

1968

# HYASTENUS HILGENDORFI DE MAN, A MAJID SPIDER CRAB NEW TO AUSTRALIA

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DIVISION OF CRUSTACEA

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(Plate 1, text-figure 1.)

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## SUMMARY

Twenty-one specimens of *Hyastenus hilgendorfi* are recorded from northern Australia. Additional figures are provided and the specimens are compared with those previously recorded from throughout the Indo-West Pacific and eastern Mediterranean Sea.

## INTRODUCTION

The genus *Hyastenus* is taxonomically one of the more difficult groups of Indo-Pacific majid crabs. Balss in 1935 listed all the species known at that time but the majority await detailed description. Thirteen species have been recorded from Australia so far and a key to their identification was given by Griffin (1966: 280-282).

During an examination of collections of Brachyura in Australian Museums in 1966-67, specimens of a species of *Hyastenus* which appeared to be distinct from those previously recorded from Australia were found in the Queensland Museum (QM), Australian Museum (AM) and South Australian Museum (SAM). These proved to be referable to *H. hilgendorfi*, originally described by De Man (1887) from the Mergui Archipelago in the Bay of Bengal. In the present paper these specimens are compared with previous descriptions of *H. hilgendorfi*.

Terminology follows Griffin (1966). The measurement given is carapace length (c.l.) including the length of the rostrum and was taken with dial calipers.

### Family MAJIDAE.

Genus *Hyastenus* White, 1847.

*Hyastenus hilgendorfi* De Man.

(Pl. I, and text-figure 1.)

*Hyastenus hilgendorfi* De Man, 1887: 14-18, pl. i, figs. 3, 4. Alcock, 1895: 209-210. Chopra & Das, 1937: 388-9. Buitendijk, 1939: 242, figs. 9, 10. 1950: 64. Stephensen, 1945: 107, figs. 20D.E. Holthuis, 1956: 328-329. Lewinsohn & Holtuis, 1964: 62.

*Halimus hilgendorfi* Laurie, 1906: 376. Rathbun, 1906: 881.

**MATERIAL EXAMINED:** Queensland Museum. Murray Id., Torres Strait, Queensland (no other data), associated with specimens of *Hyastenus diacanthus* and *H. spinosus*, 6 ♂♂, 9 ♀♀, c.l. 21.2-32.2 mm (W.2527).

Australian Museum—Murray Id., Torres Strait, October 1928, Melbourne Ward collection, 3 ♂♂, 1 ♀ (dry), c.l. 25.7-31.0 mm. Nr. Field's Reef, Port Denison, Queensland, intertidal, among stones, pres. E. H. Rainford, before 1924, 1 ♀ (ovig.), c.l. 18.8 mm (P.7041).

South Australian Museum—Palmerston [now Darwin], Northern Territory, P. Foelsche, November, 1890, 1 ♀ (ovig.) (dry), c.l. 22.3 mm, det. W. H. Baker as *Hyastenus hilgendorfi* (C.1121).

h/k

REMARKS: All these specimens are clearly referable to *H. hilgendorfi*. The male first pleopod is long, weakly curved, slender and distally weakly expanded with a membranous flap laterally, as previously described and figured by Buitendijk (1939) and Stephensen (1945).

Of the 21 specimens, the ovigerous females from Palmerston, Northern Territory (SAM C1121) and Port Denison, Queensland (AM P.7041) agree most closely with that originally figured and described by De Man in having

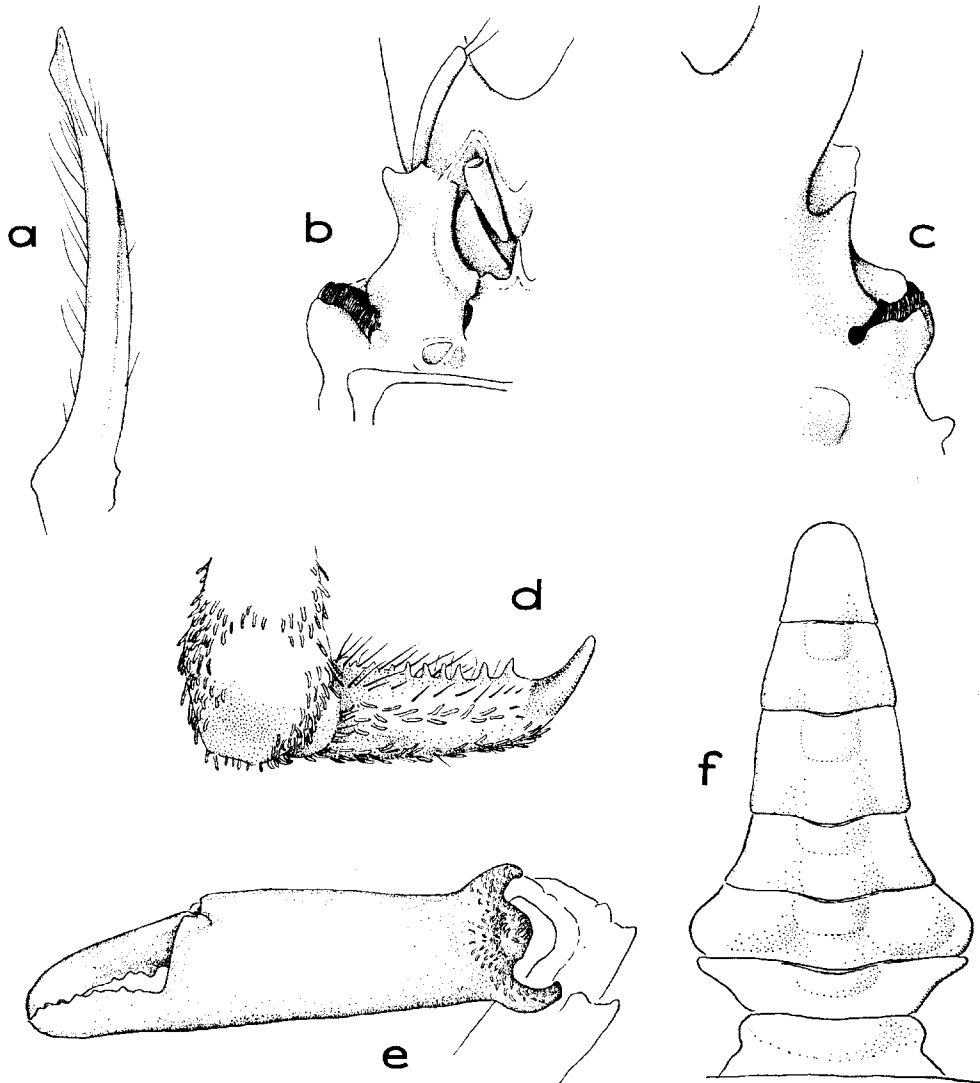


Figure 1. *Hyastenus hilgendorfi*, ♂, c.l. 32.2 mm, Murray Id., Queensland (QM W.2527): a, right first pleopod, abdominal aspect; b, orbit and antennal region, ventral aspect; c, orbit, dorsal aspect; d, dactyl of fourth left ambulatory leg, posterior aspect; e, left chela, outer aspect. f, abdomen.

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the rostral spines almost straight and the epibranchial spines sharp and upcurved. In the other specimens the rostral spines are weakly curved and distally sub-parallel in males and straight or weakly outwardly curved in females and the epibranchial spines are blunt and shorter than shown in De Man's figure. In all specimens there are prominent medial gastric, cardiac and intestinal elevations, the gastric surmounted centrally by a small tubercle. All specimens agree with the original description in having a large number of low tubercles on the dorsal surface and margins of the carapace. Usually, there are a pair of protogastrics anteriorly, three very small ones in a weakly curved, transverse row between these two and up to six mesobranchial in a curved row on each side of the midline, the first, third and fifth very small, the fourth (opposite the epibranchial spine) and the last (above the intestinal margin near the junction of the cardiac and intestinal regions) subequal and larger than any other in the series. There is a row of up to five tubercles close to the posterolateral margin and there are up to eight on the anterior part of the branchial margin, two of which are larger than the others. There is a small tubercle on the hepatic region laterally, one suborbital and two large ones on the pterygostomian regions as described by De Man. The dorsal surface of the merus of the cheliped sometimes possesses two to four low tubercles proximally in addition to the two distal ones described by De Man. The chelae in the males are long and in the larger specimens the fingers gape slightly in their proximal half and the dactyl bears a tooth at the base slightly larger than any of the others. The ambulatory dactyls are stout and bear many blunt to sharp spines in a row ventrally, about 10 on the fourth leg; the spines increase in length distally.

Laurie (1906) and Chopra & Das (1937) noted sexual dimorphism in the shape and length of the rostral spines in this species. Variation in the size and arrangement of carapace tubercles has been previously noted in *H. hilgendorfi* by Rathbun (1906), Buitendijk (1939) and Lewinsohn & Holthuis (1964).

In the key given by Griffin (1966), *H. hilgendorfi* comes out at the second part of couplet 54 near *H. auctus* Rathbun, from the Philippines and north-western Australia, which differs from *H. hilgendorfi* most noticeably in lacking tubercles around the branchial margin, in the intestinal region not being at all tumid and bearing only a small tubercle, in the gastric region bearing only a single central tubercle and in the carapace being narrower across the branchial regions (carapace width less than  $\frac{2}{3}$  post-rostral carapace length in *H. auctus*, more than  $\frac{2}{3}$  postrostral length in *H. hilgendorfi*).

**DISTRIBUTION:** Widespread Indo-West Pacific: Iranian Gulf, Ceylon, Ganjam (India), Nicobar Ids., Mergui Archipelago, Singapore, Straits of Malacca, Timor, Amboina and Hawaii. Also found in the Suez Canal and in the eastern Mediterranean Sea off the coast of Israel. Lewinsohn & Holthuis (1964) state that this species has been recorded from the Red Sea and according to Balss (1935) this species is known from Madagascar. I can find no substantiation in the literature for this species having been recorded from these two localities. In view of its very wide distribution the presence of this species in Australian waters is not unexpected.

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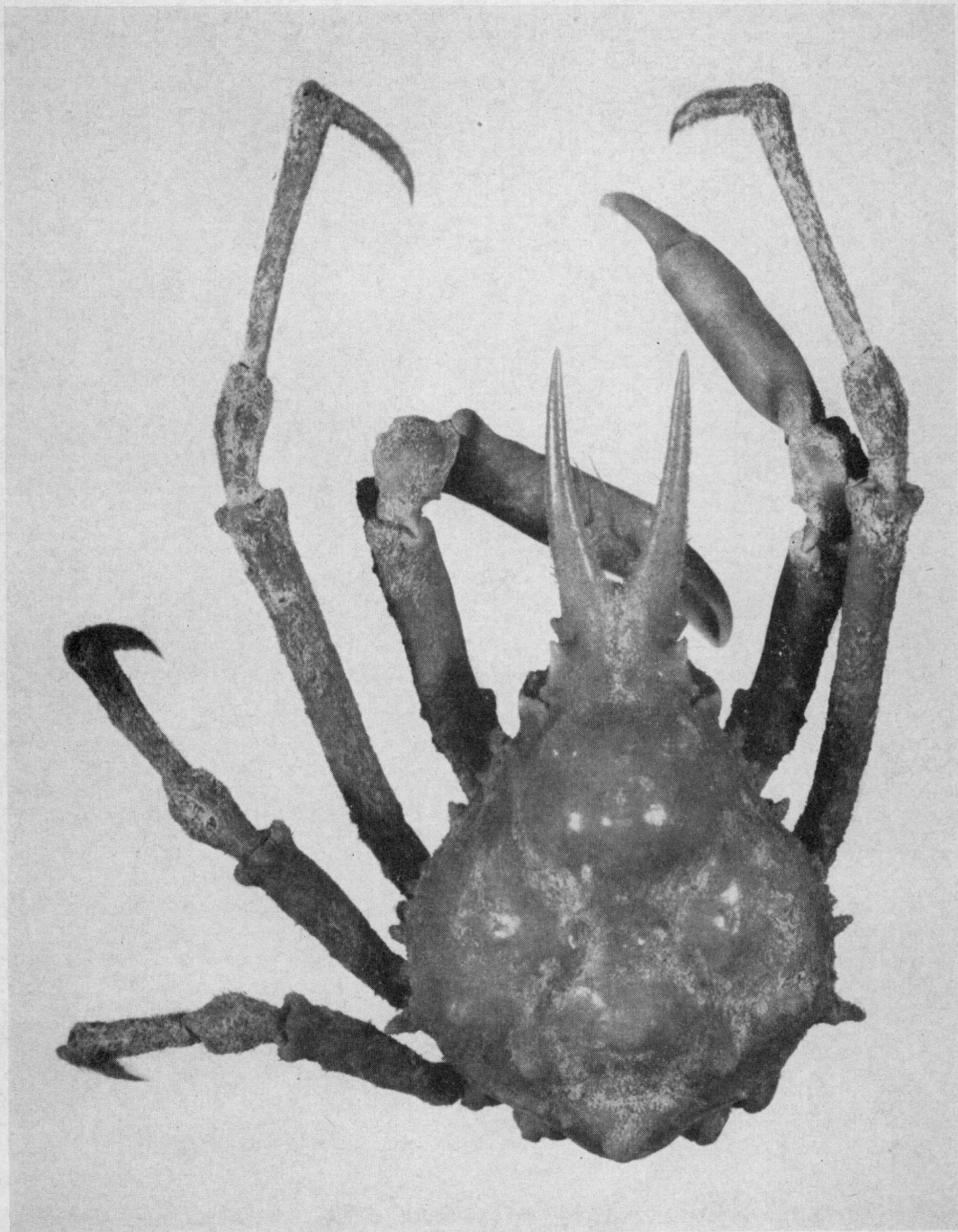
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#### EXPLANATION OF PLATE I

*Hyastenus hilgendorfi*, ♂, c.l. 32.2 mm, Murray Id., Queensland. (QM W2527), dorsal aspect.

Photo.—C. V. Turner.



Spider Crab, *Hyastenus hilgendorfi*.