

**Three Tree Swallows Feed a Family of Nestlings.**—Tree Swallow B84071(♂), a return-3, has nested for four consecutive years in the same box at my home in Worcester, Massachusetts. He was mated to F62139 in 1932. On June 15th their four young were banded, F62177, F62178, F62179, and F62180. On this date both adults and an additional adult Tree Swallow, F62176, were taken in the same nesting-box. They were watched for several days, and all three adults brought food to the young. Mr. Forbush says, "Occasionally three birds, usually two males and one female, engage in preparing a nest, incubating the eggs and feeding the young," but this is the first instance of this sort of thing among my Tree Swallows.—MRS. KENNETH B. WETHERBEE.

**Notes on Barn Swallows.**—Last summer I banded 137 juvenile Barn Swallows in a loft in my barn. About August 1st, when the first brood was well able to fly, I found from ten to twenty birds every morning, usually between 9 and 11 o'clock, resting on a rope under the loft. It was possible to drive many of these into the loft and band them, and I was surprised to find that there was a different lot of birds in the barn each day for there were very few repeats. It seems evident from this experience that young Barn Swallows move about the country before they actually start migrating, and that they have a habit of congregating in any convenient barn early in the morning. It is entirely likely that some of these birds may have been reared in my barn, for I did not band any of the first brood as nestlings, but there were not over ten nests in the barn, so that all I caught could not have been raised there. In any case, supposing this was the home barn for some of the birds, they showed by rarely repeating that the tendency to wander is probably their regular, and not their exceptional, behavior.—EDWARD M. DAVIS, Shirley, Massachusetts.

## RECENT LITERATURE

**Physiology of the Temperature of Birds.**—by S. Prentiss Baldwin and S. Charles Kendeigh. Scientific Publications of the Cleveland Museum of Natural History. Vol. III, pp. I-X; 1-196; Frontispiece; pls. I-V; figs. 1-41. Issued, October 15, 1932. Cleveland, Ohio. This book presents the results of the careful studies on the temperature of birds which have been done at the Baldwin Bird Research Laboratory, Gates Mills, Ohio.

Most of the observations were made on the House Wren (*Troglodytes aëdon aëdon*), yet a considerable amount of data obtained on other species is included. The principal method used for measuring the temperatures was by means of thermocouples attached to a recording potentiometer.

The average "standard temperature" for the male House Wren was found to be 104.4° F. (40.2° C.) and that of the female 105.5° F. (40.6° C.). There was a daily variation in the body temperature of eight species of female passeriform birds on the nest incubating varying from 103.4° F. (39.7° C.) to 108.7° F. (42.6° C.). Muscular activity, emotional excitement, and food caused a rise in body temperature, while during inactivity, as for example sitting on eggs, there was a fall. The highest normal record for a bird held in the hand was 113.5° F. (45.3° C.) for a female Robin.

The upper range for the lethal temperature of adult House Wrens averaged 116.3° F. (46.8° C.) and 115.9° F. (46.6° C.) for nestlings. The lower lethal temperature for adults was 71° F. (21.7° C.) and for nestlings 47° F. (8.3° C.).