



# Article

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## Swedish Plectida (Nematoda). Part 3. The genus *Loveninema* gen. n.

OLEKSANDR HOLOVACHOV<sup>1</sup> & SVEN BOSTRÖM

Department of Invertebrate Zoology, Swedish Museum of Natural History, Box 50007, SE-104 05 Stockholm, Sweden.

<sup>1</sup> Corresponding author, e-mail: oleksandr.holovachov@nrm.se

### Abstract

A new genus *Loveninema* gen. n., with two new species *L. tubulosa* gen. n., sp. n. and *L. unicornis* gen. n., sp. n. is described from bottom sediments collected in Skagerrak off the west coast of Sweden. *Loveninema* gen. n. is unique among other genera of Plectida by possessing a midventral labial projection located on the ventral edge of the oral opening and protruding anteriorly. Other diagnostic characters include: sclerotised labial framework in the shape of a conoid ring with three projections extending posteriorly: one mid-dorsal, one left-subventral and one right-subventral; papilliform outer labial and cephalic sensilla; amphidial fovea a transverse slit located anterior to cephalic sensilla bases; excretory pore opening on the ventral side of the labial region; pharynx uniformly muscular, cylindrical; female reproductive system didelphic, amphidelphic; male reproductive system monorchic, with reflexed testis; spicules present; gubernaculum present or absent; either alveolar or tubular supplements present in males, absent in females; caudal glands and spinneret present. *L. tubulosa* gen. n., sp. n. is particularly characterised by the 0.66–1.12 mm long body; short midventral labial projection; straight vagina without sclerotisations; male without alveolar and with 12–15 tubular supplements, 15.0–21.5 µm long spicules, and with gubernaculum. *L. unicornis* gen. n., sp. n. is particularly characterised by the 0.65–0.98 mm long body; long midventral labial projection; straight vagina without sclerotisations; male with up to 20 alveolar and without tubular supplements, 11.5–14.0 µm long spicules, and without gubernaculum.

**Key words:** Camacolaimidae, *Loveninema*, Rhadinematidae, SEM, Skagerrak, Sweden, new genus, new species, taxonomy

### Introduction

The “Swedish Taxonomy Initiative” (STI) started in 2001 and one of its most fundamental components is a thorough taxonomic investigation of poorly known organism groups in Sweden. Free-living nematodes are among the groups primarily listed as poorly known in the Swedish fauna. The order Plectida (type genus *Plectus* Bastian, 1865), with representatives commonly found in samples from terrestrial, freshwater and marine habitats, is one group for which our knowledge of the taxonomic diversity is far from complete. Worldwide, it now contains about 510 valid species grouped in 62 genera and 16 families (Holovachov & Boström, 2010). The current number of species of Plectida recorded from the Swedish mainland and adjacent seas is somewhat more than 80 compared with almost 230 species known from Europe. Reports of a little less than 50 of the species found in Sweden are published in the literature and only about half of them were described and illustrated. The records of the remaining species are either in an unpublished report (Jensen, 1989), or based on unpublished observations.

The main goal of the ongoing STI-supported project “Taxonomy and distribution of free-living nematodes of the order Plectida in Sweden” is to update and describe the diversity and distribution of nematodes of the order Plectida in Sweden. So far one new species of *Domorganus* Goodey, 1947 and two new species of *Antomicron* Cobb, 1920 have been described from the Swedish west coast (Holovachov, 2012 *a, b*). In a series of papers, this is the third contribution describing a new genus, *Loveninema* gen. n., with two species found on the Swedish west coast.

### Material and methods

Bottom sediment samples were collected in several locations in the southern part of Skagerrak and in Gullmarn Fjord off the west coast of Sweden. All samples were collected with a bottom dredge or box corer and further