



First record of *Axinyssa* Lendenfeld, 1897 (Demospongiae, Halichondrida) from the East Pacific Ocean, with the description of *Axinyssa isabela* sp. nov.

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Abstract

A new species of *Axinyssa* Lendenfeld, 1897 (Halichondriidae, Halichondrida) is described from the Mexican Pacific Ocean, which constitutes the first record of the genus in the Eastern Pacific Ocean. *Axinyssa isabela* sp. nov. is an incrusting to massive cushion-shaped yellow sponge without ectosomal skeleton. The ectosome is simply a thin, translucent, partly detachable collagen layer. The collagen is also abundant in the choanosome, while spicular density is relatively low. The choanosomal skeleton is confused with ascending single spicules or spicules grouped in tracts. The tracts become slightly more organized towards the periphery, protruding on the surface in spicule bundles or in single spicules. Spicules are oxeas and derivates (styles and strongyles), 200 to 780 µm long and 3 to 15 µm thick. So far, despite the sampling of a large number of localities along the Mexican Pacific Coast during the last years, *Axinyssa isabela* sp. nov. has been found only at National Park “Isla Isabel” (Nayarit, Mexico), where it is relatively common, in vertical walls, small caves and overhangs at depths between 4 and 20 m.

Key words: taxonomy, Porifera, Sponges, Halichondrida, *Axinyssa*, East Pacific Ocean, Mexico, natural products

Introduction

The genus *Axinyssa* was erected by Lendenfeld (1897) for a single species, *A. topsenti*, which was characterized by a vaguely plumose, ascending choanosomal skeleton composed of multispicular tracts of large oxeas, with a second smaller style and/or oxea category in brushes on the surface. Later, Burton (1931) redefined *Axinyssa* and created *Pseudaxinyssa* to harbor two species previously assigned to *Axinyssa*; *A. tethyoides* Kirkpatrick, 1903 (type species of *Pseudaxinyssa*) and *A. gravieri* Topsent, 1906. These two species differed from *Axinyssa* by the presence of a single size category of megascleres and by the lack of a specialized ectosomal skeleton of small styles and/or oxeas.

More recently, van Soest *et al.* (1990) did not consider important the presence of one or two spicule categories, or the presence or lack of a specialized ectosomal skeleton, and synonymized both genera. The species of *Axinomimus* and several others previously classified as *Trachyopsis*, *Leucophloeus*, *Rhaphisia* and *Phycopsis* were also synonymized with *Axinyssa* (van Soest *et al.* 1990). Later, Hooper & Bergquist (1992) described the genus *Cymbastela*, which also includes species with or without an ectosomal skeleton of smaller oxeas, and returned the type species of *Pseudaxinyssa*, and several other described species to *Axinyssa*. They also gave a new diagnosis for *Axinyssa* which included species with or without a specialized ectosomal skeleton, and with megascleres of one or two categories.