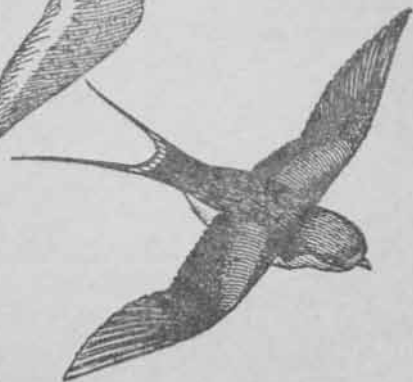
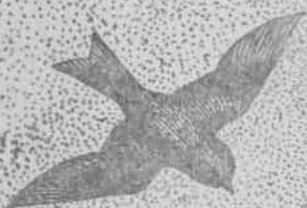


THE MIGRANT

A QUARTERLY JOURNAL
DEVOTED TO TENNESSEE BIRDS

Published by
THE TENNESSEE
ORNITHOLOGICAL
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MARCH
1964



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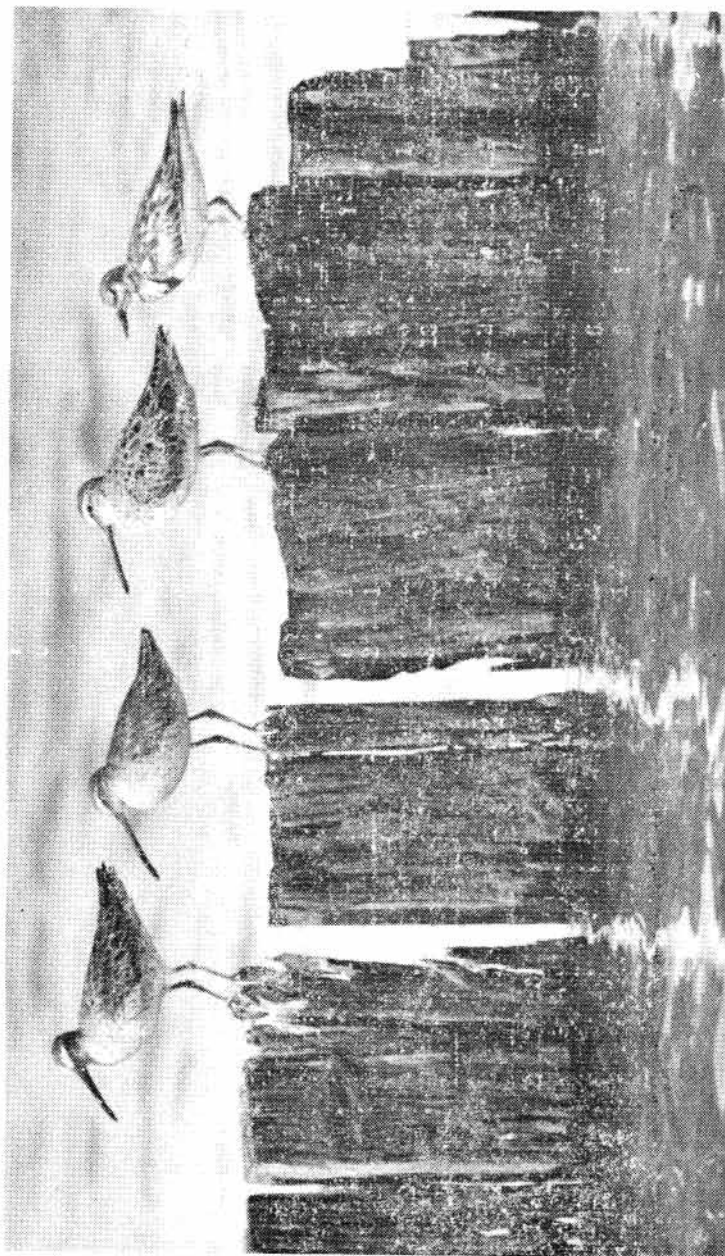
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Short-billed Dowitcher (*Limnodromus griseus*) and Ruddy Turnstone (*Arrearia interpres*) in winter plumage perched on old pilings near Gulfport in Tampa Bay, Florida. The picture illustrates (1) lack of barring on lower underparts in the Short-billed Dowitcher, (2) wing extending beyond the tail (seen in bird on left) and (3) the fact that some Short-billed Dowitchers can have very long bills (see middle Dowitcher.)
Photograph by Allan D. Cruickshank

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. 35

MARCH 1964

NO. 1

THE DOWITCHERS IN TENNESSEE

By JOHN C. OGDEN

The latest revision of the American Ornithologists' Union's Check List of North American Birds (1957) included a reclassification of the Dowitchers. Formerly these shorebirds had been classified as a single species consisting of several races (sub-species), divisible into Eastern and Long-billed forms. Due to thorough studies carried out on the behavior, morphology, and ecology of these birds, most recently by Pitelka (1950), the two forms were given specific rank. These two species are the Long-billed Dowitcher (*Limnodromus scolopaceus*) and the Short-billed Dowitcher (*Limnodromus griseus*). The Short-billed species consist of three geographical races.

There are many unanswered questions concerning these two birds in Tennessee. What is their relative abundance in Tennessee? When do they migrate through the state? Do they migrate separately or together? With what other shorebirds do they associate? What habitats do they prefer while migrating? The purpose of this paper is not to answer these questions, rather I wish to review what is presently known about Dowitchers in Tennessee and present some information which may aid in future attempts to answer the above questions.

A search through THE MIGRANT reveals the following information about Dowitchers in Tennessee. First, they are not seen often, yet when a favorable shorebird habitat is present Dowitchers are recorded enough to almost be considered a regular transient. They are nearly always found in small numbers, as flocks of over ten are unusual. The published records even indicate that Dowitchers could be found in some part of the state every year if good shorebird habitat could be located and watched regularly. For instance, since Dowitchers were first recorded in the Nashville area in the spring of 1954 (MIGRANT, 25:23) a greater effort has been made to look for them, as well as other species of shorebirds. The results are that Dowitchers have been found during migration in six of the last nine years. Similar examples could be found in other parts of the state.

The published records do give us some good ideas of when to look for Dowitchers. In spring a majority of the records occur between mid-April and mid-May in Middle and West Tennessee with a concentration of the records in the first week of May. There are no spring records for East Tennessee. The dates of observation are 16, 17, 18, and 29 April; 3, 3, 4, 5, 6, 8, 11, and 12 May. There is one very early record just south of Memphis near Lakeview, Mississippi on 3 March, 1957 (MIGRANT, 28:7). In the fall there is a wider range of dates covering a period from early August to late October: 6, 7, 14, 18, 19, 22, 23, 24, 24, 25, 25, 25, and 27 August; 3, 4, 5, 8, 19, 20, 22, 23, 29, and 30 September; 6, 6, 7, 12, 13, 13, 13, 14, 17, and 25 October. This includes records from all parts of the state. Extreme records during the fall are of one Dowitcher near Nashville on 16 July, 1961

(MIGRANT, 33:26) and a Dowitcher at Reelfoot Lake on 27 November, 1875 (MIGRANT, 7:68). There is also an early December record across the river from Memphis, near Marion, Arkansas on 1 December, 1962 (MIGRANT, 34:7).

A breakdown of the records by regions of the state reveals a majority of the records coming from the western part, and a very small minority from the eastern part. Middle Tennessee falls in between but closer to West Tennessee in the number of Dowitchers reported. I do not believe the poor showing in East Tennessee is necessarily correct. The first East Tennessee record was in the fall of 1957 (MIGRANT, 28:41) and they have been found in three of the last six years in that part of the state.

Another fact which becomes immediately obvious is that there are nearly three times as many fall as spring records. I think it would be correct to assume that Dowitchers migrate through Tennessee more heavily in the fall than spring. That is, unless the spring migration is more hurried with fewer stops.

Other than the above information there is not much to be found out about these birds in Tennessee. Probably the preferred habitat of Dowitchers in inland areas is large mud flats with scattered pools of water, flooded fields, or shallow lake edges. Many records have occurred in these type areas. Also, Dowitchers are not likely to linger for any length of time in inland areas except when very favorable conditions prevail. This is indicated by the large number of reports of birds found only once or twice.

One final bit of information (or lack of information), which can be gotten from the published records, concerns the identification of the Dowitchers to the correct species or subspecies. Prior to 1957 it was not necessary to worry about which Dowitcher you were seeing since they were classified as a single species. Yet, it was realized by many people that some well marked individuals of the two forms could be recognized in the field, primarily by bill length. So some birds were reported as being Eastern (Short-billed) or Long-billed Dowitchers based on this character. However, some birds, I believe, were reported as being one of the above according to which one "should" be seen in Tennessee, or some lesser reason. Therefore, most of the records which assign Dowitchers to one of the different species should be accepted with caution unless reasons are given for the assignment such as the following. Two reports of Dowitchers near Memphis give the following information: On 6 August, 1935, a Dowitcher was seen at North Lake and was "evidently the Eastern because of a relatively short bill." (MIGRANT, 6:52) And on 20 September, 1937, two Dowitchers were seen at Mud Lake. "One . . . had a very long bill compared to that of the other bird and it is possible that one or both were of the Long-billed subspecies. . ." (MIGRANT, 8:74) One definite identification was in 1939 when two Dowitchers were collected on 27 August, and identified in the hand as Eastern birds, (MIGRANT 10:57).

In more recent years more caution has been used in assigning Dowitchers to a correct subspecies or, since 1957, a correct species. This may be due in part to the general trend of de-emphasizing sub-specific identification in the field, but I believe an equally important reason, especially since 1957, has been a lack of easily available information on the two species. Admittedly, the two species are very similar, but I do not consider them

as difficult to identify in the field as the **Empidonax** species of Flycatchers. The rest of this paper will deal with various aids which can be used in the field to identify Dowitchers. These aids will be discussed under four basic headings: Plumage difference, Call notes, External morphological differences, and Migration.

Plumage differences: Dowitchers seen in Tennessee can be in one of three different plumages; the basic (winter or non-breeding), alternate (summer or breeding), or juvenal plumage. I will describe only the areas of these plumages which can be of value in separating the two species.

Dowitchers in the basic plumage will be the most difficult to identify since this plumage is very similar in the two species. The fact that *scolopaceus* has greyer underparts with little or no spotting and a more uniform grey back is of little use in the field. Also, the tail of *scolopaceus* is darker than that of *griseus* (dark and light bars in the tail are of near equal width in *griseus* whereas the dark bars are wider than the light ones in *scolopaceus*). Characters other than plumage will be needed to identify birds in the basic plumage.

The two alternate plumages are not so similar. The underparts of *scolopaceus* are uniform salmon colored (no white) with dense spotting confined only to the breast. The sides of the breast and belly are barred. The back will be dark compared with *griseus* due to the narrow reddish-buff feather edgings. In *griseus* these feather edgings on the back are light buff and broader. There will be variation in the underparts of *griseus* depending on which race is seen. The eastern race will be salmon only on the breast and upper belly, the lower belly and under tail area being whitish. Also ventral spotting will be more general over all the underparts, including the belly. The interior race is more variable with some birds being as uniform salmon as *scolopaceus* while others will have some white on the lower belly. But these salmon colored birds will have more general spotting ventrally than *scolopaceus*, probably less heavy on the breast and not restricted to that area. Bars along the sides of the breast and belly will either be less obvious or entirely lacking, especially along the sides of the breast. Similar differences exist in the tails of the two species as was present in the basic plumages.

The juvenal plumages are perhaps even more dissimilar. Birds in these plumages will be seen in the fall. The color and pattern of the back and tail in the two juvenal plumages will be similar to the respective adult alternate plumages of the two species, basically darker in *scolopaceus* than in *griseus*. In *scolopaceus* the sides of the face and the neck and upper breast will be more grey than buff, only indistinctly marked on the breast with any markings. And in *griseus* the same areas will be more buff than grey, especially on the upper breast. Also spotting is fairly prominent on the breast of the *griseus*.

Call notes: Certainly the easiest way to identify Dowitchers will be by their call notes. The main problem will be to make silent Dowitchers "say something". Some Dowitchers can be very "stubborn" about calling, and at other times, especially if there are several birds, they call a great deal. Since no two people seem to describe their calls in exactly the same words, I will give several different descriptions from various sources of their notes.

Small (1958) writes that "Both species utter a musical twittering sound but the whistled pheu pheu or pheu pheu pheu (rising in pitch and softer and more rapid than the similar notes of the Lesser Yellowlegs) is characteristic of the Short-billed Dowitcher . . . The single or multiple high weak Keeeck note of the Long-billed Dowitcher is likewise distinctive."

Nisbet (1961) describes the call of *griseus* as a "triple küt-küt-küt- or chü-chü-chü" faster and less musical than the Yellow-legs, "with a metallic quality. . ." He further writes that the "Küt-note is often uttered singly, grading over into a sharp kyit which is sometimes given as a rattling series when the bird is startled."

For the *scolopaceus* he writes "a shrill, prolonged keeek, sometimes uttered in groups of three or more, and becoming a rippling trill if the bird is flushed suddenly."

The description Nisbet gives of the call of *griseus* is very close to the way it sounds to me. I would describe it as a rapid, unmusical "cu-cu-cu" falling in pitch. I have heard *scolopaceus* give a prolonged high pitched note similar to that which is described above, usually from lone birds. But the note I have heard much more often from small flocks of *scolopaceus* is a "peep" or "pip". This will be given by individual birds as sort of an alarm note while on the ground or by all members of the flock while in flight. And while *griseus* very rarely calls except as they are flushed, *scolopaceus* will continue to give their "peep" notes as they fly around after taking flight. Several times I have identified Long-billed Dowitchers in the air by hearing their regularly uttered "peep" notes even before the flock was close enough to identify the bird by sight as Dowitcher.

External morphological differences: *Scolopaceus* differs from *griseus* in that it tends to have a longer bill, longer legs and shorter wings. This provides us with one and possibly two external morphological features which may be of value in field identification. The one character which will certainly be of value on some birds will be bill length. Using the measurements provided by Piteika (1950) we find the following extremes in bill length (25 millimeters equals about one inch): *scolopaceus* males, 54.4-69.6mm.; *scolopaceus* females, 64.2-80.8mm.; *griseus* males, 50.8-64.0mm.; *griseus* females, 53.9-68.5mm. There is no overlap between bill length of males of *griseus* and females of *scolopaceus*. Yet the range of measurements in *scolopaceus* males and *griseus* females is very similar. Therefore, any relatively long billed or short billed Dowitchers may be identifiable in the field, but there will always be many birds in which bill length will be of no value due to the large amount of overlap.

The second external feature which may be of value is wing length. However, I have not found it to be of much use. It was suggested by Nisbet (1961). He suggests that "normally" folded wings should extend beyond the tail in *griseus* and fall short of the end of the tail in *scolopaceus*. In *griseus* the wings should extend up to one-half a centimeter past the end of the tail and in *scolopaceus* the wings should fall short of the tail tip by up to half a centimeter. There is so little difference here that it certainly would take close observation to detect any difference.

Migration: Observations of the migration of these two species of shorebirds in other areas of the eastern United States may be of some value in determining which of the two species are seen in Tennessee at various times of the year. Although *scolopaceus* breeds entirely in Alaska, it fans out to the east during its fall migration so that fair numbers are reported

every fall along the East coast. This is particularly true of juvenal birds. Urner and Storer (1949) considered *scolopaceus* as uncommon in the fall in New Jersey but very rare in spring. In the Tallahassee region of Florida the situation has been similar, yet recent observations of *scolopaceus* in the early spring may indicate a return flight almost as large as their fall migration in this area, at least in some years. If *scolopaceus* returns to Alaska by a more western route from their wintering grounds this would explain their greater regularity in north Florida than in New Jersey in spring. Yet outside of these extreme southeastern areas, such as Florida and possibly other Gulf coastal areas, *scolopaceus* will be more common in fall than spring. This is what would be expected in Tennessee. *Griseus* is a very common migrant in the east and on the Gulf both in spring and fall.

Another variation in the migration of these two species is in the time of year they migrate. Compared with *griseus*, *scolopaceus* is a later fall migrant and an earlier spring migrant. Urner and Storer in New Jersey give the peak of *scolopaceus* in the fall as late September and the first half of October, whereas *griseus* reaches its peak in late July and throughout August. In spring the peak of *griseus* is throughout May, while the few records of *scolopaceus* are in April or early May. In north Florida the migration peaks for *scolopaceus* occur in late October through early November and again in March and early April. This is confirmed by Bent (1962). However, these dates are just the peaks and there will be individuals of both species migrating outside these dates. For instance, the one Dowitcher I have seen in Tennessee, which I believe was *scolopaceus*, was on 7 August (MIGRANT, 33:24) near Nashville.

Now to sum up the field identification of Dowitchers. Most of these shorebirds should be identified by a combination of the above aids, rather than by a single character. The possible exceptions would be in the use of the call notes or in extremely long or short billed birds. Even with all the information I have presented there will still be some Dowitchers which will have to remain unidentified. But if a fair percentage of the Dowitchers seen in Tennessee in the future are identified, then perhaps we can start answering the questions I presented at the beginning of the paper.

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ANNUAL AUTUMN HAWK COUNT 1963

By THOMAS W. FINUCANE

The T.O.S. Hawk Count in the fall of 1963 totaled 5655 hawks, of which 5434 were Broad-wings. Our 5-yr. average is 7500 and our 13-yr. average 4100. Three Bald Eagles and one unidentified eagle were recorded. The outstanding peculiarity of the Broad-wing migration was that it dropped to a low level 22 Sept. and did not recover. On the basis of accumulated statistics the peak was expected on 23 Sept., but it came 15 Sept.

The day set for maximum participation was 22 Sept. Seven stations reported that day, with a total of only 73 Broad-wings and 25 other hawks. Participation was excellent throughout the season. We had data for every day from 14 Sept. to 1 Oct., with an average of 2½ stations per day. The gap between 8 & 14 Sept. almost certainly was costly in loss of data but would not have been so in a normal season. The fact that the Rogersville-Kyles Ford lookout was not manned at all during the heavy migration period and the Mendota Fire Tower only on one day during this period also exerted a depressing effect.

The Greeneville Chapter decided to concentrate on Camp Creek Bald and Meadow Creek Bald, and the Kingsport group chose this year to test Chimney Top and continue the experiment on River Mt. We made five trips to Chimney Top, which had only once before been used as a Broad-wing lookout station, and Tom Odom was on the River Mt. Fire Tower four times, as he was the previous year. Interesting data emerged, but the Clinch Mt., generally a major source of data, was neglected.

Elder Mt., our other major source of data, had good coverage this year, headed by Adele West, but less than it has had in the past. Furthermore the flights there were lighter than in previous years. Moreover, Knoxville did get a big hawk flight in 1963, after having had one in each of the three preceding years. Reports from Fred Behrend, however, from the high mountains, showed larger counts than in the past few years although no observing was done during the period of heavy hawk flight. Perhaps eventually the T.O.S. program will show an inverse relation between the count at Elder Mt. and the count over the high mountains.

Cold fronts passed across Tennessee 4, 12-13, and 21 Sept. Interpretation of our data in terms of patterns in the fronts and the weather associated with them is not difficult. The first was followed by the 8 Sept. flight, 48 Broad-wings counted from the Mendota Fire Tower, the largest day's count we have ever made before 12 Sept. These hawks may have been involved in the eastern edge of the air mass, which passed into the ocean far to the north. The second disturbance was followed by our major migration, centering on 15 Sept. The weather-map pattern preceding this front was particularly complicated, but eventually the air mass behaved like the earlier one. The third front had practically no component moving eastward, the component which seems to indicate an increase in hawk migration through our territory, as discussed in earlier reports in this series. Eventually the relation between air-mass movements and the Broad-wing migration pattern in the T.O.S. project will be summarized in terms of the hypothesis presented in 1959 (THE MIGRANT 31, 2, 1960) and details subsequently accumulated.

Red-headed Woodpeckers are becoming fairly common on hawk flyways. In 1959 Adele West saw 12 in just a few minutes, on Elder Mt. (THE MIGRANT 31, 3, 1960). We have been seeing them every year for 3 or 4 years, and several years ago, having learned their flight patterns, I spotted two on the Hawk Mt., Pa., flyway. For the first time we saw and heard Bluebirds from our perch on the Mendota Knob, in 1963. Both species are gaining ground in upper east Tennessee.

NOTES

The numbers refer to the first column of page 10.

1. 31 Aug.—River Mt. Fire Tower is on a ridge overlooking the Holston River and U.S. 11-W and usually considered part of Bays Mt. For many years we had hoped to make a study of hawk migration at this fire tower. Now it has been achieved by Tom Odom, 1962 and 1963. His reports show that although this lookout is approximately on a line between the Mendota Fire Tower Knob and Chimney Top, the Broad-wing migration observed on the River Mt. Fire Tower is considerably smaller. On the other hand, the other raptors fly close to the tower and can be studied to great advantage.

2. Mendota Fire Tower—A good count for so early in the season, especially in view of the short period of observation, 2 hrs., 45 min. A cold front had passed over, a day or two before.

7. 8 Sept.—This is the largest count we have had on or before 8 Sept.

8. 14 Sept.—The first of 18 consecutive days of observation of hawk migration in our territory. During these 18 days the average coverage was 2½ stations per day. Between 12 & 13 Sept. a cold front passed over and was followed, 15 & 16 Sept., by a large movement of Broad-wings, recorded nearly simultaneously in all parts of our territory. The flight started early on 14 Sept. but was choked off by adverse weather. When we reached the ridge on Chimney Top, it was already 10:30. There was an overcast, and Broad-wings were flying at eye level. Not long after we reached the lookout, at 10:45, we became aware of a huge mass of murk creeping in through the valleys and over the mountains to the south. Around 11:30 we retreated into a cave and ate lunch. We had counted 50 hawks in less than an hour. The murk was accompanied by a light, stinging rain but was definitely not a severe storm. At 1:15 it was possible to return to our lookout, and eventually the weather cleared. For a long time, however, the murk remained visible, progressing northward toward the Clinch. In the next 4 hrs., of good weather, we counted only 3 Broad-wings.

9. The count on the River Mt. Lookout started 1½ hr. earlier, on 14 Sept., at 9:10 a. m. One reason for the late starts is that both River Mt. and Chimney Top require hiking. It is easy to get to the Mendota Fire Tower at 8:00, but we decided to abandon it in favor of Chimney Top and River Mt. Also the Greeneville Chapter decided to concentrate on Camp Creek Bald instead of the Rogersville-Kyles Ford lookout on the Clinch. River Mt., 14 Sept., had its biggest total, with 43 Broad-wings before 11:30 a. m. and 3 during the next 5½ hrs. and also 7 other hawks. We feel that the count might have been much higher on the Mendota Fire Tower because we would have reached it several hours earlier and the murk described in the preceding note would have arrived several hours later.

10. 15 Sept.—This was Elder Mt.'s highest count for 1963. In previous years it has had much higher counts: in particular, 4985 on 25 Sept., 1960.

11. This observation by Mrs. Bell was made 20 mi. west and 60 mi. north of Chattanooga. When records are made simultaneously at several places, those made farther southwest are earlier when the migration is going southwest. It is difficult to say, however, that the hawks in this report are significantly later than the ones in the Elder Mt. report, because both locations are on the outer edge of our territory, and we have no information on what course is followed beyond.

"On 15 Sept., I was up at Center Hill Lake, where we have a summer cabin, for the weekend. My granddaughter Susan Bell and I went out for a short bird walk along the ridge road — known as 'Ridgetop Road'. I did not expect migrant hawks so soon, or particularly at that location and so was not looking for them. However, at one stop when we were watching for warblers in a tree, I happened to notice five hawks together, which most certainly were Broad-wings. I was excited, of course, because I realized the Broad-wings must be flying that day. They came from the north or northeast and went south. In what seemed a very short time we counted 236 Broad-wings, one Marsh Hawk, 2 Red-tailed Hawks, and three unidentified buteos. The Broad-wings came in flocks — one flock of 56. I do not know the exact time, but I'd guess between 10:00 and 11:15.

"Miss Riggs, Mrs. Goodpasture, Miss Castles, and I had planned a hawk-watching trip to Bon Air for 28 & 29 Sept. but realized that would be much too late this year and so did not go.

"15 Sept. was warm, with the temperature in the 80's and practically no wind. The location is just off U.S. 70 and about 8 mi. east of Smithville."

12. Ten members of the Greeneville Chapter participated. The scarcity of hawks on a day when the other stations had their best counts is not surprising in view of the fact that Camp Creek Bald is well to the south of Chimney Top, and the heavy count there was late in the day. The murk on the previous day blocked off southward flight but not westward flight, and so the hawks reached Elder Mt. and Mrs. Bell's area long before they could get to Camp Creek Bald.

13. Chimney Top had 21 between 10:00 and noon, 2 between noon and 3:30, then 41 in the next half hour, 456 between 4:00 and 4:30, and 126 later.

14. The Broad-wings came in one group between 2:00 & 2:30, although observation was maintained between 9:35 and 4:05 by Tom Odom on the River Mt. lookout: "Broad-wings appeared east of tower, kettled, and soared west right over tower, in staggered flight. The Red-shouldered Hawk appeared about 5 min. after the Broad-wing flight — windows very plain, a beautiful bird."

One more Broad-wing was seen by Mr. Odom just after he had left the lookout. The big flights occurred during the next hour. No one knows how many would have been seen at the River Mt. lookout. The count on the Mendota Fire Tower lookout had been 130 Broad-wings in a fairly steady stream up to 2:30; one group of 42 might have appeared as the group of 39 seen over River Mt., but none of the others seen at Mendota could have passed near the River Mt. lookout. So it is not certain that the big flights later would have been seen over River Mt.

15. The day started with a thin, dark overcast and no fog, only a light haze at ground level. By 9:30 the overcast had acquired a mottled aspect; it receded slowly northward and left clear blue sky over the area south of the Clinch. Some cumulus developed later. The hawk count after 2:30

HAWK OBSERVATIONS FALL OF 1963

| No. | Date | Obr | h. | Lookout | Alt. | Wind | F | Sky | Shr | Cpr | Rtl | Rsh | Bdwg | Msh | Osp | Sph | Acc | But | Other | Unidentified |
|-----|------|-----|----|---------------|------|-----------|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-------|--------------|
| | | | | | | | | | | | | | | | | | | | | |
| 1 | 8/31 | O | 5 | River Mt. | 2379 | 2-5 W-NW | 7-7½ | 2 | | | | | | | | | | | | |
| 2 | 8/31 | CoC | 3 | Mendota | 3000 | 6 NE-E | 7-7½ | 4 | | | 3 | | 13 | | | 1 | | | | |
| 3 | 9/1 | O | 2½ | Hemlock Kb. | 4032 | 2-3 SW | 7-7½ | 2 | | | | | 2 | | | | | | | |
| 4 | 2 | CoQ | 2½ | Mendota | 3000 | 3-4 W-NW | 7-8 | 3 | | | | | 4 | | 1 | | | | 1 | 1 |
| 5 | 7 | O | 6½ | River Mt. | 2397 | 0-4 W-NW | 7-8 | 5 | | | 2 | | | | 2 | | | | | |
| 6 | 8 | W | 3 | Elder Mt. | 1880 | 0-2 SE | | 0 | | | | | | 6 | 1 | 1 | | | | 1 |
| 7 | 8 | FR | 8 | Mendota | 3000 | 0-2 S-NE | 8½ | 1 | | | 2 | | 48 | | | | | | | 3 |
| 8 | 14 | FH | 7 | Chim. Top | 3100 | 6 E | 6 | 5 | 1 | | | | 57 | | 1 | | | | | 2 |
| 9 | 14 | O | 8 | River Mt. | 2405 | 2-6 SE | 6-6½ | 5 | 3 | 1 | 3 | | 46 | | | | | | | |
| 10 | 15 | W | 6 | Elder Mt. | 1880 | 2-4 SE | | 4 | | 1 | | | 813 | | 1 | 1 | | | | |
| 11 | 15 | S | 1¼ | see note | | 0 | 8½ | | | | 2 | | 236 | 1 | | | | | | 3 |
| 12 | 15 | Gv1 | 6½ | Camp Ck. Bld. | 4844 | 6 S | 6-8 | 4 | | | | 2 | 1 | 1 | | | | | | |
| 13 | 15 | JH | 7 | Chim. Top | 3100 | 2-3 E | hot | 3 | 1 | | | | 636 | | | | | | | |
| 14 | 15 | O | 6½ | River Mt. | 2405 | 0-3 SE-E | 6-7 | 3 | 3 | | | 1 | 40 | | | | | | | |
| 15 | 15 | FRD | 8½ | Mendota | 3000 | 3-4 S | 6-7 | 3 | 1 | 3 | | | 980 | | 2 | | | | | 2 |
| 16 | 16 | G | 5 | Elder | 1880 | | | | | | | | | | | | | | | |
| 17 | 16 | N | 3 | Bluff Mt. | | 2-3 S | | | | | | | | | | | | | | |
| 18 | 16 | FJ | 8½ | Chim. Top | 3100 | | 7-8½ | 3 | 1 | | | | 1257 | | | | | | | |
| 19 | 17 | ChJ | 6¼ | Mendota | 3000 | 0-2 W-N | 7½ | 2 | 2 | | 1 | | 254 | | | | | | | |
| 20 | 18 | M | 8½ | Knox Co. | 950 | 1-2 NW | 6-8 | 2 | 2 | | | | 51 | | | | | | | |
| 21 | 18 | B | 6¼ | Buck Ridge | 4300 | 1-3 SE-NW | 6 | 3 | 1 | | | | 66 | 3 | | | | | | |
| 22 | 19 | WGV | 6 | Elder Mt. | 1880 | 0-2 E-N | 6-9 | 0 | | | | | 15 | | | | | | | |
| 23 | 19 | B | 9 | Holston Mt. | 4200 | 1-4 NW-N | 6 | 1 | 1 | | | 1 | 43 | | | | | | | |
| 24 | 20 | ChJ | 5½ | Mendota | 3000 | 0 SE | 7½ | 0 | | 1 | | | 107 | | | | | | | |
| 25 | 21 | WGV | 5 | Elder Mt. | 1880 | SE-N | | | | 1 | | | 274 | 1 | | | | | 1 | 2 |
| 26 | 21 | B | 3½ | Roan Mt. | 5800 | | 6½ | 0 | | | 2 | | 1 | 1 | | | | | | 3 |
| 27 | 21 | FH | 8½ | Chim. Top | 3100 | 0-3 NE | 8 | 1 | | | | 2 | 40 | | | | | | 1 | |
| 28 | 21 | O | 7 | River Mt. | 2405 | 0-2 SE-NW | 7-8½ | 1 | | 1 | | | | | 1 | 1 | | | | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|------|-----|----|---------------|------|----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|----|----|---|----|----|
| 20 | 21 | Rol | 5 | Mendota | 3000 | 0-3 var. | mod. | 1 | ... | ... | ... | ... | 38 | ... | ... | ... | 1 | ... | ... | | | | | |
| 30 | 22 | W | 3¼ | Elder Mt. | 1880 | 2-6 NE | ... | 0 | ... | ... | ... | ... | 8 | 1 | 1 | ... | ... | 1 | 1 | | | | | |
| 31 | 22 | B | 8 | Roan Mt. | 6250 | 3-4 N | 5 | 0 | 2 | ... | 2 | ... | 14 | 1 | 1 | ... | ... | 3 | 3 | | | | | |
| 32 | 22 | E | 6½ | Forewood FT | 2036 | 3-5 ESE | 5½-7 | 1 | ... | 1 | ... | ... | 3 | 1 | 1 | ... | ... | ... | ... | | | | | |
| 33 | 22 | Gvl | 6 | Meadow Cr. | | 6-7 NE | 7 | 0 | ... | ... | ... | ... | 9 | ... | ... | 2 | ... | 1 | ... | | | | | |
| 34 | 22 | T | | Powell Mt. | 2500 | 3-5 NNE | 6½-7 | 0 | ... | ... | ... | ... | 10 | ... | ... | ... | ... | ... | ... | | | | | |
| 35 | 22 | M | ½ | Knox Co. | 950 | 3-4 N | 5½-8 | 2 | ... | ... | ... | ... | 27 | ... | ... | ... | ... | ... | ... | | | | | |
| 36 | 22 | Kpt | 7¼ | Mendota | 3500 | 2-5 NE | 6-7 | 0 | 1 | ... | 1 | ... | 2 | ... | ... | 1 | ... | ... | ... | | | | | |
| 37 | 23 | M | ½ | Knox Co. | 950 | 3-4 N | 5-7½ | 2 | ... | ... | ... | ... | 14 | ... | ... | ... | ... | ... | ... | | | | | |
| 38 | 23 | B | 7 | Hump Mt. | 5587 | 2-5 var. | 4-5 | 2 | 2 | ... | 1 | ... | 167 | ... | ... | 1 | ... | 2 | ... | | | | | |
| 39 | 24 | B | 5½ | Jane Bald | 5700 | 1-2 S-SE | 4½-5 | 0 | ... | ... | 1 | ... | 10 | ... | ... | 2 | ... | ... | 3 | | | | | |
| 40 | 24 | B | 2¼ | Roan Mt. | 6250 | 4-5 SW | 4½-5 | 0 | ... | ... | 1 | ... | 2 | ... | ... | ... | ... | ... | ... | | | | | |
| 41 | 24 | ChF | 4½ | Mendota | 3000 | | 6 | 0 | 1 | ... | ... | ... | 3 | ... | 1 | ... | ... | ... | 3 | | | | | |
| 42 | 25 | B | 8 | Hump Mt. | 5000 | 3-5 S | 4½-5 | 2 | 1 | ... | ... | ... | 3 | ... | ... | ... | ... | 2 | ... | | | | | |
| 43 | 26 | B | 8 | Holston Mt. | 4200 | 1-4 SE-N | | 2 | ... | ... | ... | ... | 6 | ... | ... | 1 | ... | 1 | ... | | | | | |
| 44 | 26 | QWh | 2½ | White Top | 5534 | | 7½ | 3 | ... | ... | ... | ... | 13 | ... | ... | ... | 1 | 1 | 1f | | | | | |
| 45 | 27 | G | 4 | Elder Mt. | 1880 | | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | |
| 46 | 27 | B | 5½ | Camp Ck. Bld. | 4844 | 2-3 W | 4-5 | 5 | 2 | 1 | 2 | ... | 2 | ... | ... | ... | ... | 1 | 1 | | | | | |
| 47 | 27 | FD | 8 | Mendota | 3000 | 0-3 var. | 7-8 | 0 | 1 | ... | 1 | 1 | 3 | 1 | ... | ... | ... | 1 | ... | | | | | |
| 48 | 28 | FH | 1½ | Mendota | 3000 | 4 SSE | 6 | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | | | | |
| 49 | 29 | W | 4 | Elder | 1880 | | 7 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | | | | | |
| 50 | 29 | ON | 6½ | Rogersvl. FT | 3100 | 4-5 NW | 7½-8 | 2 | ... | 4 | 2 | ... | 6 | ... | ... | 1 | ... | ... | 3 | | | | | |
| 51 | 30 | Rol | 4½ | Mendota | 3000 | 3-5 S | 5-6 | 0 | 1 | ... | ... | ... | 2 | 1 | 1 | ... | ... | ... | 1e | | | | | |
| 52 | 10/1 | F | 7 | Mendota | 3000 | 1-6 SE | 7 | 0 | 1 | 1 | 2 | ... | 4 | ... | ... | 1 | ... | 1 | ... | | | | | |
| 53 | 3 | M | | Knox Co. | 950 | 2-3 WNW | 6-8 | 2 | ... | ... | ... | ... | 8 | ... | ... | ... | ... | ... | ... | | | | | |
| 54 | 6 | ChD | 4 | Mendota | 3000 | 0 NE | 6 | 0 | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | | | | | |
| 55 | 13 | FH | 5¼ | Mendota | 3000 | 1-4 SE | | 1 | 4 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | | | | | |
| 56 | 11/7 | M | ½ | Knox Co. | 950 | 3-4 N | 5-6 | 3 | ... | ... | 21 | 4 | ... | ... | ... | ... | ... | ... | ... | | | | | |
| TOTALS | | | | | | | | 289 | | | | | | 30 | 15 | 52 | 11 | 5434 | 14 | 13 | 14 | 6 | 27 | 33 |

Also—No. 7: 2 Peregrines; No. 12: Bald Eagle; No. 33: 2 Bald Eagles, Rough-legged Hawk
 f designates unidentified falcon; e designates unidentified eagle.

p. m. was distributed in the same way as the Chimney Top Count but 50% higher. The large groups were more scattered than they had been in 1962 and more difficult to count. At 3:30, Coffey, Dubke, and Smith arrived and helped us count. Data analysis showed very little overlap in the hawks counted at the two stations—Mendota and Chimney Top.

16. 16 Sept.—No hawks at all on Elder Mt. On the day before, Mrs. West recorded only one Broad-wing between 9:00 and 11:00 and then had a fairly steady stream, tapered at both ends, for two hours. Observation was terminated at 3:00 after a full hour with no hawks. We might speculate that the phenomenon which we saw cutting off the flight in our area produced the gap in the data at Elder Mt. and that perhaps a large count could have been made on 17 Sept., at Elder Mt.

17. Richard Nevius, after a dull day on Camp Creek Bald, made the largest count of the 1963 migration: "We have an alfalfa field at the end of Bluff Mt., a part of the Bays Mt. chain, and while I mowed I watched occasionally for hawks, just a glance at the clouds. On one glance I saw them, already partly gone to the southwest, towards Bulls Gap. At 10:05 I started to count and had 986 at 10:25, at which time I thought they were all gone. They were high; I had no glasses. I counted them against the white of a big cloud out of which they were coming. Once in the blue, I couldn't see them. The first part went out of sight before I could count them, probably several hundred. After finishing the count, at 10:25, I made another trip around the field and discovered they were still going, at 10:35, and will never know how many went past during that 10 min., but during the next 10 min. I counted 271 more. That seemed to be the end; I didn't see another hawk all day (to 2 p. m.). Apparently they had all come from the same roost somewhere towards Kingsport, maybe right under Chimney Top. It is about 40 mi. in a fairly straight line from where I was to Kingsport."

18. It would be senseless to argue that the hawks reported in No. 17 did not include some of those seen the day before. We felt, however, that a flight still heavy late in the day would continue the next day. To avoid duplication we should have gone to the Mendota Fire Tower but went to Chimney Top instead and sat most of the morning under a big white cloud that lingered there. Between 9:00 and 9:30 we had 53 and during the next two hours 35 more. We saw one more, at 3:15 and left an hour later. The cloud left us at about 11:30, probably the cloud Mr. Nevius had counted his hawks against.

19. 17 Sept.—Hawk flight continued all day at the Mendota Fire Tower. A count of 26 was made after 4:00 from the trail leaving the knob and from the gap below.

25. 21 Sept.—This was the last count above 200 made in 1963 in the T.O.S. hawk project. Our statistical peak date had been 22 Sept. The weather was good, and a cold front had passed, 20 Sept. On the basis of the poor data at Chimney Top and River Mt. on this date, particularly in connection with the recent front, we decided not to observe at these two stations on 22 Sept.

36. 22 Sept.—Combined-operation day — Mrs. Swindell counted 27 Broad-wings.

38. 23 Sept.—The total of 167 Broad-wings is particularly interesting. It suggests a return of the hawk migration to higher altitudes, in conjunc-

tion with other data logged by Fred Behrend in the 1963 count. We had some very clear days, during the season. The view from the Clinch Mt. was remarkably good, 22 Sept. Also the lack of the high totals we have come to expect from Elder Mt. may be related to the higher flights. Unfortunately, the high mountains were not covered during the period when the big migration was (unexpectedly) in progress. Not counting this Hump Mt. report, Mrs. Swindell's count of 27 on 22 Sept. was not surpassed by any two others added together, after 21 Sept.

52. 1 Oct.—This was part of a particular effort to establish more firmly that the Broad-wing migration had practically ended in the middle of the season, in spite of fine weather.

56. 7 Nov.—Another good Red-tail count by Maxie Swindell.

KEY TO REPORTERS

B—Fred W. Behrend, Elizabethton; C—George Craig, Bristol; Ch—Charlotte Finucane, Kingsport; Co—Wallace Coffey, Bristol; D—Dan Finucane; E—John and Elizabeth Elson, Knoxville; F—Thomas W. Finucane; G—Carl M. Gevers, Chattanooga; Gvl—Greeneville Chapter: Elva Darnell, Mr. and Mrs. Carroll Hinkle, Mr. and Mrs. Richard Nevius, Harriet, Harry, Olivia, and Richard Roberts; H—Tommy Finucane; J—John Finucane; Kpt—12 people from Kingsport, mainly visitors, a group also from Bristol and one from Abingdon; M—Mrs. Thomas C. Swindell, Knoxville; N—Richard Nevius; O—Thomas A. Odom, Kingsport; Q—Bob Quillen, Bristol; R—Dick Finucane; Rol—Holmes Rolston, Bristol; S—Mrs. Sue M. Bell, Nashville; T—James T. Tanner, Knoxville; V—T. L. Rogers, Chattanooga; W—Mr. and Mrs. Eugene West, Chattanooga.

SKY CODE

- 0. Clear; sunny; very clear.
- 1. Clear with haze; sunny, hazy.
- 2. Scattered clouds; high cirrus; mostly clear.
- 3. Cloudy to clear; overcast till 11 a. m., clear after 11; partly cloudy, fairly clear.
- 4. Heavy overcast to clear; overcast to broken clouds.
- 5. Bad grey fog, cumulus; overcast and rain, clear later; overcast, hazy; complete overcast, visibility good.

BEAUFORT WIND SCALE

0—Less than 1 knot; 1—1 to 3; 2—4 to 6; 3—7 to 10; 4—11 to 16; 5—17 to 21; 6—22 to 27; 7—28 to 33; 8—34 to 40; 9—41 to 47 knots. (A knot is 1.15 mph.)

TEMPERATURE CODE

Figures given are degrees F divided by 10.

1434 Watauga Street, Kingsport, Tenn.

BOOKS ON BIRDS, and other related subjects frequently go out of print within a few years after which they may only be secured from a dealer interested in collecting and stocking them. Such a dealer is the Pierce Book Co., of Winthrop, Iowa, which issues an annual catalog and handles new books as well. Fred Pierce, the proprietor, is a competent bird-man and was for some years the editor of *Iowa Bird-life*. — A. F. G.

THE SEASON

MEMPHIS. — The Bufflehead continued common on Horseshoe Lake, Ark., 203 being recorded 23 Feb. and over 80 found 29 Feb. On latter date 101 Canvasbacks also. Redheads — 4 on Horseshoe 23 Feb. and 2 in Lakeview, Miss. area, 22 Jan. (Mrs. Helen Dinkelspiel, Ed, Jr. and Mrs. Ed Carpenter). Herring Gulls, 3, 23 Feb., but no Horned Grebes found on Horseshoe Lake or on nearby Porter Lake this season.

A male Goshawk was reported shot 19 Dec. 1963 near Snow Lake, Ark.; because it appeared unusual it was brought to Berry Brooks of Memphis, then given to Lee Grimmig who will eventually mount it. The specimen was subsequently checked by the writer who has never seen this species in this area.

More Pine Siskin records: 2 on 8 Nov. 63, Eudora, Miss. area (HD, TC, Mrs. Arlo Smith); 12 on 19 Jan. Chucalissa area, Memphis (TOS); 4 on 4 Feb. and 2 on 5 Feb., Coffey Grounds' sweet gums; one on 18 Jan., Walnut Log area, Reelfoot; 50 on 14 Dec., Lake Placid, Chickasaw SP. (No further Red-breasted Nuthatches.) Lapland Longspur, 150, 26 Jan. and 2, 7 March, Penal Farm; only 5, 16 Feb., Stuttgart, Ark. airfield; and 5 on 1 Mar., Lakeview, Miss. Further Smith's Longspurs: 8 on 9 Feb., Jonesboro, Ark. airport, 2 on 16 Feb., Stuttgart airfield.

2 Feb., driving Interstate 40, north of Jackson, we noted 9 good to heavy blackbird lines crossing. The roost was found south of town in bottoms between Bemis and Cane Creek Baptist Church. We were unable to return to check flights in from the south. I would judge the size as 5,000,000 or more, the largest roost we have seen. About 40% in the lines noted were Common Grackles; Starlings and small blackbirds also present.

The first Purple Martins reported were 3 on 1 March by James Lancaster at his box. A 29 Feb. - 1 Mar. run of some length for Tree Swallows and Golden Plover was unsuccessful.

BEN B. COFFEY, JR., 672 N. Belvedere, Memphis 7, Tennessee.

NASHVILLE. — This is a report on the period from 15 Jan. through 29 Feb. No Loon were reported. Horned Grebe wintered again on Old Hickory Lake with 35 on 18 Jan. and 100 on 29 Feb. that included one flock of 75, largest ever here. Pied-billed Grebe were very scarce after Christmas. Ducks seemed more numerous than the past three years with up to 500 on Bush Lake. The following were there regularly except for a few days in early Jan. when the lake was frozen: Mallard, Black, Gadwall, Redhead (3 to 4), Ringnecked (a few until 11 Feb. with 60 and up to 250 on 17 Feb.) Canvasback, (from a dozen to 55 on 29 Jan. and 67 on 6 Feb.), Lesser Scaup, (very scarce until late Feb. with 300), Common Goldeneye, (one to five), and Bufflehead (1 to 4). Pintail to six were on Bush in late Feb. American Widgeon arrived there on 3 Feb. with 3 and up to six stayed through the period. On 29 Feb. 60 Common Goldeneye were on Old Hickory Lake, with 47 in one flock, the largest ever here. Eight Oldsquaw were on Old Hickory 1 Feb. (LOT) and remained through the period. A dozen Hooded Merganser were found on Old Hickory Lake 18 Jan. as were eleven Common Merganser, and 200 of the latter were seen there on 29 Feb. Records for the above ducks at Bush Lake are by HEP, those on 18 Jan. at Old Hickory by LOT, HEP, and on 29 Feb. by LOT, JOE, HEP.

American Coot were scarce after Christmas both at Bush and Old Hickory Lakes. Kildeer were scarce everywhere all winter. Fifteen Herring Gulls on Old Hickory 29 Feb. was the most for the period. 800 Ring-billed Gulls on 8 Jan. (LOT) was the winter's peak and the most ever here. Bonaparte's Gull wintered for the first time, with 200 still here on 18 Jan. and this dropped to 25 on 29 Feb.

Phoebe's were scarce, but here. A few Red-breasted Nuthatch reports were made for the period. Robins and Grackle were almost absent from Christmas until mid Feb. and returned in normal numbers. Myrtle Warblers were extremely scarce all winter. No Evening Grosbeak was reported for the winter. Purple Finches were present at many feeders in considerable numbers. There were more reports of Pine Siskins than we have had in many years.

HENRY E. PARMER, 3800 Richland Ave., Nashville, Tenn. 37205.

COLUMBIA. — Since the Christmas census, our only major activity has been the tracking down of a large blackbird roost which was finally located 25 February on the south edge of the town of Lewisburg adjacent the bypass highway. For at least two months, this roost escaped our detection because it was not believed that birds were flying from the Columbia area as far as Lewisburg. It is now known that from the west and north, birds fly as far as 45 miles into this roost. There has been no report of a similar roost in South Central Tennessee but flyways from the east and south have not been checked to see how far they extend. The roost is located in a total area of about 100 acres of mixed tall deciduous trees and fairly low densely-clustered cedar trees. The birds finally come to roost in about a 40 acre tract of almost impenetrable cedar trees. Accurate counting has defied all scientific methods, but the roost is of the order of one million birds. It is composed of about 50 per cent Starlings, 20 per cent Redwing Blackbirds, 10 per cent Rusty Blackbirds, 10 per cent Common Grackles, 8 per cent Brown-headed Cowbirds and less than 2 per cent Robins. Because a large Robin roost was found in the vicinity of Arrow Lake at Christmas time, it may well be that most of the Robins in this area have continued to roost separately.

The Pine Siskins and Evening Grosbeaks, apparently numerous this winter in East Tennessee, have not been observed here.

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

CHATTANOOGA. — An absence of a season report for the fall of 1963 prompts a brief resumé. Species of note seen in the Savannah Flats area of Chattanooga are an important contribution by Benton Basham. Two very rare records for the "flats", both reported on 18 August are the Sanderling (1), and Ruddy Turnstone (2). Also seen on the same date at the "flats" are the Black Tern, Dowitcher (1) and an early Pied-billed Grebe all recorded by Mr. Basham. He also banded the Spotted Sandpiper (1) and Western Sandpiper (2). On 20 August, he returned to the location and banded a single Solitary Sandpiper.

Other notable records for the Chattanooga area indicate the importance of banding in interpreting the migration and flow of species. From 15-30 Sept., Basham recorded the Nashville Warbler (4), Mourning Warbler (5), one an adult (M). One Wilson Warbler was banded as well as (11) Northern Waterthrush between 5 Sept. and 7 Oct. Basham also indicates that

one of the most spectacular catches of the season is the single Pileated Woodpecker on 17 Oct. This is his third catch of that specie. Hummingbird numbers were significant during the fall in that he banded 37 between 15 Aug. and 25 Sept.

The winter season in the Chattanooga area has been marked by a rather mild winter with only short periods of intensely cold weather. The mildness of the winter is in contrast to the invasion of northern species experienced in this area. Of interest, the Red Crossbill (4), B. Basham, seen on 1 Jan. are the first recorded. Another Red Crossbill was found dead on Lookout Mountain late in January (date unknown). It was viewed at the February meeting by the club members after Dr. W. K. Butts related the story of its finding by a woman resident of the mountain. This particular bird looked none the worse for having been buried then exhumed after she had learned that it was rare.

The Basham-Halverson party recorded Whistling Swans (6) at the Wood's Hole (near Tullahoma) on 3 January.

Red-breasted Nuthatches have been unusually common in this area during the winter. This Nuthatch has been recorded almost daily at Point Park on Lookout Mountain (R.E. & R.T.B.). Purple Finches have been present in large numbers all winter. The Barrs report in excess of 150 at one time at their feeding station. In contrast to the above, the Evening Grosbeak has not been seen. Only one unsubstantiated report for the Grosbeak came from Lookout Mountain. Pine Siskins have been so numerous and scattered this winter at Point Park and elsewhere as not to warrant exact dating. The flocks have ranged from 20-50 individuals. The Barrs have had 4 Fox Sparrows as constant companions at their feeding station during the winter. This deserves a note because the St. Elmo banding station has banded 10 recently when only one might be expected from past banding years. It is also interesting to note that the Oldsquaw and Bonaparte's Gull have not been reported for the season.

Ducks or waterbird records for the period around Chattanooga have been in short supply although word has been given that the state as a whole had one of the best years yet!

Three male Yellowthroats were seen on 24 Mar., (R.E., B.C., R.T.B.). One was netted. Although not the earliest record for Chattanooga (3 Mar.), the signal was given for spring migration. Early spring date for the Rough-winged Swallow is 23 Mar. (R.T.B.), previous (25 Mar.), when three were seen at Morse Pond just across the Tennessee-Georgia border. A Palm Warbler was also seen by Roy Evenson and Bill Clark (Atlanta) while banding at the Pond on 24 Mar. Although two winter records of the Palm have been recorded it is assumed that this was a migrant.

A Lesser Yellowlegs and Least Sandpiper were seen on 21 Mar. by the Halverson-Basham party at Savannah Flats. Mr. Halverson reports that an early record (2 Feb.) for the Purple Martin was recorded by a non-member (Mr. Barnes) near the Savannah Flats area. Member Halverson confirmed the birds several days later. Previous early is 18 February. Mr. Barnes has been placing up to 70 gourds a year for the last 36 years.

Maxine Crownover reports that she saw 60 Sandhill Cranes flying about 200 feet overhead at Chickamauga Park, Georgia on 8 March.

RALPH T. BULLARD, JR., 3302 Nava'o Drive, Chattanooga 11, Tenn.

KNOXVILLE. — An unusual number of rare birds have appeared in this area during the last few months. Weather conditions do not appear to be responsible for this, as these have not been unusual. A heavy crop of hemlock seeds may have had something to do with the fact that some of the rare seed-eaters stayed in the area. The records of White-winged Crossbills, Red Crossbills, and a Pigeon Hawk will be reported later. A flock of seven Evening Grosbeaks has been visiting Mrs. R. A. Monroe's feeder from 7 January to at least 4 March; a single bird at my house on 8 March is the only other record of Grosbeaks we have except for fairly large numbers in Gatlinburg and the Smokies. The Lark Sparrow which has been attending Mrs. Swindell's feeder since last fall was still doing so on 4 March. A Baltimore Oriole, either a female or a young male (definitely not a Bullock's Oriole), appeared at the feeding station maintained by Mrs. Earl Hash in south Knoxville on 10 February and every other day or so until at least 9 March. Its favorite food was grapes. Brockway Crouch saw a Rough-legged Hawk at close range on 6 January, and Paul Pardue a Greater Scaup on 22 January. Bald Eagles have been observed at several different dates below Norris Dam, along Melton Hill reservoir, and near Kingston.

Pine Siskins remained in the area in large flocks through the first part of February and in small flocks of 25 or so into early March. Red-breasted Nuthatches remained all winter in small numbers. Rusty Blackbirds were observed through January, but none was reported in February. Purple Finches have been in good numbers all winter; the Hash's feeding station has been visited by a Purple Finch that is almost a complete albino.

An early sign of spring was a flock of Red-shouldered Hawks seen on 4 February by Mrs. Maxie Swindell that appeared to be migrating. Conspicuous flights of blackbirds and Starlings going to and from roosts began to diminish in February, and the first Redwing seen displaying over a marsh was on 9 March.

JAMES T. TANNER, University of Tennessee, Knoxville.

KINGSPORT. — To us as to many other communities the past unusually cold winter brought White-winged Crossbills for the first time. They were first seen by Mrs. M. J. Adams in a heavily coned Red Spruce on her lawn 1 Feb. Thereafter through the second week of March various local members along with Mrs. Adams observed the birds, usually in or near the spruce or in nearby hemlocks. These birds always seemed unafraid so that it was possible to approach within about six feet of them.

The White-winged Crossbills were the chief reward of our observations during a winter of unrelieved cold and long-lasting snows starting as early as 13 Nov. From the first week of January, at the time of our last report, until the middle of March I observed the same species of ducks in approximately the same areas: Mallards, Black Ducks, Ring-necked, Goldeneye, and Bufflehead. At both the State Park and Boone the last week in February brought Hooded Mergansers and American Widgeon which remained through the first two weeks of March. Also wintering at the State Park and Boone below the dam were Pied-billed Grebe and Great Blue Heron. Resident in my yard each night throughout the winter was a Tufted Titmouse snugly sheltered in a coconut shell which had been hung as food for Chickadees. In January it retired before four o'clock in the afternoon,

but as the days grew longer he came to his shelter later and later each evening.

So far our only spring migrants have been eight Rusty Blackbirds which I saw in beech trees above the flooded valley of Reedy Creek on 14 March.

MRS. ROBERT M. SWITZER, 1620 Fairidge Place, Kingsport, Tenn.

BRISTOL. — February captured the spotlight for the Bristol area and with the exception of limited observation for a few days in January; this leap-year month made history with area observers. Weather conditions were not particularly severe but snow fall and precipitation were slightly above normal. The average monthly temperature was six degrees below normal with an overall average of approximately three degrees above freezing. Snow came at unusual frequency with a monthly total of 11 inches. Accumulations of one inch on 6 Feb. and three inches on 28 Feb. were our heaviest reports but all melted within a matter of hours.

It has definitely been a northern species winter, in this corner of the state, and the White-winged Crossbills stole the show with good identifications coming from one Tennessee locality and two additional observations just over the state line in Virginia.

On the morning of 1 Feb., Mrs. Earl Francisco, and a number of friends, observed a flock of crossbills at her home in Bristol, Tennessee. A large flock of nearly fifty birds fed from the cones in her pine trees and were observed within twenty feet. She reports that about 30 of these birds were Red Crossbills and 12 or 15 were easily identified as White-winged. Many males of both species could be observed in the same tree and the white wing-bars were readily distinguishable. Females were present in the flock and observations for the White-winged continued on 2, 3 and 4 Feb. Six to eight Red Crossbills were again seen on 29 Feb.

From Virginia, Mr. Carl Fleenor, a very reliable and experienced Abingdon observer, reports additional flocks of White-winged Crossbills at Mrs. Edgar Umberger's residence in Damascus, Va. on 11 Feb. At Holston, Va. he again identified another flock on 17 Feb.

There is a single record of a male Evening Grosbeak drinking from a mud puddle with four Starlings on 12 Feb. (WC).

Pine Siskins have been present all winter with many observations from various areas. Recent sightings include birds at: Damascus, Va. 11 Feb. (CF, EU); Holston, Va. 17 Feb. (10) (CF); 50 at Backbone Rock, near Shady Valley, 16 Feb. (HN); 15 at South Holston Dam 29 Feb. (WC). Purple Finch have been reported from most feeding stations and have been constantly present in numbers from two or three individuals up to flocks of nearly a hundred.

South Holston Lake had a good population of ducks until the waters began to freeze in January. Recently numbers have been very low with the following species listed for a field trip on 29 Jan.: Common Loon (1), Mallard (4), Black Duck (3), Bufflehead (2), and Hooded Merganser (2). The Great Blue Heron was present with a single bird on 29 Jan. and 1 Feb.

Additional records of interest include: Turkey Vultures (20) soaring near Painter Creek Dock 1 Feb.; a dozen Ring-billed Gulls on South Holston Lake the same date; the winter observance of the Red-headed Woodpeckers continued with a single bird on 28 Jan. and 8 Feb.; the large congregation of Crows at the lake were still in good numbers with the last large flock being about 500 on 29 Jan.

Robins were scarce with only one record prior to February, but during this month the number has grown considerably. Brown-headed Cowbirds, a species that winters here in large flocks, are abundant as flocks of several hundred are not uncommon. The Common Grackle has wintered here for the first time since I can remember. Several large flocks were reported during the winter, but since 28 Jan., when I observed a flock of 200 in neighboring yards, the numbers have increased rapidly.

Contributors: Carl Fleenor, Mrs. Earl Francisco, Herbey Nunley, Mrs. Edgar Umbarger, Enno vanGelder.

WALLACE COFFEY—508 Spruce St., Bristol, Tennessee.

ELIZABETHTON. — The past season has been most interesting in this area. As usual, fairly regular coverage has been given to four local TVA lakes, Boone, Watauga (mostly Roan Creek area), Wilbur and Patrick Henry (below Boone Dam near the islands) during the past season to ascertain the wintering populations of waterfowl. The following records on each were noted: Boone: Horned Grebe (6) only on 8 Feb.; Pied-billed Grebe (1) 19 Jan., (1) 26 Jan., (2) 8 Feb.; Great Blue Heron (1) 25 Jan., and (17) 8 Feb.; Mallard (60) 19 Jan., (4) 25 Jan., and (18) 8 Feb.; Black Duck (275) 19 Jan., (152) 25 Jan. and (100) 8 Feb.; American Widgeon (5) only on 8 Feb.; Ring-necked Duck (25) only on 8 Feb.; Canvasback (4) only on 25 Jan.; Lesser Scaup (2) 19 Jan. and (76) 25 Jan.; Common Goldeneye (50) 19 Jan., (80) 25 Jan. and (150) 8 Feb.; Bufflehead (1) 25 Jan. and (12) 8 Feb.; Hooded Merganser (1) 25 Jan. and (4) 8 Feb.; Red-breasted Merganser (1) only on 25 Jan. Patrick Henry: Pied-billed Grebe (1) only on 19 Jan.; Mallard (6) only on 19 Jan.; Black Duck (73) only on 19 Jan.; Gadwall (13) 19 Jan., (1) 25 Jan. and (20) 8 Feb.; Common Goldeneye (1) only on 19 Jan.; Bufflehead (2) only on 19 Jan.; Hooded Merganser (1) only on 19 Jan. Watauga Lake: Horned Grebe (8) 26 Jan., (32) 9 Feb. and (6) 23 Feb.; Pied-billed Grebe (1) 26 Jan. and (1) 9 Feb.; Mallard (75) 26 Jan., (50) 2 Feb., (10) 9 Feb. and (1) 23 Feb.; Black Duck (125) 26 Jan., (215) 2 Feb., (300) 9 Feb. and (175) 23 Feb.; Gadwall (2) only on 9 Feb.; Common Goldeneye (20) 26 Jan., (40) 2 Feb., (40) 9 Feb. and (25) 23 Feb.; Bufflehead (3) only on 26 Jan.; Oldsquaw (2) only on 26 Jan.; Hooded Merganser (2) 26 Jan., (4) 2 Feb. and (2) 9 Feb.; Common Merganser (8) 26 Jan. and (8) 9 Feb. Wilbur Lake: Ring-necked Duck (20) 25 Jan. and (1) 2 Feb.; Common Goldeneye (1) 25 Jan. and (1) 2 Feb.; Bufflehead (6) 25 Jan. and (5) 2 Feb.

The only hawks reported were one Red-tailed on 29 Jan. and one Cooper's on 5 Feb. An adult Bald Eagle was present at Watauga Lake 26 Jan., 2 Feb. and 9 Feb. Eight American Coot were on Boone Lake 25 Jan. Few gulls were present during the past season. Herring Gulls (1) on Boone Lake 25 Jan. and (6) 8 Feb. plus Ring-billed Gulls (3) present on 25 Jan. and (16) 8 Feb.

Brown Creepers have been noted throughout the period. At lower elevations the number of Red-breasted Nuthatch seem to have diminished. The number of Golden-crowned Kinglets (3) appeared to drop off at lower elevations during the period being recorded only 26 Jan., (1) 1 Feb., (2) 8 Feb. and (2) 9 Feb. Ruby-crowned Kinglets (1) were only noted on 3 Feb. and (1) 22 Feb. Cedar Waxwings have not been common during the season (7) being found only on 25 Jan., (180) 26 Jan. and (1) 9 Feb.

The birds that have probably presented the most spectacular display this winter have been the Fringillidae from the north. Evening Grosbeaks have been seen regularly in town during the season with the largest number counted (131) on 20 Feb. Pine Siskins have been fairly well distributed throughout the area with the largest flocks amounting to about 100. Records of the Red Crossbills (13) have been made on 2 Feb. and (2) 8 Feb. Fred Behrend also had the Red Crossbills on Stone Mountain in January and Lynn Mountain in February. Probably the most impressive records have been of the White-winged Crossbills. There were about 50 present in January in the usual place on Roan Mountain (FWB), plus also the other northern birds recorded earlier (34:93, 1963). R. L. James, Mountain Home, reported the White-winged Crossbills showed up there in January (no exact date) and they were present continuously for 26 of the 29 days in February. On 10 Feb. he had at least 100 of the birds present, but usually their number would fluctuate. On each of his observations they were feeding on the cones of the Eastern Hemlock (*Tsuga canadensis*) never on the Carolina Hemlock (*Tsuga caroliniana*). In contrast to the above, there have been only a few scattered records of the Purple Finch.

Of interest is also the record of a single Savannah Sparrow at the County Farm on 2 Feb.

Contributors: John Barnitz, Fred H. Behrend, K. H. Dubke, Lee R. Herndon, Henry E. Parmer, Charlie Smith.

KENNETH H. DUBKE, 918 State Line Road, Elizabethton, Tennessee.

ROUND TABLE NOTES

RED CROSSBILLS IN GREENE COUNTY. — While picnicking early Saturday afternoon on 31 August, 1963 in the Lower Paint Creek Recreation section of the Andrew Johnson Wildlife Management Area in south Greene County, one of our party noticed a bird feeding among the low limbs of a rather large Hemlock tree approximately fifty feet away. So far in the hour or so we had been there, we had neither seen or heard any evidence of bird life. Always looking for 'something different' the writer focused binoculars on this arrival and found it really was different — a sort of dull brick red with darker wings.

Since we had not seen one like it in the area on our many previous outings, we both left the table to observe it more closely. As it moved up into higher limbs, we discovered another Red Crossbill (*Loxia curvirostra*) — a rather drab olive colored female clinging to small branches about thirty-five to forty feet up and working on the tiny Hemlock cones. Their crossed bills were clearly visible as they continued feeding, apparently quite unconcerned about our interest in their activities.

After watching them for perhaps twenty minutes we searched the trees in the area for others, but were not successful in finding any.

To the present knowledge of chapter members, this is the first record of Red Crossbills in Greene County.

ELVA DARNELL, Route 4, Greeneville, Tenn.

GOLDEN EAGLE IN EASTERN ARKANSAS. — Recently, while hunting in Eastern Arkansas not far from Memphis, a boy found an injured Golden Eagle. He captured the bird and took it to Marked Tree, Arkansas, and turned it over to the Peace Officer who got in touch with Cleveland Cabler of the Audubon Society in Little Rock and who is also a member of the T. O. S., and he made arrangement with the Little Rock Zoo to receive the Golden Eagle. A permit was secured from the Federal Fish and Wildlife to keep the bird. Now this immature Golden Eagle is being nursed to a normal life and may be seen in the Zoo. It may be of some interest to note that 137 Bald Eagles were counted in Arkansas during the 1963 Census sponsored by the National Audubon Society TO SAVE THE BALD EAGLE. CLEVELAND CABLER, 2504 Battery Street, Little Rock, Ark.

BLUE GROSBEAK NEST IN BASIN SPRING AREA. — A year ago we reported seeing an adult Blue Grosbeak (*Guiraca caerulea*) feed a young bird out of the nest to establish the first breeding record of the species for Middle Tennessee (MIGRANT: 33, 72, 1963). This year, 30 June, 1963, I found in the same area a nest containing 3 eggs. Behavior of a female Blue Grosbeak suggested she might be near a nest. She was watched as she returned to her nest and was then flushed from warm eggs.

The nest was about 30" from the ground, tied to stalks of elderberry growing on a short steep bank that sloped from a country road to a pasture. The bank faced east and was heavily overgrown with blackberry, elderberry, goldenrod and poison ivy. The compactly constructed nest was made largely of weed stems with a strip of snake skin hanging from the bottom. The slender-oval eggs were pale blue like faded blue denim.

Both the male and female birds were closely attendant to the nest. They were often on nearby utility wires or a wire fence. Observations inside the nest were infrequent so as to disturb the birds as little as possible. On 10 July at least 2 nestlings were gaping but silent. On 13 July the nest and its elderberry support were toppling and only one nestling remained. The nest and its support were secured upright and the young bird was banded. The nest was empty on 20 July without any indication of mishap but the young bird was never absolutely identified later.

There was indication of possible 3 pairs of Blue Grosbeaks in the general area during the 1963 breeding season. Two records of a female and one record of a male were made about 3 miles from the above described territory. In the nesting area 2 males were observed in terrific chasing that seemed to be territorial contention on 25 June. A female present at this time flew away in exactly the opposite direction from the later discovered nest. This female was observed a number of times but never seemed in any way associated with the known nest. This suggested two contiguous territories occupied by mated pairs and a possible third territory about 3 miles away.

KATHERINE A. GOODPASTURE, 3407 Hopkins Lane, Nashville, Tennessee.

BOOK REVIEWS

THE MIGRATIONS OF BIRDS. — By Jean Dorst, Curator of the Division of Mammals and Birds, The National Museum of Natural History, Paris. Houghton Mifflin Company, 2 Park St., Boston, Mass. P. 467; \$6 75.

The movements of birds has intrigued man from the earliest times. Their disappearance at a given season and their reappearance at another has posed a baffling question, resulting in many theories regarding their departure and return. Why, how, when and where were questions which needed satisfactory answers.

Various species of birds migrate differently, that is, from and to different areas, some at night, some during the day, while others travel both day and night; some in flocks of a single species while others of a single sex or mixed species, still others migrate singly. Some species do not migrate at all, that is, they may spend their entire lives within a radius of a few miles of the location where they were hatched. Others may travel relatively short distances or may make altitudinal migrations or spend the summer at high altitude and the winters at lower elevation while still others may migrate hundreds or even thousands of miles.

Much has been learned about the movements of birds by various experiments. The keeping of accurate records of arrival and departure dates, observations of movements, noting flight directions against the moon, following flight direction and speed in airplanes, banding and recovery records and most recently radar techniques have revealed much about the migrations of birds.

Many examples of the various types of migrations are presented with charts and graphs to show the great variety and variations in migrations. The effects of natural phenomena, such as the weather, temperature, atmospheric pressure, wind, fog, clouds and rainfall; geographical features such as the mountains, streams, plains, deserts, coast lines and open water, as well as food, all appear to have profound influences on migration.

The urge to migrate, adaptations, orientations, routes and many other phases of bird migrations from all over the world are discussed in the light of the most recent information available.

In addition to the many illustrations, maps and graphs there is a bibliography of more than fifty pages listing only the more important references to this subject, an index of the birds, geographical index and biographical index.

This is a fascinating book to read and for those who are interested in pursuing the subject further, most of the important literature is listed. Also there are many suggested phases of migration upon which one could do research and add more valuable information to the subject. For anyone with more than a casual interest in bird migration, this would be a valuable addition to a private library or certainly an excellent reference work for a public library.

LEE R. HERNDON.

NOTES ON THE BIRDS OF GREAT SMOKY MOUNTAINS NATIONAL PARK. — By Arthur Stupka. 5½" X 8½"; paperbound; 242 p. The University of Tennessee Press, Knoxville, Tenn. 1963, \$3.00.

The introduction describes the area with respect to topography, geology, climate and flora, particularly where related to the birds as well as the ornithological work done prior to 1935 when the author became Park Naturalist. The main portion of the book, consisting of approximately 200 pages, is devoted to the more than 200 species of birds which have been reliably recorded within or very close to the park boundaries. Most of the data are

taken from the notes of the author, although he has drawn from many publications of well known ornithologists who have visited the area. Many records of species rare to the park have been picked up as casualties along the highway where the birds have been overtaken by foul weather and were unable to make their way over the mountain.

No descriptions of birds are given but specific dates of observations, particularly of the rarer species and migrants, as well as their habitat, behavior, nesting activity, young, song, abundance and elevations are given.

The appendixes list the more important localities of the area with their approximate elevations; the contributors mentioned in the text; a long list of references cited in the text; common and scientific names of plants mentioned in the text and a species index. All of these make the book very useful as a ready reference to most of the species which have occurred in eastern Tennessee and western North Carolina. Any bird student anticipating a visit to this area will certainly want to secure a copy of this book. Members of our state T. O. S. and members of bird clubs in adjoining states should have it in their library.

LEE R. HERNDON.

NAMING THE BIRDS AT A GLANCE. By Lou Blachly and Randolph Jenks. A guide to the Eastern Land Birds from South Carolina west to the Rocky Mountains and North to the Arctic. Guide Drawings by Sheridan Oman. Published by Alfred A. Knopf, New York, 1963. P. 331. \$3.95.

A color pattern guide is included just inside both the front and back covers. When a land bird is sighted by a beginner there is usually some immediate characteristic which stands out prominently and will assist greatly in classifying the bird. If a ready reference is available, such as this book, the few details observed would be sufficient to classify the bird and lead to the identification. Although the many illustrations are in black and white the text is based on color differences and the color patterns are indicated in the drawings. Relative sizes are indicated providing ready comparisons with familiar birds and birds possessing similar patterns are illustrated on the same or adjacent pages. Where the feature resembles one species in one characteristic and a different species in another, both are illustrated in another section. Thus a bird may be illustrated several times in pointing out the several similarities of other species.

In addition to the color characteristics and size which are indicated in the drawings the text lists other features which assist in clinching the identification, such as habits, habitat, sex differences, voice or song, nest and range.

The greater portion of the book is devoted to the smaller land birds but sections are devoted to smaller groups possessing special characteristics such as the woodpeckers, soaring, skimming insect hunters in flight, ground birds (chicken like), owls and hawks, eagles, vultures, crows and ravens. Most of the last group are illustrated perched and in flight.

The book is of convenient size to carry in the field and would be especially useful for beginners. It should be brought to the attention of friends who have had little or no experience in birding or better still it would make a very appropriate gift to young prospective birders.

LEE R. HERNDON.

THE MIGRANT

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

Annual Dues, \$2.50; Sustaining Member, \$5.00; Corresponding members, Libraries and out-of-state \$2.00 and Students \$1.00. All classes include subscription to THE MIGRANT.

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

ARTHUR A. ALLEN, 1885-1964

Arthur A. Allen, Emeritus Professor of Ornithology at Cornell University, died after a brief illness on January 17, 1964. His was an active life devoted largely to the study of birds.

He was born in Buffalo, New York, in 1885. His affiliation of almost a lifetime with Cornell University began when he went there as an undergraduate student in 1903. He was appointed an Instructor before he had completed his doctoral work, and there he became the first Professor of Ornithology in the country. In 1953 he retired to the position of emeritus professor, but he then devoted his energies to the building and direction of the Laboratory of Ornithology in a remarkable building and preserve at Sapsucker Woods a few miles from the Cornell campus. He was active there until a few days before his death.

He accomplished a number of "firsts" in the science of ornithology, but his two greatest accomplishments were his bringing knowledge of birds to a large public and his training of more students in the field of ornithology than probably any other single man. The first he accomplished by his writing of books and magazine articles, lecturing with his motion pictures of birds, which he did several times in Tennessee, and by his work with his associates in the sound recording of the songs and calls of birds and other wild animals. The number of professional ornithologists who received at least part of their training with him is astounding. At meetings of the American Ornithologists Union it used to be customary to hold a Cornell get-together, when it seemed as though at least half of everyone attending the meeting was there. And, of course, an even larger number of students were in his courses who had different careers ahead, some related to ornithology, as wildlife management, and others with bird study as an avocation.

"Doc" Allen impressed all knowing him with his cheerful persistence when things went badly and his relaxed enjoyment of his successes. He will also be remembered personally for his eternal interest in birds and his consideration of people.

JAMES T. TANNER.

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