

rural areas such is often dumped in the garden plot, later to be spaded in. Green vegetation includes winter wheat and the many succulents that are found around springs and in gullies during the severest weather. Unlike many other passerine birds which winter in the north, the starling secures most of its animal food at this season on the ground. Principal animal food at this season includes millipedes and dormant insects.

The month of January, 1948, was marked by frequent spells of sub-zero weather and a continued layer of deep snow in the Ithaca region. Observations of feeding starlings during this period corroborate their dependence on the fruits of many shrubs, most important among them being *Rhus typhina*, *Celastrus*, *Vitis* sp, and several viburnums, particularly *V. lentago*. Dietary changes are necessitated by snow cover; the temporary loss of one food source presumes another.—W. J. HAMILTON, JR., *Cornell University, Ithaca, New York*.

Sparrow adopts kingbirds.—On the morning of July 4, 1948, a female English sparrow, *Passer domesticus*, was seen to fly up to a young kingbird, *Tyrannus tyrannus*, perched on an automobile parked in a housing project just south of the University of Kansas campus in Lawrence. The fledgling kingbird opened its mouth and apparently received something from the sparrow.

Late in the afternoon three fledgling kingbirds of the same size as the one observed earlier in the day were seen near by. They were perched a foot above the ground on the edge of a sand box, within a few inches of each other, and were calling almost continually. During the 45 minutes that they were kept under observation no adult kingbird was seen, but at fairly regular intervals, six or eight times in all, the female sparrow flew up to the group and fed one of them. In delivering the food, the short-billed sparrow was usually caught in the wide gape of the kingbird's closing bill, and then would flutter for a moment, struggling to disengage itself.

On the following morning the three young kingbirds were noticed perched on another sand box about 100 feet from the first. The sparrow was making frequent trips to feed them with bread, from a piece dropped by a child at the edge of the first sand box. To obtain this food the sparrow had to compete with a quarreling and jostling group of its own species which was eating the bread and milling about it.

Late in the afternoon of the same day, the three young kingbirds were again observed near the same place, and the sparrow was again feeding them. Its trips were relatively infrequent, and the fledglings were restless. Occasionally they would make short flights along the edge of the field or into near by trees. Sparrows were numerous in the vicinity and often flew down to forage in the grass or to drink at puddles of rainwater. Many times the young kingbirds were observed flying up to sparrows, with mouths gaping to receive food. The sparrows approached in this manner usually hopped away or flew. In several instances one was followed by the kingbirds in flights of as much as one hundred feet. All such approached sparrows were in female or juvenal plumage. Those in adult male plumage were less numerous, but several times when males were near, the young kingbirds did not approach them. Twice in succession one young kingbird flew into a row of sparrows perched along the edge of a sand box. Each time some of the sparrows were frightened away by the sudden and direct approach of the larger bird. Soon afterward, when it had flown down to the ground, this fledgling was momentarily attacked by a female sparrow which flew down from the sand box and pecked it on the back. The kingbird did not attempt to escape or retaliate.

On the morning of the third day the three young kingbirds were at their usual location on the sand box, and the sparrow was again feeding them bread. After the

sparrow had made many trips in rapid succession, two of the kingbirds were seen to refuse bread offered to them. The sparrow offered it to each several times, then flew a few yards away to the third fledgling which accepted. At 7:00 p. m. the sparrow was seen to feed the fledglings several times. The bread was no longer in evidence, and apparently food was being obtained from other sources.

On the morning of July 8, the fledglings were observed on the ground following sparrows and occasionally receiving food from the foster parent. An adult kingbird flew down and attacked one of them, pecking it on the back. The attacked bird sought shelter at the base of a clump of grass, and the adult left. This adult was one of a pair frequently seen with its four young perched on telephone wires along the edge of a field 100 to 300 yards from the place where the present observations were made. On July 9 and 10, feeding of the kingbirds by the sparrow was again observed. The kingbirds were becoming stronger on the wing and frequently made short flights. Much of the time they were hidden from view by the thick foliage of a large cottonwood tree where they tended to stay, and observation was more difficult. On July 11, 12, and 13, the fledglings were not seen or heard and could not be located on the 14th when an intensive search of the general vicinity was made.—HENRY S. FITCH, *University of Kansas, Lawrence, Kansas.*

Nelson's sharp-tailed sparrow in West Virginia.—On September 20, 1948, while observing birds at Beech Bottom Swamp, Brooke County, in the northern panhandle of this state, the somewhat garbled song of a long-billed marsh wren, *Telmato-dytes palustris*, drew my attention. Approaching the spot where the bird was singing, I made the usual squeaking sound and two long-bills began to perform a few feet from me. It was while watching the long-bills that a sparrow made its appearance at the top of some cattails, apparently attracted by the squeaking. The bright ochre and gray face pattern and buffy breast suggested something unusual. Collecting the bird proved it to be a sharp-tailed sparrow, *Ammospiza caudacuta*. In the same general area another sharp-tailed sparrow was collected. Upon dissection the former was found to be a male and the latter a female. Subsequent visits to the swamp were unsuccessful in locating other sharp-tailed sparrows until October 8, 1948, when another male was taken. All three specimens have been identified as Nelson's sharp-tailed sparrow, *Ammospiza caudacuta nelsoni*, by Mr. W. E. Clyde Todd, Carnegie Museum, Pittsburgh, Pa. These specimens represent the only records of the sharp-tailed sparrow for West Virginia.—KARL W. HALLER, 1097½ *National Road, Wheeling, West Virginia.*

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