

Communication

[Comunicação]

**Occurrence of *Rhinoptericola megacantha* (CESTODA, TRYPANORHYNCHA) in new host and new location**

[Ocorrência de *Rhinoptericola megacantha* (CESTODA, TRYPANORHYNCHA) em novo hospedeiro e nova localidade]

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The genus *Rhinoptera*, Cuvier, 1829, is represented by eight species of rays, distributed around the world. They are present in tropical, subtropical and warm-temperate waters, except around Oriental Pacific Island (Last and Stevens, 1994). Only two species occurred in Brazilian coast: the cownose ray *Rhinoptera bonasus* (Mitchill, 1815) and the ticon cownose ray *R. brasiliensis* (Muller, 1836) (Cavalcanti *et al.*, 1997). These differentiate morphologically: *R. bonasus* usually has seven series of plates in both jaws, while *R. brasiliensis* teeth are typically arranged in series of nine (Bigelow and Schroeder, 1953). *Rhinoptera brasiliensis* is distributed from Rio de Janeiro to Rio Grande do Sul States, 23°–32°S (Bigelow and Schroeder, 1953; Menni and Stehmann, 2000).

In trawls in the southern and southeastern Brazil, a significant portion of shrimp by-catch is discarded at sea, either by treating species without commercial value or juveniles of species of economic interest (D'incão *et al.*, 2002). Some species from elasmobranch fishes are present in fishery shrimp by-catch (Lessa *et al.*, 1986; Voreen and Klippel, 2005), and many elasmobranchs are endangered due to the characteristics of slow growth, late sexual maturity and low fecundity (Stevens *et al.*, 2000).

The actually status of *Rhinoptera brasiliensis* is “endangered”, according to IUCN -Red List of Threatened Species, when the best available

evidence indicates that it meets of the criteria for “endangered”, and it is therefore considered to be facing a very high risk of extinction in the wild (Vooren and Lamónaca, 2013).

Studies about parasitological fauna of Brazilian elasmobranchs are rare. The aim of the present study was to report the first occurrence of *Rhinoptericola megacantha* in *Rhinoptera brasiliensis*, and the first occurrence of *R. megacantha* in Brazilian coast.

From April 2012 to April 2013 seven specimens of *Rhinoptera brasiliensis* were captured from shrimp fishery by-catch, *Xiphopenaeus kroyeri*, in southern and southeastern from Brazil. The specimens were found dead, and were stored in ice and taken to the laboratory to mensuration the mean length, mean width and mean weight.

The rays presented mean length 77 (63-87.5) cm, mean width 65.5 (61-70) cm and mean weight 4.08 (3.22-5.14) kg. All fish were necropsied at Instituto de Pesca de São Paulo (Santos, SP, Brazil), and stomach, heart, gills, liver and intestine were collected for study.

The organs were processed at the Universidade Estadual Paulista - Unesp (São Vicente, SP, Brazil).

The intestine of two rays were parasitized, and three specimens of cestoda *Rhinoptericola megacantha* (Cestoda, Trypanorhyncha) were

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collected in totally. Prevalence of infection 28%, mean intensity 1.5 and mean abundance 0.43, calculated according to Bush *et al.* (1997).

The cestodes were prepared for light microscopy being stained with acetic carmine and cleared with beechwood creosote. Permanent slide preparations used Canada balsam. Drawings were made with a drawing tube attached to a Nikon E200 microscope using contrast optics at Universidade Estadual de Maringá, UEM (Maringá, PR, Brazil). Type-specimens were deposited in Helminthological Collection of Instituto Oswaldo Cruz - IOC (Rio de Janeiro, RJ, Brazil).

The characteristics from *Rhinoptericola megacantha*: bothridia oval, arranged in pairs,

sessile and separated. Heteroacantha atypica. Scolex and tentacles long. The tentacles with five types of hooks. According to Call (2007), this characteristics differentiates *R. megacantha* from other cestodes of Rhinoptericolidae: *Shirleyrhynchus aetobatidis* (eight hooks) and *Cetorhynchicola acanthocapax* (seven hooks). Rhyncheal apparatus well developed. Typica basal armature.

Measurements basead on two specimens: length 8.425mm, width 0.5mm; muscular: length 5.0mm, width 0.5mm, bothrio: length 0.56mm, width 0.36mm; scolex: width 0.72mm; length tentacles 2.8 - 3.03mm; first proglotid: length 0.624mm, width 0.292mm; gravid proglotid: length 0.890mm, width 0.750mm; testicle: width 0.014mm; hooks length: 0.045 - 0.052mm.

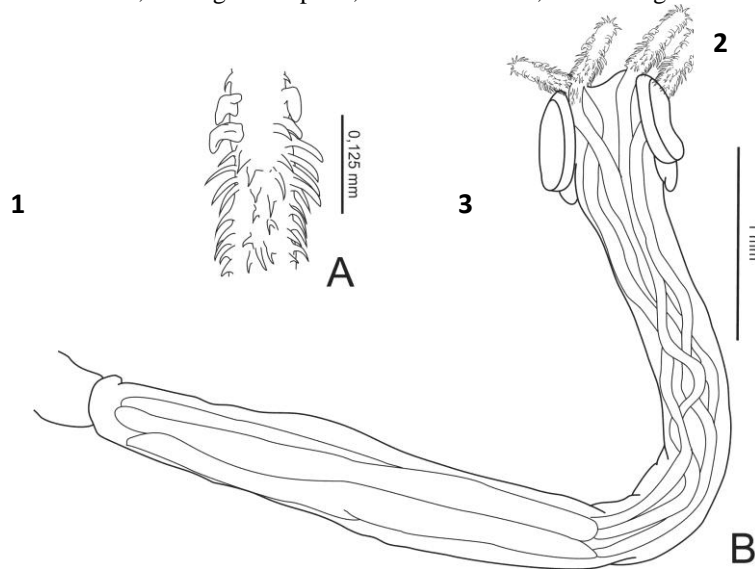


Figure 1. Drawing based in three specimens of *Rhinoptericola megacantha* (Cestoda, Trypanorhyncha), first collected in *Rhinoptera brasiliensis* from Brazil. A: Basal armature: 1 - Tentacles with five types of hooks. B: Anterior extremity. 2 - Four tentacles partially externalized. 3 - Bothridia oval in pairs.

*Rhinoptericola megacantha* was firstly reported in *Rhinoptera bonasus*, caught in Virginia, USA (Carvajal and Campbell, 1975).

It was reported in the same host in Gulf of Venezuela (Mayes and Brooks, 1980) and Gulf of Mexico (Call, 2007).

This is the first report on the occurrence of *Rhinoptericola megacantha* in Brazil and the first report in host *Rhinoptera brasiliensis*.

These data contribute to the knowledge of the parasitological fauna of rays in the Brazilian coast.

Keywords: *Rhinoptera brasiliensis*, *Rhinoptericola megacantha*, by-catch, elasmobranch, Brazil

## RESUMO

Relata-se a ocorrência de *Rhinoptericola megacantha* (Cestoda, Trypanorhyncha) parasitando duas raias da espécie *Rhinoptera brasiliensis*, de um total de sete espécimes analisados. Foram encontrados três espécimes do cestóide, que havia sido descrito ocorrendo apenas no hospedeiro *Rhinoptera bonasus* capturado em Virginia (EUA), Golfo Venezuelano e Golfo do México. Este é o primeiro relato da ocorrência de *R. megacantha* no hospedeiro *R. brasiliensis* e primeira ocorrência no Brasil deste cestóide.

Palavras-chave: *Rhinoptera brasiliensis*, *Rhinoptericola megacantha*, fauna-acompanhante, elasmobrânquios, Brasil

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