



Beaverhill Bird Observatory

Fall Report 2022

By Jana Teefy

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Introduction

The 2022 fall season was a resounding success. The BBO staff operated 13 standard nets and 7 experimental nets for songbird migration monitoring and 9 nets, and 4 owl audio lures targeting three species of owls.

The weather was unseasonably mild and warm, allowing the staff to reach higher net hours into October than in previous seasons. This also meant minimal banding events had to be cancelled.

In addition to daily banding, the staff hosted over 1000 visitors through a variety of public events over the fall season, including the 6th annual Geoff Holroyd's Young Ornithologists Workshop, over 30 ticketed songbird and owl banding events, Supper and Saw-whets evenings, a Canadian newcomer's event, and a number of school groups.

Late in the season, staff and volunteers demolished the last remaining historical BBO building, Nuthatch Nest. The bunkhouse will be rebuilt over the winter and will be ready for staff to move into come the 2023 field season.

Banding



A scruffy young Northern Flicker banded this fall



Shane holding a Ruffed Grouse that found itself tangled in one of the songbird nets

Thanks to the newly established experimental nets in the willows between Beaverhill Lake and the forest, the 2022 fall songbird migration monitoring saw high capture rates and species diversity. Operating from July 20 to October 20, 2022, an impressive 71 species were captured, and nearly 3000 individuals were banded, the highest diversity on record in the BBO's history. With the 7 experimental nets and 13 standard nets, a total of 20 nets were operated throughout the season. As with the spring migration monitoring, the experimental nets continued to outperform the standard nets with a 10-fold difference in capture rates; 118 captures/100 net hours and 18 captures/100 net hours, respectively. The experimental nets also captured a higher species diversity, with 58 species compared to 49 species captured in the standard nets. The staff were excited to capture and band rare species such as Townsend's Warbler, Townsend's Solitaire, Canada Warbler, Black-throated Green warbler, Yellow-shafted Flicker, Sedge Wren, Marsh Wren, MacGillivray's Warbler, Ruffed Grouse (left unbanded), Vesper Sparrow, and Evening Grosbeak. Of the banded birds, 854 were Myrtle Warblers, by far the most abundant species, 346 were Least Flycatchers, and 504 were Yellow Warblers.



Black-throated Green Warbler captured and banded this fall



Townsend's Warbler. Another exciting capture this season

The staff were also very excited to participate in banding Ruby-throated Hummingbirds with BBO chair Geoff Holroyd. Requiring specialized banding equipment, traps, and permits, banding these tiny birds is a rare opportunity and can only be done with Geoff on site.



Ruby-throated Hummingbird being banded and processed by a staff member



The many faces of Northern Saw-whet Owls

With the fall came the owls. Four targeted owl programs were operated this season using 9 mist nets and 4 breeding calls - a male Northern Saw-whet Owl (4 nets operating from Sept 1-Oct 31), a female Northern Saw-whet Owl (2 nets operating from Sept 1-Oct 19), a male Long-eared Owl (1 net operating from Sept 1-Oct 31), and a male Boreal Owl (2 nets operating from Oct 2-Oct 31) for audio lures. Contrasting with the songbird migration captures, the Northern Saw-whet Owl migration was surprisingly slow, with only 235 individuals captured. Excitingly, 4 of the Northern Saw-whet Owls captured were foreign recaptures, originally banded at Islet Lake by Geoff Holroyd.

Despite low captures of Northern Saw-whet Owls, it was a productive Long-eared Owl season with 21 individuals captured. Interestingly, there were no recaptures, with all the Long-eared Owls receiving new bands. Unfortunately, no Boreal Owls, Great-horned Owls or Barred Owls were captured or banded this season; however, another Barred Owl was observed near the nets this year. Additional captures in the owl nets include a Silver-haired Bat, Little Brown Bats, and Northern Flying Squirrels.

Unfortunately, November 1 marked the end of the 2022 field season, with a winter storm warning and heavy snowfall initiating the annual winterization and shutdown of the lab.



Northern Flying Squirrel that was removed from an owl net and released

Events

The sixth annual Geoff Holroyd's Young Ornithologists Workshop, where 11 youths stay on site for a week, learn to handle, band, extract songbirds and perform various field biologist skills/survey techniques. – discussed in the summer report.



Canada Warbler captured and banded during a songbird banding event

This fall, the public joined us for the second year of ticketed songbird migration monitoring events. The events ran from August 13 to September 18, 2022, with over 100 attendees joining us to learn about songbirds, migration, banding, and to see butter butts.

The ever-popular owl banding events continued this fall, with 420 attendees joining us from September 22 to October 30, 2022. They joined the staff as they operated the 4 targeted owl banding programs and captured and banded over 250 owls.

This year marked the return of the annual Supper and Saw-whets evenings, which were a success. The event was hosted over two evenings with 50 visitors per night. They were given a selection of vegetarian dishes, entertained with live music, and had the opportunity to meet one of our education ambassador birds, Maple the Peregrine Falcon. They joined the staff on net checks throughout the night and were given an interpretive experience while banding Northern Saw-whet Owls and a Long-eared Owl. Sept 24 and 25, 2022

The BBO partnered with Alberta Parks to host a Canadian Newcomer's Day. Hosting 33 attendees that are new to Canada, the event included transportation to the natural area, songbird banding demonstrations, and guided hikes through the natural area to the weir with BBO staff. Our education ambassador birds, Maple and Remy, were again brought to the site to welcome the newcomers.

The BBO also hosted various school groups that participated in guided hikes through the natural area and songbird banding demonstrations. Students from Augustana University, University of Alberta, Tofield High School, Lakeland College, Wild Outsiders youth program, and the UofA Chapter of the Wildlife Society participated.



Some of the youth that participated in this year's Young Ornithologists Workshop



Long-eared Owl captured and banded during the Supper and Saw-whets event

In the last week of the field season, staff, board members, and volunteers demolished Nuthatch Nest – the bunkhouse that marked the last of the historical BBO buildings. Constructed in the late 1980s, the bunkhouse was overdue for updating. The staff are excited to see the new Nuthatch Nest come spring.



Progression of the demolition of Nuthatch Nest in preparation for the new bunkhouse

Recognitions



Shane, Sara, Jana, Myrthe, and Jon enjoy one last meal together before Shane leaves for Ontario

The BBO would like to thank Shane Abernethy for his hard work, tech skills, handiwork, and especially his contributions to BBO with his BirdBytes videos. We wish you all the best in your future endeavours in Ontario and beyond.

Thank you to our staff this year: Head Biologist Sara Pearce Meijerink, Assistant biologists Shane Abernethy, Jana Teefy, and Jon Van Arragon.

We would also like to extend thanks to our volunteers throughout the fall season— Christian, Christie, Connie, Hazel, Irene, Jac, Jinxuan, Kylli, Larissa, Madison, Martine, Megan, Melissa, Molly, Nik, Pat, Peter, Patrick, Sierra, Warren, Willow, Zhe. A special thanks also goes out to Belgian biologist, Myrthe Van Brempt for her help throughout the field season, her detailed study of Least Flycatcher breeding biology, and her artistic talent. Myrthe, you have been a joy to host at the BBO and to show around our beautiful country.

Thank you to each of our board members: Geoff Holroyd for his guidance and role as chair; Helen Trefry (and Phil Trefry) for housing our ambassador birds and coordinating the Young Ornithologists Workshop; Rose Scott for her role as treasurer; Richard Hedley for his work on The Willet; Emily McLellan heading the fundraising committee; Glen Hvenegaard for coordinating our student 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, Brendan Casey and Pat Chan for all their excellent work!

Likewise, operations at the BBO would not be possible without the generous financial support of our sponsors. Our 2022 summer operations were made possible by financial support from the Alberta Gaming, Liquor and Cannabis Commission, Alberta Conservation Association, Edmonton Community

Foundation, the Edmonton Nature Club, The Wildbird General Store, Bass Pro Shops and Cabela's Outdoor Fund, TD Friends of the Environment, Nature Canada's Labatiuk Nature Endowment Fund, Alberta Environment and Parks, Claystone Waste Ltd., Environment and Climate Change Canada, Employment and Social Development Canada, Beaver County, Clean Harbors, Edmonton Nature Club, Bird Studies Canada's Baillie Fund, In memory of Mary Weir, and many personal donations. Additional thanks go out to Engineering Link Incorporated and Spencer Environmental Management Services Ltd for their generous donations.

Banding Totals

Table 1 Banding totals for fall migration in the 13 standard nets

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
Alder Flycatcher	3					3
American Goldfinch						
American Redstart	5					5
American Robin	3	1				4
American Tree Sparrow	14					14
Baltimore Oriole						
Bay-breasted Warbler						
Black-and-white Warbler	5					5
Black-capped Chickadee	23	85		1		109
Blackpoll Warbler	3					3
Black-throated Green Warbler						
Blue-headed Vireo						
Brown Creeper	2					2
Brown-headed Cowbird	1	1				2
Canada Warbler	1					1
Cape May Warbler						
Cedar Waxwing	4					4
Chipping Sparrow						
Clay-colored Sparrow				1		1
Common Yellowthroat						
Connecticut Warbler	1					1
Evening Grosbeak	6	5				11
Downy Woodpecker	1					1
Golden-crowned Kinglet	5					5
Gray Catbird	2					2
Hairy Woodpecker	2	2				4
Hermit Thrush	4	1				5
House Wren	7	2				9
Least Flycatcher	75	3		3		81
Leconte's Sparrow						
Lincoln's Sparrow	2					2
MacGillivray's Warbler						
Magnolia Warbler	7					7
Marsh Wren						
Mourning Warbler	1					1
Myrtle Warbler	342	46		4		392
Nashville Warbler	3			1		4
Northern Waterthrush	4					4
Orange-crowned Warbler	14					14
Ovenbird	15			2		17
Philadelphia Vireo		1				1
Red-breasted Nuthatch	9	1				10
Red-eyed Vireo	6	3	1			10
Red-winged Blackbird					1	1
Rose-breasted Grosbeak	1					1
Ruby-crowned Kinglet	14	2				16
Ruby-throated Hummingbird				2		2
Ruffed Grouse					1	1
Savannah Sparrow						
Sedge Wren						
Sharp-shinned Hawk	2					2
Slate-colored Junco	13					13
Song Sparrow	1					1
Sparrow Sp						
Swainson's Thrush	10					10
Swamp Sparrow						
Tennessee Warbler	17			1		18
Townsend's Solitaire	1					1
Townsend's Warbler	1					1
Trail's Flycatcher	10					10
Tree Swallow						
Vesper Sparrow						
Warbling Vireo	10	1				11
Western Palm Warbler	9					9
White-breasted Nuthatch	1	2				3
White-crowned Sparrow						
White-throated Sparrow	6					6
Wilson's Warbler	4					4
Yellow Warbler	15	2		2		19
Yellow-bellied Flycatcher	1					1
Yellow-bellied Sapsucker	3					3
Yellow-shafted Flicker	2					2
Totals	691	158	1		19	869

4817.8 Net Hours

18.04 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 2 Banding totals for fall migration in the 7 experimental nets

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
Alder Flycatcher	5					5
American Goldfinch	1		1			2
American Redstart	10					10
American Robin						
American Tree Sparrow	44	2			1	47
Baltimore Oriole	2					2
Bay-breasted Warbler	1					1
Black-and-white Warbler	3					3
Black-capped Chickadee	36	76	1		4	117
Blackpoll Warbler	5					5
Black-throated Green Warbler	10	4				14
Blue-headed Vireo	1	1				2
Brown Creeper						
Brown-headed Cowbird						
Canada Warbler	1					1
Cape May Warbler	1					1
Cedar Waxwing	1					1
Chipping Sparrow	2					2
Clay-colored Sparrow	78	3			1	82
Common Yellowthroat	27	1				28
Connecticut Warbler						
Evening Grosbeak	1	2				3
Downy Woodpecker						
Golden-crowned Kinglet						
Gray Catbird	4					4
Hairy Woodpecker	1					1
Hermit Thrush	2					2
House Wren	50	6			1	57
Least Flycatcher	238	20	1		6	265
Leconte's Sparrow	2					2
Lincoln's Sparrow	3				1	4
MacGillivray's Warbler	1				1	2
Magnolia Warbler	7					7
Marsh Wren	1					1
Mourning Warbler	2					2
Myrtle Warbler	416	43	1		2	462
Nashville Warbler	1					1
Northern Waterthrush	3					3
Orange-crowned Warbler	51	1				52
Ovenbird	8	1			1	10
Philadelphia Vireo	4					4
Red-breasted Nuthatch						
Red-eyed Vireo	6					6
Red-winged Blackbird						
Rose-breasted Grosbeak	7				1	8
Ruby-crowned Kinglet	13	1				14
Ruby-throated Hummingbird					2	2
Ruffed Grouse						
Savannah Sparrow	1					1
Sedge Wren	1					1
Sharp-shinned Hawk	1					1
Slate-colored Junco	3					3
Song Sparrow	10		1		1	12
Sparrow Sp					1	1
Swainson's Thrush	6					6
Swamp Sparrow	1					1
Tennessee Warbler	114	9			2	125
Townsend's Solitaire						
Townsend's Warbler						
Trail's Flycatcher	59	9				68
Tree Swallow	2					2
Vesper Sparrow	1					1
Warbling Vireo	37	4	2			43
Western Palm Warbler	10				1	11
White-breasted Nuthatch						
White-crowned Sparrow	1					1
White-throated Sparrow	5					5
Wilson's Warbler	10					10
Yellow Warbler	430	47	1		7	485
Yellow-bellied Flycatcher	1					1
Yellow-bellied Sapsucker	1					1
Yellow-shafted Flicker						
Totals	1743	230	8		33	2014

1689 Net Hours

119.24 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 ¹	Return ²	Foreign ³	Other ⁴	Total
Northern Saw-whet Owl	224	7		4	1	236
Long-eared Owl	21					21
Boreal Owl						0
Totals	245	7	0	4	1	257

1 Banded recently (within 90 days) at the BBO

NSWO Male

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

Lure Playback Hours: 360

3 Banded at a location other than the BBO

Capture Rate: 53.89 captures/100 Net Hours

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

NSWO Female

Lure Playback Hours: 278.25

Capture Rate: 8.27 captures/100 Net Hours

Boreal Owl

Playback Hours: 114

Capture Rate: 14.04 captures/100 Net Hours

Long-Eared Owl

Playback Hours: 232.5

Capture Rate: 9.89 captures/100 Net Hours