

distal part in 2 or 3 rows; inner pectoral colour is seen vaguely through fin; free pectoral rays barred.

### *Ecology*

This species occurs on sandy and muddy bottoms. It has a wider distribution in the Gulf of Mannar and Palk Bay, and is commonly taken on prawn and Leio-gnathid fish trawling grounds at depths upto 27 metres. A partly digested fish, was found in the stomach of one specimen.

### *Distribution*

It ranges from east coast of India, Ceylon (Gulf of Mannar) to Hong Kong, through Java and Philippines to Western Australia.

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## ON THE PENAEID PRAWN *PARAPENAEOPSIS STYLIFERA* AND A NEW VARIETY OF THE SPECIES FROM COCHIN\*

### ABSTRACT

A new variety of the penaeid prawn *Parapenaeopsis stylifera* is described from the samples obtained along with the *forma typica* from the inshore waters at Cochin. In the new variety, the petasma is comparatively much smaller with smaller distodorsal projections which are less divergent. In addition, the appendix masculina lacks the distolateral process seen in the typical *P. stylifera* and the specimens, on the whole are more pubescent.

\* Edited from a thesis approved for Ph. D. Degree of the Madras University.

EXAMINATION of innumerable specimens of *Parapeneopsis stylifera* (H. Milne Edwards) locally known in Malayalam as 'Karikkadi chemmeen' in the fishery has enabled to clear a confusion concerning two varieties of the species recorded by earlier authors and this is reported here. A new variety of the species met with during the study is also recorded.

***Parapeneopsis stylifera* (H. Milne-Edwards)**

*Penaeus styliferus* H. Milne Edwards, 1837 : 418

*Penaeopsis styliferus* Bate, 1881 : 183

*Parapeneopsis styliferus* Nobili, 1903 : 4

*Parapeneopsis stylifera* Alcock, 1906 : 36-37

*Parapeneopsis stylifera* var. *coromandelica* Alcock, 1906 : 37 ; Menon, 1956 : 346 (key);

*Parapeneopsis stylifera* de Man, 1911 : 9; Nataraj, 1942 : 468 ; Menon, 1956 : 346 (key) ;

Ahmed, 1957 : 12 ; Dall, 1957 : 214 (key) ; Tirmizi, 1968 : 193-203 ; 1969 : 762;

George, 1969 : 34; Rao, 1970 : 1580

*Parapeneopsis coromandelica* Hall, 1962 : 27; De Bruin, 1965 : 99

*Parapeneopsis stylifera coromandelica* Racek and Dall, 1965 : 96-98

*Parapeneopsis stylifera stylifera* Racek and Dall, 1965 : 98

**Material:** Numerous specimens from different parts of the coast of India - depth 5 to 50 m.

**Distribution:** Distributed from Indian and Ceylon waters through Malaysian waters to Indonesia and Borneo. In Indian waters it is distributed all along the coastline, more especially on the west coast and south-east coast, contributing to the fishery to a large extent. Unlike the other coexisting commercially exploited species this has no estuarine phase in its life history.

**Remarks:** Based on telsonic armature and geographic distribution Hall (1962) raised Alcock's variety *P. stylifera coromandelica* to specific rank, a view followed by De Bruin (1965) also. But Racek and Dall (1965) were of opinion that since all the morphological criteria except telsonic armature in both the forms were in complete agreement, specific separation of Alcock's variety from Milne-Edwards' species could not be attempted. However, they felt that it was necessary to retain their taxonomic distinction at an infra-specific level in view of their geographic separation and proposed two subspecies *P. stylifera stylifera* (Milne-Edwards) and *P. stylifera coromandelica* (Alcock). Examination of innumerable specimens drawn from the fishery of the species on the south-west coast of India showed that both the forms exist together here, contrary to the record of one form on the west coast and the other on the east coast by Alcock (1906). In view of this as well as the various gradations noticed in the telsonic armature varying between the two forms, it is quite evident that the two are only synonyms. So it is suggested that *P. coromandelica* may be relegated to as a synonym of *P. stylifera*.

***Parapeneopsis stylifera* var. *cochinensis* nov.**

15 male specimens varying in total lengths from 7.2 to 9.0 mm (carapace length 1.7 to 2.5 mm) collected during the course of this study from among *P. stylifera*

catches from Cochin were noticed to be different in some respects. Although no difference between the size and shape of the teeth, spines, grooves and carinae of the carapace and abdomen and other general features could be detected, the petasma was found to be comparatively much smaller (Fig. 1 b) than the typical *P. styliifera*. The distolateral projections are smaller and less divergent. The petasma looks quite similar to that of *P. gracillima* figured by Racek and Dall (1965, plate 8, figs. 8 and 9). But none of the other characters agree with that species. The appendix masculina shown in Fig. 1 d also differs from that of *P. styliifera*, lacking in the distolateral process. The specimens on the whole are also more pubescent than *P. styliifera*.

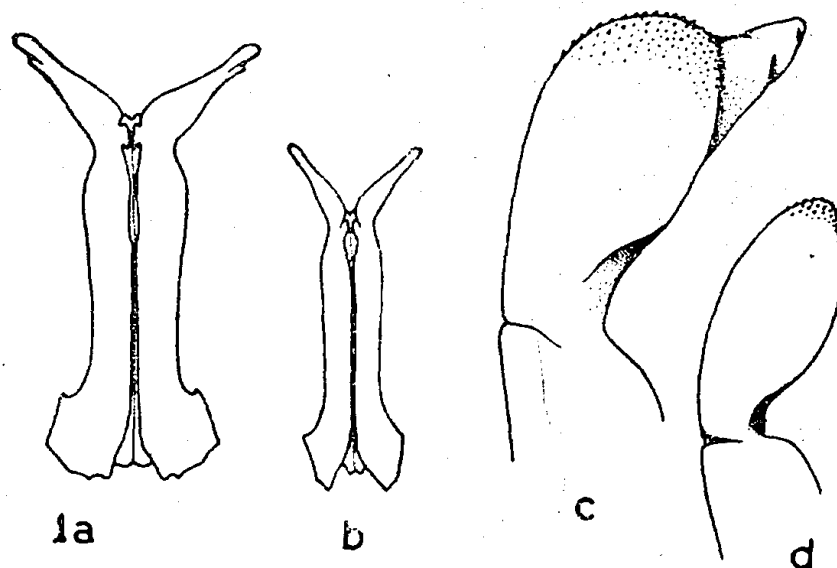


Fig. 1 a. Petasma of *P. styliifera*, b. petasma of *P. styliifera* var. *cochinensis* nov., c. appendix masculina of *P. styliifera*, d. appendix masculina of *P. styliifera* var. *cochinensis* nov.

Unsupported in any other way these differences are not quite sufficient for the creation of a new species. Corresponding female specimens with any difference in thelycal features were not obtained either. However, the difference in these male specimens are so pronounced that a distinct variety is indicated. This variety is named *Parapenaeopsis styliifera* var. *cochinensis* nov. and the specimens have been deposited in the reference collection of the Regional Centre of the Central Marine Fisheries Research Institute, Mandapam Camp.

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## ON THE OCCURRENCE OF THE CYCLOPOID COPEPOD *VETTORIA* *PARVA* (FARRAN) IN THE INDIAN SEAS

### ABSTRACT

*Vettoria parva* (Farran), a cyclopoid copepod is recorded for the first time from the Indian Seas. This is also the first record of the species from the Indian Ocean. The specimens obtained in surface plankton tows off Vizhinjam, Kerala agree in all details with the description of the type given by Farran (1936) from the Great Barrier Reef, except for the absence of lenticular swellings on either side of cephalosome.

WILSON (1924) proposed the genus *Vettoria* for the cyclopoid genus *Corina* Giesbrecht 1892 (nec *Corina* Westerlund, 1887 for a Gastropod mollusc). The genus *Corissa* Farran 1936 is also a synonym on *Vettoria* which is now known from four species namely, *Vittoria granulosa* (Giesbrecht, 1892); *V. parva* (Farran, 1936); *V. indica* (Krishnaswamy, 1951); and *V. longifurca* Rose and Vaissiere (1952).

Farran (1936) described *Vettoria parva* from a female specimen collected outside the Great Barrier Reef. Subsequently Johnson (1942) described the male of *V. parva* from the Eastern Pacific Ocean. More recently Carlo (1967) and Hure and Carlo (1967) recorded this species from the Gulf of Naples, and Shmeleva (1964), and Hure and Carlo (1967) from the Adriatic Sea. The present record of *V. parva* from the Southwest coast of India is the first record of the species from the Indian Ocean. A description of the species based on a good series of specimens available in the collection is given here.

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