



Volume 30 Number 2

MAY 2017



Gerald Romanchuk

The Beaverhill Bird
Observatory's Annual
**BIG BIRDING
BREAKFAST**
**Saturday June 3rd
AND Sunday June
4th, 2017**

The popular Big Birding Breakfast will run for 2 days this year. Celebrate the return of the migrant birds with your family and friends. Enjoy a GREAT breakfast of crepes, fruit, bacon and more. Walk the net lanes with the staff, learn how and why birds are banded and learn about the birds of our area. Get a dose of Vitamin N (Nature) while you get up close and personal with our feathered friends as they are banded and released! Nature walks, other activities and crafts for kids are planned.

Mist netting and banding run from **5 am to 11 am, Breakfast is between 7 and 11 am, Saturday June 3rd and Sunday June 4th.** A guided nature walk will be at 9 am. Cost is \$20 per person (children 12 and under free). Pre-registration and payment are required by going to www.beaverhillbirds.com; **contact** helentrefry@gmail.com **if you need more information.**

Beaverhill Lake (below) late Summer 2016. The above average precipitation in April continues to fill the lake. There have been sightings of large flocks of waterfowl with peregrines chasing them over the lake this spring and a loon calling! Photo credit: Mike Haskin



Between June 27 and July 21, 2016, a total of 138 mm of precipitation fell in the area (Alberta Climate and Information Services) and over 40 mm fell in April, 2017.



Waiting at the Wier



A special offer to BBO members! Nature Alberta is offering BBO members a free one-year membership in Nature Alberta <http://www.naturealberta.ca/> . You will receive their quarterly magazine 'Nature Alberta' for free. To secure your free membership, please send an email to them at info@naturealberta.ca . ENJOY

BEAVERHILL BIRD OBSERVATORY 2017 STAFF:

BBO is lucky to have three experienced bird banders on staff this spring. Kevin Methuen and Meghan Jacklin have returned. Sara Pearce Meijerink volunteered for 2 falls at BBO and joins the banding team. BBO thanks Emily Cicon for the past 2 years at BBO and congratulate her on starting her Master's study on songbirds at the University of Alberta and hope to see her at BBO during the year.

Staff were unable to start banding 1 April due to a late spring but started conducting a daily census through the spring snows and are banding now. Please introduce yourself to our competent and friendly staff when you visit BBO this spring.

Meet the Staff: Meghan Jacklin, Sara Pearce Meijerink and Kevin Methuen



You can Support BBO staff in the Baillie Birdathon this May! Get an instant tax receipt and specify your funds go to BBO! Thanks for donating in 2016!

Go to:

<http://birdscanada.kintera.org/faf/search/searchParticipants.asp?>

[ievent=1169312&lis=0&kntae1169312=F518B3345BC94922808E06BFEDB148CA](http://birdscanada.kintera.org/faf/search/searchParticipants.asp?ievent=1169312&lis=0&kntae1169312=F518B3345BC94922808E06BFEDB148CA)

The 2017 BBO Board members working behind the scenes:

Chair: Geoff Holroyd; Treasurer: Rose Scott ; Secretary: Thea Carpenter
Directors at Large: Helen Trefry, Steve Anderson, Julia Put, Christine Boulton,
Laurie Hunt, Emily Upham-Mills, Caitlin Mader, Jonathan DeMoor, new Board
member Roland Perrott and a special thanks to Darren McGregor, who continues
to develop BBO's super new Website: www.beaverhillbirds.com
Geoff and Laurie have **13** new interns preparing for their 2017 projects. Check out
the 2016 intern reports at: <http://beaverhillbirds.com/publications/student-interns/>

Early Spring time at the banding station: Yes, that is an American Bittern in a tree and a Beaver checking out the lab- illustrating you never know what you are going to find at BBO! Thanks for sharing your photos Sara Pearce Meijerink.





University of Alberta graduate students continue utilizing the tree swallow grid, benefitting from the work of the staff and interns that maintain and monitor the boxes. Thanks to the interns and grad students for sharing their findings.

Tree Swallow Geolocator Data by Elizabeth Gow, University of Guelph, to be presented at the American Ornithological Conference this summer. It is a great example of cooperation across NA to obtain a NA scale picture of a species.

Latitudinal variation and similarity in the range wide timing of the annual cycle of tree swallows from 12 breeding populations

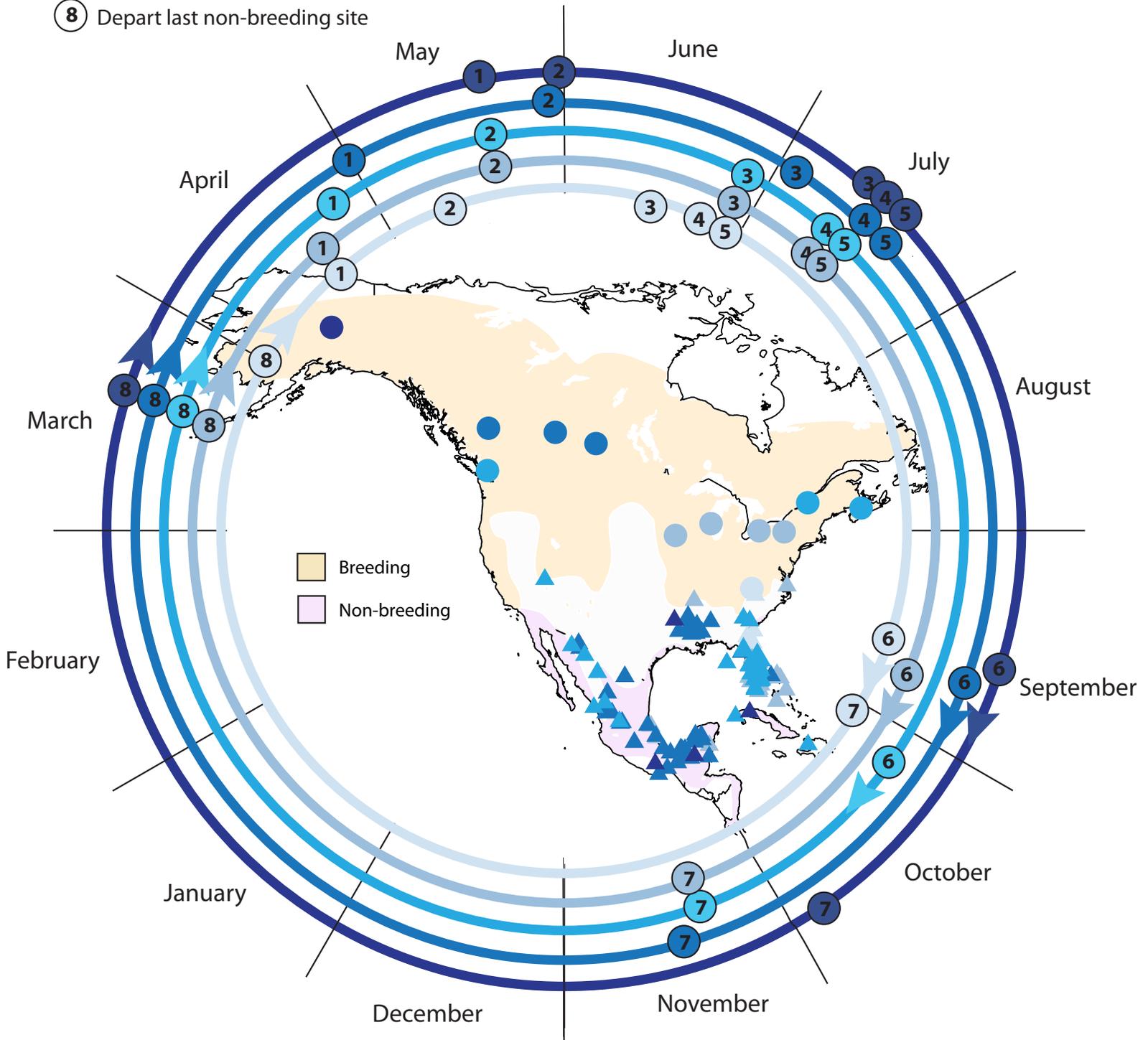
Elizabeth A Gow, University of Guelph; Samantha M. Knight, University of Guelph; David W. Bradley, Bird Studies Canada; Robert G. Clark, Environment Canada; Marc Bélisle, Université de Sherbrooke; Lisha Berzins, University of Northern British Columbia; Tricia Blake, Alaska Songbird Institute; Eli S. Bridge, University of Oklahoma; Lauren Burke, Dalhousie University; Russell D. Dawson, University of Northern British Columbia; Peter O. Dunn, University of Wisconsin; Dany Garant, Université de Sherbrooke; Geoff Holroyd, Beaverhill Bird Observatory; Andrew G. Horn, Dalhousie University; David J. T. Hussell, Ontario Ministry of Natural Resources; Olga Lansdorp, Simon Fraser University; Andrew J. Laughlin, UNC Asheville; Marty L. Leonard, Dalhousie University; Fanie Pelletier, Université de Sherbrooke; Dave Shutler, Acadia University; Lynn Siefferman, Appalachian State University; Caz M. Taylor, Tulane University; Helen Trefry, Beaverhill Bird Observatory; Carol M. Vleck, Iowa State University; David Vleck, Iowa State University; David W. Winkler, Cornell University; Linda A. Whittingham, University of Wisconsin; D. Ryan Norris, University of Guelph

Annual cycle events

- ① Arrive breeding grounds
- ② First egg (start of breeding)
- ③ End of breeding
- ④ Breeding ground departure
- ⑤ Arrival at first fall stopover
- ⑥ Departure from first fall stopover
- ⑦ Arrival at primary non-breeding site
- ⑧ Depart last non-breeding site

Breeding latitudes

- 60–65°
- 50–55°
- 45–50°
- 40–45°
- 35–40°



While it is well-established there are latitudinal differences in the timing of breeding, whether these differences carry over to influence subsequent events in the annual cycle of migratory birds is not well understood. Using data from 138 light-level geolocators, we examined the timing of annual events in 12 breeding populations of tree swallows (*Tachycineta bicolor*) ranging from 36°N (North Carolina) to 65°N (Alaska). While there were latitudinal differences in the timing of breeding, individuals generally departed the breeding grounds at similar times. This was achieved, in part, because northern breeders tended to depart for migration much sooner after rearing young compared to southern breeders. While this translated to similar arrival times at fall stopover sites, arrival at the first non-breeding site was primarily driven by the number of fall stopovers used and the total distance travelled. At the end of the winter, birds occupying more southern non-breeding sites departed earlier, but their departure was not related to the latitude of their breeding site. Arrival at the breeding grounds was positively related to distance travelled. Overall, with the exception of the most southerly breeding site in North Carolina, the timing of events outside breeding period was fairly consistent across breeding latitudes. Our results suggest that individuals, particularly at more northern latitudes, are highly effective at making up lost time incurred during the breeding period and that the timing of events in one period of the year may not always carry-over to influence the timing in later periods.

A summary of another TRES study happening at BBO:

Using ornamental coloration of tree swallows as a non-invasive indicator of aquatic pollution

by Natalia Lifshitz and Colleen St. Clair University of Alberta

While current methods for examining pollution in wildlife typically require invasive techniques, ornamental coloration has shown to be a sensitive alternative indicator of environmental quality due to its direct link to condition. In our study, we investigated if metal pollution affects ornamental coloration and oxidative status of tree swallows – one of the various aerial insectivores declining in North America – breeding in constructed urban wetlands in the city of Edmonton, compared to birds breeding in rural areas (Big Lake in St. Albert and The Beaverhill Bird Observatory). To our knowledge, this study is the first to evaluate the effects of pollution on quantitative characteristics of iridescent plumage. Our analysis shows that environmental metals negatively correlate with the antioxidant status of males and females, with stronger effects in the latter. Also, we found diverse effects of environmental quality on color, hue, chroma and brightness of feathers, with different

patterns for males and females. Our results suggest that male and female tree swallows are differentially vulnerable to urban pollution. Additionally, because our urban birds were sampled in constructed wetlands, this study could shed some light on the potentially negative effects these wildlife attractants could have on birds.

HOW CAN YOU HELP BBO?

All funds are used to pay BBO staff, for operations and projects. You will receive a tax receipt and be healthier for your generosity!



Donate here:

<https://www.canadahelps.org/en/charities/beaverhill-bird-observatory/>

Thanks for your recent help and Donations:

Les Holroyd and Glen Hvenegaard for donating to the Young Ornithologist Workshop; Bill Paulson, Geoff Holroyd and Helen Trefry for their donations. Grants: AB Conservation Association, Edmonton Community Fund, TD Friends of the Environment, and Nature Canada's Labatiuk Funds. Thanks to the Wildbird General Store for the continued donation of bird seed for BBO's feeders.

BBO is about more than just birds!

BBO staff have now installed about 40 bat boxes in the Natural Area and monitoring of these boxes will be done by an intern in 2017. Six wren boxes in 2016 had bats using them.

Excerpts from a Summary of 2016 Bat Acoustic Survey by Jody Rintoul (Augustana Campus, University of Alberta)

Employees of the Beaverhill Bird Observatory (BBO) have found bats roosting in wren boxes in recent years. The organization has thus increased bat monitoring in the Beaverhill Natural Area, starting in 2015 (bat boxes) and expanding to acoustically as well in 2016. The acoustic data collection was carried out by a volunteer intermittently from May-September 2016.

The purpose of this report is to summarize the major findings of the acoustic sampling. Note that acoustic surveys are not definitive for species inventories, but provide an estimate of groups of species. Further sampling is required.

General Methods

A wildlife acoustics SM2Bat+ bat detector was deployed for 75 nights April 30-Sept 20, 2016. The detector recorded calls from one hour before sunset to one hour after sunrise. The microphone was located 1.5-2 m above ground in a tree with very little interference from leaves at the east most area of the clearing outside the BBO station. The clearing was surrounded by trembling aspen trees, with a bat house located approximately 50 m from the microphone.

A list of all possible bat species in the Beaverhill Natural Areas was compiled based on habitat type and species ranges. Using this list, 4 categories were made based on the limitations of species identification using echolocation calls. The bat calls were analyzed looking at minimum frequency, characteristic frequency and call duration, with each acoustic file grouped into the bat categories and an additional category for low quality calls: *Myotis* sp., EPFU/LANO (Big Brown and Silver-haired Bats), LACI (Hoary Bats), LABO (Eastern Red Bats) and low quality bat calls when category could not definitively be assigned. For the purpose of this report, number of files was an indication of relative bat activity, but is not representative of abundance or overall activity (e.g., one file indicates a bat pass, if a bat is circling in the clearing, it will be represented by several files). In addition to catego-

ricing the files, I noted if a feeding buzz was present to demonstrate habitat use by category throughout the night (e.g., foraging vs. commuting).

Major Findings

Bats were detected from May 5-Sept 18, 2016. Bat activity was influenced by the minimum nightly temperature, with more bat passes occurring when minimum temperature was above 10°C. Bat activity was lowest before June and after mid-August. The peaks were in August which relates to the time in which young of the year could potentially be flying.

Myotis sp. were the most common detected bats throughout the summer and made up over 50% of files over all months. The EPFU/LANO group was next common, increasing their activity in June and August compared to other months. The remaining groups of bats were not common, making up less than 1% of all bat calls.

The majority of feeding buzzes occurred at 21:00 with feeding occurring throughout the entire night, ending before 05:00. Of the feeding buzzes, 95% were from *Myotis* sp. and the remaining were from the EPFU/LANO category.

Conclusion

Bats use the clearing at the BBO station throughout May to mid-September, with the majority of all recordings being from *Myotis* sp. The EPFU/LANO grouping used the area primarily in June and August, with lower instances throughout the remaining months. Very few records of LACI and LABO were recorded, therefore, further sampling should occur over the next summer for a larger number of calls to analyze. To get a full picture of bat use in the Beaverhill Natural Area, sampling in different habitat types is recommended.

SAVE A BIRD! We all enjoy our bird friends but please take the extra time and effort to learn how you can save a bird in your own yard if you have cats or windows that kill birds. For windows, Check out the Wildbird General Store for ideas, like the UV liquid that you can put on your windows to make them more visible. Or check out this site for more ideas: <https://abcbirds.org/get-involved/bird-smart-glass/>

Environment Canada estimates that cats kill between 100 million and 350 million birds per year in Canada, 38% of those by pet cats, and the rest by feral cats.

Beaverhill Bird Observatory's Geoff Holroyd Young Ornithologists' Workshop: Sunday July 30- Saturday August 5th, 2017

Are you 15-18 years old and interested in birds and nature?

Would you like to learn and practise how to ID, sex, age and band birds?

Would you like to experience what it is like to be in a camp setting with other teens learning from biologists?

Location: Beaverhill Bird Observatory near Tofield, Alberta.

Check out www.beaverhillbirds.com for information on how to apply to attend this free workshop or contact helentrefry@gmail.com.

