

Koedoe: (13) 127-130 (1970).

THE OCCURRENCE OF *GRAPSUS GRAPSUS TENUICRUSTATUS* (HERBST) AT THE TSITSIKAMA COASTAL NATIONAL PARK (DECAPODA, BRACHYURA, GRAPSIDAE)

by

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Introduction

In November 1968, an unusual crab was caught alive at the Tsitsikama Coastal National Park, which is situated on the southern coast of South Africa. The crab was preserved and submitted to the South African Museum for identification.

Grapsus grapsus tenuicrustatus (Herbst)

Figs. 1, 2

Grapsus grapsus tenuicrustatus (Herbst), Rathbun, 1906: 838.

Grapsus maculatus var. *tenuicrustatus* (Herbst), Kingsley, 1880: 193.

Grapsus maculatus (Gatesby), Barnard, 1950: 113.

The specimen was an adult female, having the following dimensions:

	mm
Carapace length	48
Carapace breadth	53
Breadth of front between eyestalks	22
Distance between external orbital angles	35
Length of merus of 4th leg	35
Breadth of merus of 4th leg	15
Length of propodus of 4th leg	27
Breadth of propodus of 4th leg	7

Description

Carapace slightly broader than long, depressed, with marked branchial, hepatic, and cardiac regions. Lateral margins convex, with a single tooth posterior to the external orbital angle. Front strongly deflexed, with two large and several smaller tubercles, anterior margin having a beaded appearance. Region of carapace between orbits with strong clusters of conical tubercles. Branchial region with about 12 obliquely-transverse ridges. Chelipeds subequal, finger and thumb apically spooned, outer surface of hand with two strong ridges and several short oblique ridges. Carpus of cheliped with several small dorsal tubercles, antero-medial

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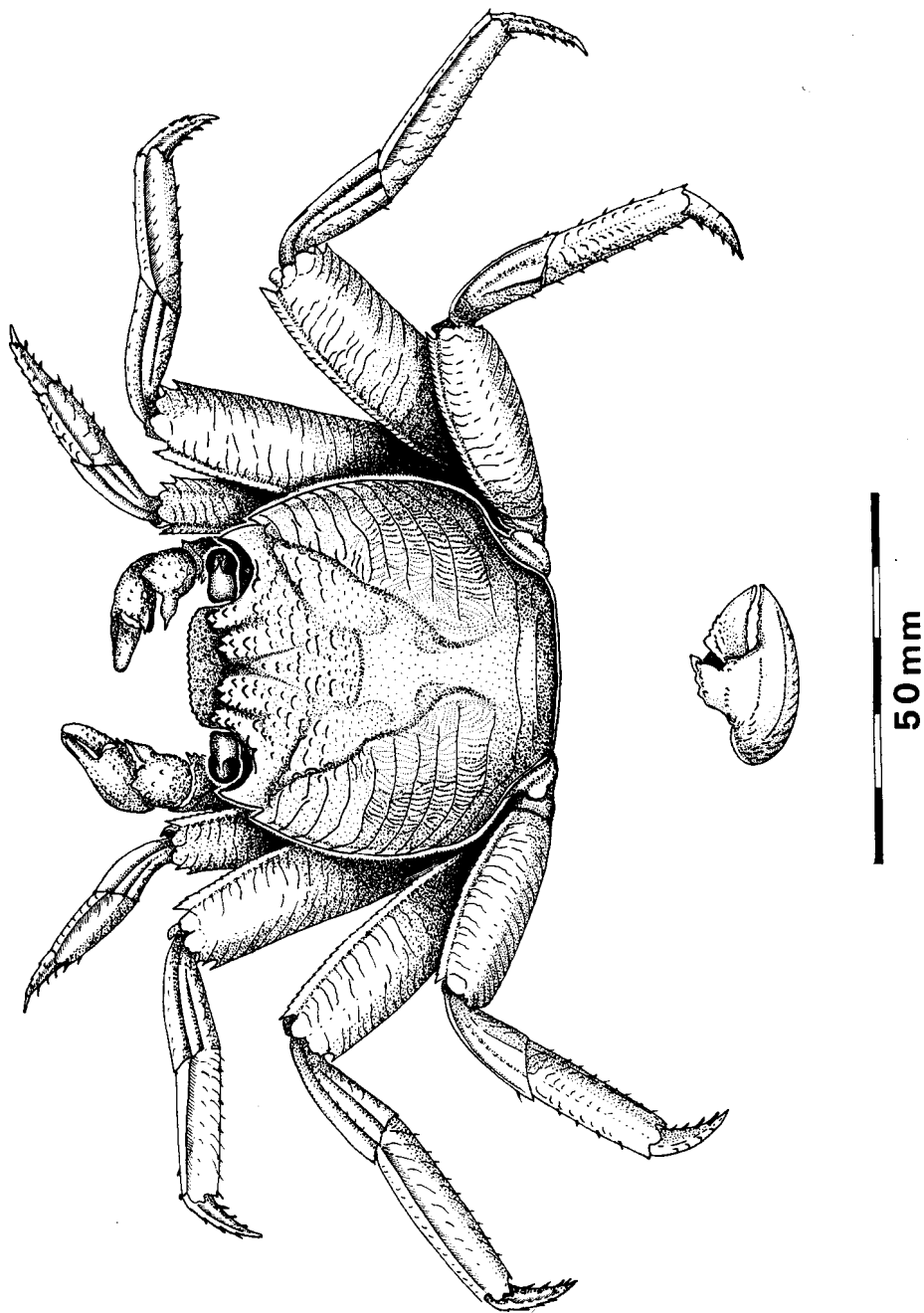


Fig. 1. *Grapsus grapsus tenuicrustatus* (Herbst). Dorsal view, adult female, and outer surface of right chela.

corner with lobe ending in sharp spine. Merus and ischium spinose on inner margin. Ambulatory legs flattened, meri broad, with numerous oblique ridges, propodi with ridge bearing fine short hairs. Dactyli strongly spinose.

Colour

Interorbital region dark plum red, rest of carapace dark brick red. Chelae bright red, legs red-grey.

Locality

Kraaibek, near Coldstream, on Tsitsikama coast.

Remarks

The genus *Grapsus*, which is typically tropical/subtropical, is represented by two species in southern Africa, viz. *G. grapsus* and *G. strigosus*. The latter has been recorded from Delagoa Bay, Natal, East London, and most of the Indo-Pacific region. It differs from *G. grapsus* in having the narrower front less strongly deflexed, as well as in the general proportions of the appendages.

G. grapsus, which is almost cosmopolitan in the littoral regions of tropical/subtropical areas, has been divided into two forms (Rathbun, 1906) viz. the Atlantic and the Indo-Pacific forms. The Atlantic or typical form has been recorded from the Atlantic coasts of America (Rathbun, 1906), the Cape Verde Islands, Senegal, Ghana, Nigeria, Spanish Guinea, Congo Republic, Angola (Monod, 1956), and also from northern South West Africa (Kensley, *in press*).

The Indo-Pacific form (*tenuicrustatus*), regarded by Kingsley (1880) as a variety of *G. maculatus*, and by Rathbun (1906) as a subspecies of *G. grapsus*, is known from almost this entire region, as well as from Mocambique and Natal. The main distinguishing features of *tenuicrustatus* from the typical form, lie in the meri of the legs, and the carpal lobe of the chelipeds. Kingsley (1880) notes that *tenuicrustatus* has a hairy carapace and meral joints and that the carpal lobe is narrower and with a longer spine than in the typical form. The present specimen agrees with *tenuicrustatus* in the form of the carpal lobe (Fig. 2) and in the possession of a hair-bearing ridge on the meri. The carapace, however, is not hairy.

Tesch (1918) noted that *G. maculatus* (= *G. grapsus*) had a slender legged variety *gracilipes*. This form is characterised by having the meri of the 4th legs at least 5 times longer than broad. The normal form has the meri 4 times or less longer than broad. Whether there are actually two genetic forms involved here, or whether the species is variable with regard to these characters (which seems very likely) is open to discussion.

The present specimen thus obviously belongs to the Indo-Pacific form of the species. This makes it a very remarkable record, being at least 500 miles south of its most southerly known record, occurring in an area

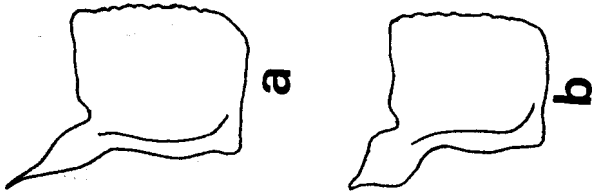


Fig. 2. a. Dorsal view, right carpus of cheliped, *G. grapsus tenuicrustatus*, Indo-Pacific form.

b. Dorsal view, right carpus of cheliped, *G. grapsus*, Atlantic form.

which is certainly not subtropical. More intensive collecting in the area should establish that the species is actually breeding here, as it is unlikely that the crab (which is not capable of sustained swimming) could have been washed down from the Natal coast.

Acknowledgements

My thanks are due to Mr. Harvey Starback for collecting the specimen, to Mr. D. Bower for making it available to the South African Museum, and to Mr. M. J. Penrith for transport of the specimen and for helpful information.

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