Biodiversity assessment in the Lower Mekong basin: First record of the genus *Oncosclera* (Porifera: Spongillina: Potamolepidae) from the Oriental Region

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Abstract

Taxonomic richness of Thai Spongillina numbers so far seven species (five genera, one family). The first record of the genus *Oncosclera* Volkmer-Ribeiro, 1970 belonging to the family Potamolepidae Brien, 1967 is here reported with the description of a new species from the Pong River (NE Thailand, Oriental Region) in the framework of a biodiversity assessment in the Lower Mekong Basin. An emended diagnosis of the genus is also provided. The new species, ascribed to the genus *Oncosclera* for diagnostic traits of the skeleton and the gemmular architecture, differs from all the other known species of the genus in its unique combination of diagnostic traits. *O. asiatica* sp. nov. is characterised by i) more or less alveolate skeleton, ii) conulose surface with a network of branched subdermal canals, iii) acanthoxeas as dominant megascleres and less frequent acanthostrongyles, iv) gemmular theca sublaminar of compact spongin with a scantly developed pneumatic layer of fibrous spongin, and v) gemmuloscleres as acanthostrongyles from elongated to ovoid with tubercles/spines particularly dense towards the tips. Despite the extremely disjunct distribution *O. asiatica* is morphologically similar to *O. intermedia* and *O. jewelli* from the Neotropical Region and *O. gilsoni* from Pacific Islands, from which the former diverges for megascleres and/or gemmuloscleres traits.

Key words: Freshwater sponges, *Oncosclera asiatica* sp. nov., Pong River, Thailand, Morphology, SEM, Taxonomy, Biogeography

Introduction


After the record of *S. navicella* by Carter (1881) from the Amazon Basin, registered also by Potts (1887), most species were ascribed firstly to the genera *Spongilla* Lamarck, 1816 or *Stratospongilla* Annandale, 1909a in the Neotropical Region (Argentina, Venezuela) from the Paraná, Uruguay, Plata and Orinoco Basins (S. *atra*, S. *intermedia*, S. *navicella*, S. *petricola*, S. *ponsi*, S. *schubartii*, S. *spinifera*, S. *stolonifera*, S. *tonollii*) by Bonetto & Ezcurra (1962) and Bonetto & Ezcurra de Drago (1964, 1967, 1968, 1970, 1973) and from Brazil (S. *jewelli*) by Volkmer (1963) and Volkmer-Ribeiro (1970). Also the Afrotropical representatives of the genus described from the sub-Saharan Africa were firstly ascribed to the genus *Spongilla* and then to *Stratospongilla* Annandale, 1909a (S. *macrospiculata*, S. *rousseletii*, S. *schubotzi*) by Stephens (1919), Kirkpatrick (1906) and Weltner (1913), respectively, as occurred also for the Pacific Islands Region lineages as *S. dialli* from New Caledonia and *S. gilsoni* from the Fiji Islands, by Rützler (1968) and Topsent (1912), respectively.

In their worldwide revision Penney & Racek (1968) did not mention most of the species, presently belonging to the genus *Oncosclera*, but only recorded three species, viz. *Stratospongilla gilsoni*, *S. rousseletii*, and *S. schubotzi*.