

Selfish behaviour of juvenile Barn Swallows (*Hirundo rustica*) intruding in active nests

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Many studies have reported non-parental nest attendance in the Barn Swallow by both juvenile (young bird of the year) and adult birds (Myers & Waller 1977, Crook & Shields 1987, Medvin et al. 1987, Møller 1988, Lorek 1992). However, we have found no verified information in the literature about unrelated juveniles visiting active nests. This note deals with such a case.

We studied the breeding biology of the Barn Swallow at a large farm in Goślub, central Poland (52°05'N; 19°28'E) from April to September 1994. All nests were controlled every day during the laying period and at least once a week afterwards. Nestlings as well as adult birds were ringed, measured and weighed.

Starting on 8 August the weather rapidly changed to low temperatures and almost continuous rain lasting until 20 August. This resulted in many young and adult swallows looking for food and shelter inside farm buildings.

On 19 August, at the end of the swallows' breeding season in our study area, six active nests were still present. In two of these nests, seven unknown (not ringed) juveniles were recorded, in addition to the nestlings. Because they were not ringed, they were neither siblings from previous broods nor hatched within the study area — all the first and second brood nestlings in the study area had been ringed. In one nest we

recorded two nestlings (wing length (WL) 81 and 73 mm) and one foreign swallow (WL 127 mm, tail length (TL) 74 mm), and in the second nest in the same room three nestlings (mean WL 86.3 mm) and six foreign birds (mean WL 125.2 mm, mean TL 69.2 mm). In the second nest, the nestlings were completely covered with foreign juveniles and thus unable to obtain any food from their parents or any other birds. They were on average 6g lighter than nestlings of the same wing length from a nest checked on the same day in a neighbouring room, but without any extra birds. No helping behaviour was observed. Rather, in the second of the two nests we observed an unidentified juvenile being fed by an adult bird.

In a neighbouring room one nest was found destroyed, with the edge broken and three dead nestlings lying under the nest. This could have resulted from overloading of the nest by foreign juveniles, many of which were present in this room.

Earlier studies on young Barn Swallows visiting active nests have concentrated on helping behaviour and assumed or proved helpers to be siblings from previous broods (White 1941, Mayers & Waller 1977). Our study is the first to demonstrate non-relative juveniles visiting nests with nestlings.

Juveniles occupying a nest with non-kin nestlings during periods of unfavourable weather conditions benefit by acquiring shelter, warmth and to some extent food. On the other hand, because of the overloading of the nest with extra birds the behaviour could result in destruction of the nest. This is not dangerous for juveniles, which fly well, but is lethal for nestlings that are unable to do so. Consequently, broods which are parasitized by strange birds would have a lower probability of successful fledging. Loesche et al. (1991) have shown that parental swallows do not discriminate between their offspring and unrelated young. Thus, it would be extremely interesting to find out whether intruding behaviour of juveniles is only incidental or more regular. If the latter were true, the evolution of counteracting behaviour of parents against unrelated young intruders should be expected.

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