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Swedish Plectida (Nematoda). Part 7. *Setostephanolaimus tchesunovi* sp. n. from the west coast of Sweden

OLEKSANDR HOLOVACHOV

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

E-mail: oleksandr.holovachov@nrm.se

Abstract

A new species of *Setostephanolaimus*, *S. tchesunovi* sp. n., is described from bottom sediments collected in the Skagerrak and Gullmarn Fjord off the west coast of Sweden. It is characterised by 1.0–1.3 mm long body, outer labial setae 6.5–8.5 µm long, cephalic setae 9–11 µm long, subcephalic setae 4–6 µm long, transversely-oval amphid, female with monodelphic opisthodelphic reproductive system, male with 6–9 tubular and without alveolar supplements, spicules arcuate and 54–64 µm long, gubernaculum with dorsal apophysis. A tabular compendium and dichotomous identification key to species of the genus *Setostephanolaimus* are provided.

Key words: Camacolaimidae, *Setostephanolaimus*, Skagerrak, Sweden, taxonomy

Introduction

The genus *Setostephanolaimus* Tchesunov, 1994 includes only seven valid species, all found in marine habitats. Six species are known from European waters and one species was recently described from the Sea of Okhotsk, but our own unpublished data suggest that this genus is much more widely distributed. The name *Setostephanolaimus* was only recently proposed by Tchesunov (1994) for those species of the genus *Stephanolaimus* Ditlevsen, 1918, which have outer labial sensilla setiform in shape, not papilliform as in the type species of *Stephanolaimus*, *S. elegans* Ditlevsen, 1918.

The Swedish taxonomic database (www.dyntaxa.se) lists five species of the genera *Stephanolaimus* and *Setostephanolaimus*, but only two of them were in fact recorded in Swedish waters. *Stephanolaimus elegans* and *S. filicaudatus* Schuurmans Stekhoven, 1946 were both collected in the Skagerrak (Schuurmans Stekhoven 1946, Willems et al. 2009). *S. elegans* is a valid species, while the taxonomic status of *S. filicaudatus* is questionable. This species was described on the basis of a single juvenile and should be considered *species inquirendae et incertae sedis*. Three other species, which are currently placed in the genus *Setostephanolaimus*, e.g. *S. flevensis* (Schuurmans Stekhoven, 1935) Tchesunov, 1994, *S. paraflevensis* (Gerlach, 1953) Tchesunov, 1994 and *S. spartinae* (Lorenzen, 1969) Tchesunov, 1994, have not yet been recorded from Swedish territory. *S. flevensis* was originally described from the Zuiderzee in the Netherlands (Schuurmans Stekhoven 1935) and was subsequently found along the coast of Italy (Gerlach 1953) and in Kiel Bay (Gerlach 1958), *S. paraflevensis* is also known from the Italian coast (Gerlach 1953), while *S. spartinae* occurs along the coasts of Germany and Scotland (Lorenzen 1969, Vadhyar 1981).

Two species belonging to the genus *Setostephanolaimus* were found during recent sampling in marine habitats along the Swedish coast conducted as a part of the on-going STI-supported project "Taxonomy and distribution of free-living nematodes of the order Plectida in Sweden": *Stephanolaimus spartinae* in samples from the Skagerrak and a new species, *Stephanolaimus tchesunovi* sp. n., in the Skagerrak and Gullmarn Fjord. The former species is new to the Swedish fauna, while the latter species is new to science and is described below.

Dichotomous key to species of *Setostephanolaimus* Tchesunov, 1994 (based on males)

1. Body longer than 2.5 mm, males with more than 20 tubular supplements *S. gandavensis*
- Body shorter than 2.5 mm, males with less than 20 tubular supplements 2
2. Subcephalic seta absent 3
- Subcephalic seta present 5
3. Males with 6–7 tubular supplements. *S. paraflevensis*
- Males with 12–15 tubular supplements. 4
4. Spicules 52–85 μm long, gubernaculum without apophysis. *S. longispiculum*
- Spicules 33 μm long, gubernaculum with long dorsocaudal apophysis *S. flevensis*
5. Spicules 54–64 μm long *S. tchesunovi* **sp. n.**
- Spicules less than 40 μm long 6
6. Spicules 17–20 μm long *S. spartinae*
- Spicules more than 30 μm long. 7
7. Amphid aperture round, gubernaculum apophysis long *S. bicoronatus*
- Amphid aperture slit-like, gubernaculum apophysis short *S. orientalis*

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References

- Boucher, G. & Helléouët, M.-N. (1977) Nématodes des sables fins infralitoraux de la Pierre Noire (Manche Occidentale). III. Araeolaimida et Monhysterida. *Bulletin du Muséum National d'Histoire Naturelle*, 427, 87–122.
- De Grisse, A.T. (1969) Redescription ou modifications de quelques techniques utilisées dans l'étude des nematodes phytoparasitaires. *Mededelingen Rijksfakulteit Landbouwwetenschappen Gent*, 34, 351–369.
- Ditlevsen, H. (1918) Marine freeliving nematodes from Danish waters. *Videnskabelige Meddelelser fra Naturhistorisk Forening*, 87, 201–242.
- Fadeeva, N.P. & Mordukhovich, V.V. (2007) New and known Leptolaimidae (Nematoda, Chromadoria) species in the Sea of Okhotsk and the Sea of Japan. *Zoologicheskii Zhurnal*, 86, 3–15. [in Russian]
- Gerlach, S.A. (1953) Die nematodenbesiedlung des Sandstrandes und des Küstengrundwasser an der italienischen Küste I. Systematischer Teil. *Archo Zoologie Italian*, 37, 517–640.
- Gerlach, S.A. (1958) Die Nematodenfauna der sublitoralen Region in der Kieler Bucht. *Kieler Meeresforschungen*, 14, 64–90.
- Holovachov, O. & Boström, S. (2010) *Identification of Plectida (Nematoda)*. EUMAINE, Gent and Nematology, UC Riverside, 98 pp. Available from: <http://www.nrm.se/download/18.9ff3752132fdaecb6800015609/PLECTIDA%5B1%5D.pdf> (accessed 15 July 2014)
- Jensen, P. (1976) Free-living marine nematodes from a sublittoral station in the North Sea of the Belgian coast. *Biologisch Jaarboek Dodonaea*, 44, 231–255.
- Lorenzen, S. (1969) Freilebende Meeresnematoden aus dem Schlickwatt und den Salzwiesen der Nordseeküste. *Veröffentlichungen des Instituts für Meeresforschung in Bremerhaven*, 11, 195–238.
- Platt, H.M. (1983) New species of *Metadesmolaimus* and *Stephanolaimus* (Nematoda: Chromadoria) from the Northern Ireland with reviews of the genera. *Zoological Journal of the Linnean Society*, 78, 363–373. <http://dx.doi.org/10.1111/j.1096-3642.1975.tb02265.x>
- Schuermans Stekhoven, J.H. (1935) Nematoda: Systematischer Teil, Nematoda Errantia. In: Grimpe, G. & Wagler, E. (Eds.), *Die Tierwelt der Nord- und Ostsee*. Leipzig, pp. 1–173.
- Schuermans Stekhoven, J.H. (1946) Freilebende marine Nematoden des Skageraks und der Umgebung von Stockholm. *Arkiv för Zoologi*, 37, 1–91.
- Seinhorst, J.W. (1959) A rapid method for the transfer of nematodes from fixative to anhydrous glycerin. *Nematologica*, 4, 67–69. <http://dx.doi.org/10.1163/187529259x00381>
- Tchesunov, A.V. (1994) Description of a marine free-living nematode *Stephanolaimus graciosus* sp. n. and erection of *Setostephanolaimus* gen. n. (Chromadoria: Leptolaimidae). *Russian Journal of Nematology*, 2, 79–82.
- Vadhyar, K.J. (1981) A new and two known species belonging to subfamily Leptolaiminae (Leptolaimidae, Nematoda) from polluted intertidal sand in Scotland. *Cahiers de Biologie Marine*, 22, 313–321.
- Willems, W.R., Curini-Galletti, M., Ferrero, T.J., Fontaneto, D., Heiner, I., Huys, R., Ivanenko, V.N., Kristensen, R.M., Kånneby, T., MacNaughton, M.O., Arbizu, R.M., Todaro, M.A., Sterrer, W. & Jondelius, U. (2009) Meiofauna of the Koster-area, results from a workshop at the Sven Lovén Centre for Marine Sciences (Tjärnö, Sweden). *Meiofauna Marina*, 17, 1–34.