
Below the dam at Hueston Woods

Saturday, February 12

2:45pm

“*Potato Chip, Potato Chip*, is this really a pneumonic?”
Ohio Audubon Assembly, Columbus, OH
talk given by Dr. David Russell

Saturday, February 26

Dawn until 11:30am

Bird Banding—*dress warmly*
Below the dam at Hueston Woods

Saturday, March 5

2:00pm

OBBA Research Committee Meeting
Caesars Creek

Saturday, April 2

9:00am—5:00pm

OBBA Bander Certification Testing
Columbus, OH

Sunday, April 17

Dawn until 11:30am

Bird Banding—*below the dam at Hueston Woods*
Guests to Banding Station: Darke County Bird Club