



Description of a new species of *Epacanthion* (Thoracostomopsidae, Nematoda) from Brazil and a modified key for species identification*

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Abstract

Epacanthion agubernaculus sp. nov. (Thoracostomopsidae, Nematoda) is described from sediments of Campos Basin, Atlantic Southeast, Brazil. The main features are: the long spicules, the absence of gubernaculum, and the presence of three pairs of setae in the tail region. Only one male was found for description, but the main features are strong enough to consider it clearly as a new species. An updated and modified key for species identification is proposed.

Key words: free-living marine nematodes, deep sea, Campos Basin

Introduction

The family Thoracostomopsidae Filipjev, 1927 belongs to Enoplida because of the presence of a smooth cuticle, metanemes, and a non-spiral amphideal fovea. This family is composed of three subfamilies: Thoracostomopsinae Filipjev, 1927, Trileptiinae Gerlach & Riemann, 1974 and Enoplolaiminae De Coninck, 1965 (Lorenzen 1994). The differential features of the subfamilies consist of the presence or absence of teeth and mandibles in the buccal cavity, except that members of Thoracostomopsinae bear a long and eversible spear (Smol & Coomans 2006).

There are few recent taxonomic studies on the Thoracostomopsidae (Lorenzen 1981; Greenslade & Nicholas 1991). Lorenzen (1981) listed 16 genera belonging to this family. Greenslade & Nicholas (1991) revised the family, described two new genera from Australia, and recognized 21 valid species of *Epacanthion* Wieser, 1953 (Wieser 1953a).

According to Mawson (1956), the main differential feature of *Epacanthion* is the structure of the mandible. However, Gerlach (1956) considered the structures of the head to be more robust features for the genus diagnosis. In the most recent revision of this genus, Greenslade & Nicholas (1991) provided an identification key following the proposals of Mawson (1956) and Gerlach (1956), and also utilized the features of the male reproductive system, such as spicules and gubernaculum.

The genus *Hyalacanthion* Wieser, 1959 is generally similar to *Epacanthion*, so Inglis (1966) proposed it to be a synonym of *Epacanthion* because of the similarity in the mandible structures.

The 21 valid species of *Epacanthion* have the cephalic capsule strongly sclerotized, cephalic setae inserted slightly above the cephalic capsule, three teeth present, and three strongly sclerotized mandibles that are formed by two solid longitudinal columns, united by a thin membrane. The structure of the mandibles is the most important feature for the genus diagnosis. According to Nicholas & Greenslade (1991), *Epacanthion*