

# Deep Sea Water Decapod, *Munidopsis* Species (Crustacea: Decapoda: Munidopsidae) off Thoothukudi Coast of Gulf of Mannar Collected in 2019-2020: Primary Documentation of 53 Species, India (08° 31.912'N 78° 25.327'E) (318 M)

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## ABSTRACT

The present investigation of squat lobster *Munidopsis ceres* is reported for the foremost time off Thoothukudi coast of Gulf of Mannar, India. The very rich in deep sea fauna and flora biodiversity of the Gulf of Mannar during the seasonal occurrence of specimen. Only one specimen of the present species was collected as an incidental by-catch in the unfathomable, off Thoothukudi coast of Gulf of Mannar, the GPS location of 08° 31.912'N 78° 25.327'E at a depth of 318 m from 22.83 miles away from this Thoothukudi fishing harbour. The total number of squat lobsters from India now rose to 53. The present records show that its extended distribution from Gulf of Mannar to New Caledonia

**Keywords:** *Munidopsis ceres*; Munidopsidae; Thoothukudi coast of Gulf of Mannar, India

## INTRODUCTION

Squat lobsters are tiny, plane, lobster-like crustaceans with long claws, divergent from true lobsters in having only three pairs of walking legs and a short 'tail' or abdomen those folds under the body. 'Squat lobster' is the general appellation for two indistinctly correlated assemblages of deep-sea decapod crustaceans that have a similar body form, the Galatheoidea and Chirostyloidea [1]. The chirostyloid squat lobsters are significantly less diverse than galatheoids, with 345 and 1256 accepted species names, respectively by WoRMS Editorial Board in 2019 [2]. A total number of 52 species (11 from Family: Chirostylidae and 41 from Family Munidopsidae) has recorded, mostly from the deeper waters of Lakshadweep Sea, Arabian Sea, Bay of Bengal and Andaman Sea. Taxonomical studies on the Chirostylid and Galatheid lobsters of India are dealt with by Alcock in 1894 & 1901 respectively [3,4], Alcock & Anderson in 1895 [5], Doflein et al. [6], George et al. [7], Rao and Tirmizi et al. [8], Thirumilu et al. [9], Vaitheeswaran and Venkataramani [10] and Vaitheeswaran et al. [11-16], Komai et al., Macpherson et al. Although, the closer examining the deep-sea crustaceans' catches landed by larger trawlers, which operated in off Thoothukudi waters, one specimen of squat lobsters was attained

[17]. On earlier investigation, it was identified as *Munidopsis ceres* and it was new to Thoothukudi fishing region, India. Thus, the total number of squat lobsters from India rose to 53. The present investigation of this specimen from Thoothukudi coast of Gulf of Mannar is the first specimen from the Southeast coast of Indian main land.

## MATERIALS AND METHODS

One male specimen (Total length 35 mm; carapace length 14 mm; weighing about 5 gm). *Munidopsis ceres* (Figure 1) was collected offshore Thoothukudi coast of Gulf of Mannar, with help of ecosounder the exact location has observed 08° 31.912'N 78° 25.327'E at a depth of 318 m, 22.83 miles away from this landing centre. Thoothukudi district, Tamil Nadu, India.

## Taxonomy

Family Munidopsidae Ortmann, 1898

Class Malacostraca

Order Decapoda

Genus *Munidopsis* Whiteaves, 1874

Species *Munidopsis ceres* Macpherson, 2007 [18] ((Figure 1).

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The specimens examined agree quite well with the original description and figures provided by Macpherson et al. [18]. Carapace as long as broad, dorsal surface moderately convex from side to side, sparsely covered with tubercles and nearly devoid of setae; cervical groove moderately distinct, regions well defined, gastric and cardiac regions more convex than branchial regions. Gastric region with pair of large epigastric processes. Cardiac region triangular, preceded by deep transverse groove. Rostrum broad, nearly horizontal or deflexed in lateral view, 0.3 length of remaining carapace, apex blunt, maximum width one-quarter carapace breadth; lateral margins strongly concave in proximal half; dorsal surface slightly convex, with numerous granules, and carinate in midline. Frontal margin concavely transverse behind ocular peduncle, leading to slightly produced process behind antennal peduncle, then concavely transverse toward anterolateral corner of carapace; lateral margins weakly convex, anterolateral corner produced into a large spine followed by 3 large acute processes, first 2 between ends of each anterior and posterior branches of cervical groove and third one behind end of posterior branch. Posterior margin preceded by elevated granulated ridge (Figure 2).

**Colour:** Over-all colour of body orange and reddish by Macpherson et al. [18].

**Remarks:** According to Macpherson et al. [18] has reviewed that the occurrence of species is closely related to *M. papanui* Schnabel

& Bruce, 2006 from New Zealand. The present specimen has reported off Thoothukudi coast of Gulf of Mannar, Southeast coast of India. Both species have the dorsal surface of the carapace, abdomen and pereopods armed with numerous granules and tubercles and a blunt median process on the abdominal targets 2 and 3 by Macpherson et al. [18] (Figure 3).

**Distribution:** The present records show that its extended distribution from Gulf of Mannar, India (318 m) to New Caledonia, between 500 and 1074 m.

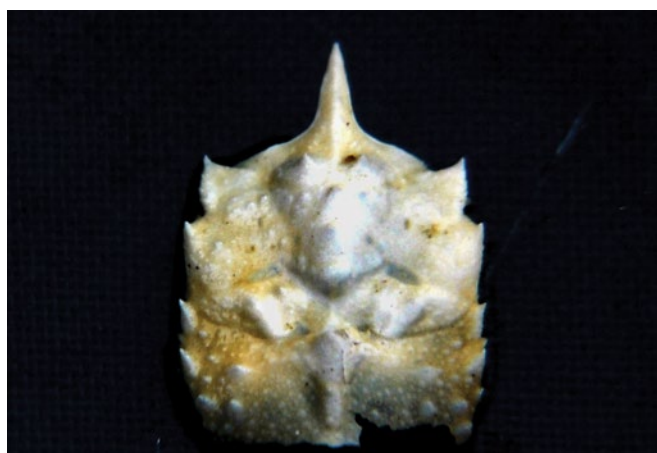


Figure 1: *Munidopsis ceres* Macpherson, 2007 – View of Carapace.



Figure 2: *Munidopsis ceres* Macpherson, 2007 – Dorsal View.

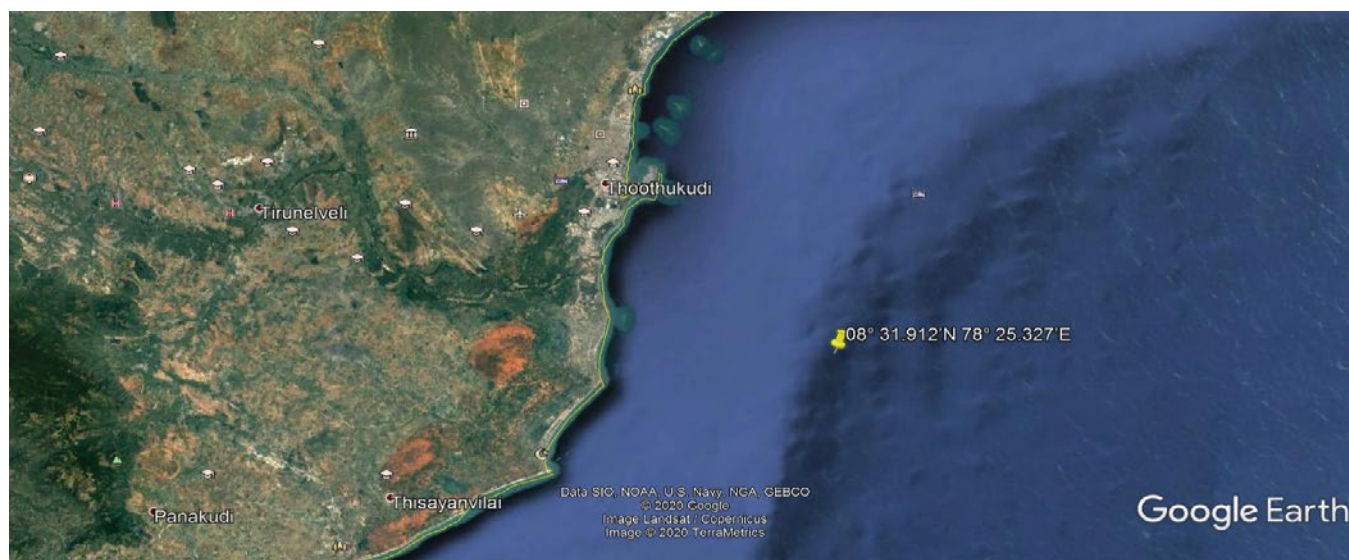


Figure 3: Overview map of Thoothukudi coast of Gulf of Mannar, India, showing the sampling site of *Munidopsis ceres*.

## CONCLUSION

The total number of squat lobsters from India now rose to 53. The present records show that its extended distribution from Gulf of Mannar to New Caledonia.

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