



# The REDHEAD



## Red-headed Woodpecker Recovery

Winter 2016

A Special Committee of the Audubon Chapter of Minneapolis

Vol. 10 No. 1

### RHWO NEWS

#### CCESR Nest Tree Inventory

In October and November 2015 an inventory was conducted of red-headed woodpecker nesting trees that were confirmed to have active nests in them during the years 2008 to 2014. The nesting trees from the 2015 nesting season were also noted but were not done comprehensively and consequently are not included. Basically, trees that were reported to contain an active nest were sought and if found were noted whether they were still standing or had fallen. Trees that had a snag of at least 8 feet were considered to be still standing. During this period aluminum tree tags with the nest designation had been attached to the trees. An attempt was made to find these tags and it was noted when they were found. Jim Howitz's notes on nesting trees had noted which were down. This was accepted as confirmation the tree was down.

The total number of nesting trees during the 2008 - 2014 nesting periods was 146. Of these two trees data was unclear if they were indeed nesting trees. If these two trees (assumed down) are included, the number of trees that contained nests that were still standing as of November 30, 2015 was 71 or 49%. The number of trees confirmed down by locating the aluminum tree tag or Jim Howitz had noted it was down was 32 or 22%. Trees that were not located and assumed down was 40 or 27%. One tree was leaning against another tree at a 45° angle. This tree and the 2 trees, whose data was unclear, was 2% of the total.

In comparing the number of trees still standing for the nest year, there is a steady increase in the percentage standing (33%, 38%, 48%, 54%, 59%, 33%, 66%) from 2008 through 2014, except for 2013 when the number plummeted to 33%. The increase is readily expected because of the shorter time to be blown over, but there is no explanation for the sudden decrease in standing trees from the 2013 nesting year. Five trees broke off mid-height, but were considered to be still standing because a RHWO could still use the tree to nest in.

A final comment – the designation of the location of a few trees was unclear from the data and the tree tags. An attempt was made to clear up any confusion, but a few errors could have been made. It is conceivable that some of the trees assumed to be down were still standing but

*Continued on page 2 Down Trees*

### A Note from the Chair

Notes from the chair

Winter 2016

Our relatively mild winter continues, after a glorious summer and fall. Apparently our Cedar Creek red-headed woodpeckers (RHWO) agree. At last count we had close to 70 birds over-wintering. That's a record for our eight years of research at Cedar Creek. Last year only two birds stayed the winter. Birds are still visible along Durant St. near the southeast corner of the property.

In October, at our last formal meeting of the year, we had an energizing gathering with Forest Isbell, the new Associate Director of Cedar Creek Ecosystem Science Reserve (CCESR). Forest was generous in his praise of our group's past work and assured us that CCESR would continue to cooperate with our recovery project and would do all they could to facilitate our ongoing research. He does envision a couple of significant changes in the near future. First, the staff is going to reconsider the present burning schedule, with perhaps fewer burns in some areas. Second, Forest said CCESR is considering the use of grazing bison, as a means of controlling the understory in oak savanna habitat. Initially, our group expressed some concern about how this might make our survey work more difficult. But Forest assured us that the only bison grazing would be two-year females. That is important because they have not yet had young and thus are not protective or territorial (translate - *aggressive*) by nature. The bison would be contracted out from a registered bison farmer and would be present on Cedar Creek property May through September. Minnesota law prohibits the transportation of bison out of the state and thus they would likely go to a Minnesota slaughter house. Each year a new cohort of two-year female bison would be released for the spring-summer grazing months.

We are still considering the use of geo-locators on some banded birds. A sub-committee is exploring the cost and efficacy of such a project. While we will not have a University of Minnesota intern (like Brittny) in 2016, we will continue to band birds and to survey for nest trees. And we have agreed to continue our annual Red-headed Woodpecker Open House and bird tours in mid-June. We will announce definite date and time in our next "The Red-head" newsletter. Finally, we are updating our website. Work should be done sometime in March.

Chet Meyers, Chair

## Note From the Editor

It is hard to believe we are entering our tenth year publishing "The REDHEAD". The Red-headed Woodpecker Recovery (RhWR) has learned a great deal about red-headed woodpeckers and can feel proud that we have been able to inform the public as well as our members about their habits. Unfortunately there is still more to learn. We have not discovered the magic elixir that attracts them to yours and my backyard. We have only learned what not to do and unfortunately that is an infinite number. However we will continue to work on efforts that will attract them to you.

In this issue we report on the study of the status of nest trees survival (still standing). Unfortunately some important information may have been lost because this had not been done every year. We hope to remedy that.

Our feature article this month is a summary of research done by Elizabeth Gow et al (see reference in article). This is important research for us because it involves a cavity nesting woodpecker (Northern Flicker) and uses geolocators to collect the data. We have been in contact with her and she will probably be consulted often during our initial phases of planning our geocator studies.

Jerry Bahls, Editor

### Down Trees Continued from page 1

the tree tag came off and couldn't be found. One tree tag was found on the ground between two trees, so it was unclear which was the nest tree. However they were both standing so it was counted as a standing tree. It is also possible in some cases that the gps coordinates were in error due to operator error in recording the numbers. This was found in a couple of trees so fortunately the error could be corrected.

This data on the number of trees that have fallen since the  
*Continued on next column, Down Trees*

## Membership Dues

The Red-headed Woodpecker Recovery (RhWR) receives almost all of its revenue from its membership dues. The RhWR dues for new members and renewing members are \$20/yr. Our membership year is the calendar year and ends on Dec. 31st.

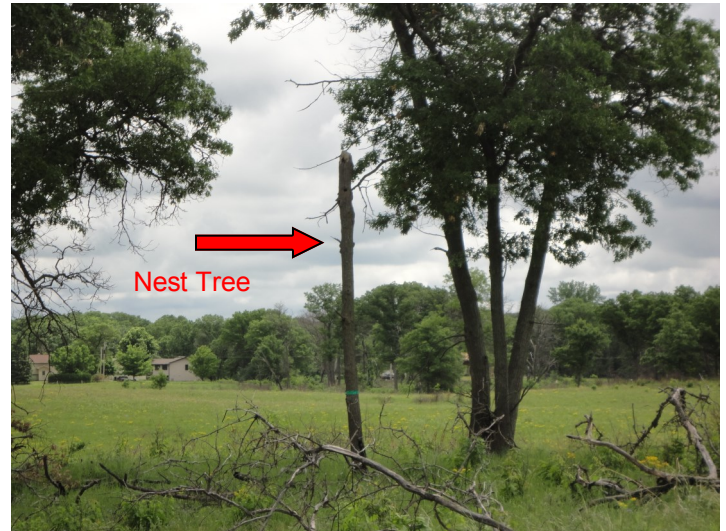
New memberships and renewals can be made by sending your name, address and e-mail address or fill in the membership application form on the last page of this newsletter to the address below. Please make check payable to Audubon Chapter of Minneapolis RhWR.

Audubon Chapter of Minneapolis  
RhWR  
PO Box 3801  
Minneapolis, MN 55403-0801

Thank you for your continued support.

### Down Trees Continued from previous column

start of the nesting studies is important in understanding the continued presence of RHWO's in an area. The natural loss of dead trees can have a devastating effect upon a population if the number of dead trees falls below an unknown density in an area. If this density falls below the threshold, the RHWO's likely will move to an area that has the needed density of dead trees. This is the reasoning why the retention of dead trees or snags is considered to be one of the reasons that explain the



## RhWR Contact Information

### Audubon Chapter of Minneapolis

|           |                                     |                    |              |
|-----------|-------------------------------------|--------------------|--------------|
| President | Jerry Bahls                         | jobaud@comcast.net | 763 572-2333 |
| Website   | www.AudubonChapterofMinneapolis.org |                    |              |

### Red-headed Woodpecker Recovery

|           |                         |                     |              |
|-----------|-------------------------|---------------------|--------------|
| Chair     | Chet Meyers             | chetmeyers@visi.com | 612 374-5581 |
| Treasurer | Jerry Bahls             | rhwracm@comcast.net | 763 572-2333 |
| Recorder  | <open>                  |                     |              |
| Editor    | Jerry Bahls             | rhwracm@comcast.net | 763 572-2333 |
| Website   | www.RedheadRecovery.org |                     |              |

woodpecker's decline during the last 60 years. This is obviously exacerbated by the removal of dead trees by land owners who consider them unattractive or fear their falling will cause personal injury or property damage. Our data indicates that about half of the dead trees will naturally fall in 5 - 8 years after nests have been established in the tree. This fact shows the need to **not** remove these trees prematurely can potentially have an effect upon the future survival of red-headed woodpeckers.

Jerry Bahls

# Geocator Study of Flickers

**Editors Note:** *In the course of researching the use of geolocators on birds, the following article was sent to the Red-headed Woodpecker Recovery by Elizabeth Gow on her studies of Northern Flickers.*

**Cavity use throughout the annual cycle of a migratory woodpecker revealed by geolocators;** ELIZABETH A. GOW,<sup>1\*</sup> KAREN L. WIEBE<sup>1</sup> & JAMES W. FOX<sup>2</sup>; <sup>1</sup>Department of Biology, University of Saskatchewan, 112 Science Place, Saskatoon, SK, S7N 5E2, Canada; <sup>2</sup>British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 0ET, UK; *Ibis* (2015), 157, 167–170.

*It was felt that this article was so significant to our potential study of the migratory patterns of Red-headed Woodpeckers that a detailed review of the article be published. To see the full article go to our website [www.RedheadRecovery.org](http://www.RedheadRecovery.org). Text in quotation marks are direct from the publication.*

Cavity use by migratory species during migration is not known and the significance of roost sites can be important. Gow, et al “documented cavity use throughout the annual cycle of [Northern Flickers] using light-level geolocators. Northern Flickers spent 63–90% of nights roosting in a cavity throughout the year, including during migration.” Gow’s work shows the potential for use of geolocators to examine cavity use.

Gow et al stated that “understanding the use of resources during migration is important because apparent mortality during migration may be 15 times higher than that during sedentary periods<sup>1</sup>. The use of unfamiliar habitats during migration may make it harder for individuals to find resources (e.g. cavities for nocturnal roosting) or safe areas that improve survival. The use of nocturnal roosting sites during the winter is widespread in birds<sup>2</sup> ....” “Tree cavities are generally more favourable than thick foliage because they exclude wind and precipitation<sup>3</sup>, reduce energy costs<sup>4</sup> and are often safer from predators<sup>2</sup>.”

“Geolocators measure light intensity and are typically used to study migratory movements<sup>5</sup> but because they measure light, they can also be used to determine when a bird enters or exits a cavity.” Gow et al studied a migratory population of Northern Flickers. They “expected that cavity use would be lower during migration, when it may be more challenging to find a cavity than when the bird is in an established home-range on the breeding or wintering grounds.”

## Geocator deployment

Gow et al “attached 76 geolocators to Northern Flickers (57 males, 19 females) during the breeding seasons of 2010–2012 at Riske Creek in central British Columbia, Canada, a study area of approximately 100 km<sup>2</sup>. They caught birds by plugging the cavity entrance and then placing a net over the hole. The geocator models (MK12 in 2010, MK20AS in 2011 and MK10 in 2012 weighing 0.9, 1.0 and 1.6 g, respectively; British Antarctic Survey, Cambridge, UK) were less than 1% of the average body mass (157 g ± 0.2 se, n = 2161). We attached the devices using a leg loop backpack harness. (The return rate of Flickers with geolocators was 39% of 76 birds, equal to Flickers without geolocators (~42%<sup>6</sup>), and geolocators did not affect the birds’ ability to enter a cavity.”

## Measuring Cavity use

Gow et al used BASTRAK software (British Antarctic Survey) to analyse the light data, which was measured at 1-min intervals with the maximum light intensity recorded every 2 min (MK12, MK20AS) or every 10 min (MK10). They viewed light data visually on graphic plots (program TRANSEEDIT), and classified each apparent sunrise and sunset transition into one of four categories.

## WHAT THEY FOUND

Gow et al “recovered 20 geolocators and eliminated 1117 nights of corrupt or suspect data, mainly from damaged geolocators on several birds from 2010. Three birds only had data during breeding and so were eliminated from analyses. Data from 16 males and one female were used in the analyses. Most nights had two abrupt transitions, suggesting that cavities were used extensively throughout the non-breeding period. Cavity use estimates ranged from 57% to 90% of 3950 nights. Unexpectedly, during migration (both autumn and spring) 49–89% of 842 nights were spent in cavities. Outside the breeding period, most individuals spent one to three nights in a roosting outside a cavity, but during the post-breeding period three birds roosted outside a cavity for 9, 10 and 14 nights in succession. A fourth individual spent seven nights roosting outside during autumn migration. During winter, some individuals appeared to use cavities throughout the winter period, whereas others used them on alternate nights.”

“Compared with the continuous use of cavities during the breeding period, the proportion of nights in a cavity was lower during the post-breeding and migration periods. The percentage of nights in a cavity was repeatable within an individual between each time period for the minimum ( $r = 0.13$ ,  $F_{5,60} = 3.6$ ,  $P = 0.006$ ) but not for the maximum number of nights in cavities ( $r = 0.11$ ,  $F_{5,60} = 1.76$ ,  $P = 0.133$ ).”

Gow et al “observed for the first time the frequency of nocturnal roosting in cavities during the entire year and both our minimum and maximum estimates of cavity use showed that Northern Flickers spent most (60–90%) nights in cavities in all seasons, including during migration. However, cavity use varied between individuals, suggesting either that the number of cavities was limited or that preference for cavities varied.”

Annual use of cavities appears to vary with the species. “Cavity use was not statistically repeatable for individual Flickers across periods as some birds increased their use of holes from post-breeding to winter and others decreased their use.” Location of wintering grounds may limit cavity availability and could contribute to their survivability.

Finally Gow et al concluded “The high frequency of cavity use by Northern Flickers year-round suggests that cavities provide benefits beyond being nest-sites. Unexpectedly, Flickers found and used cavities almost nightly during migration despite travelling through

*Continued on page 4, Study*

Study, Continued from page 3

unfamiliar areas. Mechanisms for efficiently locating cavities, the potential survival benefits to migratory birds and the implications for population dynamics require additional research. More information is also needed on wintering populations to determine whether the frequency of cavity use varies according to habitat type and whether forest management guidelines are adequate to maintain the type and number of roosting trees when populations of migrants and residents may overlap and when demand for cavities may be high."

1. Sillett, T.S. & Holmes, R.T. 2002. Variation in survivorship of a migratory songbird throughout its annual cycle. *J. Anim. Ecol.* 71: 296–308.
2. Mainwaring, M.C. 2011. The use of nestboxes by roosting birds during the non-breeding season: a review of the costs and benefits. *Ardea* 99: 167–176.
3. Vel'ky, M., Kanuch, P. & Kristin, A. 2010. Selection of winter roosts in the Great Tit *Parus major*: influence of microclimate. *J. Ornithol.* 151: 147–153.
4. Walsberg, G.F. 1986. Thermal consequences of roost-site selection: the relative importance of three modes of heat conservation. *Auk* 103: 1–7.
5. Stutchbury, B.J.M., Tarof, S.A., Done, T., Gow, E., Kramer, P.M., Tautin, J., Fox, J.W. & Afanasyev, V. 2009. Tracking long-distance songbird migration by using geo-locators. *Science* 323: 896.
6. Fisher, R.J. & Wiebe, K.L. 2006. Effects of sex and age on survival of Northern Flickers: a six-year field study. *Condor* 108: 193–200.

## Spring Issue Topics?

Send your observations and references to Jerry Bahls (rhwracm@comcast.net) by April 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 meeting will be March 16, 2016. All are welcome and encouraged to attend. Please encourage your friends to attend also. Check our website at [www.RedheadRecovery.org](http://www.RedheadRecovery.org) for current information.

Red-headed Woodpecker Recovery  
Audubon Chapter of Minneapolis  
PO Box 3801  
Minneapolis MN 55403-0801

# Save that Snag!

Place  
Stamp  
Here



## 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:**  
Audubon Chapter of Minneapolis  
RhWR  
PO Box 3801  
Minneapolis, MN 55403-0801