



CHAPTER 9 – HOW ARE MUSKOKA’S AVIAN SPECIES CHANGING?

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This is a difficult question to answer, but a pressing one with the changing climate and increasing pressures on all species. Birds are colourful, loud, and noticeable within the various habitats, such as interior forests, found in Muskoka. In many ways, this makes them a much easier group of species to collect data for, and their presence or abundance can inform on watershed health. At present, though, there is a lack of reliable data for this region.

Breeding bird surveys can be easily repeatable, provided there are enough experienced observers. However, historical data for Muskoka is difficult to find. Much of our historical data for avian species is presence/absence data and doesn't offer any insights into overall population changes. Some of our other data is at a much larger scale and is difficult to apply to the Muskoka region. This makes long term forecasts or predictions about overall status of avian populations difficult, as the data just are not complete. There are a few conclusions that can be drawn from our existing data though and some interesting looks at some of the future data analyses we might be able to provide if more data are collected.

2023 is the third year of the third Ontario Breeding Bird Atlas, a province-wide effort to assess the current status of the breeding birds of Ontario that is compiled and published by Birds Canada. The past two atlases occurred in 1980 and 2000, each surveying bird species for a 5-year period using volunteers across the province to collect data. In the past two atlases, only presence/absence data was collected. This third atlas will also assess population sizes of species, which will allow a much better understanding of the current status of many breeding birds in Ontario and Muskoka. Some of the insights from the completion of this atlas will also provide us with foundational data that we can build upon in future studies. It will hopefully demonstrate current population sizes, changes in species composition, and other population dynamics across the province and locally.

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In recent years, use of eBird, the web-based tool for citizen scientists to record, share, and review sightings of birds, has been growing rapidly, with thousands of checklists submitted every single year in Muskoka. eBird is free to use and managed by Cornell University's Laboratory for Ornithology.

Each checklist represents an individual's birding effort, with all the species observed in a given time and place being recorded. Although citizen science can have some errors, this has allowed large scale data collection that was not possible before. The amount of knowledge we have on the status of migrating and breeding birds has expanded considerably since eBird and other citizen science tools have become readily available, with noticeable growth over the last five years. These data are contributing to efforts to map breeding habitats and migration ranges in Muskoka and across the province, with eBird publishing migration maps for the majority of birds that breed and migrate through North America. Combining citizen science and the Ontario Breeding Bird Atlas, several species that were not known to breed in Muskoka have now been documented during the breeding season.

Although there is not yet enough foundational data to specify changes in population size, some of the mapping work has shown changes in breeding ranges of several species of birds. The reasons for these changes are not well-known, but a changing climate likely has some impact. Both red-bellied and red-headed woodpeckers have expanded their range into Muskoka, with several breeding locations now known in the area. Sedge wren and golden-winged warbler are other species that are being discovered more regularly in the region, either due to increased search efforts or breeding range changes. Bald eagles and peregrine falcons are breeding in locations they haven't been seen in many years as well, with records of the former appearing to become much more common. Breeding range contractions are also occurring though, with species like common nighthawk and eastern whip-poor-will disappearing from historical breeding habitats, likely due to forest regrowth. Unfortunately, much of this knowledge is not peer-reviewed, nor published, and is mainly observations from educated and knowledgeable birders. Buy-in from both scientists and citizen enthusiasts is going to be very important moving forward, to ensure that we can have some of these observations explored through a broader, more scientific lens.

In a changing climate, Muskoka may be one of the last refuges for some of these species, so these foundational data are crucial to better our understanding of how birds use our watersheds. Muskoka still has vast tracts of forested or otherwise undeveloped land, as well as many conservation reserves and parks which will allow at risk species to thrive if managed

correctly. Community engagement is key, as conservation action can't be taken without sufficient data and knowledge. eBird and the Ontario Breeding Bird Atlas allow for anyone to submit bird data to help better understand the birds and habitats that Muskoka protects. If Muskoka is to become a last refuge for some species, we need to better understand our role in the protection of avian species. This of course creates additional questions on how we manage our land to better enhance the protections for birds. Do we create habitat for species at risk that are getting pushed into Muskoka from the south due to climate change? Or do we manage our forests for only the species that are currently here? Ultimately, we need to know what is here, and why our ecosystems are so vital to all the species that call them home, including birds. That requires engagements from birders, scientists, citizens, and governmental officials to make sure that the natural systems of Muskoka remain stable and protected for many years to come.

WHAT CAN YOU DO?

Discover the joy of bird watching, add your own sightings to the eBird database, and do your part to generate the more extensive data that needs to be compiled to facilitate quantitative assessments of Muskoka's bird species. eBird is at www.ebird.org.