

The Early Movement of Starlings into Ontario

by
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The first arrival of European Starlings (*Sturnus vulgaris*) in various communities in southern Ontario had a greater impact on ornithologists than the expansion of other species, such as the Northern Cardinal (*Cardinalis cardinalis*) and the House Finch (*Carpodacus mexicanus*). The main feature of the starling arrival was the relative speed at which they dispersed and the relative growth of numbers once they had gotten a toe-hold. The first records in Ontario were from St. Catharines where a small flock was observed during the winter 1919-20 (Taverner 1920), and from Hamilton in 1920 when R. Owen Merriman wrote to Taverner about some strange birds. (Snyder (1951) stated in his book Ontario Birds that "The first observation of it in Ontario now on record concerned a flock of four or five birds seen at Niagara Falls in the autumn of 1914," but without giving evidence to corroborate this statement.)

Taverner's reply (5 February 1921) is worth quoting in part because it shows how some ornithologists in Ontario were beginning to react to the starling arrival now that unfamiliar birds

had been sighted. He began by thanking him for his notes about the strange birds. "They certainly sound like Starlings." He mentioned the small flock seen at St. Catharines the previous year, as well as a bird seen by J. H. Fleming in his garden at Toronto. "It certainly looks as if Starlings were headed our way." It would hardly extend beyond southern Ontario along the shores of lakes Ontario and Erie, Taverner guessed, "but its preference for highly cultivated localities may be severely felt there. We hope the comparative severity of winters will discourage it even there."

In the same letter Taverner then called on all bird and nature organizations to use their strongest influence to prevent importations of foreign species in the future. He hoped that Merriman would keep an eye open for starlings, and would not lose an opportunity to procure specimens. Taverner also drew his attention to a recently published work on "The Economic Value of the Starling in the United States" (Kalmbach and Gabrielson 1921).

Further records were reported. Fleming saw a flock flying over his

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garden in the centre of the city in August 1920 (Fleming 1921). E. M. Dale reported starlings from London in 1920 (Dale 1921). The first specimen taken was in 1921 at Wolf Island near Kingston.

Taverner, in his position as senior ornithologist at the National Museum, kept some of his friends and fellow ornithologists across Canada informed on the progress of the starling invasion as it developed. He told William Rowan (15 May 1922) that it had reached Kingston, Toronto, Hamilton, and Chatham among other places. A breeding record, also for 1922, came from Burlington and a probable one from Fort Erie.

Rather than use short, unconnected notes written by various people at that time I propose to give a broad account of how the starling became established in southern Ontario in the years from early 1920 to late 1926. To do this successfully, I intend to use the only extensive account of the starling incursion into Ontario in those years. This was the paper written for his Master's degree at the University of Toronto in 1926 by H. F. Lewis, at that time Chief Migratory Bird Officer for Ontario and Quebec (Lewis 1926).

By the year 1922 Lewis noticed two developments in the starlings' entry into Ontario. In this year nesting was first reported; also this can be seen as the year when the dissemination of starlings was beginning. During 1923 starlings expanded into eight communities

including Kingston, Hamilton, Kitchener, and London. By late in that year starlings were present on the outskirts of Toronto in considerable numbers. In the next year starlings were recorded from 23 communities, including for the first time in Port Hope, Agincourt, Milton, Guelph, Simcoe, and Chatham, linking up and consolidating positions already occupied by earlier arrivals. Also in this year there was a considerable extension of range eastward from Toronto and area. It was probably in this year that starlings entered Ontario through the Ottawa Valley and joined those that had entered Ontario by way of the shorelines of lakes Ontario and Erie, in the area of Brockville and Kingston. From then onwards the expansion of starlings was rapid. In 1925, 24 communities reported starlings for the first time. Some of these were: Algonquin, Picton, Cobourg, Orillia, Niagara-on-the-Lake, Goderich, Blenheim, Ojibway. Starlings moving eastwards along Lake Ontario met others moving westwards from Kingston. As a result, the range of starlings across southern Ontario was now continuous.

The earliest record of a nest discovered by Lewis was at Burlington, Halton County, in May 1922. This nest was built in a hollow, horizontal arm of a hydro tower. In 1924, there were reports of nesting in eight places, and in 1925 from 11 places. Lewis gave a summary of distribution and

abundance as of 31 May 1926 (pp. 13-16 with map on p. 14 showing known distribution in the province, May 1926). He wrote: "The total number of places in Ontario from which records of the starling have been received is 75, in the 32 counties named below. Counties in which starlings have been found breeding are marked with an asterisk" (Lewis 1926, 1927).

Lewis devoted three pages to the "Manner of Dissemination". In Ontario, starlings continued to show a definite preference for low-lying, cultivated land. They avoided the rough, higher land between the Ottawa and St. Lawrence rivers and north of Lake Ontario, and congregated in low-lying ground where there was an abundance of close-cropped grassland. One factor in their dissemination may be credited to two lines of steel towers of the Hydro Power Commission of Ontario. Each tower had a horizontal, hollow tube of four inches diameter, open at both ends, supporting a row of four heavy insulators. Each tube was 19 feet long. The starlings soon found that the inside of these hollow tubes was useful for nesting purposes in spring and summer and for roosting all year. As a nesting site it was inaccessible to predators, and provided a safe and sufficiently sheltered place. No mammals, raptors, or human beings could get at them in these hollow safe places. When starlings first reached Niagara they found this double line

of secure shelters stretching 80 miles or more through fertile habitat into Toronto. As Lewis commented, with a touch of irony, "they could not have had a kinder welcome, and that they took full advantage of it is shown both by their early appearance in Toronto and by their present abundance along the lines of towers."

Regarding the future prospects of the starling Lewis noted that it was not attracted to forest and tundra, but seemed to like human neighbourhoods, and preferred to feed on land that had been prepared for agriculture. Starlings, he predicted, would probably spread as far as James Bay. The extent to which starling numbers would grow in Ontario would depend, Lewis wrote in 1926, largely on whether or not they learned to migrate. In Europe starlings migrated to a limited extent, while in the United States they appeared to be partly migratory. In Canada it was too soon to tell. But during March and April 1926 there appeared to be a pronounced increase in numbers between Toronto and Hamilton, and in the vicinity of Beamsville, near St. Catharines, as though a spring migration northwards were bringing additional birds to the flocks of starlings that had wintered in those parts. In contrast, although starlings had been nesting in the vicinity of Guelph since 1924, and were seen there in the fall of 1925 in flocks of 50 or more, none were seen to have overwintered there.

Presumably they migrated south that winter.

Ornithologists in North America in the early 1920s were particularly concerned about the effects of the fast-growing numbers of starlings on fruit and agricultural crops. The effect of starlings on food crops could be determined only by examining the contents of their stomachs and analysing what they ate. A major study was made by E. R. Kalmbach and I. N. Gabrielson, of the Biological Survey of the United States Department of Agriculture (1921). The authors stated: "As an effective destroyer of terrestrial insects, including such pests as cutworms, grasshoppers, and weevils, the starling has few equals among the bird population of the northeastern United States. ... The most serious objection to the starling on economic grounds arises from its destruction of cherries ..." (Lewis 1926 quoting Kalmbach and Gabrielson). (I have compressed the material, quoting part and paraphrasing part).

Lewis devoted 12 pages to an analysis of 87 starling stomachs obtained by him and J. L. Baillie, nearly all from the vicinity of Toronto. His Table 1, p. 31, gives location and date when collected — mainly 1926. The remainder of the study contains some information on some aspects of the starling's "life history".

In his conclusion Lewis pointed out that the starling in Ontario was economically very useful. Its beneficial activities, at the present,

he said, far outweighed its few damaging ones, but in countries where it had become abundant it was capable of doing serious harm. "The bird is here, uninvited, and we are unable to oust it if we would. As the bird increases in numbers, changes in its activities may be expected ... It is a wary and unobtrusive species that has no need for legal protection, as is shown by its rapid increase in numbers in Ontario in seven years." Lewis concluded that, if at some time in the future the starling's activities should become economically unfavourable, "control measures should be instituted immediately." Lewis added a bibliography of the starling, including only published records of starlings in Ontario, principal references to the economic status of the starling in foreign countries, and other publications referred to in the text.

Two accounts of records of starlings in the Toronto district in the 1920s were published by Snyder and Baillie (1925, 1930). These vividly show when and where the starlings spread. During the winter of 1923-24 members of the Brodie Club reported the starling regularly from the county west of Toronto, and flocks of 100 were seen. During the next winter a flock of 150 birds was seen regularly at a garbage dump in Cedarvale Ravine. Stuart Thompson, nephew of Ernest Thompson Seton, collected two specimens in February 1925 at Leaside in the Don Valley, first

evidence that starlings had encircled the city, and reached the easterly sections. The 1930 report traced the penetration of starlings into the central parts of the city from the suburbs. During the winter of 1927-28 local naturalists noted starlings regularly within the city centre. By the summer of 1928 pairs were found nesting in the residential sections in bird boxes, crevices in homes, and in woodpecker holes. In the fall of 1928 a large congregation of starlings nightly invaded a section of Lawrence Park to roost. In the early fall of 1929 starlings again congregated there, occupying a small woodlot together with cowbirds and grackles. Baillie visited the site and estimated there were about 5000 starlings there.

The authors of this account regarded the winter of 1929-30 as a milestone in the local increase of the starling, because pairs that had nested in central areas now, for the first time, remained behind for the winter. "They became a bird of the city's streets and back yards," the authors commented (Snyder and Baillie 1930, p. 198). By the end of the year 1930 the "starlingization" of Ontario was well advanced. Their further spread in Ontario, Canada, and North America has been more recently documented in several books and papers (Kessel 1953; Burt and Giltz 1978; AOU 1983; Speirs 1985; Godfrey 1986). (For a recent assessment of the economic value of starlings see Weatherhead *et al.* 1980.)

The release of 60 European Starlings in New York City's Central Park in 1890, and a reinforcement of another 40 there in 1891, has passed by without any anniversary celebrations to mark a Starling Centenary (Schneider 1990). What do individual ornithologists feel about this omission?

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Notes

Probable Red-tailed Hawk predation on Herring Gull

At 1515h on 3 December 1989, we observed an adult Red-tailed Hawk (*Buteo jamaicensis*) with outstretched wings mantling a prey item on the snow along Barnsdale Road about 500m east of Moodie Road, Nepean, Regional Municipality of Ottawa-Carleton. The hawk took flight as we approached and an examination of the prey showed it to be a freshly-dead first-year Herring Gull (*Larus argentatus*). Feathers had been stripped from the neck region, and the neck, back of the head, and upper back had been partly eaten. There was no damage to the wings or legs, no obvious signs of injury elsewhere or of emaciation, and the corpse was still limp and not frozen (the temperature in the afternoon was -20°C), indicating that it had died very recently. We left after

about five minutes, returned at 1600h, and found the hawk still feeding on the gull. The next day the carcass was frozen stiff, and there was no sign of the hawk.

A Herring Gull is an unusual prey item, even for a species such as the Red-tailed Hawk which shows such broad dietary adaptability. Red-tailed Hawks have been documented as taking a wide variety of prey (summarized in Palmer 1988), but there are no reports of Red-tails preying on any species of gull nor any other member of the order Charadriiformes. Red-tails are known to be carrion-feeders, but the gull did not appear to have died from some other cause such as being struck by a vehicle, which is highly unlikely as Barnsdale Road is a little-travelled and snow-packed