



<http://dx.doi.org/10.11646/zootaxa.3925.3.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:41704232-9307-4C1F-A7E7-3C8E197CE228>

A new species of philichthyid copepod (Crustacea: Cyclopoida) parasitic on *Stellifer* spp. (Perciformes: Sciaenidae) from southeastern Brazil

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Abstract

A new species of copepod, *Colobomatus stelliferi* n. sp., belonging to the cyclopoid family Philichthyidae Vogt, 1877 is proposed based on female specimens collected from the mandibular canals of three species of sciaenid teleosts: *Stellifer brasiliensis* (Schultz) (type-host), *S. rastrifer* (Jordan) and *S. stellifer* (Bloch), collected in Caraguatubá Bay, State of São Paulo, Brazil. The new species can be distinguished from its closest congeners by the absence of lateral processes in the genital somite, the presence of one cephalic process in the cephalosome and one pair of dorso-lateral processes on the fused pedigerous somites. This is the first species of *Colobomatus* Hesse, 1873 described as parasites of species of the teleost genus *Stellifer*.

Key words: Copepoda, Philichthyidae, *Colobomatus*, marine fish, Actinopterygii, Neotropical region

Introduction

The cyclopoid family Philichthyidae Vogt, 1877 comprises highly modified and internal parasitic species, which are generally recorded in subcutaneous spaces associated with the sensory canals of the lateral line and skull bones of marine actinopterygians (Boxshall & Halsey 2004; Madinabeitia *et al.* 2013). This family comprises approximately 87 species belonging to nine genera: *Colobomatoides* Essafi & Raibaut, 1980; *Colobomatus* Hesse, 1873; *Ichthyotaces* Shiino, 1932; *Leposphilus* Hesse, 1866; *Lernaeascus* Claus, 1886; *Philichthys* Steenstrup, 1862; *Procolobomatus* Castro-Romero, 1994; *Sarcotaces* Olsson, 1872; and *Sphaerifer* Richiardi, 1874. *Colobomatus* is the most speciose genus with 70 valid species, followed by *Sarcotaces*, *Procolobomatus* and *Sphaerifer* with 7, 3 and 2 species, respectively (Walter & Boxshall 2014).

In the southeastern Atlantic, only three species of philichthyid copepods belonging to *Colobomatus* have been hitherto recorded, *C. belizensis* Cressey & Schotte, 1983 parasitizing *Haemulon steindachneri* (Jordan & Gilbert) and *Orthopristis ruber* (Cuvier), *C. sudatlanticus* Pereira, Timi, Lanfranchi & Luque, 2012 parasitizing *Mullus argentinae* (Hubbs & Marini), and an unidentified species found in the gills of *Micropogonias furnieri* (Quoy & Gaimard) (Luque & Tavares 2007; Pereira *et al.* 2012).

During a population study of sciaenid fishes from the coastal zone of the State of São Paulo, southwestern Atlantic, several philichthyid copepods were recovered. A detailed morphological study of these specimens, based on light and scanning electron microscopy (SEM), revealed that they represent a new species of *Colobomatus* that is described herein.

exhibiting a high host-specificity at the genus level, *C. stelliferi* n. sp. is probably specific to members of the genus *Stellifer* (i.e. *S. brasiliensis*, *S. rastrifer* and *S. stellifer*).

Acknowledgements

We are grateful to Carlos E. F. Rocha for the discussions and considerations and to Enio Mattos for help with the scanning microscopy procedures. We thank Douglas McIntosh for valuable suggestions in review of this manuscript. We are also grateful to Ju-Shey Ho for his valuable comments. Fabiano Paschoal was supported by a student fellowship from Coordenação de Aperfeiçoamento de Pessoal do Ensino Superior (CAPES), Brazil. José Luis Luque and Alexander Turra were supported by a research fellowship from Conselho Nacional de Pesquisa e Desenvolvimento Tecnológico (CNPq), Brazil. Maíra Pombo was supported by a student fellowship from Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP).

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