

Windows to *Wildlife*

On the Birding Trail

Wildlife viewing at Coeur d'Alene
Wildlife Management Area

Window Wisdom

Easy DIY to keep birds safe

Tag, You're It

Sky traffic over Salmon



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Great backyard bird count

FRONT COVER: Motus towers track tagged birds and other wildlife that come within 15 miles, turning close encounters into big insights for conservation. PHOTO: David Dressel/IDFG
BELOW: This Lewis's Woodpecker wears a small transmitter that sends important information across the landscape, helping biologists protect habitat and birds. PHOTO: Kate Stone/MPG Ranch





Tag, You're It!

How Tiny Tags are Telling Big Stories in Salmon

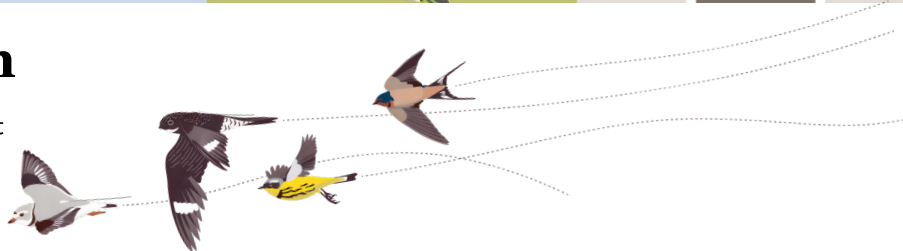
Sky Traffic over Salmon

by Tempe Regan*, Regional Wildlife Diversity Biologist
Idaho Department of Fish and Game

Understanding how animals move and why is essential to wildlife conservation. Wildlife movement includes everything from short daily trips to find food or water to long-distance migrations. One of the first questions researchers ask is simple: where do animals go, and what drives their journey?

For smaller animals, that can be a difficult question to answer. Many traditional tracking devices like solar- or satellite-powered tags are simply too heavy or bulky. If a tag interferes with an animal's ability to fly, hunt, or behave naturally, researchers can't use it.

That's where the Motus Wildlife Tracking System comes in. Motus relies on ultra-lightweight transmitters (tags) that make it possible to track even tiny species without affecting their behavior. This technology has opened a new window into the movements of animals we've never been able to follow closely before.



A Network that Spans Continents

Motus, Latin for "movement", is an international wildlife tracking system that's revolutionizing how we study small animals. Rather than relying on bulky GPS units, Motus uses tiny radio transmitters that weigh only a fraction of traditional satellite tags. These lightweight tags emit unique digital signals that are detected by a rapidly expanding network of automated receiving stations distributed across the landscape.

How it works: biologists attach a small tag to an animal like a bird or a bat. As that animal travels, nearby Motus stations scan continuously for radio signals, recording every time a tagged animal passes within roughly 15 miles. When the same individual triggers multiple stations along its route, researchers can map its entire journey with remarkable detail.





The beauty of Motus is its collaborative nature. Any tagged animal from any research project can be detected by any station in the network, and all researchers share the data. The more stations online, the clearer the picture becomes. Since 2013, Motus has tracked more than 60,000 individuals representing over 470 species, using a network of 2,290 stations across 34 countries.

Motus is also far more affordable than satellite tracking. While satellite tags can cost thousands of dollars each, Motus transmitters typically cost only a few hundred dollars. The greatest expense is installing the stations themselves, usually between \$5,000 and \$8,000. To save on costs, stations can be mounted on existing cell towers, buildings, or field structures, and many can run on solar power.

Idaho Joins the Movement

Idaho joined the Motus network in 2020 through a partnership between the Intermountain Bird Observatory and Montana's MPG Ranch. Their shared goal was to install stations across the Intermountain West and fill major gaps in our understanding of how small wildlife navigate this rugged region.

Currently, 27 Motus stations are scattered across Idaho. Two of these operate in the Salmon Region: one mounted atop the screen shop at the Idaho Department of Fish and Game's regional office in Salmon (installed in 2021) and another on the maintenance shed at the Pahsimeroi Access Area (installed in July 2025). Just to the south, stations at the Mackay Fish Hatchery and Chilly Slough help extend the network even farther. The Chilly Slough station was funded and installed by the BLM Idaho Challis Field Office in partnership with the Intermountain West Collaboration.

Left: A Silver-haired bat fitted with a tracking tag. **Right:** The actual size of a NanoPin tag, used on bumblebees and butterflies, weighing just 0.14 grams—the same as 1-2 staples! These tiny tags help scientists track long-distance migrations via the Motus network and identify when animals visit important sites like roosts, nesting colonies, and other critical habitats. PHOTO: Liam McGuire





A Northern Saw-whet Owl fitted with a tracking tag, helps biologists follow its nighttime journeys and uncover migration patterns across Idaho. PHOTO: Brock and Sherry Fenton

The results have been remarkable. Idaho's stations have detected **421 tagged animals representing 37 species**, including 12 species tagged within the state as part of four ongoing research projects.

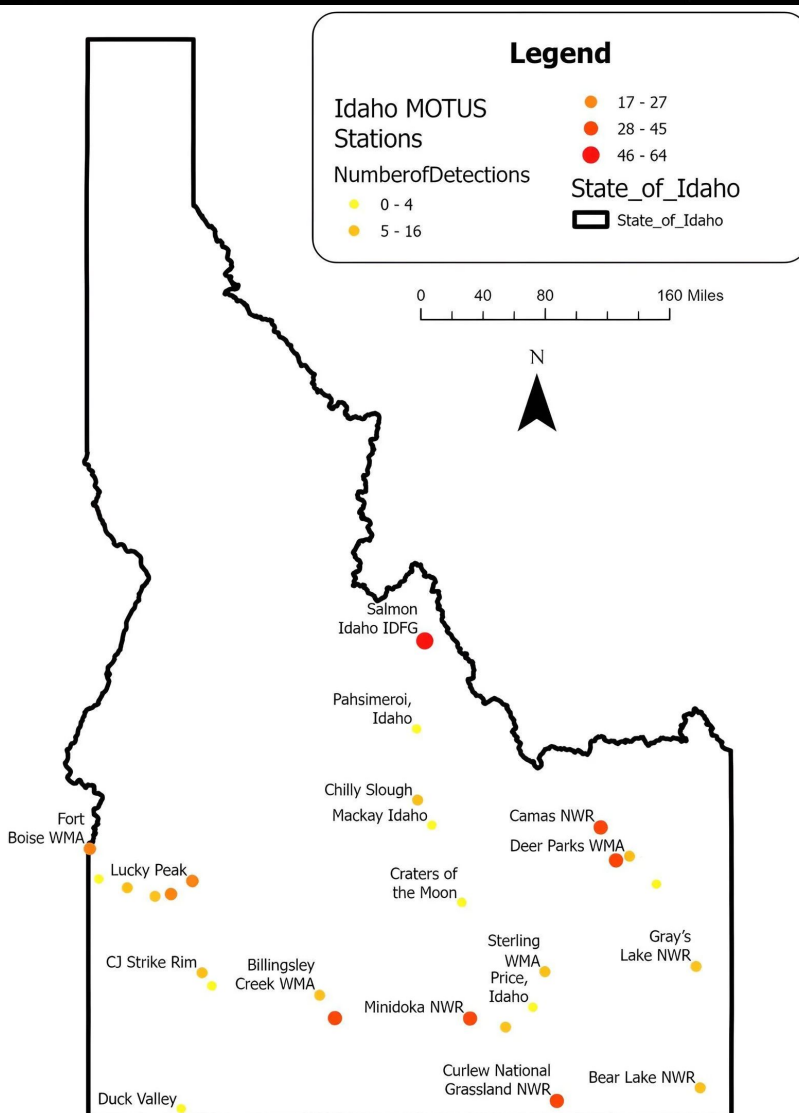
Salmon's Surprise Success

Among all of Idaho's Motus stations, the one at the Salmon regional office has emerged as a standout performer. It has logged 63 detections representing 16 species, 15 bird species and two Silver-haired Bats, making it one of the most productive stations in the entire state, especially during the fall migration.

Several other locations have become important detection hotspots as well. Camas National Wildlife Refuge has recorded 44 detections across 20 species, Market Lake Wildlife Management Area has tallied 34 detections from 17 species, and Minidoka National Wildlife Refuge has detected 33 instances involving 15 species.

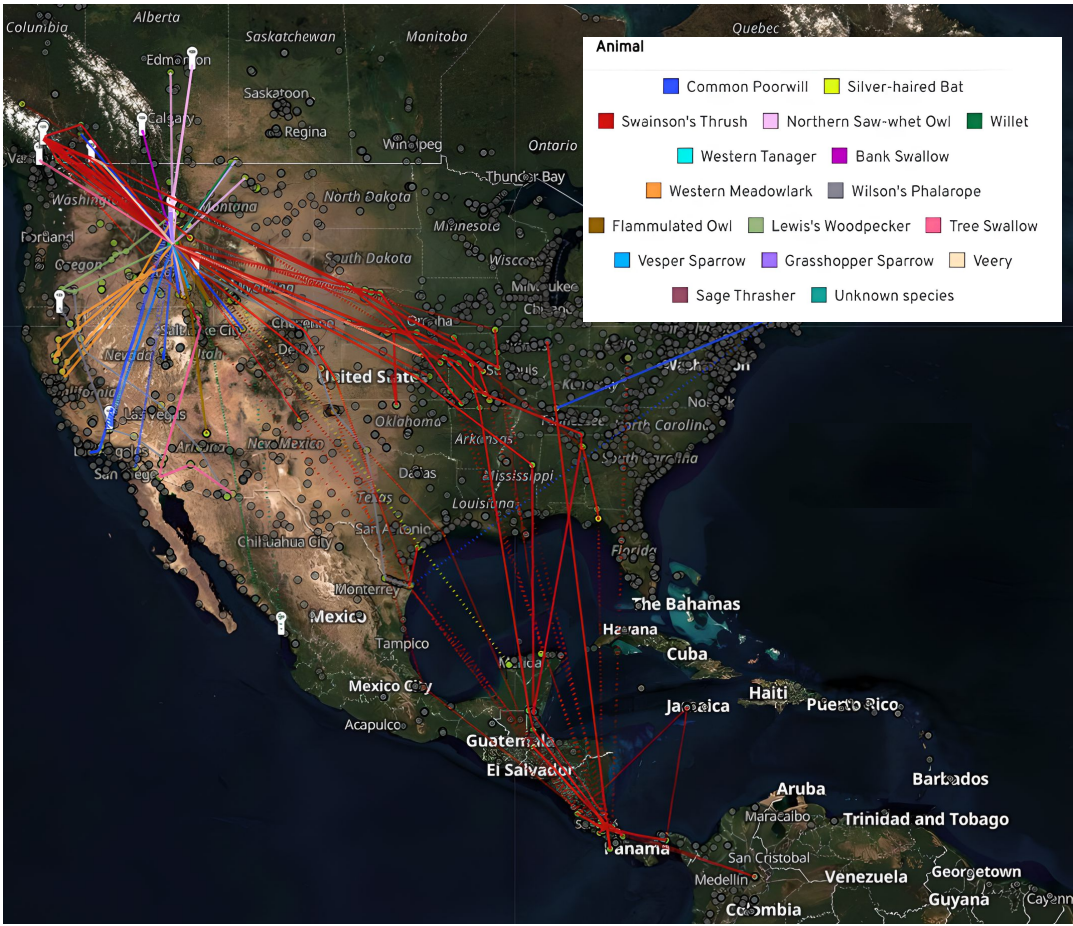
Next Steps

Idaho Fish and Game is doubling down on Motus technology. Through a multi-state grant, the Department began installing new stations in summer 2025 and has already added eight more to the network, with plans for at least five more installations before the grant period ends.



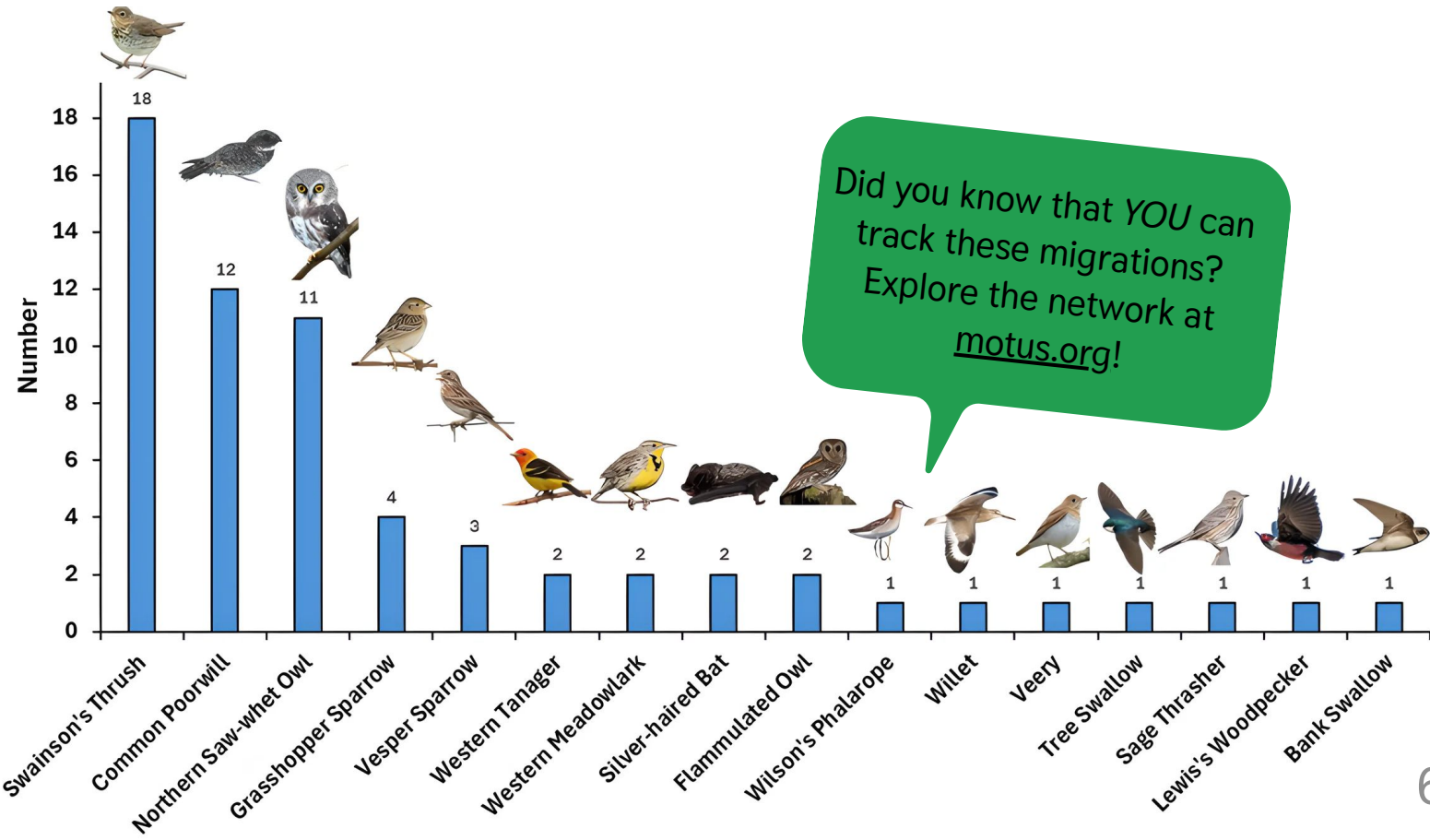
This map shows the 27 Motus stations in Idaho. The size and color of each symbol indicate the number of detections each station has recorded since it was installed.

The next step is tagging animals that need it most: species with the greatest conservation or information needs, those whose movements remain largely a mystery, and species where tracking data can directly shape and improve conservation strategies. Each tagged animal provides critical insights, revealing migration routes, seasonal movements, and dispersal patterns that were previously unknown. Together, these efforts are helping biologists piece together a clearer picture of Idaho's wildlife, guiding conservation decisions, and ensuring that these species can continue to thrive for generations to come.



Above: The map shows the movements of animals detected by the Salmon Regional Office Motus Station, from where they started to where they were last detected. Different colors show different species and solid lines show more accurate paths than the dashed lines.

Below: The Salmon Regional Office Motus Station has recorded detections for a wide range of species, highlighting the diversity of wildlife moving through this region. As of October 10, 2025, Swainson's Thrush topped the list with 18 detections, followed by Common Poorwill and Northern Saw-whet Owl, while several species, including bats, shorebirds, and songbirds, were also recorded. Each detection represents a small piece of a larger puzzle, helping scientists track migration patterns, seasonal movements, and habitat use across Idaho.



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Window Wisdom

Easy DIY to Keep Birds Safe

Paint a Pattern, Help Prevent Window Collisions



Every year, millions of birds die after flying into windows, mistaking glass or reflections of trees and sky for open space. You can help prevent these collisions with a few simple steps.

- **Add Patterns to Your Windows** – Birds see tight visual barriers as obstacles. Using dots, lines, or simple designs spaced no more than 2 inches apart makes windows visible to them.
- **Use Washable Paint Markers** – These let you create patterns quickly and safely, without blocking your view. You can refresh or change your designs seasonally.
- **Move Feeders and Baths** – Place bird feeders at least 3 feet from windows, or more than 30 feet away, so birds aren't flying directly into glass.
- **Try Screens or Films** – Window screens, decals, or films that reduce reflections can further protect birds, especially on larger panes.



Even small actions make a big difference. With a little effort, you can turn your home into a safer place for birds. Learn more about preventing collisions by visiting American Bird Conservancy website at: abcbirds.org/solutions

Above: A Mourning Dove leaves a clear imprint after hitting a window. Millions of birds die each year after hitting windows. Different window treatments like dots and stencils reduce these accidents. PHOTO: Charles Bradley/ABC

Left: Painting dots on your windows is an economical and easy way to help protect birds from hitting your windows. PHOTOS: Golden Eagle Audubon

DIY Bird-Safe

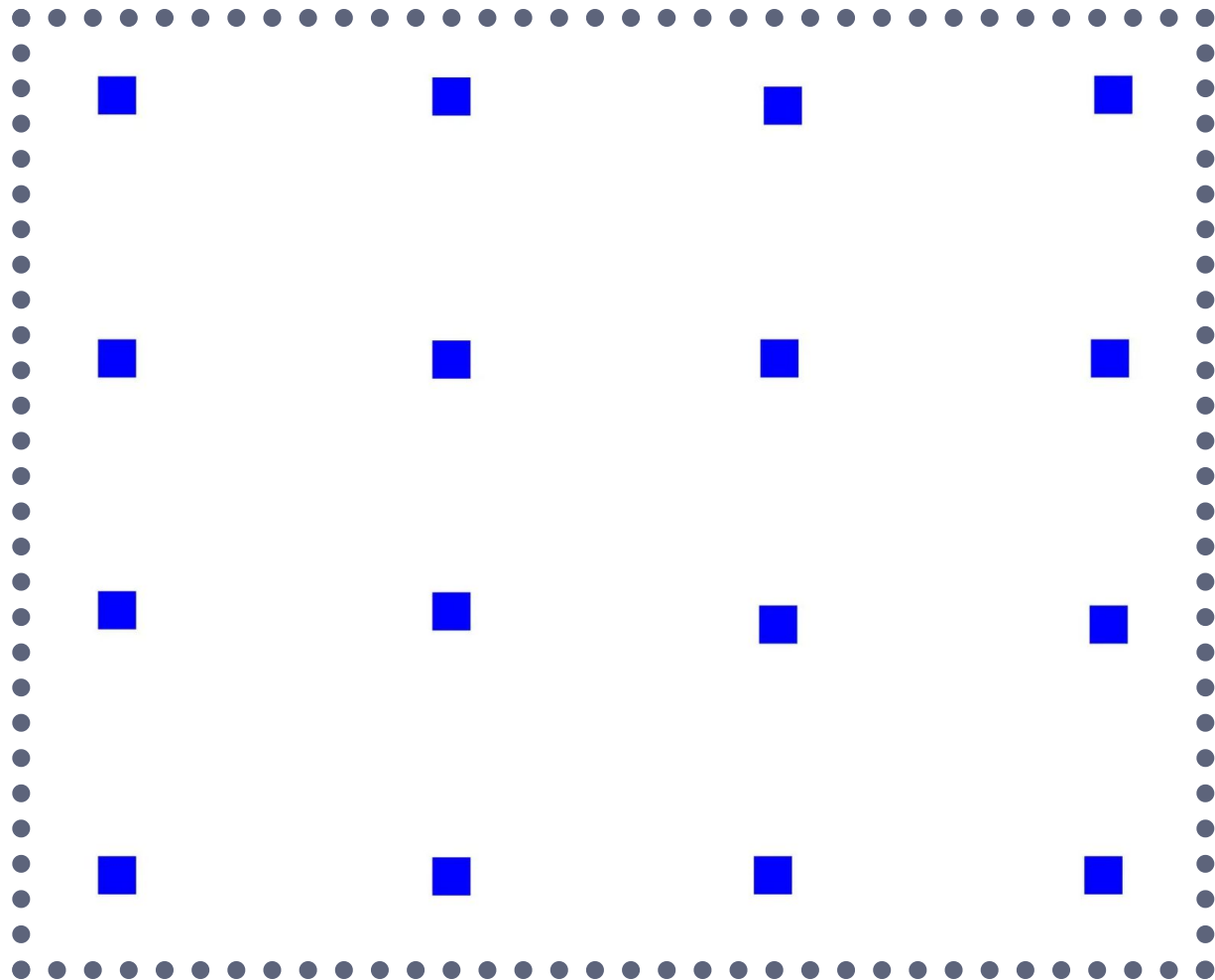
Window Marker Template

To prevent bird-window collisions, use this guide to place visual markers correctly on your windows.

Materials: Medium-tip oil-based window marker, dot template, rubbing alcohol, paper towels, cotton swabs (optional).

Instructions:

- 1. Prepare:** Clean your window. Prime the marker on cardboard.
- 2. Align & Paint:** Place the template in the bottom corner of the window. Paint the dots.
- 3. Repeat:** Reposition the template over completed dots to maintain spacing. Work upward, avoiding smudges. Clean mistakes with cotton swabs and rubbing alcohol.



Cut template along dotted line. Tape template onto a piece of cardboard. Use a hole punch or craft knife to cut out each square.

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EXPLORE YOUR NEXT TRAIL



Idaho Birding Trail



Coeur d'Alene River Wildlife Management Area

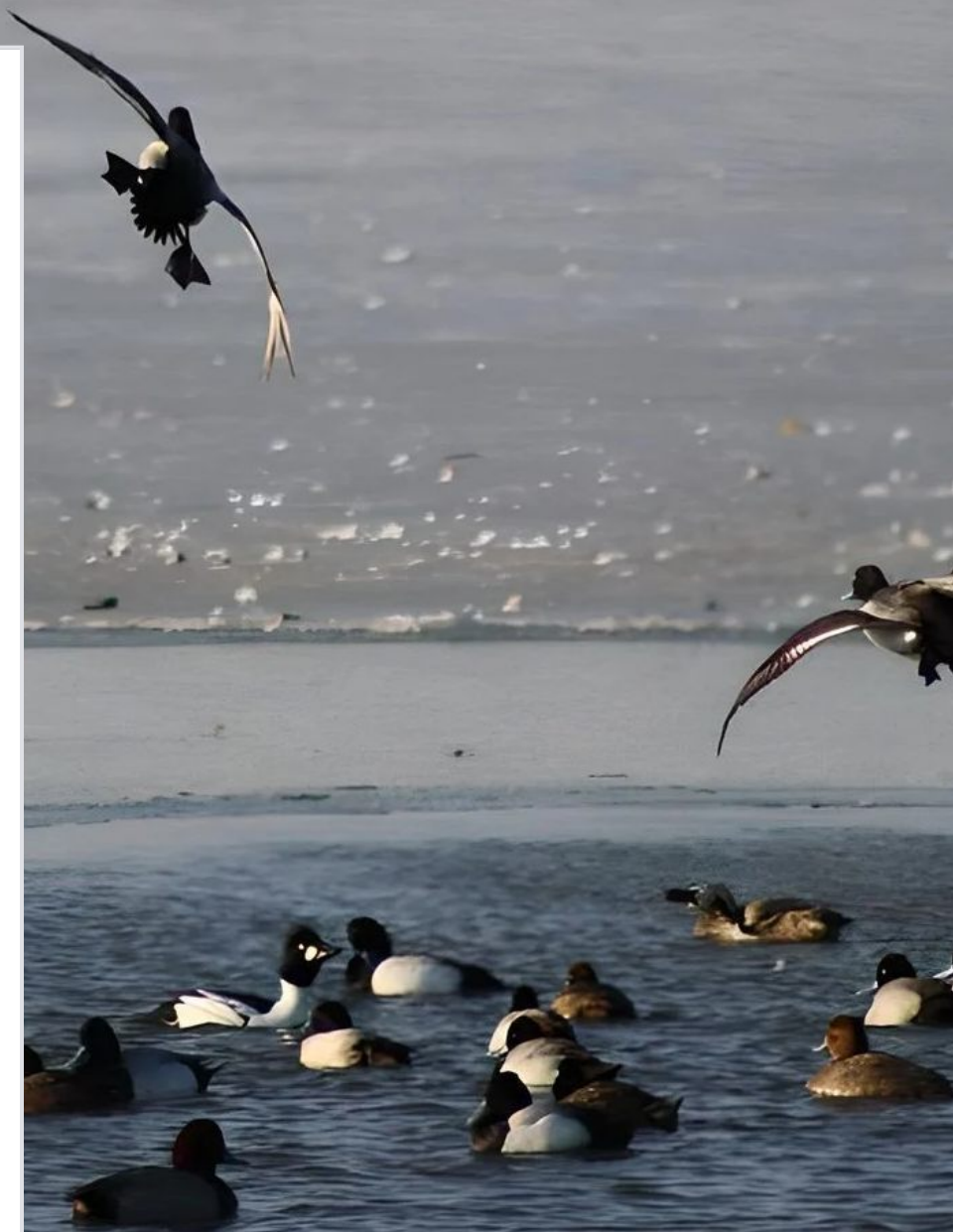
The Coeur d'Alene Wildlife Management Area (WMA) provides steady winter bird-watching from January through March.

Its mix of open water, wetlands, and forest edges supports a reliable range of species throughout the cold months.

Bald Eagles are regular winter sightings, often hunting along the shoreline or resting in cottonwoods. Waterfowl remain a major draw, with Common Goldeneye, Bufflehead, Mallard, American Wigeon, Ring-necked Duck, and Canada Geese using the open channels and marshes.

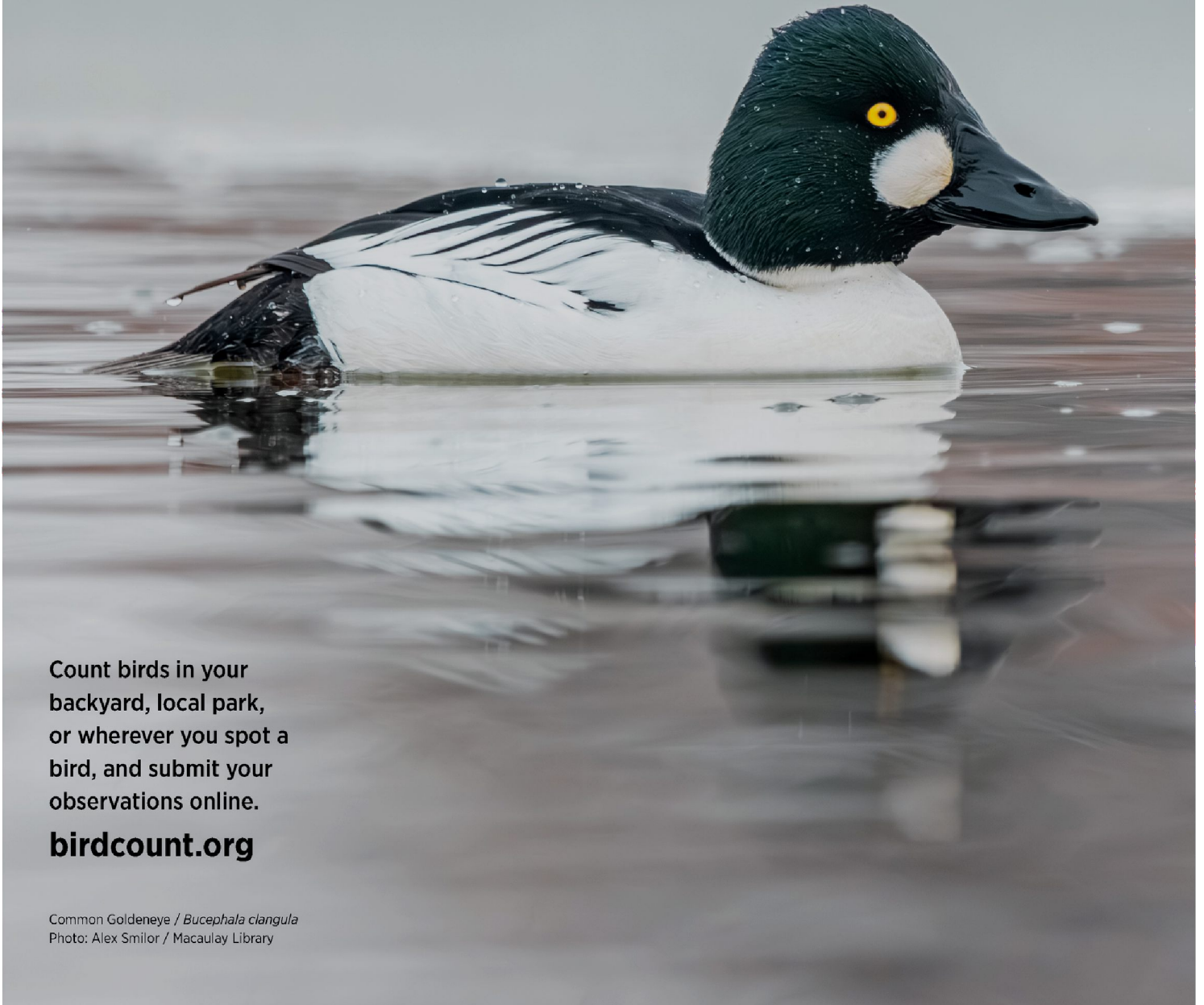
The surrounding habitat also supports a variety of resident birds. Belted Kingfishers, Great Blue Herons, and Hooded Mergansers work the edges of the water, while Downy and Pileated Woodpeckers, Black-capped Chickadees, Red-breasted Nuthatches, and Song Sparrows stay active in the forested areas. Occasional sightings of Rough-legged Hawks, Northern Harriers, and Red-tailed Hawks add to the mix.

As winter transitions toward early spring, more ducks and geese begin moving through the region, increasing overall activity. While not the peak migration season, these three months offer consistent opportunities to see a wide range of species across the WMA.



Great Backyard Bird Count

29th Annual • February 13-16, 2026



Count birds in your
backyard, local park,
or wherever you spot a
bird, and submit your
observations online.

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Common Goldeneye / *Bucephala clangula*
Photo: Alex Smilor / Macaulay Library



Thank You

Thank you to those who made direct donations, purchased or renewed a specialty wildlife license plate, or contributed to the Idaho Nongame Wildlife Fund when completing their taxes.

Your contribution provides important funding for wildlife and habitat conservation, research, and outreach in Idaho.



Windows to Wildlife

WILDLIFE DIVERSITY PROGRAM

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