

## GENERAL NOTES

**At What Time of Day do Birds Feed?**—During the spring migration of 1937 I made an attempt to determine the time of day at which birds feed.

One hundred and eighty birds of eighteen species were trapped a total of three hundred and thirty-seven times in an area of not more than fifty square yards. Five traps were used as follows: A, Lyon improved sparrow trap; B, pullstring drop trap; C, Higgins 2-cell midget, false-floor type; D, small Glenhaven sparrow trap; E, Canary cage trap, false floor.

For convenience the time of capture has been divided into four periods: Period 1, from dawn to 8:00 A.M.; period 2, from 8:00 A.M. to 1:00 P.M., period 3, from 1:00 P.M. to 5:00 P.M.; period 4, from 5:00 P.M. to dark. This gives a fair distribution of the day, early morning, mid-morning, mid-afternoon, and evening.

The table below shows the times of visit to the traps of several species, together with the number of takes in each trap at each period.

	<i>Period 1</i>	<i>Period 2</i>	<i>Period 3</i>	<i>Period 4</i>	<i>Total</i>
Total times trapped	68	120	52	97	337
Trap A	19	31	21	32	103
Trap B	5	4	3	7	19
Trap C	16	35	14	20	85
Trap D	18	37	13	17	85
Trap E	10	10	8	14	42
Slate-colored Junco	10	27	16	15	68
Field Sparrow	13	11	9	17	60
Catbird	1	1	3	..	5
Blue Jay	7	3	2	2	14
White-throated Sparrow	17	17	10	27	71
Water-Thrush	1	3	1	..	5
Cowbird	2	18	4	1	25
Song Sparrow	6	12	6	6	30
Lincoln's Sparrow	1	3	..	4	8
Cardinal	4	1	..	1	6

The foregoing seems to indicate a tendency to feed during period 2, with period 4 as second choice and period 3 as the low point in feeding—probably indicating a rest period at that time.

The above seems unusual in that one would expect the birds to be extremely hungry after a long night flight or a night spent in strange surroundings. Period 4 seems right as second choice, as there should be a tendency to feed before retiring. As the period of light before 8:00 A.M. is extremely small, it is possible that it takes the birds a little time to locate and work their way to the food-supply at the traps, thereby establishing period 2 as the choice through circumstance rather than habit.

The variation of time of capture in individual traps does not indicate anything more than the effectiveness of traps of a certain type and their proper location for certain species.

White-throated Sparrows were taken more in period 4, while Slate-colored Juncos were taken more times in period 2. As these two species are usually found feeding together, it seems strange that there should be a variation in the periods of feeding.

Lincoln's Sparrows and Field Sparrows were both taken in greatest numbers in period 4. As these two species are of retiring habits it seems right that they should be at the traps before anyone is out around the station to frighten them away. Two Cardinals trapped six times were taken four times in the early mornings.

The number of individuals showing a set time for feeding is surprisingly small, as the following will indicate. Field Sparrow 37-36958, which was trapped twenty times, was taken five times in period 1, four times in period 2, six times in period 3, and five times in period 4. Song Sparrow 37-118711 was trapped four times in period 1, five times in period 2, once in period 3, and four times in period 4.

The following table will indicate the number of individuals trapped more than once in any one period.

	Number of times trapped in any one period				
	2	3	4	5	6
	times	times	times	times	times
Number of individuals.....	16	3	3	2	3

Eighteen other individuals were trapped two or three times; each time in a different period.

CONCLUSION

I realize that the above does not offer a solution of the problem of the times of feeding of birds as a group or of any individual, but rather suggests a problem and a method of approach for bird-banders with a limited amount of time to devote to investigation. I understand that there are other papers on this subject, but I have never been fortunate enough to run across them and so do not know what conclusions, if any, have been reached. This was attempted as a means of broadening my banding work and adding more interest to banding and releasing a bird. The figures are not large and therefore are not expressive of the country as a whole or even of this particular section. No attempt was made to register weather conditions or take them into consideration in this experiment. I only hope that other banders will consider doing some work along these lines, as I am convinced that it will bring many hours of interesting and profitable recreation. LOUIS G. FLENTGE, Box 68, Wheeling, Illinois.

**A Six-Year-Old Bank Swallow.**—One of the interesting and valuable contributions that banding has to offer in furthering human knowledge about birds relates to the length of life-span. Until recent years little definite information regarding longevity in our native birds has been available. But with the recovery as returns of more than 150,000 individuals banded under the sponsorship of the United States Bureau of Biological Survey in the last seventeen years, considerable light has been thrown on this subject.

For the past several years the present authors have been more or less concentrating their banding activities on the Bank Swallow (*Riparia r. riparia*). Our first efforts, undertaken at Lake Okoboji, Iowa, in 1923, terminated in 1927. We resumed banding activities at Oneida Lake, New York, in 1928 and have continued operations there through the current (1937) season. In addition, beginning with the season of 1933, we have conducted banding studies on this bird at Albany, New York.

In these three localities we have banded to date a total of 5576 young and adult Bank Swallows. Of the 4217 individuals presumed to have been available for returns during our last season of field work in the three localities mentioned, 147 (3.4 per cent) actually have been recovered as such.

For present purposes a period of at least eight months must have elapsed between the date of banding and the date of recovery in order that the bird be considered a return. Presumably, too, each return bird has made one or more round-trip journeys between the nesting grounds and the winter quarters.

Among all these returns only one individual has attained a known age of as much as six years. A brief account of this bird's history may be of interest.

Juvenal Bank Swallow No. F 55586, one of a family of four, was banded from a burrow in the south bank of Fish Creek near Oneida Lake, New York, June 30, 1931. On May 22, 1937, it was recovered as a laying or incubating bird from a burrow in the north bank of Fish Creek about half a mile northeast of the site of its natal burrow and the point of banding. The burrow was 36 inches deep and 16 inches below the turf, and contained an unlined grass nest.

The body-temperature of this bird registered 109.8° Fahr. at the moment of recovery, and its weight was 13.3 grams. All indications pointed to the fact that this was an egg-spent female. Its mate, weight 15.5 grams, also was banded.