

# BIRD-BANDING

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## RECOVERIES OF BIRDS BANDED AT GROTON, MASSACHUSETTS, 1932-1950

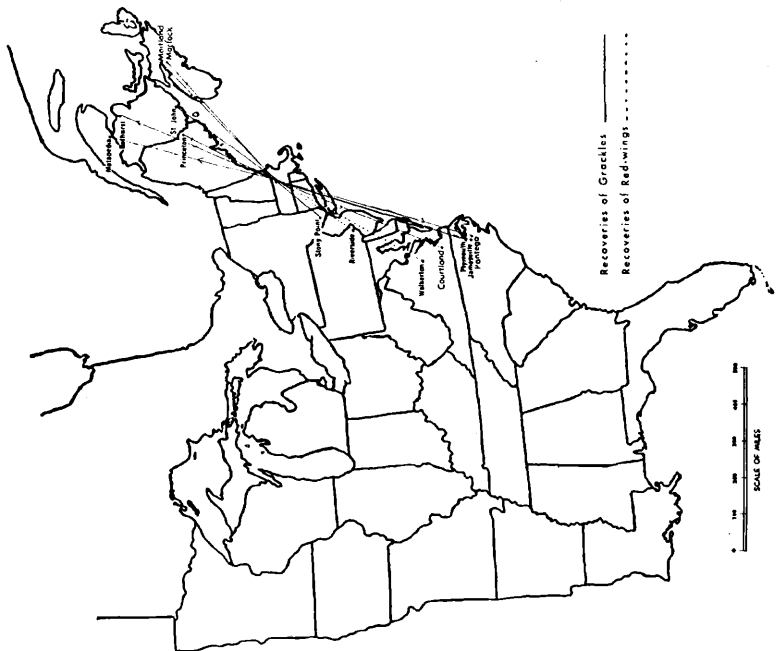
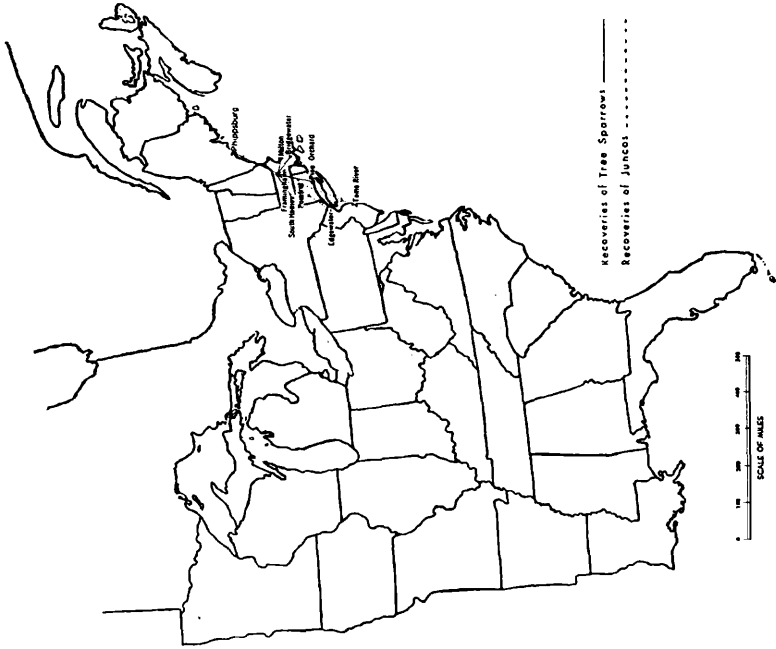
BY WILLIAM P. WHARTON

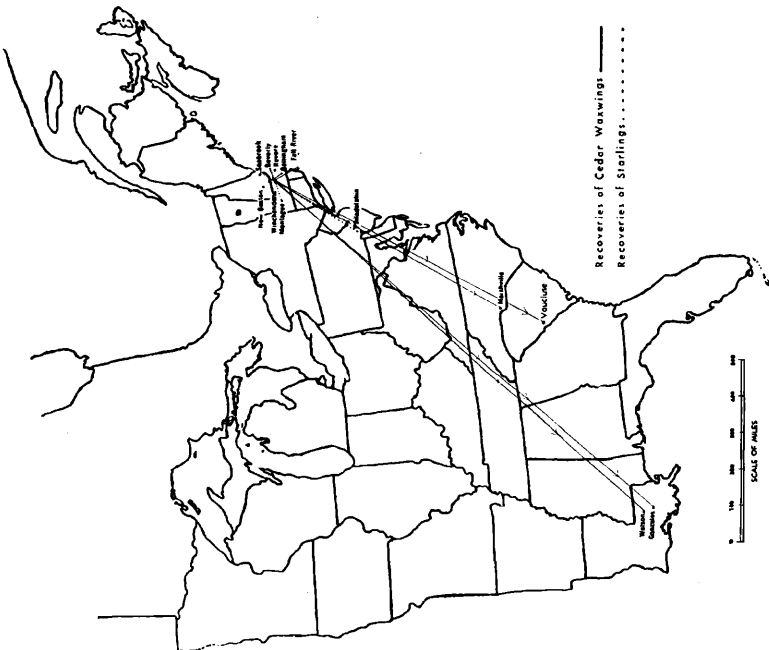
My banding station at Groton, Massachusetts, which has been operated for nearly 40 years, is now so restricted that it seems advisable to summarize the recoveries of its banded birds. In *Bird Banding* for April, 1933, a summary of recoveries reported during 1929-1931 inclusive was made, totaling only ten birds. Prior to that period only three recoveries had been reported. Now I am able to report a total of 146, of which, however, only 95 were taken at points over 20 miles from Groton. The 51 taken within 20 miles may perhaps be regarded as returns rather than recoveries, and so are not usually considered in this article. This as a result of having banded 38,057 birds from 1922 to 1950, inclusive, or only  $\frac{1}{4}$  of 1%!

Species yielding the largest numbers of true recoveries are as follows: Purple Finch 42; Robin 21; Bronzed Grackle 13; and Starling ten; with Song Sparrow and Tree Sparrow each yielding seven; Red-wing and Cedar Waxwing each five; and Junco four. The patterns of distribution of the finch, grackle, Robin and Song Sparrow recoveries are of considerable interest, as will be seen from the accompanying maps. But the greatest traveler of all has been a White-crowned Sparrow, banded October 12, 1939, and found dead at Mt. Home, Texas, on January 28, 1940.

It may be well to begin by mentioning a few scattered records of species which have not been handled in any considerable numbers. For instance, in addition to the White-crowned Sparrow mentioned above, an adult female Black-throated Green Warbler, banded in Groton on May 24, 1933, was "caught" in West Memphis, Arkansas, on October 22, 1933, and subsequently died. She was evidently on her way to Central America. Two recoveries of Black Ducks banded near Groton simply tend to confirm the now well-known Atlantic Coast migratory habits of that species. Likewise, recoveries of one Towhee and one Chimney Swift in Georgia are in accord with the already well-known habit of the former of wintering in the southeast, and of the latter of passing through that section on its long journeys to and from its winter habitat in Ecuador and Peru. Likewise, a single Catbird, which was born in Groton or vicinity, was shot in South Carolina the following winter. A Mourning Dove banded in August, 1938, was shot in southern Alabama in December of the same year.

Now let us take up returns of the species which have been recorded in sufficient numbers to contribute data of fairly substantial value. First, of course, comes the Purple Finch. Of the 42 recovered at distances of over twenty miles, eight were taken to the southwest of Groton—four in the Gulf states as far west as Louisiana—and nine to the north—two in Canada well north of Montreal and Ottawa. The







ages of these birds, as far as known, rarely exceeded two and a half years, but in one case exceeded seven years. This bird, banded on May 13, 1939, as a female or young male, was trapped and released at Dover, Massachusetts, on May 25, 1946, as a rosy male. Evidently this bird was nearly eight years old. It may be worth noting that these recovered finches seem to have avoided the Carolinas and southeastern coastal regions, and to have had a farther west trend than some other similar species. It is also worth noting that, of the 20 birds recovered from over 1,200 bandings made during the famous influx of March, 1939, only two were subsequently taken outside of New England—one at Whitefish Lake, Province of Quebec,



about two years and three months later, and the other at Hollandale, Mississippi, early in the winter of 1940.

Robins, with a total of 21 recoveries, run second to Purple Finches. Of these, 15 were taken to the southwest, and only two to the north, of Massachusetts—both the latter in southern Maine. The 15 southern recoveries were fairly well distributed over the southeastern states—one as far west as Louisiana, and one as far south as southern Florida. The largest number for any one state was nine in North Carolina, the next largest four in Florida. All but one of the 15 southern recoveries occurred, as might be expected, in the winter months from November

to March inclusive—only one in March, and that on March 10. The single exception, dated July 1, 1946, was reported from the mountains of North Carolina, where Robins regularly breed. The bird was banded as a juvenile on Sept. 24, 1944. This seems to have been a case of a so-called "eastern robin" deciding to stay in the south and become a "southern robin"! The only other breeding season recovery south of Massachusetts occurred in New Jersey in June, 1932. It had been banded in 1931 as a nestling. In this connection, it should be noted that both local nesters and their young and fall migrants have been banded in considerable numbers.

Of Bronzed Grackles, 13 true recoveries, six were reported from areas to the southwest, six from the northeast, and one from within Massachusetts at a distance of over 20 miles. While none of these birds went south further than coastal North Carolina, two reached St. John and Bathurst, New Brunswick, two Maitland and Martock in Nova Scotia, and one Matapedia in Quebec—all birds which were banded between April 9 and 18 in 1939. Although probably migrants when banded, those reported from New Brunswick were not taken until 1940, that from Quebec in 1941, and those from Nova Scotia in 1942. Practically all other recoveries of this species were banded during May, June and July, and were presumably local nesters or their young. Only one of these was recovered north of Massachusetts. It may be worthwhile mentioning that 12 grackles were reported from within 20 miles of Groton—ten "found dead" and two "shot." Nearly all these were banded as juveniles. This species has yielded the highest percentage of true recoveries, probably because it is not protected by law, and so frequently is shot.

The movements of Starlings have been markedly limited. The only one moving any distance was found dead in Philadelphia, one was taken at New Boston, New Hampshire, one in Seabrook, N. H., and one at Woonsocket, Rhode Island; all others were taken in Massachusetts. Nothing of special interest seems to have been developed in regard to this species, except further evidence of their generally non-migratory habits.

The records of only seven recovered Song Sparrows are surprisingly few in view of the large numbers banded. However, they show very wide dispersal. One of them reached Arkansas, two the Carolinas, and one Pennsylvania; two others were taken in New Brunswick and Nova Scotia in summer, both having been banded in October, probably when migrating south. The total number of Song Sparrows banded at the Groton station from 1930 to 1950, inclusive, has been 6,109, which makes the total recovery percentage only 114 thousandths of one percent!

The seven Tree Sparrow recoveries are not exciting, as all have been within a comparatively short distance of Groton. Only one—at Edgewater, New Jersey—is outside New England. One of these lived over four years after being banded, and two over three years. The four junco recoveries were also reported from comparatively short distances, the farthest being Toms River, in central New Jersey.

Waxwing recoveries, although only five in number, are of some interest. Two were reported from southeastern Louisiana, and one each from North and South Carolina. The fifth was found at Beverly, Massachusetts. Redwings make a similarly small showing in numbers, and with less wide distribution. One was taken at Walkertown, Virginia, and one at Riverside, New Jersey—both shot. It may be worth mentioning that a Redwing banded at the Austin Station on Cape Cod in August, 1934, was reported to me when at Summerville, S. C., in late 1934 as having been shot near that town, indicating a further south trend than would appear from my own recoveries.

It may be of some interest, though perhaps rather discouraging to the beginner, to compare the numbers recovered of each of the nine species covered in this article with the total number of birds banded. As already mentioned, the number of Song Sparrows banded within the period 1930-1950 inclusive, was 6,109—the largest number of individuals of any one species. This has yielded the lowest percentage of recoveries at distances of over 20 miles—only slightly over one-tenth of one percent. Recovery percentages of the other species are: Grackle 1.9%, Starling 1.68%, Purple Finch 1.51%, Waxwing 1.24%, Redwing .9%, Robin .67%, Tree Sparrow .387% and Junco .188%.

If small bird banding depended wholly on recoveries for worthwhile information, it would be discouraging indeed for those just starting. Fortunately there are of course many other lines of investigation which are open to the bander, such as returning tendencies, life spans and plumage changes, as well as mating habits, and diseases and parasites, which yield larger returns in proportion to the number of birds banded. And while occupied with these studies the persistent bander gradually builds up data on recoveries which, combined with those from other stations, are sure to prove of importance in the study of migration.

*Footnote to last sentence.*

In connection with the foregoing, it may be of some interest to new banders to read my articles in the July, 1929, number of *The Bulletin of the Northeastern Bird-Banding Association*, and in the April, 1933, issue of *Bird-Banding*, for data on returns, parasites, etc., accumulated in those days of the operation of this station. Also articles by my able assistant for many years, Edwin A. Mason, in *Bird-Banding* for July, 1936; January, 1938; and July, 1942, especially the last, which deals with recoveries from the flock of migrating Grackles banded between April 9 and 18 in 1939.

*Groton, Massachusetts.*

## TURNOVER RATIOS

BY CHARLES H. BLAKE

In the search for numerical values to use in connection with that sort of migration rate which is equivalent to length of stay, it appeared that the turnover ratio and other ratios associated with it had some value. There are a number of possible interpretations of the bare term "migration rate." For our immediate purposes we are concerned with a transmigration rate which arises from the rates at which birds arrive at and leave a given point. Such a rate tells nothing of the rate of movement between stops nor of the rate of advance of the margin of occurrence of the species. These are still other migration rates.