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Ascidiidae Herdman, 1882 (Tunicata: Ascidiacea) on the Pacific coast of Panama

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Abstract

The ascidian fauna of the Pacific coast of Panama is poorly known and only recently four species in the family Ascidiidae were reported on. *Ascidia* is the only known genus of Ascidiidae in Pacific Panama waters. In the present research, we describe a new species, *Ascidia sideralis* **sp. nov.**, and we document the new occurrence of *A. cf. gemmata* and *A. cf. liberata* (both previously known to the West Pacific), *A. archaia* (a cosmopolitan species elsewhere in the Pacific), *A. ceratodes* (previously documented in the eastern N. Pacific), and *A. sydneyensis* (an Atlantic species on the east coast of Panama) in Pacific Panama waters. A tabular key for the identification of Ascidiidae on the American Pacific coast complements this study.

Key words: *Ascidia*, biodiversity, taxonomy

Introduction

The ascidian fauna of the Americas includes a large diversity of species (Van Name 1945) and this knowledge has been improved on the last decades. Rocha *et al.* (2012) reported 26 species of Ascidiidae from the shallow waters of the Atlantic coast of the Americas, while only nine species were reported on the Pacific coast (Van Name 1945; Lambert & Lambert 1998; Lambert & Sanamyan 2001; Monniot 2007; Nova-Bustos *et al.* 2010; Carman *et al.* 2011).

New efforts to survey the ascidian diversity in Panama were recently done, both on the east (Rocha *et al.* 2005; Bonnet & Rocha 2011) and the west coast (Carman *et al.* 2011). These studies are important, because the intense traffic of ships through the Panama Canal makes this region more susceptible to the introduction and establishment of exotic species. Here we report on six species of the genus *Ascidia*, among which four have already been reported in Carman *et al.* (2011). *Ascidia* sp. is now formally described and given the name *A. sideralis*. The report of *Ascidia incrassata* is corrected, and the assigned species (*A. cf. liberata*) is considered an introduction to the region. The identifications of *A. ceratodes* and *A. sydneyensis* remain unchanged. The two additional species reported here are *A. archaia* and *A. cf. gemmata*.

Material and methods

Specimens were collected between December 2008 and November 2011, from natural and artificial substrates on the Pacific coast of Panama up to 13.0 m deep. Tidal exchange in the area is about 3.0 m. Rocky substrates predominated in the natural environment which were well exposed during low tide. Thus, animals were usually subtidal and deeper than 5.0 m. The coordinates of each collecting site are listed in Table 1.