



New records of aplousobranch ascidians from Central Chile

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Abstract

Seven shallow-water colonial ascidians of the order Aplousobranchia, including three new species, are identified in the material collected by SCUBA divers off the coast of Central Chile. Three species including *Aplidium falclandicum*, *A. fuegiense* and *Didemnum studeri* were known previously from Subantarctic and South Chile. The range of one species, *Distaplia arnbackae* n. sp., extends to south to Guaitecas Islands, and the rest three species (*Aplidium peruvianum*, *Aplidiopsis chilensis* n. sp. and *Eudistoma clivosum* n. sp.) are not known from more southern localities and may represent a northern component.

Key words: *Aplidiopsis*, *Eudistoma*, *Distaplia*, SE Pacific

Introduction

Chilean ascidians are mainly known from the work of Ärnback (1929), Van Name (1945, 1954), Monniot & Andrade (1983), Millar (1988), Clarke & Castilla (2000), Sanamyan & Schories (2003, 2004, 2007) and Lager *et al.* (2009). Species lists and geographical distribution information (Van Name, 1954; Lancellotti & Vasquez, 2000; Lee *et al.*, 2008; Lager *et al.*, 2009) indicate a higher species presence in Southern Chile compared to Central or Northern Chile. The biogeographical distribution of the Southern Chilean fauna is mainly influenced by the Antarctic circumpolar current and the South Pacific whereas the North Chilean fauna is more influenced by Peruvian coastal countercurrent (Lancellotti & Vasquez, 1999). This fact was used to explain differences in species numbers between Southern and Central Chile. However a closer look to the published data indicate that observed differences (Van Name, 1954; Lancellotti & Vasquez, 2000; Lee *et al.*, 2008) are mainly based on sampling effort during the last decades and do not depend on geographical latitude. Van Name (1954) as well as Lancellotti & Vasquez (2000) did not report any aplousobranch ascidian from Central Chile, whereas the species numbers reported by them were too high for Southern Chilean aplousobranch ascidians because several synonyms of the same species were reported as independent valid species. This error was repeated by Lee *et al.* (2008). Only Millar, (1988) mentioned the presence of the aplousobranch species *Aplidium* sp. between 33°S and 34°S.

Actually a total number of 19 species must be considered as valid species of the suborder Aplousobranchia in Chile including *Aplidium irregulare* Herdmann, 1886, and *A. recumbens* Herdmann, 1886, whose status is problematic, as well as the status of most listed Didemnidae. Here we describe three new species, one of them was reported before as *Distaplia occidentalis* (Bancroft, 1899) and two species unknown from Chilean waters before. However, we were not able to identify didemnid ascidians to species level apart from *Didemnum studeri* Hartmeyer, 1911 on the basis of existing descriptions. At least seven aplousobranch species are present in Central Chile, demonstrating a significantly higher presence of ascidians in this region than reported before.