

THE BOGHAUNTER

Volume 19, Number 2

SPRING 2024

PRESIDENT'S REPORT from Jim Reinartz *Our Strange Winter – Why the Bog Never Froze?*

We have all heard that this past winter was the warmest on record. I thought that it might be interesting to review and summarize the Bog's strange winter.

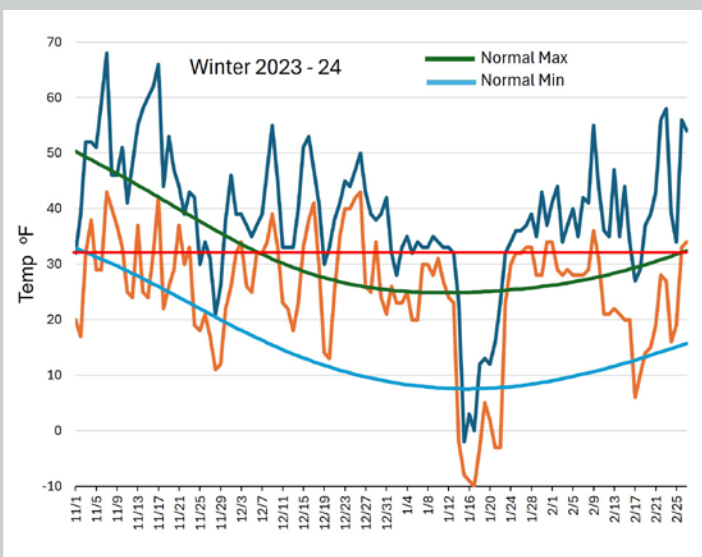
Daily weather records collected at thousands of stations are available from NOAA's "Climate Data Online - Daily Summaries: Past Weather by Zip Code" (<https://www.climate.gov/maps-data/dataset/past-weather-zip-code-data-table>). I used temperature data from the Saukville, WI weather station, and on-the-ground snow depth records from the Jackson, WI station to draw a picture of the Bog's 2023-24 winter from November 1 to February 27. I used Jackson for our snow depth summary because their snow depth measures most closely match the 22" snow depth recorded on January 13 at the UWM Field Station.

This uncommon winter was distinguished by two major factors, unusually warm temperatures, and a major accumulation of snow in the second week of January. Snow is an excellent insulator, and freezing the Bog's saturated soil requires a great deal of energy loss, so if there are more than a couple inches of snow on the ground when cold temperatures arrive the Bog doesn't freeze. To appreciate the Bog's winter and understand why it never froze this year, it is useful to focus on temperatures before the major January 13 snowfall and the strong cold snap that followed.

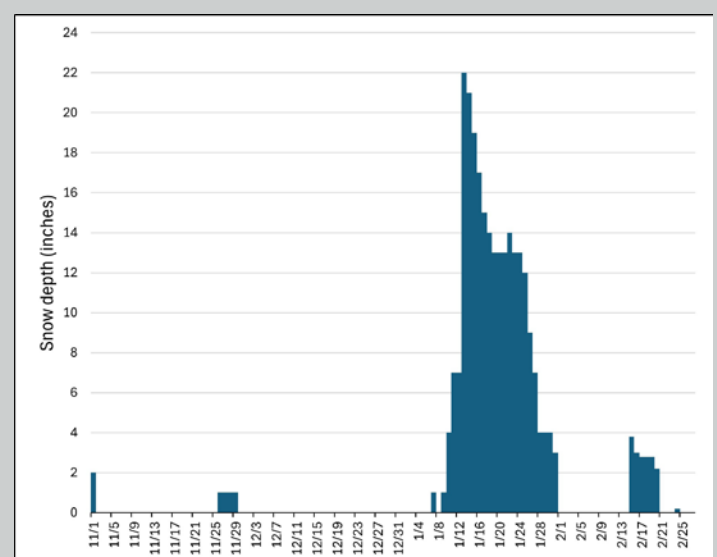
Between November 1 and our January 13 snowfall, there were only 6 days when the highest temperature of the day remained below freezing. Over that 74-day period, the daily maxima averaged 7.8 °F above normal and the daily minima averaged a whopping 10.4 °F higher than the long-term average. We had just one minor cold snap right after Thanksgiving, from the 25th to the 29th of November. So, before the big snow there was no frost in the ground anywhere.

If you don't live near the Bog, you may distinctly remember the cold from January 14 to 22, but not have experienced the enormous snow depth the Bog had at that time. In the 30 years of weather data from 1981 through 2010 the area had never recorded even close to 22" of snow on the ground, and I know that there has not been anything close to that since 2010. So at least in the past 43 years, 22" of snow on the ground was unprecedented.

This was not light and fluffy snow. The water equivalent (melted total) of the snowfall on January 13 was 3.2". We also had snowfalls with a water equivalent of 1.3" over the preceding 6 days; that's like having 4.5" of rain over a 7-day period. It was wet and heavy snow that would raise water levels in the Bog 4.5" as it melted, and water levels in the Bog remain high now.



Daily temperature maximum and minimum from Nov. 1, 2023, to Feb. 27, 2024; and normal (average) maxima and minima over the 30-year period 1981 – 2010.



Snow depth recorded at the Jackson, WI weather station from Nov. 1, 2023, to Feb. 27, 2024.
Data source: <https://www.climate.gov/maps-data/dataset/past-weather-zip-code-data-table>



Deep snow in the Cedarburg Bog, January 2024 - Brian Morrison

This deep heavy snow had at least a short-term impact on the Bog vegetation. It brought trees down and flattened shrub communities, some of them snapped so that they could not rebound as the snow melted. The boardwalk was impassable until it was cleared with chainsaw and loppers. The shrub community along the boardwalk near the stream is distinctly lower and more tangled than it was before the snow event.

The cold snap from January 14 to the 22 did nothing to freeze the Bog soil insulated by deep snow. After that frigid period, the air temperature soared right back to way warmer than normal with average highs 12.1 °F and lows 14.4 °F higher than the long-term average. Over the whole winter, including the nine cold January days, the daily maxima and minima averaged 7.4 and 10.0 °F above the norms, respectively.

How unusual is it for the Bog not to freeze over the winter? This was the third time in 42 years that our annual Winter Hike was not able to go into the Bog because it was not frozen at the end of January. There have only been a couple winters in that time when the Bog never froze. Last winter (2022 – 23) was also warmer than normal with daily highs averaging 5.4 °F and lows 6.85 °F above normal. However, a cold snap with little snow cover just before our Winter Hike on the first Sunday in February 2023 allowed us to hike to Long Lake.

FOCB's major projects to control glossy buckthorn in the Bog will become more difficult if winters without frozen soil become more common in the Bog. The winter season when the Bog is solidly frozen is the best time to do that work. Our best winters for buckthorn control have been those when the Bog froze solidly in early December and stayed that way well into February. With funding in place for a major control project now, we are hoping that the 2024-25 winter will be one of those.

CEDARBURG BOG NEST BOX INITIATIVE: 2023 UPDATE

By John O'Donnell

Given recent mild weather, Eastern Bluebirds, Wood Ducks, and Hooded Mergansers are returning earlier than usual in 2024, and Tree Swallows are usually not too far behind the bluebirds. What do these species have in common? They are cavity nesters, along with about 60 other North American birds. They also are a common and welcome sign of Spring.

However, they have not always been common. In the late 1800s through the 1930s, Wood Ducks were an endangered species in much of Wisconsin. During this same time, Eastern Bluebird and Tree Swallow populations were also in free fall with bluebirds declining nearly 90% from the early 1900s into the early 2000s, and Tree Swallows declining 49% by 2014. The initial cause for the decline of all three of these cavity nesting species was the loss of suitable nest cavities due to large scale harvesting of trees and the decimation of forests. Wood Ducks were also being hunted to near extinction.

Over and beyond the loss of nest cavities, the bluebirds and Tree Swallows experienced additional challenges. Their insect-heavy diet over time exposes them to high levels of pesticides and other contaminants such as PCBs and mercury. The widespread overuse of insecticides also reduced the amount of food available to insectivores. In many settings Tree Swallows and Eastern Bluebirds have also had to compete with invasive Starlings and House Sparrows for nest cavities. Finally, the warming climate can result in adult birds returning to their nest sites well before insects have fully hatched out, resulting in starvation of nestlings.

The decline for the Wood Ducks began to reverse with the Migratory Bird Treaty Act in 1918. Hunting Wood Ducks was prohibited nationwide from 1918 to 1941 at the same time that tree harvesting on public land was beginning to be better regulated. The introduction of nest boxes also helped, beginning selectively in the 1930s, and really taking off by

the 1990s. Seventy years of conservation programs and countless duck nest boxes have helped bring Wood Ducks back to being one of the most plentiful duck species in North America! With more duck boxes, Hooded Mergansers have also shown a proportionate increase in their overall population.

The introduction of nest boxes for Eastern Bluebirds and Tree Swallows from the 1990s into the present has also been highly successful in helping to reverse their population declines; however, insecticides and climate unpredictability continue to pose major threats to these species.

Cedarburg Bog Nest Box Initiative: The Friends of the Cedarburg Bog Nest Box Initiative began in 2012. We now have 29 duck nest boxes, six boxes for roosting or nesting owls, and one American Kestrel nest box. Twelve duck boxes and the one kestrel box are on private property; the rest of the duck and owl boxes are on property owned by Wisconsin DNR.

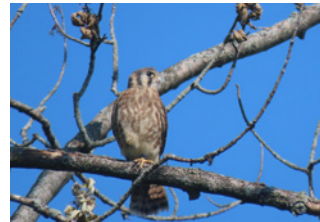
Most of the duck nest boxes are best monitored in winter when ice allows easier access in the swamp and the lack of solid ice this year made access difficult. Seven duck boxes are now unusable due to fallen ash trees; another five boxes were inaccessible due to lack of safe ice. Hence, only 16 duck boxes were inspected for nest usage in 2023. Of these, nine had conclusive evidence of Wood Duck fledging, a 56% nest success rate from the inspected boxes. One box produced both Wood Duck fledglings and Hooded Merganser fledglings. This occurs when a hen of one of these species dumps her eggs into the nest of the other species while the

hen is out of her box. Two duck boxes were packed with “egg dumps”, which typically occurs when a first-year inexperienced hen deposits her eggs in a box and does not follow up with incubation.

There is still no evidence of owls using any of the designated boxes for owl nesting; however, two duck boxes were periodically used as roost sites by Eastern Screech Owls in 2023, and one of the two large owl boxes was used as a roost by a Barred Owl. It is becoming more and more evident that the Eastern Screech Owls and the Barred Owls in the Cedarburg Bog area prefer to nest in tree cavities rather than boxes.

The kestrel nest box installed in 2021 in an eastern portion of the Bog has been empty for the past two years. However, in the Spring of 2023, two American Kestrels nested in a vacant Wood Duck box on private property a mile or so south of the Bog and four juvenile kestrels successfully fledged. The American Kestrel is also a declining species of concern; hence, good use was made of a vacant duck box.

Read more about the FOCB nest box program and our new work to maintain and monitor the bluebird and Tree Swallow boxes at the UWM Saukville Field Station in our summer newsletter.



American Kestrel juvenile --that fledged in a Wood Duck box - John O'Donnell



Male and a Female Wood Duck on a Nest Box - John O'Donnell

A DIFFERENT TYPE OF POLLINATION

By Marian French

After several visits to the bog, many hikers are probably familiar with our native pitcher plants (*Sarracenia purpurea*) and how their shape allows them to have a nutritious, carnivorous diet. But what if a different species used the same insect-trapping technology for reproduction?

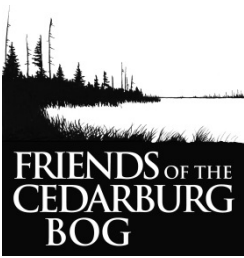
Drier parts of the natural area surrounding the Bog are home to another pitcher of sorts. At first glance, the flowers of the Jack-in-the-pulpit (*Arisaema triphyllum*) look like another carnivorous trap. They stand taller than the other spring ephemerals on the forest floor, holding their flowers up like green champagne flutes.

The part of the bloom that is most obvious, the “pitcher” is technically a modified leaf called a spathe. Inside, a modified stem called a spadix is covered with tiny flowers. In younger plants, these are all male flowers that produce

pollen and emit a fungal aroma to attract gnats. While the disappointed gnats search in vain for the non-existent fungus, they are covered in pollen and eventually exit from a tiny hole at the bottom of the spathe. Once free, they could possibly be lured into their final act of pollination.

When Jack-in-the-pulpits mature they switch their sex and produce female flowers on their spadix, while still producing the same alluring scent. The visiting insects crawl all over the pistils of the flowers, depositing pollen while searching yet again for a fungus they smell but can't find. But this time, there is no escape hatch at the bottom. Fungus gnats can't fly straight up and the inside of the spathe is too slippery to climb, and they have done their jobs as far as the female plant is concerned. Interestingly, the dead bodies just sit at the bottom of the “pitcher” and aren't absorbed in any way.

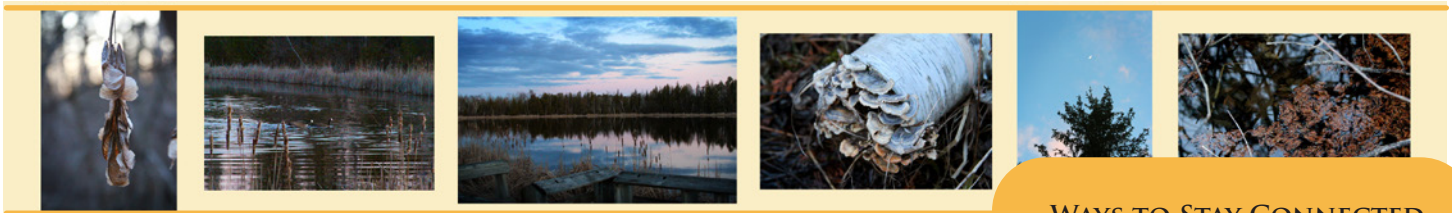
Keep an eye out as spring gets going throughout the forest for a chance to spot these unique plants.



C/O UWM Sauville Field Station
3095 Blue Goose Road
Sauville, WI 53080

ADDRESS CORRECTION REQUESTED

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FRIENDS OF THE CEDARBURG BOG EVENTS

Unless otherwise noted, walks meet at the UWM Sauville Field Station on Blue Goose Rd. Registration Required. Please register at: www.bogfriends.org (click on Programs & Events).

Walks are free and open to the public; a \$5 donation is appreciated.

Questions? Contact (414) 897-1739 or bogfriends@gmail.com Please, No Pets.

Quarterly Board Meeting

Thursday, April 4, 6:00 pm

All members are welcome to join the FOCB board meeting. The April meeting is being held in person and over Zoom. If interested in the agenda and to receive access to the meeting, please contact admin@bogfriends.org

Photography Workshop - Part 1 and 2

Saturday, April 27th, 9am-Noon

Join Andy Holman for a 2 part photography event. Part 1 is instructional with guided field work. There is a \$35 Fee due at time of registration to reserve your spot. You must have your own camera or cell phone to participate. All skill levels welcome. Part 2 will be a virtual critique. Participants will need to upload images for the critique, date TBD.

FOCB Birding by Canoe


Friday, May 24, 9:30AM – 11:30AM


Mud Lake in the Cedarburg Bog is the largest and least visited lake in Ozaukee County. It is one of the top ten birding areas in the county. During this outing, we will explore Mud Lake and its surroundings in search of a true wilderness experience only 20 miles north of Milwaukee. We will be looking for late migrants and avian residents uncommon to rare in southeastern Wisconsin, e.g., two bittern species, Alder and Yellow-bellied Flycatchers, rails, and waterbirds of every ilk. We will do about 1.5 miles of paddling.

Questions? Contact John O'Donnell at johnodonnell132@gmail.com

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 Join our Email List
<https://bogfriends.org/mailling-list/>

OZAUKEE-WASHINGTON BIRDING COALITION

The Ozaukee-Washington Birding Coalition (OWBC) has scheduled events coming up. The coalition consists of the Friends of the Cedarburg Bog, the Lac Lawrann Conservancy, Mequon Nature Preserve, and Riveredge Nature Center. Each organization will offer events and handle registration for the event. Visit www.bogfriends.org for full event details.

OWBC PARTNERS

Pike Lake/ Hartford Area Field Trip (Washington County)

Saturday, April 13, 7 a.m. to noon

Pike Lake/ Hartford Area Field Trip (Washington County)

Led by members of the Noel J. Cutright Bird Club. Caravan/ carpooling after meeting up at the Jackson Park & Ride (on CR-P, just north of Hwy. 60) at 7 a.m. We usually check out Big Cedar Lake, Wildlife Drive, and some flooded fields before hiking the northeast corner of Pike Lake.

No sign-up required.

Woodcock Wander

Wednesday, April 17, 6:30 p.m. Mequon Nature Preserve

Join local bird expert, Dan Panetti, on an evening stroll in search of the American Woodcock -- a secretive species most easily found when engaged in wild aerial courtship displays. The outing will start around dusk at 6:30 p.m. with an informational talk followed by a hike in and around the preserve listening for the "peent" call of the male. (Rain date of April 18 in case previous day is unsuitable for people and woodcock!)

Register with Nick Gall at MNP.

LLC - LacLawrann Conservancy
300 Schmidt Rd, West Bend
laclawrann.org

MNP - Mequon Nature Preserve
Pieper Power Education Center
8200 W County Line Rd, Mequon
mequonnaturepreserve.org

RNC - Riveredge Nature Center
4458 County Hwy Y, Sauville
riveredgenaturecenter.org