

BULLETIN
OF THE
NORTHEASTERN BIRD-BANDING ASSOCIATION

**A STUDY OF THE TREE SPARROW'S MIGRATION
 IN THE CONNECTICUT RIVER VALLEY**

BY WENDELL P. SMITH

THE following migration records, although not as complete as desirable, appear too consistent year after year to be accidental. They are therefore submitted for the consideration and interpretation of others. In addition, the return records are presented as further emphasizing the common experience that this species shows a marked tendency to winter repeatedly in the same locality.

The writer's station is situated at Wells River, Vt., in the Connecticut Valley about one hundred miles south of the river's source and seventy miles south of the international boundary. It is near the tip of that narrow tongue of the transition zone which extends for some distance up this valley and which probably does not exceed twenty miles in width. These records concern Tree Sparrows (*Spizella m. monticola*) of which fifty individuals were banded prior to January 1, 1926.

This species usually appears at my station in the fall migration between October 20 and November 1, but, judging from observation, these first arrivals are birds of passage, there being an interval usually of several weeks afterward when the species is not seen here. Further evidence is afforded by the fact that of those few individuals banded early in October and November none has repeated during the following winter.

The following records, covering a period of five years, present in tabular form the early appearances and disappearances of presumed birds of passage, and the later arrival of the winter residents of this species.

	FIRST ARRIVALS	DEPARTURES	LATER ARRIVALS (WINTER RESIDENTS)
1920	Oct. 28	Nov. 4	Dec. 12
1921	Oct. 24	Oct. 31	No winter residents
1923	Oct. 22	Oct. 27	Dec. 23
1924	Oct. 24	Nov. 2	Nov. 28, numbers augmented Dec. 21
1925	Oct. 23	Nov. 3	Dec. 10

Until the season of 1925 the early migrants did not visit the feeding station. Of the fifteen observed October 23, 1925, four entered the traps and were banded, but none repeated, indicating that they did not remain long in the vicinity. In the autumn, the number of birds varies greatly both in the early and in the late arrivals. Sometimes only two or three individuals are seen, but doubtless thorough search would demonstrate that they were members of a larger group. At other times as many as fifteen birds appeared together, only to disappear in a few days.

Records of spring migration are less satisfactory owing to several factors. New sources of food-supply are made available by the melting snow, and as migrants from farther south may be coming in at any time, it is more difficult to separate winter residents from birds of passage. The following records of three years tend somewhat to show, although not so conclusively as the fall records, the separate migration of the winter residents, which appear to move northward earlier than the first arrivals from the south, a reversal of the fall movement:

	WINTER RESIDENTS	SPRING ARRIVALS
	<i>Last repeat</i>	<i>Last seen</i>
1923	April 11	April 12
1924	April 4	April 25
1925	March 31	April 15

Large numbers of Tree Sparrows were noted April 1, 1925, the day following the last repeat. Within a few days, a marked decrease in the number of this species was noted, and during the week before its final disappearance only one or two scattered individuals were seen.

While by no means as numerous as at the height of migration in the spring of 1925, the dwindling and straggling disappearance is characteristic of the spring migration.

It would be hazardous to make assumptions, but these facts tend to support the theory that in migration those individuals occupying the southern parts of the breeding range migrate to the more southern parts of the winter range, and that those individuals nesting in the northern parts of the breeding range migrate to the northern parts of the winter range. In the case of many other species the limits of breeding and winter ranges would overlap.

Here is a problem that can be solved through bird-banding. It will be necessary, however, to have many stations located in both ranges of the species. The writer hopes for co-

operation from bird students in Central Canada and from those residing in the Connecticut Valley in amassing the necessary data to confirm or disprove the above hypothesis.

The return records of Tree Sparrows during the life of this station (four years) appear below in tabular form by seasons up to January 29, 1926:

WINTER SEASONS

BAND NO.	1922-23	1923-24	1924-25	1925-26
39025	b. ¹ 3/27/23	rt. ² 1/28/24	rt. 2/10/25	rt. 12/29/25
39026	b. 3/23/23	rt. 11/27/24		
39028	b. 4/2/23	rt. 1/19/24		
43553		b. 1/26/24	rt. 1/10/25	rt. 12/27/25
43555		b. 1/26/24	(not taken)	rt. 12/15/25
43559		b. 1/28/24	" "	rt. 12/27/25
43560		b. 2/1/24	rt. 1/1/25	rt. 12/27/25
43561		b. 2/4/24	rt. 2/17/25	
127125			b. 1/31/25	rt. 12/15/25
127126			b. 2/8/25	rt. 12/27/25
127128			b. 2/10/25	rt. 1/3/26
127134			b. 2/23/25	rt. 12/23/25
127135			b. 3/3/25	rt. 1/9/26
127136			b. 3/3/25	rt. 12/19/25
127114			b. 1/6/25	rt. 1/14/26
43567		b. 2/15/24		rt. 1/29/26
39066	b. 3/8/23	rt. 3/8/24		

¹ b. = banding date

² rt. = returning date

Of the fifty Tree Sparrows banded previous to the winter of 1925-26, fourteen have returned at least once; one has returned three times (a return³), and two have returned twice (returns²), a total of seventeen returning birds.

Four of the ten birds banded in the season of 1922-23 returned in 1923-24; and six out of seventeen banded in '23-'24 returned in '24-'25, and seven out of twenty-two banded in '24-'25 returned in the season of '25-'26,—40%, 35% plus, and 31% plus respectively. During the present season I have had thirteen returns from a total of fifty banded in the three previous seasons, or 26%.

Another interesting fact is that in general the visits to the trap began earlier each season. The dates when the first individual was banded for the different seasons are as follows: January 30, 1923, January 26, 1924, November 28, 1924, and December 15, 1925. It is reasonable to suppose that the presence of individuals in a flock that availed themselves of

an abundant and never-failing food-supply in preceding winters may account for this.

During December of the present season very little snow fell, and prior to the 26th temperatures were not unseasonable.

It cannot be stated positively that all the 1925-26 returns have yet been taken. Automatic traps are used, but for several reasons we do not like to compel all the birds coming to the station to obtain their food entirely from the traps, for there is competition between species for the food placed in the traps, particularly when large numbers of birds are present, the more aggressive species keeping the less aggressive species away. This difficulty is met by increasing the number of trapless feeding-places where other returns may possibly have escaped being taken.

Wells River, Vt., January, 1926.

BANDING RESULTS IN MAINE

BY FREDERICK A. SAUNDERS

In the early summer of 1924, banding operations were begun on a very small scale in Kittery Point, Maine. The traps are situated in an area partly covered with a tall growth of hickory and oak trees, with adjacent woods, pastures, and hayfields, all within a quarter of a mile of the seashore. There is a wet bushy hollow, a pool of water sometimes used by cattle as a drinking-place, tangles of blackberry vines, and plenty of rough open areas grown over with ground juniper, etc., all near by. The characteristic birds breeding in the woods there are Redstarts, Chestnut-sided Warblers, Black and White Warblers, Baltimore Orioles, Wood Pewees, Indigo Buntings, and Red-eyed Vireos; while the adjacent territory yields Song Sparrows, Maryland Yellowthroats, Chipping Sparrows, Chewinks, Yellow Warblers, etc.

Early in April, 1924, a stone and cement drinking and bathing basin was supplied with running water. It is about two feet from the ground, located among the tall trees, and eight feet from a window in my one-story camp. The year before, when it was being built, a Redstart visited it before the cement was dry, and the local birds used it as a bath as soon as it was finished, in spite of the fact that the above-mentioned pool already existed within a distance of one