

Discovery of two ‘chimeric’ Gastrotricha and their systematic placement based on an integrative approach

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Sublittoral sand from the islands of Sardinia (Italy) and Flores (Azores) – separated by more than 3700 km linear distance and 8 years between two independent sampling campaigns – yielded conspicuous specimens of two bizarre, yet undescribed, species of the marine gastrotrich clade Macrotrichida. These gastrotrichs combine several character traits that were already known from two, non-related genera. Morphological data were carefully analysed and digitally documented, and nuclear and mitochondrial DNA sequences were used for phylogenetic inference. The results of these analyses claim for the erection of a new genus. Specimens of the new taxon have a body length of less than 400 µm and are characterized by a wide, funnel-shaped mouth opening shielded dorsally by an oral hood and possess a posterior peduncle that ends with a Y-shaped pair of appendages that carry the posterior adhesive tubes. Further tubes occur as anterior, ventrolateral and lateral series; the gonads are unpaired and there is a set of two accessory reproductive organs. Molecular phylogenetic analyses confirm the results of former studies and clearly place the new taxon in Thaumastodermatidae. We hereby propose the establishment of *Chimaeradasys* gen. nov. and describe *C. oligotubulatus* sp. nov. from the Azores and *C. polytubulatus* sp. nov. from Sardinia.

ADDITIONAL KEYWORDS: Azores – biodiversity – integrative taxonomy – Mediterranean Sea – meiofauna – north-eastern Atlantic – new genus – new species – phylogeny – Sardinia.
