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A NEW SPECIES OF SCYLLARID LOBSTER *SCYLLARUS TUTIENSIS* (SCYLLARIDAE : DECAPODA) FROM THE TUTICORIN BAY IN THE GULF OF MANNAR

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ABSTRACT

A new lobster *Scyllarus tutiensis* from Tuticorin Bay, Gulf of Mannar is described. The salient characters of the new species are: absence of median tubercles on last thoracic sternum; anterior tooth of inner margin of orbit small and straight; median carina of abdomen not rised; a conspicuous colour spot on mid dorsal line of first abdominal segment partially hidden under carapace.

INTRODUCTION

THE FAMILY Scyllaridae comprises of sand and mud lobsters commonly known as slipper lobsters. The body is dorsoventrally flat and varies in size between 2 and 40 cm. The broad plate antennae are characteristically short, while the antennules are short and slender. The Scyllaridae consists of six genera widely distributed in the tropical and temperate waters. They occupy different habitats extending from shallow to the deep seas where the bottom is sandy or muddy. The genus *Scyllarus* comprises of small lobsters (Holthuis, 1984), all characterised by less than 10 teeth on the distal segments of the antennae. These teeth are very distinct and wide. Abdominal segments marked by a transverse groove or arborescent narrow grooves without elevated crenulated structures. The adults reach a maximum size of 10 cm.

Thirtyfive species of *Scyllarus* lobsters have been found distributed in the world oceans (Burukovskii, 1974; Williams, 1988). Among that, seven species have been recorded from Indian waters (George, 1967; Prasad and Tampi, 1957, 1969). Out of these, four species have been found distributed in the Bay of Bengal; *Scyllarus sordidus* and *S. rubens* particularly from the Gulf of Mannar. Prasad and Tampi (1967, 1969), Tampi (1973) Prasad *et al.* (1975) have reported the distribution of the phyllosoma larvae of eight species of the genus *Scyllarus* from the Indian Ocean. During our routine cruises of the college research vessel 'Dolphin' a new species of the genus *Syllarus* was encountered off Tuticorin (Lat. 08° 44' 18" N; Long. 78° 12' 54" E) in the Tuticorin Bay at 10 m depth. This species, hitherto unknown, is described here as *Scyllarus tutiensis* and comparison made with the other two related species of this genus.

ETYMOLOGY

Tuticorin is a place of fisheries importance for both finfish and shellfish. Spiny lobsters of the genus *Panulirus* form one of the major components of the fishery resources in Tuticorin. The common species are *Panulirus ornatus* and *P. homarus* which inhabit the coral rocky bottom. In between the coral beds there are areas of sand and mud. The occurrence of

this new species in Tuticorin Bay is of significance in terms of species diversity in the Tuticorin waters. Hence the new species has been named after Tuticorin. Suggested common name is Tuticorin lobster.

Species Description

Scyllarus tutiensis sp. nov. (Fig. 1 a)

Holotype: Lob. 9. Total length 40 mm. Carapace length 16 mm. female — berried, deposited at the Fisheries College Reference Museum (FCRM) Tuticorin, Tamil Nadu, India, May 1990.

Paratypes: (1) 8 specimens. Total length 30 mm to 58 mm. (2) 2 specimens. Total length 46 mm to 52 mm. deposited in the Marine Biological Station Reference Museum (BSRM) at PortoNovo, Annamalai University in Sonth India.

This description is based on 14 specimens including 8 females and 6 males of total length 30 mm to 58 mm.

Carapace almost rectangular. Eyes not on lateral margin. Dorosmedian ridge (Carina) of carapace with three short blunt spines. Posterior two spines with tuberculate short

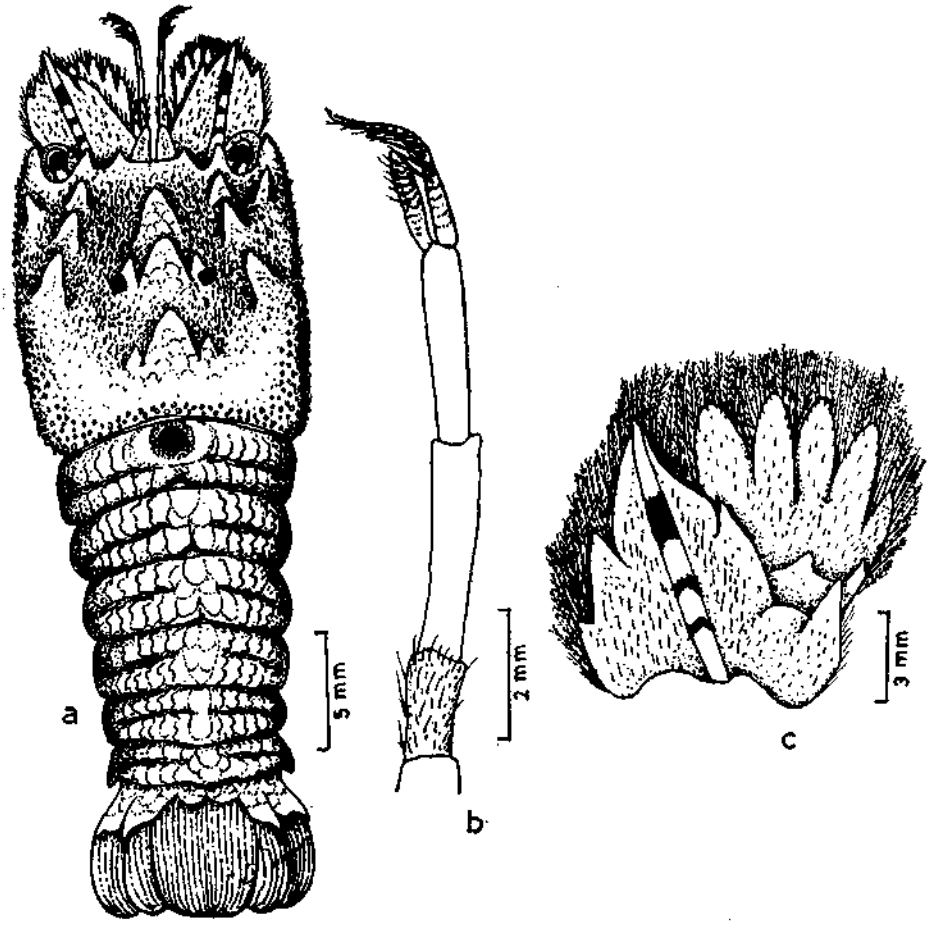

Fig. 1 a. *Scyllarus tutiensis* sp. nov. - Dorsal view, b. left antennule and c. left antenna.

spines on either side. Diagonal row of short blunt spines on anterior half of carapace. Inner anterior orbital spine small and straight. Prominent patches of tubercles on posterior and postero-lateral margins of carapace.

Antennules (Fig. 1 b) short with three elongated basal segments, proximal segment with setae and others smooth. Two short processes one shorter (exopodite) and other somewhat longer (endopodite) and bent outwards, both with long setae. Antennal plates (Fig. 1 c) broad, distal plate with 5 distinct teeth. Margin with plumose setae. Legs without pincers. No tubercle on last thoracic sternum. Short brownish hairs among spines on carapace. Abdomen without distinct carina. Abdominal segments with transverse grooves interrupted at mid dorsal region. Tubercles flat and scale-like on abdominal segments. Short brownish hairs on margins of tubercles and transverse grooves.

Overall colour of carapace and abdomen light brown to dark brown. Distinct colour marking on antennal plates, carapace and abdomen. Carina of proximal antennal plate with one large and two small bluishblack colour bands. A bluishblack colour spot on either side (at base of lateral spines) of middle spine of median carina on carapace. A conspicuous purple round spot encircled by bluishblack and white rings on mid dorsal line of first abdominal segment, partially hidden under carapace. In older specimen, entire spot bluishblack. Legs with alternate brown and white bands.

Distribution : Tuticorin Bay — Gulf of Mannar — Bay of Bengal.

Relationship with Other Species

This species is closely related to *Scyllarus paradoxus* and *S. posteli*, but differs from them in several characteristics.

Scyllarus tutiensis sp. nov. : No median tubercles on last thoracic sternum. Anterior tooth of inner margin of orbit small and straight. Median carina of abdomen not rised. A conspicuous colour spot on mid dorsal line of first abdominal segment, partially hidden under carapace.

A comparison of the characteristics of *S. paradoxus* and *S. posteli* with *S. tutiensis* shows *S. tutiensis* to be distinctly a new species.

Scyllarus paradoxus Miers, 1881 : Median tubercles of last thoracic sternum small. Anterior tooth of inner margin of orbit longer than posterior one. Median carina of abdomen slightly raised.

Scyllarus posteli Forest, 1963 : Median tubercle of last thoracic sternum sharp and curves backwards. In males additional pair of large lateral teeth present. Anterior tooth of inner margin of orbit shorter than posterior one ; median carina of abdomen slightly raised.

Scyllarus tutiensis sp. nov. differs from *S. rubens* (Alcock and Anderson), *S. batei* (Bate) and *S. sordidus* which were recorded from the Bay of Bengal.

Scyllarus rubens (Alcock and Anderson, 1894) : Anternal squmae divided by two oblique crests. Median carina present on abdominal somites II and V. Scaly sculpture on abdomen prominent only on somite VI and on pleura.

Scyllarus batei (Bate, 1888) : Anterior unsculptured part of terga of abdominal somite II smooth and without transverse groove. Propodus of pereopods II and III broad and laterally compressed.

Scyllarus sordidus (Stimpson, 1860) : Rostrum distinctly dentate. Propodus of pereopods II and III slightly compressed. Typical dendroid pattern found on abdominal somites II to IV. Additional transverse groove present between posterior marginal groove of carapace and its posterior margin.

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