

# The WILLET

Volume 37 Number 3 November 2024

Editor Julianne Hayes

### **Message from BBO Chair**

Dr. Geoff Holroyd

The excitement grows as BBO expands its education, research and conservation activities. In this issue of the Willet, you can read all about it! This year we continued to track Northern Sawwhet Owls and added two MOTUS tags to Longeared Owls revealing more about these secretive owls. Our staff continued the basic migration monitoring of songbirds and owls, and the Monitoring Avian Productivity and Survivorship Program. In this issue of the Willet, you will find articles about the breeding birds in our local forest, and secretive birds in the Lister Lake marshland. Our winter education program BirdSmart benefited from an anonymous donation which allowed us to hire another staff member and give more talks at schools and other groups. We have an amazing team of volunteers and staff. Two of our volunteers are featured in this issue. BBO accomplished all this and more thanks to your generous donations.



You are receiving this Willet just before GIVING TUESDAY, a national day to balance Black Friday's selling extravaganza. To keep BBO's projects active we depend on your support. New projects to track Long-eared Owls and Purple Martins need sponsors of MOTUS nanotags which cost \$300 each. You can name each tag and bird that you sponsor. We continue to grow our Endowment Fund and plan to match the Edmonton Community Foundations offer up to \$50,000. Two anonymous donors have already donated \$25,000, half of the maximum that ECF will match. Please help us raise the other \$25,000 which will be matched by ECF adding \$100,000 to our Endowment Fund pushing it over \$500,000 in only 5 years. This fund will generate over \$20,000 in 2025 and every year in perpetuity.

**Donate to BBO** 

**Territorial Acknowledgement:** Beaverhill Bird Observatory is located within Treaty 6 territory, a traditional gathering place for diverse Indigenous Nations, including the Plains Cree, Metis, Blackfoot, Saulteaux and Nakoda Sioux People, who are the original stewards of the Beaverhill Lake area since time immemorial.

### 2024 Activities at BBO

### Field Season at a Glance

Jana Teefy, Head Biologist

The 2024 field season started on May 1 with 5 eager biologists - Jana, Jon, Ethan, Emelie, and Xavier, the majority of whom were previous Young Ornithologists! The weekend prior to the season kick-off (April 27 & 28), the BBO co-hosted another successful Snow Goose Festival and welcomed birders to the observatory for guided hikes and interpretive banding sessions. Spring showers brought June flowers as well as flooding of the roads and some of our net lanes in early May. The main access road (Rowen's Route) was flooded, rutted, and challenging to drive, which spurred the decision to limit site access and lower our event capacity in the hopes of not worsening the road conditions.





Left: Black-throated Green Warbler. Photo Credit Jana Teefy

The weather continued to be rainy and windy throughout the spring, lowering our net hours (2219 NH in 2024 vs 2826 NH in 2023) and total captures (937 in 2024 vs 1073 in 2023), however, capture rates were higher this year (155 captures/10 NH in 2024 vs 104 captures/100 NH in 2023). 17 nets were opened daily, when the weather allowed, capturing 47 species and 937 individuals. Highlight captures include a Black-throated Green Warbler, loads of Grey-cheeked Thrush, an Eastern Kingbird, and a Sharp-shinned Hawk.



Above: Sharp-shinned Hawk Below: Northern Shrike. Photo credit Jana Teefy and Sian Ford.



Once the road conditions improved, we hosted many events, including Big Birding Breakfast, Supper and Saw-whets, Young Ornithologists, and our regularly occurring banding events. The staff also participated in a Big Birding Day and fundraised for our owl Motus project.

The BBO hosted 9 student interns to help with the long-term monitoring of the Tree Swallow and House Wren nest boxes, Grassland Breeding Bird Census, bats, and butterfly projects. This year we initiated the Purple Martin intern project and installed 2 more colony nest boxes.

Summer was hot and buggy! Thanks to the spring rains, staff and volunteers were bombarded with mosquitoes, flies, and wasps for the duration of the MAPS season. All 6 rounds of MAPS banding were completed without issue and between the 3 MAPS stations (BLAB, SOPO, LILA) 774 individuals and 33 species were captured. Many Yellow Warblers, a Cooper's Hawk, a Yellow-bellied Flycatcher, and a few Sedge Wrens were captured and banded. Nestling banding took place over the summer as well, which included 251 Tree Swallows from the 3 breeding grids, 69 Purple Martins from the now 4 nest boxes, 6 Mountain Bluebirds, and 7 Saw-whet Owls. A small black bear was spotted at our SOPO station and made a hasty exit through one of our nets. This is the first bear ever reported in the Natural Area.

The staff were each assigned a summer monitoring project. Jon continued with the Forest Breeding Bird Census, Ethan once again completed regular shorebird surveys along Beaverhill Lake, Xavier conducted the Marsh Monitoring Program, and Emelie monitored the Least Flycatcher nest success and tracked nest reuse.

Fall songbird migration monitoring ran from July 20 to October 20. The 17 nets were once again operated daily, within weather limitations, with 2267 individuals captured and an impressive 65 species. Highlight captures include a Nashville Warbler, a Connecticut Warbler, and a Northern Shrike.

Owl migration monitoring took place from September 1 to November 8 this year with some slight changes to the program such as upgraded audio equipment and establishing a second set of nets with a male Saw-whet breeding call. Overall,

owl captures were similar to previous seasons with one fewer Saw-whet Owl and 2 fewer Long-eared Owls captured than last year (293 NSWO and 9 LEOW in 2024).



Above: Boreal Owl. Photo Jana Teefy

Interestingly, most of the Long-eared Owls were captured in short succession during the super-harvest moon. The staff were very excited to capture 5 Boreal Owls this season! This is the most we've caught in one season since 2016 and more than we've caught in total since 2016. A total of 51 nanotags were deployed – 49 on Saw-whets and 2 on Long-eared Owls. Jana continued to perfect the attachment technique. The staff attempted 2 nights of non-standard owl trapping in June to catch and nano-tag the breeding parents from our occupied nest box and they caught and nano-tagged 2 brooding females! One stuck around for 5 days and the other is still being detected at the station!

With the capture rates dwindling and the busy BirdSmart season looming, the station was winterized and shut down for the season on November 8. In addition to classroom presentations, the staff will be attending store events, birthday parties, hockey games, and once again attempting to study Snow Buntings. Wish us luck!

The BBO extends a huge THANK YOU to our staff, board members, volunteers, and visitors who help make each season a success!

# BirdSmart Education: Last Season's Highlights and This Season's New Developments

Jon Van Arragon, Assistant Biologist

With the field season now behind us, you might be wondering what our busy biologists will be getting up to this winter. During the winter we deliver our BirdSmart education program, which has us doing educational presentations about birds and conservation throughout central and northern Alberta. Last year the program hit new highs in the number of presentations given and the number of students reached. Over 250 educational presentations were given, and over 20,000 students were reached by the program! BirdSmart expanded its geographic reach as well, with more presentations being given farther from Edmonton in communities like Lac La Biche and Wabasca.

This year will feature some exciting new changes to the program. Our existing presentation topics and content have been revamped to match the new Alberta science curriculum, and new presentation topics have been added as well! Our presentations are also now available in French, which will help us reach even more schools than before. Thanks to generous grants provided by Beaver County and the Battle River Community Foundation, we will also be offering presentations to schools in the Battle River School Division at a reduced price. Thanks to an anonymous donation, we are also offering presentation circuits to communities in rural or remote areas that reduce the cost for individual schools!

We have 4 ambassador birds who accompany us during presentations, each with their own adorable personalities. Nina the Burrowing Owl will be joining us once again. Her friendly personality and small size make her perfect for presentations to younger age groups! Keith the Red-tailed Hawk is returning as well. He is an extremely handsome boy with a stoic personality. He is blind in one eye and sits so still that some people mistake him for a statue! Tansi the Great Horned Owl is our largest ambassador bird, both in size and personality. She often shows off her large wingspan, and her overall plumage is stunning and majestic.

Joining us for the first time this year is Carmen the Peregrine Falcon. Carmen comes from one of the Peregrine Falcon nests in downtown Edmonton; she had to be rescued after she fledged early and injured her wing. After some rehabilitation and training, she is now ready to make her debut as an ambassador bird!

If you are interested in booking a presentation, check out **the <u>BirdSmart</u> Education** page on our website or email <u>education@beaverhillbirds.com!</u>



Above from left to right: Keith the Red-tailed Hawk, Tansi the Great Horned Owl, Nina the Burrowing Owl, Carmen the Peregrine Falcon

### Forest Breeding Bird Census 2024 Summary

Jon Van Arragon, Assistant Biologist

Monitoring breeding birds isn't just limited to bird banding at the Beaverhill Bird Observatory. It also takes place in the form of other monitoring programs like the forest breeding bird census.

What is the forest breeding bird census? It involves repeatedly surveying the same tract of forest throughout the breeding season and marking the positions of all birds detected on a map of the area. By creating a sightings-maps for each species and recording territorial behaviours and interactions such as counter-singing (two birds singing simultaneously), the approximate boundaries of each bird's breeding territory can be determined.

Right: Typical habitat in the forest breeding bird grid. Photo credit Geoff Holroyd



In 2024, Least Flycatchers were by far the most abundant species, which should come as no surprise if you've ever visited the natural area! The distinctive "cheBEK" song of these birds is so commonly heard it practically becomes white noise. Previous studies of Least Flycatcher populations in the Beaverhill Natural Area have shown that the density of territories for this species is exceptionally high, and this year's census once again supported that conclusion.

Another noteworthy observation from this year's census was the presence of Yellow-rumped Warbler and White-throated Sparrow breeding territories. Both these species are common migrants through the natural area, but their preferred breeding habitat is more mature forest stands. This and other observations suggest that the forest in the natural area is shifting to a more mature structure, which could lead to further changes in species composition in the coming years. Other species that prefer older forest that have been observed in recent years



Above: Yellow-rumped (Myrtle) Warbler. Photo credit Jana Teefy

include 2023's record high number of Pileated Woodpeckers in the area, as well as the station's first capture of a Barred Owl in 2022. Continued census surveys will allow us to watch the forest bird population change each year, which is one of the most exciting parts of long-term monitoring!

### A Mountain Bluebird Recovery

Jon Van Arragon, Assistant Biologist



Above: Mountain bluebird nestlings banded at BBO in 2021. Photo credit Jana Teefy

In late June, the Beaverhill Bird Observatory received a report that a Mountain Bluebird banded by our staff was found by another bird bander! Mountain Bluebirds are one of the most striking birds found around the BBO. Males are bright electric blue while females are a more subtle yet still beautiful blue-gray. These birds breed in the nest boxes we set up for Tree Swallows, although they are far less abundant, and we only had 1 consistent breeding pair in recent years. That makes it even more exciting that one of our banded bluebirds was recovered!

The bird in question was banded in one of our nest boxes as a nestling back in 2021. This summer, she was found incubating a clutch of 6 eggs in a nest box northeast of the town of Olds! 5 of these eggs hatched, but unfortunately the nest was abandoned before the





Left to Right: Male and Female Mountain Bluebirds. Photo credit Jana Teefy

nestlings reached maturity. Birds can abandon nests for many reasons including inclement weather, death of an adult, or disturbances at the nest.

This nestling had moved 200 km southwest of her natal nest box; an example of dispersal that ensure genetic diversity in a

healthy population. Recoveries like this help us understand the movements and population dynamics of our birds. Mountain Bluebird populations are in decline, so understanding these factors will help us conserve and protect the species. If you are interested in helping bluebirds, consider putting up nest boxes on your rural property or along rural roads! Bluebirds rely heavily on human-made nest boxes for nesting. Designs to build these boxes can be found easily online. Thank you to Ron Reist for reporting the bird in question and sharing more details about her!

### Marsh Birds at BBO

### Xavier Quantz, Assistant biologist

Wetlands are important ecosystems and are prime habitat for many bird species. The secretive behaviour of the birds that live in this habitat as well as the unstable, wet terrain and vegetation often makes finding birds here difficult. As a result, the BBO's Marshbird Monitoring Protocol (MMP) was introduced in 2022 and has continued each year since. The MMP surveys consist of five minutes of silent observation followed by five minutes of playback from five species and ending with five more minutes of silence. Playback is the use of bird calls to elicit a response to more effectively sample hard-to-detect birds. This technique is copied from the national program of Birds Canada.



Lister Lake. Photo credit Xavier Quantz

This playback was used four times at each of eight points along the west shore of Lister Lake. During these surveys, seven species of these reclusive marsh birds were found. These species were Sora, Pied-billed Grebe, American Bittern, Eared Nelson's Sparrow. Virginia Rail, and Yellow Rail. Of these species, Sora and Piedbilled Grebe were the most with 91 and 31 prevalent detections respectively. The species least often observed were Eared Grebe and American Bittern which were only detected three times each. The use of

playback had a full spectrum of results depending on which species' call was being played. For instance, 53% of Virginia Rails were detected in response to their playback with another 28% responding to Sora playback. Curiously, Sora were responsive to all species' playback with 32% during all playbacks but only 13% from their own call. 20% of Pied-billed Grebes were detected during their playback. On the other hand, Yellow Rails and American Bitterns have never responded to their own calls.

One particularly exciting bird, the Yellow Rail, was detected for the first time on MMP this year! And it wasn't just a one-off observation- there were seven detections during surveys and numerous more incidentals throughout the summer. This is somewhat strange as perfect habitat for them has existed at BBO for years yet Yellow Rails were undetected in previous surveys. Geoff Holroyd reports that they were regularly detected in past May Big Birding Days but not in recent years. Yellow Rails are among the least studied marsh birds in our area so why they might've been absent in recent years is unknown for now.

Since this is the third year of this survey, we can detect populations change from year to year. Soras more than doubled in abundance from 48 (2022) to 91 in 2024. Eared Grebe (3) and Yellow Rail (7) were first detected this year. American Bittern went from 8 (2022) to 3 in 2024 and Virginia Rail went from 10 (2022) to 3 this year. Overall, these MMP surveys have proved a successful way to find marsh birds that may have otherwise been overlooked.

### Saw-whet Owl Migration Project Update

By Geoff Holroyd, BBO Chair

Thanks to the diligent work by Jana Teefy our head biologist and master seamster, we deployed another 51 MOTUS nanotags on Saw-whet Owls and... wait for it, 2 Long-eared Owls. First I have to thank the 51 members who sponsored the purchase of the tags at \$300 each. The donors showed great courage and faith in BBO to make such generous donations. They matched the 50 donations for last year, so that we have deployed 100 tags on owls over two autumns. THANK YOU.

What have we learned? The map on page 11 speaks for itself. The general pattern of movements from BBO are curiously dissimilar to last autumn. While the general patter is south, the trend is to south-east rather than south west last autumn. The detections in Montana have shifted but not because of new MOTUS stations. Curiously no owls were detected near Missoula where they are many stations, yet they were detected there in 2023. I can't explain why except for small sample size creating random effects. Two owls were detected south of Saskatoon in October. Why not last year? Because these are new MOTUS towers set up by Canadian Wildlife Service in spring of 2024. Likewise, more detections into North Dakota.

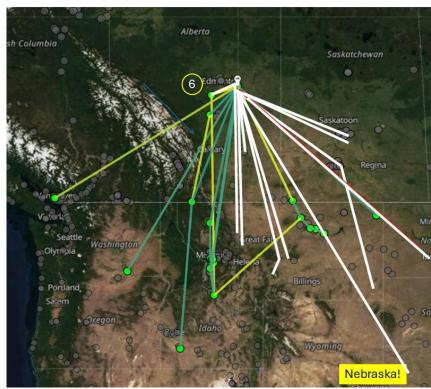


Saw-whet owl with MOTUS tag antenna visible at bottom left. Photo credit Sian Ford.

A long-distance southeasterly detection in Nebraska came with a twist. This owl was tagged on 26 September 2023. No news during this migration and first winter but it was detected 20 and 21 June 2024 just northwest of Cranbrook, BC. Was it breeding near there? Since it was only detected briefly, it likely wasn't nesting but maybe dispersed after breeding. It was detected again in Nebraska on 22 October 2024. This record is much further east and south than any other owl in our study so far.

We didn't get many spring detections. One owl tagged in September was detected in southern Saskatchewan on 9 April 2024. Its movement is more easterly from southern BC than other records. One of our first owl movements detected in October 2023 at

MOTUS Map 1. detections of over 25 owls that were tagged at BBO in autumn 2023 and 2024. The green lines are the south bound tracks in 2023. The vellow lines are spring records, and the white lines are the tracks from autumn 2024. The number 6 near Pigeon Lake represents 6 owls that have been detected by the MOTUS station on the north shore.



Sylvan Lake, came north on 2 April at the south end of Koocanosa Lake in southern BC, then detected at the same station on 11 October headed south. This owl was using the same migration route.

Another owl tagged in September was detected in central Washington on 3 November 2023. It was at the same station from 8 to 12 March 2024 presumably headed north. Then on 3 October it was detected by two of the stations south of Saskatoon migrating way east of its movement in 2023. Interestingly, it was detected at two stations 23 km apart in 32 minutes. It was flying at 43 kph that evening. Hope it had a tail wind!

A big new development was 6, count'em six owls, detected on the north shore of Pigeon Lake. Why? Because Rick Cunduit, a retired engineer set up a new station at his mother's home and she is very excited to have hosted this new MOTUS station. She has never seen a Saw-whet near her home, yet here they are passing by her station more than anywhere else in our study! These records point to a more westerly movement from BBO in autumn. There are few or MOTUS stations in the interior of BC, likewise we are not aware of any owl banders in central BC. Maybe more of our owls head west rather than south but have yet to be detected.

Not every owl left BBO immediately. 9 owls stayed within the range of our station for 10 or more days. One, a breeding female tagged by Jana and staff in the summer in June is still in the natural area; 146 days and counting. Another tagged in October is still within range. Other owls have stayed for up to a month before moving on. Some of these owls may be winter residents in the region, not a in a rush to head south.

This leads to another benefit of our owl project. Although the MOTUS system is 10 years old it is not well developed in western Canada except along the BC coast and Fraser Valley. Our project has directly stimulated researchers, teachers and volunteers to set up more stations in the past year. At least 5 new stations and maybe more are the direct

result of our project's results in the autumn of 2023. Coincidentally, Birds Canada and some universities received a large grant to establish more stations in the three prairie provinces. Hopefully some of these stations will be in place within the two-year life span of our owls' transmitters. Stand by for more interesting news on these owls' movements.

Thank you again for sponsoring a tag and owl. Our members made this project happen. In 2025 we hope to tag Purple Martins to track their movements to the Amazon in South America and back. The main purpose is to learn about the recruitment of young into the breeding population and their movements away from their natal site. You can donate to this project anytime; and you can name the purple martin! If you want to sponsor a tag and name an owl in 2024, please click here!

### BBO's First Track Following a Long-eared Owl

Geoff Holroyd, BBO Chair

Over the past few years, we have banded a few Long-eared Owls but never had a band recovery. This autumn we were able to follow a Long-eared Owl thanks to the donation by Mark Cunduit who sponsored three tags, two of which Jana was able to attach to Long-eared Owls. And the result is spectacular. Jana attached the tag on 22 September 2024 at BBO. It was detected by two MOTUS towers in western North Dakota on 6 October a distance of 923 km in 13 days. These two towers are 120 km apart and cover the distance in 3 hours and 41 minutes which is an average of 32 kph. The first tower is southeast of BBO. However, the second tower is south of the first indicating that the owl was changing direction. Indeed, when it passed by a tower in southeast Colorado it was due south of the Dakotas towers.



Above: Long-eared owl. Photo credit Jana Teefy

On this leg of its migration, it flew 925 km in 12 days similar time and distance when it left BBO. The average is 74 km per day; not as fast as the short leg in North Dakota. Possibly it stopped to feed and rest on these longer legs of migration.

We haven't heard from the second owl; fingers crossed it will pass by a MOTUS tower in the next two years. This immediate success leads to a new project. We propose to get 20 tags for Long-eared Owls in 2025. We don't know how many long-ears we will trap but we want to be ready to track as many as possible. If you want to sponsor a tag for a Long-eared Owl it is not too early and of course, you can name the tag and owl!

If you want to sponsor a tag and name an owl in 2024, please **donate now** and tell us the name of your owl! We will send you a certificate with a photo of your owl and you will receive regular updates on the owl migration project.

Contact us at <u>biologist@beaverhillbirds.com</u> if you are interested in setting up a MOTUS tower.



Map 2. Track of Long-eared Owl 59430 from BBO to Colorado in autumn 2024.

### **Volunteer Spotlight**

### **Gabby Dupuis**

I've pretty much been interested in birds since I was still in high school, although it mostly started out with parrots (and my pigeon of course). It was pretty on and off during those years. Eventually I started looking for birds around my subdivision and started becoming even more interested in birds (of the wild variety). Which is where it really kicked off.



My journey with the BBO started when I took part in the Christmas Bird Count here in Tofield back in 2022. Where Sara, the previous head biologist told me about the volunteering opportunities at the BBO. Then in 2023 is where I started my volunteering. I was already thinking of doing Conservation Biology for my future career path but when I did bird banding it really solidified that idea. I immediately fell in love with being able to handle such amazing creatures while learning more about them and being able to help them survive in the process. I was going through a particularly rough year at this point but even so it became my everything.

I'm excited to continue my journey with the BBO. Being surrounded by such an amazing community while learning something I love is one of the best things I could've asked for. I'm really hoping to turn this into my career in the future.

### **Matt Halfacre**

I am a Wildlife Biologist who works in consulting and have had a lot of opportunities to work with wildlife in my life. I have greatly appreciated all of the experiences volunteering at the BBO has offered, I have had the chance to learn banding practices in songbirds and owls, the chance to grow and enhance my ID skills by accompanying the staff on census surveys, and I have had the pleasure of assisting at educational events with ambassador birds.

My first experience involving the BBO was when I was a wildlife Rehabilitator at WILDNorth and the BBO sent in a clutch of juvenile sawwhets that they were concerned about. After some TLC, the Sawwhets were brought back to the BBO for release and a few weeks later one of the birds was recaptured and looking healthy. As a wildlife rehabilitator it is not often that you know what happens to the animals after release, so I was delighted to hear of its success after release. It has been a wonderful experience spending time at the BBO, and I look forward to spending more time volunteering in the future.



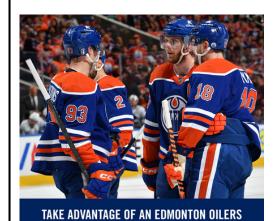
## **BBO Fundraisers**



### **BBO Merchandise**

The BBO has an online merchandise store with t-shirts, hoodies, crewnecks, and more!

**Check it out today!** 



SPECIAL GROUP OFFER WITH \$5 GOING BACK TO BEAVERHILL BIRD OBSERVATORY

# Edmonton Oilers Community Spotlight Fundraiser

Every ticket purchased contributes to BBO. Don't miss out on our exclusive group offer!

**Grab your tickets now!** 

## **Beaverhill Bird Observatory's**



# BirdSmart Education Program



### **BRING A LIVE OWL, HAWK OR FALCON INTO YOUR CLASSROOM!**









BBO's BirdSmart Education Program offers a unique opportunity to engage with a live bird of prey in your classroom or event, showcasing the marvels of avian life, conservation efforts, and the impacts of climate change. Our thoughtfully designed programs are aligned with the Alberta Curriculum and are suitable for learners from Pre-Kindergarten through Grade 12. We also extend our offerings to after-school programs, private events, and birthday celebrations, ensuring a memorable and educational experience for all participants.

### CIRCUITS TO RURAL COMMUNITIES AVAILABLE!

### WINTER 2024/25 PRICING:

### **Curriculum-linked Topics**

### Preschool and Kindergarten (30 minutes):

Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 1 - 2 (60 minutes):

How Birds Survive Winter, Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 3-4 (60 minutes):

Wetland Conservation, Bird Conservation and Climate Change, Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 5 (60 minutes):

Bird Conservation and Climate Change, Adaptations for Flight, Birds and Body Systems, Birds and Migration, Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 6 (60 minutes)

Birds in Ecosystems, Bird Conservation and Climate Change, Birds and Migration, Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 7-9 (60 minutes):

Birds in Ecosystems, Adaptations for Flight, Bird Conservation and Climate Change, Falcons of Alberta, Owls of Alberta, Hawks of Alberta, or Raptors of Alberta

### Grade 10-12 (60 minutes):

Birds – An Early Warning System; Bird Diversity, Conservation, and Research; Birds in Ecosystems; Falcons of Alberta; Owls of Alberta; Hawks of Alberta or Raptors of Alberta

French presentations available upon request!

Contact us for more information or to book education@beaverhillbirds.com 587-735-3534







The Beaverhill Bird Observatory is a proud member of the Beaver County and Tofield communities. We thank our many supporters and funders that are shown below along with personal donations including in memory of Mary Hughes Weir and the Wainwright Wildlife Society.











































TD Friends of the Environment Foundation







Environment and Climate Change Canada



