

next month, then less frequently, but in larger numbers (up to 30), for another month. In that time, my notes mention visits to the feeder only four times, the first on 31 January (two birds), but it is

certainly possible there were other visits that went unrecorded.

Bill Walker  
Deep River, Ontario

## Are Pine Grosbeaks Increasing at Bird Feeders in Ontario?

by  
Erica H. Dunn

A suggestion has been made that Pine Grosbeaks (*Pinicola enucleator*) may now be using bird feeders to a greater degree than in the past (Pittaway 1989). Most of the supporting observations, however, were from a restricted area between Lake Simcoe and Algonquin Park. Here I look at the entire province, for the period 1976-88, using data from Christmas Bird Counts (CBCs) and the Ontario Bird Feeder Survey (OBFS). These resources allow us to say whether Pine Grosbeaks are now attending feeders in greater numbers relative to their abundance in the wild (as measured by CBCs), as well as to comment on the hypotheses proposed by Pittaway to explain his observations.

### Methods

OBFS counts were obtained from the organizing body, the Long Point Bird Observatory. Each year, 400-500 people across the province tallied the birds observed at their feeders during a one to two day period, every second week from November to April. Observers recorded the peak count of each species seen in the observation period. For further details, see Dunn (1986).

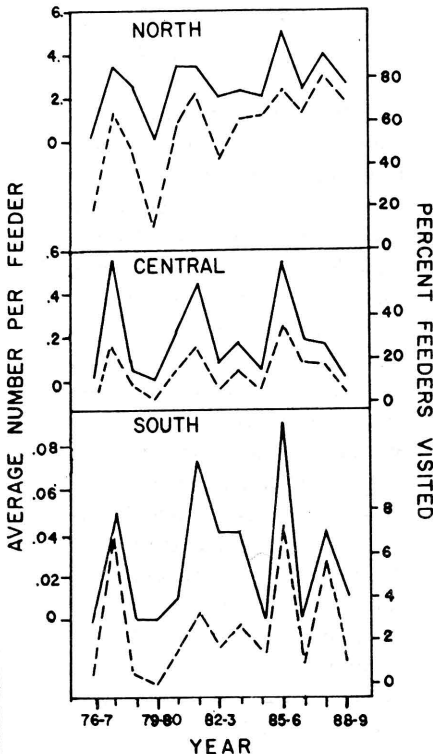
OBFS counts and CBCs were divided into three regions: Southern Ontario extended roughly to a line through Lake Simcoe to Belleville, including the Bruce Peninsula, Barrie and Peterborough. Central Ontario was defined as the area between the South and a line north of Parry Sound that passes through

Erica H. Dunn, 30 Davidson Road, Aurora, Ontario L4G 2B1

Algonquin Park and east to Petawawa. Northern Ontario was defined as the area north of the Parry Sound-Petawawa line (see Dunn 1986).

In analyses comparing feeder

*Figure 1:* Ontario Bird Feeder Survey results for Pine Grosbeak. Solid lines show the average number per feeder for the year (November through March), while the percent of all feeders visited on at least one of the ten count periods is shown by dashed lines.



counts with CBCs, OBFS data were taken from the fourth count period only, which is the one corresponding most closely in date to CBCs. The proportion of all OBFS counts and CBCs from the province that were conducted in each of these regions was very similar for both types of counts (Dunn 1986).

To determine whether a high proportion of Pine Grosbeak populations attended feeders at high population levels, multiple regressions were conducted of OBFS counts (average birds per feeder) on CBC (average birds per party hour) and CBC2 for each region and for the province as a whole. If CBC2 dropped out of an equation, the relationship between the two counts was constant, while if CBC2 remained, either increasing or decreasing proportions of birds visited feeders at higher population densities.

### Results and Discussion

Although the Pine Grosbeak is rare at feeders in Southern Ontario, it is quite common in the North (Figure 1). It is the sixth most abundant feeder species there, averaging 2.5 birds per feeder throughout the winter, and 4.9 birds at the 51% of the feeders which are visited by the species at all. Pine Grosbeaks drop off dramatically at feeders in Central Ontario, where Pittaway's observations were made, and are even less common in the south.

Numbers of Pine Grosbeaks at feeders vary markedly from year to year, as expected of an irruptive cardueline finch, in parallel throughout the province (Figure 1). There were no significant trends with year, despite the apparent increase in the north. Although 1985-86 was a high year for Pine Grosbeaks at Ontario feeders, it was not as unusual as suggested by Pittaway (1989), since similar numbers had occurred before.

These data suggest no change in feeder use over time, but to be certain, we have to compare feeder counts to populations in general. Even though feeder visitation has remained steady, a general decline in Pine Grosbeak populations would show that feeder visitation with respect to numbers in the wild had indeed increased. This was checked by looking for trends in Ontario CBCs, the only available index of total population size for the winter season. No significant trends were found in CBCs over the period 1976-88. I conclude that feeder use relative to population size has also remained steady.

Perhaps Pine Grosbeaks come to feeders in higher proportions when

there are large numbers in an area, such that we see relatively higher visitation rates in Central and Southern Ontario during invasion years (Pittaway 1989). Regression analysis of OBFS against CBCs, however, showed a straight line relationship within each region. This means that fluctuations in CBCs were paralleled by changes in feeder counts, and that a constant proportion of birds came to feeders at all population densities.

On the other hand, ratios of OBFS to CBC numbers indicated that a much higher proportion of birds in the north visited feeders relative to population size than did so further south (Table 1). A regression of OBFS on CBCs for the province as a whole indeed showed that more birds visited feeders at high population levels, contrary to the result discussed previously for each region. At least in part, this may be an artifact of the data. CBCs are conducted under increasingly severe winter conditions as one goes north. More of the birds tallied on CBCs there may actually have been counted at feeders, making the two count types less independent than further south. Currently we are

*Table 1:* Average OBFS abundance (fourth count, birds/feeder) and CBCs (birds/party hour) for Pine Grosbeak, 1976-77 through 1987-88 (1984-85 missing).

	North	Ontario Central	South
OBFS	2.5	0.2	0.03
CBC	2.0	0.9	0.4
Ratio (OBFS/CBC)	1.3	0.2	0.08

**Table 2:** Ten-year average OBFS figures for Pine Grosbeak and possible competitors at feeders. Abundance (A), percent of feeders visited at least once in season (%) and regional rank in abundance at feeders (R).

	North		Ontario			South			
	A	%	R	A	%	R	A	%	R
Pine Grosbeak	2.5	51	6	0.2	14	19	0.03	3	21
Evening Grosbeak	12.2	88	1	13.4	89	1	3.3	46	5

unable to separate individuals counted during CBCs at feeders and away from feeders, so this possibility cannot be checked.

If we assume that there is at least some tendency for Pine Grosbeaks to attend feeders more often in the north than elsewhere, what could be the reason? One suggestion is that Pine Grosbeaks in the south may have arrived from remote regions where feeders are scarce, so have not learned to use them (Pittaway 1989). I can't address this possibility without banding data, but the fact that Pine Grosbeaks are so common at feeders in Northern Ontario suggests that many of the birds further south are indeed familiar with feeders.

Another suggestion made by Pittaway (1989) is that Pine Grosbeaks may avoid feeders in Southern Ontario and New York because of the large numbers there of more aggressive species such as Blue Jay (*Cyanocitta cristata*) and Evening Grosbeak (*Coccothraustes vespertinus*). Both these species, however, were more abundant at

feeders in Northern and Central Ontario than in the south (Table 2). There was a negative correlation ( $P=0.033$ ) between Pine and Evening Grosbeak numbers at feeders in the north (and no correlation elsewhere), but the same correlation was found for CBCs. In other words, Pine Grosbeaks were more abundant in the north when Evening Grosbeaks were not, but any possible causal relationship took effect at the population level, and not at feeders.

If a higher proportion of Pine Grosbeaks really does visit feeders in the north than further south, the cause is most likely to be climatic. This would be consistent with the low visitation rates reported in New York, and high rates in Minnesota (Pittaway 1989).

### Acknowledgements

Thanks are extended to the (literally) thousands of OBFS and CBC participants who generated the data used in this analysis. Your efforts are really appreciated.

**Author's note**

This paper is only one example of how the Ontario Bird Feeder Survey can be used, and the data are available to anyone for analysis. In 1987-88, the survey was expanded continent-wide under the name Project FeederWatch. Over 7,500 now report from all parts of North America, and the data allow us to examine questions

about birds at feeders on a much larger scale. For further information on these surveys, or to take part, contact the author.

**Literature cited**

- Dunn, E.H.* 1986. Feeder counts and winter bird population trends. *American Birds* 40:61-66.
- Pittaway, R.* 1989. Pine Grosbeaks using bird feeders. *Ontario Birds* 7:65-67.

# Bird Observations on Fighting Island, Detroit River, Spring 1988

by

Martin K. McNicholl

**Introduction**

Fighting Island lies in the Detroit River, south of Windsor, Essex County, Ontario, extending from north of La Salle to south of River Canard (Byers 1980: entry 86). As the border between the U.S.A. and Canada lies in the river immediately to the west of the island (Figure 1), it is of interest to naturalists as one of the westernmost points of land in extreme southern Ontario.

Although data on birds have been collected for many years at Point Pelee and more recently at Holiday Beach and Pelee Island, relatively few details have been

published for other parts of Essex County except in brief notes and in wider regional works by A.H. Kelley. Her most recent compilation of records for the provincial and state counties surrounding the Detroit River is now over a decade old (Kelley 1978), although she publishes occasional updates (Kelley 1983). An updated compilation of data on birds in Essex County would be desirable, especially in light of the high degree of change that has taken place in bird populations in the region surrounding the western end of Lake Erie (Kelley 1972; Mayfield 1988-1989).

Martin K. McNicholl, 218 First Avenue, Toronto, Ontario M4M 1X4