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New species of free-living marine Sabatieriinae (Nematoda: Monhysterida: Comesomatidae) from around South Korea*

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Abstract

Four new species from the subfamily Sabatieriinae Filipjev, 1934 are described from the south and west coast of South Korea: three new species of *Laimella* Cobb, 1920 and one new species of *Cervonema* Wieser, 1954. Two further species of *Cervonema* are informally described owing to the absence of male specimens. In addition, *Laimella filicaudata* Ward, 1974 is formally reinstated as an extant species. Sabatieriinae are relatively character poor, defined by a striate cuticle, closely spaced cephalic setae, small buccal cavity, simple arcuate spicules and precloacal supplements minute or absent. However, we have found that the de Man's ratios *a*, *b* and *c*, the comparable lengths of the anterior and posterior cephalic setae, the position of the amphid, shape and length of the oesophageal bulb, and the proportion of the cylindrical tail part are all species informative. *Laimella ferreroi* **sp. nov.** is most distinctive species described here, having the largest de Man's ratios *a* and *b*, the longest gubernaculum (as abd) and the longest, truly filiform, tail so far recorded in the genus. *Laimella socotris* **sp. nov.** has a distinct rounded posterior oesophageal bulb similar only to *L. longicauda* Cobb, 1920 and *L. filicaudata* Ward, 1974; in combination with the tail length and the relative length of the anterior and cephalic setae this defines the species. *Laimella tongyeongensis* **sp. nov.** is defined by a combination of characters, principally the de Man's ratios a, *b*, *c* and *c'*, the oesophageal bulb length and with regards to the length ratio between the anterior and posterior cephalic setae. *Cervonema pseudodeltensis* **sp. nov.** is the only species of the genus so far described which appears to have the anterior cephalic setae marginally longer than the posterior cephalic setae. It is also defined by the amphid position and the relative size of the oesophageal bulb. *Cervonema sp. A* , described only as females, is defined by the total body length and the relative length of the oesophagus and tail (de Man's *b* and *c*). *Cervonema sp. B*, on the other hand, is distinct with respect to the de Man's ratios *a* and *b*, the R2:R3 sensilla length ratio, and the amphid directly behind the cephalic setae. It also has not been fully described here owing to the lack of male specimens.

Key words: Benthic, *Cervonema*, *Laimella*, subtidal, West Sea, Yellow Sea

Introduction

The subtidal habitat along the coast of South Korea is diverse, ranging from shallow (< 100 m) muds and gravels in the West Sea, the Straits of Jeju and Korea Strait, to a narrow continental shelf and steep slope region in the East Sea (Sea of Japan). This is also reflected in the intertidal sediments, which tend to be fine sands and muds on the west coast and coarser sands on the east coast. The Yellow Sea, between the Korean Peninsula and eastern China, is a shallow semi-enclosed, western Pacific marginal sea, and at first sight it might be presumed that the fauna within this region would be homogenous. However, studies show that sedimentary sources to the eastern and western parts of this region are distinct (Lim et al. 2006) with Chinese riverine input being predominantly silt (on average 73 %), and Korean input more homogeneous (Sand, 23 %: Silt, 45 %: Clay, 32 %). We may therefore expect to encounter a relatively distinct meiofaunal assemblage in the Korean West Sea when compared to the Yellow Sea. Nematode assemblage structure and species composition are known to closely reflect sediment granulometry (Vanaverbeke et al. 2011).

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