

**INTEGRATIVE TAXONOMY OF SYMPATRIC SPECIES OF *OSCARELLA*
VOSMAER, 1887 FROM THE CABO FRIO REGION, IN SOUTHEAST BRAZIL
(PORIFERA, HOMOSCLEROMORPHA)**

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The taxonomy of the genus *Oscarella* is one of the most complicated of the phylum Porifera due to the absence of skeleton (Muricy et al., 1996). Many morphotypes of *Oscarella* were found in the last years in Cabo Frio, Rio de Janeiro (Muricy & Hajdu 2006). Our aims were to describe and identify the species of *Oscarella* in the region of Cabo Frio. The morphology, anatomy, cytology, reproduction, ecology and genetics of different specimens were analysed through an integrative approach (Boury-Esnault et al., 2013). The results indicate that at present, five species of *Oscarella* occur in Cabo Frio: one already known from the Caribbean Sea, *Oscarella filipoj*, and four new species. The mobile cell types of the mesohyl were the most useful characters to identify the species. However, the shape of lobes, the position of oscules, the habitat, the presence of symbiotic anemones, and molecular markers also contributed to species delimitation. This study highlights the importance of integrative analysis to define, identify and describe species of *Oscarella*. With this analysis, the diversity of the ecoregion of Eastern Brazil rises from zero to five species of *Oscarella* and the world richness of the genus expands from 21 to 25 species.

Key-words: Biodiversity Hotspot, Cytology, Molecular markers, Tropical Southwestern Atlantic.

References:

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