West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

Join the WAOS and support the future availability of free pdfs on this website.

http://malimbus.free.fr/member.htm

If this link does not work, please copy it to your browser and try again.

If you want to print this pdf, we suggest you begin on the next page (2) to conserve paper.

Devenez membre de la SOOA et soutenez la disponibilité future des pdfs gratuits sur ce site.

http://malimbus.free.fr/adhesion.htm

Si ce lien ne fonctionne pas, veuillez le copier pour votre navigateur et réessayer.

Si vous souhaitez imprimer ce pdf, nous vous suggérons de commencer par la page suivante (2) pour économiser du papier.

February / février 2010

THE 'HEAD-DIP AND FLUTTER' DISPLAY OF RED-THROATED BEE-EATERS MEROPS BULLOCKI

by H.Q.P. Crick

Received 29 January 1986

INTRODUCTION

When a mated pair or a trio (mated pair plus helper) of Red-throated Bee-eaters Merops bullocki alight at the entrance to their nest-tunnel, they usually perform an excited trilling and greeting display (Fry 1973). They also perform a 'head-dip and flutter' display which has been briefly described by Fry (1984) after my own unpublished observations (Crick 1984). Here I give a more detailed description of the display and of the circumstances in which it occurs.

METHODS

Observations of Red-throated Bee-eaters were made during a three-year study of their ecology and behaviour, from 1978 to 1981, in Yankari Game Reserve, Bauchi State, Nigeria (10°30'E, 9°45'N). Colonies of nesting bee-eaters were watched from hides placed 5-20 m distant. Many of the bee-eaters at the colony sites were individually marked with brightly-coloured plastic colours (Crick 1984).

THE DISPLAY

The 'head-dip and flutter display' was first noticed at an unusual flat ground colony in Yankari (described by Crick & Fry 1980), and was subsequently observed at other colonies set in vertical cliffs. It may be derived from the normal greeting display often given by bee-eaters when perched in front of their nests; an example of greeting is described in the following extract from my note-books:

> "Two birds on the ground faced each other obliquely, tails spread, heads raised at 45°, chin feathers puffed out, wings slightly spread and vibrated, calling 'tew tew tewtewtewtewtew tirre tirre tirre tirre', rising in pitch after the first few phonemes and falling slightly at the end."

The 'head-dip and flutter' display was often accompanied with a shortened version of the greeting call:

> "a bee-eater in front of its nest puts its head briefly into the entrance and pulls it out again (the 'head-dip'), then usually calls 'tirr tirr tirr tirre tirre tirre' while vibrating its tail, and just before or just as the call ends it makes a little fluttering flight up to 20 cm away from its nest entrance, re-lands at the nest, spreading and vibrating the tail, and head-dips again."

The number of head-dips and the length of the call is variable within the sequence.

CIRCUMSTANCES OF THE DISPLAY

The 'head-dip and flutter' display was seen most often during nest excavation and the period before egg-laying. Although enumeration of its occurrences was not attempted, the display appeared to be given in three different situations: (i) as a modified greeting ceremony when members of a pair or trio were crowded at the entrance to their nest; (ii) as a stimulus to another bee-eater to enter the nest; (iii) as a stimulus for the departure of a bee-eater from inside the nest. A further extract from my notes illustrates such situations (in this extract, birds A and B are the occupiers of nest N-1):

> "08.14 hrs: A and B landed at N-1, they called trills and A fluttered in the air a couple of times, then B entered the hole. About 30 s later, B came out head first, A and B trilled vociferously, A retreated and B re-entered N-1. A then flew up ... above the holes. 08.16 hrs: A jumped down to N-1 and called. B reappeared out of the hole ... A again fluttered a little and put its head in the hole for 2-3 s. It retreated and B entered. A then flew up above N-1 again."

DISCUSSION

At vertical cliffs, where Red-throated Bee-eaters usually nest, a 'flutter' away from a nest entrance appears to be the only way for a bird to make space for its partner to head-dip or enter its nest. But on flat ground, it would be easy just to take a couple of steps sideways and, in fact, that is what happens later in the season when bee-eaters are feeding nestlings. Since the flutter element of the display occurred at the flat ground colony, it was inferred that it was part of a ritualised display. The occurrence of a flat ground colony site allowed the serendipitous discovery of this display.

It can be speculated that the 'head-dip and flutter' display evolved from intention movements to enter the nest, combined with a flight away from the nest entrance to allow another bee-eater access, and with the incorporation of elements of the greeting display. Although elements of the display can occur separately, 'head-dip and fluttering' combines them in a partly ritualised manner and appears to occur in predictable social situations.

ACKNOWLEDGEMENTS

This study was part of a Natural Environment Research Council studentship supervised by C.H. Fry. Thanks are also due to P.J. Marshall, R. Wilkinson and C.A. Galbraith.

REFERENCES

CRICK, H.Q.P. (1984) Weight changes, foraging and the role of helpers in red-throated bee-eaters. Unpublished Ph.D. Thesis, University of Aberdeen.

CRICK, H.Q.P. & FRY, C.H. (1980) Level-ground nesting by Merops bullocki. Malimbus 2: 73-74.

FRY, C.H. (1973) The biology of African bee-eaters. Living Bird 11: 75-112.

FRY, C.H. (1984) The Bee-eaters. T. & A.D. Poyser, Calton.

H.Q.P. Crick, Aberdeen University, Zoology Department, Culterty Field Station, Newburgh, Ellon, Aberdeenshire AB4 0AA, UK.