

gested the possibility of wing tagging as a method of tracing bird movements, and my wife, Jeanne, who assisted in all phases of the study. This study is supported by Hatch Funds from the Agricultural Experiment Station, University of Massachusetts.

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**THE COMPARATIVE FEEDING BEHAVIOR OF  
WINTERING EVENING GROSBEAKS AND  
PURPLE FINCHES**

By ROBERT E. GOBEIL

INTRODUCTION

During late February and March, 1963, while engaged in a banding program, I studied the feeding behavior of wintering Evening Grosbeaks (*Hesperiphona vespertina*) and Purple Finches (*Carpodacus purpureus*), at Springvale, Me. (York County). The birds were observed from a distance of three feet on a window feeder (12 by 17 in.). The hours of observation ranged from 6 A.M. to 5 P.M., for a total of about thirty hours. The feeder was well stocked with sunflower seeds at all times.

DISCUSSION

The Evening Grosbeaks and Purple Finches start arriving at the feeder at dawn; on March 7, the first birds were on the feeder at 6:15 A.M. As the days progressively lengthened, the birds appeared earlier in the morning. The heaviest feeding by both species occurred early in the morning, from 6:30 to 8 A.M. The largest flocks were also seen at this time. The Purple Finches were much more constant in their feeding, with very slight fluctuations in their numbers throughout the day. The Evening Grosbeaks, on the other hand, traveled more during the day and made sporadic visits to the feeder for shorter lengths of time, but when at the feeder, they consumed a larger amount of food and at a far more rapid rate than the finches.

While feeding on the feeder, there is continuous fighting between the same species and also with most other species of birds. When only two male grosbeaks (or two females) were on the feeder, they were substantially less aggressive than a whole flock. The presence of more than five grosbeaks on the feeder always brought conflict and fighting. The first bird to arrive on the feeder, whether male or female, usually establishes a "feeding territory". It then tries to defend the territory by keeping all other birds off the feeder. This sort of territory was also set up by Purple Finches. The original bird which establishes the territory has an extremely hard time to maintain it and almost always loses out because of the large number of birds which alight on the feeder. As soon as one bird is chased away, two more alight on the feeder. As the number of birds on the feeder increases, the fighting also heightens. When defending the territory all birds are chased away, the birds not being restricted to attacking only individuals of their own species. On March 4, a small banding trap was placed exactly in the middle of the feeder, separating it into two equal sections. Two male grosbeaks, one on each side of the trap, established a territory on their respective areas. The presence of the trap permitted the establishment of two "feeding territories", instead of the usual one comprising the whole feeder.

The establishment of such "feeding territories" does not occur in all species of birds. Pine Siskins (*Spinus pinus*) were carefully watched and showed no signs of territories. Three or four siskins often fed on the feeder, with no fighting.

When defending the "feeding territory", a definite attack posture is assumed. The attack posture in Evening Grosbeaks is accompanied by a loud "cheet" note. The bill is held in a horizontal position, just before darting at the bird being attacked. The bill rarely touches the other bird, although once, a male grosbeak pulled a few feathers off a Pine Siskin. The attack posture in female grosbeaks is basically the same as the male, except that the body is held in a slightly lower position. A female may also occasionally spread out her tail when attacking another bird.

The attack posture in Purple Finches (male and female) is quite different from that of the grosbeaks. The bird first lifts its head, with an open beak, to a vertical position; the bill is rapidly opened and closed in this position. Then the head is thrust forward, directed at the intruding bird. The beak may sometimes be open when the head is pushed forward. Actual contact with the other bird was not observed, although it may occasionally occur. The attack posture is the same for both male and female Purple Finches.

The weather had some effect on the feeding behavior of both species. The largest number of birds were usually observed on warm, calm days, while rainy, windy days were much less productive. On March 6, a cloudy and snowy day, no birds were seen on the feeder until 1 P. M. This was unusual, since the day before flocks of 25 to 30 grosbeaks were present.