

Three new minute nematode species of the superfamily Monhysteroidea from Arctic Abyss

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Abstract

Three new nematode species of the superfamily Monhysteroidea were found in the Molloy Deep (Fram Strait, Arctic Ocean) at depths of > 5000 m. *Amphimonhystrella bullacauda* sp. n. (Xyalidae) is similar to *A. unita* Lorenzen 1977 but differs from it by having longer cephalic setae (1.5–3.5 versus 1.0 µm), lacking cervical setae, head set off from the body, singular anterior testis, distally pointed spicules, larger protuberant terminal tail widening. The generic diagnosis of *Amphimonhystrella* Timm 1961 is amended, and a dichotomous key for identification of the three *Amphimonhystrella* species is provided. *Thalassomonhystera oxycephalata* sp. n. (Monhysteridae) is distinguished from all valid *Thalassomonhystera* species by a number of morphological characters including narrowed cephalic end, wide amphid, short tubular weakly sclerotised stoma, esophagus gradually widening posteriorly, lacking evident renette cell, short arcuate spicules and gubernaculum with small dorsocaudal apophysis, tail with slender cylindrical portion distinctly set off. *Thalassomonhystera molloyensis* sp. n. is related to *T. bathislandica* Riemann 1995 described also from the north-eastern Atlantic abyssal but differs by having: 1) smaller body, male length 392–460 µm versus 572–684 µm, female length 376–472 µm versus 615–633 µm; 2) sclerotised lips of vulva; 3) presense of two ventral papillae or pairs of papillae, first pair in preanal position and second pair in postanal position just behind the middle of the tail. It is noteworthy that in both species the male genital tract has a variable position in relation to the intestine which is a deviation from the normal monhysterid morphology.

Key words: *Amphimonhystrella*, deep sea biodiversity, descriptions, marine nematodes, Monhysteridae, taxonomy, *Thalassomonhystera*, Xyalidae

Introduction

Molloy Deep is an abyssal depression in the Fram Strait, between Greenland and Svalbard