

Sexual Dimorphism and Co-operative Breeding in the Striped Kingfisher

According to handbooks and field guides on African birds the sexes in the kingfisher genus *Halcyon* are alike (e.g. Mackworth-Praed & Grant 1952; Clancey 1964; McLachlan & Liversidge 1976; Snow 1978). Presumably this statement is based mainly on the examination of museum specimens which are kept with their wings folded. When studying the behaviour and ecology of various kingfisher species (Reyer, 1980) I noticed a distinct sexual dimorphism in the Striped Kingfisher *Halcyon chelicuti*. Whenever a pair performed its conspicuous open-wing display I noted that one bird had a blackish band in its underwing and the other lacked it (Fig. 1). Regular observa-

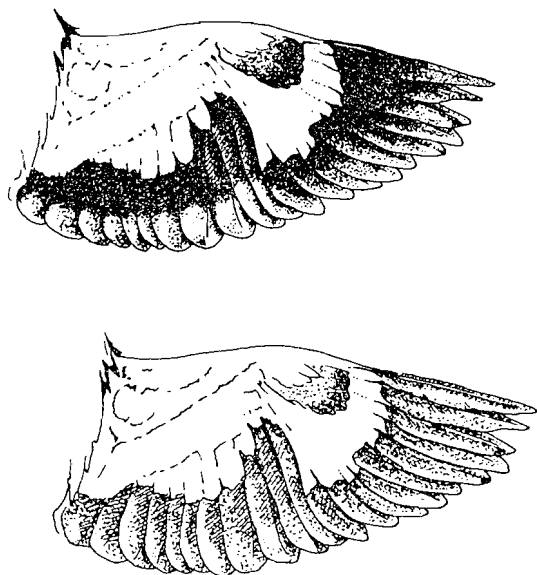


FIGURE 1
Underwing patterns of male (above) and female (below) Striped Kingfishers

tions of pairs of individually marked Striped Kingfishers in 16 territories revealed the one with the blackish band to be the male, because without any exception it was the one which mounted during copulation. On the other hand, incubation during the night – a characteristic of females in many kingfisher species – was exclusively by the bird without the blackish band. Laparotomy of one bird of each type confirmed this sex identification. This sexual dimorphism in Striped Kingfishers can be seen in nestlings as soon as the remiges break from their quills. The functional significance of this dimorphism will be dealt with in a subsequent paper on social structure and social behaviour of Striped Kingfishers. However, it seemed advisable to mention the existence of the dimorphism now, since wing patterns – among other features – are used in establishing relationships among *Halcyon* species (Fry 1980).

Another four territories held three Striped Kingfishers each and the extra bird took part in incubation and feeding young. According to the wing pattern all these helpers were males, but the sample is too small for generalization. In one of the territories both males copulated with the female. This is the first report of co-operative breeding in this species (see Grimes 1976).

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