



Beaverhill Bird Observatory
Summer Report 2018

By: Sara Pearce Meijerink

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Introduction

The 2018 summer season covers the period from June 10th to August 8th. During this time the Beaverhill Bird Observatory (BBO) programs were operated by Head Biologist Kevin Methuen, Assistant Biologist Sara Pearce Meijerink, and Summer Students Emily Grose and Jeremy Lambe. Six rounds of the Monitoring Avian Productivity and Survivorship (MAPS) program were conducted, with a total of 593 birds captured. This has been the third year the Geoff Holroyd Young Ornithologist Workshop has been held and seven youth spent a week with us learning about bird banding, biology and conservation. BBO staff also banded Tree Swallow nestlings, conducted nest searches, provided interpretive talks at the lab to the visiting public and volunteers and participated in a Purple Martin banding marathon. Twelve interns were surveying bats, butterflies, breeding birds, as well as nesting Tree Swallows and House Wrens in the natural area this summer.

Monitoring Avian Productivity and Survivorship

The Institute for Bird Populations created the MAPS program in 1989 to monitor and assess the productivity of North American land birds during the breeding season by specifically looking at population dynamics, adult survivorship and post fledgling productivity. This North American wide collaboration between public agencies, banding stations, other non-government groups and individuals across the United States and Canada is to continually monitor bird populations in order to provide vital data that can aid in the management and conservation of breeding birds.

The BBO started its MAPS program in 1989, making us one of the oldest participants in the program's history. While the BLAB station remains operational as an important forest interior site, the new SOPO and LILA stations that were established in 2016 are booming! Each station operates ten standard songbird mist nets (12m long by 2.6m tall, 30mm mesh) starting at sunrise and monitored for 6 hours, once during each ten-day cycle between June 10th and August 8th. Banding only occurred during weather conditions with temperatures between 0°C and 27°C, no precipitation and wind speed of 20km/h or less.

BLAB

The BLAB station is located near the banding lab (N53.38055° W112.52737°) with the majority of the nets located to the southeast of the lab building. When this station was first established, the habitat was described as being young aspen, balsam poplar, and willow near water. During the last 29 years, forest succession has occurred and along with fluctuating water levels of Beaverhill Lake, the habitat can now be described as mixed aged balsam poplar and aspen forest. Banding at the BLAB station occurred on June 10th, June 20th, June 29th, July 11th, July 24th and August 6th.

BLAB had another record slow season in 30 years of banding, with a total of 54 birds captured, of 10 different species. With an effort of 310 net hours, we had a capture rate of 17.4 birds per 100 net hours. Least Flycatchers were dominating this station with 36 captures, representing 65%

of all birds caught. We also caught a few American Robins (5), Black-capped Chickadees (4), Rose-breasted Grosbeaks (3) and only one of the following: Baltimore Oriole, Cedar Waxwing, House Wren, Red-winged Blackbird, Warbling Vireo and a Tennessee Warbler.



Least Flycatcher caught at BLAB (photo credit: Sara Pearce Meijerink)

SOPO

The SOPO station (N53.37936° W112.51921°) located at the intersection of Flicker Freeway and Harrier Highway in the Beaverhill Natural Area borders Lister Lake and Sora Pond. The habitat there is comprised of mixed aged poplar and aspen forest transitioning into willows that borders the two water bodies. Banding occurred at the SOPO station on June 13th, June 25th, July 6th, July 15th, July 25th and August 7th.

At SOPO we captured 317 birds over 330 hours, producing a capture rate of 96.1 birds per 100 net hours. A total of 29 different species were caught, the two most common were Black-capped Chickadees (63) and Least Flycatchers (63). The next most abundant species captured this year was Yellow Warbler (51), followed by Song Sparrow (27), Warbling Vireo (14), Clay-coloured Sparrow (11) and Red-winged Blackbird (11). Other species of interest included Cedar Waxwing (4), Marsh Wren (4), LeConte's Sparrow (3), Lincoln's Sparrow (3), Northern Waterthrush (3) and Sora (1).



Sora caught at SOPO (Photo credit: Irene Crosland)

LILA

The LILA station (N53.37216° W112.52930°) is located along Harrier Highway beside the shoreline of Lister Lake, just east of the viewpoint. Mixed age poplar and aspen, transitioning to willows once more is the habitat description of this site. Banding occurred at LILA on June 14th, June 28th, July 9th, July 19th, July 28th and August 8th.

The LILA nets caught a total of 222 birds this year, with 330 net hours producing a capture rate of 67.3 birds per 100 net hours. Least Flycatchers were once again the most frequently captured birds representing 35% of our captures with 77 individuals processed. The second most abundant species were Yellow Warbler (20), followed by Red-winged Blackbird (17), Black-capped Chickadee (13) and Song Sparrow (13). Other species of interest include; Clay-coloured Sparrow (5), Gray Catbird (4), a Baltimore Oriole, an Ovenbird and one Cooper's Hawk.



Cooper's Hawk caught at LILA (Photo credit: Emily Grose)

Geoff Holroyd Young Ornithologist Workshop

This is the third consecutive year the BBO has hosted The Geoff Holroyd Young Ornithologist Workshop for youth. This year's participants came from all over Alberta as well as one participant from British Columbia to attend the workshop to learn how to identify and band birds. Everyone participated in our Migration Monitoring and MAPS banding program and by the end of the week, almost every youth was banding and able to extract birds from the net with supervision. In the afternoons, guest speakers came out to share their knowledge and experience with the young birders. Guest speakers included Geoff Holroyd (Hummingbird Banding), David Lawrie (Moths and Butterflies), Helen Trefry (Peregrine Falcon Conservation), David Duncan (Ducks), and Kim Bloome (Wildlife Rehabilitation). Staff led the Young Ornithologists on a Big Birding Day around the BBO, Tofield wetlands and locations in Elk Island National Park. Even with all the thick smoke present due to forest fires in British Columbia, the group found 90 different bird species! The Canadian Wildlife Service was kind enough to loan an extensive bird specimen collection which the youth studied and practiced their aging/sexing skills. As well, all Young Ornithologists participated in a duckling release with Kim Bloome from Wild North and collected butterflies to identify with David Lawrie. By participating in this week long workshop, the Young Ornithologists got to experience what it is like to be a field biologist, and learned about bird conservation issues and threats facing our feathery friends.



The 2018 Young Ornithologists! (photo by Geoff Holroyd)

During the course of the Geoff Holroyd Young Ornithologist Workshop, we saw the participants grow in their self-confidence and bond with other youth that shared an interest in nature. After the workshop had ended, a week later we received word from one of the participants that she plans on changing her university major from veterinary to conservation biology. We hope that this workshop continues to inspire participants to further increase their appreciation for the natural world and the animals we share this planet with.

Though this is the third year the workshop has been held, it has yet to receive a secure, long-term source of funding. Currently this workshop is free to participants, making it available to all who love nature, no matter their background. If you are interested in helping to sponsor a Young Ornithologist to attend next year's workshop, contact Helen Trefry at helentrefry@gmail.com. A \$400 donation covers the cost of one participant attending the workshop.

Thank you once again to guest speakers Geoff Holroyd, David Lawrie, Helen Trefry, David Duncan, and Kim Blomme. A huge thank you to Helen Trefry for meal planning and groceries for the entire event, thank you Brenda Dale for making a delicious soup and thank you to Irene for a wonderful dessert! Thank you to Geoff Holroyd for helping Helen organize this workshop and for your expertise.

Nest Searches

Staff performed numerous nest searches for natural bird nests in the Beaverhill Natural Area on non-banding days. Searches included actively searching for forest and grassland bird nests, as well as recording incidental nests found when incubating birds were flushed. A nest card from the Prairie Nest Record Scheme was filled out each time a nest was found, detailing GPS location, habitat, nest location, number of eggs and young, and stage of growth. This data can be used to add to existing knowledge about nesting behavior and timing of nesting birds.

In 2018, 24 nests were found of 11 different species. Mallards (5) were the most commonly found nest, followed by Least Flycatchers (3), Blue-winged Teals (3), American Robins (3), and unknown duck species (3). Two Cedar Waxwing nests were found and one of each of the following; Green-winged Teal, Yellow Warbler, Downy Woodpecker, Rose-breasted Grosbeak and Clay-coloured Sparrow. Out of all the nests found, the outcome of 16 was unknown, 2 were successful in raising young, and 6 were failed, often due to predation.

Other Banding

Five interns monitored our 205 Tree Swallow boxes, which are located in the road grid, spiral grid, and new grid. The chicks were banded from June 18th until July 19th. 293 Tree Swallow chicks were banded at the nest boxes along with 9 adult Tree Swallows, and 4 Mountain Bluebird chicks, which were located on the spiral grid near volunteer parking.

Geoff Holroyd banded Ruby-throated Hummingbirds using a special feeder trap during the Young Ornithologists Workshop. He banded five individuals this year.

For a second year, BBO staff along with Geoff Holroyd assisted Glen Hvenegaard in a Purple Martin Marathon! For 2 days we travelled across central Alberta, re-trapping as many banded adult martins as possible in order to gain more information about their movements, and dispersal patterns. We banded 7 adults and had 32 recaptures in those two days as well. We also attended the evening mass trapping of Purple Martins at Ellis Bird Farm two weeks later in July and banded 41 adults and got 37 recaptures. It was a successful effort!

Acknowledgements

Many of the projects and achievements that were accomplished this summer would not have been possible without our Chair of the Board Geoff Holroyd, and many board members, with a special thank you to Helen Trefry. Geoff wrote and edited grants, as well as other staff documents, and mowed the trails at the BBO before the Young Ornithologist Workshop. Helen and Geoff coordinated the Young Ornithologists Workshop and Helen arranged all the meals for the event. We also must thank Rose Scott for all her continuous efforts working as Treasurer of the BBO. Thank you all for all your hard work!

The BBO relied on help from many volunteers in order to complete all the projects and tasks that were achieved this summer. We thank the following people for their assistance in banding and nest searching from June 10th to August 8th.

Irene Crosland
Richard Chamberland
Emily Cicon
Emily Upham-Mills
Alyssa Bohart
Emma Tresch
Brittany Tschirren
Cari McGillivray
Scott Rangler

We are also very thankful for the dedication of this year's BBOs interns who assist us to continue monitoring the productivity of House Wrens, Tree Swallows, and other breeding birds, as well as monitoring the presence of butterflies and bats in the Beaverhill Natural Area. Thank you to Laurie Hunt for coordinating the interns, and to the Alberta Serving Communities Internship Program (SCiP), for funding the internships. Art Hughes and the Fort Saskatchewan Naturalist Club facilitated some SCiP internships. Also, a large thank you to this year's interns' mentors. This year's reports are being written by the interns and edited by their mentors, and will be posted on the BBO website when completed.

Intern List

Krystal Hartog.....	Tree Swallow
Kerra Nisbet.....	Tree Swallow
Larissa Clayton.....	Tree Swallow
Maggie Chen.....	Tree Swallow
Bianca Unrau.....	Tree Swallow
Melissa Ghadially.....	House Wren
Christine Duck.....	House Wren
Erin Wood	Breeding Bird Census
Nicholas Helliker	Breeding Bird Census
Véronique Caron	Bats
Jenna Hlewka	Bats
Shyla Golly	Butterflies

A huge thank you to Steve and Kay at the Wildbird General Store for continuously supporting the BBO with their very kind support in the form of bird seed. They also provided us with some bird books for the Young Ornithologist this year so another big thank you to them for that!

We appreciate the unofficial office space provided by the Tofield Library and UpsanDowns Farm. Thank you Connie, Diane, Susan, Helen and Phil for letting us use your space to write reports, do data entry, and stay connected with the outside world.

Thank you to Shauna Methuen-Hall for donating a lawn mower to the BBO! This has helped us to keep the grass cut in front of the lab and in doing so, slightly reduce the number of mosquitoes chewing on us on a daily basis. Thank you!

Thank you to our financial supporters the Alberta Conservation Association, Alberta Liquor and Gaming Commission, TD Friends of the Environment, Nature Canada (Charles Labatiuk Conservation Fund), Bird Studies Canada (Baillie Birdathon), and personal donations. Thank you for supporting BBO's programs!

Appendix 1. MAPS Raw Data

BLAB Station	Captures				
Species	Banded	Recaptures	Returns	Other	Totals
American Robin	3	2			5
Baltimore Oriole				1	1
Cedar Waxing	1				1
House Wren	1				1
Least Flycatcher	18	5	11	2	36
Red-winged Blackbird	1				1
Rose-breasted Grosbeak	1	1	1		3
Warbling Vireo			1		1
Black-capped Chickadee	3		1		4
Tennessee Warbler	1				1
Totals	29	8	15	2	54

SOPO Station	Captures				
Species	Banded	Recaptures	Returns	Other	Totals
Black-capped Chickadee	44	8	5	6	63
Least Flycatcher	46	9	5	3	63
Yellow Warbler	40	4	5	2	51
Song Sparrow	12	9	2	4	27
Warbling Vireo	15	1	2	1	19
Common Yellowthroat	11	2		1	14
Clay-coloured Sparrow	11				11
Red-winged Blackbird	8	1	1	1	11
Trail's Flycatcher	3	5			8
Tennessee Warbler	7				7
American Robin	5				5
Cedar Waxwing	4				4
Marsh Wren	2		1	1	4
Swamp Sparrow	3			1	4
House Wren	3				3
LeConte's Sparrow	3				3
Lincoln's Sparrow	2			1	3
Northern Waterthrush	3				3
American Goldfinch			2		2
Brown-headed Cowbird	2				2
Ruby-throated Hummingbird				2	2
Downy Woodpecker	1				1
Gray Catbird		1			1
Green-winged Teal				1	1
Hermit Thrush	1				1
Nelson's Sparrow	1				1
Rose-breasted Grosbeak	1				1
Sora	1				1
Yellow-bellied Sapsucker		1			1
Totals	229	41	23	24	317

LILA Station	Captures					
	Species	Banded	Recaptures	Returns	Other	Totals
	Least Flycatcher	56	9	4	8	77
	Yellow Warbler	14	2	1	3	20
	Red-winged Blackbird	14		1	3	18
	Cedar Waxwing	16		1		17
	Black-capped Chickadee	10		2	1	13
	Song Sparrow	10	1	2		13
	House Wren	6			2	8
	American Goldfinch	4		3		7
	Yellow-bellied Sapsucker	4		2		6
	Clay-coloured Sparrow	3			2	5
	Downy Woodpecker	4	1			5
	Trail's Flycatcher	5				5
	Warbling Vireo	4		1		5
	Brown-headed Cowbird	3			1	4
	Gray Catbird	4				4
	Tennessee Warbler	4				4
	Common Yellowthroat	2				2
	Baltimore Oriole	1				1
	Cooper's Hawk				1	1
	Marsh Wren	1				1
	Rose-breasted Grosbeak	1				1
	Black-and-White Warbler	1				1
	Ovenbird	1				1
	Lincoln's Sparrow	1				1
	White-throated Sparrow	1				1
	Ruby-throated Hummingbird				1	1
Totals		170	13	17	22	222