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Sabellaria isumiensis n. sp. (Annelida: Polychaeta: Sabellariidae) from shallow waters off Onjuku, Boso Peninsula, Japan, and re-descriptions of three Indo-West Pacific sabellariid species

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Abstract

A new species of the genus *Sabellaria* Lamarck, 1812, is described from shallow waters off Onjuku, the Pacific side of Boso Peninsula, Chiba, Japan. *Sabellaria isumiensis* **n. sp.** is a gregarious species building colonies of tubes made of sand and shell debris over 2 m wide in the intertidal to subtidal zone of the rocky shores. The new species is distinguished by the character combination of having 1 or 2 pairs of nuchal spines, median teeth of outer paleae with 3–5 lateral spines, two kinds (long and short) of opercular paleae in the middle row of the crown, with slender blades of long ones curved outward. Morphological features of the species are described in details and compared to those of congeners from Japan and world-wide. We re-describe three poorly known sabellariid species, *Sabellaria javanica* Augener, 1934 from Java, Indonesia, *S. chandraae* de Silva, 1961 from Galle Force, Sri Lanka, and *Neosabellaria uschakovi* Kirtley, 1994 from the Far Eastern Seas of Russia. The descriptions are based on the type specimens, and we particularly emphasize the head morphology and paleal characters. We provide a summary of diagnostic characters in the genus *Sabellaria* and propose new morphological groupings that later will be tested in the framework of a formal phylogenetic analysis.

Key words: Indo-West Pacific, *Neosabellaria*, *Sabellaria*, paleae morphology, taxonomy

Introduction

The members of the family Sabellariidae are commonly known as sand-mansion or honeycomb worms. They are tube-dwelling filter feeding polychaetes that capture particles from the water column and occur worldwide from the intertidal zone down to 4500 m (Kirtley 1994). The body of sabellariids is subdivided into four unique regions, the operculum, thoracic and parathoracic segments, abdominal segments, and unsegmented posterior region. Anteriorly there is a distinctive operculum which blocks the tube opening and consists of two lobes the fusion of which varies between genera. The operculum bears the paleal crown made of 1–3 rows of highly distinctive golden ornamented strong chaetae, the paleae. Sensory nuchal organs, filamentous feeding tentacles, and a pair of short palps occur anterior to the mouth on the ventral side of the opercular stalk. The main body segments consist of three or four parathoracic segments identifiable by their oar-shaped notochaetae, followed by abdominal segments with notochaetal uncini. Posteriorly the body ends in a tubular unsegmented region.

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