



A new species of *Pseudostomella* (Gastrotricha: Macrodasysida: Thaumastodermatidae) from a sandy beach of Kerala, India

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Abstract

During an interstitial faunal survey along the south-west coast of Kerala, India, gastrotrich fauna were found in abundance. Together with species of the genera *Xenotrichula*, *Halichaetonotus* and *Tetranchyroderma*, were present several undescribed thaumastodermatid gastrotrichs belonging to the buccal palp bearing genus *Pseudostomella*. Adults of the new species are characterized by the following traits: total body length of about 300 µm; cuticular armature made up of medium sized pentancretes covering the entire dorsolateral surface; pre-buccal, grasping palps bearing five, large papillae dorsally and 4–6 smaller papillae ventrally; adhesive apparatus made up of six anterior, 22–24 ventrolateral, two dorsolateral and six posterior adhesive tubes; caudal organ pear-shaped; frontal organ spherical. *Pseudostomella cheraensis* sp. nov. is the fourth taxon of the genus known from India; however, all the previous species reported hitherto from India have tetrancretes instead of pentancretes.

Key words: interstitial; meiofauna; taxonomy; gastrotrichs; Arabian Sea

Introduction

Gastrotricha constitutes one of the most interesting and taxonomically challenging groups of meiobenthic marine and freshwater invertebrates. Traditionally gastrotrichs are considered, on morphological basis, either to be a separate phylum or to belong to the Aschelminthes, and are believed to be closely related to Rotifera (Brusca & Brusca, 1990) or the Nematoda (Ruppert & Barnes, 1994). More recently, they have been associated on molecular ground with the Platyzoa (Todaro *et al.* 2006a). In aquatic ecology, gastrotrichs are known as important components of the permanent meiofauna (Todaro *et al.*, 2006b).

Marine gastrotrichs are mainly interstitial, occurring both in the intertidal and subtidal realms. They are more abundant in fine to medium grained sediments in unpolluted and less turbid waters of coastal areas (Todaro & Rocha, 2004). However, submarine caves, dysoxic sand and deep, muddy sediments may also be colonised by gastrotrichs (Leasi *et al.*, 2006; Todaro *et al.*, 2006b, c; Balsamo *et al.*, 2007). In the sandy marine interstices, gastrotrichs rank third in abundance among the meiofaunal taxa following Nematoda and the harpacticoid Copepoda; their numerical abundance may reach a density up to 364 ind./10 cm² (Todaro, 1998).

The phylum is cosmopolitan and includes about 700 species grouped into two orders: Macrodasysida, with 250 strap-shaped species, all but two marine, and Chaetonotida, with 450 tenpin-shaped species, of which only 150 are marine or brackish.