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NOTES ON PREY CAPTURE BY BLUE-CHEEKED BEE-EATERS - The method by which small bee-eaters deal with venomous hymenopteran prey has been documented by Fry (1969). Treatment usually takes the form of stunning the insect by beating it against a perch, followed by rubbing the tip of the insect's abdomen against the perch to remove both sting and venom-sac. However, in some aerial, continuously-feeding species such as the Carmine Bee-eater *Merops nubicus*, there is circumstantial evidence for venomous prey being swallowed in flight (Fry 1973). That poses the question, how are venomous insects caught in flight and rendered innocuous? The answer was partially revealed during an hour's observation of aerial feeding by Blue-cheeked Bee-eaters *Merops superciliosus* at Zaria, Nigeria, on 4 February 1980.

A small flock of six *M. superciliosus* was encountered in a patch of recently-cleared *Isoberlinia doka* woodland at 1500 hr. (This constitutes the first record of the species in the Zaria area.) When feeding, the bee-eaters initially tracked flying insects from 3-m high perches, and subsequent pursuit flights were often as long as 100 m. Foraging birds remained aloft for three or four successive prey captures before perching again. Many prey were taken less than 10 m from the ground, and I was able to observe at close range the way in which insects were treated in flight after capture. Typically, an insect was caught from below, being taken between the tips of the bird's mandibles, with the head thrown back and the bill in a vertical position. The prey was then thoroughly crushed by being passed back and forth between the mandibular tips for three or four seconds. Sometimes the insect was tossed in the air and recaptured, to be further crushed. I observed about ten such captures, and the treatment of prey was the same in each one. However, on only one occasion was I able to identify the prey to be certainly venomous - it was a sphecid wasp. Blue-cheeked Bee-eaters are facultative in their treatment of prey; at the end of a bout of aerial feeding, the last insect caught was brought to a perch and dispatched in the usual manner by beating and rubbing.

Another point arises from these observations. Elsewhere (Dyer 1975) I suggested that the rictal bristles of bee-eaters may serve to protect the eyes from insect stings, especially in those species that are aerial feeders. In the case of *M. superciliosus* at least, insects are deftly taken in the bill-tip, and the problem of eye injury may never arise. Slow-motion cinematography of in-flight prey capture by bee-eaters would no doubt reveal the intricacies of prey capture and treatment.

M. Dyer

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