

CHANGES IN CHIMNEY SWIFT POPULATIONS OVER TIME IN THE LONDON REGION

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Introduction

In 1966 the first tool for scientifically documenting changes in North American bird populations over time was launched. Known as the Breeding Bird Survey (BBS), it is conducted annually and involves tallying numbers of all birds seen and heard during 50, 3-minute stops along a defined 40-km route. Routes mostly follow rural roads and hence do a better job of documenting swift numbers in rural landscapes than in urban settings.

Since the BBS began, swift numbers in Ontario and Canada have been steadily declining. During the 45 years from 1970 to 2015, swifts declined by 94% in Ontario and 90% in Canada as a whole. Between 2005 and 2015, the decline was 47% in Ontario and 43% in Canada.

The Situation from the 1800s to World War II

In an effort to identify changes in swift numbers in the London region prior to the advent of the BBS, available records were searched. The literature is sparse, but indications of some possible trends can be detected. From the earliest comment on status (1882) until about World War II, swifts were considered to be common within the region. They were apparently present in good numbers in both urban areas and agricultural landscapes and, if anything, may have been more abundant in rural settings. There is some indication that much nesting occurred in rural areas, but swifts congregated in cities during migration.

The Situation from World War II to the Early 2000s

Shortly after the end of World War II, some London naturalists informally noted what they perceived to be declines in swift numbers and linked these to the recent introduction of DDT. A review of readily available sources turned up a late-1970s report that swifts had become much less common in rural agricultural areas than in urban centres. Field work carried out from 1981 to 1985 for the first Breeding Bird Atlas of Ontario confirmed that urban areas had become the stronghold for swifts.

By the time of the field work for the second atlas (2001 to 2005), it was noted that the Chimney Swift had declined 46 % in Ontario since the first atlas 20 years earlier. The highest concentrations of swifts were detected in the Golden Horseshoe, Essex County, a number of areas near the north shores of lakes Erie and Huron and additional scattered locations. Areas of highest abundance generally occurred near the shorelines of the Great Lakes and in highly urban areas, but there were also concentrations elsewhere.



Monitoring Chimney Swifts at Smith Fruit, Aug 9, 2016.

Monitoring Swifts in London, 2004 to Present

Monitoring of Chimney Swifts in London began in an organized way in 2004. In the following discussion, keep in mind that there can be substantial variability in estimates made by observers when large numbers of swifts rapidly descend into a roost chimney during a compressed period of time.

In assessing counts tallied at communal swift roosts, it is difficult to discern patterns and trends. Several observations of interest, however, can be made. Use by swifts of communal roost chimneys during fall migration can be superficially compared for two, four-year periods a decade apart: 2004 to 2007 and 2014 to 2017. During the second time period, on average, only half as many roost chimneys (four versus eight) were under observation. Although the search effort for new roosts was not necessarily consistent, the difference is largely attributed to swifts simply not occupying as many roosts as they had a decade earlier.

Between 2004 and 2007, during 180 September roost counts, the highest single-night tally was 1260 in 2006. Thirteen of the 180 counts recorded more than 500

swifts at one location on one evening. The 1260 also stands as the largest tally ever recorded for any month since monitoring began in 2004.

During the 2014-to-2017 period, the largest of 79 September roost counts was 727 in 2014. Ten counts recorded more than 500 swifts at one location on one evening.

The high numbers for fall roosts during the two recent four-year periods mentioned above are notably lower than the count of 2000 made by W.E Saunders more than a century earlier, on August 20, 1901.

Spring and summer roost monitoring in London began in 2008. During the 2014-to-2017 period, between early May and June 15, four spring roosts received 89 monitoring visits. The largest spring roost count was 671 in 2015. This is much smaller than the 3000 reported by W.E. Saunders on May 12, 1906.

From 2014 to 2017, during the summer breeding season four roosts of non-breeders were visited between July 1 and July 15. Based on 27 monitoring visits, the highest count was 261. More than 100 years earlier, W.E. Saunders tallied 700 swifts on July 12, 1906.

In 2015, all chimneys identified between 2004 and 2013 as being used by swifts (for either nesting or roosting) were checked. Of the total of 162 chimneys, 29% had been lost to capping or demolition. In 2015 and 2016, visits to the remaining known swift chimneys revealed that only 75% were still occupied by swifts (though there is some inconsistency in the methodology for determining occupancy).

The hot, dry summer of 2016, during which insects were notably scarce, is thought to have been a disastrous one for swifts in the region. Orphan swifts that came into care at a local swift rehab centre were noticeably underweight compared to other years. That September only two known roost chimneys were occupied, and swifts seem to have departed from London about three weeks earlier than usual.

Summary

In London and region, prior to World War II, Chimney Swifts seem to have been present in good numbers in both urban and rural agricultural landscapes. Sometime after World War II, numbers began to drop, although this trend seems not to have been definitively observed until the 1970s, by which time swifts were rapidly disappearing from the agricultural countryside. The Breeding Bird Survey, a quantitative monitoring tool, was by then in place to document the downward population slide. In the 1980s and early 2000s, two Breeding Bird Atlas projects confirmed the continued decline in swift numbers.

In 2004, naturalists in London launched a project to monitor swift numbers at communal roosts and later to also identify chimneys used for nesting. A comparison of monitoring activity in the early part of this 14-year period shows that more roost chimneys were occupied by swifts during fall migration at that time than were used in recent years. Maximum numbers of swifts counted at London roosts are substantially lower than numbers tallied at London roosts in the early 1900s.

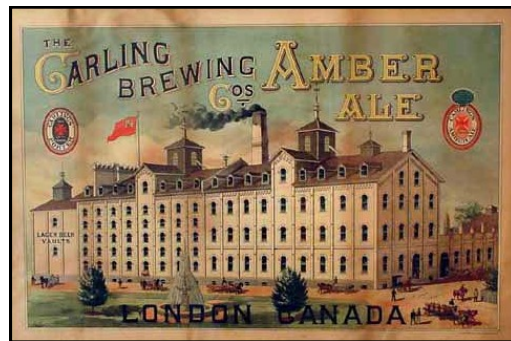
By 2015, 29% of 162 swift-occupied chimneys identified since 2004 had been capped or demolished.

By about 1980 Chimney Swifts had largely disappeared from the rural agricultural landscape. Today their stronghold lies in urban centres, where their numbers continue on a steady downward trajectory.

For references and more detailed information, contact the author (chimneyswift@naturelondon.com).

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The chimney of the Carling Brewery served as an important swift roost in the early 1900s.



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