

CHANGES IN THE HOUSE FINCH POPULATION IN CENTRAL NEW YORK

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House Finches first appeared in our region in 1971 and have been increasing in numbers in the last few years. It seems worthwhile to quantify this trend with data from our Feeder Survey. This method of evaluating bird populations has been discussed previously in this journal (Burtt 1980). During a designated week readers of "Bird Notes," a column in the *Syracuse Sunday Herald American* are asked to report for each species the maximum number of birds observed at or near their feeders at any one time. The Survey is conducted each winter for the first week of November, December, January, February, March and April. Usually between 150 and 200 reports are received.

These maxima for a given species in a given week are totalled. This total is converted to what it would have been for 100 reports, so that data taken at different times may be compared. For a given winter the six totals for each month are added to constitute the "winter total."

The Survey results are only a sample of the population in the circulation area of the newspaper. This area is about the same from year to year and covers a circular region within 50 miles of Syracuse plus the western Adirondacks and up north through Watertown and along the St. Lawrence River (*Kingbird* Region 5 plus parts of 4, 6 and 7). So it is probable that trends in the sample are about the same as trends in the population of the area.

In Figure 1 winter totals for the House Finch are plotted on the vertical axis against the successive winters on the horizontal axis. In the first three years the total is very small, but then it increases markedly. Another way to show the trend is to discard the first two years and then fit a straight line (regression line) to the data by the method of least squares; this is the dotted straight line in the chart. Its slope is 512, *i.e.*, the winter total increases by about 512 birds each year. This slope is statistically significant. (The statistical significance of this slope was determined by using a t-test to check the null hypothesis that the slope was zero. The hypothesis was rejected with $p < .001$ so the slope is significant).

There is no indication that the House Finch population is as yet tapering off. In fact, it appears to be accelerating. If a regression line is fitted to the five years beginning with 73-74 and another line to the remaining five years, the slope of the former is 104 and of the latter 961. If this latter slope should continue for the next five years the Survey winter total would be over 10,000. However, such extrapolation

is questionable because eventually the environment may be unable to support a further increase in population.

It may be of interest to compare the current House Finch Survey total with that of some other year-round species. Table 1 gives some winter totals for 1982-83. There are only two species with totals larger than those for the House Finch and these are the ubiquitous European Starling and House Sparrow.

In addition to the increase in the number of House Finches, the percentage of feeders that attract this bird provide some insight into the general spread of the species. In 1974-75, only 7% of the feeders had this bird, but in 81-82 the figure was 50% and in 82-83, 62% of the feeders were visited by House Finches. Insofar as the Feeder Survey is a reliable indicator of population trends, the House Finch appears to be on its way to becoming one of the most numerous resident species in Central New York.

LITERATURE CITED

Burt, H. E. and B. P. 1980. *The Feeder Survey and Trends in Central New York Cardinal Population*. *Kingbird*, 30: 138-142.

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TABLE 1 — FEEDER SURVEY WINTER TOTALS FOR 1982-83

SPECIES	NUMBER OF BIRDS PER 100 FEEDERS
European Starling	11,255
House Sparrow	6,998
House Finch	5,374
American Goldfinch	4,140
Black-capped Chickadee	2,854
Mourning Dove	2,303
Blue Jay	2,175
Cedar Waxwing	1,455
Downy Woodpecker	1,151
Northern Cardinal	1,018
White-breasted Nuthatch	832
Hairy Woodpecker	575

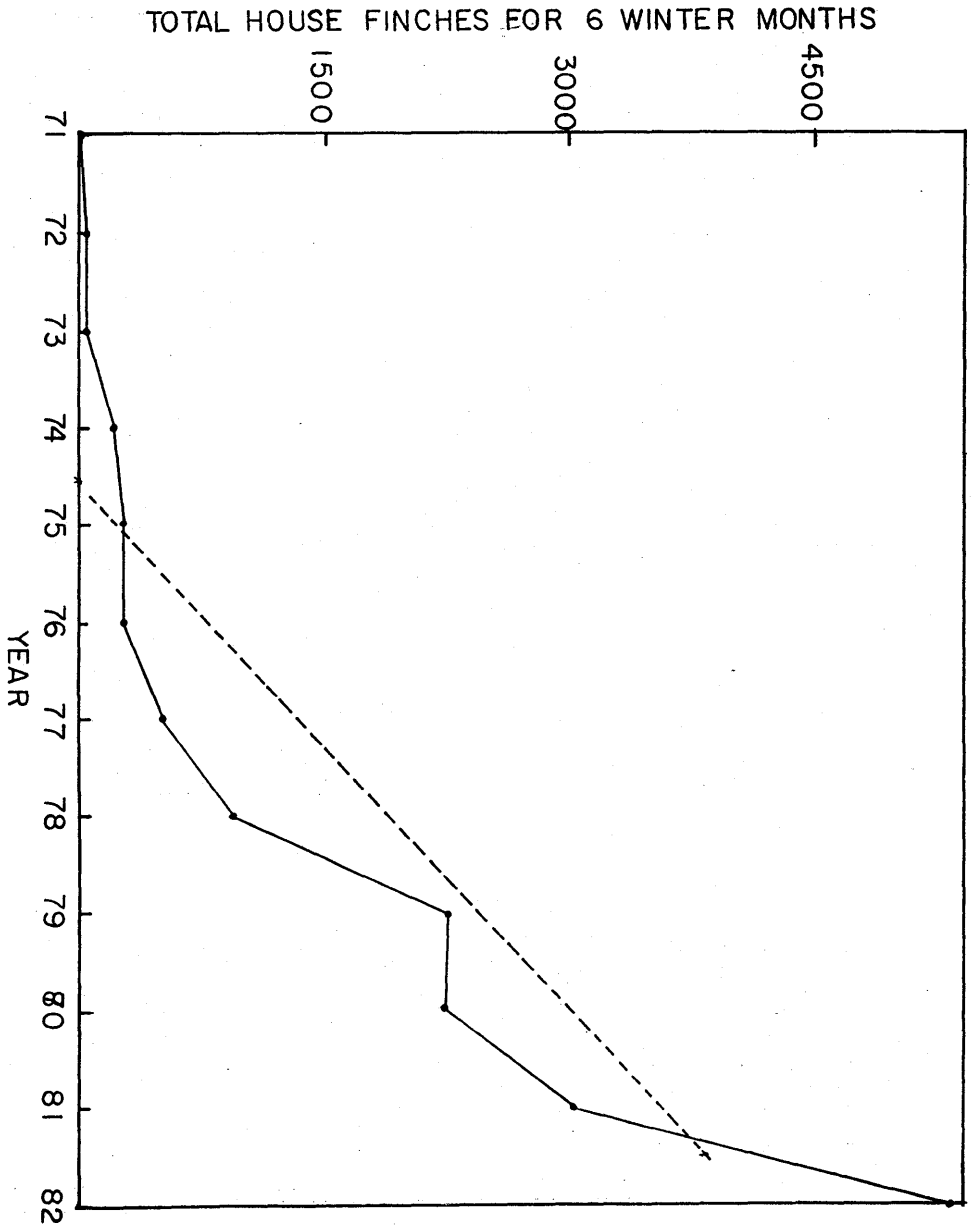


Figure 1. Changes in the House Finch population at feeders in Central New York from 1971 to 1983. Solid line equals observed data. Dotted line equals regression line, representing the average slope from 1973 to 1983.