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SOMETHING ABOUT BIRDS NESTS AND EGGS

By DR. H. S. VAUGHN

The spring of the year is to many of us the most interesting period in which to study birds for at that season they are engaged in nesting and rearing their young. It should be the goal of every bird student to find and examine the nests of every species of bird that nests in his vicinity. Not only a single nest of each but as many as possible, in order that he may learn the variations in sites chosen, the structure and composition of the nests, the number and appearance of the eggs, the time of incubation, the length of time the young remain in the nests, the number of broods in a season, the range of nesting dates, etc., etc. This particular branch of ornithology is sometimes called oology and has many devotees. It is particularly attractive to the masculine sex because men have an inborn love of hunting and because it takes strength, endurance, agility and the ability to go into "wild and wooly" places, often in the face of danger, if one wishes to gain wide knowledge in this study.

A few general remarks on when, where and how to go to find nests will be given below to assist those who are not well practiced in the "knack" of finding them. When to go, depends on the species to be sought for if you would view fresh eggs in a nest of the Great Horned Owl, you would climb to his lofty eyrie around the 20th of January. For the nests of Goldfinches, you would have to wait until the last of July or even August. In the latter month, one may also find belated nests of the Cuckoos, Indigo Buntings, Field Sparrows, Towhees, etc. For the most part however the high tide of nesting for small birds is the last half of May. Where to go, depends on what species you would seek. Whether to the woods, the thickets, the marshes, the fields, or perhaps a combination of all. By experience, and by reading of that of others, you will soon know what to look for in each type of territory. You will likewise learn how to look, for there is much fine technique to be acquired in looking for and finding the nest of each species. It is the learning of this technique that makes bird's nesting a sport which requires great skill and careful application. Under the head of how to go, should be included the advice that old clothes or hiking togs be worn so that no briar patch, thorn thicket or quagmire will tempt a detour. When nests are found, the date and a description of each should be written down in a notebook and this should be supplemented later by notes on subsequent visits. In looking into nests, do not touch them and do not pull the branches over to you for your greater ease. Adjust your own position rather than that of the nest. You may not appreciate the very slight damage you have done but the bird will detect it at once and will very frequently desert the eggs. Ground nests should not be approached closer than a yard; dogs and other animals follow human trails and disaster may result.

The eggs of birds present great variation and aside from their biological interest, they are interesting objects for study. There are reasons for their differences and the solving of these reasons furnishes much food for study. In certain species there is an evident intent to employ camouflage, so that the markings of the eggs blend perfectly with their surroundings and make them difficult to see. Thus, the eggs of the Chuck-wills-widow blend with the fallen leaves on which they are deposited, the Horned Lark with the dead grasses of

late winter and the plovers with the pebbles and loose rocks on which they lie. Birds which build nests in holes or cavities have no need for camouflage so their eggs are usually white. It is probable that birds, such as the Crested Flycatcher, which lay well marked eggs in cavities, have not always nested in such places. In this connection, it will be recalled that Chimney Swifts, House Finches and Purple Martins have within only a few hundred years, entirely changed their nesting habits. Why it is that Doves lay pure white eggs in an unconcealed nest, is somewhat of a riddle. Grackles and Jays find and destroy many of their eggs and in time Doves may evolve the cavity nesting habit. Grackles are far more abundant now than in early times.

The thickness of egg shells does not vary with their size. Certain species lay eggs that are very fragile, notably the Mockingbird, Grackle, Meadowlark and Crow. Other species, such as the Bob-white and Kildeer, lay eggs which are relatively thick-shelled. Eggs of the Chimney Swift, which have to rest on a hard platform of twigs glued together, have not only a thick shell but one that is reinforced with a membranous lining that is far thicker and tougher than that of any small bird.

The shell texture of eggs vary considerably. For instance, the eggs of the Flicker and Pileated Woodpecker have a highly polished surface. Those of the Catbird, Kingfisher and others, have a decided gloss. Most eggs however have a dull surface, those of the Kildeer for instance being quite rough. Eggs of the Double-crested Cormorant have a coarse, white, chalky deposit over them which sometimes entirely obscures the pale blue of the shell proper.

In shape again there is great variability. The roundest eggs are those of the owls while the most pointed are those of the Kildeer and Bob-white. The former are relatively large for the size of the bird but their shape permits four of them to "pack" closely when points are all at the center of the nest. Between these extremes, there are all sorts of shapes, one of the most peculiar of which is that of the Ruby-throated Hummingbird whose eggs are flat-sided with both ends blunt. Those of the Nighthawks and Whip-poor-wills are also of this shape. Some seabirds, such as the Murres, deposit their eggs on the bare rock of ledges of cliffs and they would often roll off but for their shape. Being blunt at one end with flat sides converging to a "point", they merely roll around in a circle when disturbed.

The markings of many eggs often greatly enhance their beauty, for there may be spots and blotches and scrawls of rich shades of browns, purple and lavender, often arranged in a distinct wreath about the larger end. The pigments are applied to the surface of the egg, while within the oviduct, after it has been fully formed and shortly before it is laid. Of almost as much interest as pigmentation is the ground color of the shells. This may be pure white, cream, buff and all shades of blue and of green.

The student of bird's nesting learns to know the eggs of each species so well that he can identify them at once on sight and apart from the nest. This is because there are certain constant characteristics in the eggs of each species that he learns to recognize. Likewise he can identify any nest that he may find, even tho it may be empty. He can usually do this at a glance, tho sometimes it is necessary to examine the construction of the nest, the materials of which it is made and the way it is built in the branches which support it. It is a wonderful thing to contemplate, that a pair of young birds will build their first nest, without any lessons from others of their kind, exactly the same way as have their countless generations of ancestors. One wonders if humans would do the same.

In concluding this article I would like to say that while not advocating collecting as a fad, it is my opinion that if the conscientious student of birds nesting chooses to assemble a carefully prepared, representative study collection of the eggs of our native birds, it is a worthy enterprise and not to be condemned. Such a collection, comprising two or three sets of eggs of each species, accompanied by complete data on each nest involved, housed in glass-

covered drawers, properly labeled, and made available for the study and enjoyment of other students of bird life, is an enduring thing and justifies the contribution that the birds themselves have made to it. A drawer of well prepared eggs, neatly arranged on red cedar sawdust, is indeed a thing of beauty. The collecting of such specimens is now regulated by law and permits for so doing are issued by the Federal Government only to those who are mature and who have received the endorsement of well known ornithologists. So strict are the conditions imposed that there are not more than half a dozen active collectors in Tennessee at the present time. The sum total of their annual "take" amounts to less than the toll taken by a few of the many thousand stray cats abroad in the land. The study of birds nesting need not necessarily involve forming a collection of eggs however, particularly if there is a good collection already available for reference. The written data that one can set down for each nest found and subsequently observed, is in itself well worth while.

When those who form collections of eggs find a set they need to fill a gap in their series, they proceed thus. After writing up all data, they remove the eggs one at a time, wrap them in strips of cotton and pack in a substantial box. These are later prepared by making a small hole in one side with a special drill. By blowing into this hole with a blowpipe, the contents are entirely removed and the shell is rinsed inside and out with water. When dry, they are marked with small neat figures so that the eggs of each set may always be distinguished from others. They are then placed in the cabinet where they will last an indefinite time without any deterioration. Birds quite often lose their eggs thru natural causes, or to predators, and will build anew and replace them within a short time. The advanced collector will take probably less than a dozen sets in a season.

NASHVILLE, TENN., February, 1936.

NOTE: To illustrate Dr. Vaughn's article, four pages of illustrations have been prepared and are reproduced on pages 13 to 16. The first plate shows twenty typical eggs of well known Tennessee birds. The specimens are shown double the actual size in order to more clearly bring out the types of markings. They are: No. 1—Brown Thrasher, uniformly covered with fine specks; 2—Chimney Swift, elongated shape and white; 3—Carolina Wren, speckled with reddish brown; 4—Cardinal, spots and specks of greys and browns; 5—Crested Flycatcher, thickly "penciled" with chocolate lines; 6—Cerulean Warbler, wreathed; 7—Orchard Oriole, spots and scrawls of blackish; 8—Barn Swallow, small spots all over; 9—Wood Pewee, rich browns and lilacs on creamy background; 10—Ruby-throated Hummer, smallest egg and pure white; 11—Blue-gray Gnatcatcher, next smallest egg; 12—Red-eyed Vireo, black dots on white shell; 13—Catbird, dark greenish-blue unspotted; 14—Long-billed Marsh Wren, shell entirely covered with brown markings; 15—Carolina Chickadee, wreath of brick-red; 16—Prairie Horned Lark, shell entirely covered with gray markings; 17—Kingbird, splashes of chocolate brown on creamy shell; 18—Lark Sparrow; 19—Baltimore Oriole and 20—Red-winged Blackbird. The last three show the irregular lines and markings which seem as tho done with a pen. On the second (double) plate, reproduced actual size, number 21 is Great Blue Heron; 22—Green Heron; 23—Black Vulture; 24—Double-crested Cormorant; 25—Least Bittern; 26—American Bittern (buff); 27—Coot; 28 and 29—Downy and Pileated Woodpecker (our largest and smallest); 30—a set of Kildeer; 31—King Rail; 32—Spotted Sandpiper; 33—Bob-white; 34 and 35—Great Horned and Screech Owls (our largest and smallest); 36—Bald Eagle; 37—Dove; 38—Chuck-wills-widow; 39—Crow; 40—Osprey; 41 and 42—Red-tailed and Sparrow Hawks (our largest and smallest); 43—Sharp-shinned Hawk (handsomest of hawk eggs) and 44—Duck Hawk (entirely covered with reddish-brown markings). The last plate illustrates a beautifully constructed nest of the Yellow-throated Vireo. This nest is suspended from rather than resting on, the branches. It is composed of plant fibres, bark shreds, etc., and ornamented on the exterior with blue-gray lichens.—Ed.

BIRD BANDING BREVITIES—NO. 8

BY AMELIA R. LASKEY

This winter has proven to be a very successful season for trapping Cardinals and it is hoped that the two hundred banded in the past three months will in time yield some information concerning their movements. In Belle Meade, at the home of Mrs. E. C. Tompkins, 82 were banded between November 22, 1935, and February 18, 1936; at the West End substation, Leo Rippey banded 48 during the same period; Spiller Campbell banded 36 in January at his home adjoining Peabody Campus. Each of the five stations operated yielded some very interesting return records totaling more than 25 individuals, 7 of which had been banded three years ago and 3 of them two years ago. A nestling banded last June in our garden was captured in December less than a mile away. Another fledgling banded in September was retaken also in December not quite two miles from its early home. — However some of the interesting old garden residents that were distinctively banded have disappeared during this record breaking cold winter with its frequent snows. Among them is B23487, the Cardinal that has nested in the garden at least three years. Her mate and the three color banded Mockingbirds that held territory about our home this winter are also gone. The fact that all disappeared during the moonlight nights when predators were also seen is significant. Another Mockingbird under observation at the Belle Meade substation is known to have fallen victim of a Screech Owl for the Tompkins family heard his cry of distress and rushed out in time to see him carried off by the owl from his roost at their living room window. Sparrow Hawks were very troublesome at all the stations this winter when the ground was frozen hard or snow covered. They found food scarce elsewhere and attempted to get birds in and about the traps. — Other tragedies occurred among Field Sparrows and Juncos that were due to a habit peculiar to cold weather. They gorge on seeds until they are so full they are unable to close the beak and sometimes then inhale a seed which lodges in the trachea, causing instant death by strangulation. The gullets of the three victims were examined and it was found those of the Juncos contained more than 450 millet seeds each. The Field Sparrow was an old bird spending her fourth winter at the station. From her gullet, throat, and mouth, 636 hulled millet seeds were taken which when dry weighed 1 gram. The bird weighed 16.4 grams and was very fat. She had been accustomed to feeding in the traps as her record shows she had been removed from them 44 times. — A Robin banded in September 1931 as an adult was again captured in November 1935 in a Verbal pole trap. These traps, made for Hawks, Owls, and animals, are so constructed that even a small bird may be captured without the slightest injury. — Some old Towhees were retaken during the snowy periods, 3 that were banded three years ago and 4 that were banded two years ago. — A Lincoln's Sparrow was trapped on December 22nd which is the first winter record of this species in the Nashville area, the only other late date being November 30, 1934, when Jack Calhoun collected one that he found in a flock of Field Sparrows. — A Tree Sparrow was banded at my home station on January 21, 1936. — An interesting experience was the banding of my first Golden Eagle on February 4th. The immature bird had been captured the previous day by a resident of Watertown, Tenn., shipped to the State Game Department at Nashville, and then forwarded to Gatlinburg to be released in Smoky Mountains National Park. The Eagle proved to be very docile and quiet. His head was covered with a dark cloth as he was held by Mr. John Caldwell while the band was fastened about the tarsus, which in this species is entirely covered to the toes with feathers.

NASHVILLE, TENN., Feb. 22, 1936.

A FEATHERED SPORTSMAN

BY WM. M. WALKER, JR.

The term "Sportsman" has been arbitrarily taken over by man, who, having equipped himself with a gun and hunting license, goes forth to slay what the law allows. By an odd psychological twist, perhaps prompted by human ego, he at once proceeds to characterize the birds of prey as "vermin", because these raptors are afield, at times, for game on their own account. The hawks however, having been "native sons" from time immemorial, would doubtless have better grounds to speak disparagingly of sportsmen as "vermin" were they able and unkind enough to air their views. In the last issue of *The Migrant*, the writer mentioned having observed a Duck Hawk on October 13, on Lake Andrew Jackson near Knoxville. In response to a request from the Editor, I am giving below some further details of the falcon's method of hunting.

On Sunday, October 13, George Foster, Mrs. Walker and the writer drove to the Lake to see if any ducks were present, and as usual, we were not disappointed although our find was not a water bird. We were standing by the south-side boat landing when George espied the bird flying low over the water at the west end of the lake. Before I had seen the falcon he had identified it as the Duck Hawk. Our luck continued, for the bird alighted in an oak tree on the lake shore about one hundred yards from where we were standing. Our original identification had been on flight pattern and size; now we were able to see the black hood and "mustache". Further examination revealed that the breast was streaked with brown, and because of the size of this bird we concluded our visitor was an immature female.

The hawk remained perched in the tree for about fifteen minutes. Frequently it turned its head to watch some bird flying by, and for a while it watched with true hawk-like interest a flock of thirty-five or forty Killdeer. Several times a lone Robin scolded loudly from a near-by pine and two or three times it dived at the hawk as if trying to drive it away. But the latter was only mildly interested; it employed neither a defense nor an offense against the Robin. Two Jays came to investigate but returned swiftly and silently to the thicket from which they had appeared.

The lake territory had returned to normal as far as the bird-life was concerned, when suddenly the hawk with partially opened wings began a long slanting dive towards the group of Killdeers that were on a low-water promontory. The Killdeers took to the air about the same time the hawk left its perch. The birds flew east, the hawk north, but the latter made no effort to strike as it flew low over the group. The hawk, after crossing the lake, followed the north shore until it was above the fringe of willows at the upper or west end of the lake. I was watching the bird thru my glasses when suddenly it dived and for an instant two birds were in the field of view, but when the hawk began to climb again I decided to watch the drama without the glasses. The excited "rattle" of the Kingfisher identified the proposed victim. The Kingfisher lost altitude during the next attack as the Duck Hawk struck once going down and once again as it climbed effortlessly into the air. I decided to have "a ringside seat" for the third attack so up went the glasses and there was the Kingfisher about three feet above the lake surface and flying as rapidly as possible toward a cedar thicket. Suddenly it made a quick dart to one side then to the other and finally hit the surface of the lake to churn the water with three or four rapid wing-beats. The hawk, pursuing relentlessly, after matching each twist and turn, failed by inches to clutch the Kingfisher as it lay on the water. The intended victim escaped to the thicket while the attacked returned to the same tree it had left a couple of minutes earlier.

We walked on off—passing in the open and within sixty yards of the hawk as it sat in the oak. Later we observed it chasing the Killdeers and again,

perhaps an hour after the first performance, we saw a Starling playing the leading part in the game of sky-tag. However we were too far away to see the last of the chase. The falcon was probably not very hungry else would have attacked with more determination and success. The Duck Hawk has been recorded at this lake twice prior to 1935, in each case some several years ago.

KNOXVILLE, TENN., Dec. 1935.



ARRIVAL OF SPRING MIGRANTS AT NASHVILLE

BY ALBERT F. GANIER

One of the most evident and audible signs of the arrival of spring is the return of the birds from their winter homes in southern lands. They seem glad to be back again and students of birdlife are equally glad to welcome them and to record the coming of new arrivals from day to day. Most of these birds are in song, while hunger from long flights and damp chilly nights makes them active among the half clad trees where they may be readily studied. Each year as we record the first arrivals, there arises the question, "how does this date compare with the previous earliest and the average?" To meet this question, the following data has been compiled. These records are for the Nashville area and cover twenty years of observation on the fifty best known of the spring arrivals. Following the name of each species is the average date of first arrival. This average is computed from those which are shown in the parenthesis following and which represent the twelve earliest dates of arrival that have been recorded since 1915. However, certain of these dates, those printed in italics, are so "out of line" that they have not been used in computing the average given. For the convenience of beginners, the species are listed alphabetically instead of in the A. O. U. order.

The records are chiefly from the notes of G. R. Mayfield, H. C. Monk and A. F. Ganier; the author wishes to acknowledge with thanks the assistance of Messrs. Mayfield and Monk in making their records readily available. Included also are a few other records, taken from the minutes of T. O. S. meetings, and made by Mrs. Laskey, Miss Hollinger, Messrs. Calhoun, Crook, Sharp, Shaver, Vaughn and Walker. The securing of these arrival dates involved an immense amount of field work, the data having been taken off bird list cards made on many hundred trips afield. For those who would wish other migration data from this locality, reference is made to "Bird Migration at Nashville" by H. C. Monk, *Journal, Tenn. Acad. of Science*, 1929, v. 4, pp 65-77, and, for the eastern part of the State, to "Spring Migration at Athens, Tenn." by A. F. Ganier, in *The Migrant*, 1935, v. 6, pp 2-5.

- BOB-O-LINK—April 27. (Apr 19-22-25-26-26-27-28-29-29-29-May 1-4)*
 BUNTING. INDIGO—April 17. (Apr 14-15-16-16-17-18-18-19-19-19-19-20)
 CATBIRD—April 16. (Apr 14-14-14-16-16-16-16-17-17-18-18-19)
 CHAT. YELLOW-BR.—April 21. (Apr 16-17-18-19-21-22-22-22-22-23-23-24)
 CHUCK-WILLS-WIDOW—April 15. (Apr. 1-9-12-16-17-17-20)
 DICKCISSEL—May 3. (Apr 28-29-May 1-1-2-3-4-5-5-6-7-7)
 FLYCATCHER. ACADIAN—April 30. (Apr 15-20-23-24-25-26-26-26-May 1-2-3-4)
 FLYCATCHER. CRESTED—April 15. (Apr 10-10-12-14-15-15-16-16-16-17-17-18)
 GNATCATCHER. BLUE-GRAY—March 25. (Mar 12-15-20-20-21-22-23-24-26-27-28-29-29)
 GROSBEAK. ROSE-BREAST—April 22. (Apr 18-18-19-20-21-22-23-23-24-24-25-25)*
 HERON. GREEN—April 7. (Mar 25-30-31-Apr 3-6-6-7-8-9-9-9-12-12)
 HUMMINGBIRD. RUBY-THR—April 17. (Apr 11-13-14-15-15-16-17-18-19-19-19-21)

- KINGBIRD—April 16. (Apr 13-14-14-15-16-17-17-17-18-18-19)
 MARTIN, PURPLE—March 27. (Mar 17-21-22-22-23-23-25-27-29-31-Apr 1-2-4)
 NIGHTHAWK—April 20. (Apr 8-16-17-18-19-20-21-21-22-23-23)
 ORIOLE, BALTIMORE—April 14. (Apr 8-10-12-13-14-15-16-16-16-16)
 ORIOLE, ORCHARD—April 15. (Apr 10-11-13-13-16-16-16-17-17-17-18)
 OVENBIRD—April 16. (Apr 1-10-13-14-16-16-16-17-18-20-20-20)
 PEWEE, WOOD—April 25. (Apr 20-23-23-23-24-24-25-27-27-28-29)
 SANDPIPER, SOLITARY—April 11. (Apr 4-7-8-10-10-12-13-13-14-14-15-16)*
 SANDPIPER, SPOTTED—April 21. (Apr 10-14-16-19-20-22-22-25-26-26-27-29)*
 SPARROW, BACHMANS—March 28. (Mar 12-17-22-24-28-29-29-31-Apr 1-1-4-5)
 SPARROW, CHIPPING—March 9 (Feb 21-Mar 3-3-5-6-8-9-11-11-13-15-15)
 SPARROW, GRASSHOPPER—April 9. (Mar 23-30-31-31-Apr 5-8-11-12-15-15-19-20)
 SPARROW, VESPER—March 14. (Mar 1-1-5-5-14-14-17-20-21-21-22-23)°
 SWALLOW, BARN—April 12. (Apr 4-5-6-8-9-10-14-15-15-16-19-19)
 SWALLOW, ROUGHWING—March 28. (Mar 17-20-20-24-25-31-31-Apr 1-1-2-3-4)
 SWIFT, CHIMNEY—April 2. (Mar 25-30-30-Apr 1-1-1-2-3-3-3-3-3)
 TANAGER, SUMMER—April 15. (Apr 9-10-13-13-15-15-15-16-16-16-18-18)
 TANAGER, SCARLET—April 17. (Apr 6-13-15-16-17-17-17-18-18-19-19-20)
 THRASHER, BROWN—March 4. (Feb. 14-14-26-Mar 1-1-2-4-5-5-6-6-7-7-9)
 THRUSH, OLIVE-BACKED—April 22 (Apr 16-17-18-20-20-22-22-22-23-25-27-27)*
 THRUSH, WOOD—April 7. (Apr 3-5-5-6-7-7-7-9-9-9-10-10)
 THRUSH, LA. WATER—March 22. (Mar 16-17-18-20-21-22-22-23-23-24-29-29)
 VIREO, RED-EYED—April 14. (Apr 6-8-10-10-12-12-13-15-15-15-16-17-17-17)
 VIREO, WHITE-EYED—April 2. (Mar 31-31-31-Apr 1-2-2-2-3-3-4-5)
 WARBLER, BLACKPOLL—April 27. (Apr 18-25-25-25-26-26-27-27-27-28-28-29-29)*
 WARBLER, BLACK-AND-WHITE—March 27. (Mar 18-20-22-24-27-27-29-29-30-30)
 WARBLER, BLACKBURNIAN—April 21. (Apr 7-17-17-18-21-25-26-27)*
 WARBLER, BLACK-THR GREEN—April 5. (Mar 20-26-30-31-Apr 3-4-7-7-7-8-9-10)*
 WARBLER, CAPE MAY—April 25. (Apr 16-18-19-20-24-26-27-28-29-29-29-30)*
 WARBLER, HOODED—April 12. (Mar 31-Apr 8-9-9-10-12-12-12-14-14-15-16-16)
 WARBLER, KENTUCKY—April 17. (Apr 15-15-16-16-16-17-18-18-18-19-19-20)
 WARBLER, MD YELLOWTHROAT—April 8. (Apr 6-6-6-7-7-7-8-9-9-9-10-11)
 WARBLER, MAGNOLIA—May 2. (Apr 18-19-28-29-30-May 1-1-4-4-4-5-5)*
 WARBLER, REDSTART—April 20. (Apr 12-13-17-18-19-19-19-20-20-21-21-23)
 WARBLER, SYCAMORE—April 4. (Mar 31-31-Apr 2-2-3-4-5-6-8-8-9-9)
 WARBLER, YELLOW—April 7. (Apr 4-4-5-5-6-6-7-7-9-9-9-10)
 WARBLER, PROTHONOTARY—April 15. (Apr 5-9-11-15-15-16-16-20-21-22-22)
 WARBLER, TENNESSEE—April 23. (Apr 21-21-21-22-23-23-24-24-24-25-25-25)*
 WHIP-POOR-WILL—April 14. (Apr 1-4-9-10-11-12-13-14-17-18-19-20)

* Species so noted, do not breed in the Nashville Area.

(Notes:—Where there is a widespread difference in the arrival dates shown, a careful lookout should be kept in future to record the species at dates earlier than the average given. Vesper Sparrows and Brown Thrashers sometimes occur in mid-winter. For Chuck-wills-widow and Blackpoll Warbler, there are other arrival dates recorded but so late that they obviously do not represent first arrivals.

NASHVILLE, TENN., February, 1936.



BREEDING BIRDS OF TENNESSEE:—According to the 1933 List, the total number of species and sub-species of birds nesting in the entire State is 176. Those nesting in East Tennessee only are 140 kinds, in Middle Tennessee only 122 kinds and in West Tennessee only 123 kinds. How many kinds of nests have you actually found in your locality?

THE HISTORY OF A MARTIN BOX

BY JAMIE ROSS TIPPENS

I have always wanted a Martin "Box", but was afraid, one that I could build, would turn out to be one of those untidy, heavy headed things, drooling Sparrow nests from every doorway. So, in April 1934, I asked one of our more experienced members what proportions and details a successful Martin box should have. By following his instructions, and with the help of the yard man, I built a two story, four room cottage, with two rooms in the attic under the gables and porches for each floor. It was painted white, with green door frames, and a green roof, and a gay red chimney.

April 22.—While the first coat of paint was drying, a Bewick Wren came and joyously filled an attic room with sticks, perching on the chimney to sing every few minutes. Three days after, I put the final coat of paint on the box and removed the nest. The Wren was nearby all the time I was painting, and as soon as I put the box on a stool to dry, he started building again. He seemed undisturbed by the wet paint and its strong odor. This nest was built in the other attic room and there I let it remain; I also left the box on the stool, preferring an actual Wren to a problematical Martin. For about two weeks the little builder was about the box singing constantly, when a female Wren came and accepted the nest he had made ready and in due time, six eggs were laid.

June 7.—I noticed the Wrens carrying Food into the nest, which seemed full of young. I was away from home when the young birds left the nest and believe all the eggs hatched as I found nothing but mites in the nest when I removed it from the box in August.

August 2.—The Martin box was thoroughly cleaned and fastened to a tall pole in an open space in my garden. The rest of the summer a Mockingbird used its little red chimney as his concert porch. When cold weather came and thru the winter, a Flicker used one of the lower rooms as a sleeping place. He seemed to enjoy the noise he made, drumming on the walls inside. I was afraid he would ruin the box, but he looked so contented peering out through the door, I didn't disturb him. In the early spring, 1935, some English Sparrows took possession of both attic rooms. I tried to drive them away by throwing clods of dirt at them. My aim was so poor, however, that they kept right on with their nest building, much to my disgust.

April 24, 1935—While working among my flowers under the Martin box, I heard some loud clear bird notes which sounded like a Crested Flycatcher whose voice had been cultivated. The notes were right over my head and I could scarcely believe my eyes. There, really was a Purple Martin, walking up and down the porch, peering into the rooms, and having a lot to say about everything. That sight gave me a real thrill. In a little while he flew away, but several hours later four Martins came and examined the box; all were males.

April 25.—One male and one female Martin visited the box, took in the situation from every angle, the female constantly examining the attic rooms, already occupied by Sparrows. She seemed as disgusted with the Sparrows as I was, and flew away. The male staid for a few minutes on the porch, calling, then followed her. April 26.—Same performance as the day before. The female seems to refuse to accept a home infested with Sparrows. I heard young Sparrows chirping but the adult birds have made no effort to drive the Martins away. April 29.—Martin back again after a two day absence; two females and one male, all very noisy.

May 1.—A pair of Martins seem to have claimed the box, Sparrows and all. I failed to make a note of the date I saw the Martins carrying straws into their new home but all through May and June, I found the keenest pleasure in watching these exquisite birds. Their graceful flight is truly poetry of

motion. It was breath taking, to see them come hurtling in with half closed wings, swerve up to the porch and land as lightly as a feather.

June 22.—My Martins are feeding three young, in the lower left room. Three little heads appear in the door way quite often. Two extra females present for the last three days; male tries constantly to induce them to examine the upper rooms. He goes inside and sings loudly, peers out to see if they are noticing, then repeats the performance many times. He is determined in keeping them away from the lower rooms however. July 1.—Young Martins still in their nest room—two heads now fill the door way to capacity. Four extra females are here all day but they do not roost in the Martin box at night.

July 2.—Sparrows are rearing another brood in the attic. This morning a Martin and a Sparrow had a fearful fight; while they were fighting, a Mockingbird joined the fray, and all three fell to the ground in a whirling mass. In a few minutes the Martin flew up to his porch to preen himself. The Mockingbird and Sparrow came up at the same time—the former flew to a rose vine nearby, but the Sparrow perched himself squarely under the Martin box with his beak full of feathers. Later, one young Martin ventured out on the porch; after looking about with seeming astonishment at the outside world, it scrambled hurriedly into the next room, where it remained most of the day. Late afternoon July 2.—Fifteen Martins flying about the box, all calling excitedly. Only two are adult males.

July 4th.—Young Martins left the box this morning at about six-thirty; sailing out, without any preliminary efforts whatsoever. Parent birds flew off with them; later in the day I saw the three young perched on some telephone wires several hundred feet away. The parent birds would not allow them to enter the box until roosting time. A flock of Sparrows tried to take possession of the box, as soon as the young Martins were out. We discouraged them by shooting five.

July 5th.—Martins literally swarming about the box, all very noisy. They were entering the rooms at will until late afternoon, when they all flew close and hung in the air a second, but none would alight. In a few minutes the male parent came, walking up and down the porch calling.

The three young that were perched on a nearby wire came in then and entered the upper rooms. The male was kept very busy driving away all strangers. The female came in, fed one of the young and went into a lower room. The male remained on the porch, swooping out at any approaching Martin. He kept this up until dark, then flipped inside; his day's work done.

July 6th.—At roosting time the same program was carried out, as on the previous day, the only difference being, that the strangers—I counted 20 of them—were discouraged sooner. The adult pair cruised about for a short time, coming in at intervals to feed the young. At 7:30 they went to roost. This performance was repeated for several days—fewer strangers each time. By the middle of August all the Martins had gone and I am curious to know where they went and what they do, until the nesting season comes again.

NASHVILLE, TENN.

SOME OBSERVATIONS AT A FEEDING STATION

BY CYNTHIA C. COUNCE, M.D.

A peculiar thrill flashes over me every time I see the Hermit thrust eating at my bird-table, and I am wondering how many bird-lovers can persuade the little "swamp angel" to come and eat within two feet of their door-steps.

The feeding stations on the Sanitorium grounds (near Memphis) are varied and of many styles, yet it is plainly demonstrated that our Southern birds prefer eating on slabs and boards, or, better still, on the gravel driveway around the house. Particularly do the Juncos, White-throated Sparrows, Brown Thrashers, Mockingbirds, Towhees and Hermit Thrushes seem to prefer it.

An outside window shelf that contains a large bowl of crushed walnuts is claimed by a pair of Tufted Titmice. This they guard very jealously until the Cardinals come. The pair of Titmice are early morning visitors and most gracious of all birds that come to my feeding shelf. They never fail to peep into my room with a joyful note and sometimes they will stretch their necks and chant out a number of notes, as if they are asking me something. One Titmouse wears a band on his leg, and the other one is a cripple, one foot entirely gone. The Titmice are very interesting. They show personality and make good sports. They are very trusting in their makeup. I have seen them sing on the moulding in my room, and they will eat black walnut kernels out of your hand immediately after being captured. When clasped in your hand, with toes between your fingers, they will turn at once on your fingernails, woodpecker fashion. They appear fearless, possessing an independent air, while other birds are often overcome with fear and refuse to eat at first.

An unusual feature here is that there are no English Sparrows on the grounds for on those occasions when their harsh, discordant notes are heard, they are immediately made the target of a 22 rifle and are not slow to take the hint that they are not welcome.

The bird cafeteria is supplied with cornbread crumbs (in abundance), cracklings, chops, grits and other grains. With plenty of food, water and protection, we manage to have 30 to 40 Juncos, 50 to 60 White-throated Sparrows, Field Sparrows, Bluejays, Towhees, Cardinals, Brown Thrashers, Mockingbirds, Red-headed and Red-bellied Woodpeckers, Wrens and Grackles. Most of these birds are enrolled as "regular boarders."

LYNNHURST SANITORIUM, OAKVILLE, TENN.



ANNUAL CHRISTMAS CENSUS

BY OUR MEMBERS

Our sixth state-wide census of winter birds is given in the table below and we include also, two points in North Mississippi. The total of the Tennessee lists show 88 species and this may be compared with the four preceding years when 88, 90, 87 and 77 species were listed respectively. An unusually cold December was believed to have been responsible for the Northern Horned Lark and Tree Sparrows, more than the usual numbers of Purple Finches, Fox Sparrows and Juncos and the unusual scarcity of Robins, Grackles and Waxwings. Although not so indicated by these lists, Doves have also been scarcer this winter. This census, combined with previous ones, gives a good cross-section of mid-winter bird life in the State. Most of the lists were made this year on very cold, snowy days and some are not as complete as if good weather had prevailed. The Memphis list of 70 species breaks, by 2, all previous records.

	Memphis Dec. 22	Lula Lake, Miss. Dec. 24	Corinth, Miss. Dec. 30	Covington Dec. 25	Paris Dec. 25	Nashville Dec. 22	White Bluff Jan. 5	Murfreesboro Dec. 29	Knoxville Dec. 22	Gt. Smokies Park Dec. 22	Dec. 25 Johnson City
Cedar Waxwing	86	8	8	..	..	2	..	..	..	..	2
Migrant Shrike	37	13	2	1	..	..	..	3	..	..	2
Starling	460	1560	..	1	47	465	100	18	458	250	60
Myrtle Warbler	128	39	..	2	..	45	1	..	11	..	24
Pine Warbler	6	..	..	..	..	..	..	..	..	..	..
English Sparrow	Com.	Few	..	Few	35	100	44	10	117	23	100
Meadow Lark	309	41	50	25	36	150	28	30	22	1	6
Redwing Blackbird	155	124	..	..	..	..	..	..	..	1	..
Rusty Blackbird	1	..	..	..	..	..	..	..	..	..	..
Bronzed Grackle	166	15	150	..	..	3	..	..	..	..	..
Cowbird	73	4	..	..	..	..	..	..	..	..	..
Cardinal	500	46	8	30	11	315	39	36	56	90	32
Purple Finch	20	..	..	7	..	..	11	4	6	..	..
Goldfinch	164	5	4	3	..	23	23	2	20	26	20
Towhee	89	1	150	..	31	40	11	3	24	9	..
Savannah Sparrow	15	47	..	2	..	..	..	..	..	..	2
Fox Sparrow	72	..	14	..	..	1	..	6	1	15	..
Vesper Sparrow	..	..	..	..	..	..	..	..	..	3	..
Slate-colored Junco	1170	28	200	175	26	437	231	25	160	*500	50
Field Sparrow	104	..	35	..	2	302	42	6	32	70	6
Tree Sparrow	..	..	1	..	5	..	..	..	..	..	..
Chipping Sparrow	..	..	..	..	..	..	..	..	..	..	..
White-cr. Sparrow	50	..	..	4	6	58	..	10	4	..	10
White-thr. Sparrow	1300	55	300	60	41	123	20	12	117	35	8
Swamp Sparrow	253	4	6	..	..	14	3	..	..	..	..
Lincoln's Sparrow	..	..	..	..	..	*1	..	..	..	..	*1
Song Sparrow	180	18	25	1	8	37	18	15	47	42	58

*Northern Horned Larks probably occurred at other points besides Nashville.

*Some of the Juncos listed in the Park may have been Carolina Juncos.

*Notes on the Lincoln's Sparrow will be found in "Bird Banding Brevities."

MEMPHIS: Dec. 22. 7:30 a.m. to 5:30 p.m. Overcast. Wind gentle. Temp. 29-35. Two inch snow fell night before. A careful canvas of city suburbs and adjacent territory. Observers: Mr. and Mrs. Ben B. Coffey, Miss Alice Smith, Dr. C. E. Moore, Messrs. Carney, Clayton, Embury, Fiedler, Hovis, Jackson, Leigh, McCain, McCamey, Moore, Jr., Pond, Powell, Turner, Wallace and Whittemore.

LULA LAKE (55 miles s-w of Memphis): Dec. 24. 8:30 a.m. to 5:15 p.m. Overcast except part of p.m. Temp. 26-30. Including short stop at Beaverdam Lake also in boats on Moon Lake. 4 miles on foot, 20 by auto. Observers together. Observers: Messrs. Coffey, Carney, Hovis, Wm. Moore, Turner and Whittemore.

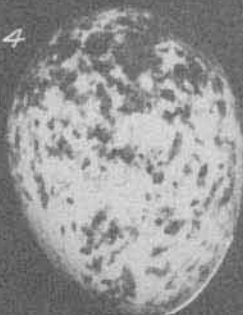
CORINTH: MISS.: Dec. 30. 1 p.m. to 5 p.m. Fair. Temp. 40. 3 miles s-e of Corinth at Hillandale Country Club. (For notes on the Tree Sparrow, see Round Table section). Benj. R. Warriner.

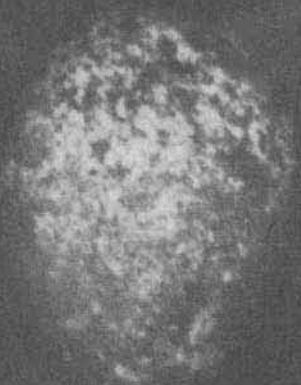
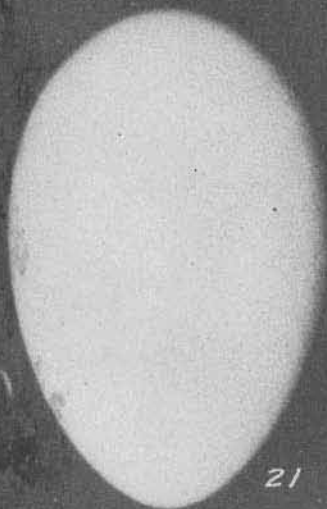
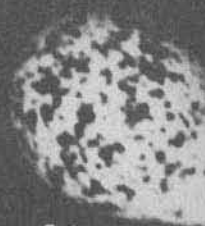
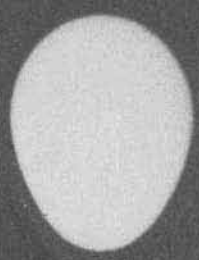
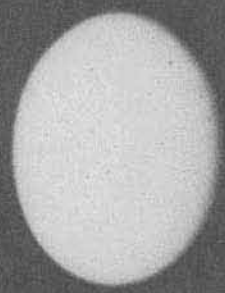
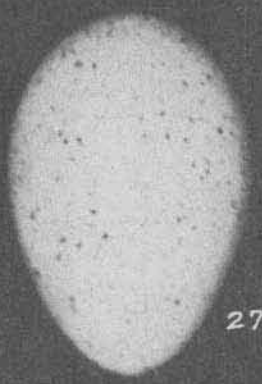
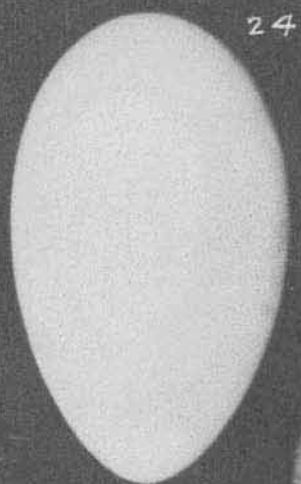
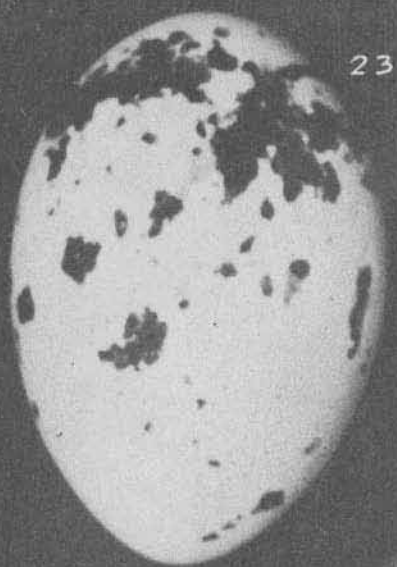
COVINGTON: Dec. 25. 10 a.m. to 4 p.m. Temp. 28-32. Partly cloudy and windy. Five miles south of town and thence to Airport. Miss Alice Smith.

PARIS: Dec. 25. Six hours afield. Snowing during a.m. Stiff wind. Temp. 34. North and west of town. Observers: Buster Thompson and Paul Crosswy.

NASHVILLE: Dec. 22. All day afield. Overcast. Deep snow on ground and snowing in a.m. Temp. 27-31. Windy. 6 parties. About Nashville. Observers: Mrs. Laskey, Mrs. Duncan, Mrs. Cochran, Messrs. Abernathy, Calhoun, Campbell, Carter, Crook, Ganier, Mayfield, Monk, Rippy, Shreiber, Tracy, Vaughn, Weakley and Woodring.

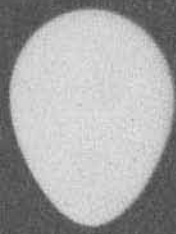
WHITE BLUFF (new Montgomery Bell park): Jan. 5. 9 a.m. to 4 p.m. Mostly cloudy. Temp. 28-40. Ground bare. Wooded hills and old fields area



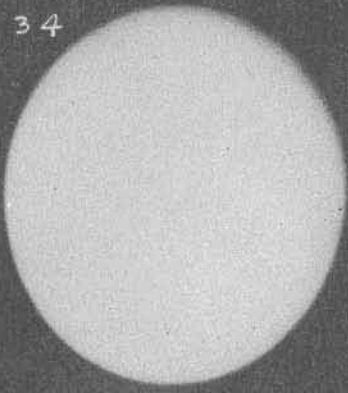


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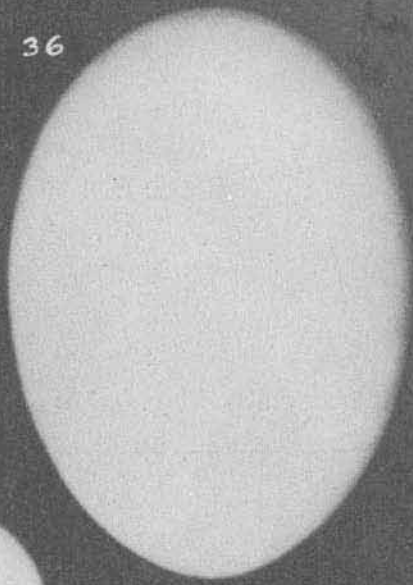
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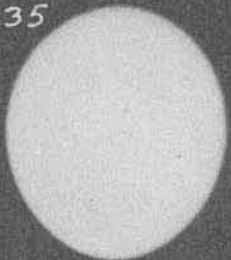


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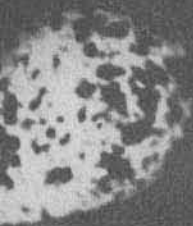
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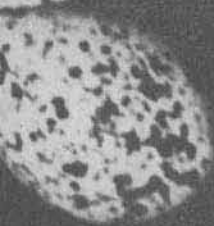
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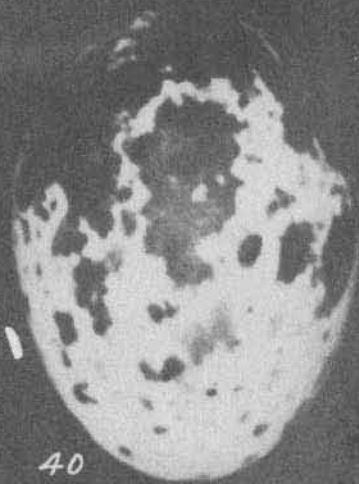
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Nest of the
Yellow-throated
Vireo
built 60 feet
up, in a
sycamore.

of 5,000 acres with springs and creeks, being converted into naturalistic park. Three parties. A. F. Ganier, H. C. Monk, J. M. Shaver, H. S. Vaughn and G. B. Woodring.

MURFREESBORO: Dec. 29. Ground snow covered. Temp. 28-32. About 5 miles on foot near town. Dr. Black, Geo. Davis, J. M. Edney, Robert Murphy and H. O. Todd.

KNOXVILLE: Dec. 22. 7:30 a.m. to 4:30 p.m. Overcast and snowing. Temp. 21-29. Within 7.5 mile radius of city. Observers: Mr. and Mrs. W. M. Johnson, Mrs. John Hollander, Messrs. Earl Henry, H. P. Ijams, Jim Trent, Jr., and W. M. Walker.

GREAT SMOKY MOUNTAINS NAT. PARK: Dec. 22. 6:15 a.m. to 4:30 p.m. Cloudy in a.m. with snow falling (2 inches deep at noon), partly cloudy in p.m. Temp. 20-29. Cades Cove chiefly, thence to Walland. Geo. Foster and Arthur Stupka.

JOHNSON CITY: Dec. 25. 7 hours afield. Temp. 20-33. 4 inches of snow on ground. Cox's Lake, Indian Ridge, Boones Ck. and Sugar Hollow. Bruce P. Tyler.



NEW BIRDS FOR THE TENNESSEE LIST

In the March 1934 issue of *The Migrant* (p. 15) there was published a list of seven new birds which had been found during 1933, that had not been recorded up to the time of publishing the *Distributional List of the Birds of Tennessee*, on January 1st of that year. They were the Laughing Gull, Stilt Sandpiper, White-eyed Towhee, White-winged Junco, Clay-colored Sparrow, Gambel's Sparrow and Harris' Sparrow. During 1934 and 1935, thirteen additional species or subspecies have been recorded in *The Migrant*, as follows:

Amer. Eared Grebe, 1935, p. 93, specimen taken near Nashville 1-14-1923.

Greater Scaup Duck, 1935, p. 49, taken in Cocke Co., about 1905.

Black Rail, 1935, p. 49, taken in Cocke Co., June, 1915.

Western Willet, 1935, p. 49, taken in Cocke Co. in 1934.

Western Sandpiper, 1935, p. 52, flock at Memphis, Aug. 7 and 11, 1935.

Piping Plover, 1935, p. 35, one near Memphis on May 5, 1935.

Hudsonian Curlew, 1934, p. 40, one near Memphis on July 8, 1934.

White Ibis, 1935, p. 68, one near Memphis on Sept. 2, 1935.

Rock Dove, 1935, p. 93, found naturalized near Nashville, 1934.

Amer. Rough-leg Hawk, 1935, p. 13, one near Nashville, Dec. 22, 1934.

Brewer's Blackbird, 1935, p. 73, one near Johnson City, April 20, 1935.

Bell's Vireo, 1935, p. 67, nesting at Memphis in June, 1934.

Common Redpoll, 1934, p. 14, one at Johnson City, winter 1933-34.

The total number of birds now credited to Tennessee becomes 316, which number includes accidental and extirpated species.

During 1934-35, *The Migrant* published first nesting records for the State of the following species: Pied-billed Grebe 1934: 29, Blue-winged Teal 1935: 22, Amer. Bittern 1935: 22 and 24, Mississippi Kite 1934: 27, Red-cockaded Woodpecker 1934: 2, Swainson's Warbler 1934: 11, and Vesper Sparrow 1934: 23. The Least Flycatcher was first recorded as a summer resident, 1934: 22.

Among the birds which are rarely recorded in the State, notes on the following were published: White Pelican 1934: 62, 1935: 26 and 38; Whistling Swan 1934: 41, 1935, 27; Blue and Snow Geese 1935: 49, 91; White-winged Scoter 1935: 29; Duck Hawk 1934: 65, 1935: 19, 36, 92, 92; Virginia Rail 1935: 49; Purple Gallinule (nesting) 1935: 23; Upland Plover 1934: 26, 45, 1935: 21, 33, 72; Wilson's Phalarope 1935: 34, 52; Stilt Sandpiper 1935: 12, 52; Laughing Gull 1935: 50; Bonaparte's Gull 1935: 50; Forster's Tern 1934: 31, 1935: 50, Common Tern 1935: 31; Sooty Tern 1934: 46; Long Eared Owl 1935: 14, 39; Olive-sided Flycatcher 1935: 93; Golden-winged Warbler 1935: 34, 35; Connecticut Warbler 1935: 33; Morning Warbler 1935: 70; Blue

Grosbeak 1935: 52; LeConte's Sparrow 1934: 64 and Gambel's Sparrow 1934: 11, 61, 1935: 24, 90.

The above records represent some splendid work on the part of our members and we hope that the next two years will be equally productive. However, we would caution against the recording of any rare bird unless identification is *absolutely positive*. The collecting of specimens of birds new to the State list, particularly of the smaller species, is desirable and is amply justified.—Editor.

BIBLIOGRAPHY FOR 1935:—Papers and notes on Tennessee birds, which have appeared in other journals during the past year, are briefly cited below. In *The Auk*: Jan., Vol. 52, p. 78, "Incubation period of the Black Vulture" (35 days), by Compton Crook; April, 52:194, "Nesting of the Lark Sparrow" (near Murfreesboro) by C. Crook; Oct., 52:370-381, "Mockingbird life history studies" (detailed observations on color banded birds), by Amelia R. Lashey. — In *The Wilson Bulletin*: June, 47:165-6, "The present status of the Olive-sided Flycatcher as a breeding bird in western N. Car. and Tenn." (in Great Smoky Mtns.) by T. D. Burleigh; Dec., 47:285-6, "Cardinal now twelve years old" (banded bird) by A. F. Ganier. — In *Bird Banding*: April, 6:69, "Two Maryland Yellowthroat returns" by Mrs. Laskey; April, 6:66, "Two migration returns of Olive-backed Thrushes" by Mrs. Ana Cochran. — In *Inland Bird Banding News*: Dec. 1934 "Unusual repeat records" (note) by Mrs. Laskey. — In *Journal Tennessee Academy of Science*: Jan., 10:1-18, "The birds of late summer on Reelfoot Lake" (an annotated list of 97 land and water birds) by Compton Crook; April, 10:77-82, "The birds of the campus of Peabody College, Nashville" (part 2, spring transients) by J. M. Shaver and C. Crook; July, 10:179-204; "Some nesting habits of the Brown Thrasher" (at Nashville) by W. G. Erwin; Oct., 10:241-7, "The status of the Black-billed Cuckoo in Tenn." (nest records, etc.) by Compton Crook.

THE MIGRATION OF NORTH AMERICAN BIRDS is the title of a new pamphlet from the pen of Dr. F. C. Lincoln of the U. S. Biological Survey. It takes the place of a similar pamphlet prepared by Wells W. Cooke in 1917. The present publication comprises 72 pages and includes many maps and halftone illustrations. Dr. Lincoln, by reason of having been in charge of The Survey's bird-banding activities for many years, has admirably equipped himself to handle the subject, for banding records have thrown much new light on the migratory movements of our native birds. As a result, the author has packed its pages with accurate information written in a style that makes it interesting reading for any layman. It is a splendid short treatise on an interesting subject and should be in the library of each of our members. A copy may be secured by sending ten cents (silver) to the Supt. of Documents at Washington for Dept. of Agriculture Circular 363.—A. F. G.

THE ORIOLE makes its bow with the January issue and plans to record bird happenings in Georgia as we do in Tennessee. It is sponsored by the Atlanta Bird Club and will appear quarterly. The makeup is similar to that of *The Migrant* and the first issue contains 12 pages. The editors are Don Eyles and Norman H. Giles, Jr. (959 Drewry Street, Atlanta) from whom it may be obtained at one dollar a year. We wish them every success and trust they may succeed in developing many new bird students in Georgia.

The first member to be admitted to the T. O. S. by its five founders was Dr. George M. Curtis, who was enrolled on October 21, 1915. Dr. Curtis is now Professor of Surgery at Ohio State University and it is a pleasure to announce that he has re-established his membership in the T. O. S.

THE ROUND TABLE

THE SEASON AT MEMPHIS: The number of individuals of certain species seen on the local Xmas census trip was much higher than usual in the case of the more uncommon passerine birds such as the Hermit Thrush, Fox Sparrow, Ruby-crowned Kinglet, and the like. This was partly but not entirely due to the thorough coverage we made of this area. Purple Finches have been fairly common even before the advent of cold "waves" in the North. This seems to be a winter when this erratic appearing species has been regularly present. The Red-breasted Nuthatch has been noted for the first time in several years, being seen by two separate parties (north and south) on the census. An individual has been frequenting the feeding shelf of Scout George Clayton. When severe cold weather blanketed the country we hoped to record some rare winter visitors but without success. However, on March 1st, ten days after our cold weather passed, we found our first Saw-whet Owl, as noted in the item which follows. — Large flocks of Bronzed Grackles which were present and frequently trapped last January and February, have been replaced this year by Starlings which have been widely distributed over the city proper. Small flocks of Grackles became noticeable the last week of February. — A few Brown Thrashers could be found in previous years by carefully searching wooded and brushy bottomlands but on the recent X-mas census we found them almost common. Individuals have been seen all during the winter in the parks and in various city yards; several have re-visited our bird-bander's traps. — Pipits have not been found on any of the usual fields formerly visited here, the only record being made on the census when a flock passed over Mud Island. However they were seen and reported as common at Moon Lake and Shelby, Miss. — At Lakeview, Dec. 15, we saw 20 Pintails, 16 Mallards, a few L. Scaup and Ring-necked Ducks, and 5 Pied-billed Grebes. March 1 we found the following on Mud Lake: Mallard, 4; L. Scaup, 20; Ring-necked Duck, 60; Pintail, 75; Canvasback, 1. At one of the small lakes in the vicinity of North Lake we saw 35 American Mergansers and a Ruddy Duck. Although the former is supposedly a fairly common transient, this is the first time (1928-1936) I have personally seen this species here. We flushed about 15 Wilson Snipe at the highway "pit" but saw none elsewhere. Our search for early Yellowlegs, King Rail, and Sora was unsuccessful. The barrow-pits were dry or low and we can only hope that the spring rains will soon fill them. The lakes are connected to the Mississippi which is beginning a moderate rise.— BEN B. COFFEY, Memphis, Tenn.

SAW-WHET OWL AT MEMPHIS: The morning of March 1st while in Overton Park I decided to learn the cause of an uproar among some Jays and found my first Saw-wheat Owl. (*Cryptoglaux acadica acadica*). Three inquisitive Titmice were within two feet of it and as it flew at my too close an approach, the Jays again gave me a clue as to its location. Identification was easy as it was smaller than a Screech Owl, lacked ear tufts, and had fine white streaks across the tail. The coloring seemed slightly grayer than as shown in "Portraits of New England Birds" nor was the bird as plump. When it again took flight, I left, only to return with six other bird enthusiasts. The bird was located against a background of dead leaves and closely studied. Then an unusual chase developed, with the owl often perching at a height of only four or five feet. Several times we encircled it, approaching thru tangled vines and saplings to within three or four feet each time before it flew. Finally it perched in the open twelve feet high in the fork of a small hornbeam. I knocked it off with my jacket which would have carried the little owl to the ground if the jacket had not hung on a snag. We were unable to spot the

bird again and had to abandon our hope of banding this "ridiculously tame" little owl.—BEN B. COFFEY, Memphis, Tenn.

NOTE: This is the first positive record of the occurrence of this northerly species in Tennessee. There is a mounted specimen in the State Museum, acquired 10 or 12 years ago and said to have been captured near Nashville, but this has not been certainly verified. It is characteristic of the Saw-whet Owl to be unwary of man.—EDITOR.

WINTER VISITORS: December 29, 1935, a day overcast with a thick gray cloud blanket, I took this bird census—a "window census"—for all observations were from the windows of the house. Snow of about two inches was on the ground, a fine mist during part of the day froze on everything and the thermometer around 20 degrees above. Since the birds were coming and going all day, those that were "many" are so indicated. Corn, cracked nuts, bread crumbs and some heads of sumac brought from the farm on a Christmas day walk, furnished food in variety. A dripping hydrant, however, was the chief attraction. Birds seem to appreciate water during a hard freeze, even more than food. The cedars and the privet bushes failed to have berries this year and the Mockingbirds miss them sorely. The birds listed were Flicker 2, Downy Woodpecker 1, Red-bellied Woodpecker 1, Yellow-bellied Sapsucker 2, Bluejays 5, Carolina Chickadee 1, Bewick's Wren 1, Mockingbird 2, Shrike 1, Cardinal 12, White-throated Sparrow—many, Slate-colored Junco—many, and English Sparrow—very many. No Robins at all were seen here during December.—ANNE A. MOORMAN, Somerville, Tenn.

ADDITIONAL NOTES ON THE MIGRATION OF OCT. 23: In the last *Migrant*, notes were given from various points on the nocturnal migration of Oct. 23 last and in response to the Editor's request, the following is added. On the occasion referred to, a large number of small birds were found dead here, most of those examined being warblers in obscure fall plumage. This location is the site of the new Pickwick Landing dam across the Tennessee River and is roughly midway between Memphis and Wheeler Dam where Mr. Bamberg made his observations. Construction activities had brought about the installation of floodlights for the work as well as a large number of overhead wires and I believe that many birds were killed by striking these wires. I saw a number of birds lying dead about the shops and warehouses at the dam-site. A friend here however, who takes much interest in birds, tells me that he also found numbers of them lying on the ground and among the weeds where there were no wires. He is of the opinion that they died from exposure after they had been diverted from the routine of their flight and became lost and bewildered by the lights. On the same night and on the following night, great flocks of honking wild geese lost their bearings and milled about the Dam but none were killed so far as I know.—J. C. LAMON, Pickwick Dam, Tenn.

NOTES FROM CLARKSVILLE: The following notes are gleaned from trips afield. A Brown Thrasher was noted on Jan. 27 but could not be found on later trips. On Feb. 16, a Phoebe was noted engaged in "flycatching" close to the edge of water, during a thaw between cold spells. A Marsh Hawk was noted on Washington's Birthday. Three or four Herring Gulls were seen on the Cumberland River on Feb. 16 and were in various phases of plumage. On Feb. 25, Purple Martins were recorded here, this being a remarkably early record. In the late afternoon, one was noted flying about Dr. Chickering's martin house next door and my son observed one or two others on the rest-shelves. On the 29th, one of them was observed again at the box. The birds were carefully scrutinized at close range to eliminate all possibility of their being Starlings, which they somewhat resemble in flight.—ALFRED CLEBSCH, Clarksville, Tenn.

TREE SPARROW AT CORINTH, MISS.: While making the mid-winter census list of Dec. 30, I found my first Tree Sparrow here. The bird was with a mixed flock of native sparrows and was feeding in a field near a thicket of briars and undergrowth. The snow and ice was three or four inches thick on the ground and the weather had been abnormally cold. The bird's rich reddish brown and white markings and its spick and span appearance made him very noticeable among the rest.—BENJ. R. WARRINER, Corinth, Miss.

THE NORTHERN RANGE OF THE TUFTED TIT: Readers of *The Migrant* may be interested to hear from the extreme northern limit of the range of this bird. I found the first one for Canada at Point Pelee, near the southwest corner of the Province, in latitude 42, on May 2nd, 1914. The bird was known to occur on Belle Isle, east of Detroit, but, though it had been looked for at Windsor, it had not been discovered there. No more were found until 1925 when two ornithologists of Toronto found one there on November 27. Since then, others have been found at various places along Lake Erie, the total of observations amounting to twelve individuals on ten occasions, three of which were in 1935. Toronto is the farthest north of these records, and it is about on latitude 44. All records were within ten miles of Lake Erie except two each at Toronto and Hamilton on Lake Ontario. The latter place, however, is only about twenty miles north of Lake Erie.—W. E. SAUNDERS, London, Ont., Canada.

A MOCKINGBIRD'S WARM ROOST: The night of Feb. 17 witnessed a sudden drop in temperature, the thermometer falling from 33 at noon to one degree below zero during the night. Snow set in at dusk and fell steadily all night. As I passed one of the buildings on Peabody College campus, on my way to the T. O. S. meeting nearby, I chanced to look up at an electric fixture on the wall, partly covered by climbing roses, and noted a Mockingbird roosting just above it. The fixture was a round, frosted glass bowl with no opening on top and a rose branch had grown just across it. There the Mocker sat, not an inch above the warm glass and oblivious to the brilliance of the light or to the snow which had covered the branches all about. When the meeting adjourned, a number of the members walked over to view the bird and found it quite unmindful of their presence or of others who passed in and out the doorway a few feet below. We regretted that the light was on a circuit that had to be turned out a little later. The watchman stated that the bird only resorted to the perch on very cold nights.—JAS A. ROBINS, Nashville.

NORTHERN HORNED LARKS IN TENNESSEE: On December 22, I found a flock of about 60 horned larks feeding alongside the road near the top of a hill in Percy Warner Park near Nashville. They were feeding on the grass seeds that protruded through the snow. By easing the car along, I was able to approach the flock so that the nearest birds were within fifteen feet of me, where I examined them with 8X field glasses. Their throats were quite yellow and the stripes over their eyes were not distinctly white, which factors led me to believe that these were the Northern form, but I could not be sure because I could not collect in the park. Later in the day I collected two larks from another flock. One of these, a female, was sent to Dr. Oberholser for identification, and as I had suspected it proved to be the Northern Horned Lark (*Octocoris alpestris alpestris*). This is the first record for this form in Tennessee, although it probably occurs in the State not infrequently, either in flocks or mingled with the Prairie Horned Larks. The unusually large number of horned larks reported about Nashville this winter probably account for the presence of this more northerly form. Mr. Ganier has written me that he collected specimens in late January from two other large flocks and they proved to be the northern variety.—JOHN B. CALHOUN, University, Va.

RUFFED GROUSE IN PUTNAM COUNTY: Whether the Eastern Ruffed Grouse (*Bonasa umbellus umbellus*) is decreasing or holding its own in the Tennessee Cumberlands can merely be guessed at. Mr. A. F. Ganier (*Wilson Bulletin*, March, 1923) found evidence of its continued persistence on the Cumberland plateau of Grundy County. The writer is always happy to find recent signs or records of the bird in these mountains, and wishes to record the following: On March 24, 1935, Dr. D. R. Bartoo and the writer flushed a grouse in Stamp's Hollow, in Putnam County. The bird flew so rapidly that plumage could not be clearly seen, nor sex determined. On May 26, 1935, in a deep wooded hollow about a mile from Stamp's Hollow, a native (and old hunter) contributed the following observations. We offer them, not as records, but as possible further evidence of the presence of the bird in Putnam County. One cock "pheasant", apparently without a mate, had been present all spring, and was frequently seen in this hollow. In the adjacent hollow, also wooded, a pair still "used", and the female with a brood of young had been seen several times. The cock was heard drumming "this morning" (the date above).—COMPTON CROOK, Western Reserve University, Cleveland, Ohio.

CARDINAL CHRONICLES: About two years ago, a male and a female Cardinal came to live in the box bushes, near my home. This pair lived peacefully and raised about three broods of young before their first winter here. During that winter, the male showed such jealous attachment to his home territory that he would drive away from the yard all other male Cardinals. Last spring, something repeatedly bumped against certain windows of my home and an investigation showed this male Cardinal to be the culprit. He was shouted at and driven from the windows but he always returned. He would dash against the higher windows of the house at five o'clock in the morning, disturbing the family's slumbers, and he would keep this noise up most of the day. It was very disturbing and so a reason was sought for his actions. Finally came the solution of the problem. As everyone knows, glass reflects objects at different angles and in different lights, and so this Cardinal had been fighting the image of himself in the window. Some white cleansing powder spread over the inside of his favorite windows eliminated the reflection of himself and we were not troubled again, until the powder wore off.*

The pair met their first serious enemies last spring. Their first two nests and eggs were destroyed by a prowling cat, or an opossum, and their third nest was blown out of a small tree during a severe storm. The poor female would rebuild each nest, while the male busied himself with trying to drive away his imaginary rival in the window. The pair finally managed to raise two young ones to maturity before July was over. From July until December, the family lived peaceably and contentedly about the premises.

On this past Christmas Eve, the pair were seen eating small grass seed on the ground and a few moments later came tragedy. A loud crash was heard against a window in the house and a Loggerhead Shrike or "Butcher Bird", was seen pursuing the unfortunate female Cardinal which had flown against the glass. As she bounced back from the window, the Shrike caught and killed her, with successive blows or pecks on the back of the head. The murderer, being only a fraction of an inch larger than its victim, was unable to carry it to a thorn tree, to impale it upon a thorn for a future meal, so began to eat his victim on the ground. The male was rather afraid of the Shrike, and scolded, while the latter made the kill. Shortly afterward, I got a shotgun and killed the marauder, fearing his future raids. Why the Shrike attacked so large a bird as a Cardinal is a mystery, as the Shrike seemed to be in good condition, and its stomach was full of small beetles. The male Cardinal has now a new mate, and continues to peck on certain windows of the house, as though nothing had happened.—HARRY YEATMAN, Columbia, Tenn.

*Editor's Note: Male birds frequently fight their reflections at mating time. Last spring, on the State Capitol grounds, a Robin busied himself much

of the day, fighting his image in the windshields of parked autos. At my home, a Mockingbird developed the same habit at windows while standing on the sill. The trouble was finally stopped by stretching two lines of heavy black thread across the window about three inches above the sill.

TWO SEASONS WITH A PAIR OF PROTHONOTARY WARBLERS:

In the summer of 1934 a pair of Prothonotary Warblers built their nest in a small tin can, nailed to the outside of the column on the front porch. The eggs disappeared very mysteriously, and the birds left our neighborhood, and I did not see them again till the nesting season of 1935. I had put up more cans in various places about the outbuildings, and on the front porch. They chose the can on the porch again, and began to build. When the nest was near completion they disappeared for about a week. During their absence a pair of chipping sparrows had preempted the can, and finished the nest to their own liking with horse hair, leaving a couple of long hairs hanging out of the can. They had hardly finished their building, when the Prothonotary Warblers returned. They were greatly perturbed, flying back and forth, to and from the nest, and pulling out the horse hair and carrying it far away. When it was relined with finely broken dead leaves, and three eggs had been laid, I found one of them broken, on the porch floor, and another with a hole pecked in it, so I removed the third egg, hoping that the birds would choose one of the other cans about the place, more remote from danger. I found them a week or so later in a much deeper can, on the garage, some distance from the house. Here they built another nest, laid five eggs, and hatched three beautiful little birds—unmolested by any enemy. I enjoyed seeing them learning to fly, from one bush to another in the althea hedge. I hope they won't forget their successful season here and will come again next summer. A surprising thing about these warblers is the fact, that although they are supposed to dwell only near water, there is no stream or pond or other body of water closer to my home than the Cumberland River, a mile away.—MRS. SANFORD DUNCAN, Nashville.

BLUE GOOSE IN SPRING: During the late winter and spring of 1929, a series of heavy rains formed a large pond near my home east of Murfreesboro. In all, about fifteen acres were submerged. During this time a number of water birds were recorded here, including Coots by the dozen, several hundred Ducks, Yellowlegs, Sandpipers, and Wilson's Snipe in marshy places around the pond. On April 16, I noticed a large bird on the far shore, feeding several feet back from the water. It allowed approach to within about fifty yards before taking flight, when a shot from a gun disabled and brought it down. On examination it was found to be a Blue Goose (*chen caerulescens*). Its only injury seemed to be the shattering of the extreme joint of one wing and this I amputated to hasten its recovery. I then put the bird in a large cage, along with a quantity of shelled corn, but it did not eat for several days. In fact, the goose did not seem to know what shelled corn was and it did not occur to me at the time that its staple food was green vegetation. The wing healed and I turned it out to graze on grass. It soon became very tame and would follow my mother about like a dog. I kept the goose for four years and during that time it laid four eggs. The only time it showed any unrest was during the spring and fall when it was time to migrate. At these times, being unable to fly, it would start off on foot and would sometimes get four or five miles away from home before it was re-captured and brought back. In the fall of 1933 the bird wandered over to a neighbor's farm and was shot by a dove hunter.—HENRY O. TODD, Murfreesboro, Tenn.

Editor's Note: The Blue Goose, in its spring migrations from the Louisiana coast to Hudson Bay, usually follows a line of flight west of the Mississippi. Spring records eastward are therefore of interest. At Bowling Green, Ky., Dr. Gordon Wilson observed three on March 13, 1933, and recorded them in the *Wilson Bulletin* for June, 1933, page 83.

THE SEASON AT KNOXVILLE:—Ducks have been present in small numbers along the Tennessee all winter; 3 Canvas-backs (rare here) and 3 Amer. Golden-eyes were seen below Knoxville on the river, January 3. Lesser Scaup and Amer. Mergansers have been seen in larger numbers and more frequently reported. — Horned Larks, present before Christmas, re-appeared in large numbers following an eight inch snow on February 7. — Red-breasted Nuthatches have been somewhat commoner this year than is usual, perhaps being driven down from the mountains by severe cold and much snow. — A Brown Thrasher is wintering in Fountain City, the first time it has done so in several years. — Scattered flocks of Robins have been present throughout all of our near-zero weather. — A single American Pipit has been reported three times this year; on January 2nd and 3rd and again later in the month. — A lone Tennessee Warbler was observed for the better part of half an hour on January 3; our first mid-winter record for this bird. — A number of interesting reports of Starlings have come in during this recent cold spell. They have resorted to the top of chimneys for the warmth and during heavy snows have been seen feeding on piles of floating drift-wood in the river. — Fox Sparrows are much more common this year and have been reported from numerous localities. — The following notes are from the Great Smokies National Park. The Raven has been repeatedly reported from Newfound and Indian Gaps. Sunday, February 9, Jim Trent and I saw 3 of them on the state line near Indian Gap where there is an average depth of 14 inches of snow. Several times during the Christmas holidays I saw the Vesper Sparrow at Gatlinburg and February 9 I saw it there again.

GEORGE FOSTER, Knoxville.

A FLORIDA (SANDHILL) CRANE AT CHATTANOOGA:—On June 1, 1935, or within a day of that date, a Florida or Sandhill Crane was captured within the city limits of Chattanooga. The bird was found in a marshy spot and appeared to be exhausted or ill. It was readily captured by a negro and his dog without further injury. He kept the bird in his yard for a day or two when another dog got into the enclosure and injured the bird's neck. Its captor then took it to the Fin and Feather Pet Shop by whom I was informed of the occurrence. Thinking that the reported "Crane" was probably merely a Great Blue Heron, I was not particularly interested at first and did not investigate until two or three days later. Mr. Mitchell, the owner of the pet shop, had been forcibly feeding the bird on gold fish but it had died shortly before I came to examine it. The skin of the bird was prepared and is now in the collection of the University of Chattanooga.—WILBUR K. BUTTS, Dept. of Biology, University of Chattanooga.

NOTE:—The above constitutes the first record of this species for Tennessee. The bird is probably the Florida form (*Grus canadensis pratensis*) and a straggler from that state where they are summer residents in limited numbers. In early days, when the Sandhill Crane was common in the upper Mississippi valley, this form doubtless occurred as a regular transient in West Tennessee.—EDITOR.

SCREECH OWL KILLS A PIGEON:—On the night of December 27, on Gay Street, in our main retail section, a Screech Owl attacked a roosting pigeon and finally killed it after a prolonged struggle. Frank Carter, local lawyer, while passing by late on the night mentioned, came across the struggling birds on the sidewalk in front of a brightly lighted show-window and stood by to watch the outcome. "That little owl looked up at me with eyes like a cat's and I thought for a moment he was going to attack me too," he said. Finally, the Owl locked his feet around his victim and, sinking his talons into it's vitals, held on until the pigeon succumbed. The owl was then captured and taken to the office of the News-Sentinel nearby, to be duly photographed and featured in the morning's news.—H. P. IJAMS, Knoxville.

EAGLES RELEASED IN THE SMOKIES: Four eagles have been received recently from the State Dept. of Fish and Game for release in the new Smoky Mountains National Park. These had been trapped by farmers and confiscated by Mr. Damon Headden, State Game Warden. The first received on Jan. 3 was a Bald Eagle, from West Tenn. It was in poor condition and died before it could be released. Two Golden Eagles, trapped near Watertown, about Jan. 20, were received a week later. A large flying cage, 8x8x26 feet, was constructed so they could be fed and held until a break in the wintry weather. On Feb. 26, the birds were banded 802821 and 802822, with bands supplied by Mrs. Laskey, and released. They appeared fairly strong on the wing and it is hoped they will remain in the park. Another Golden Eagle, trapped near Watertown about the same time as the others, was received Feb. 6. It had apparently been mistreated and died four days later. It was reported that five eagles in all were seen at the Watertown location.—ARTHUR STUPKA, Park Naturalist, Gatlinburg, Tenn.

ADDITIONS TO THE LIST OF WINTER BIRDS OF NORTH-EAST TENN.—To our previous list (see *The Migrant*, 1933 p. 25-29 and 1934, p. 14) we wish to add the following.

Broad-winged Hawk (*Buteo p. platypterus*). An individual of this species was seen in the vicinity of Cox's Lake at Johnson City, on Dec. 1, 1935. It continued to live around the lake for more than a month, until the very cold weather of mid-January presumably drove it southward. Since the occurrence of this hawk in Tennessee in winter is very unusual the following from the notes taken by Mr. Tyler, who first found the bird, is in order. "I was coming thru the swamp adjacent to Cox's Lake, looking for sparrows, in a mass of cat-tails and could only see over the tops of the lowest of them. The noise of my approach flushed the hawk which flew to a fence post near the spring branch that feeds the swamp and lake. There it rested oblivious to all danger and within easy reach of my field glass. On the rise, it was evident that it was of the genus *buteo*. As far as my observations go, there are but three of this genus occurring here, the Red-tailed, the Red-shouldered and the Broad-winged Hawks. The first two were quickly eliminated by the size and color of the tail. The individual before me showed the broad white band in the tail which is characteristic of the Broad-wing. The swamp evidently provided even at this late date, the aquatic type of food which is preferred by this species." On subsequent trips the identity of the bird was checked by Mr. Lyle.

Red-shouldered Hawk (*Buteo l. lineatus*). On Jan. 4, 1936, I had a very satisfactory view of one of these hawks. I had been "ploughing" thru a thicket of old weeds, pokeberry stalks and dewberry vines, along Boone Creek near Flourville, where the going was hard and slow. As I came into a deep gully I was surprised to see a hawk rise not far in front of me and alight on a low limb, facing me. There I observed it leisurely and noted that it was an immature bird. To distinguish between the immature birds of the *Buteos* is not always easy but in the present species, the uniform markings on the breast, the yellow on the legs matching the prominent yellow at base of bill, the absence of the white throat of the Broad-wing, the numerous tail bands, its size and, as Warren cites, a characteristic owl-like flight, branded this unmistakably as the Red-shouldered.

Wilson's Snipe (*Capella delicata*). On Jan. 11, 1936, in the warm spell following the severe cold of late December and early January, this species was observed at Cox's Lake near Johnson City. Its occurrence at this season is unusual. First appearance for 1933, 1934 and 1935 were March 12, 18 and 17 respectively.

Northern Horned Lark (*Otocoris a. alpestris*). The almost unprecedented cold of the present winter has brought this species of Tennessee. On Feb. 1, 1936, I came across a flock of eight in a snow covered field. They had found a frozen ear of corn on the ground and had gathered about it. As I stood

nearby, watching them vigorously pecking at the corn, I was able to note their larger size and appreciably more yellow head markings than those of the Prairie Horned Lark.

Red-headed Woodpecker (*Melanerpes erythrocephalus*). During the entire winter of 1934-35 a pair of these birds lived with us in a small grove. I regret to add that a boy with a 22 rifle shot both during the ensuing spring so this winter sees us without them.

House Wren (*Troglodytes aedon* subspecies). In December 1935, this species was frequently observed, probably being delayed transients. The open fall of 1935 apparently retarded the southerly migration, as is shown from the observation here of a Great Blue Heron on Nov. 24.

Brewer's Blackbird (*Euphagus cyanocephalus*). A second record of this species was made here on Feb. 1, 1936. The previous record was of one seen on April 20, 1935.

Lincoln's Sparrow (*Melospiza l. lincolni*). One of these birds was observed by Tyler, on Dec. 25, in company with Juncos and other native sparrows, feeding in a field at the edge of a thicket. Probably a delayed transient.—BRUCE P. TYLER AND ROBERT B. LYLE, Johnson City, Tenn.

CHAPTER NEWS

NASHVILLE CHAPTER:—Spring meeting dates will be as follows: March 2, 16, 30, April 13, 27, May 11, 25 and June 8th, at 7:30 P. M., Social-Religious Building of Peabody College. The annual Spring Field Day will be held on Sunday, May 3, on Sycamore Creek, northwest of Nashville. Members from all over the State are cordially invited. Officers of the Nashville Chapter are Prof. J. A. Robins, president and Benj. H. Abernathy, (Hobbs Road) secretary-treasurer.

KNOXVILLE CHAPTER (E. T. O. S.): The dates of Spring meetings and the sponsors for each will be as follows: March 4, at Flowercraft Shop (Prof. B. C. V. Ressler); March 15, Andrew Jackson Lake (Mrs. Frank Leonhard); April 1, Flowercraft (George Foster); April 19, Big Ridge Park (S. A. Ogden); May 3, Spring Bird Census at Island Home (H. P. Ijams); May 6, Flowercraft (Jim Trent, Jr.); May 17, Old Fort Loudon (H. P. Ijams); June 3, Flowercraft (Brockway Crouch); June 21, Clingman's Dome in Great Smokies Nat. Park (Bob Burch). Officers of the Knoxville Chapter are W. M. Walker, president, Dr. Earl Henry, vice-president, S. A. Ogden, curator and George Foster, (2352 Magnolia St.) secretary-treasurer.

THE MEMPHIS CHAPTER will hold regular meetings as usual but their schedule had not come in as we go to press. Their officers are, Dr. Clarence E. Moore, president; Dabney Crump, vice-president, and Franklin McCamey (1637 Netherwood Ave.) secretary.

THE MURFREESBORO CHAPTER, Mr. Henry O. Todd, secretary, holds its meetings on the second Friday of each month and members get together for field trips each week-end.

A Clarksville Chapter of the T. O. S. is now being organized and ten members have already been enrolled. Regular meetings and field days will be held and the new chapter has set for its first task, the listing of the birds of Montgomery County. We shall have a more detailed report on this chapter in our June issue.



Our advertisers have been chosen because of their reliability and because they have merchandise used by bird students. By their patronage they assist in financing this journal. Members should reciprocate by giving their patronage in return. Remember too, that they are glad to serve you by mail.

FLOWERS.—In the December number of *The Wilson Bulletin*, the splendidly conducted quarterly of The Wilson Ornithological Club, the Editor, Dr. T. C. Stephens, reviews one of our recent issues as follows.—“*The Migrant* for September 1935, is an exceptionally interesting number. Several authors jointly present a “History of The Tennessee Ornithological Society”, “Biographical Sketches of Founder Members”, “Among Our Contributors”, “Early Reminiscences” by Dixon Merritt, are articles which continue the account of the activities of the leaders of one of the older state ornithological societies. Four pages of portraits and snapshots complete a record that will be received with satisfaction by all who are engaged in similar work. Our attention is especially taken by an article entitled, “A T.O.S. Field Day”, by John Craig. The author is a stranger to us, but we salute him as a master of descriptive writing. Besides furnishing the bird lover with a very entertaining account of his favorite pastime, we consider this article to present the best single bit of propaganda for the study of birds (without a gun) extant. It would be fine if this article could be reprinted in quantity for public use. A reprint sent to a hunter friend might make many a convert to the use of a field glass.”

We thank you Dr. Stephens.—(No reprints were made but for those who may wish additional copies of the above anniversary issue, copies may still be had at twenty-five cents each.)

BIRD RECORDS TABULATED BY FERA STUDENTS AT VANDERBILT: The FERA Committee at Vanderbilt University has seen fit to assign two students to Dr. G. R. Mayfield for the purpose of tabulating all of his bird records made during the last 20 years, 1915 through 1934. These cards number more than 2,000 and constitute daily lists made by him, alone or in company with others, chiefly in the vicinity of Nashville. In the form in which they existed it was difficult to quickly arrive at the seasonal distribution of the various species of birds and so he requested the FERA Committee to furnish him the necessary assistance to tabulate the records in more convenient form. The form chosen is that of a 4x6 card for each species and on this card is written all the dates when it was recorded and the number observed on each of these dates. So far, the cards have been made out for transients, for winter visitants and for summer residents excepting those which are common permanent residents. These tabulations make it possible to get a good idea of the migratory movements and numbers present of each species through the various months. The tabulations will be in possession of Vanderbilt University for general reference. An additional set has been copied off and presented to the Tennessee Ornithological Society for its archives.

THE STARLING, which mimics the vocal efforts of other birds and even attempts human speech, is apparently making good as an entertainer in other lines. In *The Raven*, Mr. C. C. Handley of Blacksburg, Va., relates that he came upon a flock, one cold snowy day dining with the pigs in a feeding pen. When their feet would get cold they would simply fly up on the pig's back, as many as 25 or 30 on one porker, and there use his ample “deck” as an animated foot warmer. An observer at Louisville, Mr. Robert L. Duckworth, told of one which flew down to a bird bath filled with warm water and there took a bath while the mercury was hovering around zero. A few moments later the bird attempted to fly away but came down with a thud—its wing feathers sheathed and bound with ice. Starlings are not reputed to be *carnivorous* but the Editor cannot refrain from contributing the following. At this home one morning a flock of them alit on the lawn to eat the fallen hackberries, the day after the big snow thawed. Now Starlings like water but there was none handy so every now and then they would run over and bite a piece off what was left of the *snow-man*.

THE MIGRANT

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

EDITORIAL CHAT

The T. O. S. enters the new year with bright prospects for constructive work ahead and with satisfaction over its past record. Nearly one hundred new members have been added since last summer. Never has the public been so bird-minded as at the present time. With the development of National plans for more recreation and for "the fuller life", birds will take their rightful place as one of the greatest attractions of the out-of-doors.

A hard winter, is the way we will recall the one just past. December, with an average mean temperature of 34.0 degrees, broke a 60 year record except for 1917 when 31.4 was recorded. January with 33, was colder only in four other previous years and went out with a great deal of snow and one of the coldest spells on record, low temperature on the 27th being 3 degrees below zero. The "all time lows" are 13 below in 1899 and 10 below in 1918. The 33 day period between Jan. 19 and Feb. 20, showed an average daily temperature of 24.4 as compared with a normal of 40 degrees and the ground was rarely free of snow. The figures given are for Nashville.

The ability of birds to foretell a cold winter seems to have been pretty well substantiated during the one just past. Reports from all over the State show that Grackles were practically absent during December, January and until the last week in February. Robins and Waxwings were present only in small numbers. Horned Larks, Starlings and several other species, which are usually most abundant northward, visited Tennessee in unusual numbers.

The Migrant makes apologies for a somewhat cramped literary style; our pages are few in number so much condensation must necessarily be resorted to.

In this issue there are more than thirty articles and news items. This is good evidence of the amount of interest present in the T. O. S.

As we go to press, Spring in vernal dress is bursting on the scene and winter—with welcome long since lost—is in retreat. Bluebirds are calling to their mates, Cardinals and Titmice are whistling, plump breasted Robins are back on our lawns, while Jays and Grackles are garrulously flying about inspecting nesting sites. From fields the Meadowlarks hail the ploughman as he turns the damp soil for another crop. In marsh and pond, the cheery *honk-a-ree-ree* of the Redwing blends with the resonant call of "spring peepers," begging south winds to bring another shower. Hours afield on days like these make us feel that it's good to be living and particularly so when we know birds and all nature.

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