



## New free-living marine nematode species (Nematoda: Desmodoridae) from the coast of New Zealand

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### Abstract

*Pseudochromadora reathae* n. sp. is described from intertidal sand in Otago Harbour (southern New Zealand), and *Pseudodesmodora lacrima* n. sp. is described from subtidal sediment in the Firth of Thames (northern New Zealand). *Pseudochromadora reathae* n. sp. differs from other species of the genus through the combination of the following characters: sexual dimorphism in the shape of the apertura amphidialis, no interdigitation of body annuli at level of lateral alae, presence of eight longitudinal rows of somatic setae, and conspicuous pre-cloacal supplements consisting of star-shaped projections flanked by two cuticularised pieces. *Pseudodesmodora lacrima* n. sp. is characterised by the presence of large unispiral amphids on amphidial plates, conspicuous ducts in the head region, low a values, and short cephalic setae.

**Key words:** SEM, taxonomy, Otago coast, Hauraki Gulf, morphology, meiofauna, Desmodorinae, *Pseudochromadora reathae* n. sp., *Pseudodesmodora lacrima* n. sp.

### Introduction

A total of 95 valid free-living marine nematode species are known from New Zealand (Leduc & Gwyther 2008). Five species of the family Desmodoridae have been recorded so far, viz. *Molgolaimus tenuispiculum* Ditlevsen 1921, *Croconema stateni* (Allgén 1927) Wieser 1954, *Paradesmodora campbelli* (Allgén 1932) Gerlach 1963, *Desmodorella tenuispiculum* (Allgén 1927) Verschelde *et al.* 1998, and *Desmodora campbelli* Allgén 1932. The present paper describes two new species of the subfamily Desmodorinae: *Pseudochromadora reathae* n. sp. from intertidal sandy sediment at Harwood, Otago Harbour (southern New Zealand), and *Pseudodesmodora lacrima* n. sp. from subtidal muddy sediment in the Firth of Thames (northern New Zealand).

### Methods

The first sampling location was situated in the upper intertidal zone at Harwood (lower Otago Harbour, 45°49'S, 170°40'E). The site is characterised by well-sorted fine sandy sediments (85% fine sand, mean grain size = 2.4 phi, sorting coefficient = 0.4 phi) with < 1% mud content (Heiss *et al.* 2000) and has a spring tidal range of 1.74 m (Heath 1976). Extensive meadows of the seagrass *Zostera capricorni* cover much of the intertidal area. The second sampling location was situated in the Firth of Thames (37° 3'S, 175°24'E). Samples were obtained from subtidal muddy sediment (75% silt/clay) at 5 m water depth.

Samples at Harwood were obtained in January 2007 by scraping surface sediments. A multicorer was used to obtain samples from the Firth of Thames in December 2003. Samples were fixed in 5% formalin and