



# New record of *Propeamussium sibogai* (Mollusca: Bivalvia: Propeamussiidae) from Indian waters

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## Short Communication

### Abstract

Studies on deepwater molluscs are few and far between. Seven species under the genus *Propeamussium* have been previously recorded from India. The present paper reports new distribution of *Propeamussium sibogai* (Dautzenberg and Bavay, 1904) from the Indian coastal waters.

**Keywords:** New distribution, Central Indian Ocean, Andaman Islands, *Propeamussium sibogai*

### Introduction

The Family Propeamussiidae has six valid genera, among which five are living (*Catillopecten*, *Cyclopecten*, *Propeamussium*, *Parvamusium* and *Similipecten*) and one fossil (*Filamussium*) (Mollusca Base, 2021a). The genus *Propeamussium* consists of 24 species world wide (Mollusca Base, 2021b), and the species recorded from India include *Propeamussium alcocki* (Smith, 1894), *P. andamanense* (Bavay, 1905), *P. andamanicum* (Smith, 1894), *P. arabicum* (Dijkstra and Janssen, 2013), *P. caducum* (Smith, 1885), *P. jeffreysii* (Smith, 1885), *P. investigatoris* (Smith, 1906), *P. solitarum* (Smith 1894) and *P. watsoni* (Smith, 1885) (Smith, 1885, 1894, 1906; Bavay, 1905; Dijkstra, 1995; Subba Rao and Dey, 2000; Huber, 2010, Ramakrishna and Dey, 2010; Arathi *et al.*, 2015; Subba Rao, 2017). In this paper, a report on the new distribution of *Propeamussium sibogai* (Dautzenberg and Bavay, 1904) from the Pacific ocean to Indian coastal waters is discussed.

### Material and methods

Mollusc specimens were collected during the deep-sea exploratory fishery surveys of FORV Sagar Sampada (FORV SS), conducted by the Centre for Marine Living Resources and Ecology (CMLRE) in deeper waters of the Nicobar Islands. A High-Speed Demersal Trawl-Crustacean Version collected the specimens (HSDT-CV) operated at a speed of 2.5 knots, off the Andaman coast of India (9°31'N and 75°33'E). Bivalve shells were segregated from the trawl catch and washed thoroughly in freshwater before preserving them in 70% ethanol. The specimen was identified using the keys as suggested by Dijkstra (1995, 2001, 2013), Dijkstra and Maestrati (2008) and Huber (2010). Shells were photographed and morphometric measurements (shell height and shell width) were taken using a vernier calliper. The voucher specimen was deposited in the National Zoological Collections of Zoological Survey of India, Andaman and Nicobar Regional Centre, Port Blair (accession number: ZSI/ANRC-21848).

### Results

#### Taxonomy

Superfamily: Pectinoidea Rafinesque, 1815

Family: Propeamussiidae Abbott, 1954

Genus: *Propeamussium* de Gregorio, 1884; 119 (proposed as a subgenus of *Pecten*).

*Propeamussium sibogai* (Dautzenberg and Bavay, 1904) (Fig. 1A and B)

**Type material:** Specimen illustrated by Dautzenberg and Bavay (1904) Holotype (H 48.5 mm, pv) ZMA Moll. 304001.

**Type locality:** Indonesia, Bali Sea, 7° 15'S, 115° 15'E, 289 m, muddy bottom, dead and broken shells, 14.iii.1899 (Siboga stn 12).



Fig. 1. *Propeamussium sibogai* (ZSI/ANRC-21848), Andaman (9°31'N and 75°33'E) of Bay of Bengal, India (A and B Left valve dorsal and ventral views respectively)

### Materials examined

One live specimen, from sandy bottom; ZSI/ANRC-21848 (shell height 18mm, shell width 19 mm) (Fig. 1. A, B); dated 18.11.2018; 11°138.4 N, 93°30007E; Andaman Sea, off Great Nicobar Island, Andaman Sea; Collected by K. K. Bineesh.

### Description

Shell height 18mm, shell thin, fragile, almost rounded, inequivalve, somewhat oblique. Left valve auricles smooth slightly raised on the lateral margins, hinge line almost straight, eight internal riblets and byssal notch absent. Left valve creamy brown, internal riblets orange in colour and margins are white.

### Distribution

*P. sibogai* (Dautzenberg and Bavay, 1904) is widely distributed and previously reported from Indo-West Pacific 90-740 m (Huber, 2010; Dijkstra, 2013), southern Japanese waters to tropical Indo-West Pacific: 150-300 m (Hayami, 2000); Indonesia (Dautzenberg and Bavay, 1912; Knudsen, 1967; Dijkstra and Kastoro, 1997); Philippines (Knudsen, 1967;

Dijkstra, 2013); South Africa (Knudsen, 1967); New Caledonia (Dijkstra, 1995; 2001) Wallis and Futuna Islands, Loyalty Islands and Vanuatu Archipelago (Dijkstra, 1995; 2001), Fiji, Tonga, Solomons (Dijkstra and Maestrati, 2008). The present material is newly recorded from the Bay of Bengal, Indian coast.

### Remarks

Dautzenberg and Bavay (1904) first described *Propeamussium sibogai* off Bali Sea, Indonesia. Subsequently, Dautzenberg and Bavay (1912) and Knudsen (1967) reported this species from South Africa. Dijkstra (1995, 2001) recorded this bivalve from New Caledonia, Loyalty Islands, Wallis Futuna Islands and Vanuatu. Subsequently, Dijkstra and Kastoro (1997) reported this species from Indonesia. Subsequently, Huber (2010) recorded this bivalve from Indonesia, the Bali Sea, northwest Australia, Japan and Madagascar. Later, Dijkstra (2011, 2013) reported it from the Philippine Islands, the Mozambique Channel, and northwestern and southern Madagascar and Dijkstra and Maestrati (2015) from the Solomon Islands. More recently, it was recorded from Australia by Dijkstra and Maestrati (2008) and Dijkstra and Beu (2018). The current record of this species from Andaman reveals its extended distribution in the northern and central Indian Ocean. This is the extended distribution of the species from the Pacific Ocean to the Indian Ocean.

### Discussion

In India, deeper water molluscs are the least studied and are in priority for taxonomic documentation (Bijukumar and Ravinesh, 2015). The majority of the molluscan surveys were conducted from Investigator expeditions and coral reefs and associated ecosystems or biodiversity databases of all-phyla studies. The pioneering works on the deepwater malacofauna of the Arabian Sea and Bay of Bengal were performed by Smith (1885, 1894, 1906) and Bavay (1905) described eight species of *Propeamussium* [*P. alcocki* (Smith, 1894), *P. andamanense* (Bavay, 1905), *P. andamanicum* (Smith, 1894), *P. caducum* (Smith, 1885), *P. jeffreysii* (Smith, 1885), *P. investigatoris* (Smith, 1906), *P. solitarum* (Smith, 1894) and *P. watsoni* (Smith, 1885)] from different part of Indian coastal waters. After the species description, these species are not recorded from India. Recently Arathi *et al.* (2015) reported *Propeamussium arabicum* Dijkstra and Janssen, 2013 from the southwest coast of India. More frequent surveys and deepwater explorations are required in the Arabian Sea and Bay of Bengal to understand and document these organisms from Indian waters.

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