

Swallows Roosting Indoors in Japan.—During recent service in Japan with the U. S. Navy, my attention was drawn to an article in a Japanese newspaper (*Asahi Shinbun*, Feb. 13, 1957) describing the use of an occupied dwelling near the city of Hamamatsu as a roost for a large flock of swallows (*Hirundo rustica*). The article was translated for me by the Japanese interpreter attached to my command. The following is an edited version of the translation, from which anthropomorphic comments have been deleted:

Mr. Kawai does not remember the date on which the swallows first came, but it was in the autumn, at the beginning of the Showa period [c. 1927], that about 200 swallows came into his office and remained overnight. At first he did not receive them warmly because they dirtied the office with their droppings, but when the swallows came back every year he was very pleased. Mr. Kawai turned his office over to the swallows, as members of his family, and strung wires close to the ceiling for roosts. Every morning Mr. Kawai would open the wooden sliding doors and the swallows would fly out to search for food, leaving the floor white with their droppings. He made it his daily task to clean up after them.

Mr. Kawai, now over 70 years old, has spent about half his life taking care of these swallows. In the evening all the swallows return in a group; after they are in, the doors are closed and a check made to see if any are missing. Mr. Kawai has made his grandson, Junji-san, who is now 16 years old, responsible for continuing his work, and his daily records have been a great help in studying these birds. The following excerpts show some of their results.

"The life-span of the swallows is more than 7 years. We started checking life-spans about 7 years ago, using numbered aluminum leg bands to distinguish individual birds. We continued banding until we had about 2,000 swallows to check. From this study we have learned how the members of the flock change, about one-third coming from previous years, and the rest being unbanded birds; the latter are young birds hatched the previous spring. Checking the bands we have found several which were put on 2 or 3 years ago and a few of the original bands put on the first year. From this we conclude that the life-span of swallows may be more than 7 years, instead of 5 years as formerly believed.

"The swallows which failed to return may have gone to southern countries, or some may have died. Last spring I was informed that a swallow with one of our numbered bands was found in Okayama prefecture (about 200 miles west of Hamatsu). I went there and found that it was one we had not seen for 3 years; nor did it return the following winter.

"The temperature is 4 C (39 F) on the day the swallows first arrive in autumn. We can give no reason for them entering the house the first time. Every year, on the first night they arrive, all the swallows are banded; on the following nights a great number of unbanded swallows come in with them. From this fact we suggest that the first night some may have come in to escape the cold and young birds followed them on succeeding nights.

"The weather of this area [southern coast of Honshu] is very warm, with infrequent snow even in the winter. The date of arrival of the swallows is usually between the middle of October and the beginning of December, whenever the temperature falls to 4 C. In the severest winter cold, some of the swallows fall to the floor, and on such days the entire Kawai family is kept busy warming them up over the *hibachi*."

After discounting some of the assumptions that were made, such as the "reasons" for the swallows' behavior and the identification of all unbanded birds as young hatched the previous spring, the above report constitutes what appears to be good evidence of several facts. First, large numbers of swallows roosted regularly inside the house; second, the arrival of the swallows was adjusted to temperature, rather than to the calendar date; and third, at least a third of the swallows marked in one year survived to the following year. The one-third survival figure is of course a minimum, since an unknown number of survivors, like the one found in Okayama prefecture, did not return in following winters.—William J. Francis, *Bureau of Sport Fisheries and Wildlife, Urbana, Illinois*.