## SHORT NOTE

## HOUSE SPARROWS EXCAVATING FOR NESTING SITES

Our house is fitted with two window-boxes that are 5.5 m from the ground. In each box are flower pots 18 cm in diameter, in which I grow geraniums.

On 1 November 1977, I noticed some earth had been removed from one flower pot, leaving a depression about 8 x 3 cm. On the morning of the 3rd, a pair of House Sparrows (Passer domesticus) was removing earth from another pot in the next box, using bill and claw to do the earthworks, dropping the earth removed into the window-box. Working intermittently, they had dug a 9 x 5 cm hole by the middle of next day. The hole was lined with straw. A low branch of geranium was included in the roof construction by having straw woven over it, and a little "run-in," a tunnel, was made directed to the back of the box. This was useful for observation as it enabled me to look directly into the nest.

One egg was laid on each of 7, 8 and 9 November. Both adults incubated. Two eggs were hatched on 22 November and the chicks were seen to be fed that morning. The third chick was hatched next morning, but this chick did not survive, probably being trampled by the two larger chicks. The dead chick was removed by the adult male to the lawn about 6 m away. From 0630, the two remaining chicks were fed at ½-2 minute intervals for one hour. Then they were fed occasionally until about 1100, even though the parents appeared frequently at the nest. Between 1100 and 1300, feeding was more constant, though less concentrated than earlier. After this, they were fed only occasionally until dusk, when both adults settled on the nest.

Both adults fed the chicks and both helped with nest maintenance, repairing or adding more material regularly. Either adult would remove faecal sacs, which were sometimes swallowed immediately but occasionally were put on the sill until nest work was done and then taken to the lawn out of my sight. I marked one chick with a brush and ink.

As soon as feeding periods were over, the adult birds cleaned the faces of the chicks, especially around the eyes and bill, by using a light pecking and scraping action. The chicks were alerted to the approach of the adults by a signal that I could not pick up immediately. Usually one chick only came to be fed and each was fed alternately. Should one chick solicit food out of turn and persist at the front of the nest, the adult would thrust its bill and food into the gape, shake it about and withdraw. This always had the effect of causing the offender to retire and let the right chick come forward. There seemed no doubt that the adults "called" the chick due to be fed and that each chick got to know its signal, though they did not always obey the rules. However, I may have misinterpreted the chicks' behaviour.

During the most intensive feeding periods, one or other adult would settle and brood the chicks for 2-3 minutes, but once demands had lessened, they would brood the chicks for shorter intervals.

Both chicks left the nest on 5 December. They were fed regularly for a day and occasionally for the following day. The work of keeping the nest in order continued.

On 9, 10, 11 and 12 December, eggs were laid in the nest. Two young were in the nest on 25 December and a third hatched later the same day. The fourth egg was left until 27 December when it was removed to the lawn. Three sparrows left the nest on 9 January 1978 and the nest was abandoned. During this second clutch, I twice saw a second female appear at the nest and feed the chicks. I wondered if it could have been a chick of the first clutch.

On 5 November 1978, I found that earth had been removed again from two plant containers in the window-boxes. Already straw had been placed in one hole and a pair of House Sparrows was actively excavating earth from the second flower pot. I discouraged their tenancy and after three days of harassment they went elsewhere.

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