



## A review of *Pseudoleptomesochrella* Lang, 1965 (Copepoda, Harpacticoida, Ameiridae), including a redescription of *P. halophila* (Noodt, 1952) from the Black Sea and a key to species

SERDAR SAK<sup>1</sup>, SÜPHAN KARAYTUĞ<sup>2</sup> & RONY HUYS<sup>3,4</sup>

<sup>1</sup>Balıkesir University, Faculty of Arts and Science, Department of Biology, 10145, Balıkesir, Turkey. E-mail: ssak@balikesir.edu.tr

<sup>2</sup>Mersin University, Faculty of Arts and Science, Department of Biology, 33343, Mersin, Turkey. E-mail: skaraytug@mersin.edu.tr

<sup>3</sup>Department of Zoology, Natural History Museum, Cromwell Road, London SW7 5BD, UK. E-mail: rjh@nhm.ac.uk

<sup>4</sup>Corresponding author

### Abstract

Both sexes of *Pseudoleptomesochrella halophila* (Noodt, 1952) (Copepoda, Harpacticoida, Ameiridae) are redescribed in detail based on material collected from the Black Sea coast of Turkey. Careful comparison revealed that the Turkish specimens are identical with the northwestern European populations originally reported from the Isle of Sylt (Germany) and the Isles of Scilly (U.K.). Re-examination of the type material of *Nitocrella halophila brevifurca* Wells, 1961 confirmed its conspecificity with *P. halophila*. Comparison of the various descriptions indicates the genus comprises two species complexes (Atlantic and *P. halophila* groups) whose members exhibit only cryptic differences, and that the majority of discrepancies reported in the literature are potentially unreal. *Pseudoleptomesochrella pontica* Apostolov, 1969 is removed from its synonymy with *P. halophila* and is reinstated as *species inquirenda*. A dichotomous key to species of *Pseudoleptomesochrella* Lang, 1965 is provided.

**Key words:** Taxonomy, marine interstitial, cryptic speciation, boreo-pontic distribution, Turkey

### Introduction

Ever since its inception the genus *Nitocrella* Chappuis, 1924 (Harpacticoida, Ameiridae) has served as a repository for freshwater, estuarine and marine interstitial taxa that deviated from more traditional ameirid genera in their reduced swimming leg segmentation and armature. The subsequent gradual refinement of the generic diagnosis has resulted in the proposal of numerous new genera and this process appears to be ongoing (Lang 1965; Petkovski 1976; Galassi *et al.* 1999; Lee & Huys 2002; Reid *et al.* 2003; Karanovic 2004, 2006). One marine example is represented by the genus *Pseudoleptomesochrella*, which was proposed by Lang (1965) for three taxa previously attributed to *Nitocrella*: *N. halophila* Noodt, 1952, *N. marina* Chappuis & Rouch, 1961 and *N. halophila brevifurca* Wells, 1961. Lang (1965) claimed the presence of an inner seta on the first segment of P2-P4 exopods not only excluded these taxa from *Nitocrella* but also provided evidence that they could not possibly have been derived from a *Nitocrella*- or *Nitocra*-like ancestor, suggesting an affinity with the genus *Pseudoleptomesochra* Lang, 1965 instead. Noodt (1952) himself remarked that the presence of three outer spines on the distal exopod segment of P2 made *N. halophila* differ from all other *Nitocrella* species known at that time, however, he considered this discrepancy a reflection of the heterogeneity of the genus. Lang (1965) designated *N. halophila* as the type species of *Pseudoleptomesochrella* and upgraded *N. halophila brevifurca* to full species rank based on differences with the nominate subspecies in the