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Meet “Ray” at the Annual Steaks and Saw-whets event October 2nd and 3rd at the Beaverhill Bird Observatory. This event always sells out so check out the details and purchase your tickets early at www.beaverhillbirds.com

An evening barbeque with steaks, chicken, hotdogs, veggie burgers, corn, potatoes, and all the fixings are served. An assortment of homemade desserts is followed by setting up mist nets to capture Saw-whet owls during their annual migration.

Time: Dinner served between 6:00 and 8:00 p.m. Nets go up at 8:00 p.m. and dessert served.

Cost: Members \$30 /person, Non-members \$40/person can include \$10 life membership, free for kids under 12 when accompanied by their parents; registration online only, please.



“Ray” is an educational owl held under an Alberta Fish and Wildlife permit by BBO. She (yes, Ray is a She) was hand raised by Helen and Phil Trefry and will be used for school and other educational programs.

A big thanks to Ray Cromie for providing this “runt” owl from one of his many Northern Saw-whet Owl nest boxes. For decades Ray Cromie has been instrumental in bringing an awareness and appreciation of owls to thousands of people. He is a big believer in using live birds to bring home the environmental message and an appreciation of wildlife. Many past and present staff and members of BBO have

benefited from his generosity and hands on learning through banding. Recently Ray was diagnosed with cancer - we are thinking of him and Shirley at this time.

Fall Migration Notes

Fall migration is in full swing with more than 80 birds captured on peak days. This fall 55 species and over 1300 birds have have been banded. It is recommended that visitors contact Jonathan DeMoor - biologist@beaverhill-birds.com , prior to coming out. This is especially true for first time visitors- avoiding the phrase “man, I thought I knew where BBO was” ! Here we see Jonathan admiring a swamp sparrow (photo by Helen Trefry)

Meghan Jacklin, below, with a long-eared owl (photo by Geoff Holroyd).



Interns Have Fun at BBO!

The intern program at Beaverhill Bird Observatory continued this summer with 8 interns participating in projects on tree swallows, house wrens, lepidopterans, and bird grids. The following reports illustrate a few of their personal experiences.

The Internship Experience: Article and photos by Cala Jorgensen and Danielle Simard

Having just completed the first year of the NAIT Biological Sciences Technology program, specializing in Renewable Resources, we were both looking for opportunities to apply our learning and gain experience. On April 30, 2015, we received an email from school administration informing us of internship positions through the Serving Communities Internship Program (SCIP). The SCIP program enables students to gain valuable experience in their field of choice by connecting them with not-for-profit organizations and provides a small bursary to students in exchange for their efforts, while smaller organizations benefit from having the extra bodies around to carry out various projects. Eager to gain some field experience, we both applied and were absolutely thrilled to learn that we had been chosen as interns at the Beaverhill Bird Observatory (BBO).

The BBO has been in partnership with the SCIP program for three years and has provided inspiration and experience for over 30 budding biologists. Established in 1984, the BBO is the second oldest bird banding station in Canada; positioned just outside of Tofield, Alberta along the remnants of Beaverhill Lake, perfectly placed along the migration route of many different avian species. The BBO is renowned in the biological field by ornithologists, entomologists, biologists, and naturalists alike and maintains a small, highly skilled team of staff with a great wealth of knowledge. Open to the public, the observatory provides refuge for nearby city dwellers, nature enthusiasts, local birders, practicing photographers, and school groups. Though it feels quite peaceful to visit, a lot goes on behind the scenes. Ongoing projects include the MAPS (Monitoring Avian Productivity and Survival), Breeding Bird Point Count Surveys, Saw-whet Owl banding, Butterfly monitoring, and House Wren and Tree Swallow box monitoring programs - the observatory is especially known for having some of the highest Tree Swallow activity in the entire world. To this date, approximately 100 distinct bird species have been observed at the BBO.

June through August 2015, we were assigned to assist with the House Wren Box Project at the BBO; our duties included checking for signs of activity, counting eggs, counting nestlings, aging nestlings, setting banding dates, and recording observations about the boxes themselves and surrounding habitat. Apart from our regular duties, we had the opportunity to witness and assist with other activities occurring at the BBO such as data collection and bird banding for the MAPS program, collecting data to assist in creating and aging guide for developing House Wrens, and banding wren and Tree Swallow nestlings.



Checking the wren boxes granted us the opportunity to watch the pink, speckled eggs develop into naked, huddled nestlings, who then became fully fledged birds. We were even lucky enough to find one chick mid-hatch. At first glance, house wrens are small, brown, and unassuming, flitting from tree to tree, blending in seamlessly with their surroundings. We found the adult wrens to be quite shy compared to Tree Swallows, only once were able to see an adult wren on her nest. However, what they lack in size they make up in attitude. Hostility from both male and female parents increased as nestlings developed and parents invested more time and energy into raising them. These wrens would sometimes swoop within a metre of us!



Tree swallows are known to be quite common in the area. Though the observatory has boxes installed for swallows, we came across a fair amount inhabiting our wren boxes. While these boxes did not impact our research, they provided an interesting comparison to the House

Wrens. Tree Swallows build a shallow grass nest as opposed to the wren's large twig one; lay eggs that are a solid white and slightly more elongate; have an earlier breeding season and develop faster. Additionally, these birds are no sight for sore eyes - the males in particular with their iridescent blue colouring were breathtaking up close. They were much braver than the wrens, whenever we came across a Tree Swallow on its nest it would barely flinch. Often when nearing a box with swallows, the adult could be seen poking its head out the entrance and conspicuously checking all directions for signs of trouble.

One of the most rewarding parts of the internship experience is the joy and wonder at the



natural world. Each visit to the BBO felt more like a retreat than work in the lives of two busy post-secondary students. The fresh, calm air interrupted only by the odd crescendo of blissful chirps and the rustling of aspen leaves in the wind. That is at least, on the days it was not flooded by the buzzing of thousands of thirsty mosquitos. At least the insectivores were happy on those days. It wasn't long before we each invested in a bug jacket.

Though graced with the presence of many avian species, including an owl sighting, birds were not the only forms of wildlife we came across in our time at the BBO. Other species occasionally found in the nest boxes included Little Brown Bats (*Myotis lucifugus*), Flying Squirrels (*Glaucomys sabrinus*), and a myriad of invertebrates including moths, wasps, and bees. In fact, box Bb7 was home to bees for the entirety of the survey period. Neither of us was terribly inclined to look close enough to determine the species - clear, loud, and angry buzzing upon box opening was evidence enough!

Little brown bats, or rather their bottoms, were frequently found in the nest boxes particularly those in A grid. Sightings are always welcomed as this species was recently declared endangered as a preventative measure to combat White-Nose syndrome.

Catching northern flying squirrels taking shelter in the nest boxes was the highlight of the summer as far as incidental species sightings are concerned. The squeals of joy escaping our lips were probably not as comforting as the bed of dry grasses, moss and tree bark the squirrel had made. The startled squirrel retreated, sticking its tiny feet into the air in attempt to play dead. We recognized the signs of stress and left it be, after sneaking a quick picture of course.

We also had the opportunity to find species outside of the boxes. Frank, the name for all porcupines found at the BBO, was often seen



napping on his favorite spot, supported by a tangle of branches near B6 on the B grid. The first time we stumbled into him, we took him for a crow or magpie nest (a dark bramble of twigs and branches), but upon a closer look the bramble resolved into a porcupine.

We had a chance to see a natural nest in action too! The yellow warblers started out as dainty brown speckled eggs and hatched into naked chicks with shockingly yellow skin.

When all was said and done and the last of the nestlings had fledged their nests, we



began compiling data. We decided to evaluate different factors contributing to House Wren habitat selection. Our literature review informed us that male House Wrens build the structural portion of the twig nests within their self-defined territories and the females then select the most appropriate abodes and insulate them before laying their eggs. Thus, males and females may have different selection criteria which can be distinguished by overall nest development. We tested for a number of factors including nest box height, tree diameter, tree species, and orientation of box and grid location. We did find a significant difference in the tree diameter and box height of the fully active nests compared to the other boxes, it seems as though females have a preference for younger trees and boxes closer to the ground. We were proud to have our paper published in the BBO's annual report for 2015, and would like to direct readers there for more information regarding our research.

On September 10 we returned to the BBO with our classmates as a portion of NAIT's mandatory field course. We surprised ourselves with the wealth of knowledge we had gained, not only

about the House Wren project but about the observatory as well as the natural area in general. We took our peers on a tour across the Weir, pointing out some of our favorite flora and fauna along the way, answered basic questions about activities that take place at the observatory, and shared resources that we had gained during our experience. An overwhelming amount of pride and gratitude took us over during these moments. Our experience with the BBO was so much more than an internship; it was a gateway into a lifetime of appreciating and understanding nature and gaining and sharing knowledge. It was at this moment that we realized we were no longer interns but ambassadors of the Beaverhill Bird Observatory, a title we will wear proudly for the rest of our lives.



Butterfly Internship Experience by Nikki Paskar

What an extraordinary experience my summer at the BBO was! I had originally contacted Geoff in the spring with the intention of casually volunteering, and he suggested I should apply as the butterfly intern. From there, I was running headfirst into my project of monitoring the butterfly species around the BBO. With a full-time job during the week, and very limited knowledge of Lepidoptera, I spent every lunch hour and evening poring over my brand-new butterfly field guides, reports and articles, and online videos. I contacted previous BBO interns and volunteers for advice on photography. With my new net, my field guides, and my camera, I felt utterly prepared for my first day out. That is, until I actually got there; bursting at the seams with exhilaration after catching my first butterfly, I realized at that point that I had absolutely no idea how to handle the fluttering creature in my net to ID it. I nervously laughed at myself for a solid minute, and immediately called for backup. I met Steve Anderson, a previous butterfly intern and regular volunteer, back there the next day. He showed me the ropes of butterfly capturing and handling, and I was hooked.

I had the pleasure of recording a new species in the area, the Northern Pearly-eye (*Enodia anthedon*), whose presence is spreading across the area – a beautiful species indeed! My experience was only magnified by Loney Dickson’s offer to set up a mothing night at the BBO with a few other lepidopterists. We met there on a Saturday night, and I was taught how to set up the lights and sheets and check for the species. It was incredible – particularly, the beautiful White Underwing Moth, (*Catocala relict*a), that we saw, and I hope there are many more moth nights to follow. My only complaint about this internship is that, with the help of John Acorn and Loney Dickson, it has fostered a love for and addiction to Leps that I will never rid myself of. That first weekend, along with every other one this summer, was absolute magic. Walking my transect with the sun beaming warm overhead, a light breeze tickling the grasses, the birds singing and swooping, while maneuvering my net to carefully capture and ID the magnificent butterflies present was perfection. There is something indescribably special about the natural area that makes every experience surreal. It is a serene home in a world filled with bustling cities and endless concrete.



Nikki (above) with a butterfly at BBO;
Catocala relict photo by Loney Dickson)

Migration Routes and Wintering Grounds of BBO’s Tree Swallows- the Final Year of the Geolocator project- By Geoff Holroyd, Helen Trefry, David Bradley and Ryan Norris

We know that Tree Swallows leave Beaverhill Natural Area as soon as their young fledge. But where do they go? That is a question that a three year study of Tree Swallows was trying to answer. In 2013 and 2014 Geoff Holroyd and Helen Trefry placed 0.8 gm geolocators on adult tree swallows. These devices keep track of Universal Time and light levels. From that data we can determine sunrise, sunset and day length and then calculate longitude and latitude each day. Geolocators do not transmit, rather we have to re-catch Tree Swallows to remove the geolocators. As we started to search for them in 2014, we soon realized these tiny devices are not easy to see if the bird has preened it in well. The only way to make sure we were not missing any was to try and trap each adult bird in the 50 box grid or at least view them up close with a telescope as they came in to feed their brood.



In 2014 we recovered 11 geolocators placed on Tree Swallows in the Natural Area in 2013 and 2014. In June of this year we recovered 13 more, including one from 2014, for a total of 24 to date.

The attached map shows the general movements of 16 Tree Swallows based on their geolocators fixes. In early July they flew to the Dakotas and Iowa where they stayed for about two months. Then they flew down the Mississippi Valley to their winter grounds that included Florida and Georgia on the Atlantic coast, the Mississippi River delta, the coastal marshes of Veracruz Mexico, the peninsula of Yucatan Mexico and one continued south to Honduras. In



early May they returned to Beaverhill rapidly.

Thanks to the Shell Environmental Fund, University of Guelph, Bird Studies Canada, and BBO for supporting this research.

More Northern Saw-whet Owl Band Re-encounters for Beaverhill Bird Observatory

by Lisa Priestley

Bird banding in North America had its 110th anniversary in 2015. Over 60 million bird bands have been placed on birds over the past century (Environment Canada 2005). The focus of most bird banding operations is migration monitoring and productivity studies, however, movement information can also be obtained when banded birds are recovered or re-encountered in other places. Band encounters can be uncommon. The Bird Banding Lab estimates that in 2001 there were 1,049,646 birds were banded in the United States and Canada, and 97,204 recoveries (9.3%) were reported. Of these, 8.5 % were game birds (ducks, geese, swans, doves, woodcock) and only 0.8% were non-game birds. Non-game bird recovery rates were highest for raptors and lowest for songbirds (USGS 2006a).



Figure 1.

Map of four banding stations in central Alberta.

An article was recently published in the Alberta Chapter of the Wildlife Society's newsletter about band encounters the Beaverhill Bird Observatory has had from 1983-2004 (see BBO library <http://beaverhillbirds.com/library.php>). We also published a paper on Northern Saw-whet Owl encounters which presents some strong information on this tiny owl being a partial migrant (<http://beaverhillbirds.com/docs/Priestley%20et%20al%202010%20JRR-09-25.pdf>). We have had new Northern Saw-whet Owl short distance re-encounters between four stations (Figure 1) and a few long distance re-encounters recently which show more movements.

The first re-encounter was at Fritz Forest, a site that has only been surveyed for one night each in 2013 and 2014. We banded a hatch year female Saw-whet Owl banded on 28 September 2013 and captured the same owl on 17 October 2014 at the same site (see Figure 2). Did this owl stay around for an entire year or perhaps it moved away from the area and then moved back through the same area in the fall. The second encounter was of an unknown sex hatch year Saw-whet banded 3 October 2013 at Gehlert's Grove east of Lindbrook and encountered 17 October 2014 at the Fritz Forest.

Bob Gehlert (Gehlert's Grove) reported four Saw-whet band encounters, the first on 3 October, 2013 of a hatch year female banded on 2 October, 2013 at BBO. This bird travelled 16.5 km west in one day. Another Saw-whet banded at BBO on 16 October 2013 was encountered at Gehlert's Grove on 21 October 2013. A third bird banded 24 October 2013 at BBO and encountered 25 2013 at Gehlert's Grove. The fourth was a banded female Saw-whet captured on 5 October 2012 that was originally banded by Hardy Pletz near Millet on 27 September 2012, a distance of 60 km northeast. Gerry Beyersbergen also found a banded Saw-whet on 16 October 2014 at BBO that was originally banded on 9 October 2013 at Gehlert's Grove.

We captured a banded Saw-whet on 7 October 2014 at Ministik station and discovered it had been banded at Gehlert's Grove on 23 September 2014. This was a distance of 10.3 km in 14 days indicating that his owl was not in a rush to 'migrate', if indeed it was going to.

We have had some longer distance encounters as well. A Saw-whet Owl banded at BBO on 21 September 2014 was encountered on 18 October 2014 at Bragg Creek, a site run by the Calgary Bird Banding Society. This was a distance of 315 km south in 27 days. The fourth encounter was reported just a few days ago by Harold Fisher from his Nisbet banding station just north of Prince Albert, Saskatchewan. He encountered a banded second year female Saw-whet Owl on 13 September 2015. This owl was banded on 14 October 2014 at BBO, 460 km west of Nisbet station.

Our band re-encounters suggested that Saw-whets in this region migrate, summer and winter in the same locales, and still others exhibited possible nomadic tendencies, which together comprise classic indicators of a 'partial migrant'.



2. Photos of Mark Fritz with a Saw-whet owl banded in 2013 and re-encountered in 2014.

THANK YOU VOLUNTEERS! This crew (photo Jonathan Demoor) completed the fence to keep cattle out of the northeast side of the Natural Area. This fencing was long overdue and they encountered cattle in the Natural Area (photo Geoff Holroyd). Many volunteers help with bird extraction and come to view the banding, all a great help, but a special thanks goes out to those that return for the grunt jobs: fence repair, road work, building bat boxes, etc. Without your help BBO would not be able to accomplish all their projects.



