

known to remain here through a winter. During the season of 1928-29 a male was seen frequently about the traps until March 20, 1929, when the first migrant Juncoes arrived.

Here is a field for investigation, difficult but correspondingly fascinating. To learn the factors operating individually to limit winter range would increase our knowledge, for general factors really convey little information. Investigations carried on during winter transform a proverbially dull season into one of intense interest.—WENDELL P. SMITH, Wells River, Vermont, November 28, 1937.

Are Peterboro, New Hampshire, Wintering Chickadees to Any Extent Migratory Birds?—There are several banders in different sections of the United States who are seeking to ascertain if any of the Black-capped Chickadee (*Parus a. atricapillus*) observed in the fall and winter at banding stations are migratory. In this connection perhaps recent observations and banding results made at my station at Peterboro, New Hampshire during the fall and winter of 1937-38, may be pertinent.

Ordinarily during the last eleven years there are usually from a half dozen to a dozen Chickadees at my station during this period. As the nesting season approaches they practically all disappear, although for the last three years a pair has nested within one hundred feet of the station and during the nesting period both birds came for suet and sunflower seeds. On one occasion their young followed them to the station for two or three days where they were fed on suet after which old and young disappeared until fall. The winter season of 1937-38, however, proved an exception for by November 18, there were many more Chickadees at the station, among them two old banded birds, one of which proved to be at least five years old. The number continued to increase and by December 10, forty-five birds were banded, all on the right tarsus. Young birds could be distinguished from old ones by their lack of fear when handled. By December 29, fifty-four were banded and by January 4, sixty-one were banded, the number banded by January 15 was sixty-eight and a total of seventy-two were banded by January 26. From the 26th of January to February 7, only two new Chickadees appeared and they were banded.

During the period between November 18 and January 16 the birds appeared at the station in waves numbering less than ten although the actual number could not be determined. Mr. Charles B. Floyd (*in litt.*) reports that during several winter seasons he has studied this species in the field near Boston, Massachusetts and that flocks numbering ten are seldom encountered, five or six usually constituting a group. This has been my experience about Peterboro and I have often speculated whether or not these groups were of a family order.

At the height of their abundance all the seventy-four birds, plus the two banded several years ago, entered my shelf trap, 8" x 10" x 10", several times daily after sunflower seeds which they either ate or carried away and hid in the woodshed or in crannies in the back of nearby trees. They had six favorite trees having small horizontal branches where they opened the seeds. They could not carry away two unopened seeds but one or more birds would extract pits and then add an unopened seed and fly away with both. This habit appears to indicate exceptional mental ability.

From late January on there was a gradual falling off in the number of birds at the station and the shrinkage was very marked by February 4, estimated at 75 per cent, including my two old birds wearing colored bands. By late February practically all had ceased to visit the station.

If the conditions existing here, namely, practically complete absence of birds during the nesting season, are paralleled at other stations, it will be very difficult to secure recoveries until next fall. In order to make a beginning in the study of their migratory movements, if indeed there is any, there seems to be at least one method to approach the problem, namely, by instituting a thorough search for their nests, say, within one or two miles from one's station. It should be easy to bait the birds near their nests and follow this by trapping them. Of course, the more extended the search for nests is made the better. If no banded birds are found the fact will stimulate further investigation in this direction perhaps by an organized group of five or six banders operating stations four or five miles apart.—CHARLES L. WHITTLE.