

Article

First report on *Neopetrolisthes maculatus* (H. Milne Edwards, 1837) (associated with *Stichodactyla haddoni* (Saville-Kent, 1893) from Grub Island, Andaman Islands

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Abstract

The porcelain crabs are very less studied animals in Andaman and Nicobar Islands. The present paper reports first record of porcelain crab *Neopetrolisthes maculatus* (H. Milne Edwards, 1837) in these island, *Neopetrolisthes maculatus* inhabits the coral reef region and associated with sea anemone (*Stichodactyla haddoni*). The taxonomical descriptions of the species are given in this paper.

Key words Andaman; crab; Grub Island; Mahatma Gandhi Marine National Park; Wandoor.

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1 Introduction

The porcellanid crabs are one of the common crustaceans in tropical shallow waters. Only few studies have been carried out on Porcellanidae crabs in India and especially in Andaman and Nicobar Islands (Heller, 1862; Sankolli, 1963a; Henderson, 1893; Southwell, 1906 & 1909; Gravely, 1927; Sankarankutty, 1961; Haig, 1978). The genus *Neopetrolisthes* Miyake, 1937 contains two or three Indo-West Pacific species and they are usually associated symbiotically with large sea anemones of the genus *Stichodactyla* Brandt (this genus has been treated as *Stoichactis* Haddon, Miyake, 1942; Haig, 1979; Debelius, 1984). Prakash et al. (2013) provided an updated checklist of porcellanids recorded from India, including 30 species in 11 genera. The descriptions of newly recorded porcelain crab *Neopetrolisthes maculatus* (H. Milne Edwards, 1837) are given in this paper.

2 Study Area and Methodology

2.1 Study site

Survey was conducted during March 2011 at Mahatma Gandhi Marine National Park in region of Grub Island (Fig. 1).

2.2 Data collection

Based on the taxonomic study the specimen was identified as male and Porcelains crabs were collected. Further detailed taxonomic study it was identified as male *Neopetrolisthes maculatus* (H. Milne Edwards, 1837) and conformed as new record from Andaman and Nicobar Islands. The *Neopetrolisthes maculatus* species were found to live as on Sea anemone and were collected from depths ranging from 8 to 13 metres using SCUBA diving. The collected specimens were identified by following Osawa and Chan (2010). The specimens was preserved in 5-10% formalin and deposited in National Zoological Collection of Zoological Survey of India at Port Blair.



Fig. 1 Map showing the study area in Grub Island, in Mahatma Gandhi Marine National Park, South Andaman.

3 Results and Discussion

Kingdom ANIMALIA

Phylum ARTHROPODA

Class MALACOSTRACA

Subclass EUMALACOSTRACA

Order DECAPODA

Infraorder ANOMURA Macleay, 1838

Superfamily GALATHEOIDEA Samouelle, 1819

Family PORCELLANIDAE Haworth, 1825

Genus *Neopetrolisthes* Miyake, 1937

Neopetrolisthes maculatus (Fig. 2)

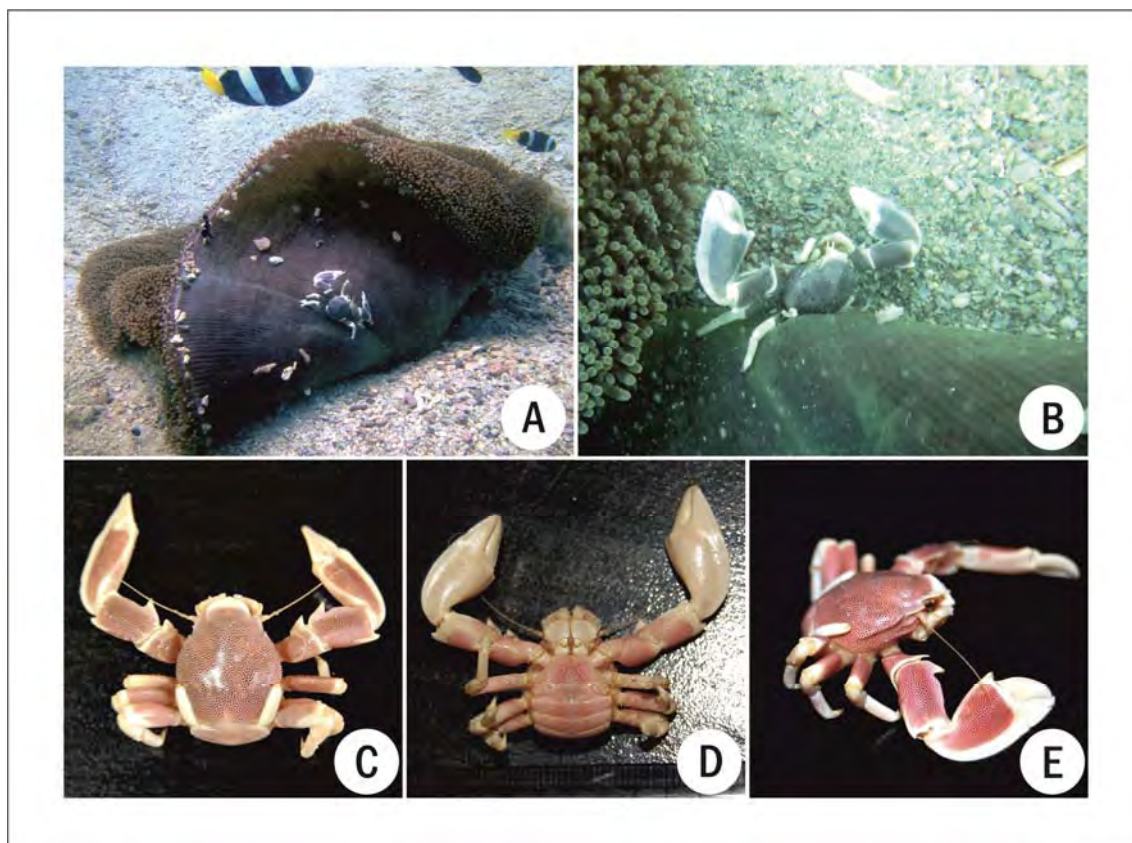


Fig. 2 *Neopetrolisthes maculatus* (H. Milne Edwards, 1837). A, B- live specimen, associated with a large sea anemone (*Stichodactyla haddoni*) C- Dorsal view, D- ventral view, E- frontal view.

Taxonomy References

Porcellana maculata H. Milne Edwards, 1837: 253.

Neopetrolisthes ohshimai Miyake, 1937a: 35.

Neopetrolisthes maculatus Haig, 1979: 127.

Description

Material examined: Specimen: 1 male, Carapace: width: 1.5 cm; length: 1.8 cm; front margin 0.6 cm; abdomen 0.8 cm; Cheliped. length: 2.0 cm; width: 1.0cm; ZSI. Reg No. 6972.

Diagnosis

Carapace nearly smooth, but with numerous short striae on dorsal surface; protogastric ridges not distinctly elevated; branchial regions without elevated parts; no supra ocular spine; pair of epibrachial spines present; rostrum without median groove on dorsal surface. Chelipeds with numerous short striae on dorsal surface of carpus and palm; carpus with at least distinct proximal tooth on dorsoflexor margin, small projection present at dorso-extensor end. Ambulatory legs with propodi comparatively short, each with 2 corneous spines at distoflexor end; dactyli each with 2 corneous spines on flexor margin (Fig.3).

Coloration

The carapace and chelipeds have a uniform pattern of numerous small, reddish purple spots. Locality: Grub Island, South Andaman (Latitude 11°35.334' N, Longitude 092°35.739' E) Ecological Habitat: Shallow and subtidal water, associated with large sea anemones (*Stichodactyla haddoni*) (Saville-Kent, 1893).

Distribution Range

Indo-west Pacific, east coast of Africa, Western Australia and Taiwan. Sankarankutty (1963) reported this species as *Petrolisthes ohshimai* (Miyake, 1937). This species is now considered as a junior synonym of *Neopetrolisthes maculatus* (H. Milne Edwards, 1837).

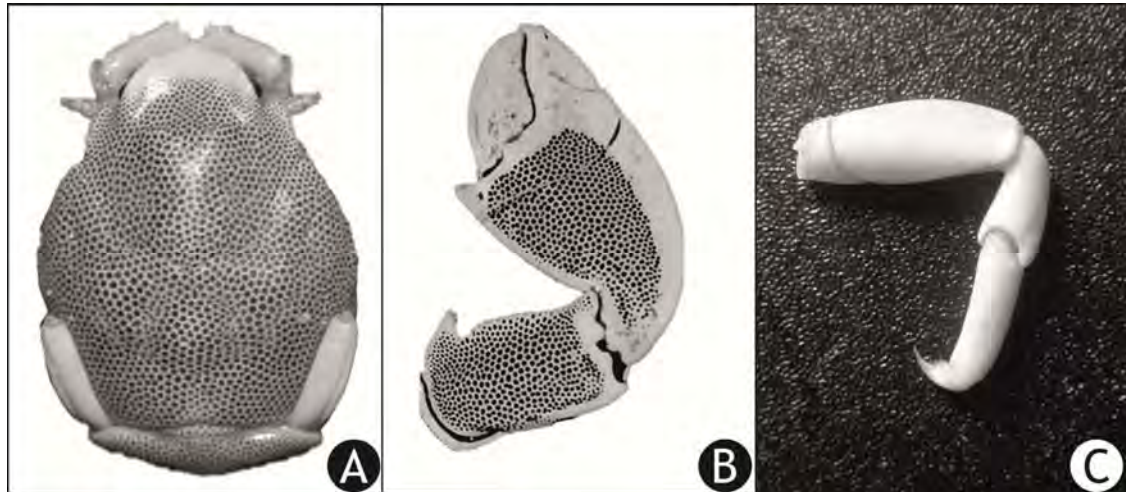


Fig. 3 *Neopetrolisthes maculatus* (H. Milne Edwards, 1837). 3A. Carapace, and anterior appendages, dorsal view, 3B. Left Cheliped dorsal view, 3C. Third ambulatory leg (lateral view).

4 Conclusion

The present report is based on a small collection of porcellanid crab from the Grub Island, Andaman & Nicobar Islands. The present finding is a new record for Andaman & Nicobar Islands, India.

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