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Some Remarks on the Colour Patterns of East African Freshwater Crabs[1]

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Very few accounts of African potamonids refer to natural colouration, and I can't recall any describing colour patterns. The generally undistinguished appearance of these crabs is well illustrated by Rathbun (1921) on the Congo Brachyura which includes collector's notes on a number of potamonid species.

My own observations in East Africa were on the whole in close agreement with Rathbun's (1921) descriptions. Colour could be useful as a means of distinguishing species in the field (though there was always considerable individual variation), but very few indeed could be regarded as being distinctively patterned. In the majority of cases the darker dorsal surfaces of the carapace and limbs merely faded into the paler colouration of their ventral sides. At most certain areas, e.g. tips of the chelae, eye-stalks, mouth frame and 3rd maxillipeds, were of a different tone from adjacent areas, but the contrast was rarely very marked.

The very small number of species which could be considered patterned were separable into two types, depending upon whether the pattern was visible from above or was evident only when the crab took up a defensive attitude. This latter type is clearly derived from the more usual dorso-ventral paling by accentuation and sharper demarcation of the differently toned areas. It seems likely that such patterns possess aposematic value, cerainly the effect is very striking when a pursued crab turns in defence. A similar function can perhaps be ascribed to the red colouration of the arthroidal membranes which occurs irregularly within a number of species.

I found well-defined dorsal patterns in only two species, both of which had the carapace predominantly black but with lateral yellow streaks. The limbs were uniformly of this same yellow to orange brown colour. These crabs were quite unlike any others I collected, but despite the similarity of their markings belong to different species-groups of *Potamonautes*. They are, however, similar in habits being confined to forested areas and rarely entering water. (One at least is very freely terrestrial). It therefore seems likely that this particular pattern represents an adaptation to life on the forest floor.

My overall impression is, however, that there is little diagonositic value in even such distinctive patterns as those of the two forest crabs. There is (in all species I've seen) very considerable variation in the extent to which colours are developed ; in the forest crabs for example no trace of the dorsal pattern appears on the youngest and the very oldest individuals and it may occasionally be absent from those of intermediate age. I therefore feel that, so far as the African potamonids are concerned, colour or colour-patterns can only be used to supplement other taxonomic characters and couldn't safely be used as the sole means of identification.

REFERENCE

Rathbun, M. 1921—Brachyuran crabs of the Belgian Congo. *Bull. Amer. Mus. Nut. Hist.* **43, 379–468.**

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[1] This article is based on remarks extracted from a communication sent to Dr. C. H. Fernando in connection with the first article in this bulletin.

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