



A new species of Halichondriidae, *Topsentia vaceleti* n. sp. (Halichondrida, Demospongiae, Porifera), collected from coralligenous bottoms of the Aegean Sea

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Abstract

A new species, *Topsentia vaceleti* n. sp., was collected from 70m depth, on a coralligenous bed of the Aegean Sea by trawl (sponge fishing gear “gagava”). The specimen is spherical, 8 cm in diameter, with deep surface grooves. It has a totally disordered choanosome and a tangential ectosomal skeleton, typical of *Topsentia*, but exhibits a different type of spiculation. This species differs from the other members of the genus by possessing both principal oxeas and secondary oxeas, the latter much longer but thinner, bent and in some cases flexuous or twisted. This is the fourth species of *Topsentia* Berg, 1899 reported from the Mediterranean Sea.

Key words: Porifera, Halichondrida, Halichondriidae, *Topsentia*, Mediterranean Coralligenous substratum, new species

Introduction

The coralligenous beds of the Aegean Sea comprise a very significant benthic ecosystem, rich in sponges and geographically extensive due to the insular structure of the Archipelagos. These beds consist of calcareous formations of biogenic origin (algae), are relatively deep (70–80m), leaving them poorly studied in comparison with other more accessible, shallower marine environments.

Similar to the published records of the coralligenous areas of the Central and Western Mediterranean Sea we also observed here a very rich, predominantly sciaphilous fauna forming the benthos (Ballesteros 2006). The composition of the sponge fauna is also characteristic, exhibiting distinct qualitative and quantitative differences from the adjacent shallow water coastal areas. For the Aegean Sea in particular, the deep bathymetry of coralligenous habitats provides an ideal substrate for species capable of living in these deeper layers (Kefalas *et al.* 2003).

There are a considerable number of halichondrid species, such as Axinellidae (the more common being *Axinella damicornis*, *A. verrucosa*, *A. polypoides*), Dictyonellidae (represented by *Acanthella acuta*, *Dictyonella marsilli*, *D. pelligera* and *D. obtusa*) and Halichondriidae (represented by various species such as *Axinyssa michaelis*, *Halichondria (Halichondria) contorta*, *Hymeniacion sanguinea* and *Spongosorites intricatus*) (Kefalas *et al.* 2003; Voultziadou 2005; Ballesteros 2006; Kefalas & Castritsi-Catharios 2007).

During an experimental exploration of the coralligenous bottom southwest of Fourni Island, we collected a sample of Halichondrida that most closely resembles the genus *Topsentia* Berg, 1899. According to Van Soest *et al.* (2010), there are currently 34 species known in the genus *Topsentia* (information retrieved from <http://www.marinespecies.org/porifera>). Most are deep waters species, which are distributed mainly throughout the tropical and temperate oceans. Only three species have been recorded in the Mediterranean (in the western side): *T. pachastrelloides* (Topsent, 1892) from the Atlantic Ocean, the Mediterranean species *T. garciae* Bibiloni, 1993 from Balearic Island, and *T. lacazei* (Schmidt, 1868) from Algiers. Our sample was determined to be a new species, and here we describe and compare it against the other known species of *Topsentia*.