



## Scientific Note

# Occurrence of *Sphyrion lumpi* (Krøyer, 1845) (Siphonostomatoidea, Sphyrriidae) on Marini's grenadier *Coelorinchus marinii* Hubbs, 1934 (Gadiformes, Macrouridae) from Brazil

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**Abstract.** Here we present the first record of *Sphyrion lumpi* (Copepoda), a mesoparasitic species found on macrourid *Coelorinchus marinii* from Southern Brazilian continental slope.

**Key words:** marine fish, parasitic copepod, mesoparasite, Southwestern Atlantic

**Resumo.** Ocorrência de *Sphyrion lumpi* (Krøyer, 1845) (Siphonostomatoidea: Sphyrriidae) em *Coelorinchus marinii* Hubbs, 1934 no Brasil. Apresentamos o primeiro registro de *Sphyrion lumpi* (Copepoda), uma espécie mesoparasítica encontrada no macrourídeo *Coelorinchus marinii*, proveniente do talude continental do Sul do Brasil.

**Palavras chave:** peixe marinho, copépode parasito, mesoparasito, Oceano Atlântico Sudoeste

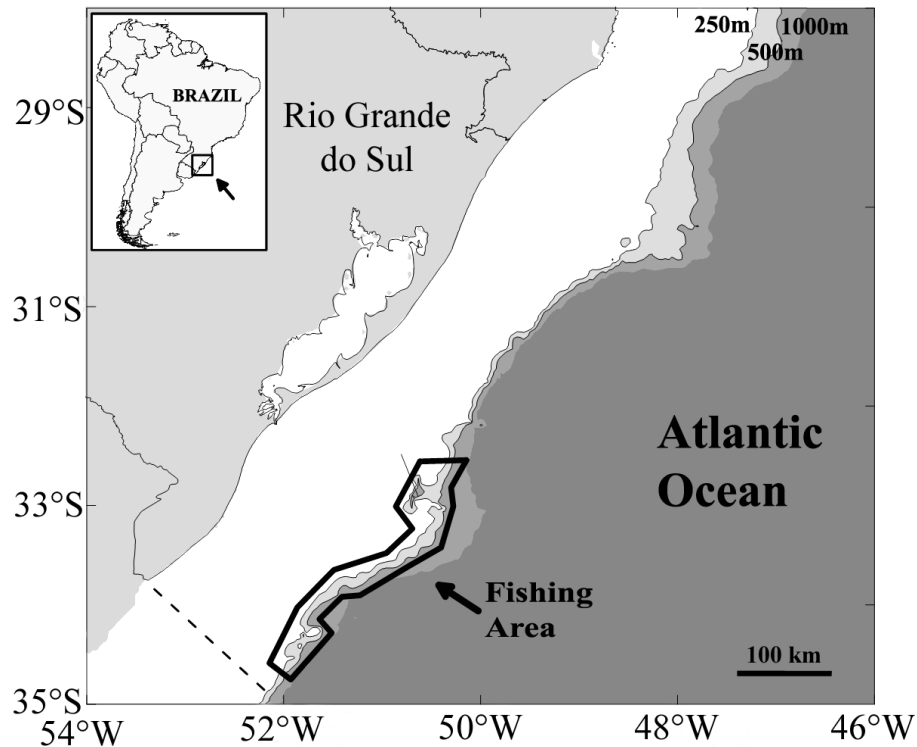
Sphyrriidae Wilson, 1919 contains species of extremely modified siphonostomatoid copepods that parasitize both bony and cartilaginous fishes. These are characterized by partial or complete loss of thoracic appendages and by some degree of degeneration of head appendages (Dojiri & Deets 1988) whose postmetamorphic females are highly modified, exhibiting a mesoparasitic mode of life (Kabata 1979). The family comprises nine genera (Boxshall & Halsey 2004) frequently reported on North Atlantic deep sea fishes (Boxshall 1998). According to Walter & Boxshall (2011) *Sphyrion* Cuvier, 1930 includes three valid species: *S. laevigatum* (Quoy & Gaimard, 1824), *S. lumpi* (Krøyer, 1845) and *S. quadricornis* Gaevskaya & Kovaleva, 1984, all of them parasitizing the somatic musculature of teleost fishes (Dojiri & Deets 1988). *Sphyrion lumpi* was recorded in more than 27 hosts, distributed in eight families and four orders of fishes

(Ho 1992). In the present work, we record the presence of *S. lumpi* parasitic on *Coelorinchus marinii* Hubbs, 1934 by the first time in Brazilian waters.

Fishes were collected from landings of a commercial fish vessel that operates with bottom-trawl on Southern Brazilian continental slope. Fourteen monthly samples from these landings were collected during late 2006 and early 2008 in Rio Grande, RS. All specimens were collected between 32.3°S-34.3°S and 250-450 m depth (Fig. 1). The fishes were fixed in 4% borax-buffered formalin and preserved in 70% ethanol until processing. Four of 877 analyzed specimens of *C. marinii* had attached copepods, three from the same sample. Total length of hosts range 245-286 mm, all sexually mature. The copepods were carefully detached from their hosts and preserved in 70% ethanol. Fishes were identified according Cohen *et al.* (1990) and copepods were

identified according to Wilson (1919) and Boxshall & Montú (1997). Photos were made with aid of an Olympus stereomicroscope SZX16-131 and voucher

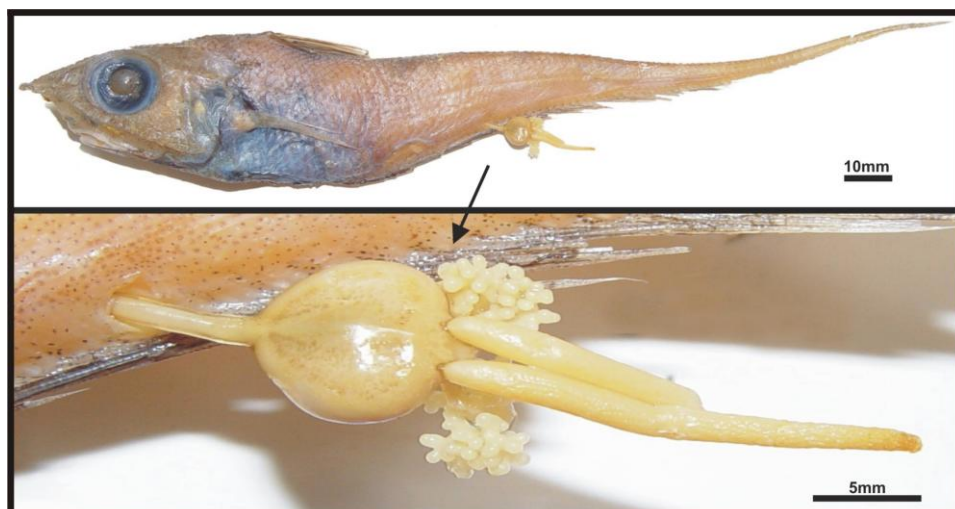
specimens were deposited in the Coleção de Crustacea do Museu Nacional, Quinta da Boa Vista, Rio de Janeiro, Brazil (MNRJ No 23391).



**Figure 1.** Map of study area.

A total of eight female specimens of *Sphyrion lumpi* were collected from their hosts, all of them were attached with their cephalosome buried

in the lateral musculature of the host, close to the anal fin (Fig. 2). No males were found.

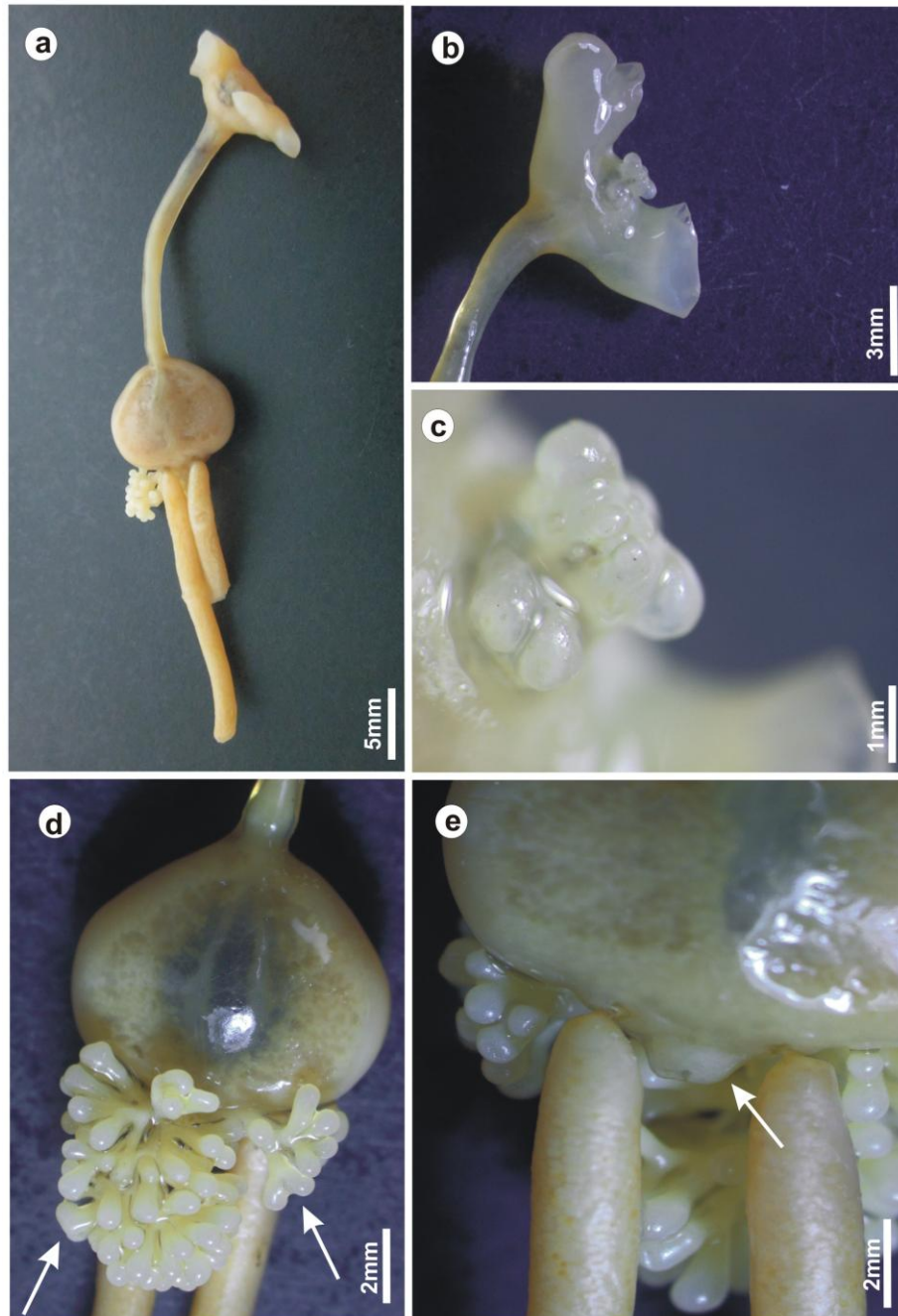


**Figure 2.** Female of *Sphyrion lumpi* attached to *Coelorinchus marinii*.

Female copepods were identified as *Sphyrion lumpi* (Figs. 3a-3e) by the presence of cephalothoracic holdfast transversely elongated by development of two lateral processes and prominent midanterior cephalic region (with reduced appendages), neck without processes (longer than the rest of the body) expanding posteriorly into pyriform genital-abdominal complex flattened dorsoventrally, posterior processes branching and clustered and midposterior perianal prominence.

*Sphyrion lumpi* is a well known parasitic copepod. It has been reported, since the 19th century, more than 70 times (Boxshall 1998). Despite on the fact of *S. lumpi* has a broad range of hosts (Kabata 1979), there are no records of this copepod on fishes from coastal zone of Brazil.

This is a new host and geographic record of parasitic copepod *Sphyrion lumpi*, recording its occurrence by the first time in Brazil.



**Figure 3.** *Sphyrion lumpi* from *Coelorrinchus marinii*. Female. a. Whole adult, ventral view. b. Cephalothoracic holdfast, ventral view. c. Reduced appendages, latero-ventral view. d. Genital-abdominal complex and posterior processes (arrows), dorsal view. e. Perianal prominence (arrow), ventral view.

### Acknowledgments

We are grateful to Fabiano M. Vieira for helping with photos. P. V. Alves and L. G. Fischer were supported by postgraduate fellowship from Coordenação de Aperfeiçoamento do Pessoal de Ensino Superior (CAPES). J. L. Luque was supported by a research fellowship from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

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Received January 2012

Accepted October 2012

Published online March 2013