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Derek Engelbrecht

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AVIAN BEHAVIOUR

MORE ON THE PRE-COPULATORY DISPLAY OF THE RED-FACED MOUSEBIRD

Derek Engelbrecht

Department of Biodiversity, University of Limpopo, Private Bag X1106,
SOVENGA, 0727

Email: derek.engelbrecht@ul.ac.za

Introduction

A common feature of the pre-copulatory displays of mousebirds (Coliidae) is their peculiar 'bouncing' or 'bobbing' display. During this display a bird bobs rhythmically at approximately 1 second intervals on a sturdy branch or platform. Although the bobbing bird usually clears the branch by between 2 and 4 cm, it will occasionally bob by simply extending the legs upward without its feet leaving the branch. Other pre-copulatory activities of mousebirds include feather fluffing (raising) by the bobbing bird, allopreening (mainly by the male), and bill rubbing (by both sexes) (Rowan 1967; Decoux 1988; De Juana 2001).

There appears to be some variation in the displays of Red-faced Mousebirds *Urocolius indicus* as James (1948), Rowan (1967), Newman (1968) and Every (1983) reported bobbing by a female (based on observations during copulation) but Woodall (1974) observed a male performing the bobbing display. Other variations include calling a soft 'chirp' (James 1948) or 'hoo' (Rowan 1967) before performing bill rubbing, and wing-shivering performed by both sexes immediately prior to copulation (Woodall 1974). Thus, it seems the bobbing bird may be male or female but mating follows

irrespective of which sex is performing the bobbing (Woodall 1974; Steyn 1996).

Observations

On 17 November 2016, I observed a group of four Red-faced Mousebirds in an Umbrella Thorn *Vachellia tortilis* (syn. *Acacia tortilis*) on the campus of the University of Limpopo (23°53'S; 29°44'E), South Africa. My attention was drawn to an individual performing the bobbing display in the mid-stratum towards the centre of the tree. This individual turned out to be the male based on observations when copulation occurred. There was one bird perched about 40 cm above and behind the displaying individual, another about 30 cm away but which soon flew off, and another bird (a female based on observations during copulation) about 40 cm above and in front of but facing the displaying bird. Observations were made from a vehicle about 5 m from the displaying bird.

The displaying bird bobbed rhythmically at about 1-2 second intervals but the bobbing was interspersed with short spells of a few deep bowing actions. During bowing his head was tucked tight into his chest and he would bow his head slowly and deliberately 1–3 times before resuming with bobbing. During bowing the male would also puff out his belly and chest feathers for brief periods - occasionally the feathers on its back - and raise his crest from time to time. During bobbing the male did not always clear the branch but when it did so it cleared the branch by between 2 and 4 cm. After about 3 minutes of bobbing and bowing, the bouncing rate suddenly increased as the female dashed towards the male by rapidly jumping from branch to branch and nestled in a crouched position on his left side (closest to me), her crest flat. The increase in the rate of bouncing was also reported by Every (1983). I did not observe any wing-quivering by either sex at any stage. Both birds performed bill 'clattering' movements although I did not hear any audible sounds or see any bill rubbing by the birds at this stage. The male performed a



few more bobs and then stood erect with his head held high and chest, belly, head and back feathers erected fully, giving it an almost comical pot-bellied, hunchbacked appearance. The male proceeded to mount the female and stood on her back while they rubbed their bills. The male also performed what appeared to be allopreening with his bill and face tucked tightly into her neck and chest feathers. This lasted about 20 seconds before actual copulation occurred which lasted about 5 seconds. The male dismounted the female and both birds sat in close proximity to each other for about 20 seconds while preening and ruffling their feathers. The female then used the typical flight call with her crest raised before flying off, the male and the last remaining bird in the group (which was seemingly unperturbed by the events described above) following her a few seconds later.

Discussion

The observations reported here seem to fit the descriptions of pre-copulatory behaviour of Red-faced Mousebirds, i.e. bobbing, allopreening, feather raising and bill rubbing. It is worth noting that in all reports to date, bobbing was only performed by one bird and only one bird responded to the pre-copulatory display with no interest shown by any other group members. Also, in all but one instance the non-bobbing bird approached from above. I did not observe any wing-shivering or hear any audible calls as reported by James (1948) and Vernon (1967). Most reports mention some degree of feather fluffing on the chest and throat of Red-faced Mousebirds but Vernon (1967) also mentions "... [the coly] would raise its feathers slightly all over the body, to give it a decidedly fatter appearance than usual, but still sleek and smooth". Raising of the feathers on the back was also noted in the congeneric Blue-naped Mousebird *Urocolius macrourus* and was described as "... a ridge of feathers along its back" (Little 1963). The feather fluffing I observed was seemingly more noticeable and extreme than these two cases as the displaying male resembled

a fluffy ball, something akin to a displaying Black-backed Puffback *Dryoscopus cubla*.

The head bowing behaviour represents a new addition to the repertoire of pre-copulatory behaviours of Red-faced Mousebirds as I could find no reference to this behaviour in the literature. The action was similar to the allopreening performed when the male was mounted on the female's back.

These observations show there is still much to learn about the pre-copulatory behaviour of mousebirds. For example, it seems unusual that either sex may initiate copulation by performing the bobbing display. Given that they are highly social animals, it is possible that this behaviour may be related to social hierarchies within the group.

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