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Deep-sea nematodes of the family Microlaimidae from the Clarion-Clipperton Fracture Zone (North-Eastern Tropic Pacific), with the descriptions of three new species*

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Abstract

The description of six species of family Microlaimidae (Nematoda), from 5,000 m depth at the Clarion-Clipperton Fracture Zone (North-Eastern Tropic Pacific), is given. Three previously described species (*Microlaimus discolensis* Bussau et Vopel, 1999; *M. porosus* Bussau et Vopel, 1999; and *Caligocanna mirabilis* Bussau et Vopel, 1999) were found about 5200 km far from the area where the type specimens were originally discovered (the Peru Basin, South-East Pacific). Of the new species, *Aponema martinezi* sp. n. is closest to two other *Aponema* species, *A. minutissima* Kovalyov and Miljutina, 2008 and *A. nanum* (Blome, 1982). However, it differs from them in having a non-set-off head, amphids located quite far from the non-annulated cephalic capsule, and by possessing the gubernaculum with the apophysis. *Microlaimus abyssalis* sp. n. belongs to a group of *Microlaimus* species with dorsocaudal apophyses of gubernaculum. It differs from other four *Microlaimus* species which have apophyses of similar shape (*M. crassiceps* Gerlach, 1953; *M. decraemerae* (Muthumbi & Vincx, 1999); *M. mnazi* (Muthumbi & Vincx, 1999); and *M. undulates* Gerlach, 1953) by lacking of supplementary precloacal organs in males and some other body parameters. *Microlaimus parviporosus* sp. n. possesses four submedian rows of pores along its entire body length. In this feature it resembles three other *Microlaimus* species (*M. cyatholaimoides* de Man, 1922; *M. discolensis* Bussau and Vopel, 1999; and M. *porosus* Bussau and Vopel, 1999). The new species differs from *M. cyatholaimoides* and *M. porosus* by the ratio of the length of the outer labial setae and of the cephalic setae (approximately of equal length in the new species vs. the much longer cephalic setae in two latter species) as well as some other parameters. The new species differs from *M. discolensis* by its shorter head setae of two rings (1.2 µm vs. 6–9 µm) and some other parameters.

Key words: *Aponema*, biodiversity, *Caligocanna*, deep sea, *Microlaimus*, manganese nodules, oozy sediments, taxonomy

Introduction

In the current paper we present the results from studying the nematode collection of the "Nodinaut" cruise conducted in 2004 to the Clarion-Clipperton Fracture Zone (North-Eastern Tropic Pacific). This region is considered to be one of the most commercially important nodule areas of the World Ocean (Thiel 2001). The main goal of the cruise was the study of macro- and meiofauna of nodule fields.

The seabed at the sample area is characterized by abyssal hills from 100 to 300 m in height spaced from 5 to 10 km apart. Most of the area (about 90%) between seabed hills and their slopes is covered by ferromanganese nodules (2 cm to 15+ cm in diameter). Sediments between nodules are very fine-grained (<2µm) silicate oozes (radiolarian and diatomaceous) (Khripounoff et al. 2006).

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