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***Deontostoma tridentum* n. sp. (Nematoda, Leptosomatidae) from the continental slope of New Zealand**

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Abstract

Deontostoma tridentum n. sp. is described from epibenthic (Brenke) sledge samples obtained from the continental slope of New Zealand at 570 and 1007 m water depths, and details of the ultrastructure are investigated using scanning electron microscopy (SEM). *D. tridentum* n. sp. is characterised by having a large buccal cavity with greatly reduced or inconspicuous odontia, one large dorsal onchium and two smaller subventral onchia, cephalic capsule without interlobar incisions with posteriorly-directed arms, ventral pre-cloacal supplement situated 200–215 µm anterior to cloaca, and gubernaculum with triangular crurae and curved proximal portion. *Deontostoma tridentum* n. sp. can be differentiated from all species of the genus based on the presence of two subventral onchia in the buccal cavity (absent in all other species). It is most similar to *D. coptochilus* in the presence of a large buccal cavity with a prominent dorsal onchium, structure of the cephalic capsule, and structure of the microlabia (*i.e.*, subventral microlabia completely divided by mandibular ridge and dorsal microlabium not completely divided by mandibular ridge). *D. tridentum* n. sp. differs from the latter in the presence of crurae (absent in *D. coptochilus*), absence of ocelli (present in *D. coptochilus*), and in the position and structure of the ventral pre-cloacal supplement.

Key words: Scanning electron microscopy; Brenke sledge; Chatham Rise; Nematode

Introduction

Species of the genus *Deontostoma* Filipjev, 1916 (and other Leptosomatidae) are among the largest free-living marine nematodes, with some species reaching several centimetres in length (e.g., *Deontostoma timmerchioi* Hope 1974). *Deontostoma* specimens are often found in association with other organisms, such as seaweeds and sponges (see review by Hope 1977). The reasons for such associations remain unclear, but the presence of some *Deontostoma* species in a wide variety of organisms, and in sediments, suggests that these associations are facultative (Hope 1977). Most records of *Deontostoma* are from shallow water habitats, but five species (*D. antarcticum* Linstow 1892, *D. arcticum* Saveljev 1912, *D. bruuni* Wieser, 1956, *D. coptochilus* Hope 1977, and *D. jae* Inglis 1964) have so far been recorded from the deep sea (> 400 m water depth) (Hope 1977; Miljutin *et al.* 2010).

Two species of *Deontostoma* are known from the New Zealand Exclusive Economic Zone (EEZ): *D. aucklandiae* Ditlevsen 1921 from the intertidal zone in Carney Harbour, Auckland Islands, and *D. bruuni* (Wieser, 1956) from bathyal sediments (595 m water depth) off the west coast of South Island. Here, a third species, *D. tridentum* n. sp., is described from epibenthic (Brenke) sledge samples obtained from the continental slope of New Zealand.

Methods

Study site and sampling

Samples were obtained from Chatham Rise, a submarine ridge that extends eastwards from the South Island of New Zealand. Samples were collected in November 2011 (NIWA cruise TAN1116), from two sites on the southern