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VOL. 40

DECEMBER, 1969

NO. 4

A STUDY OF FALL MIGRATORY BIRD POPULATIONS IN SEWAGE PONDS

BY EARL L. HANEBRINK AND ALLEN RHODES

INTRODUCTION

This study of waterfowl and associated shorebirds was conducted on sewage lakes in Craighead County, Arkansas during the Fall migration beginning on 20 September, and terminating on 13 December. The census area consists of three lakes of 56 acres surface area (Fig. 1). The largest lake is 40 acres and the smaller two of 8 acres each. These lakes are located 0.4 miles south of Highway 63 and 0.1 mile from the city limits of Nettleton, in a primarily agricultural area. There are fields devoted to crops on the northwest and southeast sides of the lakes with open woods and farm lots on the other two sides. The fields are primarily planted in soybeans and cotton and the open woods have stands of oaks (*Quercus* spp.) with Broom-sedge (*Andropogon virginicus*) and Johnson Grass (*Sorghum vulgare*) intermingled with other common weeds and grasses.

These sewage disposal lakes serve primarily as a resting stop for migratory birds during the spring and fall migration since little food is readily available in the area. There is neither an adequate area of exposed mud flats for shorebirds nor an area of flooded timber where ducks or shorebirds might feed. The lakes support a very high population of algae and zooplankton which provide food for certain aquatic bird species.

METHODS

Migratory birds associated with these sewage lakes were counted two or three times each week during the Fall of 1968. Total counts were made by using 7x50 binoculars and telescope during the early morning or late afternoon starting on 20 September, and terminating on 13 December. A total of 40 counts were made during the four months and summarized in Table 1.

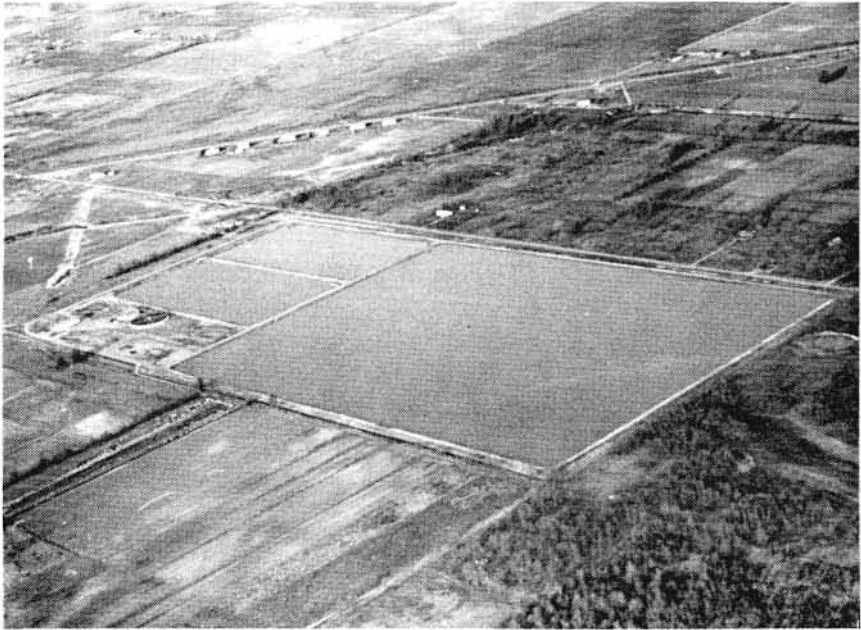


Fig. 1. Aerial photograph of study area.

RESULTS AND DISCUSSION

Populations and species composition fluctuated considerably during the fall migration. This fluctuation was usually correlated with weather conditions. The main migration can be seen from Table 1 to be concentrated in the first week in November, with numbers gradually declining in the following weeks. A very high population on 25 September is accounted for in part by the foggy overcast which gave poor visibility causing many flocks to sit down on the lakes until better weather occurred.

A total of 35 species of birds associated with these sewage lakes were sighted in 40 trips made to the area. A maximum of 17 species was seen on 6 November, and a low of four species on the 6, 9, and 13 of December. Total numbers ranged from a high of 631 on 6 November, to a low of 15 on 30 September. Most unusual for this area were the sighting of the Horned and Eared Grebes (*Podiceps auritus* and *P. caspicus*). Sixteen species of ducks used these lakes. Five species of gulls and terns were recorded. Immature Little Blue Herons (*Florida caerulea*), most likely from the Luxora Herony in Mississippi County, traveled over 50 miles to this area from their nesting location and were observed feeding along the levees of the sewage ponds.

TABLE I
NUMBER OF BIRDS SIGHTED AT EACH OBSERVATION

Species	9/20	9/23	9/25	9/26	9/27	9/30	10/2	10/4	10/7	10/9	10/14	10/16	10/17	10/18	10/19	10/21	10/23	10/24	10/25	10/28
Common Loon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Horned Grebe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eared Grebe	1	1	1	1	--	1	--	1	1	1	1	1	1	--	--	--	--	--	--	--
Pied-billed Grebe	2	2	2	1	--	--	--	4	--	--	--	--	--	--	--	12	9	--	3	--
Little Blue Heron	5	--	--	--	1	--	--	--	4	3	--	--	--	--	--	1	--	--	1	--
Blue Goose	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mallard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	6	--	--	10
Gadwall	--	--	--	--	--	--	--	--	3	--	3	13	8	9	76	40	10	23	11	9
Pintail	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	27	2	4	--
Green-winged Teal	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	10	2	--	1
Blue-winged Teal	15	--	14	17	6	3	2	13	4	12	11	14	20	5	8	8	8	4	--	2
American Widgeon	--	--	--	6	--	--	10	2	--	2	--	--	3	4	8	38	11	5	--	1
Shoveler	50	18	--	15	17	8	5	17	15	11	27	27	27	23	22	20	23	30	36	8
Wood Duck	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hedhead	--	--	--	--	--	--	--	--	3	2	2	2	2	--	--	1	8	--	--	--
Ring-necked Duck	--	--	--	--	--	--	--	--	--	--	1	1	1	7	--	4	40	7	1	7
Canvasback	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lesser Scaup	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	10	69	26	23	5
Bufflehead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ruddy Duck	--	--	--	--	2	1	--	1	--	14	12	6	11	10	10	13	18	20	71	23
Hooded Merganser	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Red-breasted Merganser	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	--	--	15	1	1	--	--	16	1	--	4	8	4	6	4	15	127	35	21	17
Killdeer	3	7	9	1	5	--	--	31	--	5	--	--	4	13	22	10	6	10	13	18
Common Snipe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
Spotted Sandpiper	--	--	--	1	3	2	--	2	3	2	--	1	--	--	--	1	1	--	--	--
Solitary Sandpiper	--	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Greater Yellowlegs	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pectoral Sandpiper	--	--	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sanderling	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ring-billed Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Franklin's Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bonaparte's Gull	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Forster's Tern	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Black Tern	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE I (continued)

Species	10/30	11/1	11/3	11/4	11/6	11/7	11/11	11/13	11/15	11/18	11/20	11/22	11/25	11/27	11/29	12/2	12/4	12/6	12/9	12/13	
Common Loon																					
Horned Grebe	1	1	5	7	4	5															
Eared Grebe																					
Pied-billed Grebe						1															
Little Blue Heron																					
Blue Goose		1	6	8				10	40												
Hallard	8	22	6	8																	
Gadwall		9	6	8	6	13			2												
Pintail	2																				
Green-winged Teal				8	4	14															
Blue-winged Teal	6	15	13	4	20																
American Widgeon		1	1	5		2	5	4													
Shoveler	9	50	23	20	25	7	20	12	19												
Wood Duck																					
Redhead	1	3	3	5	20	21															
Ring-necked Duck	16		40	82	80	75	25	10	14	19	10	21	5	11	11	28	4	6			
Canvasback	5	5	5	6	10	7	1	1	1	1				6	6	1					
Lesser Scaup	8	75	200	150	365	260	25	4	10	25	10	19	53	30	13	50	16	3			10
Bufflehead																					
Ruddy Duck	22	24	63	104	60	81	42	62	60	60	50	62	34	38	37	41	32	20			14
Hooded Merganser					1						2										
Red-breasted Merganser				1			10														
American Coot	6	5	63	31	31	50	14	6	5	5	12	8	2		5						1
Killdeer	2	8	4	11	5	12	5	5	3	5											
Common Snipe							2		1												
Spotted Sandpiper																					
Solitary Sandpiper																					
Greater Yellowlegs																					
Pectoral Sandpiper																					
Sanderling																					
Ring-billed Gull																					
Franklin's Gull		1	1																		1
Bonaparte's Gull																					
Forster's Tern																					
Black Tern																					

TABLE II
 FREQUENCY AND HIGHEST NUMBER PER SPECIES IN ONE COUNT

Name of Bird	Frequency	H. No./Day
Common Loon	1	5
Horned Grebe	5	7
Eared Grebe	11	1
Pied-billed Grebe	9	12
Little Blue Heron	4	5
Blue Goose	1	1
Mallard	10	40
Gadwall	20	76
Pintail	5	27
Green-winged Teal	7	17
Blue-winged Teal	23	406
American Widgeon	17	38
Shoveler	38	50
Wood Duck	1	5
Redhead	13	21
Ring-necked Duck	26	82
Canvasback	11	10
Lesser Scaup	26	365
Bufflehead	5	2
Ruddy Duck	34	104
Hooded Merganser	2	2
Red-breasted Merganser	3	10
Marsh Hawk	1	1
Osprey	1	1
American Coot	25	197
Kildeer	29	31
Common Snipe	2	2
Spotted Sandpiper	7	3
Solitary Sandpiper	2	2
Greater Yellowlegs	1	1
Pectoral Sandpiper	1	8
Sanderling	1	1
Ring-billed Gull	2	3
Franklin's Gull	2	1
Bonaparte's Gull	1	4
Forster's Tern	1	1
Black Tern	1	2
Belted Kingfisher	2	1

Frequency and highest number of each species is presented in Table 2. Species with the highest frequency were the Shoveler (38), Ruddy Duck (34), Killdeer (29), Ring-necked Duck (26), Lesser Scaup (26), and American Coot (25). The largest number of a species recorded on a single count was 406 Blue-winged Teal recorded on 25 September.

ACKNOWLEDGMENTS

Dr. Bob Johnson and Kenneth Beadles of the Department of Biology, Arkansas State University critically read the manuscript.

ADDENDUM

Three additional species of ducks were recorded from the sewage ponds during the 1969 fall migration. One male Oldsquaw (*Clangula hyemalis*) was observed on these ponds from 25 November until 30 November 1969. There are few records of this species recorded for the state. Two male White-winged Scoters (*Melanitta deglandi*) were observed on these ponds from 2 November until 26 November 1969. The Common Scoter (*Oidema nigra*) was also observed at this location. Two females were observed from 28 October until 30 October 1969. This sighting is a state record for this species (D. James, personal communication). Verifying documentation of extraordinary sight records were completed and sent to Dr. Douglas James at the University of Arkansas where a permanent file is kept for the state. This species was first seen by Mrs. John Ellis and several members of the Northeast Arkansas Audubon Society had the opportunity to observe this record. Species of Scoter ducks are rarely recorded this far inland from coastal areas. There are very few records of the White-winged Scoter in Arkansas (D. James, *Proc. Ark. Acad. Sci.*, 18: 20-30, 1964). Arkansas now has records of the White-winged Scoter, the Surf Scoter and the Common Scoter .

Arkansas State University, State University, Arkansas 72467.

AUTUMN 1969 T. V. TOWER CASUALTIES AT NASHVILLE

BY AMELIA R. LASKEY

The collection of T. V. Tower casualties in autumn 1969 in Nashville was well organized under the leadership of M. L. Bierly, starting in late August and continuing until mid-November with the help of several others. The birds were brought to me, counted, listed and then frozen for future studies.

The first casualty was a Kentucky Warbler on 22 Aug. The total number killed was 1,909 of 70 species—307 (51 species) at WSIX and 1,602 (57 species) at WSM.

Excepting a Starling on 7 Sept. and an American Redstart on 10 Sept., no birds were found until 18 Sept. when 62 were gathered at the two towers and on 19 Sept. a total of 200. Northerly winds, subnormal mean temperatures, overcast skies and a passing cold front prevailed at this period.

The largest kill occurred on the night of 14-15 Oct. during a similar weather period. On that night there were 139 casualties at WSIX and 1,172 at WSM. After a telephone call at 21:30 14 Oct. from Mr. Clark Sewell, on night duty at WSM, M. L. Bierly, John Riggins, K. A. Goodpasture and A. R. Laskey collected 152 birds as they fell before midnight where they could be seen on the lighted concrete parking place southeast of the tower. The others were gathered from the grass and wooded area on the morning of 15 Oct. Among them were 254 Tennessee Warblers, 220 Ovenbirds, 206 Bay-breasted Warblers, 162 Magnolia Warblers and 115 Chestnut-sided Warblers.

In late October there were few casualties and from 1 Nov. through 12 Nov., only 27 at both towers. From 12 Nov. to the termination of the visits on 16 Nov., none was found.

Compared with previous records for early fall arrival and late departure of migrants, the following are of note: Golden-winged Warbler, 15 Oct.; Cape May Warbler, 14 Oct.; Black-throated Blue Warbler, 19 Sept.; Black-poll Warbler, 15 Oct. (7 found at the two towers); Hooded Warbler, 16 Oct. (one at each tower).

The list for the two towers follows with the first numeral indicating WSIX and the second number WSM. An asterisk (*) indicates that the species was found only at WSM.

Sora 2; Yellow-billed Cuckoo 3; Black-billed Cuckoo 1*; Whip-poor-will 1-2; Yellow-shafted Flicker 1*; Yellow-bellied Sapsucker 2-1; Great Crested Flycatcher 1; Yellow-bellied Flycatcher 1-1; Acadian Flycatcher 1-1; E. Wood Pewee 1-2; Red-breasted Nuthatch 1-2; Brown Creeper 1-2; Winter Wren 1; Long-billed Marsh Wren 1-3; Catbird 4-12; Brown Thrasher 1; Robin 2*; Wood Thrush 16; Hermit Thrush 1; Swainson's Thrush 13-5; Gray-cheeked Thrush 18-1; Golden-crowned Kinglet 4-13; Ruby-crowned Kinglet

3-9; Starling 1*; White-eyed Vireo 1-4; Yellow-throated Vireo 2*; Solitary Vireo 1*; Red-eyed Vireo 8-53; Philadelphia Vireo 2-14; Black-and-white Warbler 6-38; Golden-winged Warbler 1*; Tennessee Warbler 32-351; Orange-crowned Warbler 1-4; Nashville Warbler 7*; Parula Warbler 1*; Magnolia Warbler 17-204; Cape May Warbler 1; Black-throated Blue Warbler 3*; Myrtle Warbler 9-5; Black-throated Green Warbler 11-66; Blackburnian Warbler 10-53; Yellow-throated Warbler 1*; Chestnut-sided Warbler 8-126; Bay-breasted Warbler 41-246; Blackpoll Warbler 2-8; Palm Warbler 10-13; Ovenbird 25-249; Northern Waterthrush 4-4; Kentucky Warbler 3*; Connecticut Warbler 1*; Yellowthroat 7-14; Yellow-breasted Chat 4*; Hooded Warbler 2-3; Canada Warbler 1*; American Redstart 9-14; Bobolink 15; Brown-headed Cowbird 1; Scarlet Tanager 1-3; Summer Tanager 1-3; Rose-breasted Grosbeak 7*; Indigo Bunting 6-16; Dickcissel 1*; Pine Siskin 1; Grasshopper Sparrow 1*; Slate-colored Junco 2*; Field Sparrow 2-1; White-crowned Sparrow 1; White-throated Sparrow 1-2; Swamp Sparrow 4-3; Song Sparrow 2; Unidentifiable on account of condition 5-5.

Grateful acknowledgment for their help is extended to M. L. Bierly, C. W. Fentress, K. A. Goodpasture, J. D. Parrish, John Riggins, L. O. Trabue and the personnel of WSIX and WSM T. V. towers.

The following correction should be made for the 1968 report on autumn casualties: *Migrant*, 40:25, paragraph 3, line 3: delete 311 Blackpoll Warblers, substitute 319 Black-and-white Warblers.

1521 Graybar Lane, Nashville 37215.

NOTICE TO MEMBERSHIP

Dues for 1970 are now payable. Payment should be sent to the Treasurer, Kenneth H. Dubke, 3302 Navajo Drive, Chattanooga, Tennessee 37411, as soon as possible. Your cooperation will be appreciated.

EASTERN BLUEBIRD NESTING IN 1969 AT ASHLAND CITY

BY AMELIA R. LASKEY AND MARTHA F. HERBERT

For the 1969 nesting season of Eastern Bluebirds (*Sialia sialis*) in the Neptune Community of Ashland City, John S. Herbert has increased the number of nest boxes to 70, placed on the wooden fence posts on nine miles of rural road. Regular weekly inspections were started on 5 March by M. F. Herbert and A. R. Laskey and terminated in September when the last brood fledged. The nestlings and six females were banded. In addition, eight females were trapped which had been banded as nestlings in 1968. One of these was nesting in the same box in which she had been hatched; the others were in boxes from 0.5 to 1.5 miles from the boxes in which they had been hatched.

Nest-building started in late March; first eggs were laid 2 April, with the peak on 12 April when 45 nests contained eggs. Three nests had complete sets of six eggs; 14 had sets of five eggs. In early June, one tiny yolkless egg was laid in a new nest, but was abandoned immediately. This year House Sparrows (*Passer domesticus*) were not as troublesome as in 1968. They were persistent at only three boxes, but we removed all nests and eggs. There were two Carolina Chickadee (*Parus carolinensis*) and one Tufted Titmouse (*Parus bicolor*) nesting attempts, all unsuccessful.

Of the 70 available nest boxes, 62 were used at least once by E. Bluebirds. Eggs laid, 708 (166 sets); eggs hatched, 340; young fledged 273 (39% of number laid); unsuccessful eggs and young 435 (61%). The number of unsuccessful eggs and young is discouraging and all evidence has been carefully tabulated. The heaviest loss is due to predation (188 in 49 nests). Robbed nests were intact as typical in snake predation.

A puzzling feature was the building of new nests over newly-laid clutches of eggs (91 eggs in 22 nests). This might be caused by contentions between bluebirds over the nest box, by the death of the female or other disturbances. We know that cats killed some females in their nesting environment. However, as we live 30 miles from the nesting area, it has been impossible to make the necessary observations to learn the cause of this behavior. The obvious procedure is to move the nest boxes with the great number of failures (seven in each of two boxes).

During the heat of summer, 104 eggs of 35 nests in boxes exposed to sunshine, were abandoned and usually found to be addled. During this period, young in the nests were protected to some extent by covering the box top with aluminum foil which reduced the inside temperature. Covering boxes containing eggs may be beneficial and should be tried in the next nesting season.

Small numbers disappeared from 32 broods in nests that successfully fledged young. These were doubtless removed after death by the parents. Seven young were found dead in five nests; four hatching young were eaten

by predatory ants; four eggs failed to hatch when the incubating female died on the nest from pesticide poison; four nestlings died when the box was blown down in a windstorm. The fifth of the brood survived when placed with a brood of similar development.

Thanks are due to Mrs. Boyd Bogle, Jr. and Mrs. W. A. Puryear for checking the nests on 23 May.

1521 Graybar Lane, Nashville 37215.
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THE RING'S INDEX ORNITHOLOGORUM

The editor of the International Ornithological Bulletin *The Ring* proposes to publish an Index Ornithologorum embracing the professional and amateur ornithologists of the world.

All entries should be in English and should be accompanied by one International Postal Reply Coupon for further correspondence. Closing date for all entries is 30 June 1970, but earlier arrival of entries would be appreciated. Do not delay—send your entry today.

The address is: The Editor, *The Ring*, Laboratory of Ornithology, Sienkiewicza 21, Wroclaw, Poland.

An entry (in English) should contain the following information:

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9. Do you intend to purchase a copy of the *Index* if reasonably priced?
10. One I.P.R. Coupon is enclosed: Yes No

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ROUND TABLE NOTES

BLACKBIRD ROOST AT COLUMBIA—During early December, 1969, a large Robin roost began to form rapidly in the vicinity of Reservoir Hill just west of downtown Columbia, Tennessee. Within about two weeks, the usual varieties of blackbirds also began to use the roost and by Christmas the roost had grown to enormous proportions. At the time of our Christmas count, by crude estimate, we listed 500,000 Starlings, 400,000 Common Grackles, 300,000 Red-winged Blackbirds, 100,000 Brown-headed Cowbirds, 200,000 Rusty Blackbirds, and about 150,000 Robins. It is known from observations elsewhere in the area that a few Brewer's Blackbirds are also present in the area. The Robins have generally used the western edge of the roost but overlap the various blackbird types along the fringe of their roosting area. This roost site was used in 1960 and 1961 and a year later a site was chosen about two miles south of town on "Rainey's Hill." Then for about five years the bulk of these birds are known to have roosted in a large cedar thicket one mile southeast of the center of Lewisburg, Tennessee, because actual flyways of birds originating west of Columbia, were followed eastward by plane to the Lewisburg roost. It would appear that some flyways extend out as far as 50 miles from these roosts in central Tennessee. Last spring prior to the breaking up of the Lewisburg roost, Delton Porter, who frequently birds with me, noticed quite a number of Starlings suddenly falling as they flew into the roost in the afternoon, all of which were dead upon hitting the ground. He called this observation to my attention at the time and I suggested the possibility of some disease such as a fungus disease, known to be present in bird roosts, or the possibility of starvation late in the winter when food would be more scarce as the cause of these unexplained deaths which must have been rather numerous. It is interesting that the very next winter, the birds chose a different roost site which had not been used for about 6 years. A small blackbird and Robin roost is also present just east of the airport at Lewisburg this year, but the number of birds is apparently measured in thousands rather than hundreds of thousands.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia 38401.

LEAST SANDPIPERS AND WATER PIPITS DURING WINTER AT ARROW LAKE—While routinely checking Arrow Lake on 27 December, 1969, for our Christmas bird count, I discovered a flock of very small sandpipers which were ultimately determined at close range to be Least Sandpipers, eight in number. These were carefully checked at close range to determine if any Semipalmated Sandpipers might be present, but none was found. Shortly after this a flock of birds resembling small larks was noted and when carefully observed was found to be Water Pipits, seven in number. Both flocks of birds were using the dry bed of Arrow Lake, which was less than half-filled at the time, leaving a large dry flood plane composed of mud and marshy grass, partly frozen. Although Least Sandpipers are commonly seen in the fall and spring, this is the first observation during the month of December or in the winter months in Columbia during the last 10 years of which I am aware. Water Pipits are never a common finding in Maury County and I am sure that this is only our second observation during the

last 10 years. The other sighting consisted of a single bird seen in the spring several years ago near a large pond one-half mile east of the Daniel Gray residence.

GEORGE R. MAYFIELD, JR., Maury County Hospital, Columbia 38401.

CLAY-COLORED SPARROW IN HARDIN COUNTY—A Clay-colored Sparrow (*Spizella pallida*) flew into a mist net near Olive Hill, 13 miles east of Savannah, Tennessee, about 07:00, 17 October, 1969. The site was on the east bank of Indian Creek, about 1,500 feet downstream from the Highway 64 bridge. Dominant vegetation at that spot is Black Willow (*Salix nigra*), growing thickly but not much more than three to four feet tall. Other bird species in the nets at that hour included Myrtle Warblers and Lincoln's, Swamp, and Song Sparrows (*Dendroica coronata*, *Melospiza lincolni*, *M. georgiana*, and *M. melodia*).

This sparrow was about the same size as a Chipping Sparrow (*Spizella passerina*) and resembled a first-fall-and-winter Chippy, but we noticed the following differences: In general the coloration was paler than an immature Chippy, and there was no trace of rufous edging on the crown feathers. The stripe through the eye was less distinct than would be expected in a Chippy. There was a hint of the broad, light crown stripe of the breeding Clay-colored. A grayish "collar" about the back of the neck was evident in some postures. No gray rump showed at any time except by disturbing the plumage. These differences were slight, and few would be noticeable except with the bird captive.

We compared the sparrow with the descriptions and measurements in Roberts (1955) and with the illustrations in Peterson (1961) and Robbins, Bruun, and Zim (1966). The plumage matched Roberts' description of *S. pallida* very closely, with appropriate allowance for immaturity. The tail was diagnostic, with a light edging around the grayish-brown feathers and the central pair much shorter, narrower, and more acutely pointed than the others.

It seemed to be comfortable in captivity, feeding and drinking freely, and not becoming excited nor attempting to escape. We considered holding it until it gained its breeding plumage, when its appearance would be distinctive enough to permit identification from a photograph, but it died during the night. Dissection showed the bird to be a first-year male. We found no fat deposits. The internal organs appeared healthy, and we could not ascertain the cause of death. The weight before skinning was 7.8 grams, the wing chord was 59 mm., the tail length was 60 mm., and the bill was 6 mm. from nostril to tip. For positive identification we prepared a study skin and sent it to the United States National Museum, where Mrs. Roxie C. Laybourne found it to be *Spizella pallida*. The skin is now loaned to the Ganier collection, number 1864.

There seems to be no documented Tennessee record of Clay-colored Sparrow. The breeding range extends east to Wisconsin and Michigan, and the winter range extends as far east as southern Texas, so migration in small numbers through western Tennessee seems plausible. The A.O.U. Checklist (1957) includes casual records from Ohio, Mississippi, Florida, and South Carolina, and "taken in breeding season in Illinois (Urbana) and Indiana; (Dune Park)." Bent's more liberal distribution also includes New Jersey,

Maryland, Virginia, North Carolina, Georgia, Alabama, and Louisiana. Tyler (1933) reported a sight record of Clay-colored Sparrow in Johnson City, Tennessee.

Albert F. Ganier, Katherine A. Goodpasture, Amelia R. Laskey, and Mike Bierly studied this bird with us while it was still alive, and they later offered important suggestions for this paper. We especially appreciated the study skin collection which Mr. Ganier, the T.O.S. Curator, has assembled.

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HARLAN'S HAWK AT CHATTANOOGA—On 16 and 17 January 1970, a single dark phase Harlan's Hawk (*Buteo barlani*) was observed by the writer and Miss Elizabeth Heideman in an abandoned agricultural area adjacent to the Amnicola Highway, approximately one mile southwest of Chickamauga Dam. The area where the sighting occurred is composed of weed fields, approximately thirty to fifty acres in size, which are bordered with large trees, many of which are dead and provide excellent perches for birds of prey. The area borders the Tennessee River. Rodent populations, especially rats and mice, are high. When first seen on 16 January, the bird was perched, facing the observers, in a small scrub tree in the middle of a field at approximately thirty-five yards distance. The deep grayish-black of the breast was very lightly mottled with what appeared to be a dirty white. The upper part of the under-tail was light grayish-white and became heavily mottled with the same grayish-black color of the body near the tip of the tail. The bird remained perched for approximately four minutes then flew away from the observers at about a forty-five degree angle. This provided an excellent opportunity to view the white lining of the primaries and secondaries as well as the white on the top surface of the tail. Both areas were mottled with the grayish-black color of the body. The only species with which there could arise some confusion is the dark phase Rough-legged Hawk (*Buteo lagopus*). However, this species has a distinct white, unmottled lining of the primaries and secondaries and an unmottled tail with a distinct dark terminal band. The bird was observed for about ten to fifteen minutes on 16 January, and about the same length of time on the morning of 17 January. All observations were made with 7x50 Bausch

and Lomb binoculars. The light conditions both days were excellent, with the light gray of the sky and light brown of the fields providing a good background for observations. The writer observed this species once previously (*The Migrant* 37:73), on that occasion being called as a member of a group to confirm a report of this species.

According to records in *The Migrant* this sighting represents the sixth record of this species within the state and the second record for the Chatanooga area.

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LOGGERHEAD SHRIKE NESTING IN CARTER COUNTY—An examination of the available literature reveals no record of a nest of the Loggerhead Shrike (*Lanius ludovicianus*) in Carter County. As of 1950, Herndon, in "Birds of Carter County, Tennessee" (*Migrant* 21:64), described the Loggerhead Shrike as a "rare winter resident", and reported that the period of its occurrence in that area was 20 August to 2 April ("extreme dates"). With this in mind, the following observations seem pertinent.

The author, accompanied by Dr. Lee R. Herndon, Pete Range, and Bill Bridgforth, discovered a nest of the Loggerhead Shrike near Wilbur Dam in Carter County, Tennessee, on 6 May 1969, approximately 4.5 miles east of the city of Elizabethton. The nest site was in a residential and farming area, with the immediate habitat consisting of old fields supporting a growth of broomsedge (*Andropogon* sp.), Red Cedar (*Juniperus virginianus*), and Black Locust (*Robinia pseudoacacia*), with occasional blackberry briars (*Rubus* sp.). Fence rows overgrown with honeysuckle (*Lonicera japonica*), Red Cedar, and Black Locust dissected the area. The nest was found along one of these fence rows within fifty feet of a paved road.

The nest was placed thirteen feet, seven inches above the ground in a Black Locust overgrown with honeysuckle. It contained five nestlings which were banded on 8 May 1969. The nest was saddled on a branch of the locust and supported primarily by strands of honeysuckle. The nest cup was lined with hair and rootlets; the outside of the nest included twigs, plant fibers, and white feathers (probably from chickens), and appeared loose and bulky. The nest dimensions were as follows: inside depth, 2.5"; inside diameter, 3.0"; outside depth, 6.0"; outside diameter, 5.0".

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BACHMAN'S SPARROW IN LAWRENCE COUNTY—Early one morning during the week of 25-31 May 1969, while on a birding trip to my farm in western Lawrence County my attention was attracted by Bachman's Sparrows (*Aimophila aestivalis*) singing in a neighbor's pasture a few hundred yards away. Investigation disclosed some five or six males singing on territory in the area. This was not considered to be very unusual until several weeks later when study of late issues of *The Migrant* and discussion with Mr. David E. Patterson of Savannah indicated that this is a rather rare species in Tennessee.

Identification was positive, the "seeeee, slipslipslipslipslip" song being characteristic; one bird was viewed at close range in good light with 10x50

binoculars for several minutes. The larger and darker bill and the buffy breast easily separated the species from the Field Sparrow (*Spizella pusilla*) which was common in adjacent areas.

The habitat was around the point of a deciduous, brushy, second-growth, wooded hillside jutting into the rolling pasture land which sloped toward a small creek about one-fourth mile away. The pasture had been reworked with a bush-and-bog (heavy disc harrow) last year and reseeded to a good stand of fescue and white clover which was not grazed this year. The reworking process had left some short dead sprouts standing and the singing birds were using these for perches. The birds were surprisingly tame and could be approached to a very close range and then when disturbed they would usually fly to the brush in the adjacent wooded area instead of dropping into the grass as would be expected of most sparrows. The species most common to adjacent areas such as the Blue-winged and Prairie Warblers, the Yellowthroat and Yellow-breasted Chat and the Field Sparrow, were pretty well excluded over an area of several acres. The only intruder noted was an Eastern Wood Pewee which came and gave his plaintive whistle several times in a sapling just a few feet above my head.

From references available to me it is not possible to determine whether this colony is of the Bachman's (*A. a. bachmani*) or the Illinois (*A. a. illinoensis*) subspecies. The song was certainly more varied than that of the Bachman's race which I have observed in Northwest Florida and South Alabama. But song variation is probably no basis for separating the races. It is hoped that the colony can be studied in more detail in future seasons.

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A GOSHAWK AT NASHVILLE—A mature male of this species (*Accipiter gentilis*) was observed on 27 December 1969, during the course of taking the annual mid-winter bird census. A division of our party, consisting of John and Martha Herbert and the writer, found the bird at 09:00 perched near the top of one of a fringe of large oaks growing on a river bluff above the Cumberland River, at Davidson Creek 7 miles west of Nashville c.h. We were made known of its presence by a group of eight crows which noisily heckled it at a safe distance. At a distance of about 150 yards we observed it at leisure as it faced us in bright sunlight. Much larger than the crows and of very erect posture, its light gray streaked breast, bluish-slate sides, conspicuous black cheek patch and long tail, eliminated confusion with any other species. From its perch it could command a view of scrubby pasture land southward and grassy river bottoms to the north. The intervening creek prevented a closer approach. The Goshawk is a bold and fearless predator, making its summer home chiefly in Canada. It is an extremely rare fall and winter visitant and Nashville appears to be on the southward limit of its winter range. Over the many years there are eight Tennessee records; five from Nashville (*Migrant* 8:85, 11:1, 12:61, 16:63, and 36:8) and three from the Elizabethton area (*Migrant* 21:59). Robert Mengel, in his *Birds of Kentucky*, lists even fewer authentic records from that state.

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THE SEASON

CHARLES R. SMITH, *Editor*

The months of August, September, and October exhibit an interesting weather pattern for the state. The one factor common to all three months was temperatures which were persistently colder than normal. Temperatures from each region for each month ranged from 1.9-3.3° F. colder than normal for the period; however, all regions of the state experienced essentially the same degree of cold over the three-month period, with a temperature range of 2.4-2.6° F. colder than normal for each region for the period. October was the coldest month with August being the warmest.

The Plateau and Basin Region experienced the least precipitation for the period. The western portion of the state received the greatest precipitation. This situation was due primarily to the heavy rainfall West Tennessee received on 18 and 19 August as a result of Hurricane Camille. Camille also contributed to the fact that August was the wettest month of the period, with most of the precipitation occurring in Middle and West Tennessee as a result of the influence of the hurricane. Precipitation for the eastern portion of the state was essentially normal for the period. October was the driest month for the state.

The most outstanding observation for the period was that of a Clay-colored Sparrow at Savannah. This constitutes the first collected specimen of that species in Tennessee. Identification was verified by the U. S. National Museum and the specimen is currently in the collection of the TOS Curator, Albert F. Ganier, at Nashville. Jerry Mathis and David and Mike Patterson were responsible for this observation. Other noteworthy observations include the following: Sandhill Crane, Buff-breasted Sandpiper, Western Kingbird, and Mourning Warbler from the Plateau and Basin Region; Pigeon Hawk, White-rumped Sandpiper, and Laughing Gull from the Ridge and Valley Region; Tree Sparrow and Lincoln's Sparrow from the Mountain Region.

WESTERN COASTAL PLAIN REGION—*Kite*—*Sparrows*: Mississippi Kite: 3 Aug. to 9 Sept. (4) R. Sharp-shinned Hawk: 10 Oct. (1) R. Bald Eagle: 17 Aug. (1). Short-billed Dowitcher: 5 Oct. (2) R. Sanderling: 5 Oct. (6) R. Great Horned Owl: all season (2) after no records for 2½ years. Yellow-bellied Flycatcher: 9 Sept. (1) and 13 Sept. (1) both banded. Red-breasted Nuthatch: 15 Oct. (5). Long-billed Marsh Wren: 18 Oct. (1). Short-billed Marsh Wren: 10 Oct. (1) tower casualty. Gray-cheeked Thrush: first 8 Sept. (1). Swainson's Warbler: 15 Oct. (1) tower casualty. Tennessee Warbler: only (9) banded 30 Sept. to 18 Oct. compared with

(96) same place and time last year. Orange-crowned Warbler: 18 Oct. (1). Louisiana Waterthrush: last 23 Aug. (1). Pine Siskin: unusually abundant, with (57) banded 27 Oct. to 5 Nov. and numerous small (to 25) flocks sighted. Tree Sparrow: 19 Oct. (1) R. Clay-colored Sparrow: 17 Oct. (1) verified by U. S. Nat. Mus. White-throated Sparrow: this species, much less abundant last winter than in previous ten years, is back in usual numbers, beginning 8 Oct. Lincoln's Sparrow: 16 and 17 Oct. (4).

Locations: R—Reelfoot Lake, remainder from Savannah.

Observers: Kenneth Leggett at Reelfoot; Jerry Mathis, David and Mike Patterson at Savannah.

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CENTRAL PLATEAU AND BASIN REGION—*Grebes-Ducks:* Horned Grebe: 20 Sept., (2) RL (MCW). Pied-billed Grebe: late, 18 Sept. (6) RL (MCW), 9 Oct. (8) OHL (LOT), 20 Oct. (11) RL (MCW). Great Blue Heron: 12 Sept. thru 20 Oct., (1-2) LD (RTH), few NA. Green Heron: last, 18 Oct. (1) at Manchester (MCW). Little Blue Heron: 17 Aug. (7) ACM, 20 Aug. (2) BV, both (MLB, JNR). Black-crowned Night Heron: 3 Sept. (1) WB (HB), few NA. Yellow-crowned Night Heron: 4 July to 10 Sept. (5) WB (HB). Canada Geese: 22 July (15), 8 Aug. (16) both OHL (LOT) (some with plastic collars of local breeding birds); no migrating flocks reported NA; 4 Oct. (9) LD (RTH), 13 Oct. (14) BT (DH, RH). Blue Goose: 31 Oct. (1) BL (HEP). Mallard and Black Ducks; scarce and late, first, 28 Oct. (2) of each, CL (LOT). Gadwall: first 5-30 Oct. (2-5) LD (RTH), 23 Oct. (115) WR (KD), 30 Oct. (20) BT (DH, RH). Blue-winged Teal: scarce, 20 Aug., (2), 25 Sept. (3), both BL (HEP), late were 31 Oct. (27) BT (DH, RH). American Widgeon: 1 Oct. (1) RL (MCW), 27 Oct. (55) WR (KD, JD). Shoveler: 17 Oct. (14) BT (DH, RH). Wood Duck: down to (6) 16 Oct. at RL (MCW), 4 Oct. (100) ACM (ROH). Redhead: 28 Oct. (6) CL (LOT). Ring-necked Duck: very early were (4) 8 Oct. RL (MCW), elsewhere late and scarce; 27 Oct. (784) WR (KD, JD). Lesser Scaup: first 23 Oct. (4) RL (MLB), 27 Oct. (8) RL (MCW), and (145) WR (KD, JD). Ruddy Duck: 23 Oct. (2) WR (KD), 28 Oct. (2) CL (LOT). Hooded Merganser: 28 Oct. (2) CL (LOT), 4 days earliest NA.

Hawk-Dove: Broad-winged Hawk: 25 Sept. (1) (MLB)*, last report. Bald Eagle: 5, 8, 18, 23, 28, 30 Oct. (1), 24, 26 Oct. (2), 31 Oct. (4), all LD (RTH). Marsh Hawk: 3 Aug. (1) ACM (HR, JR). Osprey: 16 Sept. to 10 Oct. (1-2) LD (RTH), 20 Sept. (3) NA. Sandhill Crane: 27 Oct. (113), 30 Oct. (21), BT (DH). Virginia Rail: 12 Oct. (1) (KAG*, MLB). American Coot: 18 Aug. (1) RL (MLB), 20 Sept. (2) ACM (AFG), 11 to 31 Oct. (200-400) LD (RTH), 27 Oct. (8500) WR (KD, JD), 31 Oct. (500) BT (RH, DH). Semipalmated Plover: 3 Aug. (1) ACM (HR, JR), 15 Aug. (1), 10, 13 Oct. (1) BL (HEP), 17 days latest NA. Killdeer: (25-30) BL during period. American Golden Plover: 15 Aug. (1), 13 days earliest NA, 1 Oct. (1), both (HEP). American Woodcock: 9, 31 Oct. (1) (MLB). Common Snipe: 4 Oct. (4) ACM (ROH), 30 Oct. (8) BT (DH, RH). Spotted Sandpiper: 8 Aug. thru period (1-4) BL (HEP), 14 Oct. (1) BT (DH, RH). Solitary Sandpiper:

last 17 Aug. (2) ACM (MLB). Greater Yellowlegs: 17 Aug. (2) ACM (MLB, JNR). Lesser Yellowlegs: scarce, 17 Aug. (1) ACM (MLB, JNR), 10 Oct. (1) BL (HEP). Pectoral Sandpiper: 3 Aug. (1) ACM (JNR), 25 Sept. (5) (HEP), 27 Oct. (5) OHL (LOT). Least Sandpiper: 15 Aug. (5), (1-6) during period except 10 Oct. (9), all BL (HEP). Dunlin: 17 Oct. (1) to 31 Oct. (5), BL (HEP), 30 Oct. (10) BT (DH, RH). Semipalmated Sandpiper: 12 Aug. (4) (HEP), 14 Sept. (2) (MLB), both BL. Western Sandpiper: 15 Aug. (1), 13 Sept. (2) BL (HEP), second NA occurrence. Buff-breasted Sandpiper: 3 Aug. (1) ACM (HR, JR), fourth NA record. Herring Gull: 14 Oct. (6) LD (RTH), only report. Ring-billed Gull: 27 Oct. (3) WR (KD, JD) and (8) OHL (LOT). Bonaparte's Gull: 27 Oct. (2) OHL (LOT). Forster's Tern: 10 Oct. (1) found shot BL (HEP), dead about one day, 16 days latest NA. Black Tern: 17 Aug. (2), 19 Aug. (35) ACM (MLB, JNR), 20 Aug. (3) OHL (OT). Mourning Dove: 11 Sept. (2) young left nest CP (HCM).

Cuckoos-Wrens: Yellow-billed Cuckoo: last, 26 Oct. (1) (KAG). Black-billed Cuckoo: 21 Sept. (2), 29, 30 Sept. (1) LD (RTH). Common Nighthawk: 5 Sept. (952) 6 Sept. (402) then down to 27 Sept. (12), all migrating over TJ (MLB, HR, JR.); last, 13 Oct. (1) H (HCM). Chimney Swift: last, 17 Oct. (25) NA (LOT). Red-headed Woodpecker: few reports NA, 30 Oct. (30) Obey River Park, gone next day, (DH, RH). Yellow-bellied Sapsucker: 27 Sept. (1) TJ (ROH), 2 Oct. (3) WB (HB). Western Kingbird: 9, 11, 16 Oct. (2), 10 Oct. (3) LD (RTH). Yellow-bellied Flycatcher: 19 Sept. (1) (KAG) to 28 Sept. (1) (MLB). Acadian Flycatcher: 11 Oct. (1) (KAG). Traill's Flycatcher: 22 Aug. (1) (KAG), 3 days earliest NA, to 25 Sept. (1) (MLB). Least Flycatcher: 17 Aug. (1), 7 days earliest NA to 24 Sept. (1), both (MLB). (Note: all *Empidonax* flycatcher records are for banded birds) Wood Pewee: 9 Oct. (1) LD (RTH), very late was (1) 21 Oct. H (HCM). Olive-sided Flycatcher: 20 Sept. (1) RL (MCW), (2) FV (AC) 7 days latest NA. Tree Swallow: 20 Sept. (100) ACM (BG). Barn Swallow: last, 4 Oct. (1) DK (MCW). Purple Martin: 20 Aug. (3) CL (LOT), 1 Sept. (1) WB (MCW). Red-breasted Nuthatch: 9 Sept. (1) H (HCM), 29 Sept. (1), then (1-3) during period LD (RTH), 15-20 Oct. (1) WB (HB), 17 Oct. (2) BT (DH, RH). Brown Creeper: 18 Oct. (1) BT (DH, RH), 19 Oct. (1) TJ (KAG). House Wren: 20 Sept. (1) (MCW), last 12 Oct. (1) (KAG). Winter Wren: 11 Oct. (1) TJ (ROH), 12, 13 Oct. (1) H (HCM). Long-billed Marsh Wren: 28 Sept. (1) (KAG) and 17 Oct. (1) (MLB). Short-billed Marsh Wren: 24 Aug. (1) RR (HLB) and 10 Oct. (1) (KAG).

Mockingbird-Kinglets: Mockingbird: very late was (3) young leaving nest 4 Sept. CP (HCM). Wood Thrush: last NA 5 Oct. (1) H (HCM); late was (1) WB 18-25 Oct. (HB). Hermit Thrush: 9 Oct. (1) BT (DH, RH), 19 Oct. (1) TJ (KAG). Swainson's Thrush: late arriving, 18 Sept. (1) H (HCM) to 17 Oct. (1) (MLB). Gray-cheeked Thrush: 13 Sept. (1) (MLB) to 17 Oct. (1) (MLB) 5 days latest NA. Veery: 24 Aug. (1) (KAG), 10 days earliest NA to 25 Sept. (1) (KAG). Blue-gray Gnatcatcher: late, (1) WB (HB) 29 Sept., and 4 Oct. (1) CH (SB). Golden-crowned Kinglet: first, 15 Oct. (1) (KAG). Ruby-crowned Kinglet: 27 Sept. (3) (HB).

Pipit-Vireos: Water Pipit: 17 Oct. (1) BL (HEP), 27 Oct. (1) OHL (LOT), only reports. Cedar Waxwing: 14 Sept. (32) BT (DH, RH), 22 Oct. (7) WB (HB). Starling: still well below normal NA and BT. White-eyed Vireo: late was (1) 20 Oct. H (AT). Yellow-throated Vireo: last, 4 Oct. (1) (KAG, MLB). Red-eyed Vireo: last 11 Oct. (1) (MLB). Philadelphia Vireo: last, 11 Oct. (1) (MLB).

Warblers: Black-and-white: late was (1) 15 Oct. (KAG). Prothonotary: a late record, 24 Sept. (1) (MLB). Worm-eating: 30 Aug. (1) (MLB), last report: Golden-winged: 14 Aug. (1) H (HCM) earliest NA by 4 days; 11 Sept. (2) LD (RTH). Blue-winged: last 23 Sept. (1) (MLB). Tennessee: scarce, since generally most commonly seen fall warbler; 11 Sept. (2) H (ES) to 26 Oct. (1) (KAG). Orange-crowned: 8 Oct. (1) (MLB), 2 Nov. (1) (KAG). Nashville: 15 Sept. (1) H (CWF) to 18 Oct. (1) (KAG). Parula: last, 4 Oct. (1) (MLB, HR, JR). Yellow: last, 20 Sept. (1) (KAG). Magnolia: well below their usual large numbers NA; from 9 Sept. (1) H (HCM) to 17 Oct. (1) (MLB). Myrtle: very early at LD with (1) 17 Sept., then (2) 10 Oct. and up to (25) 18 Oct.; first NA (1) BL (HEP), 13 Oct., then 17 Oct. (1) BT (DH, RH). Black-throated Green: last, 17 Oct. (1) (MLB). Blackburnian: 9 Aug. (1) CH (SB), 24 Aug. (7) WB (HB), to 10 Oct. (1) RL (MLB). Yellow-throated: last, 11 Oct. (1) WB (MCW). Chestnut-sided: from 2 Sept. (1) H (HCM) to 10 Oct. (1) RL (MLB). Bay-breasted: from 18 Sept. (1) BS (KAG) to 20 Oct. (1) H (AT). Palm: scarce, last 22 Oct. (1) BL (HEP). Ovenbird: from 10 Sept. (1) to 17 Oct. (1), both (MLB). Northern Waterthrush: 10 Sept. (1) (KAG) to 17 Oct. (1) (MLB), both banded birds. Louisiana Waterthrush: 4 Sept. (1) banded (MLB), 2 days latest NA. Mourning: 4 Sept. (1) (MLB) and 10 Oct. (1) (KAG) for NA, 13 to 18 Sept. (1) WB (HB). Yellowthroat: last NA 16 Oct. (2) (KAG). Yellow-breasted Chat: still scarce NA, last 5 Oct. (1) (KAG). Hooded: last NA 26 Sept. (1) (KAG), 11 Oct. (1) WB (MCW). Wilson's: 29 Aug. (1) (MLB), 30 Aug. (1) WB (HB), to 17 Oct. (1) (KAG). Canada: 19 Aug. (1) H (HCM), 30 Aug. (2) WB (HB), 9 Sept. (1) CV (Thelma Tinnon), to 27 Sept. (2) (MLB). American Redstart: 14 Oct. (1) H (HCM).

Orioles-Sparrows: Orchard Oriole: 10 Aug. (2) adults with (2) young H (MLB), last report, 15 Aug. (15) WB (MCW). Baltimore Oriole: scarce, last report 23 Aug. (1) (MLB). Scarlet Tanager: from 31 Aug. (1) (MLB) to 15 Oct. (1) H (HCM). Summer Tanager: last 19 Oct. (1) H (HCM). Rose-breasted Grosbeak: from 13 Sept. (1) to 17 Oct. (2), both (MLB). Blue Grosbeak: numbers and nesting pairs still increasing NA; several late Sept. dates NA, with a new latest, 3 Oct. (1) (KAG, MLB), 14 days latest ever; other dates, 19 Sept. (1) WB (HB), 24 Sept. (1) LD (RTH), 17 Sept. (1) WC (MCW). Indigo Bunting: more NA than past two years. Dickcissel: 17 Oct. (1) (MLB), 25 Oct. (1) WB (HB). Purple Finch: 24 Oct. (1) WB (HB) seemed absent elsewhere. Pine Siskin: 23 Oct. (1) (KAG), 25 Oct. (100) (KAG, MLB), 27 Oct. (2) WR (KD, JD). American Goldfinch: below normal NA. Vesper Sparrow: 24 Oct. (15) WB (HB), only report. Slate-colored Junco: 4 Oct. (1) BT (DH, RH), and (1) H (HH) *fide* (ARL), then 14 Oct. (1) (MLB). White-crowned Sparrow: 28 Sept. (1) (KAG), 6 days earliest NA. White-

throated Sparrow: 28 Sept. (1) CP (HCM), 8 Oct. (5) WB (HB), 14 Oct. (3) BT (DH, RH). Fox Sparrow: 17 Oct. (1) (MLB) first report. Lincoln's Sparrow: from 28 Sept. (1) (KAG), one day earliest NA to 31 Oct. (1) (MLB). Swamp Sparrow: first report, 26 Sept. (1) (KAG, MLB). Song Sparrow: 12 Aug. (1) WB (MCW), 4 Oct. (1) WB (HB), 5 Oct. (1) (KAG), first NA.

* Note—All records credited to KAG and MLB are at Two Jays Sanctuary unless otherwise stated.

Locations: ACM—Ashland City Marsh, BS—Basin Springs, BV—Buena Vista Marsh, BL—Bush Lake, BT—Byrdstown, CP—Centennial Park, CH—Center Hill, CL—Coleman's Lake, CV—Cookeville, DK—DeKalb, County, FV—Fernvale, H—Home area, LD—Lily Dale, OHL—Old Hickory Lake, RL—Radnor Lake, NA—Nashville Area, RR—River Road, NA, WB—Woodbury, WR—Woods Reservoir, TJ—Two Jays Sanc.

Observers: SB—Sue Bell, MLB—Mike L. Bierly, HB—Mrs. Hoyt Bryson, AC—Annella Creech, JD—John DeVore, KD—Kenneth Dubke, CWF—Clara W. Fentress, AFG—Albert F. Ganier, KAG—Katherine A. Goodpasture, BG—Ben Grose, ROH—Roger O. Harshaw, DH—David Hassler, RH—Robbie Hassler, RTH—Roy T. Hinds, HH—Helen Hodgson, ARL—Amelia R. Laskey, HCM—Harry C. Monk, HEP—Henry E. Parmer, HR—Heather Riggins, JR—John Riggins, ES—Ellen Stringer, AT—Anne Tarbell, LOT—Laurence O. Trabue, MCW—Mary C. Wood.

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EASTERN RIDGE AND VALLEY REGION—*Loons-Merganser:* Common Loon: first, 21 Oct. (8) SHL (WC, JW). Double-crested Cormorant: 23 Oct. (1) HRA (WCa, MH). Little Blue Heron: regular to 13 Oct. (1 to 22) HRA (KD). Common Egret: regular to 25 Oct. (1 to 9) HRA (KD). Canada Goose: regular through period (4), first migrants 26 Sept. HRA (WCa, MH). Blue Goose: 22 Oct. (11), 28 Oct. (40) HRA (KD). Shoveler: 22 Oct. (1) HRA (KD). Wood Duck: max., 9 Sept. (396) HRA (KD). Red-breasted Merganser: 4 Oct. (2), 21 Oct. (1) SHL (WC, JW).

Hawks-Sanderling: Cooper's Hawk: 27 Sept. (1) SB (RS), 28 Sept. (1) Col (RS). Bald Eagle: 11 Aug. (1 immature) HRA (KD), 30 Oct. (1) SHL (JK). Marsh Hawk: max. 26 Oct. (3) HRA (JD). Osprey: regular through period (1 to 2) HRA (KD), (1 to 2) WBL (EBE). Pigeon Hawk: 28 Sept. (1) K (S, W). King Rail: 25 Sept. (1), 5 Oct. (1) AM (KD). Virginia Rail: 28 Sept. (1) K (TK). Black-bellied Plover: 22 Aug. (1) SB (KD), 28 Oct. (1) HRA (KD). Willet: 19 Aug. (1) HRA (KD), 2 Sept. (1) BVa (WC), first Bristol area record. White-rumped Sandpiper: 24 Oct. (1) SB (RS). Dowitcher (sp.): 22 Oct. (1) HRA (KD). Western Sandpiper: 16 Aug. (2), 22 Aug. (3), 28 Aug. (3) SB (KD), 1 Sept. (1) HRA (KD), 3 Oct. (1) AM (RS). Sanderling: 4 Oct. (1) SHL, Va. (WC, BR, JW).

Gull-Warbler: Laughing Gull: 19 Aug. (1 immature) HRA (KD). Forster's Tern: 28 Sept. (1) K (JTT). Common Tern: 19 Aug. (1) ChL (KD). Caspian Tern: 27 Sept. (1) HRA (RS). Black Tern: max. 17 Aug. (100) HRA (WCa, MH). Barn Owl: regular (1) AM (KD, RS). Bank Swallow: max. 24 Aug. (2000) HC (TK). Red-breasted Nuthatch:

first, 28 Sept. (1) Col (RS), 28 Sept. (50) K (KOS); common during October in all areas. Connecticut Warbler: 28 Sept. (1) K (HL, JM, RM).

Locations: AM—Amnicola Marsh, BVa—Bristol, Virginia, ChL—Chickamauga Lake, Col—Collegedale, HC—Hamblen County, HRA—Hiwassee River Area, K—Knoxville, SB—Savannah Bay, SHL—South Holston Lake, SHL, Va.—South Holston Lake, Virginia, WBL—Watts Bar Lake.

Observers: WCa—Wilford Caraway, WC—Wallace Coffey, JD—Jon DeVore, KD—Kenneth Dubke, EBE—E. B. Edwards, KOS—Knoxville Chapter TOS, MH—Melvin Hall, JK—Mrs. J. E. B. Kelley, TK—Tony Koella, HL—Helen Lewis, JM—Julia Moore, RM—Mrs. Ruth Moore, BR—Brent Rowell, RS—Roger Swanson, JTT—Dr. James T. Tanner, S,W—Mr. and Mrs. Louis Smith and Mr. and Mrs. Bill Williams, JW—Johnny Wood.

JAMES M. CAMPBELL, 15 Hedgewood Drive, Knoxville 37918.

EASTERN MOUNTAIN REGION—*Grebes-Flycatchers:* Pied-billed Grebe: 13 Oct. (1) WaL (PR). Black Duck: 24 Aug. (1) WaL (PR). Ring-necked Duck: 1 Oct. (1) WiL. Lesser Scaup: 11 Aug. (2) WiL (present all summer). Bufflehead: 11 Aug. (2) WiL, 1 Oct. (2) WiL (present all summer). Cooper's Hawk: 10 Aug. (1) WaL (PR); throughout Oct. HC (MS). Red-tailed Hawk: 24-27 Oct. (1) HC (MS). Marsh Hawk: 29-31 Oct. (1) HC (MS). Yellow-billed Cuckoo: last 8 Oct. (1) EGC (LRH). Black-billed Cuckoo: last 5 Oct. (1). Great Horned Owl: throughout Sept., Oct. (1) MC (CRS). Eastern Kingbird: last 13 Aug. (1) EGC (LRH). Olive-sided Flycatcher: 6-11 Aug. (1) HC (MS).

Swallows-Warblers: Bank Swallow: 3 Aug. (3) MC (CRS). Cliff Swallow: 3 Aug. (6) MC (CRS). Purple Martin: last 8 Aug. (4) EGC (LRH). House Wren: last 21 Sep. (1) EGC (LRH). Catbird: last 23 Oct. (1) HC (MS). Tennessee Warbler: first 9 Aug. (1) HC (MS), very early record; 21 Sept. (1). Yellow Warbler: 13 Sept. (1) MC (PR, CRS), banded. Magnolia Warbler: 13 Sept. (1) MC (CRS), 23 Sept. (1) EGC (LRH). Cape May Warbler: 7 Sept. (1) RM (CRS). Blackburnian Warbler: 2 Aug. (1) UM (PR, CRS). Yellow-throated Warbler: 11 Aug.-18 Sept. (1) EGC (LH, LRH). Prairie Warbler: 17 Sept.-1 Oct. (1) EGC (LH, LRH). Yellow-breasted Chat: last 13 Sept. (1) MC (CRS), rather late. Wilson's Warbler: 14 Sept. (2) MC (PR, CRS). American Redstart: 21 Sept. (2) MC (CRS).

Orioles-Sparrows: Orchard Oriole: last 8 Aug. (2) EGC (LRH). Baltimore Oriole: last 7 Sept. (1) EGC (LH, LRH). Rusty Blackbird: 27 Oct. (100+) HC (MS). Blue Grosbeak: last 10 Aug. (1) WiL (CRS). Purple Finch: 26 Oct. (3) RM (FWB). Red Crossbill: 11 Oct. (3) RM (CRS). Savannah Sparrow: 29 Oct. (1) EGC (LRH). Chipping Sparrow: last 24 Oct. (1) EGC (LRH). Tree Sparrow: 28 Oct. (8) HC (MS). Lincoln's Sparrow: 5 Oct. (1) (AU, LH).

Locations: EGC—Elizabethton Golf Course, HC—Heaton Creek (near Roan Mountain), MC—Milligan College, RM—Roan Mountain, UM—Unaka Mountain, WaL—Watauga Lake, WiL—Wilbur Lake.

Observers: FWB—Fred W. Behrend, LH—Lois Herndon, LRH—Lee R. Herndon, PR—Pete Range, CRS—Charles R. Smith, MS—Maxie Swindell, AU—Alice Ulrich.

CHARLES R. SMITH, Route 2, Johnson City 37601.

PRESIDENT'S MESSAGE FOR TOS

There are several matters of interest to the TOS which have come to my attention since the time of our annual meeting last spring in Johnson City. First of all by mutual agreement it was decided not to attempt a joint meeting with the Kentucky Ornithological Society this spring. This does not mean that the members of our Society or theirs are not looking forward to such a meeting in the future, but it was felt that the best opportunity for such a joint meeting would occur in the spring of 1971 when the responsibility for our spring meeting would rest with Middle Tennessee, particularly the Nashville Chapter. If this joint meeting does materialize, it is planned that such a meeting would be located in South Central Kentucky, perhaps at Mammoth Cave, or in North Central Tennessee where it would be most convenient geographically to the membership of both societies.

The Ornithological Seminar last fall at Chalet Motel in Cleveland, Tennessee was very successful and well-attended. During the evening there was a lively discussion of the need for development and preservation of a quality environment for birds, beasts, and man. This discussion has now become even more timely because of national emphasis on pollution control as emphasized by President Nixon recently. I believe we all agreed that the members of the Tennessee Ornithological Society should play an active part in this movement, but the official role of our Society is as yet being considered by the officers and members. If you have ideas along this line I would be glad to hear from you. Under the sponsorship of the Tennessee Conservation League an attempt is now being made to form a "Tennessee Environmental Council" which would coordinate the activities of a number of societies such as ours who are interested in preserving a quality environment.

A number of ideas are under discussion by our committee for self-study and future planning. This committee will meet again before the annual spring meeting or on the Friday night of that meeting to discuss these ideas and present recommendations to the board of directors at that time. I think it is our feeling that it would be very desirable for the board of directors to meet in the fall perhaps at the same time as the Ornithological Seminar sponsored by the interested group in East Tennessee. This would allow those of us, who normally would have to attend a long session on Saturday afternoon during the annual spring meeting, to spend more time in birding and fellowship with the members during the spring meeting and would allow somewhat more time for transaction of vital business which cannot always wait a year for proper action by the board. As a by-product of this change, members of the board of directors would have an opportunity



to attend some of the worth-while papers given during the seminar and all members would be encouraged to join in the activities of a fall meeting if their time and other commitments would allow.

The Memphis Chapter is currently developing plans for our annual spring meeting in West Tennessee and these may be well known to you by the time of this publication. I look forward to seeing as many of you as possible at that meeting.

—GEORGE R. MAYFIELD, JR.

BOOK REVIEW

WILDLIFE IN DANGER. By James Fisher, Noel Simon and Jack Vincent. The Viking Press, Inc., Dept. JLW, 625 Madison Avenue, New York, N. Y. 10022, 1969: 7½ x 10 in. 368 pp., \$12.95.

This book relates the present status of more than 200 species of mammals and birds which are considered endangered and doomed to extinction unless immediate steps are taken to insure their preservation. These and many other animal and plant species are described in detail, with more than 100 of the rarest shown in color and many more in black and white. About 150 of the illustrations are by leading wildlife artists commissioned specifically for this book and will be reproduced nowhere else.

In less than 300 years at least thirty-six species of mammals and ninety-four species of birds have become extinct and now more than 200 other species are or have been on the endangered list. Some species have vanished through natural causes, such as fires, floods or disease while more have been due to the activities of man. Some of these causes have been over-hunting, poisoning for predator control, and now pollution is taking its toll, as well as habitat destruction, usually by humans, such as, clearing our forests, draining swamps and wetlands, flooding our river basins, building for industry and urban development, and construction of jet ports.

In 1966 a world list of rare and endangered birds consisted of 318 species and subspecies. Once a bird is placed on this list it is seldom possible to improve its status so that survival is assured without expensive protective measures, such as continuous warden service or the setting aside of extensive and expensive land areas as sanctuaries or refuges which must be maintained under constant surveillance.

In almost every instance man, by one means or another, has been responsible for the decline of the endangered species. In some instances federal and state governments have placed bounties on some species, which were considered detrimental to certain interest groups. The rewards were so attractive that individuals became professionals until the species became so depleted that the operation was no longer profitable. The clearing, cultivating, draining, flooding, filling, developing, polluting and otherwise encroaching upon specific types of habitat has made it impossible for certain species to find adequate food for survival. Hunting pressure on some of our game birds and waterfowl makes it necessary to limit the hunting season and the bag limit to maintain a population sufficient to insure survival of some species to assure that they do not become eligible for the endangered list.

Some of the species of birds with which we are most familiar and toward which efforts are being made to save them from extinction are:

California Condor, Everglade Kite, Bald Eagle, Peregrine Falcon, Whooping Crane, Brown Pelican, Eskimo Curlew, Ivory-billed Woodpecker, Bachman's Warbler, Kirtland's Warbler, Dusky Seaside Sparrow, and Cape Sable Sparrow. The habitats suitable for survival of some of these species are very limited and restrictive, outside of which the species cannot survive. Man has the means of usurping these areas and using them to advance his interests as the human population continues to grow at a rapid rate. Not only are these areas made uninhabitable by changing types of habitat, but some areas are becoming so polluted and saturated with insecticides that they are unsuitable for man or beast.

We are reminded almost daily, through our news media, of our deteriorating environment and that if steps are not taken immediately, our lives will be in jeopardy along with countless individuals of many other forms of life. Current literature is replete with references to the declining numbers of many of our more common bird species. The so-called "red book" published annually by the U. S. Interior Department lists fourteen mammals and forty-six bird species in danger of extinction; Wallace (*The Jack-Pine Warbler*, 47: 70-75, 1969, published by the Michigan Audubon Society) lists more than thirty bird species which show declining numbers in recent years.

Our members are urged to join and support their local and national conservation societies and by purchasing this book you will be supporting conservation on an international scale.

LEE R. HERNDON, Route 6, Elizabethton 37643.

"600 CLUB"

As the name implies, the "600 Club" is composed of individuals who have seen, heard or otherwise been able to identify 600 or more species of North American birds, north of the Mexican border. The number of persons who have done this is comparatively small.

Listed in *National Wildlife* (Peterson: February-March, 30, 1967) are a few of the individuals, who had the greatest number of birds on their "Life Lists" at that time. Leading the list was Dr. Ira Gabrielson with 670, Mr. and Mrs. Dudley Ross with 659 each, followed by Dr. Roger Tory Peterson with 650.

A survey conducted by Stuart Keith three years earlier, indicated that "no less than 19 people were then eligible for the '600' Club".

A Lifetime with the Birds (Greene: 344-372, 1966) published by Edwards Brothers, Inc., Ann Arbor, Michigan, lists the species common name, scientific name and the states or provinces in which he observed the particular species of the more than 600 species on his "life list". Mr. Greene is now attempting to "round up" all individuals who are eligible, or approaching eligibility for membership in this, as he expresses it, "fast growing organization".

The next Official Summary will be out about 15 April 1970. If you qualify for membership or are very near the 600 mark, please write: Mr. Earle R. Greene, 1600 W. 5th. St., Oxnard, California 93030, giving him the number of birds on your list by 1 April 1970.

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 3900 Wisconsin Avenue N. W., Washington, D. C. 20016.

COPY: Manuscripts should be typed double spaced on 8½ x 11" paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1968).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific name in italics only after the first occurrence in the text for both regular articles and ROUND TABLE NOTES, and should conform to the A.O.U. Check-list 5th edition, 1957. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

REPRINTS: Reprints are available on request. Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

Books for review and articles for publication should be submitted to the editor. Seasonal reports and items should be forwarded to the appropriate departmental editor whose name and address will be found on the inside front cover.

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