



A new *Clathria* (Demospongiae, Microcionidae) from Peru occurring on rocky substrates as well as epibiotic on *Eucidaris thouarsii* sea urchins

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Abstract

Southeastern Pacific sponges (Phylum Porifera) range among the world's least known faunas, with only 13 species reported to date from the entire Peruvian coast. This state of affairs motivated the onset of two large, cooperative, exploratory initiatives, with the aim of mapping sponge richness and distribution in the area: Proyecto ESPE and EsponjAS. Over 800 specimens have been collected in Peru since 2007, with identifications still in progress. Among these, a sponge species originally thought to be an exclusive epibiont on *Eucidaris thouarsii* sea urchins, relatively conspicuous on Peru's Punta Sal region. This sponge, later found to occur on additional substrates too, is described as a new species of *Clathria* (*Microcionia*). Cidarid density ranged between 1.5 and 12/m², and largest diameter of the tests between 3.2 and 5.6 cm. Total number of spines on each sea urchin varied between 68 and 96, and percent sponge coverage of these, between 18.2 and 75.7. There appears to be only a slight tendency for increased sponge coverage on larger sea urchins, so there may be factors, other than sea urchin age, shaping this association. *Clathria* (*Microcionia*) *aculeofila* sp. nov. can be markedly dominant as an epibiont on *E. thouarsii*, albeit the great sponge richness in the area. This is in contrast to the allegedly opportunistic, diverse epibiosis by sponges reported previously for Antarctic cidaroids.

Key words: Porifera, new species, epibiosis, *Clathria* (*Microcionia*)

Introduction

Notwithstanding the ecological importance of sponges (Porifera) in benthic marine ecosystems, and for their biological, chemical and pharmaceutical properties, Southeastern Pacific species range among the least known in the world (Hajdu and Desqueyroux–Faúndez 2008). Only 13 species belonging to the Demospongiae (4) and Hexactinellida (9) are this far known from Peru, with no Calcarea yet recorded. The complete list comprises the demosponges *Acarnus peruanus* van Soest *et al.*, 1991; *Dysidea lignea* (Hyatt, 1877); *Myxilla asymmetrica* Desqueyroux–Faúndez and van Soest, 1996; *Myxilla dracula* Desqueyroux–Faúndez and van Soest, 1996; and the hexactinellids *Bathydorus spinosissimus* Lendenfeld, 1915; *Eurete spinosum* Lendenfeld, 1915; *Holascus edwardsi* Lendenfeld, 1915; *Hyalonema agassizi* Lendenfeld, 1915; *H. agujanum* Lendenfeld, 1915; *H. bianchoratum pinulina* Lendenfeld, 1915; *H. tenuifusum* Lendenfeld, 1915; *H. tylostylum* Lendenfeld, 1915 and *Sympagella cantharellus* Lendenfeld, 1915. With the exception of *Acarnus peruanus* and *Dysidea lignea*, all these sponges come from deep waters. This meager list was the main reason to start the ESPE Project (“Esponjas del Perú”) in 2007 and Proyecto EsponjAS (“Esponjas da América do Sul”) in 2008, with the aim of mapping sponge richness and distribution along the Peruvian coast. This is also a natural follow up for Hajdu, Willenz *et al.*'s taxonomic studies of Chilean sponges (e.g. Azevedo *et al.*, 2009; Willenz *et al.*, 2009).