



Green-Backed Gazette

NEWSLETTER OF THE CENTRAL MINNESOTA AUDUBON SOCIETY

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President's Note, by Dan Kneip

In these trying times, it is important to see how showing up for your neighbors and those around you can result in so much good. Feeding backyard birds is a way of supporting our neighborhood, you provide the food and our bird neighbors show up for everyone's enjoyment. This simple act can lead to a more involved relationship. Many CMAS members participate in Feeder-Watch, a community science program sponsored by Cornell Lab and Birds Canada, in which participants take note of their backyard bird visitors on a selected two days per week from November through April. This program was initiated in Canada in the 1970's and expanded to USA participants via Cornell Lab in 1987. Data collected through FeederWatch has helped scientists learn of long-term trends in bird distribution and abundance, the timing of winter irruptions of finches and other species, changes in winter ranges of birds, and how disease can spread among birds that visit feeders.

In addition to feeding birds, it is possible to create a more inviting and protective backyard environment by planting native shrubs and trees that provide food and cover for birds. National Audubon has a great deal of information on how to make your yard bird-friendly using native plants. Cornell lab has articles and programs about landscaping for birds. A bird-friendly yard includes four key elements: food, water, shelter, and a place to raise their young. If you want to go even further, replace part or all of your lawn with native cover, plant a prairie plot, or participate in a gardening for birds initiative: <https://www.gardenforbirds.org/>

This month we will be participating in the Great Backyard Bird Count, a global community science event from February 13 - 16. CMAS will host an outing on Saturday the 14th along the Mississippi River. Join us at the Beaver Island trailhead at 9:30am, or go to your favorite birding spot, or watch birds from the warmth of your home. The GBBC started in 1998 in the USA and expanded to its global scope in 2013. The event now includes participants in 190 countries. As with FeederWatch, the data collected provides a snapshot of birds expanding or decreasing ranges. The timing in mid-February serves as a snapshot of bird populations before spring migration. Learn more about the GBBC at <https://www.birdcount.org/>

With birds, as in our own society, the more you learn about your neighbors, the more you will be able to appreciate the diversity and wealth of goodness there is all around you.



I caught a glimpse of happiness, and saw it was a bird on a branch, fixing to take wing. ~ Richard Peck

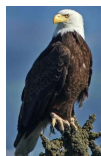
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Calendar

February 14, 2026

Great Backyard Bird Count Outing - 9:30 a.m.
Location: Beaver Island Trailhead,
downstream of the dam and hockey arena



February 18, 2026

CMAS Meeting - 7 p.m.
Location: Unitarian Universalist Church
Speaker: Michael Lee



Topic: Minnesota Biological Survey Highlights

February 21, 2026

Kestrel Box Building Event - 10 a.m.
Location: Warner Park, Clearwater, MN



*Event sponsored by Stearns County Parks - registration required



March 18, 2026

CMAS Meeting - 7 p.m.
Location: Unitarian Universalist Church
Speaker: Dick Doll
Subject: Purple Martins



April 21, 2026

CMAS Joint Meeting - 6:30 p.m.
Location: St. John's University in the Founder's Room,
Quad 170
Speaker: John Lattimer - Staff Phenologist at
KAXE-Northern Community Radio



This is the third annual joint presentation sponsored by local groups, this year's lead organizer is the local chapter of MN Master Naturalists.



Birds sing of freedom as they
soar lightly on the air.
So may our hearts soar, high above
all curbs and care.



Trees, standing firm,
hold the secret of inner power.
Give us, when tested,
strength to endure.



Mountains, remote
and still, hint at higher worlds unseen.
So may our lives be: soaring and serene.



Rivers seek passage,
unhindered by rock or tree.
So may our lives flow,
steadfast toward the sea!

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Lichens of Minnesota

Tanner Barnharst attended the January CMAS meeting to discuss his love of lichens. He introduced himself and noted that he has a Bachelor of Science degree in microbiology and a Master's degree in Environmental Engineering.

Tanner began his presentation by noting that a lichen is an example of mutualistic symbiosis (where both species benefit from the union) between a fungus and algae (or cyanobacteria). The fungus provides the structure that holds the algae (which creates energy and sugar from the sun through photosynthesis). Lichens are *always* classified by their fungus. Each species could live alone, but they would look different.

Lichens can live in extreme environments and are the base of food chains. One example of an extreme environment is outer space. Lichens have been taken into space and survived!

As the base of food chains, lichens provide homes for other organisms as well, such as yeasts, bacteria, and tardigrades (water bears). Lichens are also involved in the carbon, nitrogen, and water cycles, create and maintain soil, some fix nitrogen (from the atmosphere), provide the first step in succession (species advancement), act as a food source (for insects, birds, reindeer, squirrels, and more), and can be used to monitor air quality (because they can take up heavy metals from the air).

Northern Parula warblers, Gnatcatchers, and Hummingbirds all use lichens for nesting materials. The Northern Parula uses beard lichens while Gnatcatchers use shield lichens *every time* (predominately from the Parmeliaceae genus). Lichens have anti-microbial properties.



Humans use lichens in a number of ways such as for spices and medicine in China, Northern Europe, and India or for dyes. Tanner noted they make pretty colors and are used in Scottish dyes and litmus paper. The ancient Egyptians used lichens in embalming since 1500 BC. Vulpicida lichens are poisonous.



Lichens inhabit many types of habitats, growing on rocks, trees, soil, and metal... in essence, they can be flexible. Lichens reproduce both sexually (through spores) and asexually. Tanner noted that lichens have "no special parts". He noted that regarding morphology, there are three types: fruticose (bushy), foliose (leafy) and crustose (crusty). Reproductive structures are apothecia (cups) in sexual reproduction and soredia (grainy patches) in asexual reproduction. Undersides of lichens can have rhizines (like rootlets), veins, or may be different colors.

Foliose (leafy) lichens have different tops and bottoms. Crustose (crusty) lichens blend into the substrate and cannot be removed easily (these grow often on rocks and lava). Fruticose (bushy) lichens are 3D.

Colors will show what is inside and they may change when the lichen is wet. Rhizines (rootlets) are found on the underside of foliose (leafy) lichens. They help with attachment but don't move nutrients.

(continued in next column)

Lichens of Minnesota (continued)

Pseudocyphellia are little white dots, important for shield lichens (the biggest family) in identification. They may be helpful in gas exchange.

Tanner noted that lichens are often small and difficult to photograph. He described that the MFD (minimum focal distance) for most phones is four to six inches. Some phones have macro or ultra-wide modes for photography.

Tanner stated that there is almost no seasonality for lichen reproduction. He noted that British Soldiers have red cups (or something similar).

Tanner noted that there are clip-on macrolenses for phones, but screw on lenses are better. When photographing lichens for someone else to identify, collect the whole lichen from the top down (in the plane of focus). If reproductive structures are present, get a close up photo. Take a photo of the underside of the lichen (if possible), as well as a photo of the substrate. Post the photos on iNaturalist. This helps scientists.

There are over 500 species on iNaturalist. There are over 1,000 species in Minnesota! It is okay to post photos of lichens on iNaturalist without knowing the species. Posts need two identifications to be "research grade" (good for scientists to use). Tanner commented that there are many underdocumented counties in Minnesota.

Lichens are very resilient! During the winter, lichens have lower activity under snow. During droughts, lichens are really good at drying out.

Tanner described several species such as Elegant Sunburst (the orange color acts as a sunscreen), British Soldiers (red cups), and orange rock posies. He noted that if a person wants to forage lichens, the most sustainable way is to collect windfallen lichen because it'll just decompose otherwise.

Tanner finished his presentation by inviting those present to view the plentiful samples that he had brought with him and to look at them with a UV light, as some fluoresce to a different color. He also offered copies of his Minnesota Lichen Guide for sale and shared his contact information: Tanner.barnharst@gmail.com or via iNaturalist: @tanner-lichens-shrooms



The lichen on the rocks is a rude and simple shield which beginning and imperfect Nature suspended there, still hangs her wrinkled trophy. ~ Henry David Thoreau



Looking for ways to make a difference?

Donations are welcome for our fund to assist with continuing to operate the website, create birding backpacks and to bring quality speakers to the meetings. If you choose to help out, please make out a check to Central MN Audubon Society (CMAS) and send it to our President, Dan Kneip. THANK YOU SO MUCH!!

CMAS is now registered to receive donations via GiveMN:



Local Membership: Some CMAS members may wish to only belong and support our local Chapter, without belonging to National Audubon and receiving the Audubon magazine. Membership is \$15 annually.



Fishers belong to the Mustelidae (weasel) family, along with otter, weasels, stoat, mink and badgers. Fishers are facultative generalists, meaning they will eat plants, animals, roadkill deer, squirrels, snowshoe hare, and porcupine.

They are forest dependent animals - they do not set up territories outside forests. Fishers need structurally complex forests which include cavity trees, stumps, logs and woody debris, even tree "tip ups" for reproduction dens, rest sites, predator protection, thermal protection, and prey habitat.

Fishers were historically throughout most of Minnesota before they were extirpated due to habitat destruction and over collection around 1929 or so. Because they were not extirpated in Ontario or Manitoba, fishers naturally recolonized in northern Minnesota from the 1950's to about 1977. From 1961-1963, fishers were reintroduced in Michigan, then in Wisconsin from 1966-1967.

The fisher Fall population peaked in the 1990's - 2000. Beyond 2000, the population dropped until about 2015 when there was a slight increase in numbers to approximately 8 - 10,000 animals (in Minnesota). The MN DNR radiocollared 114 fishers (65 females, 49 males) and located them weekly via plane during a study to determine the potential reason(s) for the population decline. Options were over harvest with low recruitment, predation, and habitat loss (they need big cavity trees). Predation comes via bobcats.

Bobcats are generalists. They eat birds, hares, small mammals (voles, mice), and are less successful at eating porcupines. Bobcats inhabit the north half of Minnesota, primarily, but have moved into southeast Minnesota. Harvest information dates back to 1928. Bobcats do better in young forests than fishers.

MN DNR population models show bobcat numbers are trending upward. Bobcats prey upon fishers. During a bobcat - fisher study, it was determined that most of the fishers taken were females and 15 litters were lost.

Why kill fishers? Multiple reasons were offered. Fishers could be a food source although the bobcats rarely eat them. It is more likely due to competition, as they eat a lot of the same foods. Snowshoe hare numbers have dampened over the last two to three decades. Red squirrel numbers have fluctuated over time as well. Access to prey would be easier if fishers are not around to compete for food. Kitten safety is another possibility.

Timing of predation is very likely before, during and after birthing. A bobcat will find the fisher den and then sit and wait. Interestingly, bobcats don't always survive harsh winters.

Study areas included the Superior National Forest, Chippewa National Forest (not a lot of success there) and Fon Du Lac in Carlton County. Cats and fishers were trapped and collared. There were 20 captures and 14 collared each (seven males and seven females in the bobcats).

Clusters of locations included grouse kills, hare kills, a raccoon kill site at -30 degrees, and scavenged deer kill sites (after wolves fed). Root mass tip up areas were winter rest sites (and also where birthing happened for bobcats). Bobcats that used wetland edges were nicknamed "swamp kitties" and "junkyard cats" when associated with human buildings.

One finding from the study is that the fisher population is declining in Minnesota, but they are expanding



Audubon Upper Mississippi River (UMR) has been awarded Environment and Natural Resources Trust Fund

(ENRTF) funding to re-run [statewide marsh bird surveys](#), a project that was last done ten years ago by Audubon Minnesota. Since many marsh birds are secretive and hard to detect with traditional surveys, this is an effort to add missing data to help monitor population levels and habitat availability. Surveying will happen this year and next.

To better monitor these elusive marsh birds, volunteers will conduct surveys that include broadcasting calls into wetlands and recording bird responses. Surveys follow established routes and are completed three times in the early morning or late evening during spring and early summer. Routes are all over the state: to get a sense of where volunteers will be needed, check out the attachment for more information and a rough map of survey locations.

Audubon UMR is looking for volunteers who:

- Have good hearing
- Can identify marsh birds by sight and sound
- Are comfortable walking to off-trail survey points

Training will be provided in April. If you are interested in participating in these surveys, please [sign up](#). Audubon UMR will be following up with potential volunteers in the coming weeks to establish their skill in marsh bird ID, ability to go through training, and commitment to the survey timeframe and locations.

(Fishers and Bobcats continued)

their range. They were first found south of I-94 in 2005. In 2020, there were close to 30 sightings. In the Twin Cities Metro area, there is more turnover and fewer numbers but some breeding is occurring. When there is suitable habitat (such as at Cedar Creek), it is well occupied and there is a consistent resident population.

The study found that female fishers have a range of about six square kilometers (Km) in the south as opposed to 16 square Km in the north, while males have a 20-25 square Km range in the south versus 36 square Km in the north.

To determine their diet "brown gold" (scat) was collected and stable isotopes from hair was used to identify prey. Preliminary results included:		
Snowshoe Hare	Cottontail Rabbit	Porcupine
Gray Squirrels	Flying Squirrels	Jumping mice
Redbacked Vole	Opposum	Star-nosed mole
Short-tailed mole	Grouse	Waterfowl
Garter Snake	Insects	Fish
Black Cherry	Chokecherry	Crab apples

Female fishers average around five to six pounds, while males are more than double that, ranging from 12 - 15 pounds. Litter sizes range from one to four (average 2.4). They're active three to four hours per day and around midnight during litter times. They'll change dens periodically (not staying in one place the whole time).

Bobcat females average between 25 - 30 pounds and males are generally 35+ pounds. Both species have robust enough populations that it's been determined hunting can continue (harvest isn't high enough to cause concern). Roadkill is a much larger threat in southern MN, while predation is lower (coyotes don't climb). Eagles have taken a few.