



# The REDHEAD



## Red-headed Woodpecker Recovery

Winter 2022

A Special Committee of the Audubon Chapter of Minneapolis

Vol. 16 No. 1

### RHWO NEWS

#### Overwintering Red-headed Woodpeckers

Unlike last winter, we have some Red-headed Woodpeckers at Cedar Creek this winter. We found 39 of them on the Cedar Creek Bog Christmas Count on December 19.

Red-headed Woodpeckers are facultative migrants. In some years, they all migrate. In other years, some stay and some leave. In some years, all or nearly all stay. We have tried to figure out what determines whether they stay or leave.

Siah St. Clair, Jerry Bahls, and I have been surveying oaks at Cedar Creek for acorns for the past four years. It appears that the number of Red-headed Woodpeckers that spend the winter at Cedar Creek primarily depends on the number of acorns produced by northern pin oaks. The acorn crop this year was better than in 2020 when all the birds left but not as good as 2019, when nearly all stayed for the winter.

This fall none of the banded males and 40% of the banded females migrated. One of the males sticking around is Wolfe. In July, Wolfe and his mate Bridget fledged three young. They fledged another three young from a very late nest in September. Bridget disappeared shortly after the second brood fledged. Presumably she migrated. Wolfe stayed and continued to feed the three fledglings. As far as I can tell, Wolfe and the three fledglings are still on Wolfe's territory. This is a surprise because most fledglings disperse from their parents' territory shortly after becoming independent. The woodpeckers continue to surprise us. In our ten years of monitoring fledgling production, this is the first time a late nest produced three fledglings. None had fledged more than two.

Jim Howitz

**Factoid** - The largest number of RHWO observed for the 2021 Christmas Bird Count was 514 near the Horton, MO count circle (MOHF) which is in west central Missouri about 100 miles due south of Kansas City, MO. Four of the top 10 locations were in Missouri. The second highest number (204) was observed in Millersburg, OH, which is located 66 miles south of Cleveland. The Cedar Creek count circle (MNCC) reported 39 RHWOs, which ranked 28th most in the country, the highest number in the upper midwest.

### A Note from the Chair

Winter 2022

I hope everyone is safe and well in this new year. We are experiencing more traditional Minnesota winter weather this year, as are the 39 Red-headed Woodpeckers that were counted on the Christmas Bird Count at Cedar Creek ESR in December. In the spring we will have pictures of some of them taken by the 8 nest cameras that are up and working through the winter at Cedar Creek. While the RHWOs are working to survive the winter weather, the Red-headed Woodpecker Recovery continues to work on our goals to improve the future of Red-headed Woodpeckers.

Thanks to everyone who has renewed their membership and made generous donations over the last several weeks. More renewals continue to be received and we hope to reach our budget goals over the next several weeks. Dr. Elena West and her research team are conducting groundbreaking research on RHWOs and their habitat needs. The funds we raise go directly to pay research technicians wages and purchase equipment for the research. Exciting new information is being learned and documented, and several research papers are being prepared to be published in scientific journals. A best Management Practices document is also being prepared to be published later this year. Our funds and volunteer work are helping to make all this happen.

For those that would like some immediate RHWO interaction, go to the [zooniverse.org](http://zooniverse.org) website and click on the Woodpecker Cavity Cam project to view and help analyze the thousands of videos from the nest cameras at Cedar Creek. There have been over 4,500 volunteers from all over the world helping with this work so far. If you go onto the site you may see some nest trees and RHWOs that you have seen in person at Cedar Creek. And you will definitely get to see and hear RHWOs feeding their nestlings, defending their nests from others, and some of the 29 other species of wildlife the cameras have documented at the nest cavities.

I wish everyone a safe and healthy year.

Siah St. Clair, Steering Committee Chair

**Factoid** - Flying squirrels can be very disruptive to RHWO nesting success.

## Note From the Editor

While the Red-headed Woodpecker Recovery (RhWR) values this newsletter, we know it has a very limited reach. To get the broad reach an organization needs, we use our website and Facebook. We recently changed our website host. In doing so, much of our content was not uploaded to give us a chance to review its content. We apologize for the slowness of replacing it. However, now we are poised to begin this. So, please review our website and pass along your comments. Let us know what you like-dislike and what is missing. As part of this communication review, the RhWR will be adding a Communications Manager, who will be responsible for our website and Facebook. Their responsibilities are outline in the adjacent article. We would like to do this by the end of March, so please volunteer or volunteer someone who you feel can do the task. The volunteer need not live in the metro area or even in the state, since all the tasks are done electronically. The volunteer doesn't need to be a birder, but an interest in the environment would be useful. A bird lover with passion would be great.

The RhWR is supporting the Bioacoustics project the next two years and anticipates needing volunteers to for this project. We are currently reviewing our needs. It is expected that these volunteers will be needed across the state as well as at the Cedar Creek Ecosystem Science Reserve. Watch for announcements on our newly revamped website and on Facebook.

The RhWR Education and Habitat Committee will be looking for events and venues to present information about RHWOs. This will be especially important when the Best Management Practices for Red-headed Woodpeckers is publish later this year. Let us know about public and private property managers who you think might be interested.

Finally please invite friends and family to join the RhWR.

Jerry Bahls, Editor

## Volunteers Critically Needed

The Red-headed Woodpecker Recovery (RhWR) finds itself in need of a few volunteers that are critical to running a healthy organization. Volunteers are needed to do many organizational tasks that mean so much for the bird's future.

Probably the most critical need is for a Communication manager. The RhWR maintains a website, a Facebook page and publishes a newsletter. The greatest need is for a webmaster and contributor on Facebook. Ideally this person would sit on our Steering Committee. Sitting on the Steering Committee will give them access to information such as meeting dates, short term and long term plans as well as financial information. By sitting on the Steering Committee they will also help in the operation of the organization.

The person will be responsible for communicating with the website and Facebook page. It is expected that the person will keep the website and Facebook page up-to-date. Ideally this should be done once a week, but at least every other week. They will also add new content as needed.

Since we still work remotely, nearly all contact will be electronically until given the proper okay by local health officials. Therefore, the volunteer could live anywhere, even out of the state, as long as they have access to the internet. The RhWR would like to fill this position by March 31st.

Also needed is a new newsletter Editor. The current Editor would like be able to train a new Editor to make a smooth transition. The Editor is not expected to write any articles. The Editor is responsible for publishing the newsletter, *The REDHEAD*, quarterly in January, April, July and October. The Editor compiles the newsletter, prepares it for publication and arranges to have it printed. The Editor also distributes it to RhWR members electronically and US mail. The Editor archives a copy on the RhWR website for public use.

If you are able to help in any way, please contact Jerry Bahls at rhwracm@comcast.net or 763 355-8726. Please pass this information on to all birders or friends or anyone that might be interested.

## RhWR Contact Information

### Audubon Chapter of Minneapolis

President Keith Olstad [klbolstad2@gmail.com](mailto:klbolstad2@gmail.com) 612 940-1534  
Website [www.MinneapolisAudubon.org](http://www.MinneapolisAudubon.org)

### Red-headed Woodpecker Recovery

Interim Chair Siah St. Clair [stclairs@comcast.net](mailto:stclairs@comcast.net) 763 234-6146  
Treasurer Jerry Bahls [rhwracm@comcast.net](mailto:rhwracm@comcast.net) 763 355-8726  
Recorder <open>  
Editor Jerry Bahls [rhwracm@comcast.net](mailto:rhwracm@comcast.net) 763 355-8726  
Website [www.minneapolisaudubon.org/rhwo2](http://www.minneapolisaudubon.org/rhwo2)  
Research Blog Website [www.rhworesearch.org](http://www.rhworesearch.org)



# Woodpecker Drumming

In a few weeks we will be hearing a lot of bird calls. Birds are trying to attract members of the opposite sex or to delineate their territory. Some birds are also using non-vocal sounds to get attention. Woodpeckers are one of these species that use non-vocal sounds called "Drumming". They rapidly hammer on a hollow tree, log, or stump that they have selected because of its resonating qualities, ones that increase the strength and volume of the sound so it can be heard farther away. Other objects that they use are utility poles, metal chimneys, rain gutters, trash cans and exterior light covers.<sup>1</sup>

Why can a woodpecker hammer with a high force and not get a concussion? "Woodpeckers are capable of repeated pecking on a tree at high decelerations on the order of 10,000 m/s<sup>2</sup> (33,000 ft/s<sup>2</sup>, 1000 g-force).<sup>2,3</sup> A number of factors prevent their brain from being damaged. Woodpeckers have a relatively small and smooth brain with a narrow subdural space and little cerebrospinal fluid surrounding it. This prevents the brain from moving in the skull. The brain's orientation in the skull maximizes the contact area between the brain and skull. The skull's composition consists of compressible, sponge-like bone in the forehead and back of the skull<sup>2,4</sup>. They also have an enormously elongated hyoid bone (see drawing), which acts like a safety-belt<sup>2,5</sup>.

"Computer simulations have shown that 99.7% of the energy generated in pecking is stored in the form of strain energy [In physics, the elastic potential energy gained by a wire during elongation with a stretching force is called strain energy.], which is distributed throughout the bird's body, with only a small remaining fraction of the energy going into the brain. The pecking also causes the woodpecker's skull to heat up, which is part of the reason why they often peck in short bursts with brief breaks in between, giving the head some time to cool<sup>2,6</sup>. During the millisecond before contact with wood, a thickened nictitating membrane closes, protecting the eye from flying debris.<sup>2,7</sup> These membranes also prevent the retina from tearing. Their nostrils are also protected; they are often slit-like and have special feathers to cover them."<sup>2</sup>

So, woodpeckers are built to be able to rapidly hammer or drum for short spurts. Both males and females drum. The drumming's tempo, rhythm, duration and repetition is very distinctive for each species. Therefore, identification of which woodpecker species is drumming can be made based on these patterns. However, because of weather conditions and distance and some variability of each individual, this is not easy.<sup>1</sup> Here is a list of the drumming sound by all the native Minnesota woodpeckers -

Downy Woodpecker - <https://macaulaylibrary.org/asset/397817411>

Hairy Woodpecker - <https://macaulaylibrary.org/asset/410173701>

Northern Flicker - <https://macaulaylibrary.org/asset/247751411>

Red-bellied Woodpecker - <https://macaulaylibrary.org/asset/337714001>

Pileated Woodpecker - <https://macaulaylibrary.org/asset/339456351>

Red-headed Woodpecker - <https://macaulaylibrary.org/asset/342776221>

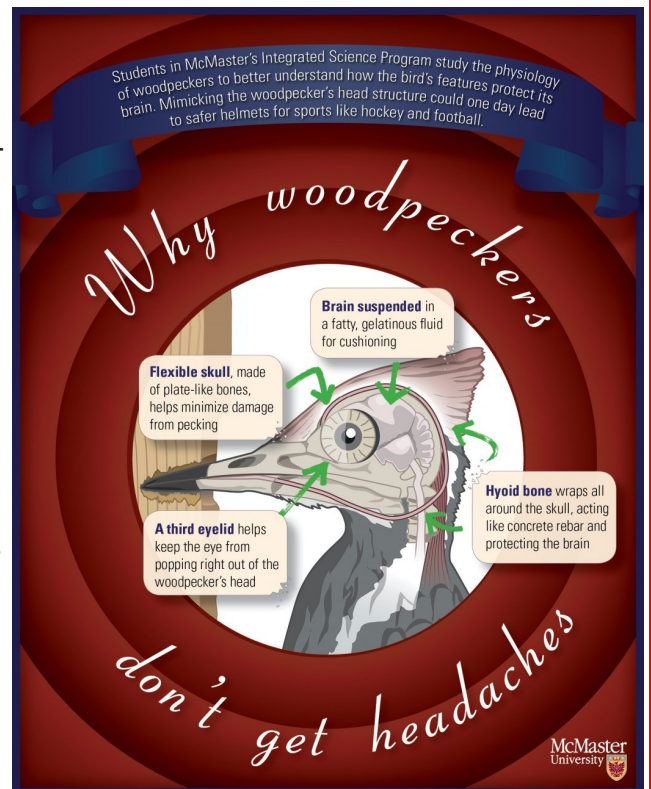
American Three-toed Woodpecker - <https://macaulaylibrary.org/asset/251044271>

Black-backed Woodpecker - <https://macaulaylibrary.org/asset/342986861>

The Macaulay Library of the Cornell Lab of Ornithology has many more recordings to listen to. YouTube also has a nice video (<https://tinyurl.com/482zbn59>) of a Red-headed woodpecker that includes it drumming.

Drumming has more meaning than just identification to the birds. It indicates a strong, vibrant individual. The drumming pattern indicates a healthy, dominant bird that controls a rich territory and would make a good mate.<sup>1</sup> Drumming begins in late winter or early spring when birds are seeking partners. Drumming is most common in the morning but can occur throughout the day.

1. [Woodpecker Sounds of the U.S.: Drumming, Calls, and More \(abcbirds.org\); https://abcbirds.org/blog20/woodpecker-sounds/](https://abcbirds.org/blog20/woodpecker-sounds/)
2. [https://en.wikipedia.org/wiki/woodpecker#cite\\_note](https://en.wikipedia.org/wiki/woodpecker#cite_note)
3. Gibson LJ (2006). "Woodpecker pecking: how woodpeckers avoid brain injury". *Journal of Zoology*. **270** (3): 462–465. doi:10.1111/j.1469-7998.2006.00166.x. hdl:1721.1/70094
4. Puiu T (23 March 2017). "Why woodpeckers don't get headaches". *ZME Science*. Retrieved 24 July 2017.
5. Wang L, Cheung JT, Pu F, Li D, Zhang M, Fan Y (2011). "Why do woodpeckers resist head impact injury: a biomechanical investigation". *PLOS ONE*. **6** (10): e26490. Bibcode:2011PLoSO...626490W. doi:10.1371/journal.pone.0026490. PMC 3202538. PMID 22046293.
6. Gammon K (25 August 2014). "Woodpecker Bodies Cushion Collision Impact On Bird Brains". *Inside Science*. Retrieved 24 July 2017.
7. May PR, Fuster JM, Haber J, Hirschman A (June 1979). "Woodpecker drilling behavior. An endorsement of the rotational theory of impact brain injury". *Archives of Neurology*. **36** (6): 370–3. doi:10.1136/bjo.86.8.843. PMC 1771249. PMID 454236.



## RhWR Volunteer Opportunities

The Red-headed Woodpecker Recovery (RhWR) has an increasing need for many volunteers now and through 2022.

Here is a list and a very brief description of the duties -

Communications Representative on Steering Committee -  
Oversee website, newsletter and Facebook™ page and be communications advocate on Steering Committee

Newsletter Editor - Coordinate publication of newsletter

Webmaster - Manage the RhWR website and Facebook

Lead Citizen Science Projects - Recruit and organize volunteers of RhWR citizen science projects

Do Citizen Science Projects (2022) – *Watch for announcements.*

Classify RhWR videos at <https://z.umn.edu/woodpeckercams>

Email rhwracm@comcast.net to sign up for any of these volunteer opportunities or to ask questions. Send this info to your friends and bird lovers.

## Next RhWR Steering Committee

The RhWR Steering Committee usually meets on the 3rd Wednesday of the month at 7:00 pm. The next *virtual* meeting will be on March 16, 2022 at 7:00 pm. If you would like to participate, please contact Siah St. Clair to be added to the call list. All are welcome and encouraged to attend. Please encourage friends to attend also.

## Important Dates

ACM Board Meeting	Feb 28, 2022
Steering Committee Meeting	Mar 16, 2022
Research Team Meeting	TBA 2022

ALL meetings are *virtual* until further notice.

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

# Save that Snag!

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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 (\$50 is suggested rate)! Please send my membership information to the address at right.

*I'd like to renew!* Renew my RhWR membership for \$20/year (\$50 is suggested rate).

*Yes, I'd like to join Audubon Chapter of Minneapolis also!* Please add me as a member of the Red-headed Woodpecker Recovery (\$20, \$50 suggested) and the Audubon Chapter of Minneapolis (\$20) at the rate of \$40/year. Please send my membership information to the address at 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