



The REDHEAD



Red-headed Woodpecker Recovery

Spring 2016

A Special Committee of the Audubon Chapter of Minneapolis

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RHWO NEWS

Research Proposals Required

Administrators at Cedar Creek Ecosystems Science Reserve (CCESR) have recently informed the Red-headed Woodpecker Recovery that we will be required to submit a research proposal to CCESR before we can continue with our studies at CCESR. While this is a minor impediment to our work there, it is needed to define the work done there so that it is coordinated with other research projects being conducted at Cedar Creek. Forest Isbell, Associate Director CCESR, has requested that we submit two proposals - (1) a long-term monitoring program that does not require direct interactions with the birds and (2) one or more short-term research projects that require capturing or otherwise directly interacting with the birds. The long-term monitoring proposal should not be a problem and we expect rapid approval of it so that monitoring will not be interrupted this summer. The proposal requiring directly interacting with the birds will require much more effort and may require us to have a qualified collaborator. It will mean that further banding of birds will be suspended until a proposal is approved. It will also mean our hope of using RFID technology this summer is in jeopardy, but not killed.

New Direction for RHWO Research

Since 2008 the Red-headed Woodpecker Recovery has been conducting research on red-headed woodpecker nest sites at Cedar Creek Ecosystems Science Reserve (CCESR). This has included data on nest trees, tree location and surrounding vegetation. Using a camera and pole, Ari Waldstein¹ began looking into the nests to determine how many eggs were laid, how many hatched and how many fledged. This was continued by Patrick Hartman and Alan Watchuka. Brittney Yohannes expanded the scope of the research by recording when the first egg was laid, when eggs hatched, when and how many fledged for all nests found during the summer as well as which individual bird was involved at each nest. Members of the Red-headed Woodpecker Recovery (RhWR) were heavily involved with all this research by assisting in locating nest trees for the researchers. Jim Howitz has color banded nearly all the RHWOs at CCESR so that individuals can be identified. Siah St. Clair used his photography skills in aiding in the identification of each bird at each nest site by taking photos of each bird with their color band visible making positive identification of each bird. Taking photos

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A Note from the Chair

Notes from the chair

Spring 2016

Will the weather ever settle down? Our up and down weather cycles are frustrating attempts at locating this year's RHWO nests. In talking with other birders, it seems the whole spring migration is somehow out of synch. We did have an exciting day of training for surveyors on April 23rd, and had an opportunity to review survey protocols, especially with regard to spring burns at Cedar Creek. As of the writing of this newsletter, all spring burns have been completed. But the general rule, at any time burns are being conducted, is to call the main office at CCESR before driving there. No one from our recovery program should be in or around when a burn is in process.

This year there are a number of new faces at Cedar Creek. Forest Isbell is the new Associate Director, Hannah Skog is Executive Assistant Director, and Caitlin Barale Potter replaces Mary Spivey as Education and Outreach Coordinator. We will be without a graduate student to coordinate research efforts and have yet to finalize our research plans, but regardless, we will continue to survey key Burn Areas for active RHWO nests. We will have our annual "open house/RHWO festival" on June 18th from 9:00 a.m. to 1:00 p.m.. Birding tours will be offered along with a few presentations related to oak savanna habitat. There will be no food present, so bring a sack lunch if you plan to stay throughout the event. Keep your eyes peeled for more specific information. We look forward to this event and hope to break last year's record of 67 different species of bird identified.

Chet Meyers, Chair



Photo by Victoria Paulson

Note From the Editor

The Red-headed Woodpecker Recovery is very excited about the use of RFID technology to further our understanding of red-headed woodpeckers. Equipment has been ordered to use to see how to use it and to adopt it to our needs. A requirement that the antenna be within two meters of the reader could cause some deployment problems since most holes are over 20 feet high. However, we are confident that with some engineering we'll be able to solve the problems. Future equipment will probably be less expensive since we'll probably be able to build it from its components rather than preassembled. We will also be able to buy a larger quantity thereby getting a price break.

A bigger blow to our plans is the need to have an approved proposal for "research projects that require capturing or otherwise directly interacting with the birds". This may jeopardize our color banding program this summer and for the foreseeable future. It will limit our ability to identify individual birds while making nest and roost observations. Our ability to acquire information about birds that migrate from Cedar Creek and their possible return and who their mates are as well as to their nest fidelity will be compromised.

Your response to our request to renew your membership has been very good. If you have not renewed, please do so. The funds raised from this will be used to continue our studies at Cedar Creek and to work with the new technologies that are emerging. I am intrigued by the use of a camera taking high quality pictures that we can use to identify the food being fed to the young.

We can still use more volunteers to help with our studies that "do not require direct interactions with the birds" such as nest tree identification and roost studies began last fall by Jim Howitz. Contact Chet at chetmeyers@visi.com or 612 374-5581 or me at rhwracm@comcast.net or 763 572-2333.

Jerry Bahls, Editor

Fire Helps RHWOs

In a recent article, Eli T. Rose and Theodore R. Simons (Avian response to fire in pine-oak forests of Great Smoky Mountains National Park following decades of fire suppression. *The Condor Ornithological Applications* Volume 18, 2016, pp.179 – 193) maintain that fire suppression in the 20th century could be a factor in the decline of Red-headed Woodpecker populations. They examined how the frequency and severity of fires affected 24 species of birds in southern Appalachian pin-oak forests. Red-headed Woodpeckers declined in this region during the 20th century, a period of active fire suppression. Red-headed Woodpeckers were most common in the years immediately following a fire, disappearing after about 15 years. Fire severity did not seem to have a major effect on Red-headed Woodpeckers, unlike several other species of birds for which there was data. The authors state that Red-headed Woodpeckers apparently benefit from small patches of high severity fire, and suggest that Red-headed Woodpeckers can exploit even small forest openings. Hotter fires can produce large-diameter snags that Red-headed Woodpeckers use for nesting. Fires also produce open areas of increased flying insect abundance that the birds can use for fly-catching. The authors advocate three different fire regimes to accommodate fire-adapted species: frequent low-severity fires, infrequent low-severity fires, and infrequent high-severity fires. This hypothesis that fire suppression has contributed to Red-headed Woodpecker population declines is intriguing.

Jim Howitz



Photo by Mary Miller

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Migration Reports

The following reports of probably migrating red-headed woodpeckers has been received by us this spring -

Steve & Chris Hettig - Morton MN, May 1st
Keith Olstad - Frontenac, MN, May 4th
Al Batt - Hartland, MN, about May 11th

We appreciate receiving these notices. It lets us know about their activity.

proved to be easier and more accurate than relying on an observer using binoculars.

Much of this research would not have been possible without the use of electronic technology. The RhWR's first use of electronic technology was the purchase of a camera that with the aid of a long pole could be inserted into a nest to take video of its contents and transmit these videos and still photos to a computer to record them for future study. This allowed the recording of eggs and young in the nest. By taking these videos at regular intervals much was learned by the researchers about nesting success or failure.

While much has been learned about red-headed woodpeckers from the above research, as with most research, more probing questions are raised. One that is very important to the long range survival of the species is "Why is there such a low fledging rate?" Can snakes be a major predator, since twice during the past nine years they have been observed in nest cavities.

The Red-headed Woodpecker Recovery has been contemplating these and other questions. We would like to know more about the feeding of the young and the effect this has on the survivability of the young. How can we learn more about their parental feeding habits? Does food availability and/or distribution have an adverse affect?

The next question we need to ask is how can we collect meaningful data that will answer these probing questions? Can we get photos of parents entering the nest of a sufficient quality to identify what and an estimate of quantity the food to answer these questions. A research team³ from the San Diego Zoo is doing a study of bird collisions at the University of Minnesota where their cameras are continually taking video of the windows and when a bird strikes the window, a detector senses the strike and sends a message to the controller to save the last 10 seconds of the video for later study. Can similar video be taken and saved that records a parent entering a nest with food for the young? Can this video be high enough quality to identify the food and how much is being fed?



Photo by Siah St. Clair



4.3mm Yellow EM4102 Bird PIT Tag
From ib technology



From ib technology
Cased EM4102 Data Logger



EM DATALOG LOOP ANTENNA
70mm diameter (65mm internal), 1.5 m connecting lead

EM Datalog Loop Antenna (80mm)
From ib technology

While these are provocative questions, funds can be a very important factor in answering these questions. Within the last ten years, a moderately inexpensive technology has emerged that has been used to count how often an individual chickadee came to a feeder⁴. This technology uses a Radio Frequency Identification Device (RFID) with an antenna. This technology has been used by pet owners and even the fishing industry to identify individual animals and fish. The technology works by implanting a small device called a passive integrative transponder (PIT) that contains a unique code that can be rapidly read by a RFID Reader. In the case of the pet owners, it is used to identify an owners pet. Recently researchers⁵ at the University of California Davis used this technology to study wood ducks using nest boxes. They literally injected the PIT under the skin of the wood ducks and placed an antenna that was basically a wire ring around the box hole and were able to record when the particular hen entered the box. The reader recorded each entrance or exit event on a memory device that also recorded the time to a tenth of a second. Researchers were then able to recover the information from the memory device and study the information as it related to their interest.

The RhWR investigated this technology and felt it could be a very useful technology to study activity at the nest site. By tagging both parents with a unique PIT we could determine which parent fed and when to a very precise time. By using the data we could determine how much time they each parent spent feeding. Using this technology, we could learn also learn which parent spent the night in the nest incubating and brooding the young. We have felt confident enough in this that we have ordered the equipment to do some feasibility studies this spring and maybe even some pilot studies this summer. The PIT (see photo) we have ordered will be attached to a leg using the band that includes a 12 mm long PIT. The antenna (see photo) can be placed around the nest hole. The reader (data logger, center photo) will probably be attached to the

Collaboration (continued from page 3)

tree. This technology can also be used to trigger a camera to photograph a bird entering the nest and using technology similar to that used by the San Diego Zoo obtain photos showing what is being fed to the young.

We are excited by the possibilities that this and other technologies pose for future research. With this in mind we have been seeking advice from researchers who have done similar research and we hope to be able to set up collaborative arrangements with them to study RhWOs at Cedar Creek and at other locations around the country.

1. Waldstein, Ariane Lentz, *Nest-site Selection and Nesting Ecology of Red-headed Woodpeckers*. M.S. Thesis. University of Minnesota (2012)
2. Yohannes, Brittney *Unpublished* M.S. Thesis. University of Minnesota (2016)
3. Paquita Hoeck, San Diego Zoo, private communications.
4. Chickadee feeder research: <https://www.allaboutbirds.org/what-are-feeder-birds-doing-with-all-those-seeds-hi-tech-tools-find-out/>
5. John M. Eadie, UC Davis, "*High Tech Sleuthing: The Secret Lives of Wood Ducks*", California Waterfowl, Spring 2015

Summer Issue Topics?

Send your observations and references to Jerry Bahls (rhwracm@comcast.net) by July 15th. Also send any future topics to be featured in the newsletter. Have you been experimenting trying to attract RhWO's? Let us know about your work!

Next RhWR Meeting

The RhWR usually meets on the 3rd Wednesday each month at 7:00 pm at the Lund's Store 1 block west of 50th & France in Edina. The next gathering will be the Open House at Cedar Creek on June 18, 2016 at 9 AM. All are welcome to attend. Please encourage your friends to attend also. Check our website at www.RedheadRecovery.org for current information.

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Red-headed Woodpecker Recovery Program Membership Application

I'd like to join! Please add me as a member of the Red-headed Woodpecker Recovery (RhWR) at the rate of \$20/year! Please send my membership information to the address below.

I'd like to renew! Renew my RhWR membership for \$20/year.

Yes, I'd like to join Audubon Chapter of Minneapolis also! Please add me as a member of the Red-headed Woodpecker Recovery (\$20) and the Audubon Chapter of Minneapolis (\$12) at the rate of \$32/year. Please send my membership information and *Kingfisher* to the address on right.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

E-MAIL _____

Send this application and make check payable to:
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Minneapolis, MN 55403-0801