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February / février 2010

NOTES ON THE BREEDING OF THE KAKELAAR AT LEGON, GHANA

by L.G.Grimes

Received 1 May 1975

The Kakelaar Phoeniculus purpureus is locally distributed in the more wooded savannas of coastal areas of eastern Ghana, where the rainfall is low and erratic (average annual rainfall is in the range 30-50 inches) and double peaked, with a major one in May and June and a minor one in September and October. In the 1940's J.R.Marshall lived a few miles west of Legon (05° 63' N, 00° 19' W) at Achimota College, where parklands and wooded residential areas were under development, and he only recorded it (Bannerman 1951, p.306) in the period December to April when little rain falls. Legon was open savanna with few trees, and the Kakelaar probably rarely occurred there. In contrast both areas to-day have well-developed parklands, residential areas and botanical gardens, and a copious supply of mature trees. These provide nest sites for Kakelaars and there is an ample supply of food for them throughout the year. As a result it is now resident, and there is no evidence that any coastal movement occurs through the area (Mackworth-Praed & Grant 1970, p. 472), although it may have done so in the early 1940's.

Breeding data for one group of Kakelaars are given in Table 1, which extends the known breeding information of the Kakelaar in West Africa. Other data for other groups obtained at Achimota are in agreement with these. At Legon a breeding season cannot be defined, for breeding (eggs and/or young present) has occurred in each month of the year. Whether this is generally true for West Africa or simply reflects the localised hospitable conditions of Legon and Achimota awaits confirmation. Although the incubation and fledgling times are not known, the observations at Legon suggest that they both may cover a period of just over two months, with two to three month intervals or less between broods. All data in Table 1 apart from those of May to July 1972 refer to one nest site first found in 1969 and still being used in 1975. It was located in a cavity formed by the matted aerial roots of the fig tree Ficus thonningii. In May 1972 the group nested under the roof of a house some 200 yards from the fig tree. Two groups at Achimota regularly nested under a roof and another group at Legon nested in the wooden housing of an unused air-conditioner mounted 20 ft. above the ground.

The co-operative breeding of the Kakelaar is well documented for the South African race (Rowan 1970, p. 257) and this is probably its normal breeding behaviour throughout its range in Africa. At Legon each group forages over a large area and although a territorial boundary is ill-defined, territorial disputes involving all members of a group do occur when two groups meet. Mutual allopreening occurs regularly, but I have not been able to detect any peck order since only two birds have been

Table 1. The months in which one group of Kakelaars bred at Legon,Ghana*

	Jan	Feb	Jan	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Oct	Nov	Dec
1970						o	o	o						
1971									o	o	o			
1972			o	o	o		o	o	o		o	o	o	
1973					o	o	o		o	o	o			o
1974			o	o										

*Regular records were kept only from July 1971 to early 1974.

colour ringed. Only one female in a group breeds, and there is no evidence to support the statement in Mackworth-Praed & Grant that several nests may be found close together. In 1972 the breeding group at Legon numbered three, and it increased to six by early 1973, to seven by late December 1973, and eight or nine by February 1974; mainly as far as I could judge through surviving offspring. Two adults, both considered males by their size, one ringed in early 1972 and the other in 1973, were still with the group in early 1975. At Achimota a group consisted of seven adults (red or partly red bills) and one immature (black bill). These were found in March 1972 when they were attending young which were evidently quite large judging from the noise, although they remained a further 24 days in the nest hole. Feeding rates (Table 2) were 3-4 times higher than those recorded by Rowan (1970), but the young she had

Table 2. Average feeding rates at a nest of Kakelaars attended by seven adult and one immature bird

Date	Days prior to departure from nest	Period of observation	Number of feeds / hour
22 Feb	24	1000 - 1200	22
25 Feb	21	0800 - 0920	28
3 Mar	14	0700 - 0900	31
8 Mar	9	0640 - 0900	23

under observation were evidently very small. The breeding female often successfully begged for food as an incoming bird, including the immature, came to feed the young, and then proceeded to feed the young herself (for details of the soliciting display see Rowan 1970). Others, however, ignored her cries and continued their flight path into the nest entrance. This was under the eaves of a roof but food could be passed to the young and to the female through a crack in the slates. The immature bird and one older bird, which had a dull red beak with black tip and probably was an offspring of the previous brood, persistently failed to locate the crack although excited by the cries of the nestlings and the soliciting female. The older bird also found it difficult to locate the entrance under the eaves. Throughout my observations this inefficiency persisted in the immature bird, and although it presumably gained in experience, its usefulness as a helper to the group is questioned. It also occasionally begged for food but was never fed. Food items included small lizards, spiders, caterpillars, and preying mantises. Although none of the groups have been collected, differences in size and behaviour suggest that helpers are of both sexes and not just males (Rowan 1970).

References

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L.G.Grimes, P.O.Box 63, Legon, Ghana