

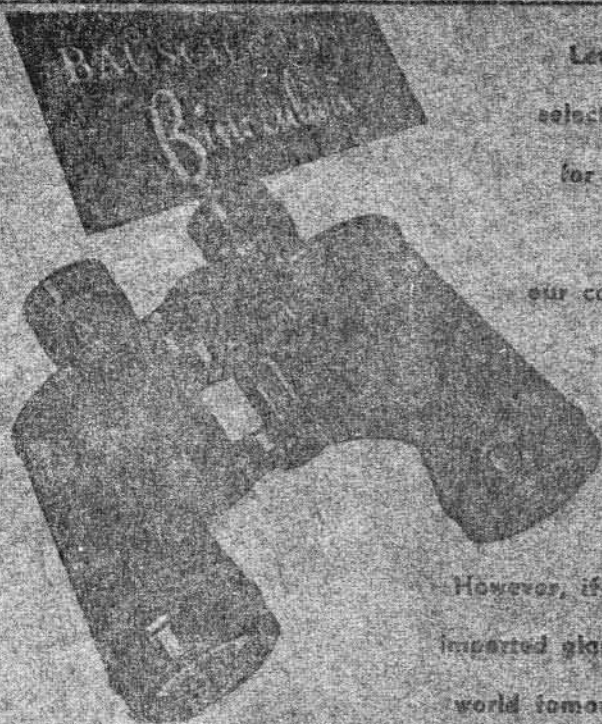
THE MIGRANT

A QUARTERLY JOURNAL
DEVOTED TO TENNESSEE BIRDS

Published by
THE TENNESSEE
ORNITHOLOGICAL
SOCIETY

DECEMBER
1960





Let us help you
select the best glasses
for your purpose
from

our complete line of
Bauch & Lomb
Binoculars
There are
no finer

However, if you prefer fine
imported glasses, we have the
world famous Leitz or Zeiss
line to choose from as well as
many lower priced binoculars
of good quality.

PHOTO SUPPLIES

If it's photographic, and if it's good,
WE HAVE IT

SNAP SHOP

CAMERA SPECIALISTS

615 Gay Street

Knoxville, Tenn.

THE MIGRANT

Published by the Tennessee Ornithological Society, to Record and Encourage the Study of Birds in Tennessee. Issued in March, June, September and December.

VOL. 31

DECEMBER 1960

NO. 4

BIRD MIGRATION CASUALTIES AND WEATHER CONDITIONS AUTUMNS 1958 - 1959 - 1960

By **AMELIA R. LASKEY**

Collecting of night-migrating bird casualties at WSIX television towers in Nashville, Tennessee was started in autumn, 1956, and has been continued on a daily basis each fall period since then although no detailed reports have been published for 1958 and 1959. Therefore this account includes these two intervening years as well as for autumn of 1960.

In 1956 from Oct. 5-19, the casualty list was 68 birds of 27 species (MIG. 27:66-67); for 1957 from Sept. 23 to Nov. 15, the total was 704 birds of 67 species (MIG. 28:54-56).

For 1958 from Aug. 26 to Nov. 9, the casualties numbered 223 birds of 55 species and a red bat; for 1959 from Sept. 11 to Nov. 14, the total was 562 birds of 59 species and another red bat. But 1960 brought the most disastrous season with a casualty list of 1553 birds of 65 species at WSIX from Sept. 10 to Nov. 13 and at the new WSM television tower 2130 birds of 59 species, representing only six collections there. Thus the collected casualties from the two towers reached the alarming total of 3,683 birds of 77 species.

ACKNOWLEDGMENTS

At WSIX, Mrs. Clara W. Fentress, Mrs. Ruth Lawrence during each period and Mrs. Sue M. Bell (on Sept. 28, 1960) cooperated in gathering the casualties.

At WSM in 1959, H. E. Parmer gathered 54 birds one morning which were brought to me.

In 1960 at WSM, the bulk of the collecting was done by personnel of Tennessee Game and Fish Commission (Sept. 27, 28, 30, Oct. 17). These birds were brought to me, were identified and listed with the assistance of Will Hon of the Commission. H. E. Parmer helped in the collection on the latter date. On Oct. 16, my husband helped me in the collection there. On Sept. 28-29, 1960, Alan R. Munro and J. C. Ogden spent most of the night at WSM. They found birds falling after midnight, collected and identified 321 birds which are included in the totals given in this report (see account elsewhere in this issue).

WEATHER CONDITIONS

As stated in my 1957 report, the heaviest kills coincided with certain weather conditions: the approach and passing of a cold front with northerly winds, usually overcast skies and often some precipitation. As all of these "cold fronts" do not produce really cold weather here, merely lowering the mean temperature, an examination of the daily weather maps was very

helpful in pre-determining casualty periods and, in later studies, migration trends. On some foggy mornings when one would expect to find casualties, there were none although tower and cables were shrouded in mist. This seems to indicate that migrations were light during these intervals between cold fronts or the possibility that birds may fly above the clouds. A comparison of weather conditions and migrations further north with those of Nashville may answer some of the questions.

In 1958 the casualty list was comparatively low as fine weather prevailed through most of the fall season. Sept. 11 took heaviest toll, 47 of the total of 223 birds.

In 1959 the bulk of the total kill of 562 birds occurred on Sept. 30 (391 casualties) with 41 on Oct. 1 and 40 on Oct. 9.

In 1960 a different wind pattern preceded the beginning of the heavy kills of late Sept. A cold front passed through Tennessee on Sept. 20 (north wind), but only 3 birds were found at WSIX. With a cold front arriving Sept. 25, southerly winds (ESE and S) prevailed through Sept. 27, but at WSIX on Sept. 26 which was mostly overcast, we gathered 31 casualties. On Sept. 27 with ESE winds, we had drizzly overcast with the stationary cold front. Casualties were heavy, 238 at WSIX and 523 at WSM. On Sept. 28 with northerly winds, drizzles and the cold front still in the Nashville area, the casualties mounted to a total of 1597 birds (598 at WSIX and 999 at WSM).

On Sept. 29 and 30, the combined totals for both towers were 517 and 336 respectively. On Oct. 1, no collections were made at WSM, but there were 27 at WSIX as the cold front moved out of Tennessee. The daily collections diminished at WSIX to ten birds on Oct. 7, reaching a small peak at the next cold front, Oct. 16 (89 birds) and Oct. 17 (70 birds) for the combined collections at WSIX and WSM.

In late Oct. and in Nov., migration had apparently tapered to low numbers, but at WSIX on Oct. 20, a dead female Mallard lay in the sedge field under cables, in good condition except that one wing had been completely sheared off. Coots were found on Nov. 10-11-13, several of the late-migrating warblers and a number of fringillids to Nov. 13 and no casualties after that date.

WSIX AND WSM TELEVISION TOWERS

This year, Charles Duke, engineer at WSIX, gave me exact measurements of the towers there which will correct the approximate measurements given to me previously by someone else and published in the earlier Migrant reports. The low tower is 247 feet in height, the high tower is 940 feet. The longest cables are 1081 feet and are attached to the tower 863 feet above ground, terminating (with other cables) at 600 feet from the tower. Mr. Duke gives the hill altitude at 1114 feet above sea level.

With a compass, I have determined that one group of cables extends NW from the tower, one group extends NNE and the third group extends south. The largest numbers of casualties were found near and beyond the first two groups of cables which the migrants meet before reaching the high tower or the set of cables extending south as they fly from the north in fall. When mortality is heavy, many birds, especially thrushes strike the NW cables and are scattered in a broad area, extending 300 or more feet down the wooded rocky hillside.

Since the addition has been built to the studio, a considerable number of birds fall on the roof after striking the NNE set of cables or the low tower which is near them. These casualties constitute a problem as there is no way for a woman to get to the roof. Collections there which are made by the porter are too widely spaced to gather all birds before deterioration is advanced.

WSM tower, located on a hill 680 feet in altitude, was erected in 1958 when published specifications were given as 1369 feet in height (including antennae of about 116 feet). The longest cables are 1600 feet.

From maps, H. C. Monk has furnished measurements of distances between the two towers and other details of distances with their possible bearings on migratory flight. The two towers are approximately 7 miles apart, WSM being north-northwest of WSIX. If migrants were moving on a true south course, transients passing one tower would miss the other by 2.2 miles or, in other words, would pass both towers only if traveling in fall on a course nearly south-southeast. These comments are of particular interest when a comparison is made of the birds found on the nights when casualties were collected at both towers. While the bulk of them consisted of the various species usually gathered at ceilometers and towers here, especially vireos and warblers, the WSM lists contained some species not obtained this year at WSIX: Black-billed Cuckoo, Yellow-bellied Sapsucker, Solitary Vireo, Worm-eating (new late departure Sept 28 and 30), Parula, Yellow-throated, Blackpoll, Pine, Mourning Warblers and Grasshopper Sparrow, also two species which have not been collected in the five years of work at WSIX: Whip-poor-will and Sharp-tailed Sparrow.

On the other hand during the same period of late Sept. several species were found at WSIX only: Blue-winged Teal, House Wren (4 in all), Brown Thrasher, Orange-crowned and Wilson's Warblers. These differences may be only coincidental and may be eliminated if investigation continues at both towers simultaneously. There is considerable evidence that birds of a species may migrate in groups or in a flight line, judging from proximity of some of the casualties of a kind.

CASUALTY LISTS

At WSIX in 1958, uncommon birds collected included a Virginia Rail on Sept. 11 and a Mourning Warbler on Sept. 12. Red-eyed Vireo led in numbers, 20, with Ovenbird next, 13.

In 1959, WSIX records of greatest interest were a Great Blue Heron on Sept. 30, a Blackpoll Warbler on Sept. 11 (identification verified by Dr. A. Wetmore), our second authentic fall record, Mourning Warbler on Oct. 28 (a new late departure date), a Grasshopper Sparrow on Sept. 30. That year the Yellowthroat led in casualties with 95 (82 of them on Sept. 30), Ovenbird 69, Magnolia Warbler 55, Catbird 42, Am. Redstart 36, Swainson's Thrush 29, Rose-breasted Grosbeak 21, Red-eyed Vireo 18, Tennessee Warbler 18.

Among the 54 gathered at WSM in 1959, 13 were Magnolia Warblers and 9 Ovenbirds. A Parula Warbler proved to be a new late departure date, Oct. 9.

In 1960 the casualty list yielded some species not previously found at the towers, a Blue-winger Teal on Sept. 28 and the female Mallard on Oct. 20: Black-billed Cuckoos (4) in the puzzling plumage of first-year birds on Sept. 27-28, Oct. 17. Also there were specimens of rarities seldom seen in the field: Virginia Rail (2) and Yellow Rail (3), furnished a new

early arrival date, Sept. 10, for the former and our third, fourth and fifth records and latest departure date (Oct. 18) for the latter. The Sora of Oct. 16 is our latest departure date for that species. A Blackpoll Warbler of Sept. 27 is our third fall record (all are casualty specimens). The Sharp-tailed Sparrow of Sept. 28 is the third specimen for Tennessee of this species.

The 1960 casualty list was headed by the Ovenbird, 793; Red-eyed Vireo, 527; Tennessee Warbler, 456; Magnolia Warbler, 303; Catbird, 219. Most of the Catbird casualties occurred on the night of Sept. 27-28. Among the 140 found on the morning of the 28th at the two towers was one carrying Fish and Wildlife Service band No. 58-137423. This bird was banded as an adult, May 19, 1960 at Lisle, Illinois by Dr. Edmund Jurica.

The following tabulation will show the numbers of each species collected at the two television towers in 1960. The first figure is for WSIX and the second figure for the six collections at WSM. A single figure is a WSIX record and a single figure with an * denotes a WSM record.

Mallard, 1; Blue-winger Teal, 1; Virginia Rail, 1, 1; Sora, 3, 2; Yellow Rail, 1, 2; Coot, 3; Yellow-billed Cuckoo, 1; *Black-billed Cuckoo, 4; *Whip-poor-will, 3; Flicker, 1; *Yellow-bellied Sapsucker, 2; Yellow-bellied Flycatcher, 2, 2; Traill's Flycatcher, 1, 2; Wood Pewee, 4, 10; Brown Creeper, 2; House Wren, 4; Long-billed Marsh Wren, 3, 6; Catbird, 155, 64; Brown Thrasher, 1; Wood Thrush, 18, 8; Hermit Thrush, 2, 1; Swainson's Thrush, 61, 21; Gray-cheeked Thrush, 95, 13; Veery, 1, 1; Ruby-crowned Kinglet, 1; White-eyed Vireo, 3, 9; Yellow-throated Vireo, 4, 12; *Solitary Vireo, 1; Red-eyed Vireo, 128, 399; Philadelphia Vireo, 18, 25; Black-and-white Warbler, 20, 47; *Worm-eating Warbler, 2; Golden-winged Warbler, 4, 2; Tennessee Warbler, 167, 289; Orange-crowned Warbler, 1; Nashville Warbler, 6, 7; *Parula Warbler 2; Yellow Warbler, 2, 1; Magnolia Warbler, 141, 162; Black-throated Blue Warbler, 1, 2; Myrtle Warbler, 2; Black-throated Green Warbler, 19, 21; Cerulean Warbler, 2, 2; Blackburnian Warbler, 23, 21; *Yellow-throated Warbler, 4; Chestnut-sided Warbler, 41, 70; Bay-breasted Warbler, 35, 38; *Black-poll Warbler, 1; *Pine Warbler, 1; Palm Warbler, 20, 28; Ovenbird, 256, 537; Northern Waterthrush, 12, 20; Kentucky Warbler, 6, 10; *Mourning Warbler, 3; Yellowthroat, 49, 67; Yellow-breasted Chat, 8, 60; Hooded Warbler, 1, 1; Wilson's Warbler, 3; Canada Warbler, 4, 3; American Redstart, 59, 38; Bobolink, 12, 8; Rusty Blackbird, 1; Scarlet Tanager, 9, 6; Summer Tanager, 2, 1; Rose-breasted Grosbeak, 11, 11; Indigo Bunting, 13, 8; Dickcissel, 4, 8; Savannah Sparrow, 1, 1; *Grasshopper Sparrow, 1; *Sharp-tailed Sparrow, 1; Vesper Sparrow, 1; Chipping Sparrow, 1; Field Sparrow, 1, 1; White-throated Sparrow, 7; Fox Sparrow, 1; Swamp Sparrow, 4, 7; Song Sparrow, 3.

In addition there were 85 casualties which were unidentifiable because of their condition when found on the ground or were left on the roof by the porter at WSIX because they were too badly infested with fly larvae.

In Sept. and the early part of Oct., our warm weather and the abundance of flesh-eating insects cause rapid destruction of the tower victims. Ants immediately swarm over the bodies. From an incomplete collection of these insects which was sent to Marion R. Smith of the U. S. National Museum, he identified eight species of worker ants. Fly larvae hatch quickly and an unidentified black larva becomes numerous on the birds. Flesh-eating animals also seek food among the casualties. However, many of the remains are still identifiable by an experienced person after mutilation.

Some twenty crippled birds were captured, but few survived. Four Red-eyed Vireos, one each of Tennessee, Nashville, Bay-breasted Warblers and an American Redstart were released wearing bands.

OTHER HAZARDS TO NIGHT MIGRANTS

Some information has been gathered from other potential hazards to night migrating birds in Sept. and Oct., 1960 in Nashville.

On Sept. 11, Paul New, meteorologist at Berry Field (Municipal Airport), informed me that a concentration of birds had been flying in the ceilometer beam from 2:00 to 4:00 a.m. and that he had placed the shield over the bright beam, operating on the ultra-violet rays, which caused the dispersal of the birds without casualty. On Oct. 5, a threatening evening with a stationary cold front and showers, I went to Berry Field and found that the ultra-violet beam was scarcely discernible and a few birds were observed flying through it without pausing. Our Nashville Weather Bureau deserves commendation for the cooperation of most of the personnel in bird protection.

On three dates in Sept. and Oct. about 7:00 a.m. J. B. Werner rescued three warblers (Black-and-white, Magnolia, Ovenbird) found stunned on streets near Life and Casualty Building in the business section. At each occasion on bringing them home, I found that they had regained flight and could be released immediately with bands.

1521 Graybar Lane, Nashville, Tennessee.

OBSERVATIONS AT A T. V. TOWER DURING A BIRD FALL

During the past fall, we in Nashville experienced a large number of bird casualties at our television towers. During one week in late Sept. there were particularly heavy bird falls and it was on one of these nights, Sept. 28, 1960, that Alan Munro and the writer made observations at WSM-TV tower in West Nashville. This tower is a three sided structure with 24 guide wires and its height combined with the altitudes of the hill on which it is located is over 2000 feet.

On Wednesday evening, Sept. 28, following a T.O.S. meeting we decided to visit this tower, to see if any birds were falling that night. We arrived at the tower about 10:30 p.m. and found that no birds were falling, so to keep the trip from being a complete loss we decided to look for birds that had fallen on previous nights and had not been picked up. The base of the tower was well lighted by a large spot light and we also had a flashlight to help us in our hunt. During the next hour and a half, about 20 birds were picked up in good enough condition to identify, including a Philadelphia Vireo and a Northern Waterthrush.

During the entire night the writer made chip counts, that is, the number of calls in a 60 second time interval. The chip count is not the number of birds that were calling in any one minute because some birds called two or more times before they got out of hearing distance. The count number can be used only as a comparative number to determine the increase or decrease in birds calling at any one time. The chip count at 10:30 p.m. was 10 calls per minute, at 11:30 it was 45 calls per minute, and at midnight it was 65 calls per minute.

At the time we arrived the sky was only partly overcast and the cloud ceiling was above the top of the tower. The wind was light from E.N.E. Between 12:00 and 12:30 a.m. the ceiling became completely overcast but did not drop any. At the same time the chip count increased rapidly until there were 110 calls per minute at 12:45 a.m. Also around 12 or a little after, it sounded as if individual birds were remaining in the vicinity of the tower, possibly circling it, rather than just passing the tower as they seemed to have been doing earlier. We were not able to observe this with the warblers since so many were calling at one time that no one bird could be traced by its notes, but we could follow some of the more distinct notes of less common birds such as thrushes or finches throughout the morning hours.

About 1:00 a.m. the clouds broke up again and the sky returned to the partly overcast state that had existed before midnight. Also the chip count dropped to between 75 and 95 calls per minute, from 1:00 a.m. through the rest of the morning hours until 5:15 when it dropped rapidly and no birds were heard after 5:30.

The birds began to fall at the time when the sky was completely overcast and the chip count was near its highest count, which was about 12:30 a.m. They fell at a steady rate until the last one was seen to fall about 5:00 a.m. Most of the birds fell either right under the tower or to the south or southwest of it. With only a very few exceptions all of the birds that fell on the paved parking lot on the south side were dead when picked up. However a large percentage of the birds, over 50%, which fell in the grassy areas that existed elsewhere were not dead when picked up. In fact several times birds were found sitting on the ground and appeared to be sleeping, for when they were touched they immediately awoke and flew away. But most of the birds that were not dead, were definitely injured to some degree. These birds were collected along with the dead ones on our periodic trips around the top of the hill every 15 minutes or less. We kept all the birds grouped according to species on the large concrete base of the tower.

The injured birds could be divided roughly into three groups. The first group was those birds that were badly injured and could not stand up. All of this group died soon after being picked up. This group was also the largest. The second group was moderately injured birds that could stand up. Most of these birds sat around on the tower base half asleep. Many of these birds died during the night, however a few recovered and during the first few minutes of daylight they flew to nearby trees. The third group and probably the smallest was those birds only slightly injured that almost continually moved around on the tower base and occasionally made short flights. Most of these birds did apparently survive and all that were not already gone, did leave at daylight.

As the night passed there were increasingly large numbers of uninjured birds flying around near the ground and sitting in the shrubs near the W.S.M. tower. Several times the writer observed birds sitting on the tower within 50 feet of the ground. There may have been a relationship between these birds and the ones we found sitting on the ground sleeping.

We observed that while the total volume of falling birds remained fairly constant, several species were picked up in larger numbers for a fairly short time, and then would be scarce or absent the other hours of the night. There were several examples of this. Few of the larger birds

were picked up until after 4:00 a.m. when several tanagers, grosbeaks and Catbirds were collected. Another example was the Palm Warblers, half of which were picked up in one half hour period. The four most common species, Red-eyed Vireo, Ovenbird, Magnolia Warbler, and Tennessee Warbler were picked up fairly steadily all night with the exception of the Ovenbirds which increased and decreased several times during the night.

As it began to get light the birds stopped falling, and soon no calls could be heard. During the night we picked up 321 birds of 30 species, most of which were warblers and vireos.

Although we were very tired, wet, and hungry the following morning, we considered our experience a very worthwhile one for several reasons. These bird falls are not only valuable in learning which species pass through an area, but also as a possible way to study certain aspects of the process of migration itself. The falls also provide birds which can be made into skins for study purposes. Several of these skins have been prepared by Alan Munro from the birds collected on this night.

JOHN OGDEN, 515 Fairfax Ave., Nashville 12, Tenn.

FURTHER OBSERVATIONS AT BUSH LAKE

By HENRY E. PARMER

This is a continuation of observations at Bush's Lake and Farm in north Nashville as reported in *THE MIGRANT*, 29:52-54, 1958 and 30:33-34, 1959. The period reported on below was from May 14, 1959 to May 13, 1960. Five unusual records for the period were reported in *THE MIGRANT*, 30:35, 1959.

Records were kept for 166 trips. On many trips little or nothing of interest was seen and no records kept. A total of 109 species were observed on the farm for the period. All observations were through 7 x 35 binoculars. Most trips were between 8 and 9 a.m. and of 30 to 60 minutes duration. Weather for summer and fall was about normal. Dec. was very cold with some ice on the lake; Jan. was normal; Feb., Mar., Apr. and May set new average cold records here. Snow totalled 38.5 in. for a new local record. It covered the ground from Feb. 13 to Mar. 20. Several trips were postponed as the writer could not find the farm roads under the snow.

In early Feb. the lake was drained. The entire mud bottom was exposed during Mar. The writer had expected that this condition would be most favorable for shore birds, but this did not prove to be so. On Apr. 7, the small upper lake was full and by May 1 the larger lake was filled and higher than normal. In other areas here very few early shore birds were seen and the main migration of these birds was in May. Fishermen were excluded from the lake after Jan. due to a restocking program. Some dove hunting was permitted in early fall. The names used and the order of listing conform to the current A. O. U. check-list.

Common Loon: Oct. 27 (1), then 2 to 3 until Nov. 30 (1); an exception to this was a flock Nov. 16 (13). Horned Grebe: Oct. 14 (1), then Nov. 12-24 (1). Pied-billed Grebe: Aug. 31 (1); Sept. 11 (7), then 1 to 2 until Nov. 7 (1). Apr. 11 (2) were the first of spring; the last May 11 (1). Anhinga: This is a rare bird at Nashville. One stayed less than an hour at noon on Oct. 21. Great Blue Heron: July 13 and 23 (1), then 1 to 2 during Nov. Mar. 19 (1), Mar. 22 (2), and Apr. 9 (1). Green Heron: July 13 (2), twice in Aug. (1) then Sept. 8 (3). Black-crowned Night Heron: These Herons nest 3.5 air miles from the lake and some most surely visit it nearly every night of the year. On July 6 at dusk 20 were seen to fly in to feed. During

early winter on 5 occasions dead singles were found that had been caught in muskrat traps and drowned. Canada Goose: Mar. 30 (1). Blue Goose: Oct. 21 (10) on the lake, 5 were mature Blues, 4 were immature and 1 a hybrid between Snow and Blue. They stayed and on the night of Oct. 28 (3) were killed; 7 remained until Nov. 2. Mallard: Nov. 2 (2), then 2 to 5 until Dec. 10 (4). Black Duck: Apr. 11 (5); 2 left on Apr. 13 and 3 remained past May 13, the limit of this paper. Gadwall: Oct. 19 thru 27 (5-6). American Widgeon: Nov. 17 (1); Mar. 17 (11). These were down to 6 that were paired on Mar. 21. Pintail: Oct. 26 (1); Nov. 10 thru 13 (1); Feb. 11 (2). Green-winged Teal: Nov. 20 thru 30 (2). Blue-winged Teal: Aug. 15 (1); Sept. 29 (1); Sept. 30 (16), and Oct. 9 (10). For spring—Mar. 19 (8); Apr. 15 (1), a peak Apr. 20 (18) and the last Apr. 29 (2). Shoveler: Mar. 21 (1) and Apr. 27 (2). Wood Duck; Oct. 30 (1). Ring-necked Duck: The first and largest flock Nov. 2 (32), then 2 or 3 until the last Nov. 24 (11); Mar. 19 (3) then May 5 thru 12 (1). Canvasback: Nov. 30 (5); during Dec. (6-12), a peak Jan. 12 (26), then fewer each trip until the last, Feb. 12 (10). Greater Scaup: Very rare here. On nearby Cumberland River Dec. 3, 4, and 6 (19). Lesser Scaup: May 26 (8) were the last for spring 1959. The first of fall arrived as the writer was at the lake about noon Oct. 29 (15). In Nov. (1-4) until Nov. 30 (11). The peak was Dec. 10 (20), then Jan. 7 (5); Jan. 11 (6) and Mar. 22 (2). April had from 1 to a peak of 10 on the 29, then May 11 (3). Common Goldeneye: Nov. 20 (1); Dec. 1 (1), and Dec. 3 (2). Bufflehead: Nov. 17 (12), down Dec. 20 (4), then thru Dec. 11 (1). Ruddy Duck: Nov. 17 (4), then thru Dec. 3 (3); Apr. 13 (3). Hooded Merganser: Dec. 3 (1) male. Common Merganser: Nov. 16 (12) and Nov. 17 (2). Red-breasted Merganser: Nov. 16 (2).

Turkey Vulture: Seen only once, Oct. 21 (1). Cooper's Hawk: At the edge of the lake Sept. 11 (1). Red-tailed Hawk: 1 occasionally during winter. Red-shouldered Hawk: 1 in Oct., Nov. and Dec. A pair nested nearby. Marsh Hawk: Sept. 18, 29, and Oct. 26 (1). Osprey: Jun. 23 one was seen carrying a fish weighing about a pound over the lake. It dropped it near the center and left the area. This is a most unusual date for an Osprey here. Sept. 18 and Apr. 27 (1). Pigeon Hawk: One found dead on Sept. 16. It had been killed by a dove hunter about 2 days earlier. A female was found there on Jan. 7. This is our only mid-winter date at Nashville. This bird was in a small willow tree between the road and the lake. The writer examined it for several minutes at about 80 yards; then, he drove up beside the tree and lowered his window. It allowed itself to be examined for about 45 seconds at a distance of only 12 feet. Then it flew across a field and through a large cottonwood tree that was filled with Starlings. These flew and the falcon made 2 lightning-like passes through the flock. Several minutes later she was seen in the top of the cottonwood — without a Starling. Sparrow Hawk: A pair in the area all year and sometimes 2 pairs in the fall.

Bobwhite: 1 male along the river Sept. 21. American Coot: Oct. 14 (1); Nov. 2 (3); Nov. 7 (3); Nov. 20 (1), and April 20 (1). Semipalmated Plover; July 24 and 28 (2); Aug. 7 (1); Apr. 18 and 20 (2); May 7 (19), the last May 9 (6). Killdeer: None in late May and June. This may be due to almost all land being covered with corn. July 22 (8); July 27 (53); Aug. 7 (21), then a few until a peak Sept. 4 (74). They continued above 50 thru Sept., Oct. and Nov. (1-11). None in Dec. and Jan. Feb. 9 (1), built up Jan. 23 (34); Mar., Apr. and May (1-6). American Golden Plover: Oct. 6, 8,

and 9 (5). These were entirely in fall plumage and are our only fall record for Nashville. Black-bellied Plover: A beautiful bird in full breeding plumage on Sept. 2 and 4. Common Snipe: Feb. 26 (1). There was not enough cover for them on the exposed muddy lake bottom. Upland Plover: July 24 (2).

Spotted Sandpiper: May 26, 1959 (2), were the last for that spring. The first fall July 23 (1), then 3 to 5 until Nov. 12 (1). This is a new late fall record here. Nov. 14, 1959 given in Sept. 1959 MIGRANT was the writer's error and should have been Nov. 7, 1959. Apr. 18 (3), were the first of spring and the peak was Apr. 19 and May 11 (8). Lesser Yellow-legs: Oct. 5 (1); Oct. 21 to 30 (1), then Apr. 5 (1) and a one-legged bird on Apr. 20. Pectoral Sandpiper: July 24 (6); Sept. 16 (1); Sept. 18 (2); Sept. 24 (1); Oct. 5 (2) and Nov. 5 (1). Only spring records Mar 16 and 17 (3). White-rumped Sandpiper: Sept. 16 and 24 (1). Least Sandpiper: July 24 (20); Sept. 9 (2); Oct. 29 and 30 (1) and Nov. 20 (1). Dunlin: Oct. 23 (1), a build up to Nov. 16 (6) and down Nov. 20 (2). These are rare here. Short-billed Dowitcher: Oct. 12 and 13 (1). Also rare. Stilt Sandpiper: July 24 (1). Rare here. Semipalmated Sandpiper: July 24 (10); Oct. 12 and 13 (1), then May 7 (2). Buff-breasted Sandpiper: Sept. 16 (2). These birds fed to within 20 feet of the car. This is our first Nashville record. Sanderling: Sept. 16 and 18 (1); Oct. 5 and 6 (1). There was enough difference in plumage for the writer to feel sure that these were different individuals. These were our first Nashville records. Avocet: Sept. 24 (1). This bird fed in water from one inch deep up to the point where it seemed to float. It would allow fairly close approach and when it did flush it would circle the lake and alight again in the same spot. Rare here.

Herring Gull: The first in summer plumage on Oct. 8 (1). This is a new early date here. Next was Oct. 21 (1), then Nov. 24 (2). The peak was Dec. 5 (12), with 5 to 6 during the month. Then Jan. 28 (1); Mar. 3 (2). One to two were seen several times in Apr. and the last May 6 (2). Ring-billed Gull: Oct. 26 (3); Nov. 5 (26). These built up Nov. 20 (300) and continued to Dec. 5 (400); then, Dec. 10 (293) and down Dec. 17 (1). Jan. 5 (12); Feb. 10 (1); Mar. 16 (3), to a spring peak Mar. 24 (24). A few in Apr. and the last May 7 (1). Franklin's Gull: May 5 (1). This is our second record for this species at Nashville. For 24 hours the wind has been blowing out of the southwest at 30 to 40 miles an hour. Late in the afternoon of the next day Mrs. Sue Bell saw 2 there. Common Tern: July 28, 29 and Aug. 1 (1), then May 7 (7). Black Tern: Jun. 2 (1); May 6 (3); May 7 (2); May 11 (1) and 12 (1). Mourning Dove: Some all year. July 22 (60); Sept. 14 (18) and Nov. 20 (2), then a spring peak Apr. 27 (60). Common Nighthawk: July 6 (1). Chimney Swift: They arrived very late at the lake and occasionally a few were seen on dull days. Ruby-throated Hummingbird: Aug. 31 (1). Belted Kingfisher: 1 or 2 occasionally. They left the lake area when it was drained. Yellow-shafted Flicker: 1 to 2 seen 4 times during the year. Red-bellied Woodpecker: Seen a few times in the trees along the river. Downy Woodpecker: Along the river in winter. Eastern Kingbird: Jun. 26 and July 27 (1). The next Apr. 29 (2); May 11 (1) and May 13 (2). May have nested there. Eastern Phoebe: July 27 (1). Eastern Wood Pewee: May 13 (1).

Horned Lark: Oct. 23 (8) to Nov. 17 (100). This went down Jan. 27 (35) and continued down to a pair in the nesting season. For the spring of 1959 they were last seen in early June.

Tree Swallow: The only fall record was Oct. 14 (18). This is a new late date here. They were very late in spring. May 6 (5), and a peak May 9 and 10 (100). May 11 (20), the last. Bank Swallow: Oct. 14 (2). This is another late record and the only one for fall. They were late in spring, May 7 (35); May 10 (500) and down May 13 (50). This is a remarkable number of Bank Swallows for the Nashville area. Rough-winged Swallow: Mar. 29 (2), and a peak May 9 (20). About 2 pairs nested along the river. Barn Swallow: About 20 nested successfully in the big barn in summer. The first of spring were Apr. 1 (3). Very few were seen until May 11 (over 300). Cliff Swallow: The first May 7 (25) to a peak on May 9 (100) and the last on May 10 (50). They nest 20 miles west of Nashville, but are not seen here often. Purple Martin: 6 or 7 pairs nested in the big box put up in Mar. 1959. No males were in mature plumage. Only July 13, 6 dead and 1 live young were found under the box. These seemed to be within 1 or 2 days of being mature enough to fly. None was seen after this date. Corn was sprayed with DDT about twice a week and this may account for the deaths.

Blue Jay: Sept. 30 (1). Common Crow: Only 1 or 2 pairs until spring. During Mar. they were there in numbers up to a peak on Mar. 23 (87). Carolina Chickadee: Jan. 27 (1). Tufted Titmouse: Seen twice during the winter. Carolina Wren: Nov. 3 (1).

Mockingbird: Occasionally. It is doubted that they nested there in 1959. Brown Thrasher: 1 several times in early Apr.

Robin: A few in early spring. Water Pipit: Nov. 12 (12), then a peak Feb. 26 (35), a few in Mar. and May 7 (1). When the ground was covered with snow and the lake was low they fed on a 12 inch strip of bare earth between the water and the snow.

Loggerhead Shrike: Sept. 8 (1).

Starling: A few pairs nest on the farm. There were around 50 in the fall and a flock Dec. 12 to 14 (5000), then usually around 300 until nesting time.

Yellow Warbler: July 29 (1); Aug. 22 (3). Myrtle Warbler: The first was very early, Sept. 30 (1), then usually 2 or 3 along the river with a peak Jan. 27 (16) and the last Feb. 24 (12).

House Sparrow: Around 20 on the farm. However, they were entirely absent for the 3 coldest months, though seen close by.

Bobolink: May 7 (7) to May 11 (6). Eastern Meadowlark: July and Aug. (20); Sept. (35); Nov. (50), then a few to none until a few pair in their nesting season. Eastern Brown-headed Cowbird: Mar. 22 (20), then a few in early summer.

Cardinal: In Jan. (1), a pair in Apr. Indigo Bunting: May 9 (1). Dickcissel: A male May 9. American Goldfinch: July 13 (2); Feb. 2 (12), and Feb. 13 (4). Savannah Sparrow: Sept. 30 (2), then 1 to 2 until Nov. 2; Feb. 26 (1) until Mar. 29 (1-10). In Apr. a field of mustard contained a great many sparrows, but they would not appear long enough for identification. Vesper Sparrow: Oct. 27 (1); Nov. 17 (1), and Mar. 29 (10). Lark Sparrow: A female on May 12.

Slate-colored Junco: Nov. 3 (10), then a few in Dec. Field Sparrow: Nov. 3 (25). Rarely seen on the farm. White-crowned Sparrow: Beautiful mature birds in the trees along the river on May 7 (11). White-throated Sparrow: Just a few times in winter along the river. Swamp Sparrow: Mar. 28 (1), and Mar. 29 (2). Song Sparrow: Oct. 6 (1), then 1 to 3 until Mar. 29 (1).

3800 Richland Avenue, Nashville 5, Tenn.

THE 1960 CHRISTMAS SEASON BIRD COUNT

By T.O.S. MEMBERS

The thirtieth annual Christmas Bird Count to be tabulated in THE MIGRANT, listing 122 species and subspecies, equals the highest counts attained in 1954 and 1955. Fifteen areas were reported, twelve of which are tabulated while three high altitude counts are reported in the paragraphs under the appropriate heading, (Cosby, Big Bald Mountain and Roan Mountain). The high altitude reports include two species (Pine Siskin and Snow Bunting) not listed in the table. The only subspecies new to the list is Hutchin's Goose from the Reelfoot Lake area.

Twenty species occur in all of the tabulated lists and 11 others are absent from only one list. Eighteen species occur in only one list while seven species are represented by a single individual.

Information on the counts and the localities in the table are listed progressively from west to east. Species designated by an asterisk (*) in the table are elaborated upon more fully in the appropriate paragraph.

INFORMATION ON THE COUNTS

MEMPHIS. — 1953 areas generally; wooded bottomlands 30%, deciduous woods, city parks & cemeteries 25%, pastures, farms, airfield 20%, suburban roadsides 22%, river edge 3%. Dec. 26, 7 a.m. to 5 p.m. Overcast to 11 a.m. then part fair, temp. 55-60, wind 3-10 W, muddy, standing water. 29 observers in 7 parties. Total party-hours, 86 (66 on foot, 20 by car); total party-miles, 193 (58 on foot, 135 by car). Missed Bluebird and both vultures second straight year. The (Western) Palm Warbler (BC, 12 feet) was the first winter record for the Memphis area. The Snow Goose, Vesper Sparrow (BC) and Lincoln's Sparrow (LC, 15 feet) were first Count records here in about 15 years. The blackbird roost was at a new locality, — Galloway Park (golf) and nearby homes. John T. Bigham, Mrs. Ed Carpenter, Mr. and Mrs. Ben B. Coffey, Jr., Mary Davant, Mrs. Henry Dinkelspiel, John H. Embury, Earl Fuller, Oliver F. Irwin, Mrs. Burt Johnson, Luther F. Keeton, Edward M. King, Charles McPherson, Mrs. J. H. McWhorter, Nelle Moore, Jack Moore, John Morrow, S. Jack Rini, Jim Rini, Mrs. Henry A. Schiller, Jack Shaffer, Bob Shaffer, Alice Smith, Mrs. Arlo I. Smith, Lynn Smith, Pamela Smith, Mrs. M. L. Torti, Mr. and Mrs. Chas. E. Wilmeth.

REELFOOT LAKE. — All points within 15-mile diameter circle with center in Reelfoot Lake; lake 20%, marsh 5%, deciduous woods 45%, fields and farm land 18% and roadside 12%; Dec. 27; 7:30 a.m. to 4:30 p.m. Overcast; temp. 35° to 47°; wind NE, 2-5 m.p.h.; eight observers in 3 parties. Total party hours, 25.5 (8 on foot, 9.5 by car and 8 by boat); total party miles, 194.2 (10 on foot, 175.2 by car and 9 by boat). The observation of the Hutchin's Geese was by Preston Lane, supervisor of the Reelfoot Wildlife Refuge, who has observed them on several occasions, including the count day, at close range and with binoculars as they fed along side of Canada Geese in the corn fields on the refuge. (Seen in area count period, but not on count day — Common Snipe and Greater Scaup). The Greater Scaup was collected by Walter O. Stieglitz while hunting waterfowl on Reelfoot Lake during the count period. Stieglitz, who is waterfowl biologist, assigned to the Fish and Wildlife Service Waterfowl Refuge on Reelfoot Lake and Preston Lane, the refuge manager, both identified the duck as a Greater Scaup. John R. Conder (compiler), Dr. and Mrs. Hunter M. Hancock, Preston Lane, Clell T. Peterson, William T. Sledd, Walter O. Stieglitz and James Wilke.

NASHVILLE. — (Approx. same areas as in past 10 years; a 15 mile diameter circle centering on Harding, 7 mi. W. of Nashville.) Dec. 31; 6:30 a.m. to 4 p.m. Continuous light rain after 1 p.m., all but halting activities. Visibility fair in a.m. Temp. range 23-35 degrees above. Little wind. Ground bare and wet. Dec. was cold with some snow. 39 observers in 13 parties. Total party-hours 78 (on foot 35; in car 43). Total party-miles 174 (on foot 32; in car 142). (Above figures are up to 1 p.m., some cars continued to cruise). Total species 81; about 1,306,176 individuals, 1,300,000 of which were estimated in a roost. This roost was on Golf Club Lane, (est. by A. F. G.), see note in Round Table. The Gulls were on and about Bush' lake. The ducks were on Bush's and Radnor lakes except the Wood Ducks, listed from canoe on Harpeth river. (L. F. III et al.) Other rarities were Lapland Longspur, Least Sandpiper and Greater Scaup (J. O. et al), Am. Roughleg Hawk (L. F. Jr.) and Brewer's Blackbird (H. E. P. et al). — Mr. and Mrs. B. H. Abernathy, O. C. Ault, Mr. and Mrs. Wm. F. Bell, Earl Bishop, Rev. and Mrs. Douglas Berndt, Annella Creach, Ruth Castles, D. J. and Fairman Cumming, Milbrey Dugger, Mr. and Mrs. John O. Ellis, Louis Farrell Jr., Louis Farrell III, Garth Fort, Mary W. Frazer, Albert F. Ganier (compiler), Charles Farrell, Catherine Goodpasture, Wayland Hayes, Will T. Hon, J. P. Jones, Alan Munro, John Ogden, Henry E. Parmer, Jennie Riggs, Edw. and Dan Shreiber, Paul Stumpf, W. D. Trabue, Mary Dale Trabue, L. O. Trabue, Anne and Lucy Trabue, Ruth White and Jesse Wills.

LEBANON. — Under heavily clouded skies with a starting temperature of 37 degrees, our bird census on Jan. 2 turned up 72 species. All members of the chapter took part in the count and Henry Parmer and Will Hon of the Nashville Chapter joined us. The territory covered was the same that we have covered for the past several years.

Relative dearth of Bluebirds and Carolina Wrens was disappointing. In the nature of surprises were finding of Blue-winged Teal and the fact that White-crowned Sparrows outnumbered White-throats. Most of the White-crowns were in concentration at Horn Springs, apparently attracted by the feeder at the home of Dr. R. D. Wilkinson.

Most of the waterfowl reported were observed in the Lock Five refuge within the Old Hickory Lake Waterfowl Development area. The number of waterfowl in the area is said by officials to be about fifty per cent larger this year than last. The birds that we saw were, as to number of species, only a fraction of the number known to be on the area. While we report only 700 Black Duck, for instance, the superintendent says that he has seen not less than 2,750 on the refuge. Dixon Merritt.

COOKEVILLE. — Approximately the same area as last year. Dec. 29; 7:30 a.m. to 4:00 p.m. Rain all day long; temp. 40° to 46°; wind 0 to 5 m.p.h. Fifteen observers in 8 parties. Total party hours 64 (3 on foot, 61 by car); total party miles 186.5 (3.5 on foot, 183 by car). Birds seen in the area but not on count day — Bald Eagle, Herring Gull, Rock Dove, Brown Creeper and Golden-crown Kinglet. Stella Breeding, Claude Bruce, Joe Crumpacker, Caprice Haile, Roy Hines, Ethel Hogan, P. L. Hollister (compiler), Claren Loftis, S. and M. McGee, Dr. J. T. Moore, Milos Sebor, Louise and Sue Snelgrove and Thelma Tinnon.

CHATTANOOGA. — (7½ mile radius centered on National Cemetery in city); fields and pastures 35%, woodlands 20%, ponds and lake 15%, creeks and river 15%, roadside 10%, residential 5%). Dec. 26; 5:00 a.m. to 5:00 p.m. Partly cloudy to cloudy; temp. 36° to 60°; wind SW, 0-19 m.p.h.; 21 observers in 10 parties. Total party-hours, 85 (49 on foot, 36 by car); total party-miles, 383 (71 on foot, 312 by car). Total, 74 species; 115,486 individuals. Leo Acuff, Mrs. J. R. Barnwell, Mr. & Mrs. T. Stanley Barr, Benton Basham, Ralph Bullard, Jr., Rock L. Comstock, Jr. (compiler), Mrs. Rock L. Comstock, Jr., Mrs. Leon Cross, Mr. & Mrs. Hugh Crownover, Kenneth Dubke, John Freeman, E. O. Grundset, Mr. & Mrs. Nat Halverson, Mrs. Henry L. Slinger, Mrs. Douglas L. Tunsberg, Mr. & Mrs. Eugene M. West, Sara Whitworth.

KNOXVILLE. — The description of the count area, including percent of cover types, is the same as last year, 1959.

Time and weather: January 2, 7 a.m. to 5 p.m. Partly cloudy to clear, temp. 32 to 45 degrees; wind of about 10 m.p.h.; 17 observers in 10 parties; total party hours, 59.

Mr. and Mrs. Robert Dunbar, John Elson, Mary Enloe, Bill Gallagher, David Highbaugh, Joseph C. Howell, Beth Lacy, Mr. and Mrs. R. A. Monroe, Holly Overton, J. B. Owen, Paul Pardue, Dick Russell, Mrs. Kenneth Sanders, James T. Tanner, Samuel R. Tipton.

GREAT SMOKY MOUNTAINS NATIONAL PARK, Tennessee-North Carolina. (All points within a 15-mile diameter circle, center near Crib Gap, approximately 3 miles east of Cades Cove, with Abrams Falls at western limit and Blanket Mountain at eastern limit; open farm land, 15%; old fields, 20%; forests, 35%; roadsides, 20%; stream courses and 60-acre reservoir, 10%.) January 1: 7:30 a.m. to 5:30 p.m. Partly cloudy; temperature 35 degrees to 47 degrees; wind variable, light; ground bare in lowlands, snow-covered at higher altitudes. 33 observers in 11 parties. Total party-hours, 89 (71 on foot, 18 by car); total party-miles, 210 (76 on foot, 134 by car).

Jessie Dempster, Mr. and Mrs. Robert J. Dunbar, John Elson, Mary Enloe, W. F. Gallagher, Mr. and Mrs. H. C. Garlinghouse, Quincy A. Gorman, David B. Highbaugh, James Hill, Dr. Joseph C. Howell, Wayne M. Lamb, Charles W. Loveday, Richard Martin, William T. Martin, Mr. and Mrs. Robert A. Monroe, Mrs. E. E. Overton, Paul S. Pardue, Richard W. Russell, Mr. and Mrs. Louis F. Smith, Jr., Mr. and Mrs. Arthur Stupka, Mrs. Thomas C. Swindell, David Tanner, Dr. James T. Tanner, Dr. and Mrs. Samuel R. Tipton, James A. Wardley, Mr. and Mrs. George R. Wood (Tennessee Ornithological Society, National Park Service, and guests).

COSBY. — Recreation area, not to top of mountain because the streams were too high to cross. Jan. 1; 8:30 a.m. to 3:00 p.m. Cloudy to clear; temp. 34 to 38°; wind, very light; about 3 mi. on foot. Sharp-shinned Hawk, 1; Red-tailed Hawk, 2; Pileated Woodpecker, 4; Hairy Woodpecker, 1; Downy Woodpecker, 5; Phoebe, 1; Com. Crow, 4; Car. Chickadee, 4; Tufted Titmouse, 6; Brown Creeper, 2; Hermit Thrush, 1; Golden-crown Kinglet, 2; Ruby-crowned Kinglet, 1; Purple-Finch, 2; Slate-colored Junco, 10. Total 15 species, 46 individuals. Mrs. Chester Darnell, Mr. and Mrs. Richard Nevius.

BIG BALD MOUNTAIN. — (Unicoi County, Tenn. and Madison County, N. Car.) Jan. 2; altitude 3500' to 5500'. Red-tailed Hawk, 1; Blue Jay, 3; Tufted Titmouse, 4; White-breasted Nuthatch, 7; Brown Creeper, 1;

THE 1960 CHRISTMAS SEASON BIRD COUNT

	Memp.	Reel L.	Nash.	Leb.	Cooke.	Chat.	Knox.	Grt. Sm.	Green.	King.	Bris.	Eliz.
Common Loon								1		1		
Red.th. Loon										*1		
Horned Grebe				1		22	2	2				
Pied.bl'd. Grebe	1					3	1	8		5		9
Grt. Bl. Heron	2	16	2	2		4	20	1	2	2	5	1
B.-c Night Heron				10								
Am. Bittern				3								
Canada Goose		5,650		31					15		1	
Hutchin's Goose		*18										
Snow Goose	*2											
Blue Goose	4											
Mallard	78	84,350	48	4,000		34			61	5	5	2
Black Duck	30	7,000	7	700		18	5	2	2	2		
Gadwall		7,000	9	10								
Pintail		17,000		300								
Green-w. Teal		400		10						1		
Blue-w. Teal				*8								
Am. Widgeon		15,300	2	300								
Shoveler		2,350		4								
Wood Duck	1	20	5	3								
Redhead		10	1	3					1	2		
Ring-neck. Duck	22	6,000	57	60				45		2		17
Canvasback	32	3,000	29	40								8
Grtr. Scaup		*	3									
Lsr. Scaup	44	300	20	10			21			2		4
Com. Goldeneye		200	2			11	5			9		1
Bufflehead		150						1	10			26

Old Squaw			1										
Ruddy Duck	1	200						7					
Hd. Merganser		150	30			1	15		3				3
Turkey Vulture		9			1	128	6	3	32	7	5		
Black Vulture		13	2	7		24			29	3			1
Sharp-shd. Hawk							1	3			1		
Cooper's Hawk	1	2	1	1	1		5		2				2
Red-tld. Hawk	31	25	12	4		8	3	6	4				
Red-shld. Hawk	2	4	6	1		1	1	3			2		
Am. Rf-Igd. Hawk		1	1								1		
Bald Eagle		25						1					
Marsh Hawk	6	9	5	2	3	2	3		1				
Sparrow Hawk	14	18	40	8	4	15	16	4	7	3	8		6
Ruffed Grouse								18					1
Bobwhite	14	8	27	20	8	93	10	8		2			23
Am. Coot		8,700	1	6				90					
Killdeer	33	3	41	6	4	54	83		6	5	4		6
Com. Snipe	2		1			4	83		2				
Least Sandpiper			1										
Herring Gull		40	25			4	4			24	5		
Ring-bld. Gull	35	89	409			25	200			45			1
Bonaparte's Gull											3		
Rock Dove			70			338	197	2	53		28		17
Mourning Dove	88	15	247	400	86	446	232	150	500	30	65		14
Barn Owl			1			1							
Screech Owl			4			2	1	3	1		2		
Grt. Horned Owl			2	1		1			1				
Barred Owl	4		1										
Bltd. Kingfisher	1	7	15	1		14	11	5	6	5	2		5
Yel.-sh. Flicker	125	8	92	17	20	70	36	4	12	6	8		9
Pil. Woodpecker	6	10	25	3	5	19	15	26	10	4	1		4
Red-bel. Woodpecker	72	20	55	10	9	39	20		10	4	1		

1960

THE MIGRANT

75

Red-hd. Woodpecker	57				2	10	3		2	1		
Yel.-bel. Sapsucker	42	1	24	6	5	11	8	7	3	5	2	
Hairy Woodpecker	9	4	10	3	5	13	3	7	1		1	3
Downy Woodpecker	43	6	72	13	9	47	38	32	25	10	13	15
E. Phoebe			7	4	1	1	2	7	1		1	
Horned Lark	33	3	181	115	13	72	46		75			1
Blue Jay	368	22	132	44	120	371	215	14	97	89	40	30
Raven								3				
Com. Crow	51	25,000	831	118	219	632	901	304	10,000	2,000	160	141
Fish Crow	37											
Bl.-cpd. Chickadee												
Car. Chickadee	129	45	118	46	20	141	173	148	55	56	70	27
Tufted Titmouse	57	15	107	35	34	210	124	74	29	59	64	19
Wh.-br. Nuthatch		3	1	1	5	35	4	2	1	3	3	
Red-br. Nuthatch						2		2	2		2	
Brown Creeper	5	3	5	1		6	12	11	5	7	3	5
Winter Wren	16		12		1	5	11	16	11	4		
Bewick's Wren			6	10	5	3	6		5			
Car. Wren	87	3	46	6	10	82	91	25	41	14	29	24
Sht.-bld. Marsh Wren		1										
Mockingbird	148	4	83	31	27	129	111	7	47	24	38	27
Catbird							1					
Brown Thrasher	28		3	1	2	21	4		1			
Robin	1,190	29	800,000	900	26	41	1	2	2	22		7
Hermit Thrush	7		16			1		11				
Bluebird		6	70	13	20	80	13	27	13	5		6
Go-cr. Kinglet	25	15	16	1		40	31	117	7	20	12	12
Ruby-cr. Kinglet	32	4	5	1		6	1	9	2			
Water Pipit	59		9			25	30					
Cedar Waxwing	736		119		130	364	23	14	47	21		
Log-hd. Shrike	18	13	9	8	4	28	20	2	6	1	3	2
Starling	500,000	810,000	500,000	4,000	1,505	81,308	6,738	149	4,000	1,000	2,607	1,115

Myrtle Warbler	51	1	146	6	2	8	70	23	12	13	21	
Pine Warbler						3			3			
Palm Warbler	*1								3			
House Sparrow	432	200	155	97	40	641	200	35	57	47	222	147
E. Meadowlark	383	31	335	33	150	308	355	194	153	79	44	76
W. Meadowlark	3											
Redw. Blackbird	350,000	1,620,000	162		2	10,388	10	3				1
Rusty Blackbird	30					1,537	35					
Brewer's Blackbird	8		6									
Com. Grackle	900,000	81,000	235	5	515	15,578	10		972	14		11
Br.-hd. Cowbird	250,000	189,000	5		8	30	40		15			
Cardinal	616	114	593	131	140	294	313	73	131	70	85	84
Purple Finch	20		5	10	60	32	17	5	2	9		3
Am. Goldfinch	82		211	13	48	367	132	22	71	15	10	73
Ruf.-sd Towhee	109	15	147	24	59	154	109	11	20	30	12	11
Savannah Sparrow	38		30		37	4	3	4				1
Vesper Sparrow	*2										*2	
Sl.-col. Junco	541	60	349	250	176	246	196	459	70	100	48	146
Tree Sparrow		2		2	2							
Chipping Sparrow						1						
Field Sparrow	162		143	90	45	174	171	211	95	78	44	56
Harris' Sparrow	2											
Wh.-cr. Sparrow	38		77	63	4		16	1	50	4	14	10
Wh.-th. Sparrow	1,745	22	236	38	55	428	362	186	85	84	80	71
Fox Sparrow	70		18	1	3	13	9	20			1	3
Lincoln's Sparrow	*1											
Swamp Sparrow	221	4	62			18	9	111				5
Song Sparrow	251	13	180	23	20	197	141	154	53	17	34	54
Lapland Longspur	13		1									
SPECIES	75	70	81	72	49	74	71	63	65	54	45	53
Individuals	2,008,847	2,884,259	1,306,185	12,217	3,670	115,486	11,804	2,893	17,145	4,071	3,788	2,367

1960

THE MIGRANT

77

Cardinal, 2; Pine Siskin, 2; Towhee, 1; Slate-colored Junco, 2; White-throated Sparrow, 3 and Snow Bunting, 1. Total species, 11; individuals 27. Fred W. Behrend.

GREENEVILLE. — About the same area covered as in several previous years. Dec. 30, 1960. The day was partly cloudy to clear, temp. 34 to 41 degrees. Twelve members with other interested persons in 8 parties drove 137 mi. and walked 15 mi., with a total of about 32 party hours to observe 66 species, and about 17,149 individuals. Members participating — Mr. and Mrs. W. Clemens, Dr. and Mrs. T. Clinard, Mr. and Mrs. W. Gray, Mrs. Wilma Irvine, Mr. and Mrs. R. Nevius, Mrs. Royal Spees, Lynn and Karl, Mrs. Helen White and Mrs. C. Darnell (compiler).

KINGSPORT. — All points within 15-mile diameter circle centering on Hillcrest, including southeastern slope of Bays Mt and Boone Lake. Open fields 30%, woodland 40%, lake and stream borders 30%. Jan. 2; 8:30 a.m. to 4:30 p.m. Clear except heavy fog over water before 10:00 a.m. Temp. 25° to 45°; wind 0-10 m.p.h. Running water open, still water frozen except the lakes. Seven observers in 5 parties. Total party hours, 38. Seen in the area during count period but not on count day, Horned Grebe, Oldsquaw (first area record), Hooded Merganser and Am. Coot. The Red-throated Loon was first seen on Dec. 30 on Boone Lake about 200' above the dam. It was first observed from the parking area and later from the shore at about 300' distance through 30X telescope and studied for 15 or 20 min. by Mrs. Switzer and son Robert. The bird was seen in the same area on the count day by Mrs. Switzer, (compiler). Dan, Tommy and Thomas W. Finucane, George Rogers, Mrs. J. Winston Smith and Mrs. R. M. Switzer.

BRISTOL. — The usual area in the vicinity of Bristol, including open fields, woodlands and portions of South Holston and Boone Lakes. Dec. 31; 6:45 a.m. to 5:00 p.m. Clear to partly cloudy; temp. 32° to 50°; wind 0-10 m.p.h. Nineteen observers. The Vesper Sparrows were observed by Mr. and Mrs. Herbert Miller at from 20' to 50' through binoculars. They were under observation for several minutes and the white outer tail feathers and reddish shoulder patches were identification marks. They were in hedgerows, small shrubs, tall grass and weeds in an area where they had been observed over a period of years.

ELIZABETHTON. — The center of our circle was shifted from Valley Forge to Wilbur Dam, 4.5 miles to the NE. This permitted the taking in of more of Watauga Lake while retaining the greater portion of the territory usually covered. Dec. 31; 6:00 a.m. to 5:30 p.m. Clear, cold and frosty with increasing cloudiness to completely overcast and rain after 3:00 p.m. Temp. 24° to 50°; wind 0 to 15 m.p.h. Seven observers in 6 parties. Total party hours, 44 (30 on foot and 14 by car), total party miles, 145 (28 on foot, 117 by car). J. C. Browning, Ed Davidson, Kenneth Dubke, Mr. (compiler) and Mrs. Lee R. Herndon, Roby D. May, Jr and Frank Ward.

ROAN MOUNTAIN. — At elevations between 3750' and 5800'; deciduous and coniferous forests and grassy balds. Snow ranging from 3" to 15" in the woodlands. All on foot. Ruffed Grouse, 3; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Raven, 1; Com. Crow, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2; Robin, 1; Purple Finch, 2; Pine Siskin, 2; Am. Goldfinch, 1; Slate-colored Junco, 11; Song Sparrow, 1 and Snow Bunting, 15. The Snow Buntings were seen in a flock flying over Round Bald Mountain at 5800'. Fred W. Behrend.

DICKCISSEL.—On June 5, 1960, a pair of Dickcissels was seen at the exact site where the single spring census bird was found. This pair was observed for at least half an hour under an extremely hot sun. They chipped constantly and moved from one nearby perch to another, usually sitting just inches apart. I also stood for long periods without moving. Finally, I backed away and soon the female flew to a tangle along a fence near me. Since she did not reappear for several minutes, I approached the spot. My husband, Gene, joined me at this point and we searched for the nest. The female flushed but we could not find the nest. A week later we returned but there was no sign or sound of the pair. We again searched for and found the nest in the thickest part of the tangle. It was empty except for one adult tail feather and appeared to be undisturbed. It is possible that our activities caused an abandonment, but I prefer to think that a predator was responsible. We have passed the area several times in a car without finding any evidence that the Dickcissels are anywhere about.

The nest was mailed to Mr. A. F. Ganier who identified it as that of a Dickcissel. This is the first known breeding record (if it may properly be called one) for this southeastern end of Tennessee. It is also rare as a migrant here. There has been, and probably still is, a colony that nest near the town of Chickamauga, Georgia, about 12 miles from downtown Chattanooga.

MRS. E. M. WEST, 5511 Dayton Blvd., Chattanooga 5.

ROBIN-STARLING ROOSTS: — In the Christmas Census of Dec. 31, 1960, are included 800,000 Robins and 500,000 Starlings, listed in a long-used roost on Golf Club Lane in suburban Nashville. This estimate was made by the writer and, as in roosts of this size, may be off by 25 percent. This is the largest number of Robins we have had this early in the winter in many years and was due chiefly to the availability of an extremely heavy hackberry crop. While this roost was in progress, a much larger one had built up 11 miles north at a point 1 mile N-W of Madison. The above species, in about the same proportions, "blackened" the young trees in a dense thicket for an area of about 30 acres. This roost was estimated at between 3 and 5 million birds. Large roosts are in progress at this time in Memphis, Johnsonville, Chattanooga and doubtless many other points. One begins to wonder if the Starling population is not "getting out of hand."

ALBERT F. GANIER, Nashville 12, Tenn.

CONTENTS OF THE MIGRANT FOR 1960 — VOLUME 31

March, No. 1	Page
Annual Autumn Hawk Count 1959 by Thomas W. Finucane	1
THE SEASON: Memphis, 10; Nashville, 11; Lebanon, 12; Cookeville, 13; Chattanooga, 14; Knoxville, 15; Greeneville, 16; Kingsport, 17 and Elizabethton, 17.	
ROUND TABLE NOTES: Sandhill Crane Wintering in Knox County, 18; Sandhill Cranes Near Chattanooga, 19; Oregon Juncos Near Greeneville, 19.	
IN MEMORIAM: James A. Robins	19
Guest Editorial: Ich Diem by Dixon Merritt	20

THE MIGRANT

*A Quarterly Journal Devoted to the Study of Tennessee Birds Published by
The Tennessee Ornithological Society*

Annual Dues, \$1.50, including subscription. Library and out-of-State
Subscriptions, \$1.00

Please Notify the Treasurer or Secretary of a Change in Address

MR. THOMAS W. FINUCANE Treasurer

1434 Watauga Street, Kingsport

MRS. H. C. GARLINGHOUSE Secretary

2012 Cedar Lane, Fountain City, Tenn.

All items for Publication should be sent to

LEE R. HERNDON, Editor, 1533 Burgie Place ELIZABETHTON, TENN.

June, No. 2

Pesticides and Wildlife in Tennessee by Sumner A. Dow	22
The 1960 SPRING FIELD DAYS by members	29
T. O. S. ANNUAL MEETING, 1960	34
ROUND TABLE NOTES: Lapland Longspur at Oak Ridge, 36; Tree Sparrow in Chattanooga, 37; THE RING — International Ornithological Bulletin, 38; Campus Bird Count — University of Tennessee, Knoxville, 29.	
ERRATA	39
Note of Appreciation	40
T. O. S. Officers 1960-61	40

September, No. 3

Frontispiece — Florida Sandhill Crane — Nest, Egg and Habitat	41
Some Mississippi Crane Notes by Lawrence H. Walkinshaw	42
THE SEASON: Memphis, 43; Nashville, 45; Cookeville, 46; Chattanooga, 47; Greeneville, 47; Kingsport, 48.	
A New Heronry in Northwest Tennessee by Albert F. Ganier	48
ROUND TABLE: The Three-toed Woodpecker Record, 50; Greater Scaup, 50; Summer Tanager Capturing Wasps, 51; Summer Tanager Captures Yellow-jackets, 51; Live Insects in A Blue Jays' Crop, 51; The Goose and the Eagle, 52; Evening Grosbeak Visitants, 53; A Shore Bird Expedition to the Tennessee River, 54; Wood Ducks' Nest in Town, 54; Brewster's Warbler Near Nashville, 55; Traill's Flycatcher, 55.	
WHIP-POOR-WILL and CHUCK-WILL'S-WIDOW CENSUS: Chattanooga, 56; Knoxville, 57. NIGHTHAWK CENSUS, 58.	
Additions to Chattanooga Area List: White Ibis, 58; Snowy Egret, 58; Western Sandpiper, 59; Connecticut Warbler, 59.	
CAMPUS BIRD COUNT — University of Tennessee, Knoxville	59
BOOK REVIEW: Bent's-Life Histories of North American Birds — edited and abridged by Henry Hill Collins, Jr.	60
IN MEMORIAM: Ernest W. Goodpasture	60

December, No. 4

Bird Migration Casualties and Weather Conditions by Amelia R. Laskey	61
Observations at a TV Tower During a Bird Fall by John Ogden	65
Further Observations at Bush Lake by Henry E. Parmer	67
The 1960 Christmas Season Bird Count by TOS Members	71
Dickcissel	79
Robin-Starling Roosts by Albert F. Ganier	79

Headquarters for

BIRD-ATTRACTING DEVICES

BIRD HOUSES — FEEDERS — FOUNTAINS

SUNFLOWER SEED

SCARLETT'S MIXED BIRD SEED

Hummingbird Feeders	\$1.95
Audubon Bird Calls	\$1.50
A Field Guide To The Birds (Peterson)	\$4.50
BIRDS, A Guide To The Most Familiar Birds	\$1.00

PETS OF ALL KINDS AND BOOKS ON THEIR CARE

TROPICAL FISH AND AQUARIUMS

JONES PET SHOP

2 LOCATIONS

1812 21st Ave., So., Nashville (12) Tenn. — Phone OYpress 1-2389

Madison Square Shopping Center, Madison, Tenn. Phone TWilight 5-5136

BINOCULARS ARE OUR BUSINESS

Grade A Japanese from \$59.50. Our experts have adapted 6 models for close-focusing, down to 10 feet!



5 Mirakel Special models, 100% coated, from \$29.50 to \$39.50.

Spotting scopes from \$54.50, with built-in tripod adapter & shoulder strap. 20x wide angle eyepiece, accessories, etc.

**FREE SERVICE GUARANTEE on all instruments—
30 DAY TRIAL PERIOD.**

Send for our catalog, plus reprints of binocular articles we have written for Audubon Magazine — free to Bird Club Members. Write us about your binocular problems — we answer questions.

MIRAKEL OPTICAL CO., Inc.
Mount Vernon 20, N. Y.

The Reicherts

DURY'S

FIELD GLASSES

STERO PRISM BINOCULARS

STERO CAMERAS

KODAKS

CINE KODAKS

MOTION PICTURE EQUIPMENT

ARTIST'S SUPPLIES

DRAWING MATERIALS

EXPERT DEVELOPING, PRINTING

ENLARGING

Write for New Photographic Catalogue

GEO. C. DURY CO.

420 UNION STREET — NASHVILLE, TENN.

and

GREEN HILLS VILLAGE