

RECENT RECOVERIES OF CHICKADEES

By Robert C. Leberman

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We have been notified by the U. S. Fish and Wildlife Service of the following three chickadee recoveries:

- (1) #33-15628, banded at P.N.R. on October 11, 1961, trapped and released by R. E. Dirig in the area of Hancock, New York, in March, 1963.
- (2) #106-28917, banded at P.N.R. on October 26, 1963, found dead at Morgantown, West Virginia, on December 20, less than two months after the date of banding.

(Of this chickadee Dr. George A. Hall, who reported the band to the Fish and Wildlife Service, writes (in litt.), "This bird was hit by a car in downtown Morgantown on December 20, 1963. A workman at a nearby car dealer's saw it happen, and picked up the bird which was still alive. It died rather shortly. As it happened my wife's mother works for that car dealer and so the bird and band came into my possession.")

- (3) #107-38169, banded at P.N.R. on November 3, 1963, trapped and released at Elkview, West Virginia, on February 23, 1964, by Glen K. Phillips.

Although ornithologists seem generally agreed that the so-called "permanent resident" Black-capped Chickadee may, at times, demonstrate seasonal movements, there has been considerable question regarding the full extent, causation and frequency of these movements. Do these "invasions" constitute true migrations, or are they merely random winter wanderings? Do the birds travel long distances, or are the movements usually of a more or less local nature? Is there a reverse flight in spring that returns the chickadees to their original areas? Do the invasions occur in random years, or in regular cycles? Some of the answers to some of these questions, at least as far as they can be answered in the western Appalachian region, are beginning to emerge from the Powdermill banding data.

Since beginning mist-netting operations at the Reserve in 1961, I have been able to detect especially heavy chickadee "flights" in the Ligonier Valley in the fall seasons of 1961 and 1963. Conversely, during the autumn seasons of 1962 and 1964, no extensive movements were noted. In this four-year period, therefore, the birds have shown seasonal movements only every other year. In the future, as our records extend over a longer time interval, it is hoped that the exact nature of this periodicity will become more evident.

Graphic comparison of a "flight" year (1963) with two years of no invasion (1962 and 1964) is shown in Table 1. Note particularly that only 44 chickadees were banded between September, 1962, and April, 1963, a period representing the winter half of the year when movements would be expected to occur. In sharp contrast, during the same period of 1963-1964, 388 birds were handled, 254 of these in the month of October

alone. Approximately the same number of net hours (the number of nets used multiplied by the number of hours in operation) were involved in each of these two periods.

Table 1. Numbers of Black-capped Chickadees banded each month for the years of 1962, 1963, and 1964

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
1962	12	8	2	22	2	1	1	3	1	25	10	2
1963	2	2	0	2	4	2	7	10	13	254	68	3
1964	4	3	19	24	1	1	4	5	11	6	1	2

That an autumn movement to the southward does occur in certain years is shown by recoveries nos. 2 and 3, above. These are both direct recoveries of winter Black-caps which were banded during days of heavy chickadee flights through the Reserve, with totals of 19 captured on the October 26 date, and 27 on November 3. The direction of these recoveries suggests that there may well be a tendency for such "migrant" chickadees passing through our region to closely follow the Appalachian Mountain system (see Figure 1). It is worthwhile to note, too, that these chickadee flights often occur on days when other northern migrants are passing through the Reserve in numbers. A frequent associate is the Slate-colored Junco.

For evidence of a return flight in the spring, an examination of Table 1 for the months of March and April shows moderately good numbers of birds captured in springs following those autumns during which large chickadee flights were recorded. In contrast, during the spring following the winter of 1962-63 (a non-invasion season) only two were banded.

The return migration at Powdermill is, of course, much less obvious and spectacular than in the fall, for a number of reasons: Fewer birds are alive to make the return trip; the hazards of migration and wintering in a strange environment would tend to reduce the over-all population, although to what extent is not known. A sizable proportion of the individuals involved in an autumnal flight may remain to breed in the new area, and never attempt to return. Others may undertake only a small part of the return trip, stopping at suitable breeding habitat wherever it is encountered. Still others may disperse from the wintering grounds in a slightly different direction from the original flight path and

"return" north to a new area. Spring migratory "waves" of chickadees (as, indeed, most species at Powdermill) are less concentrated than fall flights, the birds apparently moving more gradually north over a longer period of time. The factors regulating this more gradual spring movement are not understood, nor is the set of stimuli that initiate the entire movement pattern in either fall or spring.

The single recovery of a summer chickadee in Hancock, New York (#33-15628) gives some basis to the belief that the birds do return north in the spring of a flight year. Additional evidence is offered by two recoveries of chickadees that were banded in winter at my home station in Meadville, Pennsylvania, and which were subsequently found in central New York--one during the breeding season of the same year it had been wintering in Pennsylvania.

(Not included in the above report, because this was for Powderhill Nature Reserve birds only, are two Meadville, Pa. recoveries)

#33-15734, banded at Meadville, Pa. on December 28, 1961, trapped and released by Mrs. E. W. Fields, Gloversville, New York in February of 1964.

#102-71509, banded at Meadville, Pa. on April 8, 1962, "killed by flying into object" at Penn Yan, New York in June of 1962.

R.D.1, Saeger Hill, Meadville, Pennsylvania



ATTENTION SPARROW HAWK BANDERS
By Donald S. Heintzelman

I am currently writing a paper on migration and population dynamics of the Sparrow Hawk (*Falco sparverius*). Migration data are being extracted from a machine listing of Sparrow Hawk banding recoveries provided by the Bird Banding Laboratory. I would appreciate receiving prompt notification from anyone preferring that I do not use their Sparrow Hawk recoveries in the above mentioned paper. The machine listing of recoveries prevents me from acknowledging contributions of individual banders. ---Donald S. Heintzelman, 629 Green Street, Allentown, Pennsylvania, 18102.