



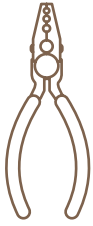
THUNDER CAPE
BIRD OBSERVATORY
THUNDER BAY, ONTARIO

2020 Annual Report



Thunder Bay
Field Naturalists





TCBO team

Authors:

Rinchen Boardman
Mark A. Conboy
Stuart A. Mackenzie

TCBO Coordinator:

Rinchen Boardman

Director, Migration Ecology:

Stuart A. Mackenzie

2020 Volunteers and
 Collaborators :

Stephanie Davis
Tamara Derkowski
Peter Harris
Claire Paillard
Kate Prince
Taylor Simpanen

**Thunder Cape
 Bird Observatory**

c/o Thunder Bay
 Field Naturalists
 P.O. Box 10037
 Thunder Bay, Ontario
 P7B 6T6

tbfn.net/thunder-cape 
 thundercapebirdobservatory
 @gmail.com


Cover:

Northern Saw-whet Owl by
 Sheri and Brock Fenton


Design:

Alexandre Nicole
 alexandrejnicole.com

DONATE


TCBO relies heavily on the
 generosity of people like you.
 Please consider making a
 donation **here** 

Thunder Cape Bird Observatory

THUNDER CAPE BIRD OBSERVATORY (TCBO)  conducts research and population monitoring of migratory birds along the north shore of Lake Superior. The observatory also provides education and training opportunities to the public and aspiring biologists. The observatory is nestled at the Tip of Sibley Peninsula south of Sleeping Giant Provincial Park. TCBO is a joint project of Birds Canada and the Thunder Bay Field Naturalists with support from the Ontario Ministry of Natural Resources and Forestry (OMNRF).


TCBO is strategically located at the southern tip of the Sibley Peninsula on the north shore of Lake Superior on the fringe of the Boreal Forest. This 35-km long forested peninsula is flanked by the highest cliffs in Ontario and is a natural migrant trap, particularly for waterfowl, raptors, and passerines in the fall. TCBO provides information on populations of Boreal breeding birds as a contribution to the Canadian Migration Monitoring Network and the OMNRF Wildlife Population Monitoring Program, as well as helping to document birds and natural history in the Thunder Bay District. The main aspects of the TCBO program are Migration Monitoring, Northern Saw-whet Owl, and Common Nighthawk monitoring.

Birds Canada

BIRDS CANADA  is the leading science-based bird conservation organization in Canada. The mission of Birds Canada is to conserve the wild birds of Canada through sound science, on-the-ground actions, innovative partnerships, public engagement, and science-based advocacy.

Birds Canada is a national charity built on the contributions of thousands of supporters and Citizen Scientists. Using data from our volunteer monitoring programs and targeted research, our scientists identify significant population changes and direct conservation planning. We are a strong partner in BirdLife International, the world's largest conservation alliance for nature and people, active in more than 120 countries and territories.

Thunder Bay Field Naturalists

THE THUNDER BAY FIELD NATURALISTS  club is a non-profit organization dedicated to the study of natural history, the wise use of natural resources, the preservation of natural areas, and the understanding and protection of nature.



Contents

Migration Monitoring Program2

Fall Migration Monitoring5

2020 Bird Highlights8

Acknowledgements10

How You Can Help 11

Appendix 1. 2020 Banding Totals.....12



SLEEPING GIANT

Migration Monitoring Program

TCBO HAS BEEN COLLECTING STANDARDIZED DATA on bird migration at the tip of the Sibley Peninsula since 1992. TCBO was founded to conduct migration monitoring of migratory birds from the forests of Northwestern Ontario which migrate along the Sibley Peninsula on their way south in the fall and north in the spring.

Each spring and fall, staff and volunteers perform daily banding and observations at TCBO. The migration count data assembled at TCBO are used to derive daily estimated totals for each species recorded throughout the year. Ultimately, estimated total data are used to generate **population trends** [↗](#) for nearly 200 species. Migration monitoring is a particularly valuable method as it enables the monitoring of species that breed in northern Canada, or other inaccessible areas, which can be difficult to assess with more conventional monitoring methods such as the North American Breeding Bird Survey. There are now about 30 migration monitoring stations (bird observatories) across Canada which form the **Canadian Migration Monitoring Network (CMMN)** [↗](#).

In 2020, TCBO banded 3 361 birds, which is below the long-term average of 7 200 birds. Additionally, 630 recaptures of previously banded birds were processed.



Trends from TCBO and stations across Canada can be found [here](#) [↗](#)

Table 1. TCBO-banded birds reported from elsewhere in 2020 (includes reports from other years only received by TCBO in 2020).

Species	TCBO banding date	Foreign Encounter date	Foreign Encounter location
Brown Creeper	October 21, 2014	October 26, 2019	Chicago, Ill.
Northern Saw-whet Owl	October 5, 2018	October 13, 2019	Not available
Northern Saw-whet Owl	October 2, 2011	November 4, 2011	Newark, Ind.
Northern Saw-whet Owl	September 23, 2020	November 17, 2020	Vernon County, Wis.

Table 2. Foreign recaptures at TCBO in the previous four years.

Species	Capture date at TCBO	Original banding date	Banding location
Blue Jay	August 22, 2020	October 24, 2019	Hawk Ridge Bird Observatory, Minn.
Northern Saw-whet Owl	October 10, 2017	October 10, 2014	Hawk Ridge Bird Observatory, Minn.
Northern Saw-whet Owl	October 7, 2018	November 7, 2017	Howard, Wis.
Northern Saw-whet Owl	October 24, 2018	October 20, 2016	Hawk Ridge Bird Observatory, Minn.
Northern Saw-whet Owl	September 27, 2018	April 13, 2017	Whitefish Point Bird Observatory, Mich.
Northern Saw-whet Owl	October 16, 2019	October 6, 2015	Tofte, Minn.
Northern Saw-whet Owl	October 5, 2018	October 21, 2016	Cedar Grove Hawk Research Station, Wis.
Northern Saw-whet Owl	October 12, 2020	November 3, 2017	Wabasha County, Minn.
Northern Saw-whet Owl	October 17, 2019	October 10, 2017	Hawk Ridge Bird Observatory, Minn.
Northern Saw-whet Owl	September 27, 2019	October 17, 2018	Hawk Ridge Bird Observatory, Minn.

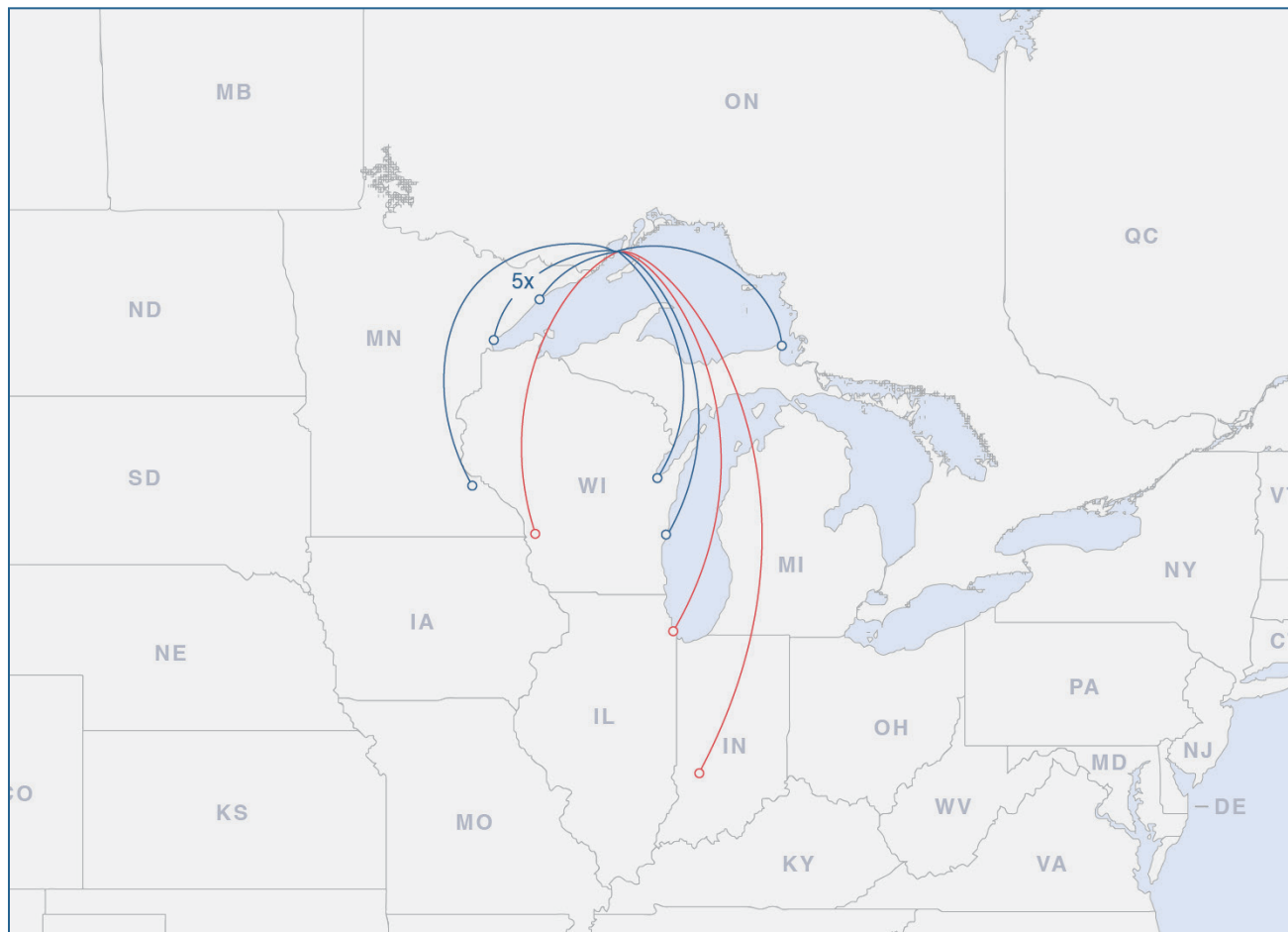


Figure 1. Encounters of TCBO-banded birds reported from elsewhere in 2020 (red), and foreign recaptures at TCBO (blue).

FALL MIGRATION MONITORING

The 29th fall migration monitoring season ran from August 2 to October 29 (89 days) with a reduced volunteer crew and other COVID-19 precautions in place. Despite working with a smaller crew, TCBO banded 3 222 birds of 90 species and forms. Surprisingly, the total was only slightly lower than the previous 10-year average of 3 439 individuals. In total staff and volunteers contributed 1 715 field hours, totalled 3 556 mist net hours, 725 hawk net hours, and 3 176 ground and J-trap hours, resulting in a capture rate of 36 birds/day (Table 1). In addition to newly banded birds there were 336 recaptures of 35 species. One Slate-coloured Junco that was banded at TCBO October 24, 2020 was found in Chicago, Illinois November 15, 2020.

Table 1. Effort summary statistics for 2020 fall migration monitoring.

Person-hours	1 725
Total species and forms reported	140
Individuals banded	3 349
Species and forms banded	90
Total station-days of migration monitoring	38
Total net-hours	3 356
Total trap-hours	3 176
Overall catch rate	10.5 birds / 100 hours
Visitors	146



Nashville Warblers were among the top 10 most banded birds, with 162 individuals banded.

There were three particularly impressive visible migrations on three days: August 21 – 1 272 warblers, 1 018 American Redstart, 96 Myrtle Warbler, and 30 Nashville Warbler. September 6 – 1 796 warblers of 17 species. September 23 – 1 015 warblers, 78 Nashville, 71 Western Palm, 44 Orange-crowned warblers, 40 American Robin, 26 Swainson’s Thrush, 50 and 60 Golden and Ruby-crowned Kinglet, respectively, 288 Dark-eyed Junco and 40 White-crowned Sparrow. There were six days with particularly notable migration when more than 100 individuals were banded (Table 2): August 16, 116 birds were banded dominated by American Redstarts and Nashville Warblers; September 23, 162 birds were banded comprised of Nashville Warblers, Lincoln’s Sparrows, and Swainson’s Thrush; September 26, 130 birds were banded dominated by Swainson’s Thrush, Slate-coloured Juncos, and Black-capped Chickadees; October 13, 138 birds were banded dominated by a flurry of Slate-coloured Juncos, and Golden-crowned Kinglets; October 16, 104 birds banded comprised of mainly Slate-coloured Juncos and American Tree Sparrows; and finally October 19, 101 birds were banded primarily Slate-coloured Juncos, Brown Creepers, American Tree Sparrows, and Golden-crowned Kinglets.

Table 2. Days with 100+ birds banded, fall 2020.

Date	Birds banded	Main Species
August 16	116	<ul style="list-style-type: none"> ■ American Redstart ■ Nashville Warbler
September 23	162	<ul style="list-style-type: none"> ■ Nashville Warbler ■ Lincoln’s Sparrow ■ Swainson’s Thrush
September 26	130	<ul style="list-style-type: none"> ■ Swainson’s Thrush ■ Slate-coloured Junco ■ Black-capped Chickadee
October 13	138	<ul style="list-style-type: none"> ■ Slate-coloured Junco ■ Golden-crowned Kinglet
October 16	104	<ul style="list-style-type: none"> ■ Slate-coloured Junco ■ American Tree Sparrow
October 19	104	<ul style="list-style-type: none"> ■ Slate-coloured Junco ■ Brown Creeper ■ American Tree Sparrow ■ Golden-crowned Kinglet



Slate-coloured Junco

*Most abundant
species banded
(396 individuals)
— fall 2020*

COMMON NIGHTHAWK MONITORING Daily evening counts were undertaken from August 10 to September 10. Common Nighthawks were observed on many August nights in small numbers. Maximum counts were only 5 individuals on August 20, 21, and 28. One bird was banded.

NORTHERN SAW-WHET OWL MONITORING Our Northern Saw-whet Owl program ran from September 15 to October 27. Weather conditions allowed us to operate over 37 nights in which 176 birds were banded. There were three nights that we were unable to operate due to the presence of a Barred Owl. Because of our small crew we did not attempt banding beyond standard protocol times.



During the fall, a total of 176 Northern Saw-whet Owls were banded over 37 nights of operation.

VOLUNTEERS Volunteers provided a noteworthy 1 715 field hours in 2020. Without them we could not have accomplished our work. They are: Stephanie Davis, Tamara Derkowski, Peter Harris, Claire Paillard, and Taylor Simpanen. Many thanks are also offered to Kate Prince for her support.

VISITORS A positive impact of restrictions to activities for the public involving COVID-19 resulted in the station having more visitors during the fall season than in past years. We welcomed 146 individuals arriving on foot or by kayak. Most were day hikers. A few stayed overnight at the campsite nearby. These visits provided an opportunity for outreach, education, and promotion.

2020 Bird Highlights

Included in this list are rarities, out-of-season birds (e.g., overwintering neotropical migrants), notable concentrations, and significant banding highlights.

Table 3. 2020 bird highlights.

Species	Notes
Cackling Goose	One was observed September 18.
Snow Goose	One was observed October 7 and 12.
Tundra Swan	Four were observed October 29.
Canvasback	Three flew past Oct. 18, and another one Oct.22.
Ruddy Duck	Two were observed September 17.
Yellow-billed Cuckoo	Individuals were banded September 22 and 24.
Black-billed Cuckoo	One was observed September 24.
Sandhill Crane	Two flew over September 24, and four on October 1.
Red Knot	One was observed September 2.
Semipalmated Sandpiper	Two were observed September 3.
Wilson's Snipe	One was found September 22, October 21, and October 29.
American Woodcock	One was present September 2.
American White Pelican	Observed many days in August through September 5. A high count of 11 was observed on August 10.
American Bittern	One was found September 24.
Green Heron	One on September 18.
Golden Eagle	One migrant was observed October 22.
Rough-legged Hawk	First of the fall was observed October 1.
Barred Owl	One was present Sep. 28, and Oct. 2, 7, and 29.



Eastern Phoebe	Singles observed from August 17 to September 22.
Carolina Wren	The first and second individuals ever banded at TCBO were banded August 9 and 15. One was observed August 14.
Eastern Bluebird	High count of three October 7.
Gray Catbird	Until recently this species was not often encountered. This year individuals were noted for much of August and September.
House Sparrow	One banded October 17.
Pine Grosbeak	An infrequently banded species at TCBO. Sixteen were banded in 2020, a new station high.
White-winged Crossbill	Daily migration flights throughout October. High counts were 625 on October 25, 800 on October 20, and 950 on October 24.
Fox Sparrow	A record number of 17 were banded.
Oregon Junco	One banded September 24.
LeConte's Sparrow	Mostly singles observed August 8-October 23. One was banded August 13 and September 25.
Connecticut Warbler	One was banded September 6 and 9.
Cape May Warbler	The highest number banded (24) in the last 15 years.
Bay-breasted Warbler	The highest number banded (14) in the last 14 years.
Blackburnian Warbler	The highest number banded (24) in the last 16 years.
Scarlet Tanager	The first banded in 13 years, September 4.
Northern Cardinal	One observed August 16.

Acknowledgements

TCBO graciously acknowledges the support of the Ontario Ministry of Natural Resources and Forestry, Thunder Bay Field Naturalists, Environment and Climate Change Canada, Fisheries and Oceans Canada – Canadian Coast Guard, and Birds Canada. Administration, oversight, project guidance, data management, and analysis are provided by Birds Canada. A special thank-you to the staff of Sleeping Giant Provincial Park for logistical support, and to Al Harris and the Bird Committee of Thunder Bay Field Naturalists for their guidance and assistance. Lastly, a special thank-you to all the volunteers that made this work possible and to Kate Prince and Taylor Simpanen, the assistant coordinators.

TCBO COMMITTEE Ted Armstrong, Neil Dawson, Allan Harris (Chair), Brian Ratcliff, Keith Wade, Nick Escott.

PHOTO CREDITS cover NSW: Sheri and Brock Fenton; **p. 2** Dark Forest Photography; **p. 4** NAWA: Sheri and Brock Fenton; **p. 6** NSW: Rinchen Boardman; **p. 9** LESP: Rinchen Boardman; BLBW: Rinchen Boardman; **p. 11** Dark Forest Photography; **All other photos: TCBO volunteers and collaborators.**

Thanks to our partners:



How You Can Help

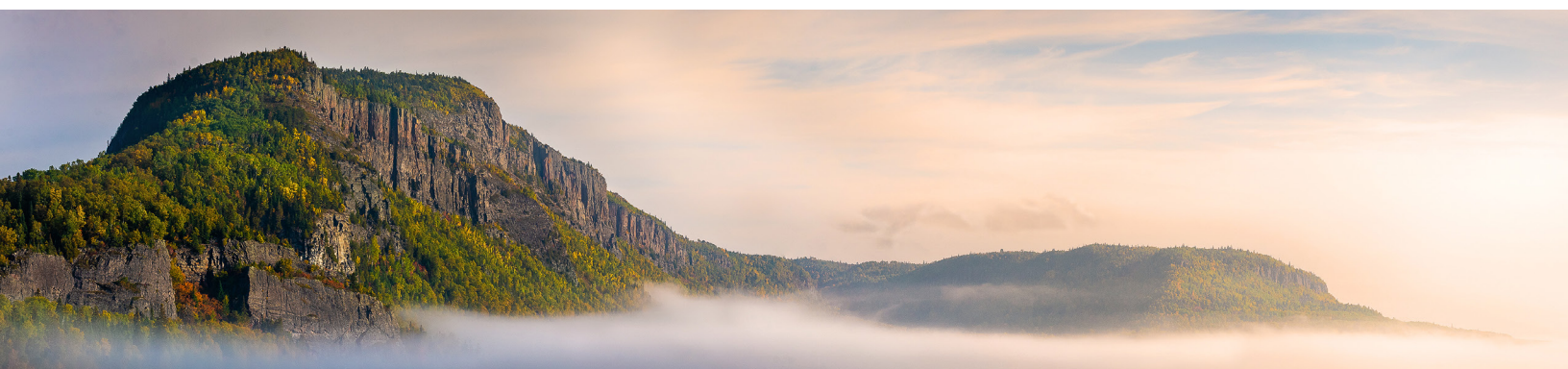
TCBO relies heavily on the generosity of our supporters. There are many ways that you can make a lasting contribution to bird conservation through our research, training and education programs at Thunder Cape Bird Observatory: one-time donations, monthly giving plans, or a legacy gift. You can also contribute to TCBO and bird conservation across Canada by participating in the **Great Canadian Birdathon** [↗](#).

- \$ 2** Enables the banding of a bird.
- \$ 25** Keeps the bird feeders stocked for a week.
- \$ 50** Feeds our volunteer team for a day.
- \$ 100** Buys a mist net, or covers the cost of a boat trip to Thunder Cape.
- \$ 250** Buys a Motus Wildlife Tracking System tag.
- \$ 500** Supplies the stations with toilet paper for a year.
- \$ 1 000** Supports the attendance of a youth at one our Young Ornithologist Internship at Thunder Cape
- \$ 2 500** Supports the training of a pupil from Latin America.
- \$ 5 000** Provides a stipend to an assistant for one season.

Donations can be made online (link below) or sent by cheque made out to TCBO c/o Thunder Bay Field Naturalists, P.O. Box 10037, Thunder Bay, Ontario, P7B 6T6, or c/o Birds Canada P.O. Box 160, 115 Front St., Port Rowan, ON, N0E 1M0. Be sure to specify TCBO in any contribution on correspondence.

For more information about planned giving, please call us toll-free at 1-888-448-2473 ext. 174, or email Kate Dalgleish at kdalgleish@birdscanada.org.

DONATE HERE [↗](#)



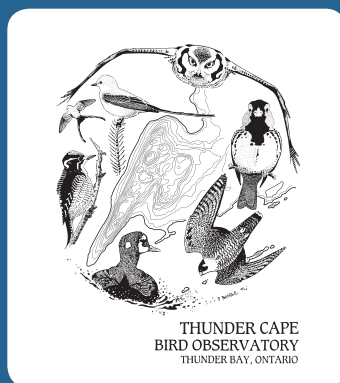
Appendix 1

TCBO's 2020 banding totals

Species and forms	Total Spring	Total Fall	Grand Total
American Goldfinch	0	4	4
American Pipit	0	1	1
American Redstart	0	210	210
American Robin	0	5	5
American Tree Sparrow	0	157	157
Bay-breasted Warbler	0	14	14
Black-and-White Warbler	0	32	32
Black-backed Woodpecker	0	5	5
Blackburnian Warbler	0	24	24
Black-capped Chickadee	0	156	156
Blackpoll Warbler	0	35	35
Black-throated Blue Warbler	0	18	18
Black-throated Green Warbler	0	21	21
Blue Jay	0	39	39
Blue-headed Vireo	0	9	9
Brown Creeper	0	113	113
Canada Warbler	0	21	21
Cape May Warbler	0	24	24
Carolina Wren	0	2	2
Cedar Waxwing	0	9	9
Chestnut-sided Warbler	0	16	16
Chipping Sparrow	0	36	36
Clay-colored Sparrow	0	6	6
Common Grackle	0	4	4
Common Nighthawk	0	1	1
Common Redpoll	0	6	6
Common Yellowthroat	0	14	14
Connecticut Warbler	0	2	2
Downy Woodpecker	0	27	27
Eastern Phoebe	0	1	1
Eastern White-crowned Sparrow	0	4	4
European Starling	0	1	1
Fox Sparrow	0	17	17
Gambel's White-crowned Sparrow	0	4	4
Golden-crowned Kinglet	0	118	118
Gray Catbird	0	3	3

Canada Jay	0	1	1
Gray-cheeked Thrush	0	9	9
Hairy Woodpecker	0	6	6
Hermit Thrush	0	16	16
Horned Lark	0	23	23
House Sparrow	0	1	1
Lapland Longspur	0	3	3
Le Conte's Sparrow	0	2	2
Least Flycatcher	0	14	14
Lincoln's Sparrow	0	76	76
Magnolia Warbler	0	58	58
Merlin	0	1	1
Mourning Warbler	0	13	13
Myrtle Warbler	0	83	83
Nashville Warbler	0	162	162
Northern Parula	0	6	6
Northern Saw-whet Owl	0	176	176
Northern Waterthrush	0	73	73
Orange-crowned Warbler	0	20	20
Oregon Junco	0	1	1
Ovenbird	0	15	15
Philadelphia Vireo	0	3	3
Pileated Woodpecker	0	4	4
Pine Grosbeak	0	16	16
Pine Siskin	0	15	15
Purple Finch	0	2	2
Red-breasted Nuthatch	0	47	47
Red-eyed Vireo	0	27	27
Red-winged Blackbird	0	3	3
Rose-breasted Grosbeak	0	2	2
Ruby-crowned Kinglet	0	44	44
Rusty Blackbird	0	4	4
Savannah Sparrow	0	51	51
Scarlet Tanager	0	1	1
Sharp-shinned Hawk	0	58	58
Slate-colored Junco	0	396	396
Snow Bunting	0	6	6
Song Sparrow	0	31	31
Swainson's Thrush	0	197	197
Swamp Sparrow	0	35	35
Tennessee Warbler	0	58	58
Traill's Flycatcher	0	32	32
Veery	0	3	3
Western Palm Warbler	0	92	92

White-crowned Sparrow	0	17	17
White-throated Sparrow	0	73	73
Wilson's Warbler	0	8	8
Winter Wren	0	13	13
Yellow Warbler	0	23	23
Yellow-bellied Flycatcher	0	16	16
Yellow-bellied Sapsucker	0	7	7
Yellow-billed Cuckoo	0	2	2
Yellow-shafted Flicker	0	18	18
Total	0	3 222	3 222



Thunder Cape Bird Observatory
c/o Thunder Bay Field Naturalists
P.O. Box 10037
Thunder Bay, Ontario P7B 6T6

tbfn.net/thunder-cape
thundercapebirdobservatory@gmail.com