

To aid in the study of the dissemination of the Starling from Columbus, it seemed desirable to band a large number of birds captured in the same evening during the height of the spring migration. Accordingly, on March 3, 1933, the writer obtained three assistants and, banding in two previously undisturbed towers at the State Hospital, succeeded in capturing 1213 birds. This would appear to be some sort of a record catch for one banding attempt, at least for Starling-banding! Needless to say, more than the usual amount of sleep was lost before the night's work was completed.

The following table summarizes the 1932-33 banding work at the State Hospital and shows the fluctuations in numbers of Starlings roosting there, as determined by careful estimates of the birds coming to the roosts and later partially checked by actual count of the birds found in the towers in which banding was done.

STARLING-BANDING, WINTER OF 1932-33, AT THE OHIO STATE HOSPITAL

Date	Birds Present	Birds Handled	Birds Banded	No. of Repeats	Per-cent of Repeats	No. of Returns	Per-cent of Returns	Towers Banded in
Dec. 3	1400	597	544	0	0.0	53	8.9	1, 3
Dec. 12	1200	453	370	46	10.2	37	8.2	1, 3
Dec. 26	1100	261	207	39	14.2	15	5.7	1, 3
Dec. 31	1000	401	368	22	5.5	11	2.7	2
Jan. 16	1000	319	235	70	21.9	14	4.4	1, 2, 3
Feb. 2	1000	631	530	73	11.5	28	4.4	1, 2, 3
Feb. 13	1000	411	302	98	23.8	11	2.8	1, 2, 2
Feb. 21	1200	256	161	86	33.6	9	3.5	1, 2, 3
Mar. 3	2400	1213	1069	70	5.8	14	1.2	4, 5
Mar. 6	1800	404	243	153	37.9	8	2.0	4, 5
Mar. 13	1700	454	300	148	32.6	6	1.3	2, 4, 5
Mar. 18	700	3	0	3	100.0	0	0.0	1, 2, 3, 4, 5
Totals		5402	4229	808	14.9	206	3.8	

The Starling is now the most abundant wintering bird in Ohio and one of the most numerous breeding species. Its rapid spread through the Mississippi Valley region has been most amazing. Because of its numbers, aggressiveness, motility, and omnivorous food-habits, the Starling deserves special attention in economic studies. Its status and possibilities for good and for evil have not yet been thoroughly evaluated in the United States. As yet we know very little compared to what may be learned by well-planned banding-studies of this species. Only 12,258 were banded in the whole country during the fiscal year 1933. This number could easily be multiplied several times. Starling-banding becomes increasingly fascinating as the study progresses and gives one the unusual opportunity of being able to follow the travels of an introduced migratory species. The value of the work would be greatly increased if a number of Starling-banders could operate in localities near a line connecting Memphis, Louisville, Cleveland, Buffalo, Montreal, and Quebec, as a large number of returns have come from those localities. The writer would be pleased to hear from other banders interested in this species.—LAWRENCE E. HICKS, Department of Botany, Ohio State University, Columbus, Ohio.

The Homing Instinct in the Rough-winged Swallow.—An opportunity to test the homing instinct of a nesting adult male Rough-winged Swallow (*Stelgidopteryx ruficollis serripennis*) presented itself to the writer during the past breeding season. On April 29, 1933, a pair of Rough-wings was observed inspecting a three-inch drain hole, about four feet above the ground level, in the concrete wall of a bridge spanning Munckinipattus Creek, Glenolden, Pennsylvania. On May 19th one of the pair was seen to

enter the hole and remain inside, presumably the brooding female. The nest-cavity was inspected with a flashlight June 11th, and three fledglings about three days old were discerned in the nest, which was located some three and one half feet from the entrance. On the above date the adult female was captured in the nest-hole, and banded on the *right* leg. The adult male (sex determined by larger size, slower wing-beats, and less frequent visits to feed young) was trapped and banded on the *left* leg on June 15th, and was taken by automobile in a northwesterly direction to Springfield, Pennsylvania, four miles distant, and released at 7.40 p.m. Upon the return to the banding-site at 7.55 p.m., as dusk was settling down, an adult was seen to enter the nest-hole, from which it did not emerge, and it is assumed this was the female.

The following morning, at 6.45 a.m., both adults were in evidence at the nest, and a *Sight Repeat* was secured of the male, the band on his left leg gleaming in the sunlight as he perched on a dead limb overhanging the water. Trapped again on that evening at 7 p.m., the adult male was taken seven miles away in a southerly direction and released at Upland, Pennsylvania, at 7.46 p.m. The nest was not visited by the writer until 2.20 p.m. the following day, at which time two adults were in evidence, but it was not until 3.15 p.m. that both birds were seen to enter the nest-hole, furnishing satisfactory evidence that the male had returned, and that the female had not found a new mate. The actual capture of the male at 7.30 p.m. that day verified this conclusion.

The writer, accompanied by Mr. Julian K. Potter, on the following day drove to Milford, Delaware, and *en route*, liberated the male Rough-wing at St. Georges, Delaware, at 7.10 a.m., 32.8 miles, as recorded by speedometer, due south from Glenolden, Pennsylvania. Upon our return that day at 6.48 p.m., two adult Rough-wings were observed carrying food into the nest-cavity, at which time Mr. Potter obtained a satisfactory view of the band on the left leg of the adult male.

Further investigations were frustrated the next morning upon the departure of the five fledglings from the nest, all of which were readily located and banded.

The difference in the reactions of the parent birds to the flashlight, when trapped in the nest-cavity, was very apparent. Invariably the female covered her young and refused to leave the nest for several minutes, and never until the light was turned off. On the other hand, the male always was eager to leave the premises, and would at once *hop* in bow-legged fashion toward the entrance. On several occasions, prior to the departure of the young from the nest, the two adults were observed pursuing a Sparrow Hawk (*Falco s. sparverius*), keeping up the chase until all three birds were mere specks in the sky.—JOHN A. GILLESPIE, Glenolden, Pennsylvania, November 27, 1933.

An Estimate by Means of Bands of the Number of Terns on Penikese Island, Massachusetts, in 1933.—In early July, 1933, on Penikese Island, 3266 young of Common and Roseate Terns were banded by Mr. Laurence B. Fletcher, Mr. Charles B. Floyd, Dr. Winsor M. Tyler, and others. Later, on July 19th and 20th, Mr. Francis H. Allen and the writer recovered from dead young terns some 60 bands. In one colony of Common Terns the writer examined 150 dead young terns; among these 36, or one quarter, bore bands. If one assumes that this represents the proportion of banded to unbanded young terns throughout the island, one would infer that the total number of terns hatched would be at least four times the number of birds banded, or 13,064. Assuming again that each