

ON THE OCCURRENCE OF *METAPENAEUS ENSIS* (DE HAAN)
IN THE BAY OF BENGAL

On 20-12-64 the Government of India trawler M. T. Ashok fishing near Lat. 20°25'N. by Long. 87°15'E. off False Point on the Orissa coast at a depth of 36 metres caught about 60 prawns which bore a close resemblance to *Metapenaeus monoceros* (Fabr.), a common prawn of the Andhra coast. A careful examination of these specimens, however, has revealed that they are *Metapenaeus ensis* (de Haan) as they possess the following genital features (Figs. 1 & 2): (1) The tips of the

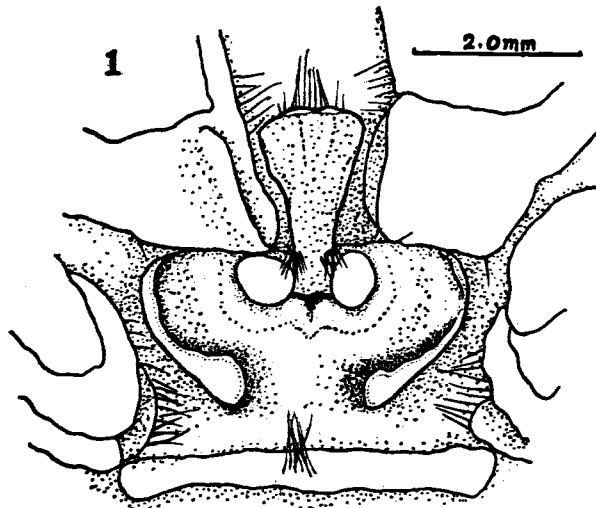


FIG. 1. Thelycum of *M. ensis*
(carapace length 3.8 cm.).

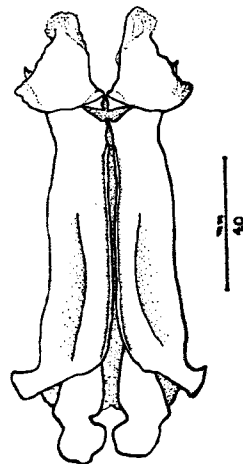


FIG. 2. Petasma of *M. ensis*
(carapace length 2.7 cm.).

disto-median lobes of the petasma are pointed forwards instead of laterally. (2) The elevated outside margins of the lateral plates of the thelycum arch over strongly (more marked in larger females) towards the mid-line posteriorly. (3) The lateral edges of the elevated median lobe of the thelycum tend to converge pos-

teriorly and enclose a rather wide and shallow groove. (4) The coxal ridges on the 4th pair of pereiopods in females are blunt edged. These genital features are considered diagnostic of *Metapenaeus ensis* (de Haan) by Hall (1958) who established the validity of this species.

It was noticed that the present specimens of *M. ensis* (de Haan) could be distinguished from *M. monoceros* (Fabr.) by the following three additional characters not referred to by Hall (1958). (1) In specimens of equal size the curved spine on the merus of the 5th pereiopod of the adult male, viewed from the ventral side, is less prominent in the present species than in *M. monoceros* (Fabr.); in the latter the spine stands out prominently from the linear axis of the merus while in the present species the spine more or less conforms to the contour of the merus. (Fig. 3). (2) The ridges on the coxae of the 4th pair of legs in females project above

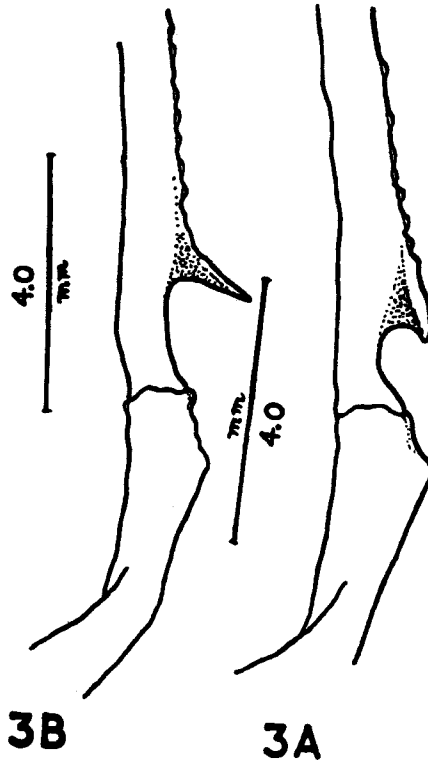


FIG. 3. The meral spine on the left 5th pereiopod of (3A) male *M. ensis* 2.7 cm. in carapace length and (3B) of male *M. monoceros*. 2.5 cm. in carapace length.

the level of the median lobe of the thelycum in the present species while in *M. monoceros* (Fabr.) the coxal ridges are flush with the surface of the median lobe of the thelycum. (3) In mature females the colour of the ovary is milky green in *M. ensis* (de Haan) while it is brownish in *M. monoceros* (Fabr.). This colour difference is consistent.

Of the 56 specimens examined, the 36 females ranged in total length from 113 mm. to 152 mm. (Carapace length : 25-38 mm.) while the 20 males ranged from 112 mm. to 123 mm. in length (Carapace length : 24-28 mm.).

This is the first record of *Metapenaeus ensis* (de Haan) from the Bay of Bengal. The specimens doubtfully recorded as *Metapenaeus ensis*? (de Haan) by Alcock (1906) do not seem to belong to *M. ensis* (de Haan) as his specimens are said to bear 3 pairs of movable marginal spines on the telson. De Man (1922) is of opinion that Alcock's specimens were probably *Penaeopsis intermedia* (Kishinouye) var. *anchista*. This species has now been synonymized under *Metapenaeus intermedius* (Kishinouye) by Hall (1962).

The present record of *M. ensis* (de Haan) from the Indian coast is of interest because Hall (1958), discussing the differences between the closely allied species *M. ensis* (de Haan) and *M. monoceros* (Fabr.), states that the former species is confined to waters east of the Malayan Peninsula/Sumatra land mass and that the latter is restricted to areas west of this land mass, the Malacca Strait in some way forming a barrier between these two species. Later he (Hall, 1962) amended this statement and said '...it would seem that it is not so much the Malacca Strait itself which is the barrier between the populations, as the northern entrance to the Strait, which is confirmed by the collection of specimens of *Metapenaeus ensis*. . . from as far north as the Langkawi Islands.' The present observation clearly shows that the distribution of *M. ensis* (de Haan) extends well into the Bay of Bengal and that in the case of this species such a barrier does not seem to exist.

In this connection it may be of interest to record that in subsequent fishing voyages, both *M. ensis* (de Haan) and *M. monoceros* (Fabr.) were fairly common in the region between Puri coast and Sandheads. Generally, *M. ensis* (de Haan) were caught in shallower areas (upto 50 m.) while *M. monoceros* (Fabr.) occurred in deeper areas (60-80 m). However, on one occasion both the species were recorded in the same haul off Sandheads at a depth of 50 m. *M. ensis* (de Haan) is very rarely seen south of Puri. But stray specimens of *M. ensis* (de Haan) have been found mixed with good catches of *M. monoceros* (Fabr.) off Visakhapatnam.

To facilitate identification of the two species in the field, the features that distinguish *M. ensis* (de Haan) from *M. monoceros* (Fabr.) are tabulated below (Table I.)

TABLE I

Features	<i>M. ensis</i> (de Haan)	<i>M. monoceros</i> (Fabr.)
1. Disto-median lobes of the petasma.	Straight, tips pointing forwards.	Recurved, tips pointing laterally.
2. 5th pereopods of adult males.	Curved meral spine less prominent, conforming to the contour of the merus.	Curved meral spine very prominent, standing out from the linear axis of the merus.
3. Lateral plates of thelycum.	Elevated outside margins arch over strongly towards the mid-line posteriorly.	Elevated outside margins more or less parallel, with a slight curve along their length.
4. Median lobe of thelycum.	Lateral sides tend to converge posteriorly, with a shallow groove.	Lateral sides parallel with a distinct longitudinal groove.
5. Coxal ridges of the 4th pereopods in females.	Edges blunt, project well above the level of the median lobe of thelycum.	Edges sharp, flush with the surface of the median lobe of thelycum.
6. Mature ovaries.	Milky green.	Brownish.

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REFERENCES

- ALCOCK, A. 1906. *Catalogue of the Indian Decapod Crustacea in the collection of the Indian Museum. Part. III. Macrura. Fasciculus I. The prawns of the Peneus group.* 55.
- DE MAN, J. G. 1922. *Siboga Exped.*, 39a : 51.
- HALL, D. N. F. 1958. *Ann. Mag. nat. Hist.* ser. 13, 1 : 537-544.
- . 1962. *Fish. Publ.*, London. 17 : 229.