

THE HARRIS SPARROW IN CENTRAL OKLAHOMA

By MARGARET MORSE NICE

The crown of the fall migration is reached when the Harris Sparrow arrives in Norman; as our most abundant bird and also our sweetest songster at this season, its coming gives the finishing touch to the pleasures of our winter bird life.

Season. For half the year *Zonotrichia querula* stays with us. The date of its arrival in the fall has not varied more than four days in six years: October 27, 1920; November 1, 1921 and 1922; October 29, 1923 and 1925; October 31, 1926. The latest dates on which they have been seen were May 6, 1920; May 3, 1921; May 13, 1922; May 12, 1926; and May 4, 1927. By the first or second week of November they are common, reaching their greatest abundance in December and January.

From January, 1926, to June, 1927, I took monthly censuses of an eight-mile tract of diversified country; the numbers of Harris Sparrows seen on this territory on each date were as follows: January 1, 1926, 293; February 1, 210; March 20, 92; April 24, 25; May 4, 20; November 13, 103; December 4, 170; January 8, 1927, 180; February 22, 72; March 26, 80; April 28, 36; May 5, 0. Besides showing the decrease in numbers toward spring, these figures indicate that fewer of these birds wintered with us from 1926 to 1927 than the year before.

The numbers of these birds seen in the Christmas censuses were: 1919, 82; 1920, 245; 1921, 280; 1922, 218; 1923, 450; 1925, 363; 1926, 260. These results are not as comparable as those of the eight-mile censuses, because a somewhat different route was followed each year, yet it is plain that these birds were much more common after 1919 than they had been before and that they reached their peak of abundance in 1923 and decreased somewhat after that. These conclusions were supported by our other field observations. During the winters of 1922, 1923, and 1925, Harris Sparrows were so numerous that they lived in gardens in town, but this was not true in 1926.

Behavior. Harris Sparrows are preëminently birds of underbrush; they frequent thick shrubbery along creeks and at the edges of woods, especially trees that are covered with vines. When alarmed, they, like Tree Sparrows, fly up, instead of diving into depths of cover as Song and Lincoln sparrows do. They often perch high in trees, a characteristic not shown by any of our other wintering sparrows except Tree Sparrows and an occasional Fox Sparrow. Harris and Tree sparrows and Juncos stay in flocks, mostly of their own species, all winter, while Song and Lincoln sparrows are solitary.

As to food, they eat poison ivy berries and elm blossoms, as well as weed seeds. At the feeding shelf, they were especially fond of canary and sunflower seeds, both of which they cracked, holding the latter flat in their bills.

In general we have found that *Zonotrichia querula* drove away smaller birds to some extent, but suffered, itself, from a special animosity from Cardinals. On April 29, I noted: "A Harris Sparrow is hopping about the kitchen door getting crumbs. He is a loquacious creature, chattering to himself, stopping every now and then to give a fragment of his sweet song. A young English Sparrow happens to come near—he flies at it viciously!"

My feeding shelf on the window sill five feet from my desk afforded me many opportunities to observe character. I will quote a few passages from my record of 1924.

"January 19. Distinguished guests today—three Harris Sparrows arrive, all in the palest plumage. One is a tyrant, driving away the other birds; after he has eaten enough, he settles down upon the water dish and rests, while five English Sparrows, the White-crown, the Plumbeous Chickadees and two of his own kind sit about in the bushes and wait."

"March 19. Snowy. No less than five Harris Sparrows are feeding on the shelf at once. Later, six are about, opening their bills at each other, 'scolding' a little. Trap and band four; they were all gentle when handled, making a kind of chirping note in the cage. The first, when released, alighted near-by and shook himself, but failed to notice the band."

Although these did not re-enter the "Ever-set" trap, I knew them apart, for 65948 was the only one banded on the left leg, 70465 had a larger band than the others, 65949 had no black on his chin, while 65950 had a great deal. All four were heard singing in April. (Hereafter the last digits of the numbers in the preceding paragraph will be used to indicate the individual concerned.)

Number 5 returned to the shelf two hours after being banded. He came occasionally till March 31, again on April 9 and regularly from April 24 to 28. Number 9 proved our most faithful patron for he came every day till April 20. Number 8 came nearly every day till March 31, and in April was recorded on the 5th, 9th, 10th and 17th. Number 0 failed to appear at all until April 16; then he came several times a day until the 28th.

Number 9 had an amusing habit of sunning himself on the shelf, lying down stretched out to the left, even doing this while eating. Later 0 sunned himself, but the other birds never did. Sometimes 0 chased 5 away, but in general they were amicable. They both sang a great deal during the last five days of their stay, almost entirely with sweet notes.

The next winter we did not spend in Norman, but on January 8, 1926, a Harris Sparrow in adult plumage, banded on the left leg, came to the shelf. Unfortunately, because of the ferocity of a very disagreeable male Cardinal, I was not able to trap him and make absolutely sure that he was 65948, as I believed him to be. He was less friendly this year than in 1924, coming to the shelf only during snow storms—on January 8 and 21 and March 30. (On the last date the trap had been lent to a neighbor who had taken it out of town.) We had a different Cardinal now, of a pleasant disposition; at one time the pair of Cardinals, the Harris Sparrow and four English Sparrows were eating in peace together. *Zonotrichia querula* scratched in the snow with both feet and sometimes held up one foot to warm it in his feathers. The English Sparrows were in a quarrelsome mood that day, fighting among themselves; a male pecked the Harris Sparrow on the breast and a female drove him away when he tried to alight. I heard him singing and recorded him on our grounds until April 13, the last time I ever saw him.

Plumages. The fully adult plumage is unchanged throughout the year except for the cheeks; in the winter they are buffy, in late spring and summer gray. (A molting male in the American Museum with but one feather in his tail taken at Artillery Lake, Mackenzie, August 6, 1907, has one cheek of each color!) In the breeding plumage the irregular spot just back of the upper posterior auricular region is either black or dark brown; in winter it is brown.

Among Preble's and Seton's specimens in the American Museum there are ten birds collected near Great Slave Lake in September. One, taken September 4, is a full grown bird in the nestling plumage. The others all have white chins and throats. Their crowns differ a good deal, but all have a more or less scaled appearance, for the feathers are black centrally, margined with pale grayish buffy; in the least mature birds the effect is predominantly buffy. Five have lighter chest patches than the other four (one bird having only a few speckles); in the first group they are brownish, in the second very dark brown. The crowns of the former are more buffy than those of the latter. The crown feathers of one of the second group are broadly margined with grayish buffy, but in the others they are narrowly margined, giving a conspicuously squamate effect.

The acquirement of the solid black crown is a more regular process than the blackening of the throat and chest. On March 1, 1926, I noted in a single flock, "two black hoods and fourteen in various stages of becoming black, each one different from every other; all fourteen crowns in the speckle stage."

In 1924, I was able to watch the development of plumage in my four banded birds. On January 19, the three (numbers 8, 9 and 5) that came to my shelf were plainly immature, with no black on the chin, throat or chest. "The abrupt change between the white throat and brownish chest patch gives the effect of an Easter rabbit whose head comes off. The bill and legs are pinkish. On the 26th the three return, all looking different, for their heads are speckled on top in distinct lines." February 15, "one reappears, his head is darkening in two places in the center."

No. 65948: March 19 to April 9: chin black, throat white; by April 9, the crown was nearly solid black in front.

No. 65949: March 19, chin and throat white; April 7, chin black just below bill, small black spot at base of throat; April 9, crown nearly solid black in front; April 16, crown almost wholly black, black appearing at sides of throat.

No. 70465: March 19, chin largely black, throat white except for two small spots at base, crown darker than the preceding birds; April 9, chin wholly black, throat white except for black bar at base; April 24, almost all the black plumage assumed, but less black on the left side than the right, cheeks partly buffy, partly gray.

No. 65950: March 19, chin black, throat black except for lower third; April 16 to 25, throat black, crown entirely black except for two small buffy spots over the bill.

In May all the birds have black hoods, but in the fall this is true of only a small proportion. My estimate was one-tenth to one-twentieth of the population with about a third intermediate in plumage, having some black on the chins and throats, and darker chest patches and crowns than the most immature birds. Unfortunately I have counts on only four small flocks; in these there were 8 black hoods and 38 others. Cooke (*Auk*, 1, 1884, pp. 334-335) wrote on December 25, 1883, in Caddo, Indian Territory, "possibly one out of a dozen was thus attired [that is, in the black hoods], while probably half of them showed black feathers among the brownish ones of the throat and breast. The rest had no sign of a black throat-patch and but little black on the head."

The question arises as to the age at which the black hoods are retained throughout the year. It seems evident that not more than one brood a season can be raised by these birds, since they must reach Great Slave Lake and Hudson Bay some time in June, as the average date of the last one seen in northeastern North Dakota was May 30 (Cooke, *Bird-Lore*, xv, 1913, p. 301). The only nesting data on

this species consist of Preble's finding young just out of the nest July 24 and 25, 1900, at Fort Churchill on Hudson Bay (N. Amer. Fauna No. 22, 1902, pp. 120-121), and Seton's discovery of a nest on the ground with "three young nearly ready to fly", August 5, 1907, at Artillery Lake, Mackenzie (*Auk*, xxv, 1908, p. 72).

It is plainly impossible for the "black hoods" to be the parents of all the rest, since that would mean from eight to twenty-two or more offspring each season for each pair. Some of the evidence points to the conclusion that they are two years old: the three kinds of plumages in the winter flocks, and the adult plumage of my banded bird that had been immature two years earlier—maledictions on the head of that Cardinal that kept me from trapping him and also on the neighbor! If this is true, the proportions of black hoods in the fall flocks should be higher than one-twelfth to one-twentieth; one-sixth to one-tenth suits the probabilities better. But it is a complicated matter to juggle figures over the problems of increase and survival in a bird population. This question can be settled definitely by those fortunate bird banders in the middle west who trap Harris Sparrows; I herewith earnestly charge them to take most careful notes on the plumages of all the individual's of these fine birds that come into their hands.

Voice. Harris Sparrows have a wide repertoire in their winter home:

1. A gentle *tseep*, not often heard.
2. A loud, staccato *tchip*, sometimes given singly, sometimes several in succession. This is the common call note. At night-fall a flock of Harris Sparrows will utter a great many of these notes, much like the bed-time hubbub of White-throats, but less loud and less prolonged. Often nothing is heard but *tchips*, but sometimes the song and "scold" also occur at this time of day.
3. The querulous exclamation or "scold", a curious, grating, chuckling series, unlike any other bird note with which I am acquainted. It does not seem to indicate displeasure, but perhaps is conversational in nature. It is heard by itself and also during winter interspersed freely with the beautiful notes of the song. Nothing could be more incongruous than this mingling of serene beauty and absurd grumblings.
4. The song consists chiefly of clear minors of different pitches, besides which there is an occasional low husky note repeated three or four times. Singing is heard from early November all winter long on pleasant days, and most of all in April. Preble (*loc. cit.*) states they "heard no song" at Fort Churchill from July 23 to 30; but Seton (*loc. cit.*) "found this species in full song September 3" in the Great Slave Lake region. Toward the end of their stay with us the querulous notes become fewer and fewer till in some songs they have entirely disappeared. The winter notes of the song are often very like some of those of White-throats at the same season, but in spring there is no difficulty in distinguishing between the two species, because both sing full songs at this season.

On April 26, 1926, at 2 P. M. I recorded two fragments of a song on our grounds. In the following transcriptions of them h means high note; l, low note; i, intermediate in pitch; kee, husky note.

hhhhh ll hhhh l ll hhhh ll ll hhhh ll hhh hhh ll ll hh ll l i hhh.
 hhhh ll ll h ll hhh ll i hh hhhh ll h ll kee kee kee kee scold scold hh ll ii hh i l.

There was a very slight interval between phrases. High notes were given singly, in two's, three's, four's, and once five in succession. Low notes were given singly and in two's and three's.

The most beautiful song of a Harris Sparrow in my experience was heard April 24, 1926, at 7 A. M., a mile from our grounds. I recorded a continuous song

for about eight minutes, not, however, getting the beginning or end; intervals between each two of the last five minutes are indicated on the record by colons. In this song there were only two pitches—high and low, and the husky note was absent; the general scheme seemed to be two or three high notes and then two low, but there were continual variations. There were never more than three high notes together; and only once, more than two low notes in a phrase. The regularity of timing is shown by the numbers of notes in each of the five minutes —35, 34, 34, 34, 36.

hhh ll hhh ll ll hh ll hh l hhh l ll h l l hhh ll ll hh ll hh ll hhh ll h l hh ll hh ll hh ll hh ll hhh ll hh ll hhh ll hhh hhh ll hh ll ll ll hh ll hh ll hh ll ll hh : hhh ll hh l hh ll hh l ll ll hhh ll hh ll hhh ll hh : ll hh ll hh l ll hhh ll hh l hhh ll hhh ll hhh ll : hh ll hh ll hh l hh ll ll hhh ll ll hhh ll hhh ll : hhh ll ll hhh ll ll hh ll hh ll hh ll hh ll hh ll ll : hh ll hhh ll hhh ll hhh l hhh ll hh ll ll hhh l hh l.

Nothing could have been more perfect in its way. It was of exquisite sweetness, the very spirit of serenity and peace.

Columbus, Ohio, October 5, 1928.