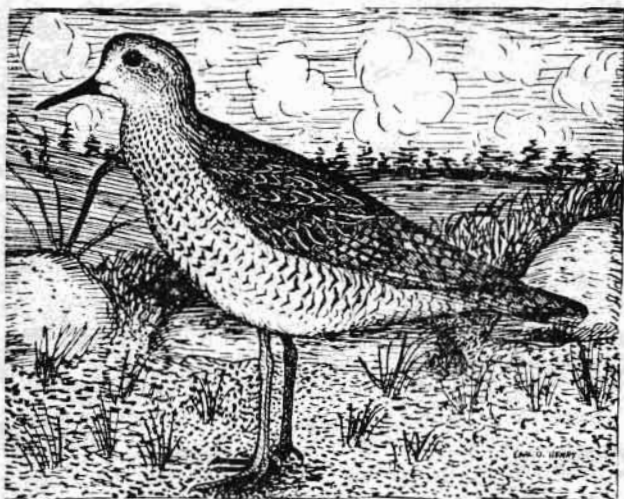


The Migrant

A Quarterly Journal Devoted to Tennessee Birds



MARCH, 1940

Published by The Tennessee Ornithological Society

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NOTES ON TENNESSEE BIRDS OF PREY

BY ALBERT F. GANIER

Among our native birds the Raptores are of more than usual interest, both because of their size and rapacious nature and because of their steady decrease which threatens the eventual extinction of many of the species. Of the birds of prey, there are twenty-six species which occur in Tennessee and the notes given below apply to eight of these, all but the first and third species being more or less rare.

BLACK VULTURE, *Coragyps atratus atratus*.—Bird students at Nashville have had the opportunity during the past winter to observe an unusually large roost of these birds just three miles southwest of the city limits. This roost is in Warner Park, being on the north side of the first of the wooded hills that one comes to in going out Highway No. 100. There are a number of large trees, including a dead one, on this hill, and the steep slope below is a jungle of cane and brush wherein one or more of these birds have nested in years past. A count made at dusk on New Year's Day, 1940, showed approximately two hundred and fifty of the birds in the trees. During the exceedingly cold spell of January 18 to 28, when the thermometer dropped to around zero nightly and actually went to 13 degrees below on the night of January 26 (Airport data), there was no evidence that any of the Vultures had migrated southward. In spite of the cold north wind to which they were exposed, the majority of them chose to perch on the upper branches of the trees rather than midway. Lacking the protection of feathers on their heads, one would think their very brains would freeze, but apparently none were killed by the cold for no dead birds were to be found on the ground. I happened to pass by on the morning of February 23 at 8 a.m. and noticed that about one hundred and fifty were still in the trees at that late hour. This was a chilly, cloudy morning when the thermometer was at 37 degrees. The 'buzzards' have chosen the park for their roost because of its greater protection from nocturnal Nimrods. As might be expected in Dixie, their 'pale-faced cousins', the Turkey Vultures, had apparently drawn a social line between themselves and the 'Blacks' for none of the former came to share the roost.

EASTERN GOSHAWK, *Astur atricapillus atricapillus*.—An immature bird of this species was shot at Glenclyff, 5 miles southeast of Nashville, on Dec. 13, 1939. The bird was in the brown first-year plumage and measured 44 inches in wing-spread. It had been in the vicinity for some weeks and had made such depredations upon poultry, including grown hens, that it had been shot

at by farmers on a number of occasions. The bird was brought by a hunter to the office of the *Nashville Banner* where a photo was made of the specimen, held with wings spread. Examination of the photograph and a check on the wing-spread left no doubt as to its identity. Wishing to secure the specimen, I went at once to the home of the hunter and was told that he had given it to a negro woman who lived close by. "Lor' Mister," said the old darky, "ah done et dat hock, en he sho et good, too." From the pile of feathers in the yard, I found ample evidence to further confirm the identity of this rare winter visitor from the Far North. The only other Tennessee record is that of an adult bird shot 16 miles northwest of Nashville on Oct. 19, 1918, and reported by me in this journal for Dec., 1937.

NORTHERN RED-SHOULDERED HAWK, *Buteo lineatus lineatus*.—Because of their unsuspecting nature, these hawks are frequently killed by hunters under the mistaken supposition that they are doing a good deed for quail and for the raisers of poultry. An adult male of this useful species was shot just south of Nashville on December 10, 1939, by a hunter and came into my hands for preservation. Upon dissection its crop was found to contain a Carolina shrew, swallowed in two halves, and its stomach was well filled with the remains of two short-tailed field mice and a green snake ten inches long. Another bird of this species, an immature, was killed by a farmer and brought to town January 16 of this year.

GOLDEN EAGLE, *Aquila chrysaetos canadensis*.—On December 26, 1939, one of these birds was captured a few miles from Lebanon and brought to Nashville several days later for disposal. A farmer and his boy, while hunting, had seen the big bird fly into a brushy field nearby, apparently intent upon capturing a rabbit. On running quickly to the spot they were able to 'corner' the bird before it could get to a clear space from which to take wing. Confined in a good-sized cage, it readily ate meat offered it. The writer enlisted the aid of the State Department of Conservation and their Mr. Solyom confiscated the bird so that it might be properly released at some later date. The Eagle was turned over by him to the writer who kept it for a week in a large enclosure, feeding it rabbits, Starlings, and veal. Mrs. Laskey placed band A731987 upon its leg and on January 7, Mr. John Caldwell, who was going to the Cumberland Mountains for the day, volunteered to release it there. He did so above the canyon of Caney Fork at a point east of Sparta. While in captivity the bird never learned the futility of dashing itself against the fish seine netting with which the enclosure was surrounded and eventually bent and frayed its tail feathers badly. It was extremely strong and its savage, thick talons and powerful beak had to be avoided carefully. I learned, however, to pick the bird up and carry it when necessary, by the procedure of grasping its wings from behind at the shoulder and drawing it back close against my belt. Although the Eagle would still lunge with its claws and beak, it was unable to reach me. I measured the bird's wing-spread and found it to be eighty-three inches. A large ashy white area under each wing at the elbow proclaimed it to be a young bird of the year. I know of several previous instances where Eagles have been caught in brushy places before they could take wing.

SOUTHERN BALD EAGLE. *Haliaeetus l. leucocephalus*.—A mature bird of this species was trapped near Greeneville, in Greene Co., by a farmer who in writing on October 28, 1939, said the Eagle had been taken about six week previous, i.e. about September 15. It was found that the bird had previously been shot and had an injured wing. The farmer kept it in his barn, feeding it on poultry, and many people came to see it. Miss Willie Ruth Reed, of Greeneville, interested herself in its behalf and wrote to the Department of Conservation to secure its release. The Department had the bird crated and shipped to Nashville with the idea of releasing it at Reelfoot Lake but it died before this could be accomplished, presumably from the damaged wing. The specimen was not preserved.

DUCK HAWK, *Falco peregrinus anatum*.—In the 'Season' section of this issue, W. M. Walker records the taking of one of these falcons near Knoxville on or about October 10, 1939. In this connection I wish to give some additional data on these birds from the same area. On May 1, 1932, Brockway Crouch and I made a trip down French Broad River in a canoe. The night before we camped under the Paint Rock cliffs, eight miles east of Knoxville. Here Mr. Crouch pointed out to me the nesting ledge that had been occupied by Duck Hawks two years previously. He had first found them here in 1920 and they had nested about the place nearly every year since. These high, rugged, and tree-clad limestone cliffs rose more than one hundred feet above the river and formed an ideal home for these peregrines, at least until the gunners became too numerous. We spent an hour or so along the crest, hoping to again record the birds here but saw none nor was there evidence of recent occupation about suitable nesting ledges.

Forty-six years ago, Duck Hawks nested within the present corporate limits of Knoxville in a cliff washed by the waters of the Tennessee River. On April 4, 1894, the cliff was scaled with ropes by William Wake and the ledges found to hold three highly incubated eggs. Wake described the nest in an old bird journal, *The Museum*, 1895, I, No. 3. This cliff is downstream from the city and about four miles from the business district.

On April 7, 1929, Mr. Crouch and the writer visited an eyrie which I had discovered in the Smokies two years before. This was in the cliff opposite Alum Cave and the three well-incubated eggs and circumstances were described in the *Wilson Bulletin*, 1931, XLII, pp. 3-4. This was some years before the park was begun. We both visited the eyrie in subsequent years for it has been used continuously. On May 17, 1931, Mr. Crouch found in addition to three young birds about ready to fly, the remains of some quarries that were of unusual interest. These consisted of a back and attached feet of a Red-breasted Merganser and two left feet of American Bitterns, all of which were identified by the U. S. Biological Survey. These had evidently been captured in flight as they passed above the forested peaks and proved that the continuous mountain ridge of between five and six thousand feet was not a deterrent to the route of these migratory birds. On his 1932 visit, made April 10, Crouch found three newly hatched young and one pipped egg. The presence of these rare falcons constitutes a feature of great interest in the Smokies and Park Naturalist Stupka justifiably extends them the most zealous protection.

PIGEON HAWK, *Falco columbarius*. Subsp.—This little falcon of the North seems to be a rather rare transient and, perhaps, winter resident. A recent record is that of one of them taken on September 18, 1939 at Murfreesboro. Thinking it was a small Cooper's Hawk, Prof. George Davis shot the bird in his own back yard. The skin was preserved by H. O. Todd, who furnished me this data. This species resembles the Sparrow Hawk in flight and size and in wooded localities, birds which seem to be the latter should be carefully scrutinized.

BAEN OWL, *Tyto alba pratincola*.—In the last issue of *The Migrant* both William Simpson and the writer mentioned the nesting and occurrence of several of these birds in the Nashville area. The nest described by Simpson was again visited by him and by John Calhoun a few days after Christmas and the young birds were still present in the hollow of the tree. With them were some dead Starlings that had been brought in by the parents for food. On February 25, Simpson visited a nesting tree near Goodlettsville that had been reported to him and upon climbing to the hollow he found it to contain two dead birds. They were fully feathered but he thinks they were young ones because one was smaller than the other. An unpublished nest record for this species is that by Brockway Crouch of Knoxville, who flushed a parent from three eggs in a pot-hole near the top of Paint Rock cliffs on the French Broad River. This was eight miles east of Knoxville and in early June, 1931.

LONG-EARED OWL, *Asio wilsonianus*.—Except for the Snowy and the Saw-whet, this has proved to be the rarest owl in Tennessee. One of our very few records is that of one collected on January 12, 1923, by Grover Cook, eight or ten miles southwest of Nashville. It was flushed from a clump of cedar trees in the heavily wooded Bellemeade hills. Mr. Cook mounted the bird and it is now in the State Museum.

An additional record for Middle Tennessee has just been reported to me by Henry O. Todd of Murfreesboro. This is of two of these birds found near there in a cedar wood on December 10, 1939 by an acquaintance of his. The party who found them, thinking they were Great Horned Owls, shot one of the pair and brought it to Mr. Todd. The two returned to the location on the 18th and found the other bird dead on the ground, three-fourths of a mile away. Both specimens were preserved. This region, having many areas thickly timbered with red cedar, may prove to be a favored winter home for this species.

SAW-WHET OWL, *Criptomax acadica acadica*.—One of these little owls was captured in East Nashville on March 16, 1940. It was temporarily held for observation by Mrs. Amelia Laskey who will give further notes at a later date. For the two previous Tennessee records, see *The Migrant*, 1936, p. 19.

NASHVILLE, March, 1940.

MID-WINTER FIELD VENTURES

BY ALFRED CLEBSCH

When early this year winter hurled its icy fury against sunny Tennessee we began to expect rare visitors from the North among our birds. About the middle of January Mr. Ganier wrote that Lapland Longspurs had been found near Memphis by Mr. Coffey and urged that flocks of Horned Larks in Middle Tennessee be watched for associating Longspurs. The Cumberland River bottomlands south of Clarksville were visited on the afternoon of January 18, when a flock of about two hundred Prairie Horned Larks was found at the stables of the local cavalry troop. The trip nearly ended there because a shell that had no powder in it fouled the barrel of the collecting gun and the trouble of ramming it out brought to mind that it was severely cold. But warm wrappings proved their worth and later we encountered a smaller flock. Specimens taken proved this to be made up of the Northern Horned Lark, a sub-species now recorded for the first time in our county. The temperature sank to five degrees above zero and a howling west wind drove needles of fine snow. A flock of about one hundred and fifty Crows was gathered in a field of corn that had been disked and flights of Mallards, cupping their wings, swung to the same feeding grounds.

That night the mercury dropped to eight below and the next morning the steaming Cumberland bore a thin skin of ice, but this was soon licked away by the waves. On Sunday the twenty-first, my friend, Dr. Pickering, went to see the ice that now began to form along the banks and noted from a vantage point a strange duck in the open water. Good light and strong binoculars distinguished for him the markings of Barrow's Golden-eye, a very northern species reported as wintering only as far south as the Great Lakes and New Jersey. The bird was studied for half an hour at easy distance. Most prominent markings were the large, halfmoon-shaped white patch that nearly covered the head in front of the eye and a line of white spots and dots set in the edge of the dark wings laid against the shining white body. The purple lustre of the head was noted as another mark to make its identification certain. And what a diver! As if he enjoyed his solitude, he kept ducking and popping up again at short intervals and his surface maneuvers were also carried out with peculiar energy.

On Tuesday, January 23, there was snowfall all day, totaling three and a half inches and now King Winter wore all his regalia. On receiving the news of the Golden-eye, preparations were made to look for it on the river again the next day. At 10:00 a.m. wind and waves had finally broken up enough of the thin, sharp ice that covered the stream so that the canoe could be launched. It was then fifteen degrees above zero. Soon ducks were sighted but around the bend at the mouth of Red River came a cutting northwest wind. Working into the face of it the boat was hard to manage and to keep away from the ice, so the ducks flew away unidentified. Only two and a half miles were travelled downstream for in shifting positions too much cold had crept under the blankets while the ice barred access to the

snow-covered banks for fire making. The return started shortly after noon when eighty Lesser Scaup had been flushed to bring better luck. A pair of American Golden-eyes were closely approached and a string of twelve American Mergansers, their saffron-tinted bellies glistening, flew over. The activity of small birds along the banks was astonishing. Deeply colored Robins and elegantly dressed Waxwings shared a meal of hackberries. Myrtle Warblers, rare this season until now, were seen in good numbers. Even two Brown Creepers twittered merrily during their inspection of the bark on willow trees. There were many Cardinals, Titmice, Chickadees, and Downy Woodpeckers, all apparently in the highest of spirits. A larger gang of Crows vociferated around a Red-tailed Hawk that was in no mood to fly just then. So they left him alone and crossed the river, some pausing for bits of food from the water while dangling over the surface. A few Ring-necked Ducks and Golden-eyes got up. Among them was a large drake that showed much white on the front of the head as he flew past, but no decision could be made that here was the rare object of the search.

The temperature reached three degrees below zero that night and the next morning the Cumberland was frozen over—not to open again for ten days. That afternoon, January 25, when Dr. Pickering took me on a drive along the river we found five Canvas-backs feeding busily in a small hole in the river ice across from town. We crossed on the Cunningham bridge, but as we drove farther the openings became fewer and we saw no more ducks. Reasoning that there must be open water at the dams we set out for Lock B, thirteen miles above Clarksville. As we turned into the bottomlands a handsome Red-tailed Hawk started from a lone sycamore tree and soon his mate joined him. With everything blanketed by snow they had probably little trouble spotting their prey. In high expectations we walked around the lock buildings for a view of the river. Here was more ice than we had at town and an unusual amount of water was going over the dam. When workmen—their job done—came from the other shore, we learned that the wickets on top of the dam had just been lowered lest they become fouled by ice-flows. This activity had driven away the ducks, and only about eighteen Black Ducks remained at the end of the open water a quarter of a mile below. Snow was on the ice and the west wind whistled upstream. The top of the lock wall in the river had blown clear of snow and sunning on it were six American Pipits, a species neither of us had seen before and one we certainly did not expect here. With shrill, chirping calls they flew off across the river only to come back to this favored spot for more sunning and preening.

On our return we crossed town and went to Dunbar's Cave. At the east shore of the frozen lake a small patch of new ice lay in cold green color against the rosy sheen thrown over the snow-covered surface by the setting sun. Next to the bluff into which the cave recedes there was black, open water with seven Canvas-backs swimming on it. The temperature went to ten degrees below zero that night.

To learn if running water attracted birds during this tight freeze two springs feeding into Red River were visited in the afternoon of January 27.

The day had started with zero and the temperature did not go above twenty degrees. Red River itself was covered with a thick sheet of ice. At the first branch, close to the spring itself, meeting a female Mallard caused mutual surprise; at the second a Black Duck shot wildly through the trees. There were few small birds with the exception of many Tree Sparrows harbored by a weed patch; still the morning hours may have seen busier bird life there. A Hermit Thrush, a Myrtle Warbler and a Song Sparrow were found drinking from the clear water. On the way home a flock of eighty-five Prairie Horned Larks was observed on the whitened Golf Links. They were busily feeding on little high spots which the wind had swept free of snow and managing to pick tiny grass seeds from the hard, frozen ground.

The next day turned bright and as a result banding at my sub-station reached a peak with seventeen new birds and fourteen 'repeats' caught in a few one-cell traps. Dr. Pickering in the neighboring yard had kept his electrically-heated bird bath going (the birds bathed even in zero weather) and my place provided the sheltering hedge. In numbers, the White-crowned Sparrows led, then came the Starlings for whom scraps of suet mixed in the bait proved too much to resist. That night Dr. Pickering phoned to tell me that when he looked over the Horned Larks at the calvary stable that afternoon he was attracted by a group of small sparrow-like birds that were sitting forlornly on and behind frozen clods. He approached to within twenty-five feet and counted fifteen of the long sought Lapland Longspurs!

This was at the site most frequently checked and it now became of interest to see how long these rare northern visitors would remain with us. A careful hunt made the next day, January 29, failed to reveal them again. This was attributed to the weather; it had become overcast and for the first time since the start of the cold spell the temperature went above the freezing point. Another trip was made January 31 when much of the snow had already gone away. At town all openings in the river ice had become closed but below old Seven Mile Ferry above town a large body of water had become open. Here two Golden-eyes were found and a Great Blue Heron was seen flying over. The stir of small birds along the banks continued unabated and in a dense patch of weeds Tree Sparrows were still feeding under the snow blanket it supported.

On February 1 flocks of Horned Larks near the State line due north of Clarksville were examined for Longspurs but none were found. It had been reported to us that over a thousand ducks had been feeding in this section where hogs were being fattened on shock corn in the fields. Another large gathering of Ducks, approaching five thousand, was said to have been near Palmyra on a water-hole in the river's ice, but reports could not be verified. The marsh below Dunbar's Cave was still frozen enough under the protection of weeds and grasses to be walked over, nevertheless a Wilson's Snipe was flushed from a clump of cat-tails.

Land and river were again free from ice and snow on February 3. Five days later, although the ground was still muddy, the river bottoms were visited again. To have two strange birds of Goldfinch-like calls and flight,

circle high and drop to the ground far off, then disappear when the spot was reached, not once but twice, is rather trying, but this experience led to eventual success. On February 11, a sunny and balmy Sunday, we found in that field a dense flock of 250 Lapland Longspurs. They were not at all shy and while at first our eyes had only caught the few that flew in short dashes over the ground, we soon discovered them right at our feet scattered thickly through the husks and broken stalks of disked corn. Stooped forward they ran like mice and then hid behind trash or clumps of soil. The so-called rattling call was more musical than we had imagined it to be and the clear Goldfinch-like note preceded it most often when the birds were on the wing. After studying their quaint manners we flushed them. They rose in a mass much in the fashion of a flock of English Sparrows but soon settled down again. This was the only time that we saw so large a flock and from then on we found their steadily decreasing number always in company with Northern Horned Larks. As a rule they took part in the maneuvers of that species in returning to their chosen field after a wide circling sweep which ended with a long flight barely above the ground, as a plane that comes to an airport and taxis the length of the field before stopping. When the flushing was repeated over and over, the Longspurs would, however, lag behind or leave the flock just as if they lacked some of the wild spirit of the Horned Larks.

The weather during February was moderate in temperature but often murky and wet. On the eighteenth, a week after the big find, ten or twelve Lapland Longspurs were found with twice that number of Northern Horned Larks in a similar field approximately ten miles north of the first site. This number also dwindled away rapidly and the behaviour of the Larks showed that mating was near. On February 22 only one or two Longspurs were left at either place. On the twenty-ninth Dr. Pickering found one Longspur with six Horned Larks half a mile from town near Red River.

All during February these birds had attracted us to them but when March came they were gone. When we returned the scene had changed and new actors had come on the stage. The fields had become green and the raucous chorus of Red-wings, Grackles, and Cowbirds pierced the air of early spring. With their arrival passed a season of unusual ornithological interest.

CLARKSVILLE, March, 1940.

THE UPLAND PLOVER

(PICTURED ON OUR COVER)

This species (*Bartramia longicauda*) is true to the first part of its common name only, being a bird of the grassy plains and, in migration, being found on pastures, airports, and other grassy areas. It is not a true plover like the Killdeer and its often-used name of 'Bartramian Sandpiper' is more appropriate. Formerly abundant, it was a popular game bird and steadily decreased in numbers. Saved by the abolition of spring shooting it made a slow comeback and now is becoming more and more common. In Tennessee in recent years it has been recorded as a fairly common transient at Memphis, uncommon in Middle Tennessee altho rare at Nashville, and rare in East Tennessee. At Memphis it is

present from about March 22 to April 23 and reappears as early as July 17. The last fall date is September 3 but it probably remains much later. Favorable habitats are not visited as much in the fall as in the spring. In Middle Tennessee it has been reported several times by Dan R. Gray at Mt. Pleasant, usually in April and September, and by Henry O. Todd, Jr. at Murfreesboro from March 10 to May 15, 1937 and from August 12 to September 14, 1937. The Nashville area is probably the most intensively worked region in the state but records there are few, as noted in another article by Mr. Monk. The only East Tennessee records are for Johnson City, March 26, 1933, and on a previous date not recorded. We believe, however, that records will become more frequent if we continue to visit suitable localities. The presence of this species is often unsuspected and the best method of finding it is to deploy all observers and cover the field as would be done for Horned Larks, Pipits, Longspurs, LeConte's, and Savannah Sparrows.

We give below all references to the Upland Plover in the pages of *The Migrant*:

- 1932 III p. 10. Gray, Dan R. "I see a few Bartramian Sandpipers here every spring; one year they were so tame that I had to stop my tractor to keep from running over one" (At Mt. Pleasant).
- 1932 III p. 48. Coffey. One in Zoo, caught Sept. 3, 1932, near Miss. line, S. of Memphis. (1st Memphis record).
- 1933 IV p. 22. Ganier, A. F. Looked for them without success at Mt. Pleasant, May 7, 1933. "Mr. Gray sees them in April and September nearly every year."
- 1934 V p. 26. Coffey. Five on the Mud Lake levee (Tenn.-Miss.) March 31, 1934. (2nd Memphis record).
- 1934 V p. 45. Ganier, A. F. (2nd) Nashville record, one on Aug. 3, 1934.
- 1934 V p. 58. Gray, Dan R. None seen but one heard in spring; two present on farm in early September. (Mt. Pleasant).
- 1935 VI p. 31. Trent, James, Jr. Mentions Tyler's (Bruce P.) record at Johnson City, March 26, 1933.
- p. 33. Coffey. March 27 to April 4, 1935, from 2 to 11 present each day at old Bry's airport in Memphis but first seen Mar. 26 east of town.
- p. 72. Gray, Dan R. None seen so far (Sept.) this year but one heard passing over.
- 1936 VII p. 38. Coffey. None on March 22 or 25 outside town but 11 at the old (Bry's) airport on March 25 and 2 to 5 up to April 23. At Lakeview, Miss., 2 on April 10, 5 on the 11th, and 10 on the 13th. April 10th one heard overhead in town.
- VII p. 67. Coffey. Five on Aug. 30 at Mud Lake, and on the Tenn.-Miss. line.
- 1937 VIII p. 64. Todd, Henry O. Two seen east of Murfreesboro from March 10, 1937 to May 15. Also from Aug. 12 (14 Plovers), various records up to Sept. 14 (1 single).
- 1938 IX p. 63 Coffey. One on the Municipal Airport, July 17, 1938. A few heard overhead in late July and early August.

ADDENDA: On March 17, 1940, Burdick found 7 Upland Plovers at 'Terry-crest' east of Memphis. On the 22nd he recorded flocks of 19 and 15 on the Lakeview levee.

THE UPLAND PLOVER AT NASHVILLE

BY HARRY C. MONK.

The Upland Plover is so rare at Nashville that its records are of considerable interest. Even the most active observers have seen it but once or twice in from twenty to twenty-five years local experience. It is not known to occur regularly at any locality in Davidson county. I have seen it but once in twenty-three years, but have heard the species flying over my home occasionally at night in the last three years.

The first Nashville record was made March 31, 1917, by Drs. G. R. Mayfield and R. M. Strong, who saw two birds in a field along Harding Road at Kenner Avenue. This was reported at the T.O.S. meeting of April 27, 1917, and entered in the minutes; later it went to the Biological Survey on the migration schedule for the year and has been published in Bent's Life Histories, USNM.Bull. 146, 1929, p. 66.

The next record was Aug. 3, 1934, when Mr. A. F. Ganier saw one bird with a flock of seventy-five Killdeers in the North Nashville bottoms. (*Migrant*, 1934, p. 45)

A second spring record was obtained April 17, 1937, when Mr. Ganier and I found one Upland Plover in some fields along Cleese's Ferry Road, a few miles west of town and near the river. This bird lay close until we had passed and then flushed from a point about seventy feet to our left and somewhat behind us, giving its loud, startled call as it did so. It was carefully studied as we stalked it, but proved too wary to collect and soon made off, rising higher and higher, and flying down the river valley at a height of several hundred feet. This is the only Upland Plover I have actually seen in this region.

The following records are based on call notes heard at night at my home in the western suburbs of Nashville. The first of these was heard on September 5, 1937. The day had been rainy and at nightfall a thick fog obscured everything. In this thick blanket a host of birds could be heard, most of the calls being unrecognizable, but one call of a Solitary Sandpiper stood out and at 7 p.m. one clear call of an Upland Plover was heard. At 9:30 p.m. another bird flew over very low, its calls sounding loud and clear. Still later in the night a bird repeated this performance. A few nights later, at 7:30 p.m., September 8, one of these birds was heard overhead, calling many times, its cries sounding loud at first and then dying away as it moved off, due south. This night was also cloudy, but no other birds were heard as on the previous occasion.

In 1938 Upland Plovers were heard on three nights. One was heard on August 24 or 25 (exact date not recorded) and another at 8:20 p.m., August 27. These nights were dark, but clear and quiet, and only one call was heard each time. In the early hours of September 1, during lulls in a severe thunderstorm, a number of these birds were heard. At 12:07 A.M. several birds suddenly began calling in unison, at a low elevation directly over the house. These calls continued for about one minute and sounded as if the birds were much excited. At 12:40 A.M. one more call was heard. After the storm had passed, at 1:10 A.M. several birds were again heard overhead. It was evident that the storm had caught a number of Upland Plovers on the wing that night.

In 1939 Upland Plovers were heard on four nights. The first came at 11:30 P.M., July 21, and gave three loud clear calls as it flew by. The night was clear, dark, and quiet. On August 10 at 8:45 P.M. a bird passed over the house at a very low elevation, traveling due south and calling repeatedly—twenty times at least—in a varied and highly musical manner. This bird was so loquacious that I thought at one time that there might be two calling together. The night was clear but dark and still and no other birds of any kind were heard. On August 26, at 11:30 P.M. a bird called once from a fairly high elevation; the night was clear, with moonlight, and still. The last records were made on October 10. One call was heard at 11:12 P.M. and was immediately answered by a bird much lower, near the house. At 11:30 P.M., another bird was heard as it passed over farther to the west and five minutes later another call came from the western sky. This night was cloudy and cool and no other sounds were heard.

In conclusion I wish to emphasize that most of the calls here reported were quite loud, and would have attracted the attention of any bird-minded person. They were clearly heard and identical with calls I have heard from this species on its breeding grounds in a northern state and also with the calls given by the bird Mr. Ganier and I saw April 17, 1937. I have lived at my present address for twenty years, and have noted these night calls only in the last three years. I have certainly not been more wakeful in recent years than before, and the birds would have been heard and recorded in other years if they had been calling as they have been recently.

NASHVILLE, February 28, 1940.

THE CHUKAR PARTRIDGE IN TENNESSEE

BY VAL SOLYOM

Beginning in 1937 the Tennessee Game and Fish Division secured eggs of the Chukar Partridge (*Alectoris graeca chukar*) in an attempt to experiment with the adaptability of this bird to Tennessee conditions. It had been indicated by the experience of other states that the Chukar can adapt himself to conditions in the United States just as the Hungarian Partridge has done. Believing that he would make a good game bird, the Game and Fish Division has set out in all seriousness to ascertain the possibility of the Chukar to adapt himself in this region and during 1939 planted 2400 of this species throughout the state.

As most lovers of bird life know, the Chukar partridge comes from Asia and is known to live in elevations ranging between one and two thousand feet above sea level, as well as upward into the Himalaya mountains. He is gregarious like the Bob-white and during the fall and winter of the year will congregate into coveys of some forty-odd individuals. His food and nesting habits are believed to be similar to that of the Bob-white with the exception that he can go without water and prefers a dry upland habitat to a wet lowland. One outstanding weakness is that this species, as well as the Bob-white, is susceptible to the blackhead disease so prevalent around barn-yards. The bird weighs an average of seventeen ounces, which, comparatively speaking, is about two and one-half times the weight of our native Bob-white quail, judging from weights taken of Tennessee raised birds at the Buffalo Springs Game Farm during the year of 1939.

In order to obtain well-rounded selections of planting sites, the Game and Fish Division selected through its personnel, twenty-seven areas ranging from one end of the state to the other. Each area has a minimum acreage of 2,000 acres and is located preferably in typical upland habitat. The sum total of these Chukar refuges amounts to about eighty square miles. A list of the specific locations follows. East Tennessee: Roan Mountain, Kingsport, Rockford, Maryville, Edgemore, Orebank, Crossville, and Pikeville. Middle Tennessee: Standing Stone, Sparta, Hartsville, Murfreesboro, Lawrenceburg, Centerville, and Hohenwald. West Tennessee: Lexington, Huntingdon, Henderson, Selmer, Whiteville, Gallaway, Millington, Covington, Dyersburg, and Union City.

In most of the above locations the birds were planted during the periods August 14 to September 11, 1939. One exception may be cited, that of an early spring planting near Gallaway in Fayette County, which introduction was accomplished during March of 1939. In each case one hundred birds with an approximately equal sex ratio were released over four sections of the 2,000 acres selected. The provisions made for the birds were that four sections of twenty acres each should be reserved on each 2,000-acre tract. On this twenty acres grazing was prohibited and four patches of food-producing plants were planted by the local cooperators. These provisions were made to encourage the birds to stay on the area. In addition to providing physical requirements, as well as controlling excessive predation, arrangements were made to patrol each area twice a month by the cooperators as well as by the local Conservation Officer. The latter was to submit a report on all observations. Up to the present we have learned through these reports that on the Gallaway area the Chukars have nested and brought off in all between thirty and sixty young, and that on some of the areas a few dead were found. These birds seemed to have been in good condition with feed in their crops. In no case were they found in time to give a reliable diagnosis. In some cases the birds seemed to be moving from four to fifteen miles away from the original planting location. In most of the reports the Chukars seemed to have survived the recent cold and snowy spell. All in all the reports are encouraging, but the acid test will come at the end of the year 1940 when we can ascertain the rate of reproduction as well as survival.

Due to the nature of the species and to the fact that we have it under careful observational study, no attempt is being made to distribute it more generally over the state. Not until our findings prove favorable in regard to the Chukar's adaptability to Tennessee conditions will there be any plans for such general distribution as we are now undertaking with the Bob-white quail.

If any T.O.S. members or other interested individuals and groups should observe Chukars while on field trips, they should promptly report their findings to the Game and Fish Division at Nashville. Such cooperation will be appreciated. Information desired includes the date, the number of birds seen, the specific location where found, and other interesting data, and the name and address of the observer.

NASHVILLE, March, 1940.

LAPLAND LONGSPURS AT MEMPHIS

BY BEN COFFEY

Lapland Longspurs (*Calcarius lapponicus lapponicus*) were first definitely recorded at Memphis this past season but we have every reason now to believe they have been present for two or three winters previously. This despite the fact we have been expecting them since 1933 when first reported by George H. Lowery, Jr., in northeastern Louisiana during December, 1932. Moreover, M. G. Vaiden had found five at Rosedale, Miss., on December 2, 1938.

On Christmas Day, 1939, our census party of Burdick, Coffey, and Mason, stopped to examine a small flock of Killdeers about six miles northwest of Tupelo, Miss. Also present in the bare field along the highway was a small flock of Prairie Horned Larks. Looking them over for Pipits we made out one bird distinctly different from either species, yet resembling both in actions. Smaller and more slender than the larks it also lacked their conspicuous markings but showed more contrast in markings and color than is present on Pipits. The sparrow-type bill distinguished it from both species. After stalking it several times we all agreed we had found our first Lapland Longspur.

The Moon Lake, Miss. census party on December 31 were all cautioned to watch for the Longspurs in the fields and along the levee where we customarily found American Pipits and very rarely Prairie Horned Larks. A large flock of small, ground feeders was found and the entire party brought back later to look them over. There were so many Longspurs that we had to look them over and over to find any Pipits. Most of the Pipits recorded that day were individuals flying over or small groups on the levee. We estimated the Longspurs at 400. By this time most of us had learned to recognize the rattling notes of this species and had coined the word 'Lapits' to cover any or all of the three species: Longspurs, Pipits, and Horned Larks.

The following Sunday, January 6, we decided to visit our previous Pipit feeding grounds north of Memphis in the hope of recording the Lapland Longspur in Tennessee. Our first stop was the old Armstrong airport (now an old corn and cotton field) at Woodstock. Two weeks previously, on December 24, I had visited this field looking for Pipits on the Memphis Xmas Census. I was alone, having left the others working across the Loosahatchie bottoms. A flock of about two hundred birds rose nervously and circled away. Some of the calls were a two-syllable 'pip-it' and a single syllable note of the Pipit but most of the notes were of a rattling nature which I had previously assumed to be another type of Pipit call-note. The flock moved on so I listed them as two hundred Pipits. Other Pipits were seen at close range that day by our three main parties but I muffed a chance to report this new species on our census report to *Bird-Lore*. For on January 6 we flushed a flock of this size at the same spot,—the rattling notes were now known to be made by Longspurs—and when the birds settled back down accommodatingly close we could find nothing but Longspurs! West of the highway was another flock of fifty.

Correction has been made in our Memphis Census list as published in this issue. For at least the two seasons previously I have distinguished this rattling note from others without thinking of it being given by other than Pipits. We have not looked our flocks over so carefully in recent years. During the first few years that Pipits were common here (1933-1936) we followed them up each time they circled away so that everyone on each trip could see them at close range. There were no Longspurs then. However, Horned Larks still continued unusual enough for each new set of bird enthusiasts that we continued to watch this type of habitat. Less frequently, perhaps, in later years as Overton Park and Mud Lake offer in season the most for one's limited time.

Continuing on January 6 we found a small flock of Longspurs and Prairie Horned Larks about a quarter-mile north. The latter we examined for Northern Horned Larks without success. We worked another field north of the Big Ditch drainage canal but with no results except a scattered file of nine Pipits.

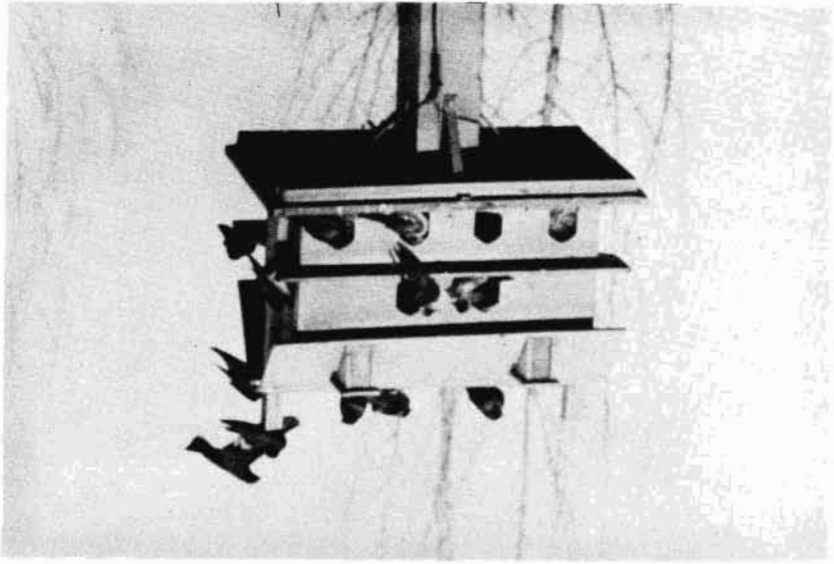
On January 13 we were privileged to have Albert F. Ganier with us. At Armstrong field we spread out for a canvass but not a Longspur rose! One Tree Sparrow on an old cotton stalk and not much else. Two more hours of daylight and a sinking feeling that we might not 'produce the goods' for our guest authority. At the second locality a few minutes later we found our birds from the auto. By repeated stalking we made an estimate of 12 Lapland Longspurs, 15 Prairie Horned Larks, and 10 Northern Horned Larks. This was the spot where we had only the Prairie subspecies the week previously. All birds present were individually observed on both occasions. A few of the Longspurs had brighter chestnut markings on the back of the neck than did the majority. Two collected were in the dull plumage.

Hurrying to the Big Ditch field we arrived there shortly before dark. Primarily we wanted to 'kick-up' a LeConte's Sparrow but a cloud of small birds to the west of the LeConte's habitat attracted our attention. We soon found a large flock of about four hundred Longspurs, apparently hunting roosting places in the mats of short grass. All seemed to be in the bright plumage. Three were collected and the differences in plumage and size of these specimens and the first two seemd almost what one would expect between two separate species. The males measured about 6.6 inches in length, the females about 5.9 inches.

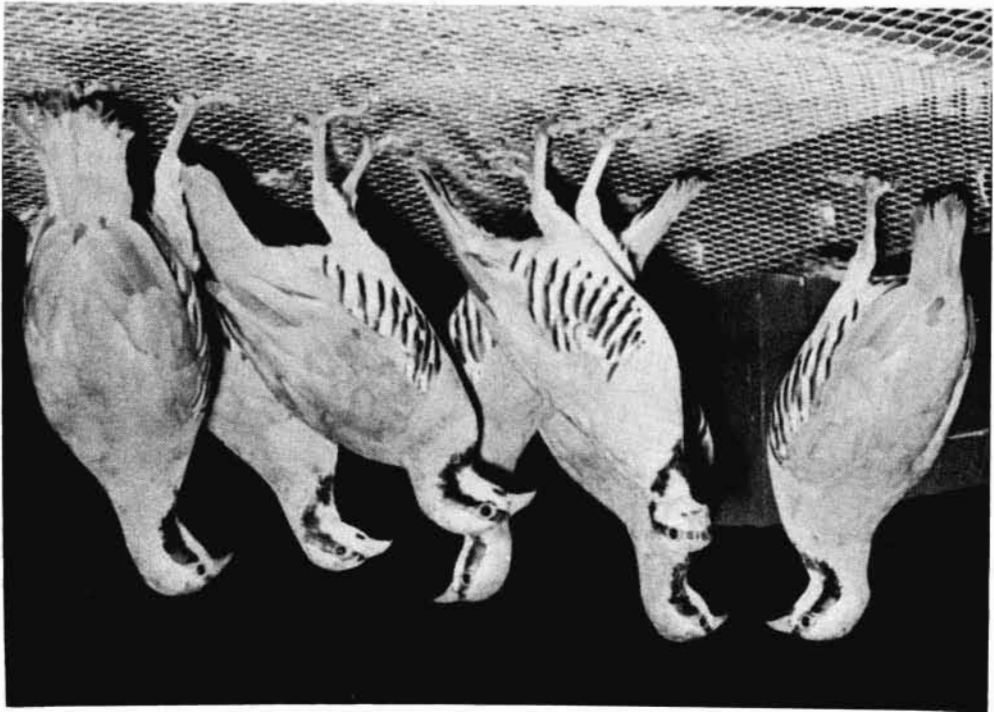
About two weeks later Burdick reported a flock of seven hundred just east of Memphis. We did not again visit the above localities north of town until March 31. At that time we failed to find any of our northern visitors while eleven Pectoral Sandpipers and eleven Upland Plover north of Big Ditch indicated the spring migration was well under way.
MEMPHIS, March 31, 1940.

OUR ILLUSTRATIONS:—On the opposite page at the top is shown a group of Chukar Partridges, Tennessee's newly introduced game species, described in this issue by Mr. Val Solyom. At the bottom is a most seasonable photo by Dr. Chas. F. Pickering who snapped this 'full house' at his Martin box. The Purple Martin is one of our first summer residents to return each spring. Following are two excellent photographs made by Mr. M. H. Oldham in Poinsett County, Arkansas, and illustrating Mrs. Oldham's article on other pages. The first is of young Red-shouldered Hawks being fed on the nest, May 5, 1939. The adult bird apparently is offering a small lizard to the young. The second is of a young Great Horned Owl, March 10, 1939. (Continued on page 19.)

Purple Martins



Chukar Partridges





Young Great Horned Owl



Red-shouldered Hawks

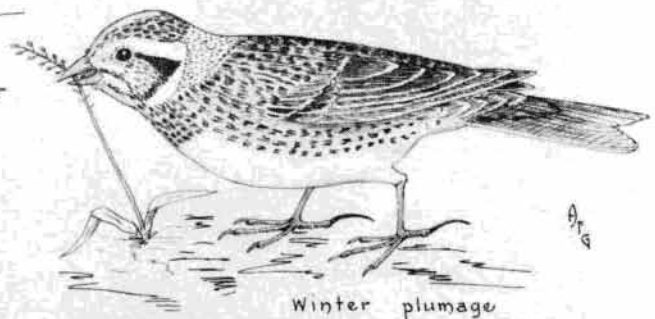
Lapland
Longspurs



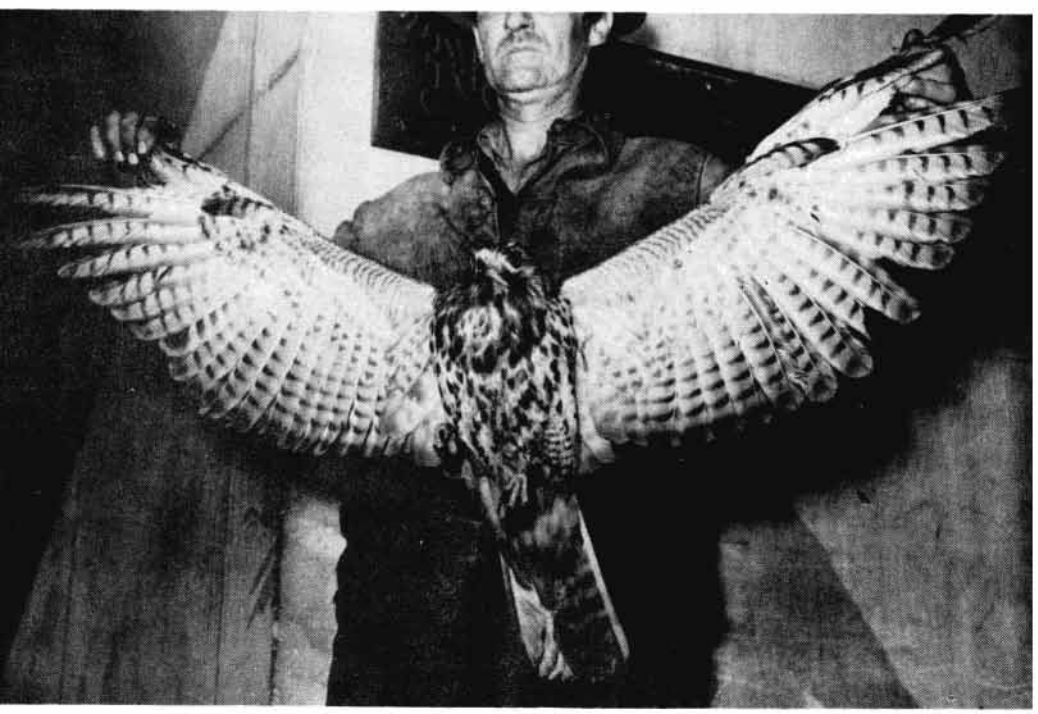
Summer plumage



Northern
Horned
Lark
Spring plumage



Winter plumage



PHOTOGRAPHING THE GREAT HORNED OWL AND RED-SHOULDERED HAWK

By MRS. M. H. OLDHAM

On January 8, 1939, while walking in a woods in Poinsett County in eastern Arkansas, we found the nest of a Great Horned Owl. It was an open nest located about forty feet up in a red oak and showed signs of having been used previously. The adult owl was brooding two white eggs. Due to high water, we were unable to return to the nest site until February 12, when we found one young owl about the size of two fists. The other egg did not hatch. Each week thereafter we returned to take pictures of the young owl at various ages. Not once did the adult owl return to the nest while the camera was up, although she would often wait until the climber was almost to the nest before taking flight. This was always the case on the coldest days.

On March 18 we visited the young owl for the last time. As Mr. Oldham climbed the tree to place the camera, the young one spread his wings and sailed to the ground about 200 feet from the nest. Although he was large, he was not yet able to fly. He objected vigorously to having his picture taken and would fluff out his feathers and make a hissing sound. His claws were strong and sunk so tenaciously into the sleeve of my leather jacket that it was difficult to pry him loose. We then placed him high on a limb near the nest tree and told him "goodbye."

Beneath the nest we found rabbit fur and also a small sandpiper which had apparently been dropped before it could be eaten. The latter was the only evidence of the killing of birds we saw at this nest. We have also found nests of the Great Horned Owl in both Tennessee and Michigan and all have been open nests high off the ground.

On March 17, 1939, we found a Red-shouldered Hawk's nest containing one white egg speckled with brown. The nest was constructed about 30 feet up in a willow oak and in the same woods in which we had found the owl's nest. On April 2 several miles from this nest we found a second Red-shouldered nest located about 25 feet up on the side of a red oak. We flushed an adult as we walked under the nest. As we were able to identify the hawk, we did not attempt to see into the nest at this time.

On a second trip to the first nest we built a blind and on April 22 returned to use it. There were three young hawks about five days old in the nest. They were covered with down about the color of a Rhode Island chick. We set up the camera, crawled into the blind and waited. The adult hawks screamed as they wheeled and circled overhead but they would not come near the nest.

OUR ILLUSTRATIONS (continued):—Pictured on the opposite page are some of Tennessee's rare winter visitants. At the top are Lapland Longspurs, recorded for the first time in the state this past season, shown with a Northern Horned Lark. These two species frequent similar habitats and are often found together. The summer plumage of the Longspurs is acquired after they leave this country en route to the Arctic region. Drawing by Mr. Albert F. Ganier. The photograph, courtesy of the Nashville Banner, is of an injured immature Goshawk taken near Nashville this season as described in Mr. Ganier's article.

We then decided to visit the second nest the same day. Stakes were nailed to the side of a nearby tree to a height slightly above the nest. We found three young hawks in this nest also. These appeared to be about ten days old and were beginning to sprout pin feathers and show barred coats. At intervals of about a week we returned to the nest for pictures of the young hawks. The adults did not return to the nest often and we succeeded in getting only one picture of them on each visit and often only after a wait of several hours. However, the adults did not seem to mind the camera. The young would crouch down in the nest when they saw us but after the camera was up and we had taken our places behind some vines, they would stand up again and move about, calling every now and then to parents who doubtless were too far away to hear. We noticed that fresh leaves had been placed in the nest each time we saw it. On May 15 the young had left and were perched about in the tree. They were handsome birds with their barred backs and buff underparts.

Mr. Oldham never found evidence of food in the nest. Perhaps their appetites were so great they ate the food as fast as their parents could provide it. However, we did get a picture of an adult holding a lizard which it had brought. A few minutes later both the parent and lizard were gone.

We visited the first hawk nest only once more and found that one of the hawks had lost the sight of one eye. The mosquitoes were numerous and swarming about the nest, so we wondered if he had not injured his eye with his claw as he tried to fight them off.

The three nests described were located west of Harrisburg and about a half-mile south of the Weiner Road. The second hawk nest was three and a half miles west of the L'Anguille River while the other two nests were about one mile east of the river.

HARRISBURG, ARKANSAS, February, 1940.

ANNUAL CHRISTMAS CENSUS

BY OUR MEMBERS

Our eleventh annual state-wide mid-winter or Christmas Census of bird life is tabulated below. For the Nashville chapter it was their twenty-fifth annual census. The number of lists submitted again necessitated two sets of tables. Fourteen localities in the state are represented. Lists from Corinth and Rosedale, Miss. were included as usual and for the first time the Moon Lake (Lula), Miss. census annually taken by Memphis members. This latter had been taken on December 26 in previous years, usually under bad weather conditions. The 26th was possibly worse this year but since *Bird-Lore* magazine moved up the dead-line for census lists submitted to it from the 27th to the 25th, this was one year the Moon Lake census could be and was postponed. Census lists appearing in *Bird-Lore* were from Great Smoky Mountains National Park, Greeneville, Humboldt, Memphis, and Nashville (1939, Supplement to Vol. XLII, No. 1, pp. 104-106). Also included were Hickory Flat and Tupelo, Miss., made by our members (pp. 107-108.) The Nashville list is found again in *The Kentucky Warbler* (1940, No. 1).

The highest single list of 73 species, from Memphis, breaks the previous record of 70 species,—Memphis, 1935 and 1936, and Nashville, 1938. The composite list for all Tennessee reports embraces 96 compared with 92 in 1938 and the record of 93 in 1937. Species appearing in *The Migrant's* census lists for the first time are: Lapland Longspur, not included on Memphis list sent to Bird-Lore (see comments elsewhere in this issue); out-of-state (Miss.)—American Egret, Burrowing Owl, LeConte's Sparrow, and Lapland Longspur. Added in Tennessee since last year are: Horned Grebe, Pintail, Green-winged Teal, Canvas-back, Ruddy Duck, American Merganser, Sharp-shinned Hawk, Herring Gull, and Vesper Sparrow. Dropped are: Loon, Double-crested Cormorant, Old-squaw, Golden Eagle, Red-breasted Nuthatch, and Chipping Sparrow.

TABLE I

	Nashville Dec. 24, 1939	Clarksville Dec. 17	Clarksville Dec. 28	White Bluff Jan. 7, 1940	Norris Dec. 28	Gt. Smoky Park Dec. 17	Corinth, Miss. Dec. 24	Memphis Dec. 24	Moon Lake, Miss. Dec. 31	Rosedale, Miss. Dec. 24
Number of species	68	55	57	49	44	46	46	73	72	61
Number of individuals	14887	1329	2549	1134	1163	1045	2772	10952	5525	11615
Number of observers	18	4	8	5	2	21	2	20	11	2
Horned Grebe	2	.....	.....	.....	.....	.....	.....	.....	26	.....
Pied-billed Grebe	1	.....	1	.....	2	.....	.....	1	14	9
Double-crested Cormorant .....	.....	.....	.....	.....	.....	.....	.....	.....	69	71
Great Blue Heron .....	.....	.....	2	.....	.....	.....	.....	2	8	5
American Egret .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Canada Goose .....	.....	.....	.....	.....	.....	.....	.....	62	.....	.....
Common Mallard	9	28	62	4	143	.....	.....	1	517	860
Black Duck	21	2	6	.....	200	.....	.....	5	79	.....
Gadwall	1	.....	3	.....	.....	.....	.....	.....	3	12
American Pintail .....	.....	.....	.....	.....	11	.....	.....	6	.....	85
Baldpate .....	.....	2	.....	.....	4	.....	.....	.....	.....	400
Green-winged Teal .....	.....	.....	.....	.....	5	.....	.....	.....	.....	23
Blue-winged Teal .....	.....	.....	.....	.....	4	.....	.....	.....	6	.....
Shoveller .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	119
Wood Duck .....	.....	.....	.....	.....	.....	.....	.....	3	.....	4
Ring-necked Duck	23	65	210	1	.....	.....	.....	252	58	92
Canvas-back .....	.....	.....	.....	.....	.....	.....	.....	1	126	4
Lesser Scaup	10	.....	.....	.....	40	.....	12	413	108	1400
American Golden-eye	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffle-head .....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Ruddy Duck .....	.....	.....	.....	.....	.....	.....	.....	4	287	.....
Hooded Merganser	21	.....	.....	.....	.....	.....	.....	.....	1250	5
American Merganser .....	.....	.....	.....	.....	8	.....	.....	.....	45	.....
Red-breasted Merganser .....	.....	.....	.....	.....	.....	.....	.....	.....	90	.....
Turkey Vulture	7	17	1	8	.....	21	.....	4	8	1
Black Vulture	57	14	.....	2	.....	.....	20	.....	5	5
Sharp-shinned Hawk	2	.....	.....	.....	.....	1	.....	.....	.....	2
Cooper's Hawk	2	2	1	2	1	1	.....	1	3	.....
Red-tailed Hawk	8	.....	3	4	1	2	.....	4	3	4
Red-shouldered Hawk .....	.....	3	.....	.....	1	.....	1	6	.....	.....
Marsh Hawk	2	2	4	1	1	.....	1	4	6	6
Duck Hawk .....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Sparrow Hawk	24	2	7	1	5	4	1	20	7	4
Ruffed Grouse .....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....
Bob-white	53	42	21	53	24	10	.....	99	32	8
Coot .....	.....	6	9	.....	.....	.....	2	.....	2	2200
Killdeer	34	1	3	1	13	5	.....	114	59	16
American Woodcock	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilson's Snipe	3	1	1	.....	.....	.....	.....	1	.....	8
Herring Gull .....	.....	.....	.....	.....	1	.....	.....	15	60	.....
Ring-billed Gull .....	.....	.....	.....	.....	.....	.....	.....	134	86	.....
Mourning Dove	3	13	118	15	15	13	15	84	86	17

TABLE I—Cont.

	Nashville Dec. 24, 1939	Clarksville Dec. 17	Clarksville Dec. 28	White Bluff Jan. 7, 1940	Norris Dec. 28	Gt. Smoky Park Dec. 17	Corinth, Miss. Dec. 24	Memphis Dec. 24	Moon Lake, Miss. Dec. 31	Rosedale, Miss. Dec. 24
Barn Owl	1									
Screech Owl	1	1	1	1			1		1	
Great Horned Owl	3									
Burrowing Owl									1	
Barned Owl	2	1	3				8	2	1	1
Belted Kingfisher	4	2	7	3		3		4	6	5
Flicker	60	17	23	5	2	2	20	158	34	8
Pileated Woodpecker	5	6	10	6	1	4	2	1		3
Red-bellied Woodpecker	13	11	9	12			8	49	19	13
Red-headed Woodpecker		2	5					13	4	3
Yellow-bellied Sapsucker	2	3	7	2	1	1	11	12	2	2
Hairy Woodpecker	10	4	6	2		2	3	8	3	1
Downy Woodpecker	40	24	28	16	3	11	2	32	1	4
Phoebe	4			4	1	2	1			
Prairie Horned Lark	210	14	100					18		
Blue Jay	26	14	28	8		5	20	307	25	11
Raven						6				
Crow	350	102	76	32	78	19		63	25	3
Chickadees*	102	44	92	31	32	90*	8	108	16	17
Tufted Titmouse	60	39	73	20	20	6	6	51	4	7
White-breasted Nuthatch	4	3	20	5		1		3		
Brown Creeper	1		2	1		2	6	10		
Winter Wren	10	2		1	2	5	1	22	2	
Bewick's Wren	7	1	2					1		
Carolina Wren	42	41	39	23	11	26	12	87	11	3
Mockingbird	112	25	16	5	2	2	2	90	10	4
Brown Thrasher								32		5
Robin	684	20	103	1	1	63	30	78		19
Hermit Thrush	4	1		7	1	4	12	66	4	
Bluebird	103	22	20	45	2	21	6	49	2	14
Golden-crowned Kinglet				1	6	81	40	97	14	
Ruby-crowned Kinglet						4	2	23	10	35
American Pipit	53							71*	106	13
Cedar Waxwing		30	64					75		
Shrike	1	1	1	1		3	1	28	18	38
Starling	11,200	55	62	8	46	12	10	996	347	1000
Myrtle Warbler	26	6	9				12	168	32	47
English Sparrow	63	5		8	30	50	20	com.	39	42
Meadowlark	35	7	78	16	5	7	6	514	148	58
Red-wing			78					245	103	200
Rusty Blackbird	314							17		11
Bronzed Grackle	4						2000	1235	476	4000
—Unidentified Blackbirds				42						
Cowbird	30		160					1	1	400
Cardinal	285	214	283	37	39	43	30	595	50	37
Purple Finch	45		18	26	3		20	208	2	
Goldfinch	54	13	36	54	12	38	25	99	1	
Towhee	47	18	43	21		1	50	99	1	2
Savannah Sparrow	4					3	4	25	86	
LeConte's Sparrow									3	
Juncos*	232	184	298	216	240	200*	40	1137	133	150
Tree Sparrow		9	5	1						
Field Sparrow	62	76	10	152	38	175	25	293	64	
White-crowned Sparrow	14	3	16					22	4	
White-throated Sparrow	260	63	144	73	65	49	200	1921	123	23
Fox Sparrow	16	12	31	6		1	20	169	38	17
Swamp Sparrow	59	13	28	51	4	2	10	45	49	
Song Sparrow	55	21	53	83	39	26	40	178	61	52
Lapland Longspur								200	400	

TABLE II

The following data completes the tabulation on the opposite page and is included in the totals:

Knoxville, Dec. 29: Green-winged Teal, 1; Hooded Merganser, 20.
 Humboldt, Dec. 24: Wood Duck, 2; Sharp-shinned Hawk, 1.
 Johnson City, Dec. 19: *Yellow Palm Warbler, 2.
 Johnson City, Dec. 31: *Vesper Sparrow, 12.

TABLE II

	Covington Dec. 26, 1939	Humboldt Dec. 24	Henderson Dec. 30	Paris Dec. 28	Springfield Dec. 31	Murfreesboro Dec. 25	Knoxville Dec. 29	Greenville Dec. 25	Johnson City Dec. 19	Johnson City Dec. 31
Number of species	33	37	28	44	46	43	38	31	29	25
Number of Individuals	1049	921	294	739	1187	11943	715	1312	475	375
Number of observers	1	1	1	2	5	4	2	2	1	1
Pied-billed Grebe						2				
Great Blue Heron		1		3			1			
Common Mallard			36	16						
Turkey Vulture	2		10	6	3	2		35	5	5
Black Vulture		6	1	2		4		7	3	
Cooper's Hawk			1	2		5				1
Red-tailed Hawk			1	1		1		1		
Red-shouldered Hawk				1	2					
Marsh Hawk		2		1	2	6				
Sparrow Hawk	2	6		2	4	3	2	2	6	3
Bob-white	6	14		75	9			20		
Eastern Turkey			5							
Killdeer	3	3		7	5	13	1		7	
American Woodcock				1						
Mourning Dove	7	7	2	24	19	12	14	24	27	
Screech Owl				2		2				2
Great Horned Owl						2				
Barred Owl	1	2		1	2					
Belted Kingfisher		1		2		1	1		1	
Flicker	8	2	5	3	37	16	4	3		
Pileated Woodpecker		1	1	1	4	1		2		
Red-bellied Woodpecker	10		1		22	3	2	3		
Red-headed Woodpecker				3		1				
Yellow-bellied Sapsucker	3				2	2				
Hairy Woodpecker	4		2		2	3	1			3
Downy Woodpecker		2	6	2	30	4	6	6	3	
Phoebe							2	1		1
Prairie Horned Lark					11	31		40	6	
Blue Jay	28	30	15	12	51	6	6	23	6	7
Crow	80	500	6	17	96	10000	400	1000	42	7
Carolina Chickadee	12	3		16	23	13	19	10	12	19
Tufted Titmouse		4	12	12	75	9	18	14	4	8
White-breasted Nuthatch			1	2	6		4		2	
Brown Creeper		1			2		2			
Winter Wren			1	6		1	1		2	2
Bewick's Wren	2					4		3		
Molina Wren	9	2	4	11	35	22	8	14	6	5
Mockingbird	8	8		7	5	59	5	5	11	3
Brown Thrasher	1									
Robin				30	3	197				1
Hermit Thrush	1	1	1		8	1	2			
Bluebird		2	8	36	8	51	2		9	7
Golden-crowned Kinglet	1			5	1		33			
Ruby-crowned Kinglet	1	4								
Cedar Waxwing		30								
Shrike	1	3			2	1	1		3	
Starling		25		55	11	1000	27	7	55	200
Myrtle Warbler	3				21	90	4	2	2	
English Sparrow	40	50		42	16	95	26	30	50	50
Meadowlark	30	10	5	12	147	133	15	2	4	
Rusty Blackbird					63					
Bronzed Grackle		40	6	25	21	2				
Cardinal	18	30	3	12	70	25	9	17	26	10
Purple Finch					7			1		
Goldfinch	20			4	9		3	5	10	3
Towhee	1	3	6	42	77	1	3			1
Savannah Sparrow					8		3			
Slate-colored Junco	450	50	75	124	160	79	15	16	18	25
Tree Sparrow					29					
Field Sparrow	40		20	45	21	9	25	2	21	5
White-crowned Sparrow	12				1	22		12	71*	
White-throated Sparrow	180	50	50	50	44	2	11	2		1
Fox Sparrow		5			2		2			
Swamp Sparrow	5		10	15						
Song Sparrow	60	20		2	11	7	16	3	61	1

Species shown in bold-face type were not recorded in Tennessee.

* SPECIAL NOTES: Chickadees.—Carolina Chickadees only at every locality except the Great Smoky Mts. Park where both the Black-capped and Carolina were definitely observed but not listed separately.—Juncos,—should be Slate-colored Juncos at all localities except in the Great Smoky Mts. Park where Carolina Juncos were also recorded.

Shrike,—should be Migrant Shrike except possibly for Memphis, Moon Lake, and Rosedale. The Loggerhead Shrike has been collected in winter at Rosedale. Bronzed Grackle,—should be Purple Grackle for all East Tenn. censuses.

Yellow Palm Warbler,—observed by Bruce P. Tyler, "fine display no doubt as to identity."

Vesper Sparrow,—twelve observed by Robt. Lyle and party in the Chucky Valley district near Embreeville.

White-crowned Sparrow at Johnson City,—71 recorded by Bruce P. Tyler who states they are found there in flocks. No White-throated Sparrows found on the day of this census (Dec. 19, 1939).

* OTHER NOTES ARE INCLUDED IN CENSUS DATA ON FOLLOWING PAGES AND IN 'THE SEASON'.

COVINGTON:—Dec. 25, slightly overcast; calm; temp. 35; 7 miles on foot. Liberty area.—Alice Smith. HUMBOLDT:—Dec. 24, 8 to 4:30; cloudy A.M., sun hazy P.M.; brisk NW wind; temp. 38 to 42; 8 miles on foot, 9 miles by auto. Along old river bed of Middle Fork, Forked Deer River, 1½ miles SW of Humboldt; Bailey Park; 7 miles NW of town along Hwy. No. 76.—Albert J. Marsh. HENDERSON:—Dec. 30, 9 to 4; clear; high SW wind all day; temp. 22. Chickasaw Forest, chiefly around Lake Placid and Lake La Joie. About 8 miles on foot, 35 miles by auto, including distance enroute.—J. R. Endsley. PARIS:—Dec. 28, 8 hours on foot; cloudy; temp. 34 to 40. By auto 9 miles NE of town and then about 12 miles hiked. O. H. Jackson estate west to Holly Fork bottom, NE to Patterson dogwood thicket, return via Beaverdam. Three Great Blue Herons seen Dec. 23 near the Sulfur Well heronry.—L. D. ('Buster') Thompson and Archie Jackson. SPRINGFIELD:—Dec. 31, 9:30 to 4:00; fair, cold NW wind; temp. 16 to 34. Large and small swamps 6 miles NW of town, with nearby woods and fields.—John Calhoun, A. F. Ganier, Conrad Jamison, Arthur McMurray, and Gordon Wilson. MURFREESBORO:—Dec. 25, 8 to 4; fair, light N wind; temp. 28 to 40. About 5 miles on foot, by auto over a 20-mile circuit.—George Davis, Marion Edney, Martha Ann Rion and H. O. Todd, Jr. KNOXVILLE:—Dec. 29, 8:30 to 3:30; cloudy with occasional snow flurries; light NE wind; temp. 40; 4 miles on foot. Lake Andrew Jackson and Univ. of Tenn. farm.—Mr. and Mrs. W. M. Walker. GREENEVILLE:—Dec. 25, 7:30 to 11:30, 1 to 4:30; clear; temp. 25 to 38; 4 miles on foot and 12 miles by auto. Reed farm along Roaring Fork Creek, and Bays Mt.—Willie Ruth Reed and Richard Nevius. JOHN-SON CITY:—Dec. 19, 9 to 4:30; fair; calm; temp. 57 to 69. Cox's Lake, Indian Ridge, Boone's Creek, and Picken's Bridge.—Bruce P. Tyler. JOHN-SON CITY:—Dec. 31, 9 to 1; fair; strong wind; temp. 32. Cherokee Road, Embreeville section via Erwin.—Albert Hyde, Robert Lyle, and Mrs. J. R. Zimmerman.

NASHVILLE:—Dec. 24, 4 A.M. to 5 P.M.; ground bare and wet; no wind; temp. 34 to 41. Radnor Lake, Overton hills, Warner Parks, Bellemeade, Westmeade, Hill estate; River Road and bottoms; Paradise Ridge; Marrowbone Lake; and suburbs of town. 17 observers in 6 groups; total 33 miles afoot, 45 group-hours. The Pipits were in one flock. 5,000 of the Starlings were at a roost in magnolia trees. A Red-headed Woodpecker was seen on

Dec. 26; also a flock of 1500 Bronzed Grackles. For additional notes see 'The Season.'—Mr. and Mrs. B. H. Abernathy, Paul Bryant, John B. Calhoun, Albert F. Ganier (compiler), Conrad Jamison, Mr. and Mrs. F. C. Laskey, Miss Mary Lee, Francis Lawrence, Arthur McMurray, C. E. Pearson, John Pritchett, Leo Rippey, Jr., J. A. Robins, Wm. Simpson, H. S. Vaughn, and G. B. Woodring. CLARKSVILLE:—Dec. 17, 6 to 5; partly cloudy A.M. clear P.M.; no wind; temp. 50 to 60. Three groups, 22 group-hours. By auto 12 miles, then 2½ hours on horseback on farm near Trenton, Ky.—Mrs. John Y. Hutchison. By auto 35 miles, generally NE of town,—Dunbar Cave, Meriwether farm, golf course, Hiatt garden, Spring Creek.—Dr. and Mrs. C. F. Pickering. 15 miles on foot to Mark's Slough, along T. C. R. R., and Cumberland River.—Alfred Clebsch, Sr. CLARKSVILLE:—Dec. 28, 6 to 6; dark and overcast; no wind; temp. 32. Five groups, 32 group-hours. Dunbar Cave, Haynes Lake, near mouth of Red River to Odd Fellows Home, Mark's Slough circuit.—Lamar Armstrong, John B. Calhoun, Alfred, Jr. and Edward Clebsch, Alfred Clebsch, Sr. (compiler), Mrs. John Y. Hutchison, Wanda McBride, and Dr. Chas. F. Pickering. See 'The Season' for comments. WHITE BLUFF:—Jan. 7, 9 to 3:30; cloudy; light wind; temp. 34 to 37; lake frozen over except for 2 out of 53 acres. 10 miles on foot, 3 groups. Montgomery Bell State Park only as on previous trips; woods, waste lands, and new 53-acre artificial lake.—A. F. Ganier, G. R. Mayfield, H. C. Monk, H. S. Vaughn and G. B. Woodring. NORRIS:—Dec. 28, 9:30 to 4; cloudy; light N wind; temp. 34 to 40; ground bare except snow on mountains around Caryville Lake. 2 miles on foot, 17 by auto with frequent stops. Caryville to Norris, —Mr. and Mrs. W. M. Walker. GREAT SMOKY MOUNTAINS NATIONAL PARK:—Dec. 17, 7 to 4:30; clear; wind moderate, variable; in lowlands, ground bare and dry, temp. 44 to 60; in mountains, snow-covered, 1 to 2 inches, in shaded areas, highest temp. 47. Area of 15 miles diameter centered on Bull Head and including Mt. LeConte, Mt. Kephart, Greenbriar Cove, Elkmont, and the state divide from Collins' Gap to Charlie's Bunion; also Emert's Cove and Gatlinburg and Pigeon Forge, just outside park. Altitude range, 1200 to 6000 feet. 21 observers in 7 groups. Total 43 group-hours, 43 miles on foot, 101 miles by auto. As in 1938 Red Crossbills and Pine Siskins were not to be found. The absence of Red-breasted Nuthatches proved to be quite unusual. Seed crop of spruce and fir was very light this year. The Eastern Turkey was observed a few days prior to the census.—Charles O. Baird, Jr., Mary Ruth Chiles, Edw. W. Dougherty, Lelia C. Hall, John J. Hay, H. P. Ijams, Mr. and Mrs. Wm. M. Johnson, Mrs. Frank Leonard, Mary McGriff, Elise Morrell, S. A. Ogden, W. M. Walker, Jr., Dr. Dorothy E. Williams (Knoxville Chapter); Wm. F. Alston, Carlos C. Campbell, Betty Jean Hay, Elizabeth B. Johnson, Dr. Willis King, Joe F. Manley, and Arthur Stupka, Park Naturalist. CORINTH, MISS.:—Dec. 24, 12 to 5; very cloudy; slight wind; temp. 40. Liddon Lake (3 miles SE) to Tuscumbia bottoms (5 miles SW).—Benj. R. Warriner and Elgin Wright. MEMPHIS:—Dec. 24, 7 to 5; overcast; stiff wind; temp. 35 to 38; wet underfoot from previous day's rain, first in some time. Same territory as previous years but omitting Mud Island and N. 2nd St. just N of Wolf River, Mound City Chute, and Nonconnah Creek at Mt. Moriah road; better coverage. 20 observers; 15 working in twos and threes from three autos, each 1 to 6 miles on foot;

singly in town and park; 2 on river in cruiser late afternoon. Total, 92 party-hours.—Austin Burdick, Jr., Fred Carney, Mr. and Mrs. Ben Coffey, Jr., Bill and Jack Fowler, Dr. Louis Leroy and Louis, Jr., Joe Mason, Hugh McCain, Franklin McCamey, Jr., Fordyce Mitchel, C. E. Moore, John Pond, Mrs. M. L. Torti, Eugene Wallace, Billy Walker, Ben Welch, Wendell Whittemore, and Neal Wyatt. MOON LAKE (LULA), MISS.:—Dec. 31, 9 to 5:30; cloudy; brisk wind; temp. 35 to 45. Hwy. 61 just N of Dundee to Lula, by auto along east and south sides of Moon Lake, then N near levee, crossing same thru bottoms to Helena ferry, back to north end of lake; frequent stops. Two auto groups for the first time, together along lakeside, separate later and occasionally in pairs. Burrowing Owl, LeConte's Sparrows, and Lapland Longspurs observed at length by all.—Austin Burdick, Jr., Mr. and Mrs. Ben B. Coffey, Jr., Bill and Jack Fowler, Joe Mason, Franklin McCamey, Jr., C. E. Moore, John Pond, Jim Vardaman and Ben Welch. ROSEDALE, MISS.:—Dec. 24, 7 to 3; a cold, clammy day, foggy and poor visibility; sleeting at 8:30, rain at 1:30, then clearing until 4 P.M.; temp. 42 to 38. Rose-dale to Legion Lake, to Lake Bolivar, and return. 38 miles by auto and 1 on foot. The American Egret was on opposite side of Lake Bolivar and was watched for some time. It waded a considerable distance but never took flight. Possibly an injury accounts for its presence here. (Also reported subsequently—Editor). Rusty Blackbirds seen in a barnyard with kindred species. On our return journey a total of 25,000 to 35,000 Bronzed Grackles, Starlings, and Red-wings were seen going to roost. Most of the ducks were seen at Lake Bolivar.—Mr. and Mrs. M. G. Vaiden.

THE SEASON

CLARKSVILLE AREA: To us the increase in numbers of Tree Sparrows is the outstanding change in bird population brought by the severeness of last winter. During the second half of January and all of February this was possibly our most abundant species, whereas at the end of December it was still rare. Other trends, such as the relative shortage of White-throated Sparrows, Field Sparrows, Towhees and Myrtle Warblers, the more general distribution of Fox Sparrows, and the total absence of Golden-crowned Kinglets had already been noted during the Christmas Census. During the cold spell itself, Purple Finches and Winter Wrens retired from this territory and neither Grackles nor Cowbirds were seen between Dec. 29 and Feb. 4. The Bewick's Wren became hard to find in December and we believe all of this species finally left here. Dr. Pickering noticed one again on Feb. 17, but 4 weeks later they are not yet back in usual numbers. Species that remained in spite of the cold include Great Blue Heron, Wilson's Snipe, Red-headed Woodpecker, Phoebe, these four rarely seen, and in good numbers, the Robin. A regular wave of the Eastern subspecies came in around Jan. 24, right in the midst of the coldest weather. Early in January flock after flock of ducks arrived coincidentally with the freeze along

the Ohio. In other years individuals of transient species have lingered here, but this time none stayed except the true winter ducks: Mallard, Black, Ring-necked, Canvas-back, L. Scaup, Golden-eye and American Merganser. All of them except Canvas-back and Golden-eye occurred in good numbers. On Feb. 11 a change was noted; 11 Pintall were seen and Red-wings and Grackles had returned. Since that is the day on which we found the large flock of Longspurs, it may be worth mentioning that it followed closely on the atmospheric disturbance that resulted in the Georgia tornado. Blue-winged Teal arrived Feb. 17 and on the 24th a Woodcock was flushed. Savannah Sparrows began drifting back on Feb. 15 and Canada Geese flew north Feb. 25-March 3. Six Baldpates mingled with the winter ducks on Mar. 2. With the return of the Chipping Sparrow Mar. 4 and the Purple Martin on the 7th we listed the arrival of our first migrating summer residents. On the 7th also came another harbinger of spring, a Tree Swallow and on the 9th the alarmed cry of the Wood Duck rang once more from Red River. But Vesper Sparrows and Brown Thrasher keep us waiting this year.—ALFRED CLEBSCH, Clarksville.

NASHVILLE AREA—The winter here was colder than ordinarily, especially January. A large winter roost was located south of Woodlawn and West End Avenue, in hedges and thickets. During the latter part of February, when the number of birds roosting there reached a peak, the roost was estimated by our members to contain 50,000 to 500,000 birds,—about 100,000 were undoubtedly there. The bulk of them were Starlings, Robins, and Grackles; also Red-wings later.—A 5-inch, ten-day snow fell Jan. 16; it was accompanied by severe cold which froze over the Cumberland River sufficiently for people to walk across it for three days (first time since 1884). Mr. Ganier reports that practically all of several birds collected by him during that period were of normal weight and amount of fat. Nevertheless, quite a few Starlings, Cardinals, Towhees, and other ground feeding birds were found starved or frozen. Hackberries were still to be found on some trees.—Most of our observers agree that Carolina and Bewick's Wrens, and Myrtle Warblers were notably absent this winter.—H. C. Monk reports an immature Bald Eagle at Radnor Lake Feb. 16; Am. Merganser, Feb. 23 and 28; and Kingfisher, Feb. 28. He also reports: Brown Thrasher, Feb. 28; Phoebe and Fox Sparrows, March 1 at Centennial park.—Mrs. Laskey reports a Woodcock singing near her home, they nest here all too infrequently.—On a January morning, John Pritchett, Jr., discovered at his home a Ruffed Grouse, the first to be recorded in Davidson County in about 15 years. As he approached, it took flight. But, it was later found to be a domestic grouse that had escaped from a neighbor!—ARTHUR McMURRAY, Nashville.

KNOXVILLE AREA:—We shall give a few general remarks concerning the winter season and later develop other specific points of interest. The duck population on Norris Lake was greater this year than last based on observations of Burch, Henry, and myself. Some species worthy of mention are: A few Golden-eyes and about 1,000 Buffle-heads were seen on Jan. 14. Large numbers of Black Ducks and Mallards, goodly numbers of Blue-winged Teals, Ring-necked Ducks, and Hooded Mergansers were present on the lake

throughout the winter.—The Purple Finch has been notably scarce with only about four records for the past two months and then only a few were seen. The Cedar Waxwing, always erratic, was only recorded on Mar. 6 when Miss McGriff observed a large flock near her home.—There are some species that have been present during the winter which are not usually found around Knoxville. The vicinity of Fountain City with a small, swift flowing stream that remained unfrozen during the coldest of weather, proved to be a favored habitat for some of these birds. For the second time in the past four years a Brown Thrasher has wintered there. The White-crowned Sparrow, which is not at all common here, was reported in small numbers in early January, had increased to about 50 in late February and on Mar. 5 Freeland Goddard counted 30 on and around his feeding station. Also along this stream at least 6 Wilson Snipes could be flushed most any time and twice Goddard reported a Woodcock. Once he approached within 15 feet as the latter bird fed along the stream bank near a bridge abutment. The Woodcock was observed in flight song on Feb. 28 and again by Mrs. Walker and myself on March 2. Two birds were performing on the latter date when we watched and listened for twelve to fifteen minutes. However, we had waited approximately twenty-five minutes before the flight song began. On Feb. 4 Goddard, Baird, and the writer found 2 male Cowbirds, 2 American Pipits and 20 Rusty Blackbirds. The weather at the time had moderated some but snow still covered most of the ground.—The cold weather caused one incident that obtained some newspaper publicity. On Feb. 27 a Great Blue Heron in feeble flight was captured near Halls Crossroads by a truck driver who noticed the bird could stand only with difficulty. An investigation revealed a large ball of ice on each foot and this extra weight together with the decreasing supply of food had placed such a burden on the heron that it could hardly maintain equilibrium. The bird was thawed out, fed some goldfish and other food, and placed in a warm basement but it didn't survive.—The Fox Sparrow furnished us with fun and amusement when the ice and snow had covered everything. At Mr. Ijams' place the snow had been packed down to a cake of ice near a small shrub. This was the favorite feeding spot for two Fox Sparrows and here the grain and peanut hearts were thick enough to completely cover the snow. Yet the sparrows would hop into the air, alight scratching as if the leaves were thick on the ground, and finally after a pause would eat a few grains of seed and then repeat the performance. Was this habit or instinct?—Another highlight of the winter season was the appearance of a lone Tree Sparrow at Mrs. Picklesimer's feeding station on Jan. 23. It was in a flock of Juncos and White-throats but remained in the vicinity that day only.—Mr. Meyer reports that the cold weather increased his banding activities. It is of interest to note that of the 60 White-throats banded in 1939 he has had 20 per cent returns to Feb. 1, in the winter of 1939-40.—This year the Red-breasted Nuthatches have not been present in the Great Smoky Mountains National Park except in very few numbers, yet they have been found around Knoxville this winter to a much greater extent than usual.—The Purple Martin and the Red-wing were our first spring migrants and they both arrived Mar. 1. A Pine Warbler was heard singing on Mar. 10 so we may assume that spring is around the corner.—W. M. WALKER, Knoxville.

DUCK HAWK NEAR ALCOA:—In early October while a local sportsman was dove hunting, a hawk darted swiftly across the sky within shooting distance. When the hunter picked up the bird he realized its markings were somewhat unusual and phoned Mr. H. P. Ijams, giving him the details of the incident. The bird proved to be an immature male Duck Hawk, excellently marked.—It was taken in the flat, agricultural country near Alcoa, Tenn. some 6 or 8 miles from the Chilhowee range which is on the western side of the Great Smoky Mountains. Thus Alcoa is within easy hunting range for this swift and powerful master of flight.—Mr. Ogden mounted the bird for Mr. Ijams who then presented it to Mr. Arthur Stupka, Park Naturalist, for the Great Smoky Mountains National Park. Because the Duck Hawk is one of the rarer birds of the area this specimen will be placed in the Park museum.—W. M. WALKER, Knoxville.

TICKS ON PURPLE FINCH AND WHITE-CROWNED SPARRROW:—On Feb. 24, 1940, I collected near my home a male Eastern Purple Finch (*Carpodacus p. purpureus*). While members of this species were seen hereabouts in late December, they became absent or else quite scarce during and following the zero weather we had the second half of January. This individual was alone and on examination showed one tick, swollen to the size of an English pea, attached to the nape of his neck, and another, half that size, fastened over the left eye. The bird was badly emaciated, having flabby muscles and no fat. His plumage was darkened by a heavy coat of soot. He had been feeding on buds, but, when seen, his flight was weak. Another tick was found by Mrs. John Hutchison in her banding operations on an immature White-crowned Sparrow (*Zonotrichia l. leucophrys*). Originally banded Nov. 3, 1939, the bird was handled again on Feb. 11, 1940, when nothing unusual was noticed. Caught next on Mar. 14 he carried over the left eye a tick, which to judge by its gray color may have been of the same species as those I found on the Purple Finch. Ticks are not found in this section until late spring, particularly not after such a hard freeze. I am informed that about six species of ticks have been found on birds and that they are the same kind that feed on mammals.—ALFRED CLEBSCH, Clarksville.

REVIEW

NOTES ON THE BIRDS OF TENNESSEE, By Alexander Wetmore. (Proceedings U. S. National Museum, LXXXVI, 175-243, 1939).

Several years ago, Dr. Wetmore, who is Assistant Secretary of the Smithsonian Institution and an accomplished ornithologist, embarked upon a systematic field survey of the birds of the interior of the Southern States. His plan was to send field collectors into these states, taking one state each year, and to gather therefrom a series of birds in the form of study skins so that eventually the series would show whatever variation there might be and form a basis for the mapping of the range of the various species and

subspecies. Beginning with West Virginia (1936), the field work was carried on next in Tennessee (1937), Kentucky (1938), and North Carolina (1939) for periods during the spring and fall. As the collections are worked over and identified, the results are published by the author in the form of annotated lists and those for Tennessee and West Virginia are now available. The Tennessee report here reviewed is publication No. 3050 from Vol. 86 of Proceedings U. S. National Museum and covers 68 pages. Following four pages of introductory remarks, itinerary, etc., there is an annotated list covering the 186 species and subspecies observed by the party, for most of which specimens were obtained.

It so happens that Tennessee, extending more than 500 miles from east to west, lies midway between the Gulf Coast Region and the Great Lakes Region and that species of a score or more of Tennessee's resident birds are represented in the above regions by different subspecies. The State therefore constitutes a region of mingling for these forms and it becomes a difficult problem to ascertain which of the subspecies should be assigned to the state or, if both are present, to map the more or less indefinite boundary that marks their separation. As a matter of fact, where two subspecies meet or overlap, a large percentage of the birds will be found to be intermediate. With most birds having a wide range one can gather specimens from the extremes of the range and find enough difference to split the species into two or more forms. This of course produces a degree of chaos within the central areas and necessitates much collecting to determine where the forms merge. In recent years ornithologists have explored the Gulf Coast and Appalachian Mountain areas and there claimed many new southern forms, for the most part depending upon a slight difference in measurements or in shade of color. As a result Tennessee has become highly involved in the problem of attempting to map the range of such of these split-species as range within her borders.

We are indebted to Dr. Wetmore for not having complicated our problem further by making additional subdivisions within the States. We are indebted to him considerably for his assistance in mapping the range of the subspecies which have already been described. By comparing the Tennessee collection with the large and varied collections available in Washington, the author was able to classify his material with as much precision as is possible between closely related forms. To our basic *Distributional List of the Birds of Tennessee* (Ganier, 1933), Dr. Wetmore's report adds the following subspecies not heretofore recorded in the State and some of which are awaiting recognition in the next A.O.U. Check-List.

1. Canada Ruffed Grouse (*Bonasa umbellus togata*)
2. Western Solitary Sandpiper (*Tringa solitaria cinnamomea*)
3. Western Mourning Dove (*Zenaidura macroura marginella*)
4. Boreal Flicker (*Colaptes auratus borealis*)
5. Northern Carolina Chickadee (*Penthestes carolinensis extimus*)
6. Ohio House Wren (*Troglodytes aedon baldwini*)
7. Northern Yellow-throat (*Geothlypis trichas brachidactyla*)
8. Ridgway's Grackle (*Quiscalus quiscula ridgwayi*)
9. Western Field Sparrow (*Spizella pusilla arenacea*).

Included also in Dr. Wetmore's report are records of the following subspecies described since 1933 from Tennessee and adjacent areas and prior to the publication of his paper.

10. Appalachian Chickadee (*Penthestes atricapillus praticus*)
11. Southern Creeper (*Certhia familiaris nigrescens*)
12. Southern Winter Wren (*Nannus troglodytes pullus*) and
13. Churchill Savannah Sparrow (*Passerculus sandwichensis oblitus*)

According to Dr. Wetmore's findings, the Canada Ruffed Grouse would seem to displace the Eastern Ruffed Grouse from the List; likewise the Appalachian Chickadee displaces the Black-capped in our high eastern mountains and the Northern Yellow-throat displaces the Maryland Yellow-throat throughout the State. Of the Meadowlarks Dr. Wetmore found only the Southern form represented among eleven specimens collected across the State although those from the northeastern section appeared intermediate toward the northern bird. Similarly, among the Blue Jays, he comes to the conclusion that the Florida Blue Jay is the breeding form throughout. It is also noted with interest that no Northern Water-thrushes were among those collected in the mountains although it has been thought likely that this form would be found breeding there.

Those interested in the distribution of the two or more forms of the various species occurring in the State should read the findings of the author with regard to the Red-shouldered Hawk, Ruffed Grouse, Solitary Sandpiper, Mourning Dove, Screech Owl, Barred Owl, Flicker, Pileated Woodpecker, Downy and Hairy Woodpeckers, Blue Jay, Crow, Chickadees, White-breasted Nuthatch, Brown Creeper, House Wren, Winter Wren, Brown Thrasher, Robin, Parula Warbler, Meadowlark, Red-wing, Grackle, Towhee, Savannah Sparrow, Field Sparrow, and Song Sparrow. Were space available here, it would be of interest to discuss each of the above species as well as others, especially with reference to about seventy-five skins of the subdivided species, sent to Dr. Wetmore by the reviewer in order to be examined along with those the former had assembled. A report upon these will, however, be made later in this journal. To those taxonomists who are ever ready to insert a new subspecies wherever two already recognized forms meet and intergrade, and thus to further complicate the situation, the reviewer would call attention to the conservative statements by the author with regard to this under his remarks on the Field Sparrow and the Purple Grackle.

A copy of this report should be in the hands of all T.O.S. members interested in the distribution of Tennessee birds and the author advises that he will honor requests for copies. While the findings with regard to many forms are as yet far from conclusive, still an excellent ground work is laid, to be built upon as further collecting can be done. The building up of adequate collections of bird skins is a tedious and time-taking task which the amateur is inclined to shirk and such has been the case in the South. The author's style of writing is very readable and is as non-technical as could be desired upon what, after all, is a somewhat technical subject.—A. F. GANTER.

THE MIGRANT

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*"The simple truth about birds is interesting enough,
it is not necessary to go beyond it."*

PLEASE NOTIFY THE SECRETARY OF A CHANGE IN ADDRESS

We are indebted to various of our members for the timely illustrations in this issue. The excellent pictures of the Red-shouldered Hawks and the Great Horned Owl are by Mr. M. H. Oldham of Harrisburg, Ark. Pages 15 and 18 were arranged by Mr. Albert F. Ganier and include a picture of the Chukars, supplied by the Game and Fish Division of the Tennessee Department of Conservation, one of an immature Goshawk, courtesy of the Nashville Banner, one of Purple Martins at their nesting box by Dr. Chas. F. Pickering, and last but not least a drawing of Northern Horned Lark and Lapland Longspurs made especially for this issue by Mr. Ganier. We also want to express our appreciation to Dr. Earl O. Henry for his fine portrayal of the Upland Plover which graces the cover of this issue. We intend to call on Dr. Henry's talents again. The beautiful cover design used in recent years is also by a Knoxvillean, Mr. Harry P. Ijams, one of our veteran members. This design will still be used but when possible we plan to utilize the cover to present and preserve suitable drawings as well as to lend variety to the cover.

We also desire to express our thanks for a gift of \$10 from the Knoxville Chapter to the T. O. S. treasury, or, in effect, for publication of *The Migrant*. This is not their first generous assistance.

In the September issue—the Twenty-fifth Anniversary issue—we hope to print photographs of all our chapters in action. So local photographers get busy on the spring field days and let us have something to use.

John James Audubon appears on an U.S. postage stamp this year for the first time, the design being one of thirty-five known as the 'Famous Americans' series. Five denominations are repeated for seven groups of men, the classifications being: authors, poets, educators, scientists, composers, artists, and inventors. Audubon's likeness appears on the one-cent denomination of the 'scientists' group. The first date of sale is April 8 at St. Francisville, La., which is associated with the life and works of the famous ornithologist. We are leaving a space for you to attach this engraved portrait miniature honoring him.

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CALENDAR—T. O. S. ACTIVITIES

SPRING FIELD DAYS AND CENSUS TRIPS

- April 28—Knoxville Chapter, Island Home (Ijams) Farm.
May 5—Clarksville Chapter, Red River, Montgomery County.
May 5—Memphis Chapter, Lakeview, Tenn.-Miss.
May 12—Nashville Chapter, A Highland Rim stream. T. O. S. Business Meeting at the same time
May 19—Blue Grass Chapter, Osceola (Porter Farm), Columbia.
June 16-22—Field Week in Tenn. Mts. (to be arranged,—A.F.G.)
June—Try a breeding bird census in a restricted area nearby.
Sept. 1-2—Labor Day, an opportune time for bird trips.
Sept. 7-8—Mud Lake (Memphis) shorebird census, subject to water levels.
(Contact Ben Coffey, Sept 1-2 if desired).

The above is only a partial outline of a very active program. Are you taking part in these activities and projects?

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