

SPARROW ASSOCIATIONS

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From their behavior at my feeding and banding station in the village of Garden City, I have recently become interested in sparrow associations, and herewith present certain observations of them and conclusions drawn therefrom, with special reference to our three species of *Spizella*.

Changes I have noticed over a period of years in the numbers of resident birds, permanent, summer or winter, in a given Long Island locality, most often have been attributable to changes in the habitat. It is not necessarily the immediate habitat. If there is a sufficiently favorable area to act as a base for a species within an accessible distance, its elimination will be felt over the surrounding region, and the numbers of that species therein decrease, if the bird does not disappear. For such a base to be effective at a given locality, its area, size of its bird population, and its nearness depend on the species in question. *That is one reason why every acre or less of ground left wild and undeveloped, is of so much importance to birds and to bird-lovers.*

Between the World Wars, no more than a half mile east of Franklin Avenue, which runs north and south a little east of us and is the main thoroughfare of Garden City Village, there was still a considerable area of vacant land grown to grass, bushes and small trees, where the edge of the Hempstead Plains had earlier been. It was a base for flocking Tree Sparrows in winter and singing Field Sparrows in summer, but has now been almost completely swept away by the mounting tide of small houses.

In winter flocks of Tree Sparrows were found irregularly but not infrequently in the formalized yards about the houses west of Franklin Avenue, such as ours, which are still little changed. But the last time I remember them there in any number was in the winter of 1944-45. That season the Keith Henneys banded one on Fifth Street, January 30, 1945 (No. 4335472). There were fewer the following winter, but this same individual came back to Garden City and was trapped by the Heathcote Kimballs (also bird-banders) on Fourth Street, around a quarter mile west-southwest, December 29, 1945.

In recent years there have been apt to be a few winter Tree Sparrows wherever a bit of favorable cover, however small, remained east of Franklin Avenue. I dare say (and hope) others have been more fortunate, but the winter and spring of 1956 to 1957 are the first I can remember that I have neither seen a Tree Sparrow or heard a Field Sparrow sing in Garden City.

The common ground-feeding sparrows associate in mixed flocks, wherein the individuals take their behavior pattern from one another irrespective of species. They tend to fly up into adjacent trees or bushes or drop down to feed together. This is so familiar that I had not realized here was a useful form of intercommunication, which cut across species lines, until the fact was pointed up to me by an out of season Baltimore Oriole that dropped down on my trap December 3, 1953, interested in the bait it contained. The trap was surrounded by a group of sparrows, not afraid of it, and picking up what they could take safely, but so conditioned to the trap and its danger line, that one was very rarely caught. The Oriole may have been attracted by seeing them feeding, but it was definitely not one of the group, an out-

sider to which the behavior of sparrows meant comparatively little. It went about the trap trying to get at the bait, and when it came to the entrance and that problem was solved, immediately and deliberately went inside, was taken out, banded and released.

Seven species commonly found in mixed groups are the Fox, White-throated, Song, Tree, Field, Chipping Sparrows, and Junco. Which are most frequently in company seems to be a good deal a matter of light and shade preferences, though size and closeness of relationship also play a part. The Fox Sparrow is mostly a bird of shaded woods and thickets, Tree and Field Sparrows of the sunlit open areas. The White-throated Sparrow ranges from shaded to partially shaded, Junco from open to partially shaded ground. Both being plentiful winter residents, they are often found together, though there is little cohesion between them, they tend to mix for a while and then drift apart. The Song Sparrow is the most catholic in the matter of light and shade, frequently found with the Fox Sparrow at one end of the line, and any considerable flock of Tree Sparrows at the other usually has a few Song Sparrows with it. The Song Sparrow is relatively independent, intolerant, aggressive, and does not like to be crowded. It will sometimes drive individual House Sparrows out of its way, and take its own departure when there are too many to be gotten rid of. By contrast Juncos are playful. Much of the pleasure they seem to find in one another's society is chasing one another about.

It is interesting to note that Field Sparrows in summer and Tree Sparrows in winter replace one another in the same habitat. It follows that in fall when both are present, the less numerous of the two are often found in groups of the more numerous. Migrant Field and Chipping Sparrows are also sometimes found together, and presumably from being of the same size, make a homogeneous group that acts more in unison. There is little indication that its members notice the species difference, and one has to look at each one carefully to be sure which it is.

I was interested in the behavior of a few Chipping Sparrows in a group of White-throated Sparrows, Juncos, or both, flying up into nearby trees and shrubbery, and down to feed with them. But the larger birds scattered over the grass, and the Chipping Sparrows assembled at the edge of a bordering road, where they probably found a fare more to their liking.

A less expected association than that between Field and Tree Sparrows, but rather comparable therewith, is that between the Chipping Sparrow and the Junco. Delayed migrants of the former species in the fall are more often than not found in flocks of the latter. On September 18, 1921, my first two or three Juncos of the fall at Garden City, dull-colored individuals, were in a flock of Chipping Sparrows. The behavior and temperament of the two is not unlike, both are "dooryard birds" at home in suburban areas, the one in summer the other in winter, before these became unsuitable for nesting Chippys.

Comparatively few Field and almost no Chipping Sparrows actually overwinter on Long Island, and when they do so, they seem to go into winter quarters, their association with other species casual.

In the winter of 1919 to 1920, a vacant lot at the end of our block in Garden City was grown with a tall dry grass (*Andropogon virginicus*). On

Christmas morning, 1919, after blizzard conditions the night before, there were a half dozen Field Sparrows feeding there, and with them at least one Tree Sparrow. No great amount of snowfall was badly drifted, and the sparrows were clinging to the grass or reaching it from the snow under which it was partially buried. I frequently found several Field Sparrows (usually less, and never more than six or eight) in this lot later in the winter, the last time on Washington's Birthday, 1920. Sometimes there were other species in larger numbers, if less regularly; on January 18 a flock of 15 or 20 birds, Tree Sparrows and Juncos in about equal number; January 22, about 4 Field Sparrows with 2 or 3 Tree Sparrows feeding on the grass which projected above the snow; February 8, about 40 Tree Sparrows — three or four Juncos and two or three Field Sparrows noticed among them. On February 23, 1920, I came upon three Field Sparrows together at Amityville, Long Island, and these also were feeding on *Andropogon virginicus*.

In the season of 1954-55 an unusually dull-plumaged Chipping Sparrow overwintered among a line of small thick bushes along the platform of the Garden City railroad station where I took the train for town. It doubtless partook of feed that had been thrown out there as did a number of House Sparrows and Starlings, was cognizent of and correlated its movements with theirs to some extent within this limited area, but seemed to pay them little attention. I saw it first on December 24, 1954, definitely identified it three times in February and twice in March 1955, the last time March 8. On January 10 a Chipping Sparrow in company with Juncos visited my yard over a quarter mile away. It did not look like and probably was not this same individual, and likely had not yet gone into winter quarters. The very occasional Chipping Sparrow I remember coming across in previous winters had been rather solitary, and not associated with other species.

Before the 1920's, the Chipping Sparrow was an omnipresent summer resident on Long Island. At Garden City the first singing males were a season marker which I looked for in the end of March, though they may have appeared more often in early April. They were as common in the suburbs as Robins still are, and probably bred there in larger numbers per acre than in more rural areas. In early fall one saw them feeding on lawns in considerable flocks, prior to the arrival of White-throats and Juncos to join them. Now but a small fraction of their then number remains anywhere on Long Island. They are not uncommon, and a few pairs still nest about the two country places with which I am most familiar, one at the North, the other at the South Shore. But their suburban habitat is changed, its population reservoir of this sparrow is gone, its roads are crowded with automobile traffic. And where is the plentiful horse-hair there with which they used to line their nests?

American Museum of Natural History, New York 24
