

New Occurrences of Side-gilled Slugs, *Pleurobranchus mamillatus* (Quoy & Gaimard, 1832) off Tuticorin Coast, Tamil Nadu, India.

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The present investigation provides information on the availability and distribution of Side-gilled slugs, *Pleurobranchus mamillatus* which were caught by trawl gears operated along the Tuticorin coast of South (8° 40' 782" N and 78° 15' 469"E) India at a depth of around 15-20 m during 18 September 2013. The specimens were identified as *Pleurobranchus mamillatus*. This species has not been reported earlier and therefore considered as a new record to the inshore waters of Gulf of Mannar along Tuticorin coast. However, this species has been reported to be distributed New Guinea, New Caledonia, New South Wales, Australia, and possibly from the Great Barrier Reef and Southern Africa, Okinawa, Japan, Indonesia, Zanzibar, and Lakshadweep (India). A note on the morphological features of this specimen is detailed in this paper.

Keywords: Side-gilled Slugs, *Pleurobranchus mamillatus*, Tuticorin, TN.

Introduction

Sea slugs are the lesser-known molluscan group and these are one of the most beautiful and diverse creature's displays attractive colors in the ocean. Side-gilled slugs, *Pleurobranchus mamillatus* is a large and tuberculate Pleurobranchomorpha sea slug, characterized by bright pink or yellow rings or spots encircling the base of each tubercule. In some specimens of sea slug the pink spots are outlined in purple. Some of the tubercules are usually very long, in some specimens absent also. It was first reported by Quoy & Gaimard's,^{5,6} from Mauritius. It has been found in New Caledonia (personal observations), New South Wales, Australia (Allan,¹), and possibly from the Great Barrier Reef (Kenny, 1970) and southern Africa (MacNae, 1962). It has also been recorded from Kerama Islands, Southern Japan as *P. grandis* by Atsushi Ono⁷. Indonesia¹⁰, Zanzibar⁴, It has also been recorded from Lakshadweep, India (Apte²). In recent past years, many workers^{8,9} studied Opisthobranch fauna from western Indian Ocean. Yonow⁸ described two new species and ten new records of Opisthobranchs from the western Indian Ocean and Sethi⁷ reported the sea slug, *Kalinga ornata* from the inshore waters of Bay of Bengal along Chennai coast, India. Present study reports on

availability of a new Side-gilled slugs that was collected from the Gulf of Mannar along the Tuticorin coast. Identification, availability to the species level was carried out as per the earlier reports and this is for the first time from the east coast of India.

Materials and Methods

During our study on marine molluscs from the Gulf of Mannar, off Tuticorin Coast, we have come across in trawl net catches of *P. mamillatus* which is found to be uncommon for this coast until now and this species were caught approximately 35-40 km southeast off Tuticorin at a depth range of 15 to 20 m (8° 40' 782" N and 78° 15' 469"E) by using a trawl net. Specimens were identified as *Pleurobranchus mamillatus* (Fig. 1 & 2) and were consistent with the specimens examined by Bombay Natural History Society, BNHS, Mumbai, India. For photographic documentation and detailed study, Digital Sony 16 Megapixel camera was used. The collected specimens were preserved in 70% (v/v) ethanol and deposited in National Biodiversity Referral Museum at CMFRI, Kochi.

Result and Discussion

Material Examined:

Pleurobranchus mamillatus (1specimens; Trawl net; Gulf of Mannar, Off Tuticorin Coast, (8° 40' 782" N and 78° 15' 469"E).

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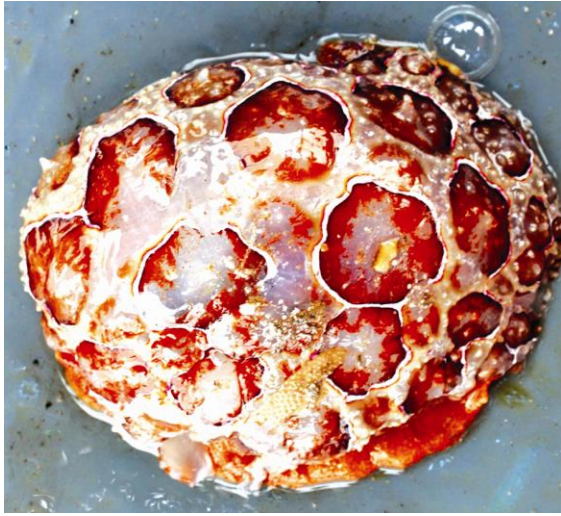


Fig. 1—Side-gilled slugs, *P. mamillatus* (Dorsal view) collected from Gulf of Mannar, Tuticorin Coast, Tamil Nadu.

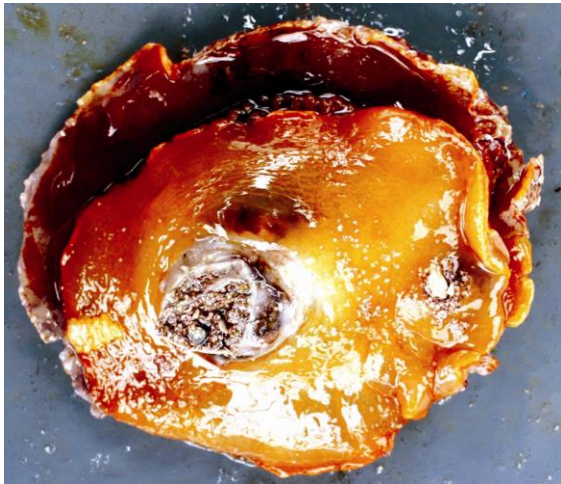


Fig. 2—Ventral side of Side-gilled slugs, *P. mamillatus* collected from Gulf of Mannar, Tuticorin Coast, Tamil Nadu.

Systematic:

Order: PLEUROBRANCHOMORPHA
 Super family: PLEUROBRANCHOIDEA,
 Family: PLEUROBRANCHIDAE,
 Genus: *Pleurobranchus*
 Species: *mamillatus* (Quoy & Gaimard, 1832)

Measurements and Description:

The total body length and width of sea slug was 93.05-104.97 and 80.25-89.02 mm respectively.

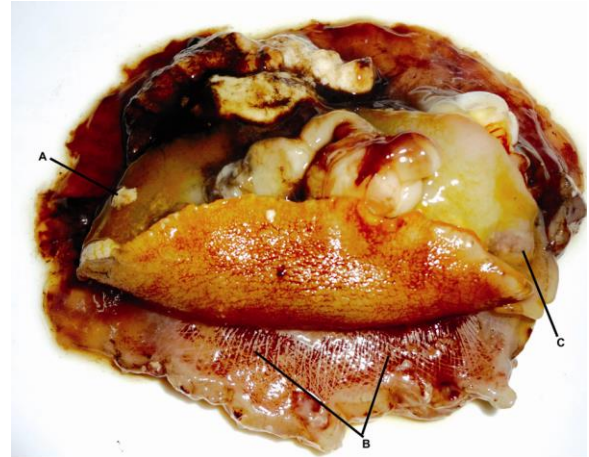


Fig. 3—Side-gilled Slugs, *P. mamillatus* (Ventral view) collected from Gulf of Mannar, Tuticorin Coast, Tamil Nadu (A-Gland, B- Gill, and C-Jaws).

Total body weight varied from 72.06-125 gm. Side-gilled slugs; *P. mamillatus* is a large and tuberculate Pleurobranchomorpha sea slug, characterized by bright pink or yellow rings or spots encircling the base of each tubercle (Fig.1 & 2) and in some specimens the pink spots are outlined in purple. Some of the tubercles are usually very long, in some specimens absent also (Fig. 3). This species is usually found on sandy and soft bottom, at depths to over 100-150 feet. Species measures up to about 150 mm in length. Sea slug is known to possess anti-cancer, anti-tumor and anti-viral compounds which are very useful in the pharmacological industry. In India, sea slugs are been used for the extraction of natural anti-cancer compounds like Soblidotin, Synthadotin/ILX651, Cemadotin, and Kahalalide F³. The fishery of sea slug was in infancy stage as it not consumed as food in India. However, in most of the times sea slugs are been discarded in the sea itself as it is considered as a low or no value catch But nowadays sea slugs caught by trawl as by-catch has been used for poultry manure and fish feed preparation.

Acknowledgements

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