



Beaverhill Bird Observatory Fall Report 2020

By
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Executive Summary

Beaverhill Bird Observatory's fall migration monitoring was conducted by Head Biologist Sara Pearce Meijerink, Assistant Biologist Shane Abernethy and summer student Jon Van Arragon. Jon worked with us until August 31st, and Shane joined us from Ontario on August 30th after working from home for two months. Songbird migration census was conducted between July 20th and October 20th. Due to safety considerations associated with the COVID-19 pandemic, we were forced to heavily modify our research programs. We did not run daytime songbird nets and instead focused our banding efforts on owls. We did continue conducting a daily 40-minute census until October 20th to visually account for daytime migrants, with an additional variable-length census at the weir to increase our observations. During owl migration monitoring, we hosted groups of up to 10 visitors 6 nights a week. We enforced mask-wearing and distancing during the event and hosted hundreds of guests over the course of the season without incident. During the fall, we captured 219 owls of 3 species, a frustrating low number that may indicate a poor breeding season.

Daily Census

We continued our double census from the spring in an attempt to make up for our lack of daytime mist netting. High water levels at the weir allowed for large numbers of waterfowl and shorebirds, and an occasional evening visit saw hundreds of mixed gulls flying north over Beaverhill Lake. The water level at the weir remained exceptionally high, and it continued flowing until late September (it typically dries up early in the summer). With sustained high water levels, the vegetation in the Beaverhill Lake basin has begun dying back, exposing large expanses of open water, an exciting sign that the lake is coming back!

White-faced Ibis, a new breeder in the natural area, were a regular fixture at the weir, as well as flocks of Wilson's Snipe and Greater/Lesser Yellowlegs. Later in the season, Greater White-Fronted Geese and Snow Geese passed overhead in the thousands, and Lister Lake itself was populated by flocks of Bufflehead, Northern Shoveler, Gadwall, Ruddy Duck and Green/Blue-winged Teal. The occasional squeak and whinny of a resident Sora in the aptly named Sora Pond was also a reliable part of the morning soundscape, as were the inquisitive *chups* of Myrtle Warblers from the trees right into October. Notable sightings include the first Willet to be seen in the natural area in years and a flock of 23 Pectoral Sandpipers that passed through the day before Lister Lake froze over. A number of Black-crowned Night Herons also appeared to call the area their home during September: the occasional evening visit would spot up to nine of them passing through.



Juvenile Black-crowned Night Heron

Owl Migration Monitoring

Our owl migration monitoring program, now old enough to vote, officially began its eighteenth year on September 1st, and ran until October 31st. With it began our first mist netting of this calendar year. However, it got off to a bit of a rocky start: technical issues with the audio player prevented us from running the two Saw-Whet owl nets with a female lure until September 9th, and a recall on large raptor bands prevented us from opening the Long-eared Owl net until the replacement bands were received on September 10th. We ran four nets with a male Northern Saw-whet call, their eighteenth year of operation, and ran two more nets with a female Saw-whet call for their second year. In addition, we continued running our single net with a Long-eared Owl call and began running our two Boreal Owl nets on October 1st.

With our four players, we accumulated 1039.5 playback hours over the entire season (355.5 with a male Saw-whet call, 315.5 with a female Saw-Whet call, 229 for Long-eared Owls and 139.5 for Boreal Owls) and captured 214 Northern Saw-whet Owls, 4 Long-eared Owls and one Great Horned Owl, giving us a seasonal



Northern Saw-whet Owl in juvenile plumage



Above: After-Second Year Northern Saw-whet Owl wing

Below: Northern Saw-whet Owl being removed from a bird bag to be banded



capture rate of 21.06 owls per 100 net-hours, which is less than half the capture rate of last year. This frustrating low may be due to a number of factors, namely the cyclical nature of owl populations, but we suspect that this year's breeding season was exceptionally poor, possibly the result of high precipitation levels in May and June that drowned out rodent populations. Our very first owl capture of the year was a Saw-whet in full juvenile plumage; for context, we have never captured a juvenile plumage Saw-whet during migration season in our head biologist's eight years at BBO, and although it represents a single data point, may indicate a late breeding season.

Table 1. Total number and type of capture per species during 2020 owl migration monitoring at Beaverhill Bird Observatory (BBO). Repeat captures were banded in 2020 at BBO, Return captures were banded at BBO in a previous year, Foreign captures were banded at a location other than BBO, and other captures were caught in a mist net but released un-banded

Species	Banded	Repeat	Return	Foreign	Other	Total
Northern Saw-whet Owl	193	8	4	5	4	214
Long-Eared Owl	4					4
Great Horned Owl	1					1
TOTALS	198	8	4	5	4	218

On-Site Construction

This fall saw a highly exciting and somewhat bittersweet development at the BBO: our old lab building, in regular use by staff and volunteers since it was built in the 1980's, was demolished. It had served us well, but was beginning to show its age, was uninsulated, and was home to a few more unwelcome guests than most would be comfortable with. There are only so many weasels in the pantry that even the hardest biologist can tolerate, after all. And so this fall, after months of permit negotiation, construction finally began on our new lab building and education centre. The new structure will be well insulated, with a wood stove providing heat during the cold fall and spring months, and will feature a second floor for indoor activities when that becomes feasible. It will also eventually sport a network of solar cells, powering a cell booster and what we hope will be the third operational MOTUS tower in Alberta!

Of course, the lack of a building presented its own suite of challenges to our staff. Our chair, Geoff Holroyd, was generous enough to loan us his camper trailer, which we used as our kitchen, office and lounge for the entire season. Visitors were treated to the slightly surreal sight of our propane refrigerator on cement blocks next to the camper trailer as they followed us on net checks. Luckily, the natural area doesn't have any raccoons or bears! Heat was also a concern during a cold snap in mid-October: with no way to generate heat, our drinking water, food produce and cooked food quickly began to freeze solid no matter where we stored it. We also learned, although we are unsure what we expected, that refrigerators are not capable of keeping their contents warm in subzero ambient temperature.

Nonetheless, construction has been proceeding at a pleasing pace. While it is unlikely that the new lab will be ready for full use by the spring, it is now weatherproof, which was our general



Our new education and research station under construction

goal for the fall season. Any progress our contractors are able to make before getting snowed out will be considered a bonus. In the meantime, our staff continue to be excited by the possibilities this new building will offer.

Education and Outreach

While we were not setting mist nets for songbirds this fall, the natural area was still open to the public, and our staff informally engaged with visitors as they passed through. Due to safety concerns from the COVID-19 pandemic, we chose not to hold our annual Steaks and Saw-Whets fundraiser. However, we were able to roughly equate it in a rather different form by hosting visitors for owl banding six nights a week in groups of up to 10 a night. These small events surpassed our expectations in popularity so much that we had sold out our entire season within two weeks of the Eventbrite page going live, and had to open up two more nights a week to accommodate overflow. Even then, we had to disappoint a large number of people who were a couple days too late to secure a reservation.



Owl Banding Visitors posing with a Saw-whet Owl

Visitors to our owl banding nights were given an explanation of the banding process and shown many of the unique features of owls when one was captured. We also had a number of informal discussions on conservations and biology and the general work done by BBO. On nights when the net captures were slow, we had a backup plan: Rickie, our ambassador Saw-whet Owl, made regular appearances, much to the enjoyment of our guests. On some later nights in the season, our staff derived some amusement by appearing with Rickie already perched on our heads without comment, and waiting to see how long it took for people to notice. It turns out that a small, well-camouflaged bird is easy to overlook when you don't expect to see it.

In late October, we began putting out feelers to local schools to gauge interest in our BirdSmart program. We experimented with live webinars in spring, but we now have ambitious plans to transition our winter educational program to a fully digital format to help ease the uncertainty teachers are facing at this time. While interest at the date of writing has been limited, it is understandable that teachers are reluctant to commit to anything at this time and we expect interest to surge later in the season.

Acknowledgements

As always, the work we do at BBO would not be possible without the support of our generous funders and donors, who have our gratitude. A special thanks also goes out to the many paying visitors who came out for owl nights this year, whose support eliminated the funding shortfall for our building caused by the spike in lumber prices.

A big thank you goes to our board members for keeping things running smoothly behind the scenes. Particular thanks go to Phil and Helen Trefry, who house our educational birds and generously allow our staff to use their living room as an unofficial office space, and to Geoff Holroyd for his assistance with grants and with our monitoring programs, and for making our staff jealous with his consistently higher owl capture rate.

Thanks also goes out to the numerous volunteers who assisted with owl monitoring this season, including Christian Lunn, Meghan Jacklin, Irene Crosland, Helen Trefry, Janos Kovacs, Jordan Lang, Jac Curry, Emily Cicon, Stephanie Thunberg, Martine Dumont, Michelle Hoang, Priscilla Lai, Erin Low, and Austin Zeller. We couldn't have run our fall migration monitoring program as smoothly as we did without their generous help, and we doubly appreciate their willingness to put up with cold temperatures later in the season!

We (and our local family of flying squirrels) also thank Steve and Kay of the Wildbird General Store for keeping our feeders topped up with donated seed. We also extend a heartfelt thank-you to our many funders. The 2020 fall operations were made possible with financial support from the Alberta Gaming, Liquor and Cannabis Commission, TD Friends of the Environment, Nature Canada's Labatiuk Nature Endowment Fund, Bird Studies Canada's Baillie Fund, the Edmonton Community Fund and the Bass Pro Shops and Cabela's Outdoor Fund.



The night BBO caught 10 Saw-whet Owls and 1 Great Horned Owls to the delight of staff and visitors!