

PERIODS OF TRAP ACTIVITY  
AT MONTCLAIR, NEW JERSEY  
By Frank P. Frazier

The article by L. Barrie Hunt, "A Time Study of Trap Activity" (Inland Bird Banding News, April 1957, reprinted in EBBA NEWS 20:79) stimulated me to go over my banding records in order to determine whether or not my conclusions agreed with his. In order to assure the validity of the comparison, I have followed Hunt's procedure closely.

From April 1, 1950, till October 1, 1954, 8586 individuals of 63 species were trapped (bandings, repeats and returns) in Upper Montclair, Essex County, New Jersey (coordinates 4051-07413) and the trapping times were recorded. As in Hunt's study, all birds taken in nests, by hand or in nets have been excluded. Traps, during this period of three and a half years, were operated from dawn to dark almost every day. Trip-step, potter, all-purpose, house and drop traps were used.

The three hour periods into which Hunt grouped his records were 7-10AM, 10AM-1PM, 1-4PM and 4-7PM, referring to them as early morning, late morning, early afternoon and late afternoon. I follow these periods, with the exception that my early morning period is from dawn to 10AM and my late afternoon period is from 4PM till dark. These periods are given in eastern standard time.

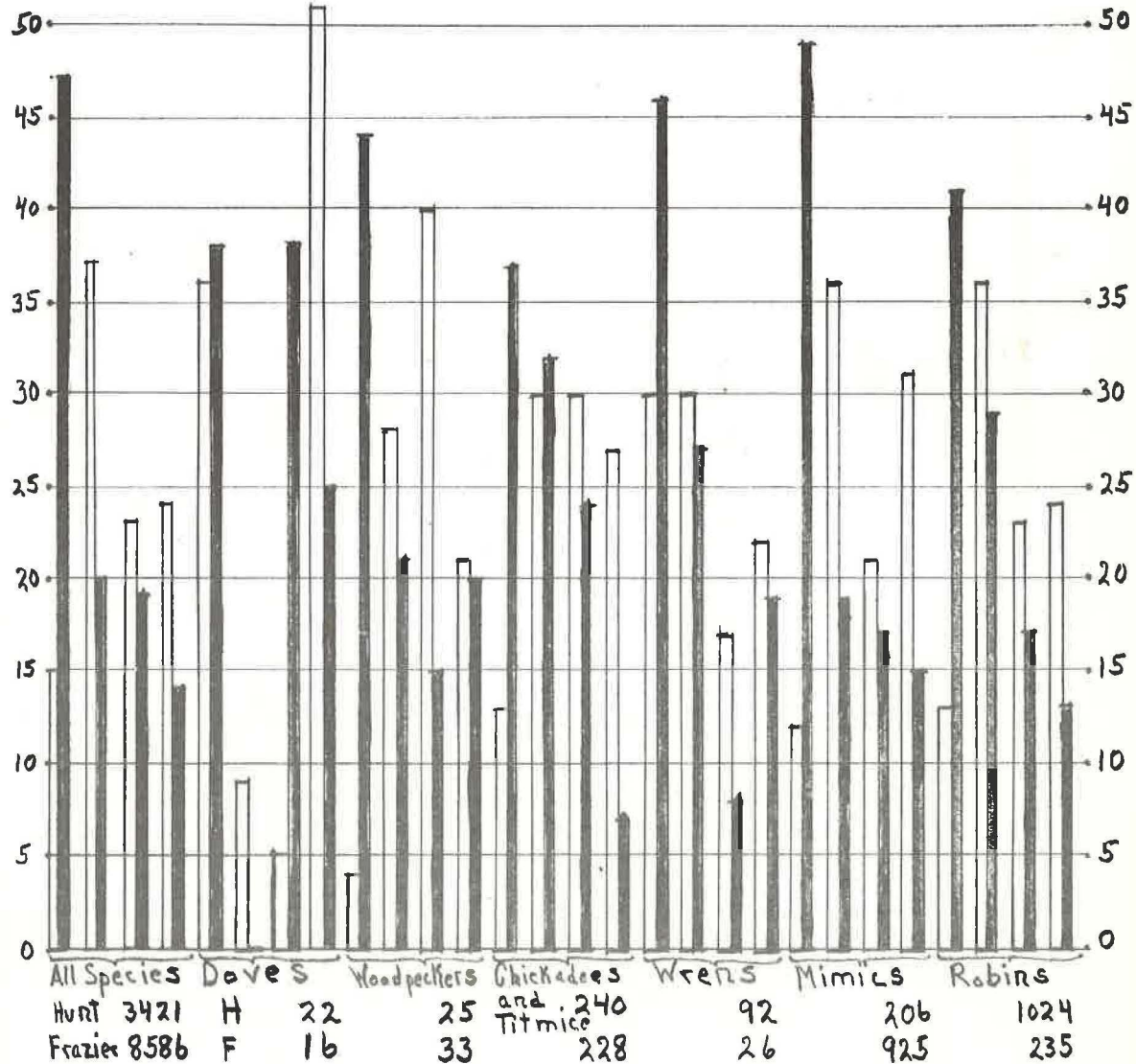
In the graph illustrating the results of my study, in comparison with Hunt's results, the four time periods for each group of birds are shown in order, each representing the percentages of individuals in the group taken during that period. Percentages are given to the nearest whole percent. The number following the name of each group represents the number of individuals included in that group. I have added one group -- Blue Jays -- that Hunt does not list, since the large number of my trappings (525) warrants a separate group. The All Species column has been entered first for ease of comparison with each subsequent group.

As the graph indicates, my trapping times are in considerable disagreement with those of Hunt. Where the food and water seeking activity of his All Species show an early morning low, mine show an early morning high -- his 15%, mine 47%. Hunt's early morning low is followed by a late morning peak and a levelling off throughout the remainder of the day. My early morning high is followed by a levelling off to 20% in late morning, 19% in early afternoon and 14% in late afternoon.

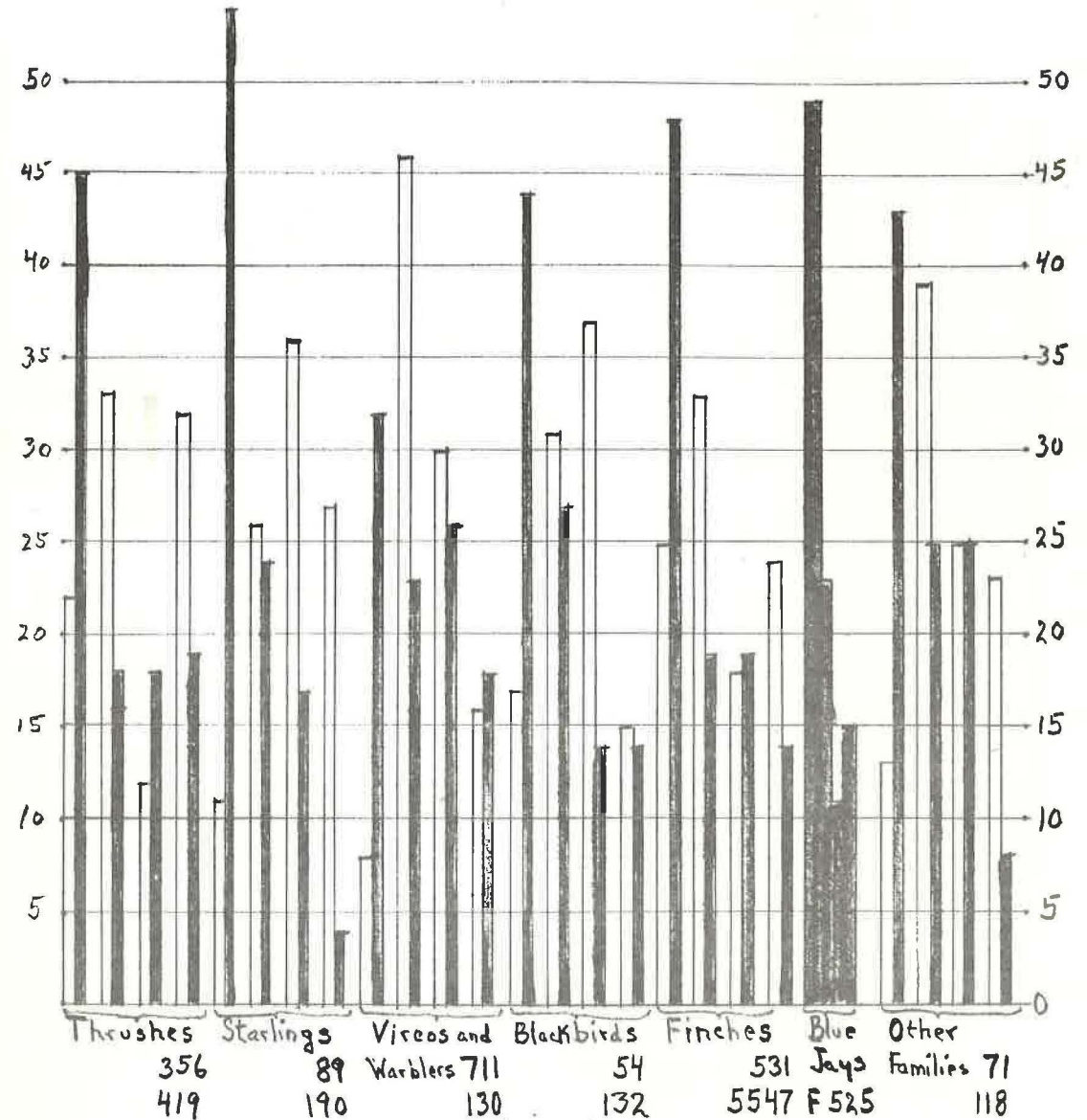
Hunt states that his early morning low could be partially the result of not baiting his traps by 7AM -- my traps were usually baited much earlier. Robin activity comprised 30% of all Hunt's trappings but did not influence his percentages. Finch activity comprised 65% of my trappings, but the All Species percentages, excluding finches, were nearly identical.

TIME STUDY GRAPH

Comparison of Hunt's results (clear bars) with Frazier results (solid bars). In each group, the left hand pair of bars is before 10AM; 2d pair, 10AM-1PM; 3d pair, 1-4PM and 4th pair, after 4PM. Bars measure percent.



NOTE: The numbers immediately below the name of each group represent the numbers of individuals included in that group -- the top number by Hunt, the lower by Frazier.



My study shows that the activity of each of the groups coincides with the All Species pattern of an early morning high followed by a tapering off of activity during the remainder of the day. With the exception of three groups -- Doves, Chickadees and Titmice, Vireo and Warblers -- at least 40% of the trappings took place in the early morning period. The small number of Dove trappings do not show anything very conclusive except for the early morning peak in both studies. In the Chickadees and Titmice Group, mine is dominated by Black-capped Chickadees with 212 trappings, 37% in early morning. My Vireo and Warblers Group showed an early morning peak of only 32%.

Individual species followed the group and All Species pattern with only a few exceptions. My 29 Veery captures, like Hunt's, were scattered throughout the day. My 39 Chipping Sparrow captures show an early afternoon peak of 49% with only 23% in the early morning period. My 5 Indigo Bunting and 7 Rose-breasted trappings, although too few to show any significance, had their highest peaks in the late morning period.

The comparison of these two studies shows that there is a marked difference in the times of trap activity, particularly in the early and late morning periods. The reasons for this difference are obscure. One reason may be that my early morning period extends from dawn until 10AM and my traps were baited the night before or very early in the morning, whereas Hunt did not bait his traps before 7AM and states that "no birds were known to have entered before 7AM. . ." Another reason might be that Hunt trapped "the majority of birds. . . in water traps during the summer and early fall months," whereas at my station, the majority of birds were taken in traps baited with seed (some with water in addition to seed) in the spring and fall months.

One other possible reason for my marked early morning peak is that my station is in a well-populated suburb of New York, in my back yard adjoining the town park. Before 10AM there is not much human activity near the banding area, but after that time there is apt to be quite considerable human activity.

It seems extremely doubtful, however, that any or all of these reasons is sufficient to account for the marked early morning peak my study shows -- 47%, or nearly two and a half times the number of birds trapped in the next highest period. The birds that come into my traps -- come early.

\*\*\*



PLAN NOW to come to the EBBA Annual Meeting at Ramsey, New Jersey, April 12th and 13th, 1958. You will get many new ideas on baits, trapping and netting techniques, record keeping -- and you will enjoy and profit from exchanging experiences with your fellow banders.