CHAETURA ANDREI (APODIFORMES, APODIDAE): ASPECTS OF NESTING

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The Ashy-tailed Swift (Chaetura andrei) breeds in Argentina, Brazil and Venezuela and migrates to Colombia and Panama. In Brazil, it has been found nesting in attics, chimneys (Abendroth 1953) and hollow palms (Sick 1948, 1950, 1959), but its breeding biology has been little studied. On 12 December 1991, at 17:00 (all times are standard time, though recorded originally as daylight saving time), we heard young begging in a nest glued to the inside wall of a chimney in our home in Rio Claro, São Paulo State (22°24’S, 47°34’W). We occasionally noted noisy begging on that and following days. From December 17 on, we alternated registering all visits from 05:00 to 19:30 every day. In all, we studied 416 hours from 12 December 1991 to 28 January 1992. On 21 December between 18:37 and 19:30, a tape recorder recorded begging, as all observers had to leave. Our study, therefore, details the pattern of visits for most of the nestling period at this one nest.

The number of visits recorded in this way is not exact, although it is fairly accurate. When E. Willis watched from outside and Oniki registered visits at the same time by listening, he noted two birds enter 30 s apart on one occasion, resulting in a single burst of sound from the young. In several cases, he recorded a single bird entering and Oniki recorded two pulses of young begging a few seconds apart. We decided to record cases of pulses of sound up to 30 s apart as a single visit, probably resulting in a slight underestimate of the number of visits. Sick (1959) registers that young raised by Mrs. Abendroth in a basket would beg at a draft of wind. We did not record this, but our chimney is protected and rarely receives drafts of wind. We did record young squeaking when rain started to fall at 22:51 on 29 December.

Fig. 1 shows visits per hour of study from 17 December 1991 to 14 January 1992. According to this figure the feeding rate is high at dawn, there is a smaller peak at midday and another at dusk, as high as at dawn. The dawn rate per hour would be slightly higher if we had excluded from the denominator the first 5—15 min of each hour, when it was still rather dark and the adults had not yet left the nest. The dusk rate excludes time after 19:30, except on 23 December when the last adult entered in the dark at 19:43. Long midday or afternoon periods without feedings on 13—14 January may have been periods when young were gone, and the midday peak may have been slightly higher than in Fig. 1.

Return of the two adults to the nest for the night may not represent feedings, so we have excluded the final two visits each day as the dotted line on the figure.

The adults left between 05:00 and 05:16 and entered for the night between 18:56 and 19:43. Twice, observing from outside, E. Willis saw two adults entering the chimney to stay for the night: on 25 December, one adult entered at 19:02 and the other at 19:13; the next day, one entered at 19:04 and the other at 19:09. We do not know if adults feed young on the last visit as they enter to sleep. In antbirds, generally the female does not bring food on her last visit, when she stays to sleep on the nest; only the female sleeps on the nest. Both adult swifts stayed in the chimney at night.
FIG. 1. Visits (young squeaking) per hour at different times of day.

FIG. 2. Intervals between feedings, in minutes.
Generally when the adult left the nest early in the morning there were fluttering noises and the young chirped a little; but when adults returned for the nestlings' first feedings, between 05:05 and 06:05, there was much noise and commotion as all young begged at the same time. Some begging sessions took only 15 s. As young grew older, adults made less trips to feed them, which means they stayed long periods without food. Intervals between squeaking bouts varied from 30 s (observation from outside the house) to 374 min on 13 January (Fig. 2). The long period on 13 January may represent a period when young had left the chimney, however.

We do not know when the young hatched and when young of this species start to beg actively. In our experience with antbirds, for instance, young start begging strongly when they are a few days old. Thus, assuming that the young were at least 3 days old (day 2), on 12 December, the nestling period plus period near the nest was some 35 days, because young left the chimney on 13 or 14 January, in the morning. They did return in the afternoon to sleep inside the fireplace for several more days. Sick (1950) obtained 28–30 days in the nest for two other nests.

Their last week or so in the chimney, the young chirped faintly all night long like a small bell tinkling softly.

Fig. 3 shows number of feedings per day from 05:00 to 19:30. Young were fed more intensely on December 19–20 (61 and 60 feedings), on December 29 (51 feedings) and again on January 5 (48 feedings). The last 8–9 days before leaving the chimney, young were fed less often than earlier.

On 18 and 19 December, when it was raining strongly, adults entered the fireplace to feed, so that a summer shower did not seem to interfere with feeding sessions. However, days with rain ("R" in Fig. 3) sometimes had low feeding rates. Adults visited separately in most cases. Before and after leaving the fireplace, they sometimes circled around the house calling. On such occasions we saw as many as 8 individuals, but there was no evidence of visits to the nest by more than two. Sick (1959) recorded a nest with nine adults roosting at night, plus other cases of several birds at a nest.

On 8 February 1992, droppings below the nest were collected, mixed with a few twigs that fell from the nest, the total weighing 316g. Mostly there were well-digested insect remains.

FIG. 3. Visits per day. "R" marks day with some rain.
Young and adults returned to sleep in the fireplace at least until mid-February. Individuals flew around and above the house every day around 17:00, even in March. However, none were roosting in the chimney.

To ascertain the exact nestling period of Chaetura andrei more nests in different places should be watched but this one gives some indication of a very long nestling and within-chimney period, probably allowing young to fly well the first time they leave. Raising more than one brood per summer may be difficult, as eggs here would have been laid in late November, and insect numbers may be insufficient to raise young earlier in the spring (before dependable rains).

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