

HOURS OF THE DAY WHEN HARRIS'S AND WHITE-THROATED SPARROWS WERE TRAPPED DURING MIGRATION

By O. A. STEVENS

THE writer's trapping station has been especially a migration station where White-throated and Harris's Sparrows make up a large proportion of the birds taken. No returns on these birds have occurred in three years' operation; consequently intensive study during migration is the chief field of activity. In the fall of 1929 the records of each visit to the traps were kept separate to see what could be learned regarding the habits of the birds in this respect. A preliminary study of these results seems very largely negative, and it is thought desirable to present the same to raise the question whether further effort in this direction is desirable or in what way it should be undertaken.

About seven traps were in operation and were arranged in three groups about fifteen or twenty rods apart. From September 18th to October 27th the total number (including all repeat records) of birds removed from the traps at different hours of the day was as follows:

8 A.M.	12 M.	3 P.M.	6 P.M.
324	248	329	342

September 22d to October 8th covers the main period, during which five visits per day (except twice each at 12 and 6) were made with the following results:

WHITE-THROATED SPARROWS						
	8 A.M.	10 A.M.	12 M.	3 P.M.	6 P.M.	
Number banded . . .	24	18	17	10	16	
Repeat records . . .	40	34	36	34	49	

HARRIS'S SPARROWS						
	8 A.M.	10 A.M.	12 M.	3 P.M.	6 P.M.	
Number banded . . .	38	33	36	37	42	
Repeat records . . .	47	44	25	45	70	

These results show a uniformity which was a surprise to the writer. The number of White-throats banded at 8 A.M. is high, and they were more evenly distributed through the period than those at other hours. Aside from this, the 6 P.M. records are notably high, especially for repeats. Both of these are probably accounted for by the fact that the traps were located near good roosting-quarters.

The next inquiry was whether individual birds show any regularity in the hour at which they appear. The nature of the results presents a considerable difficulty in approaching this question. Only repeat records can be used, and preferably those of birds which have appeared once or twice a day for several days. This type of repeat is not common. More usually the birds are present only a very few days, or, if for a longer period, they appear several times during the day. The occasional individuals which seem to form the trap habit must remain near by most of the time. These furnish a comparatively large proportion of the repeat records but cannot be used in this phase of the study.

The following table shows how few of the birds are present more than two or three days. The figures for the fall of 1928, which are more extensive for the Harris's Sparrows, are included as well as those of 1929.

Number of Days Individual Birds were Trapped.

	1	2	3	4	5	6	7	8	9	10
White-throated Sparrow, 1929	80	25	8	2	5	2	2	0	1	0 ¹
Harris's Sparrow, 1929	174	35	15	5	6	3	5	1	0	1 ²

Number of Days Individual Birds were Trapped.

	1	2	3	4	5	6	7	8	9	10
White-throated Sparrow, 1928	88	31	14	8	6	2	1	0	1	0 ³
Harris's Sparrow, 1928	210	89	45	14	14	15	8	3	7	2 ⁴

For the birds which appeared only once or twice each day for two and three days the following figures appear:

	Harris's	White-throat
Same hour, once each day for 2 days	3	4
Different hours, once each day for 2 days	18	10
Same hour, once each day for 3 days	2	0
Different hours, once each day for 3 days	2	1
Three times in 2 days, twice at same hour	5	1
Three times in 2 days, all at different hours	6	1
Four times in 3 days, twice at same hour	3	3
Four times in 3 days, all at different hours	1	2

More than half of the birds taken on only two days appeared once each day, and these, as shown above, usually did not reappear at the same hour. As the period increased, there was

¹ Also one for 12 days.

² Also one for 11 and one for 14 days.

³ Also one for 12 and one for 26 days.

⁴ Also three for 12, one for 13 and one for 19 days.

also an increase in the number of visits each day. This, with the small number at the longer period, leaves but few records which could show regular visits at particular hours. Casual inspection of the list suggests that the following are exceptional cases which approach most closely to a regularity in hours:

Harris's A150070—?; 8, 3; 8, 11; 8, 11; 8, 11.
Harris's A162522—12; 11; 11; 10; 12; 12; 8, 6.
Harris's A171044—12; 3; 3; 12; 12; 3; 6.
White-throat A162626—10, 6; 10, 6; 6.
White-throat A162627—10, 6; 6; 10; 10; 8, 10.

Nearly all the birds which were taken as many as five times during the period September 22d to October 8th appeared at either four or five different hours. Here, as in the list of those taken on two and three days, the White-throats seem to be a little more regular than the Harris's Sparrows, but the number is too small to offer more than a suggestion.

One more question was whether there is any notable association of individuals. I have charted the records for two five-day periods during the best portions of the season and find much the same results as described in the preceding paragraphs. Two days' results will serve to give some idea of the trend:

BIRDS TAKEN SEPTEMBER 18 AND 19, 1929
HOURS OF THE DAY

Stations	8	12	3	6	8	12	3	6
G	045	040	045	045	040			045
	067			060	045	060		
	501		507	507	507	507		
	507		510		518	524		528
B	051		051		051		034	
	062		062		071		071	517
	505		071	517		522	509	524
	508						512	526
N	035	034	034	034				034
		509	512					035
			513					040

With reference to the Harris's Sparrow, I had expressed the belief (*Wilson Bulletin*, 41:173) that aside from birds which form the trap habit, captures are largely a matter of chance. I believe the data here discussed bear out this statement. Probably little could be expected in the way of definite grouping during migration.

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