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1938 SWIFT BANDING AT NASHVILLE AND CLARKSVILLE

BY JOHN B. CALHOUN

The first attempts at Chimney Swift banding in Nashville were made in 1937 when Mrs. Amelia R. Laskey, with the aid of Arthur McMurray, trapped two very small flocks. They banded 47 on Aug. 28, 1937, at the Southland Body Works, and 148 on October 2, 1937, at the Meridian Street Methodist Church. The trap used at that time was too bulky to be conveniently handled with the result that quite a few Swifts escaped. A bird banded at Kingston, Ontario, on May 16, 1936, was taken in the first group.

This work was resumed in 1938, being carried on by myself from August 23 to September 7, and by Mrs. Laskey from September 10 to 27, inclusive. The trap used this year was of the pentahedral type developed by J. C. Dickinson, Jr. and myself at the University of Virginia. It was of the general type used and described elsewhere by Green, Coffey, and Peters. The metal funnel was flattened on the outside so as to reduce size and weight and to place the weight as near to the chimney as possible. The top sloped gradually to the back so that there was no back side. We will be glad to give further details of the trap, cage, and trapping technique to anyone interested. Valuable assistance was given by Arthur and Carl McMurray, Leo Rippey, William Simpson, Conrad Jamison, John Pritchett, Harry Monk, and several others. To these and to the people who allowed the work on the various buildings, appreciation is here expressed.

Swift banding at Clarksville, Tenn. was carried out as a project of the Clarksville chapter of the T. O. S., under the permit of Mrs. John Y. Hutchison. The trap used was also of the pentahedral type. Dr. Pickering, Mrs. Hutchison, Mr. Alfred Clebsch, and Alfred Clebsch, Jr. are mainly responsible for the success of this project which, however, could not have been carried out without the cooperation of the whole chapter. 4265 Swifts were banded in Clarksville. If other chapters of the T. O. S., where Swift banding is not already being done, would conduct similar projects, a proportionately greater amount of facts concerning the movement of Chimney Swifts would result than is now the case.

The first indication of colony formation in 1938 in Nashville was noticed on August 16, when 300 Swifts were seen at the Blakemore Methodist Church. Mr. H. C. Monk reported 800 there on August 20 and 500 at the Centennial Park chimney on August 21. On the evening of August 22 Monk and I made a smudge fire in the Park chimney, which was about 40 feet high, and forced the birds there to go elsewhere. It was completely dark before we could

force all the Swifts to leave. Despite the heavy smoke several kept dropping into the chimney, only to be forced out in a few moments by the smoke. Most of the birds from this roost must have gone to the nearby Blakemore chimney since Leo Rippey and Alfred Clebsch, Jr. reported many stragglers arrived there after the main body had already entered.

Most of the chimneys at which banding was carried on were twenty feet or less in height above the roof, so that the usual method of piping the Swifts down into the gathering cage could be employed. On three chimneys which extended over thirty feet above the roof another technique was used which made the trapping of Swifts in high chimneys relatively simple. After placing an extension ladder against the chimney the trap was pulled up with a rope and set in place. Then the gathering cage was likewise raised until the funnel of the trap extended into the top of the gathering cage. As soon as the gathering cage was full the flow of Swifts was cut off and the cage lowered to the roof where banding operations could be carried out with relative ease.

In all our operations we forced the birds out of the chimneys by lowering a large tin can containing rocks into the chimney, and rattling it vigorously just below the birds. In this way we had little difficulty in scaring them out, even when we had to stop the flow of birds several times during the banding operations.

Two distinct methods of entering a chimney to roost were noticed. The first of these was the normal method of circling clockwise or counterclockwise until the entire flock had assembled, after which time the whole flock would pour into the chimney. On the evening of August 30 another method was observed. At 6:20 P.M. while it was quite light, I arrived at Father Ryan High School where a flock of 300 or 400 had already gathered and were flying erratically about the chimney; some birds going in all the time. The number of birds outside the chimney nevertheless remained constant, due to new recruits coming in continuously from all directions, in flocks of 12 to 100 flying low and fast. This went on for fifteen minutes, during which time at least 2500 Swifts entered the chimney. This process must have been going on for some time before my arrival since we removed 4467 birds from the chimney the next day. This same method of entering was also observed once at Warner School.

FOREIGN SWIFTS

From Tables 3 and 4 it may be seen that 37 foreign birds were captured in Nashville and 7 in Clarksville, excluding in each case those flying between the two cities. With the exception of the three Swifts banded by J. C. Dickinson, Jr. and myself at Charlottesville, Virginia, all foreign recoveries were from west of the Appalachian Mountains. Ten of the Swifts which were banded north of Tennessee were caught in the same season that they were banded. Of these, No. 39-111991, banded by Mr. and Mrs. F. E. Frei at Glasgow, Ky., is of particular interest because it was recovered by Mrs. Laskey the morning after it was banded. This indicated it had flown the 85 miles from Glasgow to Nashville in one day as it had been released at 5:30 A.M., September 22, and had entered the Nashville chimney

to roost by 6:30 P.M. the same day, the time at which the chimney was covered.

Another class of foreign captures that were of particular interest were those that had been banded this same season south of our stations, indicating a definite northward movement. Three Swifts banded at Memphis on Sept. 5 were trapped, two at Clarksville and one at Nashville. Outstanding, though, was a bird banded Sept. 27 at Baton Rouge, La. by Mr. George H. Lowery, Jr., which was caught five days afterwards at Clarksville, 460 miles north-northeast. This is an average of about 100 miles a day. The most unusual of these five records was perhaps that of a Swift banded at Clarksville on Sept. 11 which wandered east-northeast 480 miles and was recovered by us at Charlottesville, Va. on Oct. 1. Thus for the first time we have records (infrequent but indicative) that show how extensive the random flying of this species during its leisurely fall migration can be. This might be expected of birds with the power of flight that the Swifts have.

RETURNS

Of the 195 Swifts banded by Mrs. Laskey in 1937 fifteen individuals were retaken this year, two of which repeated. Five were of the 47 banded Aug. 28, 1937, and ten of the 148 banded Oct. 2, 1937; seven of the latter were taken during August of this year. One of the first mentioned five was taken Aug. 27, 1938, in the same chimney from which it was banded.

REPEATS AND INTER-CITY RECORDS

Of prime importance in the banding at Nashville and Clarksville is the great number of 'repeats' which showed local movement and the large number of inter-city recoveries. An even 50 Swifts banded in Nashville were trapped later in Clarksville and 13 Clarksville Swifts were taken in Nashville. We might say 14 of the latter, technically, as 39-65781, banded originally in Nashville on Aug. 27, was recovered in Clarksville on Sept. 11, and again in Nashville on Sept. 15. At Clarksville there were 183 'repeat' records for 182 Swifts repeating,—that is, one bird repeated twice. At Nashville 1396 Swifts repeated, 63 of them two times and 8 of them three times, for a total of 1475 repeat records. This includes 5 foreign Swifts, three of which repeated twice and 2 of our local returns from 1937 which repeated. All repeats but two were recorded from different stations than that at which they were originally trapped. In Tables 1 and 2* we have listed complete data on inter-station and inter-city movements; the relative location of all Nashville stations is shown on an insert. From this tabulation it is evident that there is no flock unity. In the evenings the Swifts evidently stop at the first convenient roosting place, depending on where their wanderings in search of food have taken them. Thus in any flock the number may remain fairly constant, but its composition may change daily due to local movement rather than to an influx of Swifts from some northern point. It is noticeable that the farther apart two dates of banding are the less likelihood there is of re-trapping any birds from the first flock; nevertheless, a month after our first two banding dates, Aug. 23 and Aug. 27 there were 30 repeats from those flocks among the 896 Swifts caught on Sept. 27 at Ward-Belmont. We see then that although there were a considerable number of Swifts leaving Nashville during August and September, presumably for the most part going

*These Tables are shown on a chart on a later page.

southward, there was evidently quite a 'rear-guard' consisting of Swifts which had spread out locally and to neighboring cities. For a more complete account of the movement of Chimney Swifts between cities in a given region see Dr. H. S. Peters' account of his banding in Alabama and Georgia in 1936 (*Bird Banding*, Vol. 8, No. 1, pp. 16-24).

As we banded more birds the percentage of repeats in each succeeding flock increased gradually until we trapped our largest flock (4467) on Aug. 31. Then the percentage jumped to a maximum of 21.2% in a flock of 1336 taken the next day two miles away (52% of these 'repeats' were from and constituted 3.44% of the big flock of the day before). The percentage was 18.3% on Sept. 5 but afterwards averaged about 12%. The first large flock banded will normally have the largest proportion of Swifts which 'turn-up' again but Table I shows it (in this case the Aug. 23 flock) to be second with 15.4% of its members repeating. The flock with the highest percentage of all birds repeating later (21%) was a small one of 344 banded Aug. 28, the last flock trapped before the big flock of Aug. 31. Thirty-nine or 11.3% of its Swifts were found in the latter as was 7.1% of the large Southland Body Works flock of Aug. 27.

I am indebted to Mrs. Laskey and to Mr. Clebsch for the complete data of their banding in their respective cities, and to Mr. Monk and Mr. Coffey for the preparation of Tables 1 and 2.

TABLE 3—SWIFTS BANDED ELSEWHERE (FOREIGN), RECOVERIES AT NASHVILLE.
Place

Place	Band Number	Date Banded	Date Recovered
Charlottesville, Va. (Dickinson and Calhoun)	38-123561	May 13, 1938	Sept. 5, 1938
	38-174541	May 15, 1938	Sept. 7, 1938
	38-172959	May 15, 1938	Sept. 10, 1938
Ithaca, N. Y. (W. W. Middlekauf)	38-162508	May 9, 1938	Aug. 31, 1938
Kingston, Ont. (Miss Ida Merriman)	34-45351	May 16, 1936	Aug. 28, 1938
	34-45942	May 24, 1936	Aug. 23 & 31, & Sept. 5
	36-73156	May 16, 1937	Aug. 31, Sept. 1
	36-73951	May 16, 1937	Sept. 1, 1938
	36-73690	May 16, 1937	Sept. 17, 1938
	37-90214	May 15, 1938	Aug. 31, 1938
	37-90572	May 22, 1938	Sept. 5, 1938
	37-90971	May 29, 1938	Aug. 23, 1938
Blind River, Ont. (Irvin S. Sturgis)	38-145591	July 23, 1938	Aug. 27, 1938
	38-145944	July 23, 1938	Aug. 28 & 31, Sept. 1
	38-145385	July 23, 1938	Aug. 31, 1938
	38-145476	July 23, 1938	Aug. 31, 1938
	38-146234	July 23, 1938	Sept. 15, 1938
Charleston, W. Va. (I. H. Johnston)	34-58192	Sept. 23, 1937	Aug. 31, 1938
	34-61098	Not yet recorded	Sept. 5, 1938
Newark, Ohio (L. E. Hicks)	38-52486	Sept. 20, 1938	Sept. 27, 1938
Wheeling, Ill. (L. G. Flentge)	37-146296	May 16, 1937	Aug. 31, 1938
Beloit, Wis. (Carl Welty)	38-120763	May 17, 1937	Aug. 27, 1938
	38-120314	May 17, 1937	Aug. 31, 1938

TABLE 3—Cont.	Band Number	Date Banded	Date Recovered
Fairfield, Iowa (Carl Welty)	L17136	May 13, 1933	Aug. 27, 1938
	34-126829	May 23, 1934	Aug. 31, 1938
	35-119609	Oct. 2, 1936	Aug. 23, 1938
Lexington, Mo., (Sturgis)	36-56285	May 26, 1936	Sept. 5, 1938
	39-111991	Sept. 22, 1938	Sept. 23, 1938
Glasgow, Ky. (Mr. and Mrs. F. E. Frei)	34-93120	Oct. 9, 1935	Sept. 7, 1938
	36-86991	Oct. 8, 1936	Sept. 17, 1938
Memphis, Tenn. (Ben B. Coffey, Jr.)	36-88259	Sept. 16, 1937	Aug. 31, 1938
	38-21128	Sept. 21, 1937	Aug. 31 & Sept. 1
	38-21816	Oct. 4, 1937	Aug. 23, 1938
	38-85154	Sept. 5, 1938	Sept. 17, 1938
	38-114718	Oct. 15, 1937	Aug. 27 & 28, & Sept. 17
Baton Rouge, La. (Geo. H. Lowery, Jr.)	38-115722	Oct. 15, 1937	Sept. 5, 1938
	38-115836	Oct. 15, 1937	Sept. 5, 1938

TABLE 4—FOREIGN RECOVERIES AT CLARKSVILLE

Place	Band Number	Date Banded	Date Recovered
Beloit, Wis. (Carl Welty)	35-118798	May 16, 1935	Sept. 11, 1938
	36-149170	Sept. 16, 1936	Sept. 11, 1938
Quincy, Ill. (Musselman)	38-85253	Sept. 5, 1938	Sept. 11, 1938
	38-85077	Sept. 5, 1938	Sept. 24, 1938
Memphis, Tenn. (Ben B. Coffey, Jr.)	38-115643	Oct. 15, 1937	Sept. 24, 1938
	39-36560	Sept. 27, 1938	Oct. 2, 1938

Data for one other swift has not yet been ascertained

TABLE 5—NASHVILLE-CLARKSVILLE SWIFTS TRAPPED ELSEWHERE THIS FALL, 1938

	Band Number	Date Banded	Date Recovered	Place of Recovery
NASHVILLE	38-175721	Aug. 23	Sept. 27	Baton Rouge, La.
	38-176006	Aug. 23	Sept. 18	Glasgow, Ky.
	39-66001	Aug. 27	Oct. 8	Baton Rouge, La.
	39-67114	Aug. 27	Oct. 1	Baton Rouge, La.
	39-67177	Aug. 27	Oct. 1	Baton Rouge, La.
	39-68405	Aug. 31	Sept. 27	Baton Rouge, La.
	39-68788	Aug. 31	Sept. 18	Glasgow, Ky.
	39-68866	Aug. 31	Sept. 27	Baton Rouge, La.
	39-69028	Aug. 31	Sept. 21	Memphis, Tenn.
	39-69861	Aug. 31	Sept. 21	Memphis, Tenn.
	39-70152	Aug. 31	Sept. 21	Memphis, Tenn.
	39-71932	Sept. 1	Sept. 27	Baton Rouge, La.
	39-72751	Sept. 1	Sept. 18	Glasgow, Ky.
	39-74383	Sept. 7	Sept. 21	Memphis, Tenn.
	39-83313	Sept. 7	Oct. 1	Baton Rouge, La.
	39-32268	Sept. 10	Oct. 1	Baton Rouge, La.
	39-32423	Sept. 10	Oct. 1	Baton Rouge, La.
	39-32712	Sept. 17	Oct. 8.	Baton Rouge, La.
	39-33834	Sept. 17	9/20 to 10/5	Madisonville, Ky.
	CLARKSVILLE	39-75633	Sept. 11	Sept. 21
39-76104		Sept. 11	Oct. 8	Baton Rouge, La.
39-76771		Sept. 11	Sept. 18	Glasgow, Ky.
39-77737		Sept. 11	Between	Madisonville, Ky.
39-77822		Sept. 24	Sept. 20	Madisonville, Ky.
39-77854		Sept. 24	& Oct. 5	Madisonville, Ky.

MILLER SCHOOL OF BIOLOGY, UNIVERSITY OF VA., CHARLOTTESVILLE, VA.
DEC. 5, 1938.

SWIFT BANDING IN THE SOUTH

By BEN B. COFFEY, JR.

Bird banding stations in the South are all too few, not only from the standpoint of proper regional representation but from that of their greater potential value. Many species of birds which spend the summer in the North where a preponderance of banding stations are located, spend the winter in the South. In encouraging the banding of Chimney Swifts here we have an additional reason in the increased opportunity afforded us each fall to handle larger number of Swifts than possible in the North. The migrating or wandering flocks increase in numbers as they move southward and a few flocks may be found which number 5,000 to 6,000 birds. The largest flock that has been banded (as far as we can ascertain) was one of 6,025 at Atlanta, Ga., Oct. 11, 1936, by Dr. Harold S. Peters. Prof. Wyman R. Green trapped one of 7,000 birds at Chattanooga on Sept. 21, 1929, of which 1500 were banded and the others examined for old bands.

In the fall of 1925 and of 1926, Mr. H. L. Stoddard banded a total of about 6,000 Swifts at Thomasville, Ga., Cairo, Ga., and Tallahassee, Fla. This number includes some banded in 1924 and in the spring of 1926. At Chattanooga Prof. Green trapped once in the fall of 1928 and again in 1929 and 1930. Due to a shortage of bands the first two years, about 9,000 birds were released unbanded, but in 1930 about 14,000 were banded for an approximate total of 17,500 Swifts. The writer trapped a large flock at Memphis in 1932 and in 1933 but only had 500 bands each time; the 1933 flock numbered about 5,000. Since then we have tried to band as many as we could but without outstanding success. This year, however, we banded our largest flock, one of 3585. Meanwhile in 1936, Dr. Harold S. Peters of the Biological Survey banded 15,478 Swifts in the Auburn, Ala. area and 6,025 at Atlanta, Ga., for a total of 21,503—the record for one group of workers. At Auburn 6500 other Swifts were released unbanded due to a shortage of bands. In 1937 Dr. Peters returned and banded one flock of 1950 at Opelika, Ala. We hope that others will continue in that area.

That fall also, Mr. George H. Lowery, Jr. began trapping Swifts at Baton Rouge, La., a very strategic location in relation to nearly all other banders. He banded 4500 in 1937; altho absent from the city several weeks in 1938, he banded 11,499 in four trappings (including 4,699 on Sept. 27).

In Tennessee this last season 27,429 Swifts were banded. Nashville set the pace with 15,876, Mrs. Laskey's enterprising group of assistants being led by our aggressive and enthusiastic fellow member, John B. Calhoun, who must have been half fireman and half monkey to trap on the chimneys that he did. 13,033 Swifts were banded before John left for University, Va. and the good work was kept going by Mrs. Laskey until the Swifts disappeared. 4,219 was the largest flock banded. Our chapter in nearby Clarksville banded 4,265 in their first season which is more than for any of our six previous years here in Memphis. Their work in connection with Mrs. Laskey's was further valuable in that some determination could be made of the movements of Swifts between Nashville and Clarksville. The Nashville total alone is a few more than was banded in the Auburn area in 1936. An area of comparable size would include both Nashville and Clarksville and the total for same would be 20,141. At Memphis we banded 7,288 Swifts, our best record.

Swift banding was also undertaken at two nearby points in Kentucky this fall and pertinent data has been kindly supplied by the banders. Mr. and Mrs. F. Everett Frei banded a total of 888 Swifts at Glasgow on Sept. 18 and Sept. 22 and Mr. Raymond J. Fleetwood banded 2212 at Madisonville and adjacent Morton's Gap, Sept. 20 to Oct. 5, inclusive. Glasgow is 85 miles northeast of Nashville and Madisonville is 60 miles north of Clarksville. Several of the Nashville and Clarksville Swifts were picked up at each place and we have taken the liberty of adding Table 5 to Mr. Calhoun's article in order to show these and other recoveries of the Middle Tennessee birds.

Attention should be called here to the extended northeastward wanderings of some Swifts in the fall as described in Mr. Calhoun's article. A second unaccountable phenomena, to the writer, is the scarcity of records between Memphis and Baton Rouge. In 1937 Mr. Lowery took 6 Memphis Swifts (including 3 out of 2373 banded that year) from about 4500 birds. In 1938 he took only 2 (also from those 2373) altho he handled about 11,600 Swifts. Yet 7488 Memphis birds were banded or recorded here this fall—5600 before any trapping was done at Baton Rouge. And at Memphis we only recovered two of his 1937 birds. Evidently only Swift banding stations southwest of Memphis can complete the picture. In seven years only two of our Swifts have been reported elsewhere southwest or south of Memphis.

MAP OF STATION TO STATION MOVEMENTS

We have attempted to show graphically the number of Swifts recovered between the Tennessee stations and all other stations which have trapped our birds and whose birds have been picked up here. Recovery records for the two nearby Kentucky points were also plotted. So that some idea of the number banded at each station could be taken into consideration, that was also shown graphically for stations for which data had been kindly supplied us by the banding cooperators. The number used is the total for 1935 to 1938, inclusive, as we thought the residue of older banded birds insufficient to have an appreciable bearing. Exceptions are: Fairfield, Iowa, 1933-34, after which Prof. Welty removed to Beloit, Wis.; Clayton, Ill., 1928 to 1934, designation arbitrary; Chattanooga, Tenn., merely indicated because of the one recovery made at Memphis (1934),—Prof. Green removed after banding about 17,500 Swifts in 1928-30. This recovery, the taking of a Memphis bird at Opelika, Ala. (1936), and that of an Atlanta bird at Glasgow, Ky. this fall, are apparently the exceptions to the generally indicated movements. Columbus, Ohio, Ashland, Ky., and Milledgeville, Ga., are shown but no movements between these points and the five 'home' stations have yet been recorded. Charlottesville, Va., is designated more briefly as University.

Some consideration was given to expressing recoveries as a mathematical ratio or per cent based on the number of recoveries, the number of birds banded at one point and the number examined at the other point. However there were so many variable factors involved and modifications necessary for every case, affecting each ratio, that we not only abandoned the idea but eliminated from this article an elementary discussion of these factors as too complicated. Consequently the simple method was used and the actual total number of recoveries indicated. Where there is more than

one recovery, the number is given. An example of figuring the total is given: 6 Memphis birds at Baton Rouge in 1937, 2 in 1938, 2 Baton Rouge birds at Memphis in 1938; total, Baton Rouge-Memphis, 10. Memphis recoveries as shown date back to the first few in 1933 and 1934; those for the other four points are shown in Calhoun's Tables 3 to 5 inclusive, augmented by a Kingston, Ontario recovery at Nashville in 1937.

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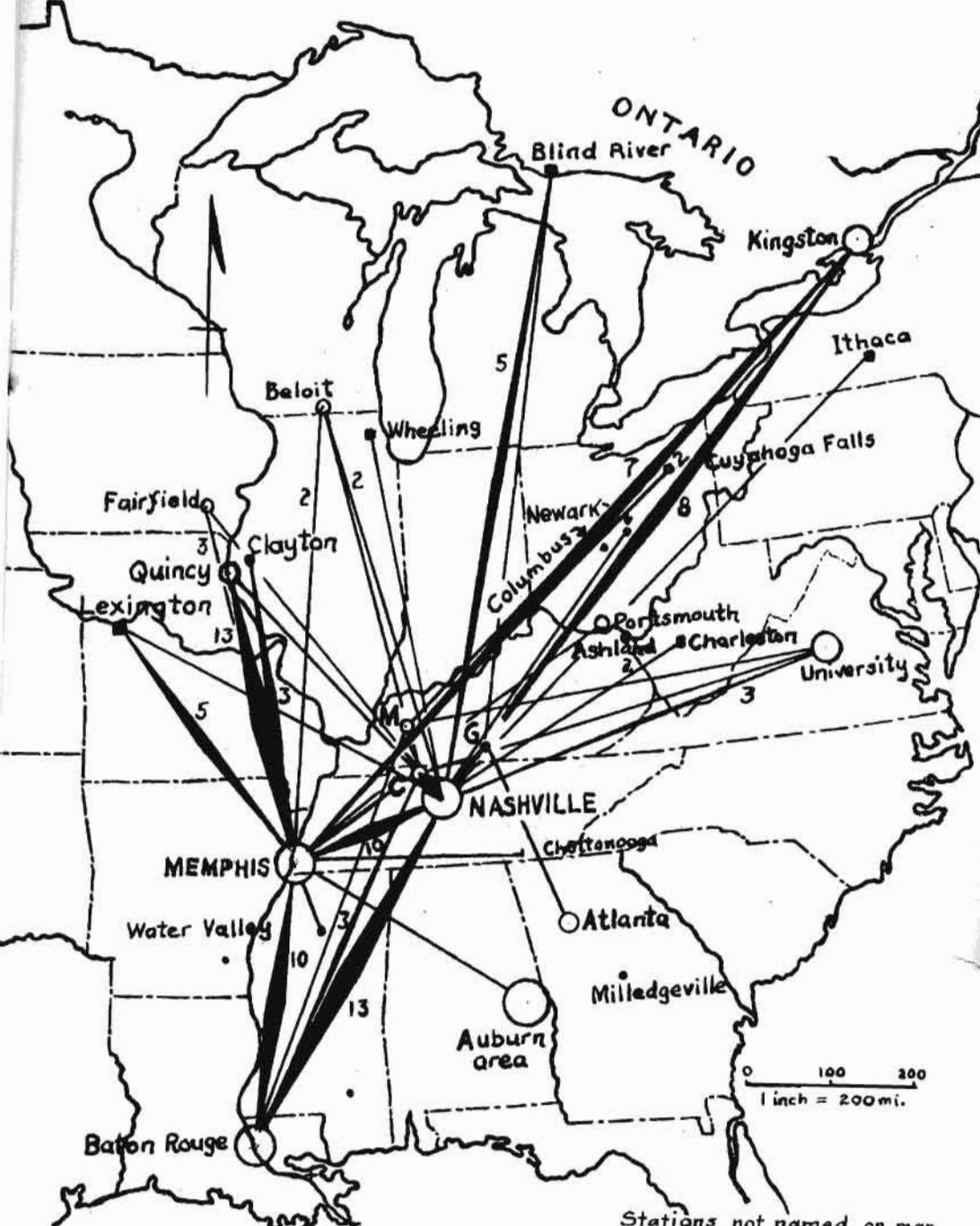
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- MEMPHIS, TENNESSEE. December, 1938

THE THIRD YEAR OF THE BLUEBIRD PROJECT

BY AMELIA R. LASKEY

During the 1938 season, with the excellent help of William Simpson, it has been my privilege to continue with the Bluebird nestbox project in Percy Warner Park, described by Mr. E. D. Schrelber in *The Migrant* of March, 1938. Beginning February 23rd, forty-five trips were made to examine the boxes, twenty of them alone and the remainder with William and a few other bird students, including Mr. Schreiber. Three or four hours were spent in the field on most of the trips because this year extraordinary efforts were made to capture the brooding females in the boxes in each of the nesting periods. With the exercise of much patience and strategy, including many trips during hard rains, which experience taught us was the only time certain individuals could be trapped, a large percentage was banded or trapped with bands for identification. No desertions, broken eggs, or ill effects of any kind were caused by the brief handling given the birds.

The total number of fledglings that left the nest successfully this year, from the 37 boxes now placed in the park, exceeded the number fledged from the 27 original boxes during 1936 and 1937 combined. From the total of 460 eggs laid in 1938, an average of 4.42 for the 104 sets, 264 nestlings or 58.1 percent were successfully fledged. The early nests were most successful with 72.3 percent of the eggs laid developing to the fledgling stage. Results for the second period figured 55.2 percent and for the third period, still lower, 42.6 percent. Two nesting attempts were made in a fourth period but both failed.



SWIFT RECOVERIES BETWEEN BANDING STATIONS

Number of Records Shown to Scale

Number Banded 1935-38 Shown to Scale

○ 1,000 to 17,000 • less than 1,000 ■ No Data

Stations not named on map
 C = Clarksville, Tenn.
 M = Madisonville, Ky.
 G = Glasgow, Ky.

BUILD A BLUEBIRD HOUSE

BY MERRILL S. CARTER

When we consider how successful the Bluebird project in Percy Warner Park has been we would like to encourage other groups throughout the State to come to the aid of this most useful bird and conduct similar projects. When the average citizen puts up a bird house on his property he may be doing more harm than good, hence this article. Likewise, this mid-winter season is the best time to place houses, so that they may weather and lose all human odors, and also so that the birds may find them early and become acquainted with their future nesting sites.

All bird houses might well be made of cypress, for this wood is easy to work, does not need to be painted, will weather and season without warping and splitting, and will last indefinitely. Other woods may be used but it is advisable never to use tin, clay or other substances that conduct heat. Rustic houses are of great value, as no doubt some birds consider the home made of a hollow limb as a natural nesting site, but the Bluebird seems to be in such great need of a suitable place to lay its eggs, that it will build in mail boxes and tin cans.

The design need not be elaborate. Use wood that is $\frac{3}{4}$ of an inch thick and you can construct your box without cutting a single mitre, angle or difficult joint. Make the box about 5 or 6 inches square on the inside, and about twelve inches high. Place the entrance about ten inches above the floor. Let this opening be 2 inches in diameter. An expansion bit will save time here. Smaller entrances are recommended by some, but we have found this size as satisfactory. The English Sparrow will enter any box that the Bluebird can, so here you must use some other way of discouraging this thief. The top of the box must be removable, even though you expect to keep no data, for then you can remove the inevitable Sparrow nest that is built in most boxes placed near homes. By catching the Sparrow hen, destroying the nest and eggs, you can usually persuade this pest that your box is not a suitable place for it. A removable top will permit observations, banding and cleaning. The nest may be taken out and the cavity cleaned on the very day that the first brood leaves. The mother bird will usually return for a second nesting within a week. The top may be secured with hooks and screw eyes, with hinges made of metal or leather, or with pins made of bent nails. First, you must bore a hole with a gimlet slightly larger than the shank of the nail. A portion of the top needs to extend down into the cavity when this "key" is used to permit the nail to go through the side into it. We have found that the top can even be horizontal as this will save the difficult angle saw cut. Let it extend over the sides and cover with tarpaper to turn the water.

The location of a Bluebird box is very important. By all means place it in the open away from tree limbs and bushes and at a height of from three to ten feet, preferably three to five feet. The lower the height the more accessible it will be for observations inside and for cleaning. If a fence post is not available, a pole should be used. In locating it near a public thoroughfare remember that thoughtless persons and harmful animals might

molest the box and thus cause the Bluebirds to desert their eggs. In open country boxes may be placed one to each acre of land and nearly all will be used. Do not put too close together as only one pair of birds will occupy a given territory.

We hope that Bluebird house building and placing projects or contests can be arranged by our chapters and members, working through school classes, science groups, Boy Scouts, 4-H Clubs and others.

NASHVILLE, TENNESSEE, December 15, 1938.

THE RELATIVE ABUNDANCE OF WINTER BIRDS AT NASHVILLE

BY ALBERT F. GANIER

For more than thirty-five years now, the magazine *Bird-Lore* has been publishing annually the results of the nation-wide Christmas bird census. This census was inaugurated to sustain interest in work afield at a season when the weather was not inviting, and, to gather information on the whereabouts and distribution of our birds during mid-winter. It was popular from the very start and its cooperators have carried on year after year or else passed the work on to younger observers. A good natured spirit of rivalry has prevailed and has spurred individuals and groups to do far more comprehensive search than prevailed in the earlier years. As years go on, a considerable mass of such information accumulates and becomes available for study. A study of these lists, whether for a locality, a region or for the nation, represents a field as yet but lightly tapped but one which can yield many interesting results.

A problem of primary interest, for any given locality, is the determination of the most abundant winter birds and the order of their abundance. Due to annual fluctuations, reasonably accurate results can only be deduced by taking the *averages*, thru a number of years. It is the purpose of this paper to present some methods of tabulating these averages and to encourage others to similarly work out the results for their localities.

Christmas census lists have been made at Nashville since 1914—for 24 years—and by observers who respond year after year and thus make the work reasonably uniform. Of our first seven census lists, five were made by the writer without assistance. Since that time, however, fellow observers have increased in number until during the past seven years, there has been an average of fifteen afield. Field glasses of the binocular type are used and care is taken to correctly estimate the numbers where species are in flocks. As many of us as possible put in the entire day and a few work their localities beforehand so as to locate birds not regularly found. Between 40 and 45 species will represent a good day's record for one party of from two to four observers but when six to eight parties gather at the end of the day to compile results, the composite list usually runs between 62 and 66 species. The number of individuals of each species are set down upon printed listing cards, all thru the day as the birds are seen, and the

totals, finally set down upon the composite list, give the totals seen on the day's census. From these composite lists the averages presented on the two charts on other pages are compiled.

The areas covered lie chiefly southeast, south, and southwest of Nashville and from the city limits to about ten miles farther out. Only a small proportion of this area, of course, can be covered during the day of the census. Nashville lies in the northwest part of what geologists term the 'Basin of Middle Tennessee' and the altitudes range from 400 to 500 feet above sea level except on the hilltops. The soil, of limestone origin, is rich and produces a large variety of vegetation which in turn yields winter food for an avian population somewhat more abundant in winter than in less fertile areas. Dominant trees are the hackberry and red cedar, both of which bear berries upon which many species are largely dependent in cold weather.

Chart No. 1, shows graphically the relative abundance of the nine most common birds for the last ten census lists as well as the average of these over the ten year period in the last column. In determining this average, however, the two extremes (maximum and minimum numbers recorded) have been omitted because such a result presents a truer picture than if all ten were taken. It will be noted that the Slate-colored Junco leads the list while the Cardinal is second and the White-throated Sparrow ranks third. It will also be noted that in Chart No. 1, the highly gregarious species—Starlings, Grackles, Cowbirds and Robins—are not shown. This is because their appearance at the time of the Christmas census is too erratic to make them properly comparable to the species which live the entire winter in one locality. Some years, the four gregarious species are absent or nearly so while in other years they are present in large numbers. The Horned Larks are gregarious also, but are far less inclined to drift about than those mentioned. Some idea of the thoroughness of coverage may be gained by comparing the figures shown in the first two lines, giving the number of observers and number of species listed during each census.

Chart No. 2, presents five columns of averages for twenty-two species of birds. It is particularly interesting to note that in each case, the Junco holds first place among the non-gregarious species. The most acceptable result to be obtained from these several sets of averages are those given in the fourth column, the average of the past ten years with the two extremes omitted. Even this, however, does not present an entirely accurate picture for the reason that certain small species are obscure or else have the ability to slink away in the thickets without revealing their true numbers. Others, such as the Mockingbird, Flicker, Crow, and the like, are readily seen and counted to their full numbers. The fifth column therefore has been added in order to give the writer's opinion of what would be the probable rating if it were possible to actually find and count every bird within this area.

In the case of game birds, and doubtlessly of other species as well, there are definite indications that their abundance or scarcity fluctuates in cycles covering a period of years. This has also been found true of small mam-

RELATIVE ABUNDANCE OF WINTER BIRDS AT NASHVILLE
GRAPHIC PRESENTATION. - CHART # 1.

NUMBER OBSERVERS	4	8	10	13	15	14	12	17	15	20	Average of 8
NUMBER OF SPECIES	55	46	56	59	66	67	67	59	62	69	
YEAR	1928	'29	'30	'31	'32	'33	'34	'35	'36	'37	
JUNCO	100	115	267	81	278	190	180	437	520	400	246
CARDINAL	48	65	23	116	239	195	143	295	133	225	147
WHITE-THR SPARROW	94	150	73	69	294	115	77	123	44	218	140
CROW	50	130	127	36	105	230	108	270	131	175	132
HORNED LARK	0	0	0	61	25	50	215	533	358	166	109
MOCKINGBIRD	30	22	31	68	135	120	170	120	60	131	97
FIELD SPARROW	9	9	77	105	75	160	81	300	80	86	84
MEADOWLARK	17	26	3	113	89	175	53	150	72	90	76
SONG SPARROW	41	48	69	85	103	90	81	37	31	60	63

⊗ indicates the 2 extremes omitted in computing the average in last column.

MOST COMMON MID-WINTER BIRDS ABOUT NASHVILLE, TENN.
AS DETERMINED BY CRISTMAS CENSUS LISTS.

24 year average 1914 -1937	5 yr average 1933-1937	10 year average, 1928-1937		This order is probably more nearly correct.
		all ten	2 extremes omitted	
a-Br.Grackle-17300	Starling 1904	Starling 8795	Starling 1618	} Highly gregarious; too erratic to grade with other species.
b-Starling-7200	Robin 167	Grackle 590	Grackle 361	
c-Cowbird-2300	Grackle 18	Robin 156	Robin 135	
d-Robin - 1380	Cowbird 8	Cowbird 13	Cowbird 10	
1-Junco 149	1-Junco 341	1-Junco 240	1-Junco 246	1-Junco
Crow 106	H'd Lark 265	Cardinal 150	Cardinal 147	Wh-thr.Sparrow
H'd Lark 101	Cardinal 202	H'd Lark 141	Wh-thr.Spar: 140	Field Sparrow
Wh-thr.Sparrow 98	Crow 184	Crow 137	Crow 132	Cardinal
5-Cardinal 95	5-Eng.Spar. ^(e) 161	5-Wh-th Spar' 126	5-H'd Lark 109	5-Car.Chickadee
Meadowlark 80	Field Spar: 141	Field Spar: 98	Mockingbird 97	Towhee
Field Spar: 69	Mockingbird 120	Mockingbird 89	Field Spar: 84	Titmouse
Song Spar: 52	Wh-th' Spar: 115	Meadowlark 79	Meadowlark 76	Song Sparrow
Mockingbird 50	Meadowlark 108	G.Chickadee 66	C.Chickadee 66	Crow
10-Dove 40	10-C.Chickadee 87	10-Song Spar: 65	10-Bluebird 65	10-Mockingbird
Bluebird 38	Waxwing 72	Bluebird 62	Song Spar: 63	Horned Lark
C.Chickadee 38	Dove 69	Towhee 52	Dove 47	Eng. Sparrow
Flicker 36	Bluebird 69	Dove 50	Towhee 46	Carolina Wren
Towhee 33	Towhee 63	Waxwing 48	Flicker 44	Bluebird
15-Kildeer 28	15-Song Spar: 60	15-Flicker 46	15-Kildeer 34	15-Meadowlark
Goldfinch 24	Myrtle Warb 54	Kildeer 37	Titmouse 33	Downy Woodpecker
C.Waxwing 22	Flicker 50	Goldfinch 35	Goldfinch 33	Bob-white
Car.Wren 22	Kildeer 47	Titmouse 33	Car.Wren 31	Myrtle Warbler
Titmouse 21	Goldfinch 47	Car.Wren 32	Wh-cr. Spar 30	Wh-crown Spar.
20-Bob-white 20	Wh-cr' Spar 47	20-Wh-cr Spar' 30	20-Bob-white 29	20-Flicker
Myrtle Warb' 19	Titmouse 43	Bob-white 29	Myrtle Warb' 26	Titmouse

a-Grackle, except for 5 yrs, when 421500 were recorded, their average would be 22.8

c-Cowbird, " " 3 " , " 55000 " " " " " " 8.5

d-Robin, " " 3 " , " 41000 " " " " " " 88.1

b-Starlings were first recorded in 1923, average is computed for 15 subsequent years.

e-English Sparrow counts are not available prior to 1931.

mals. The theory is that disease, predators, and adverse weather conditions, step in and thin out a species when it threatens to become too numerous, thus preserving the natural faunal balance. Chart No. 1 would seem to show a well defined cycle over 10 years in the case of the Song Sparrow.

After another term of years, if the local Christmas census lists are kept up as actively as they have been in the past, it will again be in order to summarize the results to ascertain what change if any has occurred in the relative abundance of the species listed on the accompanying charts.

NASHVILLE, TENN., December, 1938.

ADDITIONAL NOTES ON PINE SISKINS IN THE GREAT SMOKY MOUNTAINS NATIONAL PARK

BY ARTHUR STUPKA, Park Naturalist

In *The Migrant* for December, 1937, (Vol. 8, No. 2, pp. 69-70), the writer, in his article entitled "Pine Siskins in the Great Smokies," reported the first record of these birds from the Great Smoky Mountains National Park area (March, 1937) and discussed their status to and including December 3 of that year. In the present article this discussion is extended to cover such observations as were made on Pine Siskins in the following 12-months period.

December, 1937—March, 1938, (inclusive):

Siskins were observed on more than 50 days during this four-month period, and there is little question that the birds would have been noted daily had the writer made trips into the spruce-fir zone at more frequent intervals. However, this statement should not imply that these birds were restricted to the higher altitudes, for although their greatest concentrations were usually noted in the higher coniferous forests, yet the species invaded lowland areas rather frequently, and occasionally in considerable numbers. The birds were active under a variety of weather conditions, and at times when the mountains were blanketed in heavy fog, their peculiar notes alone would reveal their presence. A few came to a bird-feeding station on rare occasions during the winter, although there was no scarcity of their natural food. On our Christmas bird census the number of Siskins was estimated at 1000, and at other times during this period I regarded that number as being very conservative. It is possible that within the area of the Great Smoky Mountains National Park the population of Pine Siskins was between 3000 and 5000 throughout most or all of this period.

April, 1938: The last of the big Siskin flocks was observed on April 19 when well over 1000 birds were noted feeding in trees and on the ground at Newfound Gap, on the Tennessee-North Carolina state line. In their foraging as well as in their flights the birds maintained an unusually compact group.

May, 1938: Only twice during this month were Siskins observed, and in both instances the birds were very few in number and were noted only in the spruce-fir regions. The disappearance of the big flocks had come about rather suddenly, and it was believed that they had either disbanded for their nesting period or else had left the Park. Their food supply appeared to be plentiful.

June, 1938: On June 1 a flock of about 30 Siskins was observed in the fir forest which covers the summit of Mt. LeConte—our third highest mountain in the Park (6,593 ft.) One of these birds appeared to be a juvenal as its notes were unlike those which I had ever heard uttered by this species. There appeared to be little or no difference in its appearance, but the light conditions were such in this dark forest that I could not be certain on this point.

On June 13 the last Pine Siskins which I was to see for a period of four months were observed at Indian Gap, on the Tennessee-North Carolina state line. As the record proved to be of some significance, I wish to be somewhat more specific than heretofore: Upon alighting from my car at Indian Gap (where I had arranged to meet those members of the Tennessee Ornithological Society who were beginning a week's field work on the birds of the Park), I noticed three Siskins fly into the top of a small fir which grew nearby. For two or three minutes the birds were occupied with feeding on the new lighter-colored terminal growth of this tree. One individual then made its way close beside one of the other two birds and commenced fluttering its wings after the fashion of a juvenal. The bird toward whom this display was apparently intended stopped its feeding, and, after pausing for a few seconds, extended its bill to where it appeared merely to touch the bill of the second bird. I could detect no actual food-offering, however. Soon after, all three birds flew away, but several minutes later I came upon two others in the dense forest near at hand. These Siskins spent some time preening their feathers while perched low in the spruce and fir trees, and while so engaged I was able to approach them closely. The notes which they uttered on occasions were unlike those of the adult birds and in their streaked plumage was the pale yellowish wash which characterizes the immature birds.

Members of the Tennessee Ornithological Society who were studying the birds of the Park area during the period June 13-20, 1938, listed a total of 16 Pine Siskins from altitudes of 4500 feet or higher, the largest number observed in any one region being eight.

July—December 5, 1938: After the episode of June 13, already described, the writer observed no Pine Siskins until October 15 when four birds were noted feeding on weed seeds near the headquarters area of the Park, two miles south of Gatlinburg. One or two of these birds were again observed in this vicinity on three of the remaining days of October. From October 26 to date (December 5) no Pine Siskins have come to my notice.

It is not known as to how many Pine Siskins nested in the Great Smoky Mountains National Park during the year 1938, but the discovery of juvenals in June indicates that a certain proportion if not the great majority of the big wintering flocks bred in this area.

GATLINBURG, TENN., December 5, 1938.

Start the New Year right by adding to your equipment for enjoying the sport of bird-watching—a new bird book, camera, or the like. Our advertisers have many timely suggestions. You may also consult your local officers or write the nearest regional editor.

THE SEASON

MEMPHIS AREA:—Since June there have been only a very few scattered rains with the result that the 'barrow-pits' in the Lakeview area became dry early. The 'big pit,' site of the former blackbird roost, became much reduced in size. As reported last time the Mississippi River was higher than usual at this season,—just enough to maintain Mud Lake too deep for herons and shorebirds. After the run-off the lake dried up fast and on Oct. 30 only a few shallow pools were left. But during five weeks of favorable water level our field trips were replete with interest. (See the Round Table for notes on rare shorebirds.) Herons became common Sept. 25, as noted in the last issue, and the American Egret remained 10 to 14 days longer than usual. We recorded 130 Egrets on Oct. 9 and 74 on Oct. 16. The Little Blue Herons were more uncommon in this immediate area than for several years. This may have been a local condition. They were reported common last spring in one large heronry 200 miles south of here but a second heronry held only a scattering of nests, altho the birds may have moved. A White Pelican, either in winter plumage or first winter plumage, was seen on Oct. 9 and again on Oct. 16 and was not at all shy. After disappearing over the trees towards Horn Lake, in company with 'flushed' Egrets, it would soon return and soar back and forth near us and finally alight. It would allow us to approach to within 60 yards. A lone Wood Ibis was also there on the 16th. Four Caspian Terns were seen Oct. 9 (our third record). One was evidently an immature judging from its plumage and actions; it apparently was begging food from the adult that hovered in the vicinity attempting to induce it to take flight at our approach.—Unidentified 'peeps' numbered 400 on Oct. 9 and 210 on Oct. 16; those we approached close enough to identify included 4 Western and 10 or more Semipalmated Sandpipers; the Least were probably common. Pectoral Sandpipers and L. Yellowlegs were uncommon except for 70 of the latter on the 9th. It was unusual not to find 'Solitaries' or an occasional 'Spotted'.—Pond and Simpson on Oct. 6 found 500 Mallards and 50 L. Scaup Ducks on North Lake and 250 Least Sandpipers on Mud Lake. A few Black Ducks, Mallards, Pintalls, and Blue-winged Teals were seen at Mud Lake on Oct. 9 and still less on Oct. 16 when the water was about gone. One of our most unusual experiences was watching Wood Ducks come over, about sundown, from northwest of Mud Lake to the large 'barrow-pit' where they dropped in among the willows or into the small patches of open water. In strings of 2 to 20 they passed 10 to 20 feet over our heads as we stood in the tall weeds or willows along the 'pit'. On Oct. 23, even after we returned to the auto parked at the levee they passed over us in hurried flight. The total count was 380. The next Sunday Mr. Gancier accompanied us here and we saw over 100. The writer waded out into the water and in the dusk several came down nearby,—some only touched the water before taking off again but a few remained for several minutes before they saw the immobile enemy.—Due to the mild weather gulls were not seen on the river in front of town until Nov. 23 when Mrs. Coffey noted

12 Ring-billed Gulls at their favorite spot, the sewer mouth at Talbot Street. 20 L. Scaup were also seen. On the 26th, 20 Ring-billeds were seen and 96 L. Scaup. Since then only a few gulls, if any, have been seen.—BEN B. COFFEY, JR., Memphis.

CORINTH AREA:—The afternoon of Nov. 13 was cloudy, cool, and still. Misty rain fell intermittently. Birds were plentiful and active in Tusculumbia bottom. A strange, sweet song came from a thicket. Investigation proved it to be that of a Fox Sparrow. I got close enough to the bird to see the muscles in his little throat at work. The song of this bird is said to be the finest of all of the songs of the Sparrows; and one bird book says that many a bird student has never had an opportunity to hear it. It was indeed surprising to me to hear it at this particular time of the year.—An owl flushed at my feet, a large Barred one. He lit close by in a small tree; when I tried to flush him again he refused to leave the place. Then a swamp rabbit jumped from almost the identical spot and ran into the underbrush. The owl flew a few feet farther and stopped again. It was quite evident the bird had been stalking the rabbit.—A year ago in this same woods (*Migrant*, Dec. 1937) I witnessed a riotous, but harmless, outbreak among several Ruby-crowned Kinglets. On the present hike I had a somewhat similar experience. This time the actors were a male Golden-crowned and a female Ruby-crowned. The former flashed his brilliant orange-colored crest in apparent anger as he tried to drive off the 'Ruby'. The whole top of his head was aflame. The crest appeared fan-shaped, being broad at the back end and narrow in front. This was the first time I ever saw a 'Golden' raise his top feathers in anger or excitement, although of course I have seen the Ruby-crowned do it many times. The ruction was soon ended when the Ruby flew away.—Added to my list for the afternoon there were also many other Fox Sparrows, 3 Brown Creepers, 3 Yellow-bellied Sapsuckers, 2 Hermit Thrushes, with Towhees, 'White-throats', Flickers, Titmice, Chickadees, Kinglets, and Blue Jays too numerous to count. My companion, Elgin Wright, in an excited moment said, "I wish Ben Coffey were here, we'd show him some birds!"—BENJ. R. WARRINER, Corinth, Miss.

CLARKSVILLE AREA:—Here, as elsewhere, prolonged dry weather marked the fall season. We had no rainfall from Sept. 11 till Oct. 19 (and then only small amounts), so that during the height of the migration we missed those turns in the weather from which we expect shifts in the bird population. But we found such changes taking place just the same and our migration records show dates much in keeping with those of former years. As an example of migrants moving during stable weather, Mrs. Hutchison found on the morning of Sept. 23 a weed field near her banding station swarming with Warblers, Vireos, and Flycatchers that must have come to rest there during the night. At last real migration weather arrived and the blustery and rainy night of Oct. 19 was dotted from dusk till dawn with the small calls of countless feathered travellers. They flew so low that we caught ourselves looking for some nearby hedge or tree whence they might issue from some slumbering birds. Soon after dark the strong notes of Blue Geese were heard. Around this date a number of

our observations are grouped. From Oct. 15 to 19 immature Chipping Sparrows were abundant in the shade trees in town. The big Blackbird roost in the city broke up on the 18th, the henceforth diminishing fragments taking other sections for their nightly quarters. On Oct. 17 an Osprey was killed at Dunbar's Cave by a keeper who saw in the bird only a threat to the fishermen's sport. On the Cumberland River a Double-crested Cormorant was seen from Oct. 19 to 22, and 7 Ruddy Ducks on the 20th. Although Ducks seemed to arrive slowly at first, they now show a decided increase in numbers over past years. New species recorded are Bufflehead and Hooded Merganser. An enjoyable sight were 7 Pintails on Dunbar Cave Lake, Dec. 4. Wood Ducks were reported to us as common on the Cumberland River, Nov. 24 and 27. We found a Pectoral Sandpiper among a group of Killdeer and Wilson Snipe on the shore of the P. A. Meriwether pond, Oct. 22, but in general there were not many shore birds here this fall. Our Chimney Swifts left earlier than last year, the latest observations being Oct. 11 at Clarksville and Oct. 13 at Erin, Tenn. Hummingbirds also seem to have left sooner than usual, as none were seen after Sept. 27. On the other hand the Yellow-billed Cuckoo was listed regularly until Oct. 27. A Vesper Sparrow,—a species that is rare with us in fall and winter, was found by Dr. Pickering on Oct. 3 and the first fall record of the Palm Warbler was on Oct. 9. Following the wet summer season we were surprised that Short-billed Marsh Wrens did not come to the few marshy sections that sometime attract them here,—we only found a single individual at the rush-lined edge of a pond on Oct. 22.—ALFRED CLEBSCH, Clarksville.

THE SEASON AT NASHVILLE:—Migrating Chimney Swifts had "thinned out" at an earlier date than usual this year, for by Oct. 15, most roosting chimneys were deserted in spite of the fact that mild weather had prevailed. The chimney at 928 Broad St., where no banding had been done, was harboring about 7000 on Oct. 6, but their numbers rapidly diminished and on the last date observed by the writer, Oct. 20, only 2 went to roost there. H. C. Monk, however, watched this chimney the following evening and saw four enter. During the night the temperature dropped to 41 degrees and no more were seen after this date.—Philadelphia Vireos are always rare enough to be watched with interest. On Oct. 8, two were seen at Columbia during the course of the Bluegrass Chapter's field day there. One of these birds was busily engaged in eating berries of the Virginia creeper vine which seemed odd for a bird which is purely insectivorous during the warm months. The Biological Survey's examination of stomach contents, however, shows that many vireos turn from "bugs" to berries as the cool autumn days come on.—An immature Whistling Swan was shot on Nov. 19, by a hunter who claimed to have mistaken it for a goose. At my request it was given to the State Museum. The bird had alighted, by itself, on the surface of a small lake near Russellville, Ky., about 50 miles north of Nashville. This is one of the very few recent records we have for this general area and its killing was a regrettable instance of ignorance.—G. R. Mayfield reported a Blue-headed Vireo, in song, on Oct. 24, also late dates for: Wood Pewee, 1 on Oct. 20; Tennessee Warbler, 3 on Oct. 20;

Black-throated Green Warbler, 1 on Oct. 23; and Magnolia Warbler, 1 on Nov. 6. The last was also seen by H. C. Monk and is a very late record. —From his records, Mr. Monk reports an early Song Sparrow and a Sapsucker, both on Oct. 3, a late Brown Thrasher on Oct. 13, a Wood Thrush on Oct. 5, and a Black-billed Cuckoo on Oct. 9. The writer saw one of the last mentioned species at Columbia on Oct. 8, and also a Blackburnian Warbler. Cedar Waxwings were unusually common all thru September. —A record of the Snowy Egret was reported by Mrs. C. B. Tippens who saw one on Sept. 1 near the Hard Scuffle Road.—A. F. GANTIER, Nashville.

JOHNSON CITY AREA:—This fall brought about only a few marked variations in the seasonal behavior of the birds. Notably among such was the early departure of the Robins which breed here. Generally the Robins leave about Sept. 24 but this year they left early in September and while the young were still being fed by the parent birds. Following the departure of our breeding Robins there were some still observed; however, they were presumably migrants from farther north. I had imagined that this early departure indicated an early fall but in that I was pleasantly disappointed and have not yet been able to discern the reason for this unusual early migration activity.—The Catbirds remained until the last days of September,—possibly a few days later than the date of their usual departure. Why they should have remained longer than the Robins awakens other questions in my mind as their departure is usually simultaneous.—The arrival of the Rusty Blackbirds was also earlier than usual, and proceeded more leisurely,—the flocks being smaller and the time spent here more extended than usual. Many of the birds visited my garden and gave opportunity for close observation of their rusty plumage.—The Migrant Shrike was first observed here on Oct. 30 and was seen again on Nov. 2, being about the usual time for its arrival. It spends the winter here, a very interesting and useful member of our winter avifauna.—The fall migration gave evidence of abundant bird life,—even the hawks, now very rare in this section, were seen in unusual numbers. It would be a wonderful step forward if something could be done to stop the indiscriminate slaughter of our hawks and prevent their gradual extinction.—BRUCE P. TYLER AND ROBT. B. LYLE, Johnson City.

CHAPTER NEWS

We are glad to welcome a chapter of eleven members at Dickson to our roster and we want to congratulate its president, Mr. W. P. Morrison, for developing and organizing it. A delegation of Nashville members drove down for the organization meeting. KNOXVILLE: New officers are: Prof. Henry Meyer, pres.; Miss Dorothy E. Williams, vice-pres.; Miss Ruth Chiles, sec-treas.; Mr. Wm. Walker, Jr., curator. Meetings are held the first Wednesday night of each month at Flowercraft with Sunday field trips scheduled for each third Sunday. MEMPHIS: New officers are: Mrs. L. G. Guth, pres.; Mr. Fred Carney, vice-pres.; Mrs. T. I. Klyce, sec.; Miss Katherine Hale, treas. Meetings are scheduled at the Pink Palace Museum every other Monday at 8 P.M., resuming on Jan. 9.

THE MIGRANT

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Items for publication should be sent to the Editor.

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

The *Migrant* extends the Season's greetings to its friends coupled with sincere thanks to all who have assisted in making each issue possible. We especially want to thank Mr. Ganier, Mr. Clebsch, and Mrs. Coffey. Because of the large amount of work connected with editing our journal and having it published, we have not had the opportunity on many occasions to write and acknowledge contributions and other correspondence as we would have liked to have done. As it is, our correspondence has increased many times and represents an appreciable part of the time necessary for the *Migrant*. So we will appreciate unsolicited copy and the earlier each time the better, to enable us to spread out the work. We would especially like short notes from as many members as possible. Is your area represented in this issue?

The annual Christmas bird census will be under way as this issue goes into the mails and we hope that most of our members will have been able to take part in this, one of our most important cooperative projects. There's an extra zest in being out at Christmas time looking for **and finding** many different kinds of birds when most people think "the birds have gone south." In our region we are favored with a plentiful winter bird-life. If you haven't already been out, go New Year's Day.

Mr. Clebsch reports a gift of \$10 from our Knoxville members. For this we are indeed grateful as it helped us on this issue. They have also sent in 1939 due for 15 members. Let us all cooperate and save our secretary time and postage by remitting 1939 dues before January 10.

'RARE SHOREBIRDS AT MUD LAKE' was carried over to the next issue due to the receipt of another article after going to press.

PLEASE SEND IN CHRISTMAS CENSUS LISTS BY JANUARY 10.

INDEX TO THE MIGRANT

FOR 1938 — VOLUME 9

MARCH	PAGE
1. 'Notes on Birds of the Great Smoky Mts. Nat'l Park', by Frank Bellrose.....	11
'Bluebird "Better Housing" Project', by E. D. Schreiber.....	4
'Annual Christmas Census' (from 11 localities, 1937), by Members.....	6
'Bird Banding Brevities—No. 12' by Amelia R. Laskey.....	10
'A Day With a Loon', by Benj. R. Warriner.....	11
The Round Table: The season at Memphis; Notes from members of the Clarksville Chapter; Notes from Nashville; The season at Knoxville; Winter notes from Corinth; Annual mid-winter bird censuses of the Montgomery Bell Project; Bird census at Covington.— at Pulaski;—at Johnson City; A female Cardinal fights her reflection; Blue Goose in Hawkins County; Red-headed Woodpecker catching wasps; The Starling as a mimic; Birds unaffected by noise; National Wildlife Week; Meeting dates.	12-20
JUNE	
2. 'Prothonotary Warblers Make News,' by Eldon Roark.....	21
'The Black Vulture in Rutherford County,' by H. O. Todd, Jr.....	23
'A Back Yard Theatre,' by Jamie Ross Tippens.....	24
'Birds in Flight,' by Benj. R. Warriner.....	26
'The New Constitution' (of the T. O. S.), by Geo. R. Mayfield.....	27
The Round Table: The season at Memphis; The season at Clarksville; Notes from the Nashville area; The Spotted Sandpiper; Mixed flocks; Corinth chat; A Screech Owl fisherman; a Starling roost; Bibliography for 1937; Meetings and field days.	28-34
Membership Roll	35-40
SEPTEMBER	
3. 'Some June Birds of the Great Smokies' by Albert F. Ganier and Alfred Clebsch	42
'Summer Resident Lists' (21 lists, from all sections), by Members.....	46
'Rambling with the Birds', by Cynthia C. Counce.....	52
'Bird Banding Started at Clarksville,' by Mrs. John Y. Hutchison.....	53
Illustrations from the T. O. S. Great Smokies Trip.....	55-58
'Blackbird Banding in the Mid-South—I', by Ben B. Coffey, Jr.....	59
The Season: Memphis, Corinth, Nashville, Clarksville, Knoxville, and Johnson City.	
The Round Table: Laughing Gull at Reelfoot Lake; Black-bellied Plover at Mud Lake (Memphis); Early Marsh Hawk record; Notes from Paris; Notes from Murfreesboro; Summer bird-life of a Mt. Pleasant farm; Some unusually large broods and scarcity of late nests; Notes from Knoxville; Meeting.—Editorial page.	68-72
Recoveries of Banded Blackbirds, mimeographed maps	73-76
DECEMBER	
4. '1938 Swift Banding at Nashville and Clarksville', by John B. Calhoun	77
'Swift Banding in the South', by Ben B. Coffey, Jr.....	82
'The Third Year of the Bluebird Project', by Amelia R. Laskey	84
'Build a Bluebird House', by Merrill S. Carter	88
'The Relative Abundance of Winter Birds at Nashville', by A. F. Ganier	89
'Additional Notes on Pine Siskins in the Great Smoky Mountains National Park', by Arthur Stupka	93
The Season: Memphis, Corinth, Clarksville, Nashville, Johnson City	95
Index to Volume 9, Year 1938	100

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