



Beaverhill Bird Observatory

Fall Report 2023

Jasper June, with contributions from Jon Van Arragon

January 11, 2024



Introduction

The 2023 fall season was a tremendous success with exciting new outcomes. This autumn was the first season that BBO introduced a MOTUS tagging program for Northern Saw-whet Owls. The BBO staff operated 13 standard nets, 7 experimental nets for songbird migration monitoring and 9 nets with 4 owl audio lures for monitoring three owl species. The weather was warm, with little snowfall during the field season. No banding events were cancelled due to weather. In addition to daily banding, the staff hosted over 1000 visitors through various public events, including over 30 ticketed songbird and owl banding events, Supper and Saw-whets evenings, and hosted the Metis Nation of Alberta.

Banding



The first Baird's Sparrow ever caught at BBO

The Fall Migration Monitoring nets operated from July 20 to October 20, 2023, with 7 experimental nets and 13 standard nets for a total of 20 nets operated this season. An impressive 69 species and over 3000 individuals were captured, and the standard nets catching 58 species and 951 individuals and the experimental nets catching 54 species and 2121 individuals. As in previous years, the experimental nets outperformed the standard nets with 143.26 captures/100 net hours and 16 captures/100 net hours, respectively. However, this year, the experimental nets saw slightly less species diversity, with 54 species compared to 58 species captured in the standard nets.

The BBO Team were excited to capture and band rare species in our nets such as the Baird's Sparrow, which was the first of this species caught in the history of Beaverhill Bird Observatory. In addition, BBO banded Canada Warblers, Black-throated Green Warblers, Yellow-shafted Flickers, a Sedge Wren, a Marsh Wren, a Vesper Sparrow, Pileated Woodpeckers, and a Northern Shrike! This was only the third time a Northern Shrike was caught in BBO nets in 40 years. We also had high numbers of some of our common species in the area. Of the birds captured, the most frequent were Myrtle Warblers, with 564, 516 Least Flycatchers, and 603 Yellow Warblers. This year also saw an influx and early arrival of Tennessee Warblers. We captured 249 Tennessee Warblers this season.

The implementation and launch of MOTUS tagging were an exciting part of the Beaverhill Bird Observatory's monitoring efforts this fall. MOTUS tagging allows researchers to pinpoint the migratory routes and movements of many species of birds. When birds equipped with these tags fly within 15 km of a MOTUS tower, their location is uploaded into a database to help researchers track their movements. Geoff and Jana were able to equip 48 Saw-whet Owls that passed through BBO with MOTUS tags! These Owl tags were made possible by generous donations from BBO members who sponsored Owls and had the opportunity to name their owls. We hope to continue MOTUS tagging in 2024 to continue researching Northern Saw-whet Owls' migration.

Owl migration monitoring using 9 mist nets and 4 different owl breeding calls yielded another successful year with 284 Northern Saw-whet Owls banded, 1 Boreal Owl banded, 11 Long-eared Owls banded and 9 Saw-whet Owl recaptures. We ran the male and female Northern Saw-whet calls and Long-eared Owl calls from (Sept 1-Oct 28) and the Boreal Owl calls from (Sept 21-Oct 28). This fall was productive, with higher amounts of Northern Saw-whet Owls captured compared to last year, but fewer Long-eared Owls than the previous year. Our staff were also delighted to have banded our first Boreal Owl in 4 years. Excitingly, we had 9 Northern Saw-whet Owls recaptured this year. Three of our Northern Saw-whet Owl recaptures were originally banded in Lesser Slave Lake and Bragg Creek in September 2022. Another recapture was banded in Prince Albert in October 2022, and one returned to us and 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.



A Northern Saw-whet Owl perched on a branch with a radio tag



A surprising Boreal Owl



The fiercest of songbirds: A Northern Shrike or "Butcher Bird"

Events



Supper and Saw-whets Evening 2023

The Beaverhill Bird Observatory hosted multiple banding events and field trips across the field season to engage and educate the public about our research and conservation efforts. We hosted 8 songbird banding events with 91 attendees and 22 owl banding events with 370 attendees. 2 annual Supper and Saw-whets event nights welcomed 100 guests and featured a variety of vegetarian foods along with live music and stargazing at the lake. Our education birds Nina, Keith, and Tansi did a fantastic job greeting our visitors. We are grateful for all the volunteers who helped make these events possible and a huge success! We also hosted a banding event for the Metis Nation of Alberta with 16 guests. In addition to these events, BBO hosted visitors from Ellis Bird Farm, Mackenzie Nature Observatory, the Red Deer Polytechnic Group, John Acorn's university class and Tofield High School.

In addition to fall monitoring efforts, Jana and Jon worked hard to prepare for their trip to Belize to attend the North American Banding Council (NABC) workshop and certification session at the Toucan Ridge Ecology and Education Society.

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.

They enjoyed seeing many incredible birds, such as Keel-billed Toucans, Collared Aracari, Tody Motmot, Common Pauragues, American Pygmy Kingfisher, Royal Flycatcher, and a Golden-hooded Tanager. Jana and Jon had an amazing time on this trip and learned a lot from everyone there. They look forward to sharing what they learned with the community. Thanks again to BBO for sending them on this adventure!



Jon in Belize at the NABC Certification



Black-throated Green Warbler



Jana banding a Common Pauraque in Belize



Appreciation

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 biologists Jon Van Arragon, Ethan Denton, Sierra Jamieson, Cala Jorgensen, Logan Bradley, and Jasper June.

Our work would not be possible without the incredible support from our volunteers. We appreciate the volunteer team that helped with the Casino Fundraiser. We would also like to thank our volunteers throughout the fall season— Braxton, Brett, Brenda, Charlotte, Carolyn, Christian, Christie, Connie, David, Hazel, Emily, Ezekiel, Foster, Hyrerin, Irene, Jac, Jay, Joanne, Kylie, Kelsi, Kaitlin, Kelsie, Leslie, Leonard, Gabby, Jenelle, Matt, Madison, Marissa, Mikayla, Maud, Marin, Megan, Meghan, Nicole, Nesha, Nik, Pat, Peter, Patrick, Rachel, Shawn, Sian, Trish, Willow and Xavier. Thank you to our university interns for collecting data during the field season. Thank you to Jewels, the dog, for always warmly greeting our volunteers and event guests.

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 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 for his work on 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. Our 8 interns completed their projects, which are profiled in the Willet, and their reports are on our website.

BBO would not be possible without the generous support from our members and sponsors featured below.





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.



Canada Summer Jobs



TD Friends of the Environment Foundation



Environment and Climate Change Canada



Table 1. Banding Totals for Fall Migration in the 13 Standard Nets

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
American Tree Sparrow	1					1
American Redstart	7	2				9
American Robin	3					3
Alder Flycatcher	1					1
Baltimore Oriole	1					1
Black-capped Chickadee	18	78	3		1	99
Black-throated Green Warbler	1					1
Black-and-white Warbler	2					2
Blackpoll Warbler	12					12
Blue-headed Vireo	1					1
Blue Jay	1					1
Bay-breasted Warbler	3					3
Brown Creeper	5					5
Brown-headed Cowbird	1				1	2
Canada Warbler	2					2
Clay-coloured Sparrow	3	1				4
Connecticut Warbler	1					1
Common Yellow Throat					1	1
Downy Woodpecker	4	6				10
Eastern Phoebe	1					1
Gambel's White-crowned Sparrow	1					1
Golden-crowned Kinglet	2	1				3
Gray Catbird	1					1
Hairy Woodpecker	5	4			1	10
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
Myrtle Warbler	260	8	1	4	2	273
Mourning Warbler	2					2
Nashville Warbler	1					1
Northern Waterthrush	2					2
Orange-crowned Warbler	11					11
Ovenbird	23	3				26
Pileated Woodpecker	4					4
Pine Siskin	1					1
Red-breasted Nuthatch	8					8
Red-eyed Vireo	5					5
Ruby-throated Hummingbird		1			6	7
Ruby Crowned Kinglet	12					12
Rose-breasted Grosbeak	8					8
Sharp-shinned Hawk	4					4
Slate-coloured Junco	33	4				37
Swainson's Thrush	29				1	30
Trail's Flycatcher	4					4
Tennessee Warbler	22	3	1		1	27
Vesper Sparrow	1					1
Warbling Vireo	13	4				17
Wilson's Warbler	7					7
White-breasted Nuthatch	1	6				7
White-throated Sparrow	3					3
Western Palm Warbler	4					4

Yellow-rumped Warbler (Myrtle x Audubon's hybrid)	1				1
Yellow-bellied Flycatcher	2				2
Yellow bellied-Sapsucker	3	1			4
Yellow-shafted Flicker	2				2
Yellow Warbler	34	15	6		55
Totals	742	173	15		21

4406.5 Net hours

1 Banded recently (within 90 days) at the BBO

16.77 captures/100 net hours

2 Banded at the BBO >90 days prior to recapture (e.g. in a previous year).

3 Banded at a location other than the BBO

4 Caught in a mist-net but not banded (e.g. escaped net).

Table 2. Banding Totals for Fall Migration in the 7 Experimental Nets

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
American Tree Sparrow	13					13
American Goldfinch	2	1	4			7
American Redstart	42	2				44
American Robin			1		1	2
Alder Flycatcher	12					11
Baird's Sparrow	1					1
Baltimore Oriole	2					
Black-capped Chickadee	45	46	6			97
Black-and-white Warbler	9	1				10
Blackpoll Warbler	8					8
Blue Jay	3					3
Bay-breasted Warbler	1					1
Brown-headed Cowbird	1				1	2
Canada Warbler	1					1
Clay-coloured Sparrow	37	3			1	41
Cedar Waxwing	2					2
Common Yellow Throat	18		1			19
Downy Woodpecker	2					2
Gambel's White-crowned Sparrow	9					8
Hermit Thrush	1					1
House Wren	37	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
Myrtle Warbler	270	19	1		1	291
Mourning Warbler	7					7
Nashville Warbler	1					1
Northern Shrike	1					1
Northern Waterthrush	6					6
Orange-crowned Warbler	27					27
Ovenbird	8					8
Purple Finch	3					3
Philadelphia Vireo	4					4
Red-breasted Nuthatch	1					1
Red-eyed Vireo	12	1				13
Ruby-throated Hummingbird					2	2

Ruby Crowned Kinglet	27	1				28
Rose-breasted Grosbeak	6					6
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
Trail's Flycatcher	45				2	47
Warbling Vireo	35	11	4		1	51
Wilson's Warbler	16				1	17
White-throated Sparrow	16					16
Western Palm Warbler	12					12
Western Wood-Pewee	1					1
Yellow bellied-Sapsucker	4					4
Yellow-shafted Flicker	1	1				2
Yellow Warbler	478	82	14		13	587
Totals	1795	254	32		40	2121

1440 net hours

143.26 captures/100 net hours

1 Banded recently (within 90 days) at the BBO

2 Banded at the BBO >90 days prior to recapture (e.g. in a previous year).

3 Banded at a location other than the BBO

4 Caught in a mist-net but not banded (e.g. escaped net).

Table 3. Banding Totals for Fall Migration in the 9 Owl Nets

Species	Banded	Repeat	Return	Foreign	Other	Total
Northern Saw-whet Owl	284	4		5	1	294
Long-eared Owl	11					11
Boreal Owl	1					1
Totals	296	4		5	1	306

NSWO Male

Playback hours: 312.25 Hours

Capture rate: 63.73 captures/100 net hours

1 Banded recently (within 90 days) at the BBO

2 Banded at the BBO >90 days prior to recapture (e.g. in a previous year).

3 Banded at a location other than the BBO

4 Caught in a mist-net but not banded (e.g. escaped net).

NWSO Female

Playback hours: 305.5

Capture rate: 13.75 captures/100 net hours

Boreal Owl

Playback Hours: 206.5

Capture Rate: 10.65 captures/100 net hours

Long Eared Owl:

Playback Hours: 285

Capture Rate: 4.91 captures/100 Net Hours