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STELLETTA HAJDUI, A NEW SPECIES FROM THE SOUTHWESTERN ATLANTIC (PORIFERA, CHORISTIDA, ANCORINIDAE).

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Key words: Porifera, Choristida, Ancorinidae, southwestern Atlantic, taxonomy.

ABSTRACT

A new species of *Stelletta* from the southwestern Atlantic, *Stelletta hajdoui* sp.n. is described from the slope off Rio Grande do Sul State coast, Brazil (32°24'S, 50°15'W) (Fig.1). The material studied was dredged up at the depth of 200m by the R/V Atlântico Sul, during "Projeto Talude" run by Fundação Universidade de Rio Grande (FURG). A key to the Brazilian *Stelletta* sponges is provided.

INTRODUCTION

Genus *Stelletta* is represented at southwestern Atlantic by the following species: *S. anancora* (Sollas, 1886 as *Pilochrota anancora*), from 13 to 37m in depth, *S. crassispicula* (Sollas, 1886 as *Pilochrota crassispicula*), from 13 to 22m in depth (Sollas, 1886) and *S. purpurea* Ridley, 1884 (Mothes-de-Moraes, 1985, as *Myriastria purpurea*; Mothes & Lerner, 1994), intertidal. The new species of sponge has been found in the poorly studied southern Brazilian area. The cold subantarctic Falkland Current is present in this area and brings a subtropical component to its marine fauna and flora (= Patagonian affinity) (Mothes et al., 1993).

MATERIALS AND METHODS

The specimen is deposited in the Porifera Collection of Museu de Ciências Naturais at Fundação Zoobotânica do Rio Grande do Sul, Brazil. Skeletal slides and dissociated spicule mounts were made following Mothes (1996). The SEM study was made using a Jeol JSM-5200 Scanning Microscope. Scales for SEM pictures are indicated with each spicule. The spicules measurements in the text refer to minimum-mean-maximum in µm. Preliminary results of this material are presented in the Book of Abstracts of VI Congreso Latinoamericano de Ciencias del Mar (COLAC-MAR), Mar del Plata, Argentina.

Abbreviations for the institutions

FURG: Fundação Universidade do Rio Grande, Rio Grande, Brazil.

MCN : Museu de Ciências Naturais, Porto Alegre, Brazil.

MCN POR: MCN, Porifera Collection.

FZB: Fundação Zoobotânica do Rio Grande do Sul, Porto Alegre, Brazil.

UFRGS: Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.

ZMA : Instituut voor Systematiek en Populatiebiologie (Zoölogisch Museum), Amsterdam, The Netherlands.

DESCRIPTIVE PART

Class Demospongiae Sollas

Order Choristida Sollas

Family Ancorinidae Gray

Genus *Stelletta* Schmidt

Diagnosis

"Ancorinidae with the simple spicule complement of radiate oxeotes and triaenes, and several categories of euasters." (Van Soest & Stentoft, 1988).

Type species: not fixed; usually cited as *Stelletta grubii* Schmidt, 1862 (Desqueyroux-Faúndez & Stone, 1992).



Stelletta hajdui n.sp.
(Figs. 2-8)

Material studied

Holotype: MCN-POR 3240, off the coast of Rio Grande do Sul State (32°24'S, 50°15'W), Brazil, coll. R/V. Atlântico Sul, XI.1988, 200m deep. Schizoholotype (slides) from holotype deposited under ZMA POR.

Diagnosis

Stelletta hajdui n.sp. possesses oxeas I: 1840,0-2240,0-2599,0/19,0-27,1-38,0, oxeas II: 920,0-1340,9-2001,0/57,0-76,5-95,0, rares plagiotriaenes (cladome: 342,0-760,0/28,5-57,0; rhabdome: 389,5-988,0/38,0-66,5), oxyasters smooth with 6 a 12 uniform rays (diameter: 27,6-43,4-55,2) and spheroxyasters with microspined and 14 to 20 uniform rays (diameter: 6,9-9,2-11,5).

Description

External morphology: small irregular fragment (0,9x0,7x0,5cm) (Fig.2). Surface microhispid; consistency firm, slightly compressible. Colour in spirit white. Not visible

Fig. 1. Map of the study area showing location where samples were collected.

oscles and pores probably because small and preserved material.

Skeleton. Radiate architecture (Fig.5): ectosomal skeleton with a thin cortex of spheroxyasters. Choanosomal skeleton: plagiotriaenes with clads tangential to surface, between plagiotriaenes are found oxeas in two sizes categories directed outwards; oxyasters and spheroxyasters are in confused orientation.

Spicules: megascleres - oxeas I (Fig.6) hastate, thin, long, straight to slightly curved 1840,0-2240,0-2599,0/19,0-27,1-38,0; oxeas II (Fig.7) hastate, usually thick and short, slightly curved, sometimes straight 920,0-1340,9-2001,0/57,0-76,5-95,0; rares plagiotriaenes (Fig.8) cladome: 342,0-760,0/28,5-57,0, rhabdome: 389,5-988,0/38,0-66,5. Microscleres: oxyasters (Fig.3), smooth with 6 a 12 uniform rays (diameter: 27,6-43,4-55,2); spheroxyasters (Fig.4) with microspined and 14 a 20 uniform rays (diameter: 6,9-9,2-11,5).

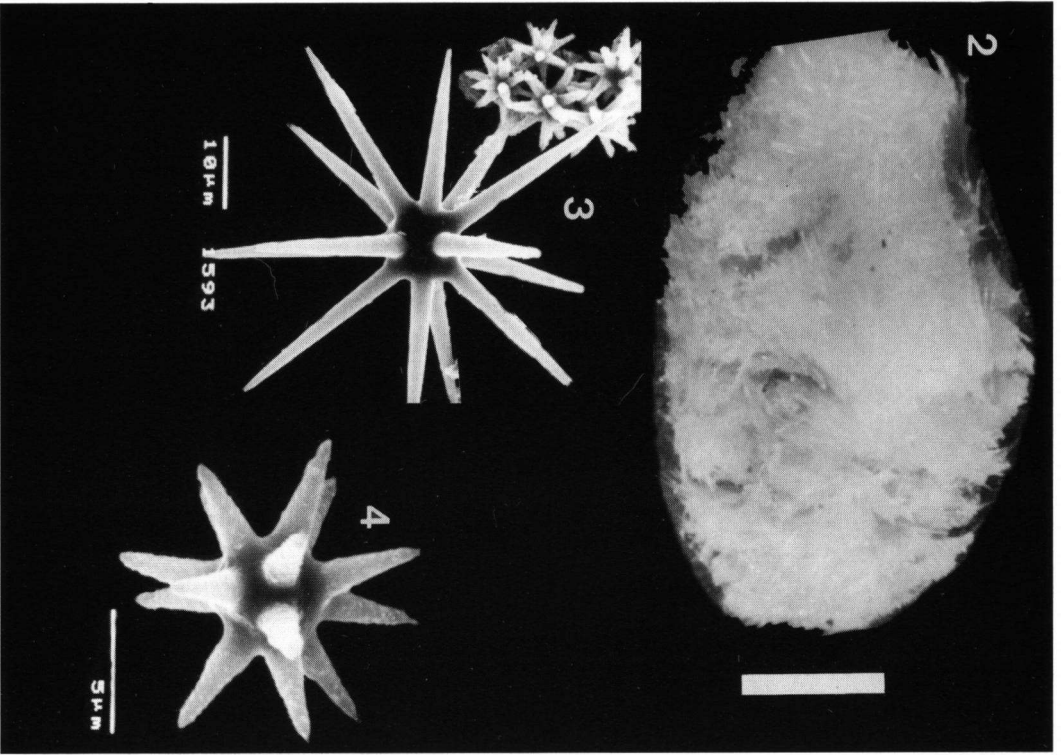
Etymology

The specific name is given in acknowledgement of Dr. Eduardo Hajdu's valuable contribution to biodiversity knowledge of Brazilian marine sponges.

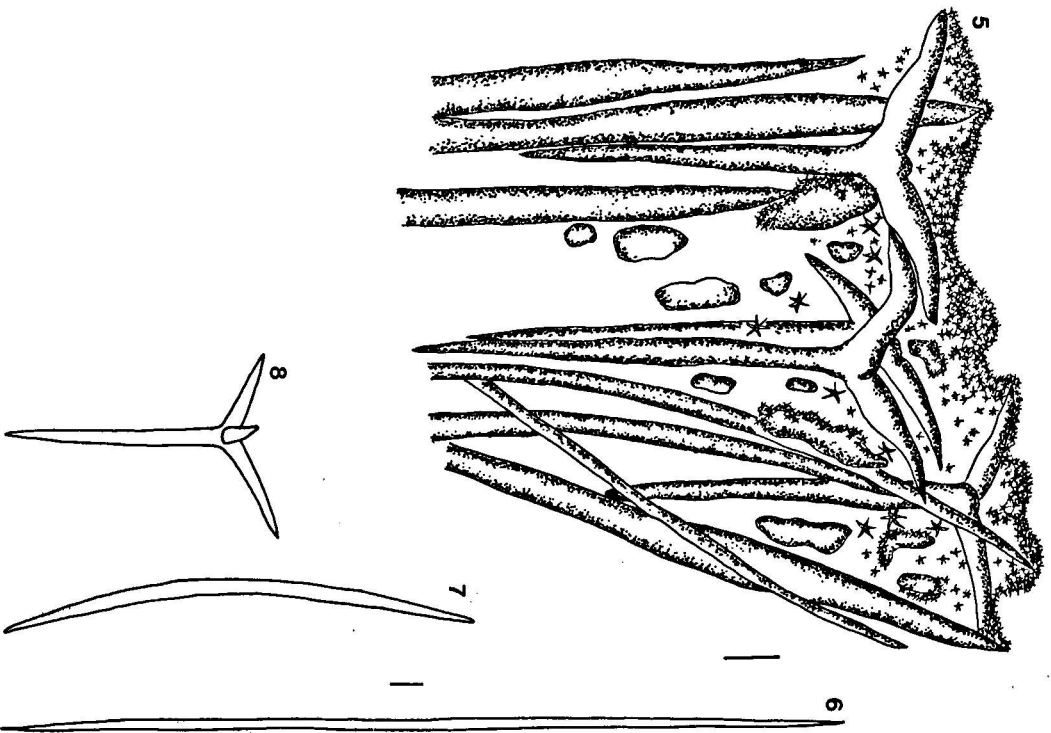
DISCUSSION

The *Stelletta* species identified off the Brazilian coast differ from the new species on the following aspects: *S. anancora* presents a category of oxeas, orthotriaenes and microscleres are tylasters; *S. crassispicula* presents a category of oxeas, orthotriaenes and microscleres anthaster and tylaster (Sollas, 1888); *S. purpurea* comprises a category of oxeas, orthotriaenes and microsclere tylaster (Mothes & Lerner, 1994). A revision of the specimens identified as *S. purpurea* for the Brazilian coast, according to the SEM, should be carried out because the disjunct distribution between the specimens identified as *S. purpurea* for the Brazilian coast and the ones from the Indian Ocean - Arafura Sea (Ridley, 1884) do not corroborate the conspecificity.

The species closer to the *S. hajdui* sp.n. is the *S. grubioides* Burton, 1926 described for South Africa (Burton, 1926) as for the presence of oxeas and oxyasters, but it differs for the presence of the orthotriaenes and the variation of strongylaster to tylaster in the second.



Figs. 2-4. *Stellietta hajdii* n. sp. 2. Holotype (MCNPOR 3240), preserved, off Rio Grande do Sul State coast, Brazil. 3. Oxyaster (big) and Spheroxyaster (small). 4. Spheroxyaster.



Figs. 5-8. *Stellietta hajdii* n. sp. 5. Perpendicular section of skeleton 6. Oxea I. 7. Oxea II. 8. Plagiotrachea. Scales: 2 = 0, 2 cm; 5-8 = 100 μ m.

KEY TO THE BRAZILIAN SPECIES OF *STELLETTA*

- 1a With oxeads and orthotriaenes..... 2
 1b With oxeads and plagiotriaenes; microscleres oxyasters and spheroxyasters.....*S. hajdui* sp.n.
 2a Only tylaster microsclere are present.....3
 2b With tylaster and anthaster microscleres.....
 *S. crassispicula*
 3a With anatriaenes.....*S. purpurea*
 3b Without anatriaenes..... *S. anancora*

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