

# **Annual Report 2023**

By Jana Teefy

With contributions from
Jon Van Arragon, Ethan Denton, Sierra Jamieson, Cala Jorgensen,
Logan Bradley, and Jasper June

#### Thank You to Our Sponsors

The BBO is able to continue its long-term monitoring and public engagement programs thanks to the generosity and support of our sponsors. We sincerely thank the following organizations for helping to fund our research and education programs: Alberta Conservation Association, Alberta Gaming Liquor & Cannabis Commission, Beaver County, Bass Pro Shops and Cabela's Outdoor Fund, Birds Canada Birdathon, Canada Summer Jobs, Claystone Waste Ltd., Clean Harbors, Edmonton Community Foundation, Eco Canada, Edmonton Nature Club, Environment and Climate Change Canada, MCS Net, Nature Canada's Charles Labatiuk Nature Endowment Fund, Nature Canada's Work to Grow Program, Nickle Family Foundation, Spenser Environmental, TD Friends of the Environment Fund, and Wainwright Wildlife Society, Wild Bird General Store. We are also grateful for the many personal donations made by our members including in memory of Mary Hughes Weir.

Without your support, BBO would not be able to continue to do the vital research and programming we offer the public. Thank You!

#### Notes from BBO Chair, Geoff Holroyd

As we completed the replacement of our buildings in 2023, we could focus on more education and research programs. The new 'Nuthatch Nest' was a welcome bunkhouse for staff and volunteers. We still have some work to do on infrastructure and building maintenance will be with us to keep our new buildings in good condition. Our board members continued to provide both advice and hands-on help to accomplish many tasks.

BBO continues with a strong financial position thanks to your donations and hard work applying for grants. Another casino in September provides the base on which we build out budget each year. Your donations to our Endowment Fund in the Edmonton Community Foundation together with ECF's matching grant raised our Endowment Fund to over half million dollars in only 5 years. This fund will provide significant funding in perpetuity for our programs.

We continued to learn about Least Flycatchers including a surprising number of nests that were reused for 2022. We completed the first year of survey of shorebirds on the south shore of Beaverhill Lake to determine if the lake is still worthy of its status as a Western Hemispheric Reserve; spoiler alert, it is! With your support were purchased 50 nanotags that were attached to Northern Saw-whet Owls showing that many migrate south not east as shown by bird bands. All these and our other projects provide opportunities to engage people in the wonders of nature.

Thank you for your ongoing support of BBO activities. We have accomplished much and will continue to grow. Think Globally, Act Locally!

#### Notes from BBO Head Biologist, Jana Teefy

This year has seen many changes and exciting beginnings for the BBO. We said goodbye to Sara Pearce Meijerink and I stepped into the role of Head Biologist in March. We wish you all the best in Labrador, Sara!

2023 has been a year of learning, initiating, and connecting. We participated in new events, like the Snow Goose Festival, instituted new protocols, like digital data entry, found new grant opportunities, and initiated new projects like the Northern Saw-whet Owl nano-tagging and Snow Bunting monitoring. We also worked to install interpretive signage in the natural area and design an interactive display for our specimen collection.

I was able to bring skills from my previous career as a Veterinary Technologist and put them to



Jana in her element extracting a Long-eared Owl

use at BBO. An example of these skills was attaching custom fit nanotags in a backpack configuration to the tiny Saw-whet Owls. I'm excited to see how this project develops and see where my owl, Jimmy Tallon, goes. We caught some exciting new species this year that I was excited to band, including Piliated Woodpecker, Blue Jay, Leconte's Sparrow, Vesper Sparrow, Eastern Phoebe, and Northern Shrike. Sadly, I was not on site when the Boreal Owl was captured.

Jon and I were fortunate to attend the North American Banding Council workshop in Belize where we both received bander and trainer certification. I am extremely proud of the both of us! We were able to explore Belize a bit, saw over 200 new species, and made connections with banders from across North and Central America.



Jewels (Jana's dog) assisting with trail camera servicing. She enjoyed coming to work and took well to her role as the official BBO greeter.

It is a pleasure to be a part of the BBO community and I cherish the connections made with our staff, board, visitors, members, volunteers, and interns. We had the pleasure of hosting banders from other banding stations at BBO and I enjoyed connecting with and learning from them.

I am grateful for the opportunity to be Head Biologist at the Beaverhill Bird Observatory. Jewels and I can't wait to see what happens in the years to come.

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# List of 2023 Executive, Staff and Contact Information

Board	Position	Year
		Joined
Geoff Holroyd	Chair	1984
Helen Trefry	Vice Chair	2014
Rose Scott	Treasurer	2016
Jac Curry	Director at Large	2020
Darren McGregor	Director at Large	2005
	Web Designer	
Emily Gross	Director at Large	2020
	Fundraising	
Julianne Hayes	Director at Large	2019
Glen Hvenegaard	Director at Large	2020
Alyssa Bohart	Director at Large	2018
Christie Campbell	Director at Large	2022
Warren Finlay	Director at Large	2022
Brendan Casey	Director at Large	2022
Richard Hedley	Director at Large	2022
	Willet Editor	
Staff	Position	
Jana Teefy	Head Biologist	
Jon Van Arragon	Assistant Biologist	
Ethan Denton	Seasonal Biologist	
Sierra Jamieson	Seasonal Biologist	
Cala Jorgensen	Seasonal Biologist	
Logan Bradley	Seasonal Biologist	
Jasper June	Seasonal Biologist	

#### Contact Information:

Geoff Holroyd, PhD, Chair of the Board of Directors - <a href="mailto:chair@beaverhillbirds.com">chair@beaverhillbirds.com</a> Jana Teefy, Head Biologist — <a href="mailto:biologist@beaverhillbirds.com">biologist@beaverhillbirds.com</a>

#### Introduction/Summary

The Beaverhill Bird Observatory's field season was led by Head Biologist Jana Teefy along with Assistant Biologist Jon Van Arragon, and summer field assistants Sierra Jamieson, Ethan Denton, and Cala Jorgensen and fall field assistants Logan Bradley and Jasper June.

The Snow Goose Festival kicked off the spring season, bringing over 300 visitors to BBO for guided hikes, banding demonstrations, and opportunities to see the large flocks of Snow Geese on Beaverhill Lake and



across Beaver County. Spring and Fall Songbird Migration Monitoring occurred each morning from May 1 to June 9 and July 20 to October 20, respectively, with 13 standard nets and 7 experimental nets, totalling 20 mist nets. The last of our original buildings, Nuthatch Nest, was replaced this spring by MacLellan Carpentry. This bunkhouse has 3 separate rooms, each with a bunkbed, sleeping up 6 people, and has a beautiful screened-in deck.



The newly built Nuthatch Nest bunkhouse

Summer operations included standard MAPS banding at our 3 stations – BLAB, SOPO, and LILA. Banding efforts this summer also included Tree Swallow, Purple Martin, and Northern Saw-whet Owl nestlings. Additional monitoring projects took place over the summer season, including the continuation of the Forest Breeding Bird Census, the Least Flycatcher nest monitoring, and the Marsh Monitoring Program. Staff initiated projects including Shorebird Surveys, a vegetation inventory, a protocol for monitoring invasive plants in the area, and winter Snow Bunting

monitoring. Staff also worked on stewardship and maintenance activities like fence repair, maintaining trails, installing a handwash station at the outhouse, installing a road sign on Rowen's Route, updating the signage at the visitor parking, general upkeep of the field facilities, and launched an online merchandise store.

Once again, 8 student interns conducted monitoring projects for bats, butterflies, Tree Swallow and House Wren nest monitoring, and the Grassland Breeding Bird Census. Heavy rains

in July caused flooding of the net lanes and trail systems at the SOPO and LILA stations and some of the experimental Migration Monitoring net lanes, Impacting MAPS banding and Migration Monitoring for a short time. Harrier Highway, Duck Drive, and Flicker Freeway were flooded, and the access road was blocked for several days, preventing public access.



Summer staff Cala, Sierra, and Ethan at the banding bench

The BBO was pleased to host events such as the 7<sup>th</sup> annual Geoff Holroyd Young Ornithologists' Workshop, World Migratory Bird Day, Big Birding Breakfast, Supper and Sawwhets, and songbird and owl banding events, which brought over 1700 visitors to the observatory.

The fall owl season was another tremendous success with exciting new outcomes. We operated 9 mist nets with 4 owl audio lures – a male and a female Northern-Saw Whet Owl, a Long-eared Owl, and a Boreal Owl breeding calls targeting those three owl species. This autumn was the first season that BBO introduced a highly successful MOTUS tagging program for Northern Saw-whet Owls. On October 29th, snowfall and low capture rates marked the end of the field season and the closure of the laboratory.

Three new education birds joined the team this year. They are acclimating well and will make great educational ambassadors for our BirdSmart Education Program! During the winter season, staff are hoping the catch and study Snow Buntings in partnership with the Canadian Snow Bunting Network.

For an in-depth look into our day to day activities, highlights, and banding summaries, the Weekly Banding updates can be found <u>HERE</u>.







The newest education ambassador birds. Nina the Burrowing Owl, Keith the Red-tailed Hawk, Tansi the Great Horned Owl.

#### Songbird Migration Monitoring

The spring and fall Migration Monitoring was operated from May 1 to June 9 and from July 20 to October 20, respectively, following the Canadian Migration Monitoring Network protocols and within weather limitations. With a total of 1075 individuals captured in the spring, the 7 experimental nets outperformed the 13 standard nets once again totalling 665 captures (84.8 captures/100 net hours) in the experimental nets compared to 410 captures (20.1 captures/100 net hours). The difference in productivity is even more apparent in the fall with a total of 3072 individuals captured totalling 2121 captures (143.3 captures/100 net hours) in the experimental and 951 captures (16.8 captures /100 net hours) in the standard nets. A total of 47 species were captured in the spring and 70 species captured in the fall.

The BBO team were excited to capture the first Baird's Sparrow and third Northern Shrike in BBO history as well as 2 Blue Jays, the 10<sup>th</sup> and 11<sup>th</sup> in BBO history. Capturing 4 Piliated Woodpeckers in one season was quite the surprise considering we had only captured 3 in the past 40 years. All 4 of the woodpeckers were hatch year birds, which indicates there was a successful nest nearby. Other captures of note included Canada Warblers, a Black-throated Green Warbler, Yellow-shafted Flickers, a Marsh Wren, and a Vesper Sparrow.

The most frequently caught were Yellow Warbler (788), Least Flycatcher (725), Myrtle Warbler (581), Clay-colored Sparrow (287), Tennessee Warbler (250), Black-capped Chickadee (215), House Wren (123), and a surprising 90 Baltimore Orioles. We saw a large Tennessee Warbler influx in July and suspected this may be due to a molt-migration, a phenomenon not previously observed in the species and maybe an effect of the widespread forest fires. An invasion of leaf hopper beetle larvae may also have played a role in bringing the large numbers of Tennessee Warblers and orioles to the natural area. Along with banding, staff conducted a 40-minute daily census to document the species in the natural area, supplementary to what we catch in the nets. With the lake continuing to fill, it was no surprise to see massive flocks of Franklin's Gulls clouding the sky over the lakebed. Census observations of note include a Western Meadowlark, Red Crossbills, White-winged Crossbills, a Double Crested Cormorant, and large flocks of Sandhill Cranes.









A Northern Shrike, a Blue Jay, the first ever Baird's Sparrow at BBO, and one of 4 Pileated Woodpeckers captured this year.

### **MAPS Banding**

Monitoring Avian Productivity and Survivorship (MAPS) is a North American-wide standardized program that monitors nest productivity and survival rates of locally breeding birds to detect trends in local and wide-scale breeding populations. The BBO has operated MAPS banding since the program's inception in 1989. The Observatory currently runs three MAPS stations - BLAB, SOPO, and LILA. The three stations were operated once per ten-day period from June 10 to August 9 within the MAPS protocol parameters designed by the Institute for Bird Populations. As in previous years, LILA was only able to run 9 nets while BLAB and SOPO ran 10 nets. Heavy rains in July caused flooding in the natural a rea, including the LILA and

SOPO net lanes along Lister Lake, preventing the operation of the LILA and SOPO MAPS stations for rounds 9 and 10; BLAB was not impacted. Despite the flooding, 425 birds were captured in 722.5 net hours, producing a capture rate of 58.8 birds /100 net hours.

The most frequent species caught was the Least Flycatcher (118), Yellow Warbler (52), Redwinged Blackbird (31), Tennessee Warbler (27) and Baltimore Oriole (23). The influx of Tennessee Warblers was first noted during MAPS banding and was notably interesting as staff observed no breeding occurrences in the Natural Area, but the warblers arrived in force in mid-July, well before migration would typically begin.



The extent of the flooding in the natural area in July

#### **BBO Lab (BLAB)**

The longest-running MAPS station at the BBO is the BBO Lab, or BLAB, station. 2023 was the 34<sup>th</sup> year of operation for the station, making it one of the longest-serving MAPS sites in the program. Due to the ongoing forest succession, BLAB is surrounded by a young poplar forest with little undergrowth, and consequently, catches fewer birds than BBO's other two MAPS stations. This year, BLAB was operated on the 10<sup>th</sup>, 19<sup>th</sup>, and 30<sup>th</sup> of June, the 10<sup>th</sup> and 20<sup>th</sup> of July, and the 1<sup>st</sup> of August for a total of 316 net hours. With 75 birds caught during the summer, BLAB totalled 23.7 captures/100 net hours. Least Flycatchers were by far the most common bird caught, with 38 captures followed by 7 Baltimore Orioles. Of the 14 species caught, highlights were Hermit Thrush (1) and Common Grackle (1).

#### Sora Pond (SOPO)

The Sora Pond, or SOPO, MAPS station is situated on the southwest side of Sora Pond, between the pond and Lister Lake. It's comprised of both young poplar forest and wetland habitat full of thick willow shrubs, a combination which gives SOPO a good diversity of birds as well as consistently high capture rates compared to the other two stations. SOPO was run on the 11<sup>th</sup> and 22<sup>nd</sup> of June, and the 4<sup>th</sup> and 11<sup>th</sup> of July, before flooding made running the station

impossible for the rest of the season. During these 4 days, SOPO accumulated 216.5 net hours, catching 202 birds for a rate of 93.3 captures/100 net hours. Least Flycatchers were the most common catch, with 38 captures followed by 32 Yellow Warblers, 18 Tennessee Warblers, and 14 Cedar Waxwings. Birds of note included Black-and-white Warbler (2) and unusually high numbers of Gray Catbirds (9). A singing Field Sparrow evaded the nests but the tape of its song confirmed the unusual record.

#### Lister Lake (LILA)

The Lister Lake, or LILA, station is located on the northwest shore of Lister Lake on the border of a young poplar forest and the dense willows and cattails on the lakeshore. LILA was the first of the three MAPS stations to flood this year, becoming inaccessible in mid-July. Consequently, the station was only operated on 4 occasions, these being the 12<sup>th</sup> and 23<sup>rd</sup> of June, and the 5<sup>th</sup> and 12<sup>th</sup> of July. In 2023, LILA saw 148 birds caught in 190 net hours, for 77.9 captures/100 net hours. Once again, Least Flycatchers were the most regular find in the nets, with 42 captures, followed by 18 Yellow Warblers and 15 Red-winged Blackbirds. Interesting species caught included, Red-eyed Vireo (3), Black-and-white Warbler (1), and Rose-breasted Grosbeak (1).









A Baltimore Oriole, Warbling Vireo, Rose-breasted Grosbeak, and Gray Catbird. Common captures at our MAPS stations

Jon with a Long-eared Owl



A Boreal Owl, the first captured in 4 years



Geoff and a Saw-whet owl after a nanotag deployment

#### **Owl Migration Monitoring**

The Owl Migration Monitoring season was successful with 296 Northern Saw-whet Owls, 1 Boreal Owl, and 11 Long-eared Owls captured using 9 mist nets and 4 audio lures – female Saw-whet, and male Saw-whet, Long-eared, and Boreal Owl calls. The Northern Saw-whet and Long-eared Owl nets operated from September 1 to October 28 and the Boreal Owl nets from September 21-October 28. We had higher Saw-whet Owl captures than last year with 296 total captures, compared to 236 captures in 2022, but half as many Long-eared Owls than the previous year with 11 captures this year and 21 captures last year. Interestingly, all of the Long-eared Owls received new bands with none being recaptures. The staff were also delighted to have captured and banded the first Boreal Owl in 4 years! Excitingly, we had 9 Northern Saw-whet Owls recaptured this year. Three of the Northern Sawwhet Owl recaptures were originally banded in Lesser Slave Lake and Bragg Creek in September 2022. Another recapture was banded in Prince Albert, Saskatchewan in October 2022, and one was originally banded at Beaverhill Bird Observatory in 2022. The remaining recaptures were banded earlier this fall at BBO. These recaptures provide important data on these owl's movements, which deepen our understanding of their migration routes. On October 29th, snowfall and low capture rates marked the end of the field season and the closure of the laboratory.

The launch of our Northern Saw-whet Owl MOTUS nano-tagging project was an exciting addition to the Beaverhill Bird Observatory's monitoring efforts this fall. The project involves attaching nanotags in a backpack configuration on Saw-whet Owls, the first project of its kind, and allows us to track their movements and migratory pathways over a 2-year span. When birds equipped with these nanotags fly within 15 km of a MOTUS receiver, the tag pings all the information from that tag to the MOTUS databases. Geoff and Jana equipped 48 Saw-whet Owls with nanotags and we've already had 9 birds detected at other stations! Based on our band recovery data, we were

expecting the owls to migrate across the prairies into eastern Canada and the USA. However, all 9 of the owls have been detected to the south and west – Sylvan Lake, Waterton, Montana, Idaho, Washington and into south BC. None have been detected east as predicted from our banding recoveries. These nanotags were made possible by generous donations from BBO members who sponsored tagged owls. We hope to continue MOTUS tagging in 2024, both at nest sites and during migration monitoring, to continue researching Northern Saw-whet Owls movements and breeding locations. To learn more about this project click here <a href="https://naturealberta.ca/wp-content/uploads/2024/01/Nature-Alberta-Mag-Winter 2024.pdf">https://naturealberta.ca/wp-content/uploads/2024/01/Nature-Alberta-Mag-Winter 2024.pdf</a> and check out page 14-17.

#### **Nestling Banding**

In addition to mist-netting efforts, staff banded Tree Swallow, Purple Martin, and Northern Saw-whet Owl nestlings. The BBO supports the most productive Tree Swallow breeding colony in North America with over 200 nest boxes. Additionally, University of Alberta researcher Dr. Ivy Schoepf researched heamosporidian infections and their effect on the nestlings and a possible correlation between parasites carrying avian malaria and nest site

selection. Ivy and the Tree Swallow interns banded both adult (29) and nestling (179) Tree Swallows, while the BBO staff focused on the Spiral Grid, banding 148 nestlings. The Mountain Bluebird nestlings on the Road grid were, unfortunately, not monitored or banded this year.

For the second consecutive year, the BBO hosted a successful Purple Martin colony! The colony increased to 19 successful nests - an exciting indication that the Martins are thriving here! Staff banded the nestlings in one colony box but were thwarted at the second box by a House Wren who built a nest and laid five eggs in the winch mechanism. Despite this unexpected complication, 39 nestlings were banded.



A Saw-whet Owl parent peeking it's head out of a nest box

Additionally, one of the 20 owl nest boxes was occupied by a pair of Northern Saw-whet Owls, who successfully raised 4 young, all of which were banded and successfully fledged. We hope to nanotag nesting owl adults and chicks in the coming seasons to better understand their breeding and nesting locations as well as their movements. If you would like to sponsor a tag and name an owl click here <a href="http://beaverhillbirds.com/get-involved/donate/">http://beaverhillbirds.com/get-involved/donate/</a>

#### **Events**

#### **Snow Goose Festival**

This spring saw the return of the Snow Goose Festival, the first in nearly 20 years! The BBO was proud to chair and co-host the event, which was based out of the Tofield Arena. Over 1200 people attended the two-day event, taking bus tours to visit the large flocks of Snow Geese, attending a banquet with a catered dinner, silent auction, live music and a presentation by Garnet Raven on Snow Geese and the effects of Highly Pathogenic Avian Influenza. Additionally, a tradeshow was held in the arena with educational presentations, kid's crafts and a BBO display where attendees were able to meet and hold Keith, the Red-tailed Hawk, and Maple, the Peregrine Falcon. The event brought over 300 visitors to BBO for interpretive banding demonstrations and hikes in the natural area to learn about the history of Beaverhill Lake. BBO hosted 300 visitors with hikes in the natural area and banding demonstrations at our center.

#### **Public Banding Events**

In addition to daily banding, the staff hosted over 1700 visitors through various public events, including over 40 ticketed songbird and owl banding events, World Migratory Bird Day, Big Birding Breakfast, Supper and Saw-whets, and hosting various school groups and the Metis Nation of Alberta for banding demonstrations. Event attendees enjoyed going on net check with the biologists, watching interpretive banding demonstrations, meeting our educational ambassador birds, and learning about our research, monitoring programs, conservation efforts and engaging with the natural world.

Ticketed banding events occurred from May 18 to June 9 for spring songbird banding, August 19 to September 10 for fall songbird banding, and September 14 to August 27 for owl banding events. Additionally, BBO hosted the annual Big Birding Breakfast May 27-28 with over 100 people watching educational banding demonstrations, interacted with a specimen display, enjoying a crepe breakfast, participated in crafts and games, and released feathers into the windy grassland for the nesting Tree Swallows. Another 100+ visitors joined us for Super and Saw-whets on September 23-24 for a home-cooked vegetarian meal, banding demonstrations, live music, and stargazing at the lakebed. BBO also hosted a free event on May 13 for World Migratory Bird Day to celebrate the return of our feathered friends with banding, guided hikes to the weir and lakebed, and crafts. In addition to these events, BBO hosted visitors from the Metis Nation of Alberta, Ellis Bird Farm, Mackenzie Nature Observatory, the Red Deer Polytechnic Group, John Acorn's university class and Tofield High School.

There were three additions to our education team this season – Tansi a young Great Horned Owl, Nina, a young Burrowing Owl, and Keith, an 8-year-old rescue Red-tailed Hawk. They have all been an absolute joy to work with and are adjusting well to the crowds of people, preparing them for the upcoming BirdSmart Education program in the winter.



Sierra giving a banding demonstration at an event.



A crowd gathering for a Supper and Saw-whets event.

#### Young Ornithologist's Workshop

The BBO was pleased to host the 7th annual Geoff Holroyd's Young Ornithologists Workshop with 10 youths from Alberta, British Columbia, Massachusetts and Japan attending. Over the course of the week, the young birders learned how to age, sex, and identify many of our local passerines and gained skills in bird banding and extraction from mist nets. As well as banding, the youths experienced what it's like to be field biologists - camping in the clearing, waking up at 4:30 am, assisting with food prep and handwashing dishes. The afternoons were filled with various activities and guest speakers, such as Geoff Holroyd, Matt Turnbull and Dave Lawrie presenting on Tree Swallows research, Peregrine Falcon recovery, aquatic invertebrates, and entomology. The youths enjoyed learning various wildlife monitoring techniques participating in shorebird surveys, pond dipping, and insect netting. The two final days were spent at UpsandDowns Falconry Farm and on a birding big day, where the team agonizingly totalled 99 species found.



The 2023 YO team, left to right: (top:) Cala Jorgensen, Toby Ye, Heather Trocher, Helen Trefry, Ethan Denton (middle:) Jon van Arragon, Jana Teefy, Sierra Jamieson, Alex Zbylut, Paul Jacques, Quinn Desilets, Geoff Holroyd (bottom:) Braxton Igne, Dave Lawrie, Jay Froese, Jewels (dog), Mianna Popik, William Buswell, Gwendolyn Bateman-Dungey, Karin Higuchi

#### Internships and reports

The BBO was pleased to provide 8 students once again with summer internships. These students monitored and maintained the Tree Swallow and House Wren nest box grids, surveyed local butterfly and insect populations, monitored bat populations through box checking and acoustic detection, and completed the Grassland Breeding Bird Survey Grid. Reports on all these efforts are published on the BBO website. The Observatory would like to thank the interns, as well as their expert mentors, for their dedication and hard work this summer!

#### Intern Project Reports can be found on our website **HERE**.

**Grassland Breeding Bird Surveys** 

Jasper June (Janine Heber) Mentor: Karin Snyder House Wren Nest Box Surveys: Willow Zilliox & Adrienne Bailey

Mentor: Zach Antoniw

<u>Tree Swallow Nest Box Surveys</u>
Jinxuan Cui & Lucille Wang

Mentor: Ivy Schoepf

<u>Butterfly Surveys</u> Laura Azzolini Correa

Mentor: John Acorn

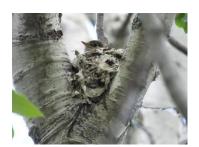
#### **Bat Monitoring**

Maria Mejia and Jasper O'Driscoll
Mentors: Erin Low and Lizelle Odendaal

#### **Additional Monitoring**

#### **Nest Searching and Monitoring**

BBO staff and volunteers successfully located and monitored 48 natural nest s including those of the Least Flycatcher (36), Yellow Warbler (2), American Robin (3), Yellow-bellied Sapsucker (2), Gray Catbird (1), Tree Swallow, and Baltimore Oriole (1). The Tree Swallow nests were in natural tree cavities, which is worthy of noting. The staff also used the pole camera to explore a snag with multiple cavities and found a House Wren, Yellow-bellied Sapsucker, a Tree Swallow nest, and what was likely a cavity used by a Northern Flying Squirrel all in the same tree.



Least Flycatcher on a nest

#### **MOTUS**

BBO's MOTUS station was operational and connected to the global network in early May, after fixing our solar power system. Detections this year include, White-throated Sparrow (4), Bank Swallow (25), and Swainson's Thrush (1). It's exciting to see more species and individuals detected each year. Additionally, 36 Northern Saw-whet Owls were detected, all of which were tagged at the observatory this fall. With 13 towers in Alberta already, and more being installed every year, we expect more projects and many more detections in the years to come.



A Northern Saw-whet Owl perched on a branch with a nanotag

#### **Least Flycatcher Nest Monitoring**

The Least Flycatcher project continued this year with 24 new nests found and monitored for breeding, timing, clutch size, and nest outcomes. Nest clustering was also evaluated. Furthermore, 18 of last year's nests were relocated and monitored for reuse. Surprisingly, 8 (44%) of those nests were reused this year.



Least Flycatcher nest with eggs photo taken with pole camera.

#### Marsh Monitoring Project

Marsh Monitoring continued this year with 4 surveys completed on June 9, 16, 21, and 25 starting at dawn. Each survey includes 8 standardized point counts along the shore of Lister Lake from the Weir to Lister Lookout, where 10 wetland species are targeted using audio playback. During the standard surveys, 5 of the 10 target species were found – American Bitterns, Soras, Virginia Rails, Nelson's Sparrows, and Pied-billed Grebes. Horned Grebes, Rednecked Grebes, Yellow Rails, Eared Grebes, and Least Bitterns were not detected. On June 29 an additional survey was completed on the southern shore of Lister Lake where Yellow Rail were detected in the 2017 surveys. Unfortunately, Yellow Rail were not detected this year, however, Soras, Nelson's Sparrows, a Virginia Rail, and an American Bittern were detected. Vegetation surveys for this project were completed on July 7 to document habitat types and estimated water depth.

#### Forest Breeding Bird Census Grid

Staff completed 8 Forest Breeding Bird Census surveys with 50 point counts over 25ha. Observations of note are the previously mentioned rush of Tennessee Warblers in mid-late July, which were not present earlier the breeding season. Least Flycatcher observations also appear to be fewer than previous years. A total of 132 territories were defined for 6 different species. As in previous years Least Flycatchers were the most abundant species with 66 territories identified throughout the study area. Yellow Warblers remained abundant with 37 territories, these being more concentrated at the northern edge of the census grid where more willow habitat is present. House Wrens were also quite common as a grid of nest boxes for this species is present within the census area. Other species for which territories were determined were Baltimore Oriole, Warbling Vireo, and Red-eyed Vireo. The overall number of territories detected in this year's censuses were lower than the previous two years. There were also fewer territories for each individual species compared to the previous two years.



Least Flycatcher



Red-eved Vireo



Yellow Warhler



Tennessee Warbler

#### **Shorebird Surveys**

Shorebird surveys were conducted every 7-10 days from May 1 to August 31 with 12 survey points along the south shore of Beaverhill Lake at 400m intervals along the 4.4 km shoreline from Francis Point to the weir at Lister Lake. All shorebirds within a 200 m radius of each survey point were identified and counted using a spotting scope. Over the course of the survey period, 25 shorebird species were detected and over 36,000 individual shorebirds were observed. Long-billed Dowitcher was the most populous, accounting for nearly 28,000 individuals. The Dowitchers began congregating in early July but vanished, along with most other shorebirds, when the area flooded and the mudflats along Beaverhill Lake disappeared. Lesser Yellowlegs were the most consistently detected, being present at 12 of 14 surveys.



Ethan on a shorebird survey

#### **Mammal Monitoring**

Three trail cameras successfully monitored the mammal populations within the Natural Area. The cameras are serviced twice each year to download photos and replace batteries. The photos are analyzed, and the data is submitted to Alberta Parks and WildTrax. The most common species observed are White-tailed and Mule deer, moose, and coyotes. Neither skunks or porcupines were detected this year and, importantly, neither were wild boar.



A moose captured on one of the trail cameras

#### **External Parasite Projects**

This year BBO Staff collected external avian parasites - flat flies (hippoboscid *sp*) for the University of Guelph as well as avian ticks for the Upper Grand Tick Center in Fergus, Ontario; both studies ended this year. We also assisted researcher, Dechen Edwards, the University of Alberta in collecting feather mites, microbes, and preen oil. She is studying feather mite diet to test their hypothesis that their diet consists of microbes and preen oil.



Feather mites seen on a flight feather

#### **Plant Surveys**

A project for BBO this summer was to inventory the local plants and create an invasive plant survey protocol. Just over 100 species of plants were collected, identified, and 25 specimens were pressed for future reference.

The invasive species protocol, intended to be completed every five years, calls for plant surveys at twelve 5x2 metre plots based around Lister Lake - four forest plots, four graminoid plots, and four wetland plots. The survey this year didn't detect any invasive species in the plots, however, invasive plants are known to be present in the natural area, including Timmothy, Canada Thistle, and Kentucky Bluegrass.

#### **Snow Bunting Monitoring**

This winter the BBO initiated a Snow Bunting project in partnership with the Canadian Snow Bunting Network (CSBN) to monitor their population dynamics, overall health, responses to weather changes, and movements. This project involves locating flocks of Snow Buntings and using baited traps to capture and band them. So far, we have been unsuccessful in catching Snow Buntings; however, we are still learning about them and just how nomadic the buntings are.



A flock of Snow Buntings

#### NABC Workshop and Certification, Belize

After the field season wrapped up, Jana and Jon attended the North American Banding Council (NABC) workshop and certification session at the Toucan Ridge Ecology and Education Society in November in Belize.

NABC is a non-profit organization that aims to promote sound and ethical techniques in bird banding. This organization offers certification at 3 levels: assistant, bander, and trainer. After being evaluated and tested on multiple exams, Jana and Jon earned both bander and trainer certifications, which are the 2 highest levels of certification NABC offers. This certification offers a higher level of data collection and training opportunities at BBO.

They enjoyed seeing many incredible birds, such as Keel-billed Toucans, Collared Aracari, Tody Motmot, Common Pauraques, American Pygmy Kingfisher, Royal Flycatcher, and a Golden-hooded Tanager. Jana and Jon had an incredible time on this trip and are looking forward to utilizing their new skills and knowledge in the upcoming field season and sharing what they learned with the BBO staff, volunteers, and Young Ornithologists. Thanks again to BBO for sending us on this adventure!



Jon at the banding bench



Royal Flycatcher



Green Honeycreeper



Jana banding a Common Pauraque

#### **BirdSmart Education Program**

This past years BirdSmart Education program was a resounding success with 212 presentations given to 5498 students and 1153 adults on birds, conservation, and the effects of climate change from November, 2022 to April, 203. Sara, Jana and Jon teamed up with ambassador birds Remy the American Kestrel and Maple the Peregrine Falcon to deliver presentations to schools in Edmonton and surrounding areas and as far away as Lac La Biche, Westlock, Wainwright, Sedgewick, Red Deer, Drayton Valley, Swan Hills, Alder Flats, Fort MacMurray, and Winfield.

In addition to in-school presentations, BBO staff and ambassador birds attended events at 2 teachers' conventions, Backyard Birds store, Wild Bird General Store, Wild Birds Unlimited store, Boulders rock climbing gym, an Edmonton Oilers game, and at Hockey Hooky, where they presented to 12,000 students between periods at an Oil Kings game.

The 2023/2024 BirdSmart Education season is off to a great start with the additions of the new ambassador birds Nina the Burrowing Owl, Keith the Red-tailed Hawk, and Tansi the Great Horned Owl.

If you would like a live bird of prey to attend your school, meeting or private event (we do birthday parties as well!), be sure to contact our education team at <a href="mailto:education@beaverhillbirds.com">education@beaverhillbirds.com</a>



Jana presenting with Nina



Jon presenting with Maple for Hockey Hooky at Rogers Place

#### Willet Newsletters

The Willet is the official newsletter of the Beaverhill Bird Observatory. Three editions are produced annually, containing information about upcoming events, stories from the field and more. In 2023, these were produced by BBO board member Richard Hedley, which were sent out to our membership. Richard did a wonderful job of keeping you informed of all the work we do. Past editions of the Willet from 2023 or earlier, can be found by visiting our website HERE.



Richard Hedley, BBO Board member and Editor of the Willet Newsletter

#### Acknowledgement of Volunteers and Members

As always, the BBO relies on the time, effort, and skill of our many incredible volunteers. We'd like to extend special thanks to everyone who gave their time to the BBO this year with banding efforts, stewardship, event help, meal preparation, and work bees and the casino fundraiser.

Our work would not be possible without the incredible support from our volunteers. We thank our volunteers throughout the season—Aiden, Andra, Braxton, Brett, Brenda, Charlotte, Carolyn, Christian, Christa, Christie, Connie, Darlene, David, Deanne, Hazel, Emily, Ezekiel, Foster, Gabby, Glen, Hazel, Hyrerin, Irene, Jac, Jay, Jo-anne, Kale, Ken, Kylli, Kaitlin, Kelsi, Kirstin, Kalyssa, Laura, Leslie, Leonard, Jenelle, Jennifer, Julianne, Matt, Madison, Marissa, Martine, Melissa, Makayla, Maud, Marin, Megan, Meghan, Nathaniel, Nicole, Nesha, Nik, Pat, Peter, Patrick, Pricilla, Rachel, Richard, Rylan, Solene, Shawn, Sian, Trish, Willow and Xavier and anyone we may have missed. Thank you to our university interns for collecting data during the field season.

Thank you to our incredible board members: Geoff Holroyd, the chair, for his expertise and leadership, Helen Trefry, vice-chair and Phil Trefry for housing and caring for our ambassador birds, coordinating the Young Ornithologists Workshop, Supper and Saw-whets, and their work on the Volunteer Appreciation night; Rose Scott for her role as treasurer; Richard Hedley editor of The Willet; Emily McLellan heading the fundraising committee; Glen Hvenegaard for organizing the internship program and strategic plan committee; Darren McGregor for managing our website; and board members Julianne Hayes, Jac Curry, Alyssa Bohart, Christie Campbell, Kimberly Fulton, Warren Finlay, and Brendan Casey for all their amazing work and contributions to our organizations.

The BBO would like to thank our staff this year for their contributions to the field season: Thank you to Head Biologist Jana Teefy and Assistant biologist Jon Van Arragon, and seasonal biologists Ethan Denton, Sierra Jamieson, Cala Jorgensen, Logan Bradley, and Jasper June for all of their efforts. Thank you to Jewels, the dog and official greeter, for always warmly greeting our volunteers and guests. Lastly, the BBO would not be possible without the generous support from our members and sponsors featured below.



Volunteers having lunch at the work bee.

# Appendix 1

#### Spring Songbird Migration Monitoring

Table 1. Banding totals for spring Migration Monitoring in the standard nets

Species Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total
Alder Flycatcher	1				1
American Redstart	2				2
American Robin	10	5	6		23
Baltimore Oriole	13	35	10	3	61
Black-and-white Warbler	1				1
Black-capped Chickadee	1	3	1		5
Brown-headed Cowbird	4			1	5
Canada Warbler	1				1
Chipping Sparrow	13	1			14
Clay-colored Sparrow	7	2			9
Common Yellowthroat	1				1
Downy Woodpecker		2	1		3
Gray Catbird	2				2
Hairy Woodpecker				1	1
House Wren	19	7		1	27
Least Flycatcher	68	40	4	2	114
Lincoln's Sparrow	1				1
Mourning Warbler	2				2
Myrle Warbler	5				5
Orange-crowned Warbler	1				1
Ovenbird	2				2
Purple Finch		1			1
Red-eyed Vireo	4				4
Red-winged Blackbird	9			1	10
Savannah Sparrow	1				1
Slate Colored Junco	1				1
Song Sparrow	1				1
Swainson's Thrush	33			1	34
Traill's Flycatcher	4		1		5
Tree Swallow	2	1			3
Veery	1				1
Warbling Vireo	5				5
White-crowned Sparrow	2				2
White-throated Sparrow	18	3	1		22
Yellow Warbler	9	12	6	2	29
Yellow-bellied Flycatcher	1				1
Yellow-bellied Sapsucker	1	7	1		9
Total	246	119	31	12	410

1. Banded recently (within 90 days) at the BBO

2032.5 net hours 20.07 captures/100 net hours

- 2. Banded at the BBO >90 days prior to recapture (eg. In a previous year
- 3. Banded at a location other than the BBO
- 4. Caught in a mist net but not banded (eg. Escaped net)

Table 2. Banding totals for spring Migration Monitoring in the experimental nets

Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total
Alder Flycatcher	1				1
America Goldfinch	5				5
American Redstart	5				5
American Robin	2	1			3
Baltimore Oriole	13	10	2	1	26
Black-capped Chickadee	1	9	4		14
Blackpoll Warbler	1				1
Blue-headed Vireo	1				1
Brown-headed Cowbird		1			1
Cedar Waxwing	5				5
Chipping Sparrow	22			1	23
Clay-colored Sparrow	184	37	8	4	233
Common Yellowthroat	12				12
Downy Woodpecker		1			1
Gray Catbird	5				5
House Wren	8	1	1	2	12
Least Flycatcher	77	11	1	6	95
Lincoln's Sparrow	2				2
Magnolia Warbler	1				1
Mourning Warbler	2				2
Myrle Warbler	11		1		12
Orange-crowned Warbler	5				5
Red-eyed Vireo	1				1
Red-winged Blackbird	2				2
Rose-breasted Grosbeak	1				1
Ruby-crowned Kinglet	2				2
Ruby-throated Hummingbird				1	1
Savannah Sparrow	2				2
Song Sparrow	5		1		6
Swainson's Thrush	3				3
Tennessee Warbler	4				4
Traill's Flycatcher	17	1	1		19
Tree Swallow	16	3	3		22
Warbling Vireo	4		2		6
Western Wood Pewee	2				2
White-crowned Sparrow	3		_		3
White-throated Sparrow	8				8
Yellow Warbler	77	22	11	3	113
Yellow-bellied Sapsucker	3	2			5
Total	513	99	35	18	665

1. Banded recently (within 90 days) at the BBO

794 net hours

2. Banded at the BBO >90 days prior to recapture (eg. In a previous year

83.75 captures / 100 net hours

3. Banded at a location other than the BBO

4. Caught in a mist net but not banded (eg. Escaped net)

## Fall Songbird Migration Monitoring

Table 3. Banding totals for fall Migration Monitoring in the standard nets

Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total	
Alder Flycatcher	1					1
American Goldfinch	1					1
American Redstart	7	2				9
American Robin	3					3
American Tree Sparrow	1					1
Baltimore Oriole	1					1
Bay-breasted Warbler	4					4
Black-and-white Warbler	2					2
Black-capped Chickadee	18			3		99
Blackpoll Warbler	12		<u>'</u>	<i>.</i>		12
Black-throated Green Warbler	12					1
	1					1
Blue Jay						1
Blue-headed Vireo	1					
Brown Creeper	5				_	5
Brown-headed Cowbird	1				1	2
Canada Warbler	2					2
Clay-coloured Sparrow	3	1				4
Common Yellowthroat					1	1
Connecticut Warbler	1					1
Downy Woodpecker	4	6				10
Eastern Phoebe	1					1
Golden-crowned Kinglet	2	1				3
Gray Catbird	1					1
Hairy Woodpecker	5	4		1	1	11
Hermit Thrush	1					1
House Wren	16	6			1	23
Least Flycatcher	125	29		3	5	162
Lincoln's Sparrow	3					3
Magnolia Warbler	15	1				16
Mourning Warbler	2					2
Myrtle Warbler	260	8		1	4	273
Nashville Warbler	1					1
Northern Waterthrush	2					2
Orange-crowned Warbler	11					11
Ovenbird	23					26
Pileated Woodpecker	4					4
Pine Siskin	1					1
						8
Red-breasted Nuthatch	8					
Red-eyed Vireo	5					5
Rose-breasted Grosbeak	8					8
Ruby Crowned Kinglet	12				-	12
Ruby-throated Hummingbird		1			6	7
Sharp-shinned Hawk	4					4
Slate-coloured Junco	33					37
Swainson's Thrush	29				1	30
Tennessee Warbler	22	3	:	1	1	27
Traill's Flycatcher	4					4
Vesper Sparrow	1					1
Warbling Vireo	13	4				17
Western Palm Warbler	4					4
White-breasted Nuthatch	1	6				7
White-crowned Sparrow	1					1
White-throated Sparrow	3					3
Wilson's Warbler	7					7
Yellow Warbler	38	15		6		59
Yellow-bellied Flycatcher	2					2
Yellow-bellied Sapsucker	3					4
Yellow-rumped Warbler (Myrtle						
x Audubon's hybrid)	1					1
Yellow-shafted Flicker	1					1
Total	742		1!	5 2	1	951
	742	1/3	1.		-	JJI

<sup>1.</sup> Banded recently (within 90 days) at the BBO

<sup>4406.5</sup> Net hours 16.77 captures/100 net hours

<sup>2.</sup> Banded at the BBO >90 days prior to recapture (eg. In a previous year

<sup>3.</sup> Banded at a location other than the BBO

<sup>4.</sup> Caught in a mist net but not banded (eg. Escaped net)

Table 4. Banding totals for fall Migration Monitoring in the experimental nets

Species	Banded Repe	at <sup>1</sup> Return	Other <sup>4</sup>	Total	
Alder Flycatcher	12				12
American Goldfinch	2	1	4		7
American Redstart	42	2			44
American Robin			1	1	2
American Tree Sparrow	13				13
Baird's Sparrow	1				1
Baltimore Oriole	2				2
Bay-breasted Warbler	1				1
Black-and-white Warbler	1	1			2
Black-capped Chickadee	45	46	6		97
Blackpoll Warbler	16	1			17
Blue-headed Vireo	1				1
Blue Jay	1				1
Brown-headed Cowbird	1				1
Canada Warbler	4				4
Cedar Waxwing	2				2
Clay-coloured Sparrow	37	3		1	41
Common Yellowthroat	18	J	1		19
Downy Woodpecker	18	1	1		2
Hermit Thrush	1	1			
	37	1.0		0	1
House Wren		16		8	61
Least Flycatcher	312	37		5	354
Leconte's Sparrow	10				10
Lincoln's Sparrow	6				6
Magnolia Warbler	20	2			22
Marsh Wren	1				1
Mourning Warbler	7				7
Myrtle Warbler	270	19	1	1	291
Nashville Warbler	1				1
Northern Shrike	1				1
Northern Waterthrush	6				6
Orange-crowned Warbler	27				27
Ovenbird	8				8
Philadelphia Vireo	4				4
Purple Finch	3				3
Red-breasted Nuthatch	1				1
Red-eyed Vireo	12	1			13
Rose-breasted Grosbeak	6				6
Ruby Crowned Kinglet	27	1			28
Ruby-throated Hummingbird				2	2
Savannah Sparrow	2				2
Slate-coloured Junco	18	3			21
Song Sparrow	5				5
Swainson's Thrush	5			1	6
Tennessee Warbler	188	26	1	4	219
Traill's Flycatcher	45			2	47
Warbling Vireo	35	11	4	1	51
Western Palm Warbler	12				12
Western Wood-Pewee	1				1
White-crowned Sparrow	9				9
White-throated Sparrow	16				16
Wilson's Warbler	16			1	
Yellow Warbler		02	1.4		17
	478	82	14	13	587
Yellow-bellied Sapsucker	4	4			4
Yellow-shafted Flicker	1	1		10	2
Total	1795	254 within 90 days	32	40	2121

<sup>1.</sup> Banded recently (within 90 days) at the BBO

1440 net hours 143.26 captures/100 net hours

<sup>2.</sup> Banded at the BBO >90 days prior to recapture (eg. In a previous year

<sup>3.</sup> Banded at a location other than the BBO

<sup>4.</sup> Caught in a mist net but not banded (eg. Escaped net)

#### **MAPS Monitoring**

Table 5. Banding totals for BLAB MAPS station

Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total	
American Robin		1				1
Baltimore Oriole		5		2		7
Black-capped Chickadee		1		3		4
Brown-headed Cowbird		2			1	3
Cedar Waxwing		1				1
Common Grackle		1				1
Hairy Woodpecker				1		1
Hermit Thrush		1				1
Least Flycatcher	2	25	6	6	1	38
Red-winged Blackbird		2		1		3
Rose-breasted Grosbeak		5				5
Tennessee Warbler		1			1	2
Warbling Vireo		5		1		6
Yellow Warbler		2				2
Total	Ţ.	52	6	14	3	75

- 1. Banded recently (within 90 days) at the BBO
- 2. Banded at the BBO >90 days prior to recapture (eg. In a previous year
- 3. Banded at a location other than the  $\ensuremath{\mathsf{BBO}}$
- 4. Caught in a mist net but not banded (eg. Escaped net)

Table 6. Banding totals for SOPO MAPS station

Species Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total	
American Goldfinch	2				2
American Robin	2				2
Baltimore Oriole	10				10
Black-and-white Warbler	2				2
Black-capped Chickadee	5		2	1	8
Brown-headed Cowbird	6			1	7
Cedar Waxwing	14				14
Clay-coloured Sparrow	4				4
Common Yellowthroat	3				3
Grey Catbird	5	4			9
House Wren	3				3
east Flycatcher	30	3	4	1	38
incoln's Sparrow	3			1	4
Myrtle Warbler	1				1
Ovenbird	2				2
Red-winged Blackbird	10		1	2	13
Song Sparrow	5	3	1	1	10
Swainson's Thrush	1				1
Tennessee Warbler	14			4	18
Fraill's Flycatcher	2	2			4
Tree Swallow	2		1		3
Warbling Vireo	3				3
White-throated Sparrow	3				3
Yellow Warbler	15	7	8	2	32
/ellow-bellied Sapsucker	2	1	3		6

- 1. Banded recently (within 90 days) at the BBO
- 2. Banded at the BBO >90 days prior to recapture (eg. In a previous year
- 3. Banded at a location other than the BBO
- 4. Caught in a mist net but not banded (eg. Escaped net)

Table 7. Banding totals for LILA MAPS station

Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Other <sup>4</sup>	Total	
American Robin		1	1			2
Baltimore Oriole		5		1		6
Black-and-white Warbler		1				1
Black-capped Chickadee		5	1			6
Brown-headed Cowbird		2				2
Cedar Waxwing		4				4
Downy Woodpecker				1		1
Grey Catbird		2				2
House Wren		5	4			9
Least Flycatcher	2	7	8	7		42
Red-eyed Vireo		3				3
Red-winged Blackbird	1	3		1	1	15
Rose-breasted Grosbeak		1				1
Song Sparrow		7	1			8
Tennessee Warbler		6			1	7
Traill's Flycatcher		1				1
Warbling Vireo		4		1		5
White-throated Sparrow		4	1	2		7
Yellow Warbler	1	1	2	5		18
Yellow-bellied Sapsucker		4	2	2		8
Total	10	6	20	20	2	148

- 1. Banded recently (within 90 days) at the BBO
- 2. Banded at the BBO >90 days prior to recapture (eg. In a previous year
- 3. Banded at a location other than the BBO
- 4. Caught in a mist net but not banded (eg. Escaped net)

#### Owl Migration Monitoring

Table 8. Banding totals for owl migration monitoring

Table of Barraing totals for our							
Species	Banded	Repeat <sup>1</sup>	Return <sup>2</sup>	Foreign <sup>3</sup>	Other <sup>4</sup>		Total
Northern Saw-whet Owl	28	4	4		5	1	294
Long-eared Owl	1	1					11
Boreal Owl		1					1
Totals	29	6	4		5	1	306

- 1. Banded recently (within 90 days) at the BBO
- 2. Banded at the BBO >90 days prior to recapture (eg. In a previous year
- 3. Banded at a location other than the BBO
- 4. Caught in a mist net but not banded (eg. Escaped net)

NSWO Male

Playback hours: 312.25 Hours

Capture rate: 63.73 captures/100 playback hours

NWSO Female Playback hours: 305.5

Capture rate: 13.75 captures/100 playback hours

**Boreal Owl** 

Playback Hours: 206.5

Capture Rate: 10.65 captures/100 playback hours

Long Eared Owl: Playback Hours: 285

Capture Rate: 4.91 captures/100 playback hours

#### **Financial Statements**



# Beaverhill Bird Observatory Society Financial Statements

\*\*\* Available in May 2024 after our AGM \*\*\*

# Acknowledgement of our 2023 Donors

Our work would not be possible without the generous support of our donors. All those who donated \$50 or more in 2023 are listed here; all others nonetheless receive our sincere thanks.

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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.

Visit www.beaverhillbirds.com for more information.





































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