



2015 Summer Bird Count Summary



The Toronto Summer Bird count is a joint effort of Bird Studies Canada and the Toronto Ornithological Club (TOC). Every year, TOC members conduct a series of bird counts between May 24th and June 30th, listening and looking for all the birds they can find at a set of predetermined locations within the Toronto Christmas Bird Count Circle (see Fig 1.). This “point count” protocol duplicates that of the 2nd Ontario breeding Bird Atlas (OBBA), which was conducted between 2001 and 2005. By duplicating these point counts annually, we can systematically and scientifically track how bird abundance and distribution are changing in Toronto over time, and data collected will become more valuable and interesting with every year of added information.

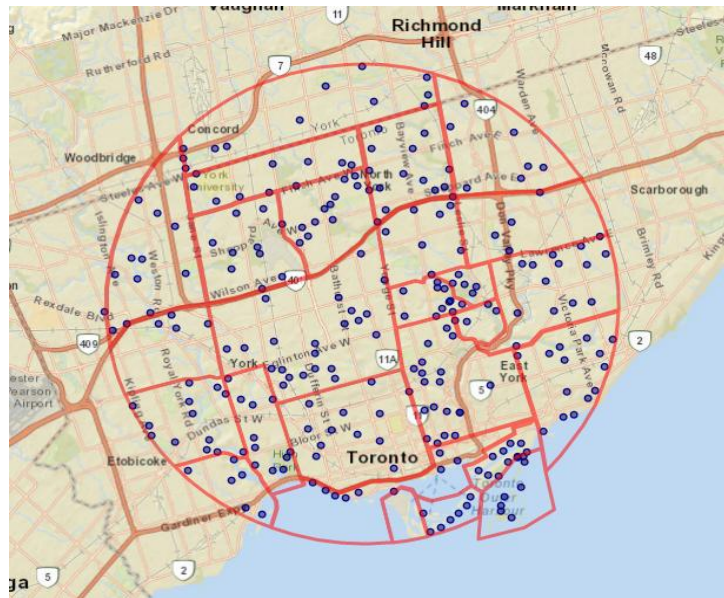


Figure 1. Point count locations from the 2nd OBBA that fall within the Toronto Christmas Bird Count Circle, shown here in their respective “sector” counting areas. These locations were originally sampled (1 visit per site), between 2001-2005.

A total of 275 point counts were conducted city-wide in 2015 (See Figure 1.), and participants detected a record total of 84 species. Sector 23, which includes the area around York University and Ross Lord Park, contained the most species of birds on the count with a total of 42 species and an average of 10.6 species detected per 5 minute point count.

Several known Toronto breeders were new for the count protocol: **Pileated Woodpecker**, **Ruby-throated Hummingbird**, **Red-necked Grebe**, and **Red-bellied Woodpecker**. A few unexpected species were also detected on the count although these do not likely represent breeding individuals: **Long-tailed Duck**, **Great Black-backed Gull**, and **American Black Duck**.

Conversely, a number of expected species were missing this year: **Carolina Wren**, **Orchard Oriole**, **Eastern Bluebird**, and **Wood Thrush**, but none have previously been detected on the count in large numbers.

Trends

To analyze trends in bird abundance, measures of significance were taken from paired double-tailed t-tests. For each species (and meaningful groups of species, such as aerial insectivores or cavity nesters) two t-tests were done: one comparing the average number of birds detected per point between 2014 and 2015, and one comparing the same measures between 2015 and the OBBA.

Tree cavity nesters (woodpeckers, nuthatches, chickadees, wrens, and Great Crested Flycatchers) have had a tumultuous few years as a group. These birds have been showing annual significant declines since 2013 ($p=0.0134$ last year, and $p=0.00028$ this year) despite a significant increase between 2013 and 2014. Availability of cavity nesting sites and insect food resulting from extensive tree downfall during the 2013 “ice storm” event may account for this short term increase.

Toronto’s species at risk (**Chimney Swift**, **Bobolink**, **Eastern Meadowlark**, **Wood Thrush**, **Barn Swallow**, **Eastern Wood-pewee**, and **Red-headed Woodpecker**) have declined overall since the OBBA ($p=0.00549$) with **Red-headed Woodpecker**, **Wood Thrush**, and **Bobolink** absent from the count altogether in 2015. However, those species at risk remaining in the city are not all experiencing the same fate. **Chimney Swifts** and **Barn Swallows** have recently become some of Toronto’s most numerous birds (see Table 1.), and **Eastern Wood-pewees** have remained stable over the last 15 years, with no discernible change in numbers or range.

Although insect-eating songbirds (vireos, flycatchers and wrens) have experienced a significant decline overall since the OBBA ($p=0.0067$) and 2014 ($p=0.01978$), the aerial insectivores as a group are not showing the same declines. Interestingly, this “guild” of birds is known to be decreasing throughout their ranges, but they have increased dramatically in Toronto since the OBBA (See 2013 report) and continue to show an overall increase annually for most species.

One exception to this general aerial insectivore trend in 2015 was the **Barn Swallow**. Despite a significant increase in observations since the OBBA, only 113 were detected in 2015 compared to 212 in 2014, representing a sharp downturn across all sectors. It is possible that Barn Swallows were negatively affected by unseasonably low temperatures in early Spring. Although this did not affect numbers of other aerial insectivores in Toronto, it did alter their migration dates, with **Tree Swallow**, **Purple Martin**, and **Bank Swallow** arrival times from eBird showing later 2015 than in other years.

Corvids continue to rebound from West Nile Virus, albeit very slowly. Both **Blue Jays** and **American Crows** show an increase since 2013 after their precipitous collapse in 2008.

Species	2015	Species	2014	Species	OBBA (2001-2005)
Double-crested Cormorant	3405 on 27 counts	Double-crested Cormorant	4313 on 22 counts	Ring-billed Gull	1729 on 69 counts
Ring-billed Gull	2375 on 206 counts	Ring-billed Gull	1488 on 142 counts	European Starling	1068 on 175 counts
House Sparrow	937 on 194 counts	House Sparrow	880 on 147 counts	House Sparrow	820 on 158 counts
European Starling	716 on 151 counts	European Starling	717 on 125 counts	Double-crested Cormorant	657 on 14 counts
American Robin	541 on 212 counts	American Robin	524 on 164 counts	Rock Pigeon	455 on 105 counts
Red-winged Blackbird	345 on 98 counts	American Goldfinch	256 on 121 counts	Canada Goose	380 on 15 counts
Rock Pigeon	263 on 55 counts	Canada Goose	233 on 19 counts	American Robin	290 on 120 counts
Canada Goose	260 on 17 counts	Rock Pigeon	231 on 53 counts	Common Grackle	272 on 103 counts
Chimney Swift	203 on 89 counts	Barn Swallow	212 on 47 counts	Mourning Dove	157 on 89 counts
American Goldfinch	187 on 109 counts	Chimney Swift	212 on 73 counts	American Crow	152 on 64 counts

Table 1. Most common species detected during the 2nd OBBA and the 2014 and 2015 SBC, and their relative rankings.

What's next for the SBC?

Now that the point count protocol for the count is well established and organized, we will be working on adding new and exciting elements to the Summer Bird Count. Nest and area search options will be added, as will outings and events focused on the breeding birds of Toronto, and the techniques used to monitor them. Stay tuned in the coming months to learn how the Summer Bird Count will grow and improve.

Acknowledgements

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