

Annual Report







TCBO team

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Thunder Cape Bird Observatory

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Thunder Cape Bird Observatory

THUNDER CAPE BIRD OBSERVATORY (TCBO) \(\text{TCBO} \) \(\text{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 southwest of Sleeping Giant Provincial Park, and is strategically located 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 Ontario's Provincial Wildlife Population Monitoring Program, as well as helping to document birds and natural history in the Thunder Bay District. TCBO is a joint project of Birds Canada and the Thunder Bay Field Naturalists in partnership with the Ontario Ministry of Natural Resources.

Birds Canada

BIRDS CANADA is the country's only national organization dedicated to bird conservation. Our mission is to drive action to increase the understanding, appreciation, and conservation of birds in Canada.

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 ☑ 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.







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Migration Monitoring Program

TCBO HAS BEEN COLLECTING STANDARDIZED DATA on bird migration at the tip of the Sibley Peninsula adjacent to Sleeping Giant Provincial Park since 1992. TCBO was founded to conduct monitoring and research on migratory birds from the forests of northwestern Ontario which migrate along the north shore of Lake Superior 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 (CMMM).



Trends from TCBO and stations across Canada can be found here ♂

Table 1. TCBO-banded birds reported from elsewhere in 2022 (includes reports from other years only received by TCBO in 2022).

| Species | TCBO banding date | Foreign Encounter date | Foreign Encounter location |
|-----------------------|----------------------|---------------------------|-------------------------------|
| Northern Saw-whet Owl | September 28, 2011 | October 15, 2021 | Waupaca, Wis. |
| Northern Saw-whet Owl | September 19, 2020 | September 29, 2021 | Lakewood, Minn. |
| Northern Saw-whet Owl | September 22, 2021 | September 26, 2021 | Lakewood, Minn. |
| Northern Saw-whet Owl | October 3, 2021 | November 8, 2022 | Rushton Woods, Pa. |

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

| Species | Capture date at TCBO | Original banding date | Banding location |
|-----------------------|----------------------|-----------------------|---|
| Blue Jay | June 2, 2018 | October 10, 2017 | Hawk Ridge Bird Observatory, Minn. |
| Blue Jay | August 24, 2020 | August 29, 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 | September 27, 2018 | April 13, 2017 | Whitefish Point Bird Observatory, Mich. |
| Northern Saw-whet Owl | October 5, 2018 | October 21, 2016 | Cedar Grove Research Station, Wis. |
| 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, 2019 | October 15, 2017 | Tofte, Minn. |
| Northern Saw-whet Owl | September 27, 2019 | October 17, 2018 | Hawk Ridge Bird Observatory, Minn. |
| Northern Saw-whet Owl | October 16, 2019 | October 6, 2015 | Tofte, Minn. |
| Northern Saw-whet Owl | October 17, 2019 | October 10, 2017 | Hawk Ridge Bird Observatory, Minn. |
| Northern Saw-whet Owl | October 12, 2020 | November 3, 2017 | Minneiska Township, Minn. |
| Northern Saw-whet Owl | October 20, 2020 | October 8, 2019 | Tofte, Minn. |
| Northern Saw-whet Owl | September 22, 2022 | October 1, 2020 | Steven's Point, Wis. |
| Northern Saw-whet Owl | September 29, 2022 | October 10, 2020 | Crescent, Iowa |
| Sharp-shinned Hawk | May 7, 2017 | September 27, 2016 | Hawk Ridge Bird Observatory, Minn. |
| Sharp-shinned Hawk | September 18, 2018 | September 13, 2013 | Hawk Ridge Bird Observatory, Minn. |
| Sharp-shinned Hawk | September 26, 2021 | September 15, 2019 | Hawk Ridge Bird Observatory, Minn. |

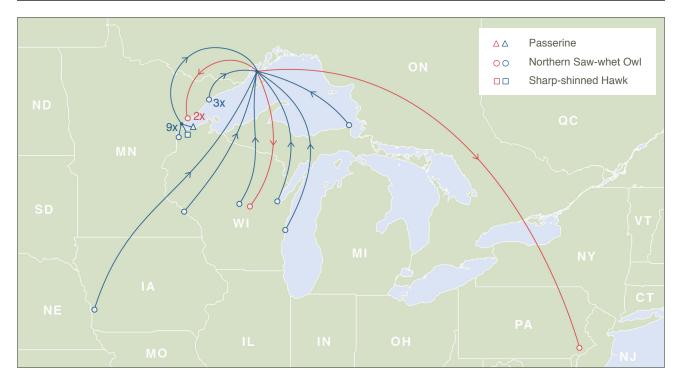


Figure 1. Encounters of TCBO-banded birds reported from elsewhere in 2022 (red), and foreign recaptures at TCBO (blue).

SPRING MIGRATION MONITORING

This was the first complete spring operated since 2020 due to Covid. It was a joy to return but due to a very extended winter in northwestern Ontario, our first two intrepid volunteers had to snowshoe into the station to open the buildings in advance of the boat being able to reach the shore. Sleeping Giant Provincial Park and Thunder Bay still had a meter of snow on the ground during the first week of May. The shore of Lake Superior was covered in ice. Consequently, our season start was delayed from May 1 to May 6, and ran to June 5, totaling 31 days.

The season remained cool, wet, and windy for the most part hindering migration until the end of May and early June. On May 23, the logs recall: "Yesterday's paper: heavy frost for the first couple of hours then calm, then wind off the lake."

Even on the last day of the season Rinchen Boardman reported: "Frost this morning! It didn't really warm up until 11:00 even with full sun. Calming air. Much cleaning, boarding windows, storing food, taking down nets, etc., in preparation for our departure tomorrow, big lake allowing. There could be a few more birds passing through over the next couple of days, but we must depart."

Our efforts produced 1,401 individuals banded of 76 species and 113 recaptured birds of 16 species. Our healthy daily average catch was that of 45 birds or 70.64 individuals per 100 hours. The previous 10 years of operation has an average of 1,871 birds banded (Table 3).

Table 3. Effort summary statistics for 2022 spring migration monitoring.

| Person-hours | 1,190 |
|--|----------------------------|
| Individuals banded | 1,401 |
| Species and forms banded | 76 |
| Individuals recaptured (species and forms) | 113 (16) |
| Total station-days of migration monitoring | 31 |
| Total net-hours Mist net Hawk net | 1,105.9 1,083.7 22.2 |
| Total trap-hours Ground trap J-Trap | 877.3 718.0 159.3 |
| Overall catch rate | 70.6 birds / 100 hours |



One of the 12 Cape May Warblers banded in spring 2022.

There were three significant migration days when more than 100 birds were banded, but not until the end of May. On May 24, 107 birds were banded of 24 species dominated by Blue Jays (27), Chipping Sparrows (17), American Redstarts (13), and Chestnut-sided Warblers (11). On May 29, 115 birds of 28 species were banded again dominated by Blue Jays (13), Common Yellowthroat (10), Pine Siskin (10), Magnolia Warblers (9), American Redstarts (9), Canada Warblers (8), and 12 other warbler species! Finally, near the end of the season on June 1, 123 individuals of 13 species were banded completely dominated by Pine Siskins (87) and Blue Jays (16).

Table 4. Days with 100+ birds banded, spring 2022.

| Date | Birds banded (species) | Main Species (number banded) |
|--------|------------------------|--|
| May 24 | 107 (24) | Blue Jay (27) Chipping Sparrow (17) American Redstart (13) Chestnut-sided Warbler (11) |
| May 29 | 115 (28) | Blue Jay (13) Common Yellowthroat (10) Pine Siskin (10) Magnolia Warbler (9) American Redstart (9) Canada Warbler (8) |
| June 1 | 123 (13) | ■ Pine Siskin (87) ■ Blue Jay (16) |

Conditions allowed the safe operation of mist nets for 1,083.67 hours, limited hawk net use of 22.25 hours, 159.33 j-trap hours, and 718 ground trap hours. Our reduced crew members contributed 1,190 volunteer hours. Much appreciation is offered to each one of them listed below.

On June 5, we recaptured a Swainson's Thrush initially banded at TCBO on August 17, 2021, as a hatch year bird. TCBO banded a Purple Finch on May 14 on our 08:40 net round. It was subsequently recaptured on the same day at 11:50 by McKellar Island Bird Observatory in Thunder Bay. This is a first inter-station capture for these two close locations.



Most abundant species banded -spring 2022:

- 1. Blue Jay (265, pictured) 2. Chipping
- Sparrow (157)
- 3. Pine Siskin (129)

OUR VOLUNTEER CREW We are indebted to our volunteers—without them we would not have been able to conduct our work. This year they came from Ontario and Québec in Canada, and Minnesota, USA. They are: Kelly Cossette, Holly Gallagher, Peter Hastings, Hayley Mackey, Jennie Maxwell, Sheldon McGregor, Jake O'Flaherty, Elysha Shubauer, Jeanne Wright, and Olya Wright.





Five of the 10 volunteers and interns who lent a helping hand in spring 2022 (left to right): Peter Hastings, Elysha Schuhbauer, and Hayley MacKey (top); Jeanne Wright and Olya Wright (bottom).

FALL MIGRATION MONITORING

The season started in earnest July 26 when the first three cooperators stepped foot on shore. Our autumn season officially ran from August 1 to October 30. Mostly calm and clear skies provided good monitoring conditions through most of August and early September, but there were many days the wind blew strongly from the south which is not conducive to southerly passerine migration. Mid-September brought with it some unsettled weather—"It has been two full days and nights of torrents of rain and southeast wind, force 3–5. The big lake rages. Few birds anywhere." The weather broke to make way for October gales which were quite persistent this fall. We banded 2,508 individuals of 84 species or forms. This is a lower-than-expected tally. The previous 10-year average is 3,219. We also encountered 192 recaptures of 31 species.

Table 5. Effort summary statistics for 2022 fall migration monitoring.

| Person-hours | 3,070 |
|--|------------------------|
| Individuals banded | 2,508 |
| Species and forms banded | 84 |
| Individuals recaptured (species and forms) | 192 (31) |
| Total station-days of migration monitoring | 91 |
| | |
| Total net-hours | 4,286.6 |
| Mist net | 3,957.3 |
| Hawk net | 329.3 |
| Total trap-hours | 3 662.5 |
| Ground trap | 3 199.0 |
| J-Trap | 463.5 |
| Overall estab rate | 21 6 birda / 100 baura |
| Overall catch rate | 31.6 birds / 100 hours |

The American Redstart was the most banded species in fall 2022 with 229 individuals banded.



There were three days when more than 100 birds were banded. The first push occurred on September 10 when 102 individuals of 29 species were banded including 17 warbler species including Western Palm Warbler (27), Blackpoll Warbler (12), American Redstart (10), and Magnolia Warbler (7). On September 20, 156 birds of 27 species were banded comprising Golden-crowned Kinglet (41), Blackcapped Chickadee (12), Nashville Warbler (17), American Redstart (14), Tennessee Warbler (8), and Myrtle Warbler (8). Finally, on October 30, the last day of the season, 124 individuals of 10 species were banded led by 66 Slate-coloured Juncos and 41 Golden-crowned Kinglets.

Conditions allowed for the safe operation of mist nets for 3,957.34 hours, hawk nets for 329.25 hours, j-trap for 463.5 hours and 3,199 hours of ground trap use. Despite there being many nights with strong wind or rain and the sometimes threatening Barred Owl we operated our Northern Saw-whet Owl nets for 235 hours.

Table 6. Days with 100+ birds banded, fall 2022.

| Pirde banded (appeide) | Main Species (number handed) |
|------------------------|---|
| Birds banded (species) | Main Species (number banded) |
| 102 (29) | Western Palm Warbler (27) Blackpoll Warbler (12) American Redstart (10) Magnolia Warbler (7) |
| 156 (27) | Golden-crowned Kinglet (41) Black-capped chickadee (12) Nashville Warbler (17) American Redstart (14) Tennessee Warbler (8) Myrtle Warbler (8) |
| 124 (10) | Slate-coloured Junco (66)Golden-crowned Kinglet (41) |
| | 102 (29) 156 (27) |

COMMON NIGHTHAWK MONITORING Daily evening counts were undertaken from August 8 to September 10. Common Nighthawks were observed on five August nights in small numbers. Our highest count was on August 22 with a total of 15. Two early morning birds were seen on September 19. No birds were banded this year. This species shows a steady decline at this location.



Most abundant species banded —fall 2022:

American Redstart (229, pictured)
 Golden-crowned Kinglet (223)
 Slate-colored Junco (205)

NORTHERN SAW-WHET OWL MONITORING Our Northern Saw-whet Owl Monitoring program ran from September 15 to October 26. Weather conditions allowed safe operation on 24 nights. Four nights were curtailed for the close presence of a Barred Owl. Due to personnel makeup, strong winds and/or rain, we operated the minimum standard protocol period. We banded 86 individuals and retrapped two birds previously handled at other locations.

VOLUNTEERS Our dedicated volunteers contributed 3,070 hours over the season. Volunteer assistance is indispensable for our on-going work. This season's crew arrived from Ontario, Canada; Texas, USA; United Kingdom, and Hong Kong. Many thanks to: Louis Driver, Mathilde Ducroz, Maud Ionnidis, Sarahanne Thompson, Taylor Simpanen, Evan Sinclair, Katrina Theisen, Alice Wong, and Marissa Zamora.

VISITORS TCBO welcomed 155 intrepid hikers and kayakers this year. They came from Germany, United Kingdom, the American states of Illinois, Iowa, Michigan, Minnesota, and Tennessee and the Canadian provinces of Manitoba, New Brunswick, Newfoundland, Ontario, Québec, and Saskatchewan.



Three of the nine volunteers and interns who lent a helping hand in fall 2022 (left to right): Marissa Zamora, Alice Wong, and Mathilde Ducroz.

2022 Bird Highlights

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

| Tundra Swan | S. Four were observed May 16. |
|------------------------|--|
| Trumpeter Swan | S. Four were observed May 16, two on May 22, and one on June 2. F. One was observed soaring overhead October 7. |
| Red-necked Grebe | F. Fifteen were observed August 10, four on August 22, and 14 on October 5. |
| Rock Pigeon | F. A rare bird at the Cape, one was observed on October 22. |
| Common Loon | F. A high of 38 were observed October 5, and 24 were observed on October 17. |
| American White Pelican | F. Numerous individuals were observed on many days throughout the season with high counts of 31 on August 2, and 42 on September 13. |
| American Bittern | F. One was observed September 3. |
| Eurasian collared Dove | S. One was observed May 29. |
| Black-billed Cuckoo | S. Numerous observations from May 31 onward. Four were banded this season. Only 17 have been captured since 1991. F. Individuals were observed August 13, September 11, October 1 through 6. |
| Common Nighthawk | F. The first two of the season were observed August 13. The largest movement of the season was only 15 individuals on August 22. |
| Chimney Swift | S. Individuals were observed May 24 and June 1. F. Individuals were observed on August 21, October 14, 17, 26, and 30. |
| Sora | F. One was banded on August 27 which was the 6th ever banded at TCBO. |
| Wilson's Snipe | S. One was observed May 5. F. Individuals were observed on September 26 and October 9. |
| Whimbrel | F. One was observed August 13. |

| Common Loon | S. Nineteen were observed May 8, 23 May 10, and 106 May 11. From the logs: "Happiness is being beside a flat glass lake and 62 COLO rafting, diving, drifting, communing, and puppy-yapping for 5 hours and counting." |
|------------------------|--|
| American White Pelican | S. Two were observed June 2. |
| Golden Eagle | F. Five were observed on October 19. |
| Northern Goshawk | F. Individuals were observed October 17 & 27. |
| Rough-legged Hawk | F. Three were observed on October 19. |
| Barred Owl | S. Observed or heard May 13 & 17. F. Individuals were observed from October 6, through 9. |
| Northern Saw-whet Owl | F. Highs of 28 on October 9 and 24 on October 1 were captured/observed. |
| Wood Duck | S. Two were observed May 11, and one on June 1. |
| Redhead | F. Eighteen were observed on October 26. |
| Canvasback | F. A high of 714 were observed on October 17. |
| Harlequin Duck | F. Two were observed offshore on October 20. |
| Surf Scoter | S. Two were observed May 8. F. Ten were observed October 17. |
| White-winged Scoter | S. Fifty-nine were observed on May 10. F. A high of 52 were observed October 17, 24 were observed October 9, and 37 October 28. |
| Black Scoter | F. Thirty-one were observed on October 22. |
| Long-tailed Duck | S. Fifty-two were observed May 11 and 22 May 24. |
| Hooded Merganser | S. One was observed June 1. |
| Red-headed Woodpecker | S. Individuals were observed May 29 through June 1. The third ever, and first banded in 10 years, was captured May 31. |
| Red-bellied Woodpecker | S. Individuals were observed May 17, 18, 21, 23, 24, and June 6. The first in 10 years, and fourth ever was banded May 24. |







Sora Red-headed Woodpecker Black-backed Woodpecker

| American Three-toed Woodpecker | F. One was observed on the last day of operation October 30. |
|-----------------------------------|--|
| Black-backed Woodpecker | F. First of the season was observed September 10, and five were observed October 20. |
| Downy Woodpecker | F. Forty-five were banded this season, the highest since 2010. |
| Hairy Woodpecker | F. Fourteen were banded this season, the highest since 2010. |
| Pileated Woodpecker | F. Four were banded this season. |
| Northern Flicker | F. Only two were banded this season which was the lowest since 1996. |
| Olive-sided Flycatcher | S. Three were observed May 25 all in the same tree. One was banded May 27. F. The first of the season was observed August 10, and two were observed August 13. |
| Eastern Wood Pewee | S. First of the season was observed May 9, and then not again until May 25 through 31. One was banded on June 1 which was only the third in previous 10 years. |
| Yellow-bellied Flycatcher | S. The first of the season was observed May 10. F. Thirty-nine were banded, the highest total since 1995 when 39 were also banded. |
| Western Kingbird | S. One was observed June 2 F. One was observed October 6. |
| Blue Jay | S. Numerous this spring with 265 banded, the highest total since 2009. |
| Boreal Chickadee | F. One was banded on October 15. Three more were observed October 27. |





Olive-sided Flycatcher

Western Kingbird

| Barn Swallow | F. Two late individuals were observed on October 26. |
|-------------------------|---|
| Red-breasted Nuthatch | S. Decent numbers throughout the spring following an eruption in fall 2021. F. Significant numbers consistently observed throughout the fall. A high of 25 were observed August 17. |
| White-breasted Nuthatch | F. One was observed October 30. |
| Sedge Wren | F. One was banded on October 13, the first since 1994. |
| Marsh Wren | S. One was observed May 10. |
| Gray Catbird | S. Individuals were observed May 6, 14, 18, 25, 28, and June 2. F. One was observed on October 1. |
| Brown Thrasher | F. One was observed May 19. |
| Northern Mockingbird | S. One was observed May 12. |





Sedge Wren

Wood Thrush

| Wood Thrush | S. One was banded May 14. This was the eighth ever banded with seven being captured in the last eight years. |
|--------------------------------|---|
| Evening Grosbeak | F. Thirty were observed on October 23, and 35 October 25. |
| Pine Grosbeak | F. The first three of the season were observed on October 7, seven were observed each on October 27 and 28. |
| Common Redpoll | F. A high of 150 were observed October 28 following 65 that were observed October 27. |
| Red Crossbill | F. Four were observed on October 27. |
| White-winged Crossbill | F. The first 11 were observed August 18, six on August 21, then absent until October when three, 12, and 15 were observed on October 27, 28, and 30 respectively. |
| Pine Siskin | S. Incredible spring migration after an eruption in the previous fall. 338 were observed on June 1 (87 banded), 110 on June 3. One hundred and twenty-nine were banded overall, the highest tally since 2015. On May 9, Rinchen noted that "siskins were fling- |
| | ing themselves over the frigid water. Big wind and waves." |
| Lapland Longspur | |
| Lapland Longspur Snow Bunting | ing themselves over the frigid water. Big wind and waves." |
| | ing themselves over the frigid water. Big wind and waves." F. The first was observed October 17. |
| Snow Bunting | ing themselves over the frigid water. Big wind and waves." F. The first was observed October 17. F. The first was observed October 16. |







Grasshopper Sparrow

Field Sparrow

Clay-colored Sparrow

| Chipping Sparrow | S. One hundred and seventy-three were observed May 10 with 157 were banded throughout the season. |
|-----------------------------------|---|
| Clay-colored Sparrow | S. Two were observed May 14. One was banded May 25. F. One was banded on August 15, and 2 were banded August 17. |
| Gambel's White-crowned Sparrow | S. One was banded May 11. F. The first of the season was banded September 8. |
| LeConte's Sparrow | S. One was observed May 5. |
| Lincoln's Sparrow | F. A prominent species this year with a high of 29 observed September 7. |
| Yellow-headed Blackbird | S. One male flew over the platform May 31. F. One flew over the platform on August 13. |
| Western Meadowlark | S. Individuals were observed on May 6 & 7, and 14. |
| Orchard Oriole | S. One was observed May 31. |
| Rusty Blackbird | F. The first of the season (11) were observed September 10. Highs of 46 and 35 were observed on October 28, and September 13, respectively. |
| Brewster's Warbler | S. The first ever banded at the Cape occurred May 24. |
| Tennessee Warbler | S. Eighty-three were observed May 24. F. A high of 52 were observed August 27, and 42 September 20. |
| Nashville Warbler | S. Seventy-eight were observed May 24. F. A high of 154 were observed August 27. |
| Connecticut Warbler | F. One was banded August 31. |
| American Redstart | S. Sixty-nine were observed May 24, and 136 were observed May 28. One hundred and twelve were banded, the highest total since 2008. F. Two hundred and twenty-nine were banded, the highest since 2001 when 281 were banded. Highs of 97 were observed August 27, 79 September 8, 61 September 20, and 54 August 15. |
| Northern Parula | F. Fourteen were banded, the second highest total since 16 were banded in 2013. |
| Black-throated Green Warbler | F. Forty-five were banded, the highest total since 62 were banded in 2009. A high of 27 were observed August 27. |
| Magnolia Warbler | F. A high of 66 were observed September 20. |







Rusty Blackbird Connecticut Warbler Chestnut-sided Warbler

| Bay-breasted Warbler | S. Thirty-five were observed May 24. F. A high of 30 were observed August 27. |
|------------------------------|--|
| Blackburnian Warbler | S. Two hundred and twenty-six were observed on May 24. |
| Chestnut-sided Warbler | S. One hundred and twenty-seven were observed May 24. |
| Pine Warbler | S. Individuals were observed May 9 and 14. One was banded May 9 which was the 7th ever, and the first in 9 years. |
| Black-throated Green Warbler | S. Ninety-four were observed May 24. |
| Canada Warbler | S. Forty-two were banded which is the second highest total next to 63 banded in 1996. F. A high of 54 were observed August 27. |
| Summer Tanager | S. A total of four different individuals were observed this season with different individuals observed on May 12, 14, 25 (when a second-year male was banded), and another on May 28. This was the third ever banded at TCBO with singles banded in 2015 and 2018. |
| Western Tanager | S. One female was observed June 3. |
| Northern Cardinal | F. The first cardinal ever banded at TCBO was captured on October 23! |
| Painted Bunting | S. A young female was initially observed at the hummingbird feeder, then observed on the platform feeder. |
| House Sparrow | S. One was observed May 16. |







Summer Tanager Northern Cardinal Painted Bunting

OTHER NOTABLE WILDLIFE OBSERVATIONS

Pine Marten S. Four were observed May 12.

Canada Lynx F. One was observed on October 20 & 21.





Pine Marten Canada Lynx

Acknowledgements

TCBO graciously recognizes the support of the Ontario Ministry of Natural Resources, Thunder Bay Field Naturalists, Environment and Climate Change Canada, Fisheries and Oceans Canada – Canada Coast Guard, Parks Canada – Lake Superior National Marine Conservation Area, and Birds Canada. TCBO acknowledges the staff of Sleeping Giant Provincial Park for logistical support, Tom Eaton – Chair of Silver Islet Harbour Association, Silver Islet Store, and the Bird Committee of Thunder Bay Field Naturalists for their assistance. Lastly, a very special thank you to each Volunteer listed above and all of our supporters.

BIRD COMMITTEE Mirabai Alexander, Ted Armstrong, Neil Dawson, Nick Escott, Allan Harris (Chair), Brian Ratcliff, and Keith Wade.

PHOTO CREDITS cover SSHA: Rinchen Boardman; p. 2 Dark Forest Photography; p. 8 AMRE: Sheri and Brock Fenton. p. 14 WEKI: Sheldon McGregor; p. 18 Pine Marten: Alice Wong. All other photos: TCBO volunteers and collaborators.

Thanks to our partners:











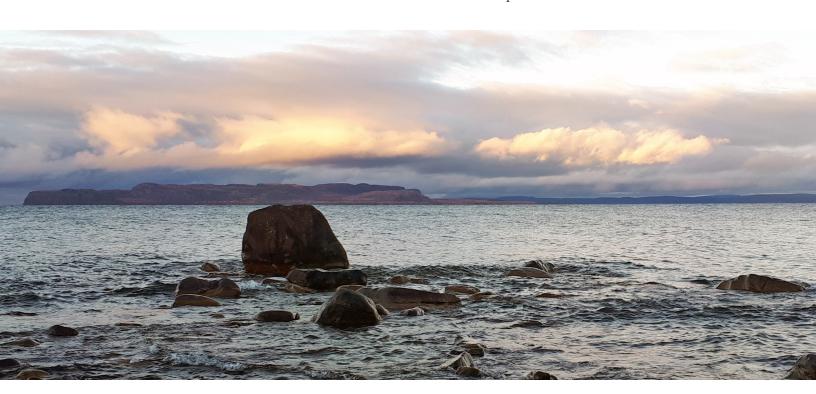


Land Acknowledgement

Thunder Cape Bird Observatory offers this land acknowledgement in recognition of the Indigenous Peoples and communities on whose lands Thunder Cape Bird Observatory projects occur. Thunder Cape is in the traditional territories of the Anishinabek Nation and the traditional territory of Fort William First Nation, signatory to the Robinson-Superior Treaty of 1850.

Indigenous Peoples have long inhabited these lands which are still home to diverse First Nations. Thunder Cape Bird Observatory, Birds Canada, and Thunder Bay Field Naturalists understand that Indigenous voices, knowledge, and ongoing work on the land are critical for wild birds to thrive in sustainable ecosystems. We support the needs, aspirations, and rights of Indigenous Peoples to care for the land.

We are privileged to have Indigenous volunteers, researchers, and visitors from many Indigenous communities in the Western Hemisphere. We are committed to increasing that participation and collaboration, and Birds Canada has formed an Indigenous Engagement Committee to help us do ever better. We hope that, through birds and shared love of nature, we can come together in a spirit of respect and reconciliation across the western hemisphere.



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** [4].

| \$ 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 | Pays for a boat trip to Thunder Cape or buys a Motus Wildlife Tracking System Tag. |
| \$ 500 | Supplies the stations with toilet paper for a year. |
| \$ 1 000 | Supports a Young Ornithologist Internship at Thunder Cape. |
| \$ 2 500 | Supports the training of a pupil from Latin America. |
| \$ 5 000 | Provides a stipend for 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.







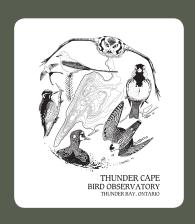
Appendix 1

TCBO's 2022 banding totals

| Species and forms | Total Spring | Total Fall | Grand Total |
|------------------------------|--------------|------------|-------------|
| American Goldfinch | 3 | | 3 |
| American Redstart | 112 | 229 | 341 |
| American Robin | 1 | 5 | 6 |
| American Tree Sparrow | | 73 | 73 |
| Baltimore Oriole | 3 | | 3 |
| Black-and-White Warbler | 32 | 61 | 93 |
| Black-billed Cuckoo | 4 | 1 | 5 |
| Bay-breasted Warbler | 4 | 13 | 17 |
| Black-backed Woodpecker | | 4 | 4 |
| Black-capped Chickadee | | 139 | 139 |
| Brown-headed Cowbird | 3 | | 3 |
| Blue-headed Vireo | 4 | 3 | 7 |
| Blackburnian Warbler | 11 | 9 | 20 |
| Blue Jay | 265 | 30 | 295 |
| Blackpoll Warbler | 3 | 35 | 38 |
| Boreal Chickadee | | 1 | 1 |
| Brown Creeper | 4 | 38 | 42 |
| Brewers Warbler | 1 | | 1 |
| Black-throated Blue Warbler | 12 | 23 | 35 |
| Black-throated Green Warbler | 9 | 45 | 54 |
| Canada Warbler | 42 | 38 | 80 |
| Clay-colored Sparrow | 4 | 8 | 12 |
| Cedar Waxwing | 4 | 3 | 7 |
| Chipping Sparrow | 157 | 30 | 187 |
| Cape May Warbler | 12 | 32 | 44 |
| Common Grackle | 18 | 3 | 21 |
| Connecticut Warbler | | 1 | 1 |
| Common Redpoll | | 1 | 1 |
| Common Yellowthroat | 26 | 11 | 37 |
| Chestnut-sided Warbler | 30 | 6 | 36 |
| Downy Woodpecker | 1 | 45 | 46 |
| Eastern Bluebird | 1 | 2 | 3 |
| Eastern Phoebe | 2 | | 2 |
| Eastern Wood-Pewee | 1 | | 1 |
| E. White-crowned Sparrow | 9 | | 9 |
| Field Sparrow | | 1 | 1 |

| Fox Sparrow | | 1 | 1 |
|------------------------------|-----|-----|-----|
| Golden-crowned Kinglet | 2 | 223 | 225 |
| Gray-cheeked Thrush | 1 | 9 | 10 |
| Gray Catbird | 1 | 1 | 2 |
| Grasshopper Sparrow | | 1 | 1 |
| Gambel's White-crowned Spar- | 2 | 6 | 8 |
| Hairy Woodpecker | | 14 | 14 |
| Hermit Thrush | 3 | 6 | 9 |
| Horned Lark | | 6 | 6 |
| Indigo Bunting | 5 | 2 | 7 |
| Least Flycatcher | 11 | 8 | 19 |
| Lincoln's Sparrow | 9 | 42 | 51 |
| Magnolia Warbler | 48 | 64 | 112 |
| Merlin | | 1 | 1 |
| Mourning Dove | 3 | 2 | 5 |
| Mourning Warbler | 18 | 12 | 30 |
| Myrtle Warbler | 28 | 92 | 120 |
| Nashville Warbler | 27 | 154 | 181 |
| Northern Cardinal | | 1 | 1 |
| Northern Parula | 7 | 14 | 21 |
| Northern Waterthrush | 6 | 39 | 45 |
| Northern Shrike | | 2 | 2 |
| Northern Saw-whet Owl | | 86 | 86 |
| Orange-crowned Warbler | | 17 | 17 |
| Olive-sided Flycatcher | 1 | 1 | 2 |
| Ovenbird | 11 | 20 | 31 |
| Philadelphia Vireo | 5 | 1 | 6 |
| Pine Siskin | 129 | | 129 |
| Pine Warbler | 1 | | 1 |
| Pileated Woodpecker | | 4 | 4 |
| Purple Finch | 14 | | 14 |
| Rose-breasted Grosbeak | 19 | 1 | 20 |
| Red-breasted Nuthatch | 22 | 34 | 56 |
| Red-bellied Woodpecker | 1 | | 1 |
| Ruby-crowned Kinglet | 10 | 18 | 28 |
| Red-eyed Vireo | 15 | 15 | 30 |
| Red-headed Woodpecker | 1 | | 1 |
| Rusty Blackbird | | 8 | 8 |
| Red-winged Blackbird | 13 | 4 | 17 |
| Savannah Sparrow | 8 | 44 | 52 |
| Slate-colored Junco | 2 | 205 | 207 |
| Sedge Wren | | 1 | 1 |
| Sora | | 1 | 1 |
| Song Sparrow | 17 | 28 | 45 |

| Sharp-shinned Hawk | 5 | 30 | 35 |
|---------------------------|-------|-------|-------|
| Summer Tanager | 1 | | 1 |
| Swamp Sparrow | 13 | 17 | 30 |
| Swainson's Thrush | 44 | 72 | 116 |
| Tennessee Warbler | 5 | 48 | 53 |
| Traill's Flycatcher | 10 | 23 | 33 |
| Veery | 10 | 4 | 14 |
| White-breasted Nuthatch | | 1 | 1 |
| White-crowned Sparrow | 3 | 15 | 18 |
| Wilson's Warbler | 21 | 13 | 34 |
| Winter Wren | 1 | 12 | 13 |
| Wood Thrush | 1 | | 1 |
| Western Palm Warbler | 18 | 99 | 117 |
| White-throated Sparrow | 13 | 36 | 49 |
| Yellow-bellied Flycatcher | 15 | 39 | 54 |
| Yellow-bellied Sapsucker | | 1 | 1 |
| Yellow Warbler | 15 | | 15 |
| Yellow-shafted Flicker | 8 | 2 | 10 |
| Yellow Warbler | | 18 | 18 |
| | | | |
| Total species | 76 | 84 | 99 |
| Total birds | 1,401 | 2,508 | 3,909 |
| | · | | |



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

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