The feeding was fairly evenly distributed during the day. The average interval for the House Wren was about two and one-half minutes apart, and for the Flicker twenty minutes. The Sapsucker fed the greater number of times between 10 and 11 A. M. (20 times), the Flicker between 7 and 8 P. M. (5 times), and the House Wren between 5 and 6 P. M. (38 times).

The exact age of the young birds was not known, but in each case they were well developed and left the nest a few days later.

On August third a similar tabulation was made on the feeding of a brood of Violet-green Swallows and of Chestnut-backed Bluebirds that were about two feet apart in woodpecker cavities in another pine tree. The Bluebirds visited the nest 323 times during the day, and the Violet-green Swallows 260. This, however, was hardly a fair comparison, as the swallows began to leave the nest during the day, and by night three had gone, hence part of the feeding could not be recorded.

Between the hours of 6 and 7 p. m., the Bluebirds visited the nest to feed the young thirty-three times. The swallows did not begin feeding until nearly an hour later than the Bluebirds.

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THREE INTERESTING BREEDING RECORDS FOR 1925 FROM THE PIEDMONT REGION OF NORTHEASTERN GEORGIA

BY THOS. D. BURLEIGH

From the standpoint of topography and soil, and even climate, Georgia has been divided into three sections which are all readily separated one from the other, and which are distinct enough that their characteristics are apparent to the most casual observer. One, the Coastal Plain, covers, roughly speaking, the southern half of the state; the second, the Piedmont Plateau, comprises the larger part of the remainder of the state, the third section, the Mountain Region, being limited to the northern tier of counties and rather small in area when taken into consideration the state as a whole. It was in the northeastern corner of this Piedmont region, about Athens, the county seat of Clarke County, that these notes were taken, the breeding records, all of them, pertaining to this past spring, 1925. To those unfamiliar with this Piedmont region it might be said briefly that it is characterized by being rather hilly, a transition as it were from the mountains to the level coastal plain, and with a red clay soil the more evident be-

cause of the cotton fields that very largely take the place of pastures, and also grain crops such as wheat and rye, farther north.

STARLING. Sturnus vulgaris. As early as the fall of 1917 this species was reported from Savannah, Georgia, (See Department Circular 336, U. S. Department of Agriculture, "Spread of the European Starling in North America"), but it was not until March 7, 1924, that I first recorded it at Athens. On that date five birds were seen feeding at the edge of an open field, and that there might be no question as to my identification one was collected after they had flown into the top of a nearby shortleaf pine. Whether this unduly warm reception was the cause I am not sure but these birds were not seen again, and almost a year elapsed before I recorded this species for the second time. On January 20, 1925, a flock in which there were fully sixty birds was seen feeding in the top of a large sweet gum at the edge of the Sandy Creek "bottoms." They were wary and hard to approach, and also rather restless, circling over the open fields either in one compact flock or in several small groups, their soaring flight being at this time easily noticeable. At dusk they were seen going to roost in a large stretch of cattails, wheeling above it for some time before finally dropping down out of sight, and as I watched them I felt that it was an auspicious omen in so far as their lingering here and breeding was concerned. In the next few months scattered birds were seen at irregular intervals, but they were few and far between, and the possibility of a pair actually nesting at Athens seemed doubtful. On April 23, however, one bird, a male, was seen in the dead top of a large white oak, singing, and as there were several promising looking cavities in this tree I felt that perhaps after all my optimism would be justified. I lacked the opportunity that day of investigating more fully, and when I returned three days later, on the 26th, both birds were in the top of the tree, so it was the 28th before I attempted to settle the issue. The absence of the female that day aroused the hope that she was perhaps incubating, and that proved to be the case. The holes first noticed turned out to be empty, but climbing the tree had made the bird uneasy and she finally flew from another cavity that had not been seen until she revealed its presence. It was an old Red-headed Woodpecker's nest, in a dead limb in the top of the tree sixty-five feet from the ground, and was inconspicuous enough to be easily passed by unnoticed. The cavity itself was fully a foot deep, and was well filled with a rather bulky nest of weed stems, coarse grasses, and dry loblolly pine needles. There were four fresh eggs in the nest, and as it was noon, and a reasonably warm day, the fact that the female was incubating then made me feel that no more would have been laid. The tree stood well out in the open, at the upper end of the reservoir that supplies the city with water, and a hundred yards from a short stretch of pine woods, with cotton fields the predominating feature of the landscape. No other birds were seen during the spring but unquestionably young were successfully reared close about Athens for on August 1 a flock of eighteen of these birds was noted feeding about several cows at the edge of an open field; and, on September 6, a flock of fully a hundred was observed in the top of a tree at the side of a road. Since that date small flocks, usually averaging from five to fifteen birds, have been seen almost daily, and there is little doubt but that this species is now well established here as a common breeding bird. My one breeding record is the first for the state, and probably the farthest south that this species has nested so far, but this coming spring should see much of the Piedmont region well south of Athens invaded in perceptible numbers.



Nesting site of the Dickcissel (at x) in Clarke County, Georgia, 1925. Arrows point to singing trees



Nesting site of the Starling in Clarke County, Georgia, 1925. Arrow points to nest cavity.

Grasshopper Sparrow. Ammodramus savannarum australis. The cotton fields with their scanty growth of grass offer few inducements to such a species as the Grasshopper Sparrow, and probably largely because of this lack of suitable nesting sites these birds are rather scarce here. It is true that this is practically the southern limit of their breeding range, but locally, in spots meeting their few requirements, they are fairly plentiful, and in time, with sufficient encouragement, they may become one of the common breeding birds of this part of the state. For several years now the Georgia State College of Agriculture has urged the planting of alfalfa as an aid to the growth of the live stock industry throughout the state, and to prove its value to the average farmer has devoted considerable acreage to the cultivation of this legume. Here, as well as in several adjoining fields used for

grazing cattle, these birds are, during the summer months, actually plentiful. Undoubtedly the introduction of the alfalfa is the cause of this comparative abundance of a species rarely seen elsewhere in the county, and as this plant is gradually gaining favor with the farmers throughout the state the result will be watched with interest. On June 13 I was crossing one of these fields when a bird flushed from almost under my feet and a short search revealed the nest holding two eggs incubated possibly three or four days. This number may seem rather small, and it may occur to others, as it did to me for the moment, that disaster had overtaken one or more of the eggs; but the probability is that that is the normal number for a second brood. Other years young fully fledged and out of the nest for some time have been seen the last of May so there is little question but that this was a second set, and as is generally known fewer eggs are laid by the average bird here in the south than is the case farther north. The nest was sunken flush with the ground and very well concealed in the middle of a thick clump of grass near the edge of the field, and was built of fragments of weed stems and grasses, lined with fine grasses and a little horse hair, and well arched over. The bird showed great concern when flushed, fluttering through the grass close by and chipping incessantly. This is, to the best of my knowledge, the first definite breeding record for the state.

DICKCISSEL. Spiza americana. It is doubtful if this species ever occurred in any numbers anywhere in Georgia, even before its unexpected disappearance from the Atlantic Coast states some years ago. I know of but one published record of its breeding in the state, in 1883, (See Notes on the Summer Birds of Northern Georgia, by Arthur H. Howell, The Auk, Vol. XXVI, No. 2, April, 1909), and that is rather indefinite and based seemingly on a pair of birds that were merely seen that one year at Rising Fawn, Georgia. Forty-two years having gone by without any further records for the occurrence of this species in the state, and as during that time it has become extremely rare anywhere east of the Alleghenies, the fact that it nested here this past year is I feel of decided interest. Until this past spring I had seen but one bird, a male on March 4, 1923, and I considered it a very scare migrant, or even but an accidental straggler, about Athens. On April 24, 1925, a male was again seen near the same spot, singing from the top of a small tree at the edge of an open field, and this time it lingered on day after day. A large sycamore stood here at the side of a stream flowing through this field, and gradually its upper branches came to be the one definite place where the bird could be

found throughout the larger part of the day, singing untiringly. Within two weeks a sudden increase occurred in the number of these birds, six being seen on May 6, all males, and well scattered over several fields of oats then ripe but as yet uncut. They were singing incessantly, either on the wing or perched in the top of a tall weed, and judging from appearances were well satisfied with conditions in general. Unfortunately within a few days this grain was cut, and almost at once these birds disappeared, but two males remaining at the spot where the one had been first noted. Possibly a hundred vards from the sycamore, and well toward the center of a field of alfalfa, was a small white oak, and it was in the top of this tree that the second bird chose to spend most of its time. The streams mentioned above flowed through a ditch ten feet in width and six feet deep, the sides being overgrown, rather thickly in spots, with such underbrush as willows and alders. It was the only situation that I considered at all promising if these birds actually nested here, for the surrounding fields were much too open to conceal the nest with any degree of success. For which reason, as the first of June approached and both birds still sang each day, and all day, from their favorite trees, this ditch was closely watched and a nest finally found that, on May 29, held four fresh eggs. It was two and a half feet from the ground and very well concealed in a thick vine growing on the side of the ditch, and was somewhat bulky but compactly built of weed stems, grasses, and fragments of dead leaves, well lined with fine rootlets and a few black horse hairs. When found, during the middle of a very hot afternoon, the female was incubating, but flushed as the vine was touched and, joined by the male who had been singing close by, showed great resentment at my intrusion. other nest was unquestionably close by but no attempt was made to find it for this one record was sufficient to prove that this species was really breeding here, and I had no desire to discourage these birds too much. What the future holds is of course merely to be guessed at, but I am hoping very much that the Dickcissel may in time be once more a regular summer resident about Athens. Why they should have lingered as these two pairs did this year is difficult to explain satisfactorily, but having succeeded, as I feel confident they did, in rearing a brood here it is easily possible that the venture may be undertaken again in the vears to come.

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