

FIRST RECORD OF STENOPODIDEAN SHRIMP, *MICROPROSTHEMA VALIDUM* (CRUSTACEA: DECAPODA: SPONGICOLIDAE) FROM WEST COAST OF INDIA

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ABSTRACT

In the present study stenopodidean shrimp, *Microprosthema validum* is first time reported from the West coast of India. This species is widely distributed along the Indo-Pacific region and previously reported from the Southeast coast of India. The details of morphological characters of the species are presented in the report.

Figure : 01

References : 11

Table : 00

KEY WORDS : *Microprosthema*, New record, Stenopodidean shrimp, West coast of India,

Introduction

The shrimp species of Genus *Microprosthema* are mostly free living inhabiting shallow coral reef, rocky shores, seagrass beds and rubble flats^{2,9,11}. A total of 16 species are described under genus *Microprosthema* worldwide¹¹ out of which two species, *M. validum* and *M. semilaeve* are reported from Indian waters^{3,6,7,8}. *M. validum* is widely distributed along the Indo-West pacific region⁴ and in Indian waters. It is so far reported only from Palk Bay and Gulf of Mannar located on East coast of India^{3,6}. The crustacean fauna of Gujarat state is scarcely studied¹¹ and to fulfill the lacuna of Information detail survey was carried out in different coastal areas of state for the collection of crustacean fauna. During the survey, one specimen of stenopodidae shrimp was collected, which is identified as *M. validum*. The present record shows distribution range extension of the species on the west coast of India. The morphological details of the species are given in the report.

Material and Methods

The specimen of the species was collected from the coral reef area of Pirotan Island (23°36' 14N; 69° 57' 30E), located in the territory of Marine National Park, Jamnagar district, Gujarat. Handpicking method was adopted for the collection of specimen during the low tide.

The fresh specimen was photographed and preserved in 70% alcohol for further identification. The examined specimen was deposited in the Zoology museum, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India with the museum accession number ZI-AR-PR-38. The measurements were taken in mm. The morphological terminology depicted¹⁰.

Abbreviation: TL: Total body length (tip of the rostrum to tip of the tail), Coll.: collector

Results and Discussion

Systematics

Order: Decapoda

Infraorder: Stenopodidea

Family: Spongicolidae

Genus: *Microprosthema*

Species: *Microprosthema validum* (Fig. 1)

Synonyms

Microprosthema valida

Stenopus robustus

Stenopusculus crassimanus

Microprosthema validum

Materials Examined

One male (TL-1.4 cm) (ZL-AR-PR-38), Pirotan

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Island (23°36' 14N; 69° 57' 30E), Jamnagar, Gujarat, from coral and rock reef, coll. by Barkha Purohit, 22 October 2015.

Diagnosis

Body robust with very hard shell or stony in appearance; eyestalk bearing two spines on inner region; rostrum short, tapering and slightly curved downwards, armed with six dorsal spine; carapace broader than longer, covered by spinules, anterior portion rather strong, a longitudinal row of three spines from base of rostrum to cervical groove; first abdominal segment carinated, bearing a distinct spine near the base of pleuron; second abdominal segment carinated transversely with two prominent projection near the base of pleuron; third abdominal segment divided into two portions by transverse carina, hind portion longer, transverse carina interrupted at four places forming three teeth; fourth and fifth abdominal segments glabrous, dorsal carina reduced, pleura ends with a pointed tip, no additional spine present. Ischium of third maxilliped longer than merus, armed with three spines, among the distal one is strongest; inner margin with minute spine, merus rather narrow with two large spines. First pereopod slender and shorter; all

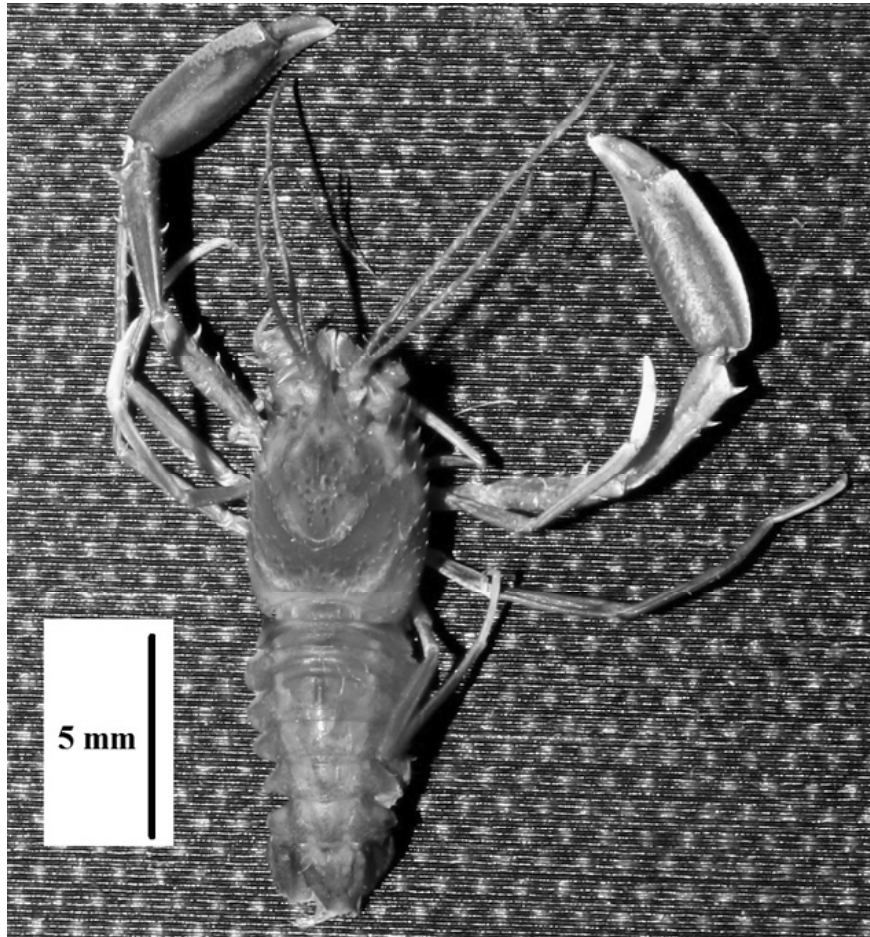


Fig. 1: *Microprosthema validum* Stimpson, 1860 (ZL-AR-PR-38), male (TL-1.4 cm), dorsal view.

segment smooth; second pereopod similar to first but longer than first; merus with three spine on anterior region; third pereopod strong, carpus shorter than propodus, its carinated dorsally and concave from inside; three spines and some spinules present on dorsal side; spinules present on both lateral and ventral margin; propodus swollen but rather narrow; dorsal margin fully serrated about twenty teeth and anterior half of ventral margin also serrated with fifteen teeth; dactylus half as long as propodus, cutting edge with a large median tooth which fits in the concavity between two teeth present on cutting edge of immovable finger. Fourth and fifth pereopods similar in shape and long, dactylus compressed laterally and biunguiculate; propodus three times longer than dactylus, not segmented; carpus longer than propodus and subdivided into four segments; base of the telson as long as uropods, distal part narrow, two longitudinal carina present with three spine, each spine with a hair at outer base; one spinule present near base. Three pair denticulate teeth present on endopod of uropods and seven teeth on exopod.

Colouration

Carapace is reddish orange at the base of rostrum, scattered anteriorly and pale yellow patches present. The outer margins of abdominal segments are reddish and red chromathophores are scattered on whole surface. The colour of third pereopod is similar to the carapace and finger tips are whitish. Others pereopods are light pink.

Distribution

M. validum is widely distributed throughout the Indo-West Pacific, Mauritius, Red Sea, Djibouti, Persian Gulf, Pakistan, Chagos Archipelago, India, Peninsular Malaysia, Japan, Indonesia (Java) and Australia⁵.

In India waters the species is reported from Palk Bay and Gulf of Mannar (Tamilnadu)^{3,6}.

Remarks

The specimen of *M. validum* Stimpson, 1860 examined in the present study, showed agreement with the description and illustration^{1,4} but differs in case of segmentation of carpus and propodus of fourth and fifth pereopodus. The specimen examined⁴ had propodus of fourth and fifth pereopod subdivided into three segments¹, had unsegmented carpus and propodus. The specimen

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 examined in the present study has four segments carpus and unsegmented propodus.

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