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A new species of *Cephalodasys* (Gastrotricha, Macrodasyida) from the Caribbean Sea with a determination key to species of the genus

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Abstract

A new marine gastrotrich species of the genus *Cephalodasys* is described from shallow sublittoral coralline sand sampled between Lee Stocking Island and Norman's Pond Cay (Exuma Cays), Bahamas. *Cephalodasys interinsularis* **n. sp.** reaches a body length of 471 µm and is characterized by a new combination of characters including six total anterior adhesive tubes and five pairs of ventrolateral adhesive tubes. The new species is morphologically similar to *C. swedmarki* but can be distinguished by the different number of anterior adhesive tubes, the spatial arrangement of the ventrolateral adhesive tubes, and a shorter pharynx. We provide an updated diagnosis of the genus and a determination key to all known species of *Cephalodasys*. *C. interinsularis* **n. sp.** is the third known species of *Cephalodasys* from the Caribbean marine province.

Key words: biodiversity, marine meiofauna, taxonomy, species description, Bahamian ecoregion

Introduction

Lee Stocking Island (LSI) is one of a series of small islands on the eastern margin of the Great Bahama Bank in the Caribbean Sea. The geology of the island is well characterized (reviewed in Kindler 1995), and as a research site for the Perry Institute for Marine Science, is host to numerous biodiversity and ecology studies devoted to macroscopic organisms (e.g. Albins & Hixon 2008, Lapointe *et al.* 2004, Sánchez *et al.* 2003, Stoner 2003). However, marine meiofauna is poorly characterized from the island (for some individual records of nematodes and naidids see, e.g., Musat *et al.* 2007 and Kvist *et al.* 2010), and this is especially true for the taxon Gastrotricha, where only a few species have been described and/or recorded so far (Kieneke et al 2013a, 2013b, von und zu Gilsa *et al.* 2014). During our studies of the marine meiofauna of LSI in 2010, we encountered numerous gastrotrichs (see Schmidt–Rhaesa *et al.* 2010) that we are still in the process of analyzing. Among these are specimens of *Cephalodasys* Remane, 1926, a relatively common marine taxon of Macrodasyida but one that only comprises 12 described species to date (see Hummon & Todaro 2010, Hummon 2011, Kieneke & Schmidt–Rhaesa 2015, Todaro 2015). Our examinations of the few specimens we encountered revealed a consistent combination of characters that is unique among the currently known species. Here, we describe a new species of *Cephalodasys* from LSI based on live and fixed material and provide an updated taxonomic key to the genus.

Material and methods

The sediment sample LSI09 (rather fine calcareous biogenous sand) containing four specimens of *Cephalodasys* was collected from a sublittoral shoal between Lee Stocking Island and Norman's Pond Cay on April 13, 2010 (N 23°45.972′; W 76°06.897′, Fig. 1). The sample was taken at a water depth of approximately 2m via skin-diving deployed from a small research boat of the Caribbean Marine Research Center (CMRC) of the Perry Institute for Marine Science (PIMS). The sand was qualitatively collected from the sea floor with wide-necked PE bottles (1000

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9a TbA 4 per side 10
9b Number of TbA other than 4 per side 11
10a TbVL 5 per side; medium-sized animals (Lt: 500 µm) with a rounded caudum; tube arrangement: TbA 2x4, TbVL 2x5, TbP 10–12 . . . . . .*C. swedmarki* Hummon, 2008.
10b TbVL 6 per side; long and slender animals (Lt: 615–772 µm) with a rounded but slightly flared caudum; tube arrangement: TbA 2x4, TbVL 2x6 (terminal pair of TbVL is more isolated from the remaining TbVL), TbP 16 . . . . . .*C. dolichosomus* Hummon, 2011
11a TbA 5–6 per side; rather small animals (Lt: 294–368 µm) with rounded, slightly flared caudum; tube arrangement: TbA 2x5–6 2x4 (TbA are very thin), TbVL 2x3–7 (commonly 5), TbP 13–17 . . . . . *C. pacificus* Schmidt, 1974
11b TbA 3 per side; medium-sized animals (Lt: 431–471 µm) with a simply rounded caudum; tube arrangement: TbA 2x3, TbVL 2x5, TbP 11–12 . . . . . *C. interinsularis* (this study)

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