

Volume 31 Number 3

**Sept 2018** 

# Beaverhill Bird Observatory's Steaks & Saw-whets:

## Friday September 28th and Saturday September 29th

Celebrate the annual fall movements of the Northern Saw-whet Owl through the Beaverhill Natural Area. A steak barbeque with veggies will be served at BBO, followed by setting up mist nets to capture owls for banding. Learn about their biology while observing owls up close. Enjoy the sounds of fall migration and the stars overhead.



This popular event sells out so please book early to ensure your spot! **Online registration required.** Dress for the weather!

**Time:** Dinner served between 6:00 and 8:00 p.m. Nets go up at 8:00 p.m. **Cost:** Members \$30 /person, Non-members \$40/person can include a \$10 <u>life</u>

membership, free for kids under 12 when accompanied by their parents.

If you wish to share home made baking with the group, bring some to share!

**Register:** Purchase tickets on-line at <a href="www.beaverhillbirds.com">www.beaverhillbirds.com</a>; for more information contact <a href="mailto:chair@beaverhillbirds.com">chair@beaverhillbirds.com</a>

(Photo credit: Helen Trefry)

## "Fall migration monitoring is going incredibly

**Well**", reported Kevin Methuen in the last week of August. "We have captured nearly 1100 birds of 44 species! On one of our most exciting days we caught 11 species of warblers. The biggest highlights have been Cape May, Black-throated Green, and Bay-breasted warblers". Below, a Grey-cheeked Thrush was species #44 for this fall.



There is still time to visit BBO and catch some of the exciting fall migration. Photo credit: Kevin Methuen

## TIME TO BOOK YOUR CLASS ROOM TALK WITH ONE OF OUR EDUCATION OWLS

## education@beaverhillbirds.com

Presentation topics complement the curriculum, focus on climate change, owls of Alberta, the main threats facing birds and more. Let your local teacher know of this popular talk series!

The BBO education team, led by Sara Pearce Meijerink, continued talks through May this year. Overall, 178 presentations were given to audiences ranging from pre-kindergarten to seniors. Over 7000 students and 1200 adults were reached across Alberta! Staff and students also attended many other outreach activities this spring, including science and career fairs with Ricki and Ray, the educational Sawwhet Owls.



thanks from the Guthrie

Above: One of the many School.

## **Bat Box Building Bee**

The St. Albert Venturers assisted BBO in a Bat Box Building Bee held at Trefrys. These large multi-layered Bat Boxes will replace the smaller bat boxes. The bat interns have shown that the smaller ones are less likely to be used and if so, only by single bats, while the larger ones are frequently used at the Beaverhill Natural Area for rearing young. Thanks to Laurie Hunt for arranging the work bee and to Geoff Holroyd and Phil and Helen Trefry for supplying material and tools.



#### Student Interns 2018

**Twelve** student interns had projects this summer at BBO. Thanks to Board member Laurie Hunt who organized the SCiP (Serving Community internship Program) funded program and to the Fort Saskatchewan Naturalist Society (Art Hughes) for collaborating to fill more positions. Internships would not be possible without mentors ensuring each student is supervised and successful:

Tree Swallows interns Kerra Nisbet, Larissa Clayton, Maggie Chen, Krystal Hartog, and Bianca Unrau, were mentored by Kevin Methuen;

Breeding Bird Grid interns Erin Wood and Nicholas Helliker were mentored by Geoff Holroyd;

House Wren interns Melissa Ghadially and Christine Duke were mentored by Sara Pearce-Meijerink;

Bat Box interns Veronique Caron and Jenna Hlewka were mentored by Erin Low and Lynne Burns;

Butterfly intern Shyla Golly was mentored by Steve Andersen.



**Big Birding Breakfast** in June saw more than 80 people attending, including many families. They were treated to great weather and a chance to see migrants close up, such as this female Yellow Warbler with a brood patch. (photos Melissa Penny and Helen Trefry)





Thanks to the many volunteers that made this event fun and to cooks Janos Kovacs and Claude Roberto (below holding a PEFA). Claude made it a family event by sharing cooking with daughters Ariane and Amelie. Andra Bismanis and Geoff Holroyd lead Nature Walks; Thea Carpenter, Helen Trefry and Andra Bismanis supplied baking. Amelie Roberto-Charron volunteered with BBO for over a month before heading to Mauritius. She was selected by Wildlife Preservation Canada as the next New Noah, a program for training biologists in endangered species and habitat conservation work. Below she bands a Mauritius Fody. Amelie was also

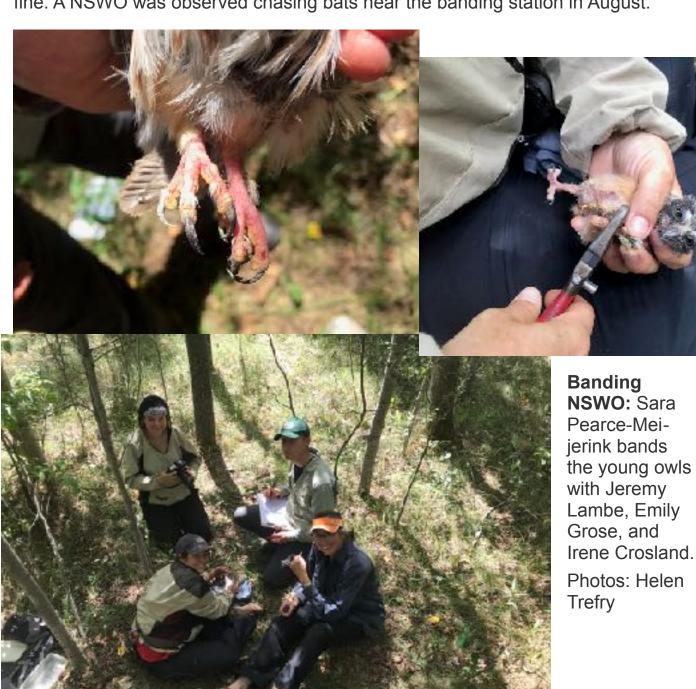
creative in teaching the interns how to identify birds' posts via cookies



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## Unusual Condition Found in Nesting NSWO at Beaverhill

One of the nest boxes in the Beaverhill Natural Area had a Northern Saw-whet Owl nest which fledged 4 young. While checking the boxes in May, the female was captured and her legs and feet were noted to be red and lacking feathering. On July 15th when the young were banded the female recaptured and the condition appeared worse. BBO staff were unable to determine what the cause was but based on advice from experts, decided to treat her for mites. If you have heard or seen this condition before, we would like to hear from you. The young appeared fine. A NSWO was observed chasing bats near the banding station in August.



# BBO's Geoff Holroyd Young Ornithologists' Workshop Year #3.

This year BBO hosted 7 keen young women (no guys!) for a week in early August. For the first time, the workshop was eligible for High School credits through the Innovate program which a few of the students took advantage of. Despite very hot weather for part of the program and an infestation of wasps, it was a fun week exploring the world of birds with these High School students. The staff shared their wealth of knowledge while working long hours. Thanks to Geoff Holroyd, David Laurie, Dave Duncan, Kim Blomme, and Phil and Helen Trefry for helping with sessions as well as others that helped provide food and transportation for the week (Helen Trefry, Brenda Dale, Carol Nolan, Andra Bismanis, and Inger Poulson)



Amelia Jowle, Kenzi Kawalilak, Madelinn Hanch, Noor Shahzad, Sasha Fairbairn, Stefanie Chang and Alexa Watt with BBO Chair Geoff Holroyd, Helen Trefry and Staff members Kevin Methuen, Jeremy Lambe and Sara Pearce Meijerink with Taiga. Missing Staff member Emily Grose. (Photo: Geoff Holroyd)

The following are reviews of the program from two of the Young Ornithologists in 2018:

#### My Week at the BBO by Kenzi Kawalilak (Holden, AB)

On the morning of August 5th, I didn't really know what I was getting myself into. All I knew was that I was going to spend the next week at the Beaverhill Bird Observatory learning about the life of a field biologist with other teens. I was really nervous about the week because I've never done a workshop like this one before. I am glad I left my comfort zone to try something new because the young ornithologist workshop was one of the best weeks I have had all summer! I met new and interesting people, I learned more about the world of birds, and I made some great memories.

Once all of our tents were set up we all got to sit down and introduce ourselves. In the first couple minutes I knew I was meeting some of the most genuine individuals I have ever met. The more I got to talk to the others the more I learned about the things they were passionate about. I was ecstatic to be surrounded by people who loved nature. Everybody was able to teach each other new things and the learning never stopped. As I got ready for bed the first night I smiled knowing that this week was going to be packed with new experiences that I wouldn't have the opportunity to do if I didn't come on this trip.



Waking up at 4:30 in the morning was easier than I expected it to be. It was refreshing to be up in the cool morning air and see the changes of the sky as the sun rose. On the first day we learned all about banding birds. I was nervous to try out banders grip on a bird for the first time, but once I did it I realized it isn't as difficult as I imagined. Each of the staff exemplified what it takes to be a great biologist. They taught us how to age, sex, and identify birds, how to extract birds from nets, and how to band the birds of course. After a couple of days we

I will always hold the memories of the week in my heart. From frolicking after butterflies like wild children, to handling some feisty chickadees, this week was full of adventure. Sure the weather was scorching hot and the wasps were more than plentiful, but that just exposed us to the reality of working in this field of work. If I didn't take the chance of doing this workshop I wouldn't have realized how much I love the world of biology and working in nature. It was more than just a week banding birds, it was a week of making new friends, learning new things, and trying things I would never have imagined doing. I would recommend to anyone who is passionate about birds or nature to do this workshop in the future because it is such a wonderful experience!

## My Experiences at Beaverhill Bird Observatory's Young Ornithologists' Workshop by Sasha Fairbairn (Surrey, BC)

Deciding to go camping for a week with strangers was the scariest decision I have ever made, but I have no regrets whatsoever in attending. I flew in to Edmonton from Abbotsford, BC, on the first day, and was given a ride to Beaverhill Bird Observatory (BBO). I had already been in contact online with both drivers (one of which was Helen Trefry, the organizer of the Young Ornithologists' Workshop) before the journey, and both were friendly and easy to talk to, so it was a surprisingly comfortable car ride despite lasting an hour and having the nervous thoughts of myself and another young ornithologist filling the atmosphere.

It was mid-afternoon by the time that everybody arrived on the first day, so there was only time to set up tents before the staff gave an introductory presentation and organized dinner. In that time, I got to know that the four staff were all super friendly, the other young ornithologists were equally shy and willing to make friends, and BBO itself was a beautiful place to be. The main location was a grass clearing in the trees, where tents could be set up anywhere nearby. There were picnic tables with a tarp overhead, that were used for the meals as well as any free time. There was also a small building that had a kitchen, seating area, and specific banding room. Everything else was located outdoors, including a dishwashing station, handwashing station, and long drop toilet (aka "the throne"). There was a private shelter to take a shower using a solar-heated water bag, but most of us chose to instead wait and use the bathroom at Helen's house midweek. It was possible to get one bar of signal to text people from the middle of the clearing, but the most reliable place to make calls was a two-minute walk from camp to volunteer parking.

The rest of the days had more of a routine. Each morning, we woke up at 4:45am, made ourselves breakfast in the cozy kitchen, and banded birds from 5:30 to 11:30 am. Previously, I had never tried banding and did not even know what a mist net looked like, so I learnt more than I could ever imagine during those six hours each morning, and even on the second day my opinion was valued as I measured wing lengths and judged age and molt, along with a long list of other things. Once banding was over, lunch was served before a presenter came to speak to us and we had a field trip. The presentations were

on butterflies, hummingbird banding, ducks, and falconry. There was always a relevant field trip that followed, including one to Helen's house, where she was raising falcons and the cutest ever northern saw-whet owl, and another to Elk Island National Park and Geoff Holroyd's house (another workshop organizer who the workshop was named after). It was an early night of around 9:00 pm, but there were always a couple of kids that stayed up, unable to sleep because of hot or uncomfortable tents. On the first and last nights, all the young ornithologists organized a walk together. The other nights included talking for long hours, playing a bird identification game that one of the kids brought, and going on shorter walks with a partner.

It honestly did all feel like fun and games, although there were basic camping chores that needed doing. On the first night, the young ornithologists were split in two groups. Each day, a different group would take on the washing up and preparing meals.



There were also two banding programs that needed doing at the start of the week, so the groups would also take turns between Migration Monitoring, and Monitoring Avian Productivity and Survivorship (MAPS). I found that this helped me get to know the people in my group much better, and I was able to take more turns handling the birds during banding. I also have no complaints about preparing meals, as I learned camping skills, as well as basic life skills, from doing so. Each day, a volunteer or staff member would bring food from their house or garden, so the young ornithologists rarely had much to do aside from laying the table and cleaning the dishes afterwards. There were three vegetarians, including me, and we always had plenty of healthy food to eat. Nobody had the chance to go hungry as there were leftovers and snacks available throughout the day for anybody feeling peckish.

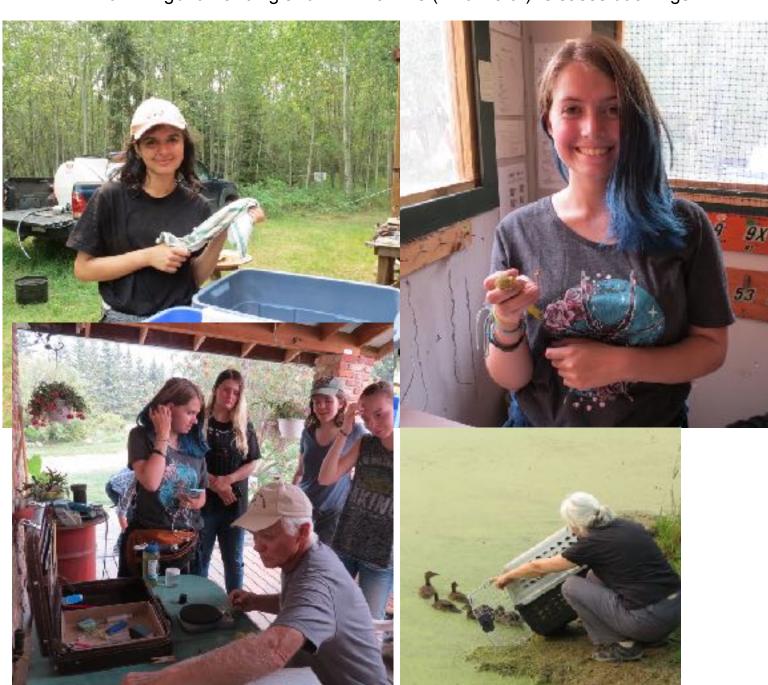
My least favourite part about the week was the bugs. The mosquitoes were considered better than last year, but were still landing on any bare skin throughout the day, especially around sunrise and sunset. I found it the most comfortable to wear a bug jacket during banding in the mornings, and then a short-sleeved shirt but long loose trousers for the majority of the day. I was very pleased to have brought long hiking socks, as ankles were a favourite for the sneaky mosquitoes. There was nothing to be done about the wasp problem, aside from forget any previous fears of wasps because there was no avoiding them near water and food at the camp site. Three people were stung during the week, but nobody was allergic so it did not ruin any of our weeks.

Aside from the mosquitoes and wasps, the wildlife at BBO was incredible. Exciting birds were caught in the mist nets most days, and Friday was the Big Birding Day, where we went around Beaverhill Lake and Tofield, trying to spot as many birds as possible. A few of the many lifers I saw during the trip included the sora, white pelican, black and white warbler, and Canada warbler. I also learnt heaps about butterflies during the pre-

sentation on Monday, had a spontaneous lesson on snakes while holding a garter snake on Thursday, and saw my first ever porcupine during the evening walk on Friday.

This camp was designed to benefit general nature lovers as well as the full-on bird enthusiasts. I enjoyed every aspect of it, and found that there was no time to be bored, yet too much adrenaline to be tired. The staff were overly generous with providing food, offering help, and entertaining everyone. After being together for a week, I got to know the other young ornithologists well, and we have all been keeping in touch since. I hope to return to BBO and volunteer one day, because I had such an incredible and unforget-table experience.

Below: Noor enjoying dishes; Madelinn banding; Geoff demonstrating Hummingbird Banding and Kim Blomme (Wild North) releases ducklings.



Stefanie holds a Peregrine during a raptor field trip at Trefrys and Amelia admires a Plains Garter Snake.





## Great Canadian Birdathon by Kevin Methuen

The BBO staff and volunteers had an epic birdathon this year! 121 species were identified in a 24 hour period, starting with banding followed by birding at Amisk Creek, Tofield Llama pond, and Elk Island. Highlights included Common Loon, 15 species of duck, Black-bellied and American Golden Plovers, Dunlin, and a Broadwinged Hawk. We raised \$825, thank you to all who donated and participated! Amelie Roberto-Charron also led a birdathon team for BBO, raising over \$5300! Geoff Holroyd and Helen Trefry also completed a birdathon to support BBO, identifying 111 species (between the two of them!) and raising over \$1500!

## Migratory Bird Day celebration with Nature Alberta

May 24th 2018 turned out to be a Family Day for 3 generations of the Holroyds,



celebrating a birthday as well!

Eric Holroyd (age 7) already knows many common birds but needed a hoist by Dad, Mike Holroyd. Sister Anna goes after butterflies while the smoke created by Geoff's cake was impressive! Photos: Steve Andersen



## **Sherwood Park Fish and Game Donates \$10,000!**

BBO has recognized that the staff sleeping quarters and banding lab require repairs as roofs begin to deteriorate and animals move into the buildings! Fund raising has begun and many individuals have contributed to date. However, Sherwood Park Fish and Game have made the difference in being able to move forward with plans for the work. See the next Willet for an update!

Below: Doug Burton presented the funds to Geoff Holroyd.



## Spring Migration Results by Kevin Methuen

The Beaverhill Bird Observatory's spring migration monitoring was conducted by Kevin Methuen, Sara Pearce-Meijerink, Emily Grose and Jeremy Lambe. Spring migration was monitored from May 1<sup>st</sup> to June 9<sup>th</sup>, with standardized banding and census conducted throughout these dates. BBO staff operated thirteen mist nets and recorded 607 captures of 44 species, achieving an overall capture rate of 23.4 birds per 100 net-hours.

#### **Migration Monitoring**

Thirteen mist-nets (2, 2X, 8, 9, 9X, 50, 51, 52, 53, 54, 55, 56, and 57) were operated from May 1st to June 9<sup>th</sup> on days that were above zero degrees Celsius, relatively calm (wind below 20 km/h), and free of precipitation. A total of 2594 net hours were accumulated, due to relatively few 'weather' days during the monitoring period this spring. A total of 607 birds were captured, of which 443 were newly banded. Both of these numbers were the lowest since 2013, the year before new net lanes were established. Species diversity was also lower this spring with 44 species (Table 1).

|                                | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------------------------|------|------|------|------|------|------|------|------|
| Total Captures                 | 754  | 532  | 276  | 242  | 408  | 382  | 500  | 497  |
| Birds Banded                   | 546  | 424  | 196  | 169  | 318  | 288  | 351  | 333  |
| Net hours (NH)                 | 2219 | 1809 | 1570 | 1615 | 1813 | 1828 | 1608 | 2016 |
| Capture Rate<br>(birds/100 NH) | 34.0 | 29.4 | 17.6 | 15.0 | 22.5 | 20.9 | 31.1 | 24.7 |
| Species                        | 44   | 38   | 32   | 31   | 44   | 38   | 39   | 38   |
|                                |      |      |      |      |      |      |      |      |
|                                | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Total Captures                 | 412  | 459  | 324  | 841  | 810  | 849  | 996  | 607  |
| Birds Banded                   | 241  | 307  | 211  | 561  | 641  | 663  | 802  | 443  |
| Net hours (NH)                 | 1884 | 1997 | 1884 | 2615 | 2859 | 3432 | 2031 | 2594 |
| Capture Rate<br>(birds/100 NH) | 21.9 | 23.0 | 17.2 | 32.2 | 28.3 | 24.7 | 49.0 | 23.4 |
| Species                        | 40   | 39   | 36   | 43   | 45   | 54   | 51   | 44   |

Table 1. Numbers of captures, mist-netting effort, capture rates, and number of species caught during spring migration monitoring at the Beaverhill Bird Observatory since 2003.

The five most commonly captured species this spring were Clay-coloured Sparrow (144 captures, representing 23.7% of all captures), Least Flycatcher (117 captures, representing 19.3% of all captures), Yellow Warbler (50 birds caught, 8.2% of captures), House Wren (26 birds caught, 4.3% of captures), and Swainson's Thrush (24 birds caught, 4% of cap-

tures). These top five species made up 59.5% of the total number of birds caught. See Table 2 below for full banding results.

Table 2. Total number and type of capture per species during 2018 spring migration monitoring at Beaverhill Bird Observatory (BBO). Repeat captures were banded in 2018 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 |
|------------------------|--------|--------|--------|---------|-------|-------|
| Alder Flycatcher       | 3      |        |        |         |       | 3     |
| American Goldfinch     | 4      | 2      |        |         |       | 6     |
| American Redstart      | 3      |        |        |         |       | 3     |
| American Robin         | 6      | 2      | 2      |         | 1     | 11    |
| American Tree Sparrow  | 1      |        |        |         |       | 1     |
| Baltimore Oriole       | 9      | 11     |        |         |       | 20    |
| Black-capped Chickadee | 1      | 11     | 2      |         |       | 14    |
| Blackpoll Warbler      | 1      |        |        |         |       | 1     |
| Brown-headed Cowbird   | 6      | 2      | 2      |         |       | 10    |
| Canada Warbler         | 1      |        |        |         |       | 1     |
| Cedar Waxwing          | 1      |        |        |         |       | 1     |
| Chipping Sparrow       | 12     |        |        |         |       | 12    |
| Clay-coloured Sparrow  | 110    | 29     | 2      |         | 3     | 144   |
| Common Yellowthroat    | 3      |        |        |         | 1     | 4     |
| Slate-coloured Junco   | 14     | 1      |        |         |       | 15    |
| Downy Woodpecker       | 1      |        |        |         |       | 1     |
| Gadwall                |        |        |        |         | 1     | 1     |
| Gray Catbird           | 4      |        |        |         |       | 4     |
| Gray-cheeked Thrush    | 4      |        |        |         |       | 4     |
| Hairy Woodpecker       | 1      |        |        |         |       | 1     |
| Hermit Thrush          | 3      |        |        |         |       | 3     |
| House Wren             | 18     | 5      | 1      |         | 2     | 26    |
| Least Flycatcher       | 75     | 19     | 13     |         | 10    | 117   |
| Lincoln's Sparrow      | 17     |        |        |         | 2     | 19    |
| Magnolia Warbler       | 3      |        |        |         |       | 3     |

| Mourning Warbler             | 12  |    |    |   | 1  | 13  |
|------------------------------|-----|----|----|---|----|-----|
| Myrtle Warbler               | 14  |    |    |   |    | 14  |
| Orange-crowned<br>Warbler    | 10  |    |    |   | 1  | 11  |
| Ovenbird                     | 1   |    |    |   |    | 1   |
| Red-eyed Vireo               | 1   |    |    |   |    | 1   |
| Rose-breasted Grosbeak       |     |    | 1  |   |    | 1   |
| Ruby-crowned Kinglet         | 1   |    |    |   |    | 1   |
| Savannah Sparrow             | 4   |    |    |   |    | 4   |
| Song Sparrow                 | 10  | 1  |    |   |    | 11  |
| Swainson's Thrush            | 22  |    |    |   | 2  | 24  |
| Tennessee Warbler            | 1   |    |    |   |    | 1   |
| Trail's Flycatcher           | 20  | 1  |    |   |    | 21  |
| Tree Swallow                 | 2   |    | 1  |   |    | 3   |
| Warbling Vireo               | 3   | 2  | 2  |   |    | 7   |
| White-crowned Sparrow        | 2   |    |    |   |    | 2   |
| White-throated Sparrow       | 14  |    |    |   |    | 14  |
| Yellow Warbler               | 22  | 13 | 12 |   | 3  | 50  |
| Yellow-bellied<br>Flycatcher | 2   |    |    |   |    | 2   |
| Yellow-bellied Sapsucker     | 1   |    |    |   |    | 1   |
| Totals                       | 443 | 99 | 38 | 0 | 27 | 607 |

May 20<sup>th</sup> to 26<sup>th</sup> was our busiest week of spring migration, with 205 captures and the highlight being a Canada Warbler. Our single busiest day of banding occurred on May 31<sup>st</sup> when we caught 60 birds of 16 species, including three gorgeous Magnolia Warblers. Other notable captures this spring included 20 Baltimore Orioles, 13 Mourning Warblers, and one Gadwall duck!

Staff surveyed birds along a standardized census route each day between May 1<sup>st</sup> and June 9<sup>th</sup>. Census results are combined with other incidental observations and daily banding totals to produce a Daily Estimated Total (DET) of the number, and type of species migrating through the Beaverhill Natural Area. There were many memorable sightings on census this spring. One day staff observed large flocks of Sandhill Cranes and Snow Geese numbering in the 400's each, flying right over the lab building. Many raptor species were also present on census with Peregrine Falcon, Merlin, and Sharp-shinned Hawk recorded as highlights.

Outside of census, large flocks of White-faced Ibises were popular with visitors and observed on Kallal Marsh, Beaverhill Lake, Lister Lake, and nearby flooded fields.



Blackpoll Warbler (Photo: by Kevin Methuen

### Meet BBO's Newest Board Member Alyssa Bohart:

"I have been volunteering at the BBO since May of 2014 and have been involved in many different aspects including banding operations as well as public outreach. I'm currently working on a Masters' Degree in Ecology at the University of Alberta, studying polar bear migration behaviour. I was eager to join the board to take on new opportunities and roles with the BBO."



### **Kudos Corner**

Beaverhill Bird Observatory events in 2018 are being Supported by Telus, Sherwood Park Fish and Game, Alberta Conservation Association, TD Friends of the Environment, Alberta Gaming and Liquor Commission, Nature Canada (Charles Labatiuk Conservation Fund), Bird Studies Canada (Baillie Fund), Community Environment Action Grant, Community Environment Action Grant, Community Environment Action Grant, Program, Serving Communities Internship Program (SCiP), The Wildbird General Store, Aviva, Edmonton Nature Club, and individual donors.

There are many, many ways that individuals have worked to make BBO a better and productive place this summer: Sara Pearce-Meijerink ably finished the education season in May and then acted as head bander in June/July while Kevin Methuen took an extended travel holiday (he missed BBO after 6 weeks and returned with even more energy). Emily Grose and Jeremy Lambe worked uncomplainingly to get the many jobs done that are always waiting after their banding shifts are done. It was a busy busy year at BBO.

Thank you to Greg Ottway for coordinating a donation of four picnic tables through Alberta Parks. The old ones were beyond repair and the new ones have already been used for numerous events.

Volunteers make BBO a special place to work, and are essential to our success. Helen Trefry co-ordinated the Big Birding Breakfast and Young Ornithologist week. Al and Joyce DeGroot again cooked the bacon, Thea Carpenter and Andra Bismanis supplied baking for the event. The Tofield Library staff continue to allow scanning and printing and supply a place to work.

For supporting our day-to-day operations, thank you Al DeGroot and Geoff Holroyd for setting up solar panels and batteries; Geoff for setting up rain barrels and bringing water, filling and delivering propane, and cutting grass on all of our large trails with his riding mower; Helen Trefry for producing the Willet; Darren Macgregor for maintaining our website; Rose Scott for managing BBO's finances; Thea Carpenter for managing memberships; Steve Andersen for heading up fund raising. Finally thanks to the whole Board who keep operations functioning efficiently and help in ways too numerous to include here!