JUVENILE WIRETAILED SWALLOWS IN MALAWI : MENSURAL AND MOULT DATA AND OBSERVATIONS ON USE OF PARENTAL NEST-ROOST

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For many years 'a pair' of Wiretailed Swallows *Hirundo smithii* have nested regularly under the eaves of a lakeshore cottage at Namaso Bay, Malawi. The present nest is situated about 0,5 m above a frequently-used doorway; it is in regular use for breeding and is used every night for roosting. Last year (1990), the female was apparently incubating in August; in December the nest was being used nightly by two adults and two juveniles for roosting.

I visited the cottage on a number of occasions at different times of the year between August 1990 and June 1991 and took the opportunity to trap and examine the birds. Results of the observations and examinations in hand are as follow.

MOULT

On 10.08.90, I ringed the adult female, sexed on tail length (see Table 1 for mensural data) and active brood-patch; on 02.01.91. I retrapped the female and ringed another adult (probable male) and two juveniles which had been roosting in the nest. (These were the only Wiretailed Swallows frequenting the vicinity of the cottage at the time). On 22.06.91 three juveniles were trapped.

(a) Adults

Adults were in active primary and tail moult in January, completing towards the end of the month. Thus, primary moult scores were recorded at 32 (male) and 45 (female) on 2nd January and another male had recently completed moult on 3rd February. The female was retrapped again on 3rd February when moult was complete and the remiges were already showing signs of wear. These accord with the results of moult analysed by Earlé (1988) which showed a double peak in February and August.

(b) Immatures

Of two immatures trapped on 2 January, one was part-way through primary moult (P score 15) with no tail moult whilst the other showed no evidence of active moult. Three juveniles (*ca* 2 months-old) from the same nest were trapped on 22 June; all were close to completion of primary, secondary and rectrix growth.

If one of the immatures from the previous year had fledged on or around the same date, this would indicate that for March-brood young, post-juvenile moult of remiges commences approximately five months after completion of growth of the juvenile feathers.

However, the pattern for September-brood juveniles is unknown. In the absence of any further moult data for Wiretailed Swallows in Malawi, it is interesting to speculate on whether September-brood young retain their juvenile flight feathers for over a year or start their post-juvenile moult after only a few months. Perhaps it is possible that 'September' birds enjoy a different moult-cycle from 'March' birds, moulting flight feathers in June-July?

TABLE 1

DETAILS OF WIRETAILED SWALLOWS *HIRUNDO SMITHII* RINGED AT NAMASO BAY, MANGOCHI DISTRICT, MALAWI 1990-1991

RING NO.	AGE	SEX	WING	TAIL[1]	P/MOULT [2]		R/MLT [3]		DATE
Y 02802	Ad	F	110	54	0	-	0	0	10.08.90
Y 02802(R)	Ad	F	-	56	45	10	60	6	02.01.91
Y 02802(R)	Ad	F	-	-	0	-	0	0	03.02.91
Y 02813	Ad	0	104+	-	32	8	8	4	02.01.91
Y 02814	Ad	M	109	83	50	10	60	6	03.02.91
Y 02825	Ad	M	110	-	0	-	0	0	23.06.91
Y 02826	Ad	M	115	79	0	-	0	0	23.06.91
Y 02827	Ad	M	110	81	0	-	0	0	23.06.91
Y 02828	Ad	F	109	62	0	-	0	0	23.06.91
Y 02811	Juv	0	107	40	15	4	0	0	02.01.91
Y 02812	Juv	0	104	39	0	-	0	0	02.01.91
Y 02822	Juv	0	-	-	47	10	58	6	22.06.91
Y 02823	Juv	0	-	-	47	10	58	6	22.06.91
Y 02824	Juv	0	-	-	47	10	58	6	22.06.91

1 = longest rectrix
2 = latest remix in moult, ascendant count
3 = latest rectrix in moult, centrifugal

USE OF PARENTAL NEST-ROOST

The Wiretailed Swallow has a double-peaked breeding season in Malawi, February-April and August-October (Benson & Benson 1977, personal observations); this pattern is in common with that found in other parts of Africa although it is less well-marked in East Africa (Earlé 1988). The species is known often to have two broods in a season, and rarely up to four (Turner & Rose 1989). Given the state of moult of the two juvenile birds at Namaso Bay, it seems likely that the one undergoing post-juvenile moult would have been from a February-April brood whilst the other, with slightly fresher, complete primaries was from an August-October brood. Assuming that the adults had evicted the

earlier juvenile whilst breeding again in August-October, they must have re-admitted it to the roost at some time thereafter.

Interestingly, at another nest near Thyolo, in the south of Malawi, a pair which had a clutch of two eggs on 12.10.91 had been permitting juveniles to continue to roost in the nest until very shortly before that date.

I can find no reference to post-juvenile sharing of nests as roost sites, and Turner and Rose (*idem*) state only that juveniles return to their nest for several days after first flying. The Namaso Bay observations would indicate that adults permit juveniles from up to two previous broods to share a nest for roosting, although the Thyolo observation suggests that adults drive the juveniles away for the next breeding period at least. Presumably adults allow juveniles to return to share the nest for roosting again after the latest brood is flying.

The advantages of such permissiveness by the adults are obvious, and comparable to those of communal roosting in general. It would be interesting to study further to see if the juveniles are forced by adults to roost on the edge of the nest on a regular basis, such a position being colder and more exposed to possible predation.

REFERENCES

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