



## ***Cladocroce caelum* sp. nov. from the Brazilian coast; first record of the genus in the South Atlantic**

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Haplosclerida is characterized by the possession of diactinal megascleres, most commonly oxeas in isodictyal arrangement. While the sizes of spicules may be an important characteristic to identify species the skeletal architecture serves to discriminate families and genera (van Soest & Hooper 2002). *Cladocroce* Topsent, 1892 is characterized by the presence of multispicular fibres tracts with a rather dense subisotropic reticulation in between (De Weerd 2002), currently with 15 valid species (van Soest *et al.* 2013), only three of which are from the Atlantic Ocean, and none from the South Atlantic. Here we are record a new species of *Cladocroce* for Brazil for the first time. Specimens were collected during a faunistic survey conducted in the area of Enseada dos Corais Beach (Pernambuco State, Brazil) and Baía da Traição (Paraíba State, Brazil). The present contribution takes the number of valid described species of *Cladocroce* to 16.

### **Order Haplosclerida Topsent, 1928**

### **Suborder Haplosclerina Topsent, 1928**

### **Family Chalinidae Gray, 1867**

### **Genus *Cladocroce* Topsent, 1892**

### ***Cladocroce caelum* sp. nov.**

**Holotype.** UFPEPOR 1450, Enseada dos Corais Beach (8°19'23"S, 34°56'57"W), Cabo de Santo Agostinho Municipality, Pernambuco State, Brazil, 1 m depth, col. U. Pinheiro and G. G. Santos, (26.XI.2012). Paratype. UFPEPOR 1628, Baía da Traição Municipality (6°41'19"S, 34°55'60"W), Paraíba State, Brazil, 1 m depth, col. G. G. Santos, (07.XI.2013).

**Description (Figure 1).** Massive shape with tubular projections, partially fused in the base, large apical osculum (1.5–3 mm in diameter). The holotype is 3.4 cm high, 2.8 cm wide. Individual tubes are approximately 6 mm in diameter. Conulose surface, consistency is compressible and fragile. Color in life is sky blue, and after preservation it becomes beige (Fig. 1A, B). There is no special ectosomal skeleton but a tangential isotropic unispicular reticulation of oxeas forming tracts 38–80 µm in diameter (Fig. 1C). The choanosomal skeleton is thick, unispicular, interspersed by many choanosomal spaces and reinforced by pauci- to multispicular tracts 24–72 µm in diameter (Fig. 1D, E). Spongin is scarce, cementing the tracts and the nodes of the isotropic reticulation. Spicules are oxeas (holotype—67–74.5–80 / 3–3.9–5 µm; paratype—62–76.0–86 / 2–4.0–5 µm) sometimes slightly curved, smooth and with sharp tips (Fig. 1F).

**Distribution and ecology.** Known from Northeastern of Brazil (Pernambuco and Paraíba States) in shallow water at 1 m depth.

**Etymology.** Named caelum which means sky in latin.

**Remarks:** *Cladocroce caelum* sp. nov. is the first record of the genus from the South Atlantic. This species is allocated to *Cladocroce* based on the presence of a choanosomal skeleton reinforced by multispicular primary tracts (De Weerd 2002). The new species differ from others of the genus by possessing the combination of massive-tubular shape, blue color and generally smaller oxeas (see Tab. 1). Among the Atlantic species it differs from *C. fibrosa* (Topsent, 1890), based on its vase shaped, grey color and larger oxeas (600 / 18 µm); *C. osculosa* Topsent, 1927 which is lamellate in growth form and has brown color; *C. spathiformis* Topsent, 1904 which is tubular and transparent, with larger oxeas

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