

some of the pines and spruces on or bordering the place were filled, and the overflow was as before.

October 28—About 4 p. m. I observed small squalling squads of Starlings passing up a ravine leading from the Great Valley, where the species flocks in appalling numbers, flying low or running on the ground, apparently hastening to the muster upon the hill. The roosting birds become increasingly abundant. Starlings, as usual, were noisy all night.

October 29—A killing frost with the temperature 28° F. this morning. Grackles and Starlings left the roost in a compact body at 6:10 a. m. and this evening few roosted on the place, though the avenues were crowded, probably because the maple leaves had thinned less there than on the hilltop.

October 30—It started to snow at 7 a. m., and continued snowing without pause until well into the night. This evening it was a great sight to see flock after flock, varying approximately from 100 to 2,000 birds, from 4:35 to 5:00 p. m., circling about the roosting ground and then passing overhead in a northeast by east direction in search of a more sheltered roost, thus drawing the final curtain for the season upon the Grackles. Probably some of the Starlings, in the excitement of the community spirit, accompanied them southward on the morrow, but the bulk of them resumed their normal every-day life about us.—FRANK L. BURNS, *Berwyn, Penn.*

The Fall Migration of 1924 in East Central Ohio.—The months of September, October and most of November, 1924, were spent at our farm home, located four miles south of Uhrichsville, Tuscarawas County, Ohio, and good opportunities were at hand to observe the fall bird migration. During the period from September 20 to November 8 we "listened in" on the migrants practically every night. "I hear the beat of their pinions fleet, but their forms I cannot see." But we heard the beat of their pinions only a few times. More often we saw their forms against the moon. But most unmistakably, "I hear the cry of their voices high." This, however, is not true on cloudy nights, because then they fly low down.

The first night migrants were heard on September 10 and 11. There were but few nights between September 20 and October 18 that bird notes were not heard, and there were several high tides of migration. On September 24, 25 and 26, there was a great wave of warblers and thrushes. On September 27 the thickets and woodlands were overrun with these birds, the south wind of that date seeming to hold them in check. On the night of September 28 there was a light movement, increasing with a light west wind on the 29th to a flood of migration on the 30th. This was accompanied by a decided drop in temperature and a moderate wind from the northwest to the north. I was out until 2 a. m., and from dark until that hour group after group followed in such close formation that from some direction or another their notes could be heard at all times. The note of the Green Heron was heard frequently. At 8 p. m., 10 p. m. and 11 p. m. the notes of the Great Blue Heron were heard, and the Bittern was heard several times.

Several groups of Killdeers were noted during the last week of September, and one group of thirty-five birds that we particularly noted tarried for several days on a field that was being prepared for wheat. A local group of four old birds and five young ones, representing two families that had come from nests on our farm and a neighboring one, joined the thirty-five strangers in their feed-

ing, but I noticed that when the teams disturbed them and they flew to another part of the field that the local group always separated from the strangers. The thirty-five strange Killdeers were not seen after September 29, seeming to have left on the migration wave of September 28 to 30, but the local group did not migrate until in November.

On October 5 and 6 there was a small wave of migration, while on October 16, 17 and 18, there was a great sparrow wave, with a considerable number of Woodcocks, Mourning Doves and Meadowlarks. The thickets and fields were overrun for a few days with groups of the Field, Vesper, White-throated and Fox Sparrows, while Towhees, Myrtle Warblers, Hermit Thrushes and Kinglets were much in evidence. We found the Lincoln's Sparrow in this wave, for the first time in several years.

The notes of the Great Blue Heron were again heard on the nights of October 17 and 26. On October 26, 27 and 28, came another sparrow wave. The Chipping and Song Sparrows and the Hermit Thrushes were more in evidence on this wave, and the Myrtle Warblers were present in considerable numbers. The Tree Sparrows and Slate-colored Juncos came in greater numbers at this time. Also, several flocks of ducks were noted. A small company of Canada Geese was noted on this wave, and again on November 3 and 6, about 285 Canada Geese passing between 1 P. M. and 4 P. M., and another company being heard at 9 P. M., on the latter date. This was the most geese that we have seen in migration for many years.

Nighthawks passed on the 15th, 16th, and 17th of September, but in much smaller numbers than usual. On November 8 several large companies of Bronzed Grackles and Red-winged Blackbirds passed, and one company on November 9. On a neighboring farm a large company of Bronzed Grackles and Red-winged Blackbirds had a common roost for two or three weeks and we had a good opportunity to study the groups as they left for the day and returned in the evening. This company departed on November 18. From 11 A. M. to 1 P. M. a straggling line of Crows were passing, but we had no large mobilization of Crows in the fall of 1924. No large mass movements of Robins were in evidence during the fall, and only small local groups were noted. Two Loons were noted on October 27 and two on October 29. There is no hesitation in the flight of the Loon. It is clean cut and straight, with an apparent objective ahead and the purpose to get there quick.

It is a difficult matter for me to distinguish the migrant flights from the food flights. The route of the Nighthawks, Bronzed Grackles, Red-winged Blackbirds and Crows, as checked by the compass, was west, 35 degrees south. The straggling groups of migrating Bluebirds seemed to take this course, but we have heard their call notes at night on a route to the southeast. The southeast course, as checked by the compass, is south, 20 degrees east. I am persuaded that the number of migrants passing here to the southeast indicates more than a local movement, one that is found in general over Ohio, and seems to point to a convergence to a well-marked route from southeastern Ohio, while the number flying to the southwest is probably no greater than would be found at other points between here and Lake Erie or the Ohio River.

The Pileated Woodpeckers were seen on numerous occasions in September, October and November, but I did not visit the nest tree in 1924, nor the Laurel Valley, where we had previously found the Long-eared Owl and the young of the

Great Horned Owl. The Florida Gallinules, Least Bitterns and rails returned to the "oasis" in the spring of 1924, but we did not take the time for a census.—CHARLES R. WALLACE, *Delaware, Ohio.*

The Behavior of Birds at a Georgia Feeding Tray.—The behavior of different birds at our feeding tray has been a source of considerable interest to us. The tray, placed in the top of a cherokee rose bush, with an evergreen tree overhanging the bush, is about twenty feet from the house and in full view of several windows. Brown Thrashers, Blue Jays, Mockingbirds, Cardinals, Towhees, Song Sparrows, White-throated Sparrows and English Sparrows have been more or less regular visitors

English Sparrows and Mockingbirds have been unwelcome, and have been driven away frequently. The English Sparrows soon learned they were not welcome, and most of them would fly away if they heard the door open, or even if one tapped on a window-pane. Some, however, merely slipped into the bush to return to the tray shortly. Many learned that other species were not driven away and so would wait until some other bird was on the tray, when they would slip up with the other bird. Towhees and Cardinals would sometimes allow English Sparrows to eat at the same time as themselves, but the Cardinals, especially, frequently drove them away. English Sparrows never dared to come to the tray, or to remain there, if a Thrasher, Blue Jay, or Mockingbird was near by.

The Mockingbird never ate at the tray but often perched on it and allowed no other bird to approach. One Mockingbird was fond of perching in a near-by tree and driving away any other bird that came to the tray. The Blue Jay alone was free from molestation. In fact the advent of a Blue Jay near the tray meant the departure of the Mockingbird.

Of all the birds that visited the tray the Blue Jay was the most wary. The slightest noise would cause it to fly away, and yet when the Blue Jay appeared, any bird, except a Brown Thrasher, that happened to be on the tray would at once yield its place to the Jay. Two or even three Jays would eat side by side, sometimes feeding each other. Now and then a Blue Jay would carry food to a bird apparently too timid to come to the tray.

The Song Sparrow much preferred to feed on the ground and search for bits dropped by other birds, but would sometimes sneak up through the bush. The White-throated Sparrows also preferred the ground, but they came to the tray more frequently and more openly.

The Brown Thrashers often came in pairs and fed side by side. They had no fear of Blue Jays and were the victors in any dispute as to which might eat. With the Mockingbird matters were reversed. A Mockingbird might drive a Brown Thrasher away but yielded to a Blue Jay.

Neither the Cardinal nor the Towhee, except in the height of mating, would allow another of its kind on the tray with it. The males usually appeared to have first rights. One bird would feed for a while, then leave and another would take its place. Four or five might be waiting turns to eat but two never ate together. Once, in the midst of the mating season, I saw a pair of Towhees eat together. Several times I have seen a pair of Cardinals together, the male now and then caressing the female with his beak, or feeding her. At other seasons they drive one another away. The Towhee could not eat long without scratching and knocking food onto the ground and its mate while waiting her turn found more or less to eat on the ground.—BERYL T. MOUNTS, *Ballard Normal School, Macon, Ga.*