Wintering Behaviour of House Sparrows in Ottawa

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First introduced into North America in 1850 in New York, House Sparrows (*Passer domesticus*, hereafter, "sparrows") now occur from BC to Newfoundland and from Nunavut to Florida (Lowther and Cink 2020). They have probably been our commensals ever since the start of agriculture, as their remains have been found in Neolithic archaeological sites (Graeber and Wengrow 2021). On the scale of domestication that runs from dogs and chickens (very) to wolverines and owls (not at all), the sparrow falls well towards the chicken part of the spectrum: not quite a pet, but not really a wild bird; less vilified than the rat, less loved than the cat; tolerated but not celebrated.

Photo above: *Male House Sparrow in winter plumage.*

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So, we must know a lot about such a tame and abundant bird? Certainly, lots has been written about them (e.g. Summers-Smith 1963, 1988), but recently, when I wanted to find out about why they form localised aggregations in winter, I came up with a gaping hole. This article is an attempt to fill it, at least for sparrows in Ottawa.

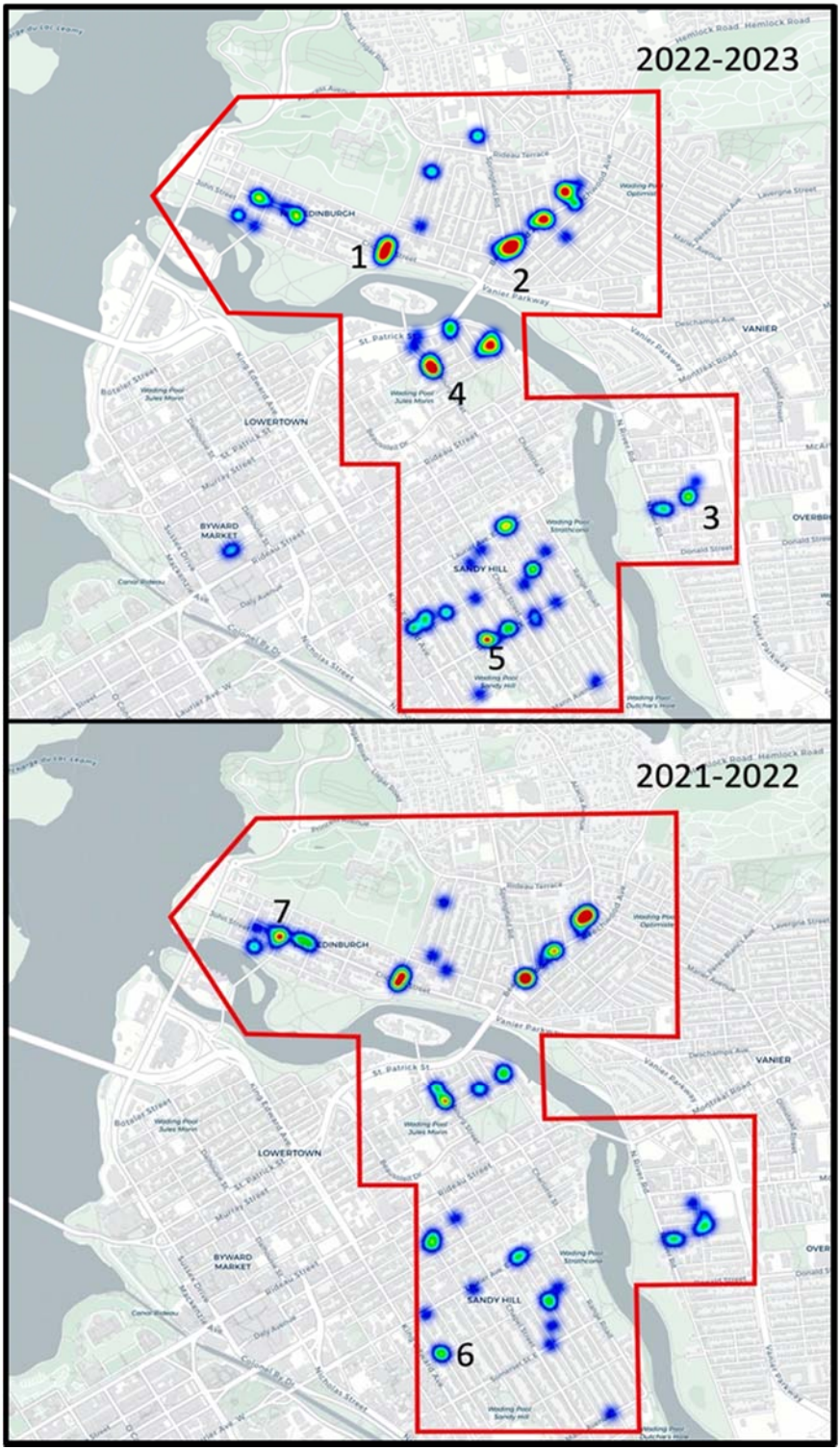
In recent years, on my morning walks through New Edinburgh, Sandy Hill and the fringes of Rockcliffe, I noticed that sparrows were concentrated in predictable clumps that I nicknamed "sparrow camps". Initially, I was especially interested by a group occupying a densely branched deciduous bush near the Rideau River pathway, just beside where Dufferin Road bends to meet Stanley Avenue (Figure 1, *1*). In February 2019, I never found it empty of sparrows during the day, with numbers ranging as high as 18 over ten mornings. Oddly, no one was feeding them at this spot: the nearest feeder was about 100 m away.

In January 2020, the concentration shifted to a group of dense, low shrubs on the SE corner of Crichton Street and Dufferin Road. Numbers there fluctuated from 0-15 in November, but rose as high as 35 in mid-December. Again, there is no feeder at the spot, although it is only 50 m from one. In January, birds were present daily, usually more than 15, but they were impossible to count accurately because, at my approach, they retreated into the densest part of the bushes. This aggregation continued to be occupied throughout the winters of 2021-22 and 2022-23.

The two most prominent feeding sites for sparrows in my area were both associated with supermarkets: one in the hedge right by the bus stop outside the Beechwood Avenue Metro (Figure 1, *2*; up to 90 sparrows) and one in dense shrubs at the SW corner of the Loblaws parking lot on McArthur Road (Figure 1, *3*, up to 100 sparrows). Both of these sites were provided with food in the winters of 2019-2022, placed on the ground nearby by a local sparrow-lover. However, in the winter of 2022-23, no food was provided at the Loblaws site, and it was not occupied, although another, smaller camp was occupied nearby. The camp that has existed for many years outside the Rocky Mountain Chocolate Factory in the Byward Market, usually numbering >25 birds, may be the most familiar to Ottawa residents. Sparrows at this site probably subsist on the remains of fast food consumed by visitors.

After scoping out many local camps in the winter of 2019-20, I decided to make regular counts at as many camps as possible in New Edinburgh, Sandy Hill and surrounding areas. This article is based mainly on observations made in the area outlined in Figure 1 between November and March in three winters: 2020-21, 2021-22 and 2022-23.

Figure 1, opposite page. *Study area (outlined in red) and position of sparrow camps: red dots occupied >80% of visits, green occupied 20-80%, blue occasionally occupied. 1 = Dufferin-Crichton, 2 = Metro Beechwood, 3 = Loblaws, McArthur, 4 Patro on Cobourg, 5 = Somerset-Sweetland, 6 = Henderson-Osgoode, 7 = Union-Crichton.*
Maps courtesy Epicollect5 *https://five.epicollect.net/.*


2022-2023
1
2
3
4
5
LOWERTOWN
BYWARD MARKET
SANDY HILL
VANIER
2021-2022
7
6
LOWERTOWN
BYWARD MARKET
SANDY HILL
VANIER

Characteristics of sparrow camps

Most camps were associated with regularly-stocked feeders or feeding sites, usually within 100 m of the camp; most were in dense bushes and most birds perched within 3 m of the ground. The most common cover used was either a cedar hedge (30%. N = 59), densely-branched deciduous bushes (59%), or ornamental Weeping Mulberries (5%). The latter support several of the largest regular camps. Among the largest camps (mean count >10 birds) occupied in 2021 and 2022, 10/14 (78%) were in deciduous trees or bushes, suggesting that these tend to be preferred over conifers. Camps tend to be static in a given winter, but may change between winters, so that only 6/69 (9%) were occupied in all four winters of my study. In Sandy Hill, the largest camp in 2020-21 was in a small deciduous and not very dense bush close to the sidewalk at the corner of Osgoode and Henderson (Figure 1, *6*). In 2021-22 it was smaller, probably because a nearby feeder was often left empty. In 2022-23 the spot was barely used at all, but another camp was established about 60 m away in similar deciduous bushes close to the Osgoode-King Edward intersection, and a large camp was established in a Weeping Mulberry near the corner of Sweetland and Somerset East, being the largest in Sandy Hill that winter (Figure 1, *5*).

Sparrow camp in snow at the Metro on Beechwood Avenue.

Behaviour

The birds do not usually spend the night in these aggregations. On several mornings in 2020 and 2021, I watched the Beechwood Metro camp from soon after first light. Birds began to arrive in parties of 4-7 just before sunrise, flying in very fast and diving straight into cover. Most appeared to come from the direction of Vanier, although that was hard to judge because they dived in so fast. The camps were mainly deserted before sunset, with birds leaving, as they arrived, in small, straggling groups, rather than dense flocks. Before departure, they often flew up into adjacent trees, hopping from branch to branch in an agitated manner for several minutes before actually flying off. Two camps that were also used as overnight roosts were both in dense cedars. In one case, the birds that roosted in the cedars appeared to shift to adjacent deciduous shrubs during the day, at least in good weather. My thought is that at night, when they cannot detect predators at a distance, they prefer to be in evergreen cover, but that during the day they prefer deciduous shrubs that allow them to see approaching danger.

It makes sense that the sparrows would congregate around a supermarket: lots of waste food is produced. However, neither of the supermarket camps made use of the dumpsters. Instead, they chose to rest in places where dense cover at a suitable height from the ground was available close to where well-wishers deposited bird food, in the form of seeds and grain. At the Metro, 20-30 pigeons and variable numbers of starlings also used the same resource: they sat on the hydro wires, while the sparrows clustered in the bushes below.

The presence of sparrows in winter appears to be strongly related to the density of people. In Rockcliffe (human population density 1043/km^2), I have never found a single camp, although small parties of sparrows occasionally move through the area. Rockcliffe residents rarely see sparrows at their feeders. I think it likely that the density of food sources is insufficient to support a regular population of sparrows, but a lack of suitable cover may also be involved. In New Edinburgh (population density 5530/km^2), there are few sparrow camps except along Beechwood Avenue, which forms the boundary with Vanier. In New Edinburgh, on a given day in January, excluding Beechwood Avenue, there were typically about 25 sparrows distributed in three or four camps (39/km^2), whereas Sandy Hill, with a human population density of 10,800/km^2 supported at least 100 sparrows (86/km^2) in six or seven camps.

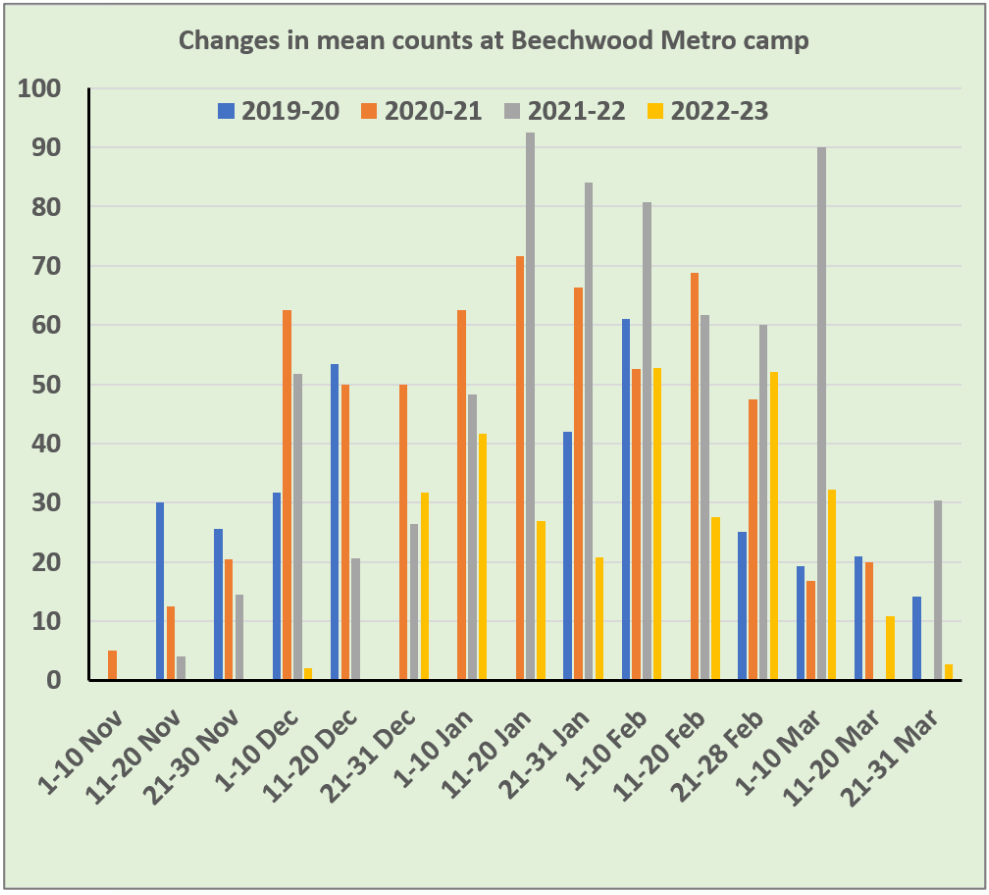
As many camps are not immediately adjacent to food sources, birds in the camps are not typically feeding while there. Their behaviour is very weather-dependent: when it is cold and windy, they tend to be deep inside the vegetation, their presence betrayed only by occasional chirps. On the other hand, when it is sunny, even if the temperature is below 0 degrees, birds tend to perch on the outer twigs on the sunny side of the shrubs and often vocalize strongly and persistently.

The camps are definitely a seasonal phenomenon, building up and concentrating in November and breaking up in March (Figure 2). It is possible that when the weather turns cold the camps develop rapidly in November, but my data are too sparse to say

for sure. However, in March, camps break up on fine sunny days, with singles and pairs visiting potential nest sites. Single males often sing (chirrup) loudly and persistently from previous years' nest sites, clearly advertising for mates. However, bad weather, especially snowstorms, have them back in the camps in their winter numbers. By the end of the month, though, the camps hold few birds, even when the weather is sub-zero. The final disappearance of the camps, around the first days of April, has coincided in several years with the arrival of Song Sparrows in the area.

The Ottawa sparrow population is by no means the most northerly or the one that suffers the coldest winters. They are found in Churchill, MB and as far north as Arviat, NU, on the west coast of Hudson Bay (Richards and Gaston 2018), as well as in Whitehorse and Yellowknife. How important and widespread the winter camp behaviour I have described may be I do not know. The role of the camps is an enigma, more so because none of the literature I have consulted comments on such behaviour.

Figure 2.
Trends in numbers of sparrows, by ten-day periods, for Beechwood Metro camp. Missing columns indicate no observations.



Moreover, the existence of the camps is not visible in eBird records. You would never think, from looking at the sightings within my search area, that there are significant aggregations of sparrows: most records involve <5 birds. I cannot account for this strange lacuna in eBird, although it may relate to the fact that birding hits a trough in mid-winter. It may also relate to the fact that, being an introduced species, many birders think of House Sparrows as second-class birds and often fail to record them.

In my opinion, this is very unfortunate. After all, given the relatively late arrival of *Homo sapiens* in the Americas, we ourselves could be thought of as introduced species. And where we go, sooner or later, House Sparrows will follow.

I have a lot of respect for sparrows – they are real survivors. For a bird that started its evolutionary career somewhere in the Middle East, it has made a long hop to the Boreal snows of the Ottawa winter, albeit with a lot of help from its human commensals. In our region (Boreal Hardwood Transition), House Sparrow populations have sunk to about one tenth of what they were in 1970 (https://wildlife-species.canada.ca/bird-status/tendance-trend-eng). Despite that, Canadian Wildlife Service pays no attention to this introduced species. However, I think our lives would be poorer for the loss of sparrows: most of us live in cities and, along with European Starlings and Rock Doves, also introduced, we would have very little to brighten our city excursions if sparrows were to disappear. They are fascinating birds and worthy of much more attention than they get.

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