

## The Internship Experience of 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 270 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. Unfortunately, there is no current research taking place at the BBO on this species, though 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 BBOs 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.