

THE SONG SPARROW BREEDING SEASON OF 1931

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IN previous papers I have described the location and general technique¹ of my studies on *Melospiza melodia beata* prosecuted by means of aluminum and colored bands on the fifty-odd acres of waste land between our home in Columbus, Ohio, and the Olentangy River, and have recounted the results of the nesting season of 1930² and the returns of banded birds in 1931³. In this article I will give a brief report on the chief events of the past breeding season.

Survival of Adults. The loss of nesting adults in 1930 had seemed to me heavy, but it proved even greater in 1931. In the former year forty-seven banded birds present April 6th were reduced to forty by early June, five of twenty females (25 per cent) and two of twenty-seven males (7.4 per cent) having come to their ends. In 1931, with sixty-eight banded birds, six of each sex disappeared within the same dates, 20 per cent of the thirty females and 15.9 per cent of the thirty-eight males. The increase in mortality I attribute to shooting by boys.

Reproduction. Since I left Columbus June 6th, I was able to observe less than two months of the nesting season, the first full set being found April 19th. Forty nests were located, but in four of them the young had not flown at the time of my departure, so I do not know whether or not they were successful. Of the twenty-seven nests that contained full sets (all nests with Cowbird eggs being left out of consideration), fourteen held five eggs, eleven four eggs, and two three eggs. Fifteen nests of the first attempt averaged 4.5 eggs per set, and twelve nests of the second attempt 4.4 each.

In twenty-six of the thirty-six nests (72.2 per cent) the young hatched, and in seventeen (46.6 per cent) they flew in safety. Of the one hundred and thirty-six eggs laid, ninety-eight hatched (72 per cent) and sixty young were fledged (44.1 per cent). All these percentages compare closely with 1930 experiences with sixty-one nests. Ten nests in 1931 were entirely successful, forty-five young being fledged from forty-five eggs, but seven were only partially so, fifteen young being fledged from twenty-six eggs. The average number of young fledged

¹*Bird-Banding*, 1930, Vol. I, pp. 177-180.

²*Wilson Bulletin*, 1931, Vol. XLIII, pp. 91-102.

³*Bird-Banding*, 1931, Vol. II, pp. 89-98.

in the seventeen successful nests was 3.5, the same number as last year in twenty-nine successful nests.

On our return September 1st, we found that 1931 had differed strikingly from 1930 in the large number of late young raised. Our garden was full of birds in juvenile plumage, some molting, others not. There was even one brood that left the nest the first week in September. The weather in July had been excessively hot, averaging 3.7° F. above normal, but precipitation had been slightly above normal.

In 1930, perhaps in some way due to the unprecedented drought, molting of the nesting adults started early and ended early, being practically finished the first week in September, while in 1929 and 1931 it was not ended until two weeks or more later. The dates on which the resident Song Sparrow in our garden, has started to sing in earnest during these three falls are: September 24, 1929; September 10, 1930; and September 28, 1931. There was far less singing this past fall from the adult males than during 1930. The dates on which fall singing was recorded from four birds were as follows:

<i>Bird</i>	1930	1931
10	Sept. 10-Oct. 11	Sept. 28, Oct. 4
12	Oct. 1, 9	Oct. 10, 13
19	Sept. 18, 19, Oct. 1, 9	Oct. 10, 16
23	Sept. 16-Oct. 9	Sept. 29-Oct. 16

Additional evidence of an eminently successful breeding season lies in the astonishing number of young Song Sparrows that have wintered on Interpont and are now (March 1st) settled on their territories. The juvenile male proclaims his youth by the character of his singing, at first warbling and later semiwarbling, although these stages may be quickly outgrown and some young birds in early February cannot be distinguished from adults. There are more than twice as many young resident males here at present as there were a year ago.

The experiences this fall and winter have confirmed my belief that in 1930 the molt was abnormally early and consequently curtailed the breeding season. The Song Sparrows raised more young in 1931 than in 1930 because of the longer breeding season.

Two Enemies of the Song Sparrows. This region apparently affords sufficient food at all times of the year for its Melospizan inhabitants, and offers ten thousand admirable nesting sites. But the birds have many enemies, two of which I will discuss at this time, the Cowbird and the boy.

The Song Sparrow is one of the most useful inhabitants of

Interpont from the point of view of *Molothrus ater ater*. Shall we hurl recriminations at this bird, or listen to the quaint philosophy of Alexander Wilson, who in regard to "the singular, I will not say unnatural, conduct of the European Cuckoo," refused "to consider as an error what the wisdom of Heaven has imposed as a duty on the species?" In the "singular circumstance" of the short incubation period of the "Cow-pen Bunting" he traced "a striking provision of the Deity" to keep the species from extinction.

Ever since in 1930 one of my pairs of Song Sparrows made the notable record of raising their five young along with a Cowbird⁴, and far from being exhausted, in less than a month raised another family of five, this time without a boarder, I have looked on *Molothrus* with a more kindly eye. The Cowbird does not grow faster than its nest-mates purely through greed; it has to make nearly twice as big a bird in the same short space of nine or ten days. So far as I have observed, the young Cowbirds are peaceable occupants of the nest, in only one instance in my experience crushing one of the little Song Sparrows. On Interpont the presence of the parasite gives an added element of excitement to the finding of Song Sparrow nests.

This year the Cowbirds had very bad luck. Of twelve eggs found in Song Sparrow nests, only two young were fledged, 16.6 per cent of success. In two instances the misguided females laid in deserted nests, while one did so in an empty nest, where her egg was left severely alone. In six cases the whole nest came to grief.

The history of the 69s' nest is a curious one. I found it May 4th, when it contained one Cowbird's and two Song Sparrow eggs with egg yolk on the former and on one of the latter. Apparently the parasite had eaten one or two of the host's eggs. In 1928 I saw a female Cowbird eat a Song Sparrow's egg, but I have never observed such a thing again, nor found yolk on the eggs until this instance. The Song Sparrow eggs hatched May 10th, but the Cowbird's failed to do so. On the morning of May 13th I found that both parents had disappeared and the baby birds were dead. I opened the egg and found a well-developed young *Molothrus* that probably would have hatched in two more days. Whether it could have survived with five-day nest-mates is extremely doubtful. In a nest in 1930 one Cowbird and one Song Sparrow hatched May 14th and the other two Song Sparrows the next day, but the second Cowbird did

⁴*Auk*, 1930, Vol. XLVII, pp. 419-420.

not hatch until the 17th; the next day the tiny infant had disappeared, but the other four nestlings were fledged.

The two Cowbirds that were raised this season were both in the same nest, and, moreover, a Song Sparrow was raised too, a new achievement in the annals of *Melospiza* and *Molothrus*. This nest was found May 11th, when it contained two eggs of each species; the Cowbirds hatched on the 16th, the others the following day. The former prospered as always; one Song Sparrow held its own fairly well, while the other was rather stunted. On the 25th I put a Cowbird inside the Government sparrow-trap two yards from the nest and soon had the gratification of capturing and banding its foster mother. The young bird was replaced and remained at home. The next morning, when we visited the nest, one of the Cowbirds was outside; my daughter tried to catch it and in the resulting commotion, the other Cowbird and the larger Song Sparrow left the nest. The parents must have forgotten the poor little runt, for by afternoon it was dead. But for this accident, both Song Sparrows would probably have had another day of care in the nest and both might have survived.

The most distressing feature of my work with the Song Sparrows has been the shooting of them by boys. One cannot expect Cowbirds to reform and raise families in conventional style; the Song Sparrow can shoulder that burden fairly well. Snakes and weasels, Blue Jays and skunks have a right to eat some of the surplus eggs and young, and this is reckoned for in the economy of their victims. Cats and rats are outlaws and an intolerable infliction to our native fauna, but even they are following the laws of their nature. But there is no shadow of a real excuse for supposedly civilized people to shoot song-birds. A great deal of blame lies on those who introduced the "English Sparrow," whose unpleasant ways have so discredited our native Sparrows that the generality consider it a meritorious deed to slaughter any small brownish bird. Those parents are also at fault who give guns to their sons, for boys will not always be content with inanimate targets.

A large share of the destruction of adults on their nesting grounds I believe was due to shooting by boys. Of the fifteen adult Song Sparrows that disappeared from Central Interpoint from January to June, 1931, thirteen lived along the dikes which are the frequented thoroughfares. One bird's band was sent to the Biological Survey by the boy that killed him. Another I found shot with his banded leg broken off. In this immediate region four banded birds disappeared within a week, two of them being my all-important females that had joined their

mates February 21st and 25th; I suspected them to be residents and wanted above all things to be able to check the matter this winter⁵. The fate of the 69s' family, where both parents were destroyed the same day, has already been told. Sometimes, when one of a pair was killed early in the season, the survivor procured a new mate promptly. But the results of shooting two male birds deserve to be told in detail.

11, a resident male, had half of his unbanded leg shot off in late March. He stayed in retirement for eight days and then reappeared to proclaim his territory as bravely as before. It was pitiful to see how he had to flutter to gain his balance each time he alighted. He supported himself by crouching or by leaning against a slanting stalk. I wondered how well he could survive and took it for granted that he would not get a mate. However, on April 5th, I discovered he did have a mate, a day before his neighbor was thus favored. The first nest of this pair was found deserted with one egg in it. The second nest, beautifully concealed in a clump of Canada goldenrod, contained five eggs, two of which hatched, the others being infertile. The crippled father fed his babies, and all was going well when some enemy emptied the nest.

At 8.30 A. M. February 2, 1932, this bird was caught and proved to be in excellent shape, weighing 25.2 g. He has learned to support himself on the stump, and the fluttering has been almost eliminated. Interestingly enough this season he was joined by a mate on February 23d, while all but one of his neighbors were still bachelors.

The other case of special interest concerned the 67s, both banded birds. On Sunday, May 2d, I located their nest with four young about three days old; the female was brooding, but her mate had been killed. The mother cared faithfully for the nestlings, but the weather was cold, the temperature for the first week of May averaging 56° F. instead of the normal 68°. It would have been of great interest to have watched the nest carefully to see how the bird met her problems under her double handicap, but the attempt to keep track of thirty-five other pairs prevented any such study. On Tuesday there were but three young, and on Wednesday only two. Thursday I was delighted to see that a new mate had arrived (an unbanded bird) and was helping with the feeding. Unfortunately his aid had come too

⁵One of the five early females of 1931 survived and stayed on her nesting territory all winter; I trapped her on January 6, 1932, finding her weight at 3.30 P. M. to be 25.8 g. She is now remated to her last year's mate, a new record in the known history of Interpont. There are about twenty resident females here this very mild winter, 1931-1932.

late, and the next morning but one nestling survived. Two weeks after it had left the nest, the male showed much concern when I approached his step-child.

Females of several species can raise sizable families without help from their mates; the Dickcissel (*Spiza americana*), Painted Bunting (*Passerina ciris*), and sometimes Warblers do so, but the Song Sparrow schedule depends so fundamentally on interaction between the two parents that this female could not assume the whole of the task in an unfavorable spell of weather and raise more than a fourth of her young. With different weather she might have done better. In 1930 a female cared alone for two Cowbirds, but she was deserted (her mate being frightened away by my placing a trap over the nest) after the need for brooding had passed, when the young were about seven days old.

Efforts to educate the boys, telling them of the laws, and trying to interest them in the birds may have done good in some cases, but the slaughter continued. In desperation I procured a commission as Special Game Protector of the State of Ohio, and now I find that my words of warning, backed up by the shining badge, are listened to with respect. Since Interpont lies within the city limits, shooting is forbidden, and this ordinance I strictly enforce. In case of necessity I can take away guns or even arrest miscreants. So there is hope for the future.

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