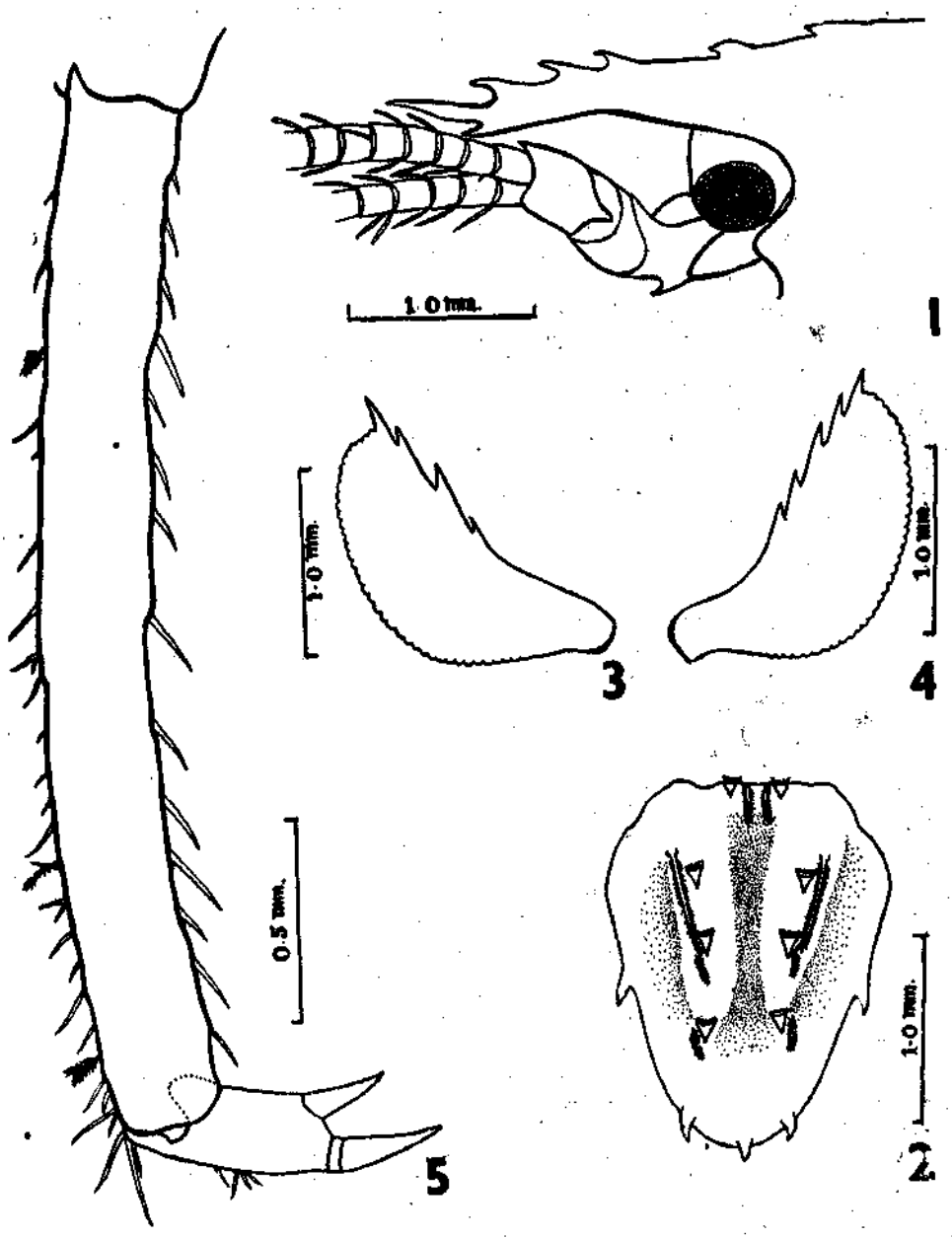
ON TWO SPECIMENS OF *MICROPROSTHEMA* SP. (DECAPODA MACRURA) FROM PALK BAY

A single male specimen of *Microprosthema* sp., measuring 13 mm. long was first noticed in the laboratory moving among the tentacular bases of an expanded sea-anemone, *Gyrostoma* sp. on 2-7-1961 which was collected earlier from a shallow pool of water under dead coral stones in the exposed tidal sandy flat of Palk Bay. The occurrence of shrimp on sea-anemone, however, proved to be only accidental, since on a later occasion we were able to collect an ovigerous female, 15 mm. long on 10-9-1961 from the same locality under dead coral rocks. A perusal of literature reveals that only *Microprosthema validum* Stimpson (=*Stenopus robustus* Borradaile) has been previously recorded by Gravely (1927) from Krusadai Island and Shingle Island in the Gulf of Mannar. Holthuis (1947) gives a detailed account of the family Stenopodidae and has provided a useful key for the identification of the species of *Microprosthema*. Of the four species recognised by him (*M. validum*, *M. semilaeve*, *M. plumicorne* and *M. scabricaudatum*), *M. validum* and *M. semilaeve* are very close and differ from one another in the presence or absence of a short longitudinal median carina at the posterior half of the dorsal surface of the third abdominal segment and in the number of teeth along the outer margin of scaphocerite. A careful examination of the two specimens in our collection shows the following interesting features. (See Table I).

Taking into consideration the two main distinguishing characters between *M. validum* and *M. semilaeve*, namely, the presence or absence of a longitudinal carina on the third abdominal segment and the number of teeth on the scaphocerite, a comparison with the specimen at our disposal reveals that the number of teeth on the outer margin of scaphocerite show a range of variation which can embrace both the species. The median longitudinal carina on the third abdominal segment, however, is not present in our specimen, so also in *M. semilaeve*. In the two specimens under consideration, there is a longitudinal shallow groove devoid of spinules at the upper half of the inner margin of the carpus of the third pereiopod which was also noticed by Holthuis in *M. semilaeve*. But he has not mentioned whether such a groove is present in *M. validum* also. Moreover the uninterrupted nature of the transverse carina on the third abdominal segment agrees with the condition observed in *M. semilaeve*. On the other hand the specimens agree with *M. validum* in having a double longitudinal row of forwardly pointing spinules from the base of the rostrum to the cephalic groove. A careful study reveals that the number of spinules on the exopod and the endopod of the uropod as well as those on the ventral side of propodus of fourth and fifth pereiopods is a very variable character, since their number is seen to vary on the left and right side of the same animal. Due to the overlapping nature of the number of teeth on the scaphocerite between the two species, although the teeth are said to be stronger in *M. validum*, much reliance cannot be placed on this character in distinguishing the two species. Therefore the validity of the species, *M. semilaeve*, will depend on the stability of the median longitudinal carina on the posterior half of the third abdominal segment. If this character is reliable, then the specimens in our collection agree more closely with *M. semilaeve*, in which case it will be a new record for the entire Indo-Pacific region. According to Holthuis, the distribution of *M. semilaeve* is restricted to tropical east American seas only, from Bahamas to Fernando Noronha. If much reliance cannot be placed on the above character, then *M. semilaeve* should be treated as a synonym of *M. validum*.



Microprosthema sp.

FIG. 1. Rostrum in lateral view.
FIG. 2. Telson in dorsal view.
FIG. 3. Scaphocerite of right side.
FIG. 4. Scaphocerite of left side.
FIG. 5. Propodus and dactylus of fourth pereiopod.

TABLE

Characters	*M. validum*	*M. semilaeve*	*Specimen No.* 1	*Specimen No.* 2
Rostrum	Dorsally 5-8 spines, ventrally with or without one spine	Dorsally 4-11 spines (4-6 large, rest indistinct)	Dorsally 5 spines, ventrally one (Fig. 1)	Dorsally 5 spines, ventrally one
Carapace	A double row of 3 or 4 spinules from the base of rostrum to cervical groove	No distinct median double row behind rostrum	An inner row of 4 and a lateral row of 3 spinules on either side of base of rostrum to cervical groove	An inner and a lateral row of 3 spinules on either side of base of rostrum to cervical groove
III abdominal segment	Transverse carina interrupted at 4 places forming 3 teeth. Median longitudinal carina on the posterior dorsal surface distinct	Transverse carina entire. No median carina	Transverse carina entire. No median carina	Transverse carina interrupted at one place only. No median carina
Scaphocerite	2 or 3 strong teeth on outer margin apart from the terminal one	5 or 6 small teeth including terminal	4 small teeth on the right and 5 on the left including terminal (Fig. 3, 4)	4 small teeth on the right and 5 on the left including terminal
III Maxillipede	Ischium externally with about 5 spines. Merus with 2-3 spines	Ischium externally with about 4 spines. Merus with 2-3 spines	Ischium externally with 3 spines. Merus with 2 spines	Ischium externally with 3 spines. Merus with 2 spines
3rd pereiopod		Longitudinally deeply hollowed on the upper inner side of carpus	Shallow longitudinal groove on the upper inner side of carpus	Shallow longitudinal groove on the upper inner side of carpus
4th and 5th pereiopods	Propodus with 10-12 movable spines on ventral side. Carpus divided into 4 and propodus into 3 segments (Segmentation often very indistinct)	Propodus with 15 movable spines. Carpus and propodus not segmented (Propodus divided into 3-5 segments, Pocock 1890)	Propodus with 13-14 movable spines. Propodus and carpus undivided (Fig. 5)	14 and 13 movable spines on IV and V pereiopods of right side, 16 on left pereiopods. Propodus and carpus undivided
Uropodal exopod	Outer margin with 6-12 teeth	Outer margin with 9 teeth	Outer margin with 9 teeth	11 on right and 10 on left outer margin
Uropodal endopod	Outer margin with 1-4 teeth	Outer margin with 3 teeth	Outer margin with 2 teeth	1 on right and 2 on left outer margin
Telson	Two longitudinal carinae with 3 spines, each with a hair at outer base. A pair of blunt spines in between the carinae, often a small spinule near base	Two longitudinal carinae with 3 teeth, each with a hair at outer base. 2 pairs of teeth anteriorly in between the carinae	Two longitudinal carinae with 3 teeth, each with a hair at outer base. In between carinae teeth absent (Fig. 2)	Two longitudinal carinae with 3 teeth, anteriormost pair alone with two hairs at outer base. Rest with one hair. In between carinae teeth absent

Characters of *M. validum* and *M. semilaeve* after Holthuis (1947).

The body colouration of the living animal is pale yellow, flagella of antennule and antennae, merus, carpus and fingers of the third pereiopod are dull brown. Numerous minute black spots are found over the body, more densely on pleopods.

Eggs are fairly large and numerous and those in which the embryos are already visible measure 0.47-0.53 mm. long and 0.38-0.44 mm. broad.

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