



A review of taxonomic concepts in the Nannoniscidae (Isopoda, Asellota), with a key to the genera and a description of *Nannoniscus oblongus* Sars

GEORGE D.F. WILSON

Australian Museum, 6 College Street, Sydney, NSW 2010 Australia. E-mail: buz.wilson@austmus.gov.au

Abstract

Owing to recent taxonomic changes to the Nannoniscidae Hansen, the concepts of the taxa within the family require clarification. Specimens of *Nannoniscus oblongus* Sars, putatively those examined by G.O. Sars, and specimens from Hjeltefjord, Norway were illustrated to clarify the concept of the type genus of the Nannoniscidae. Specimens used by Siebenaller and Hessler (1981) and several other recently-described taxa were evaluated. Standard views are argued to provide more consistent illustrations of morphology. The somite articulations of the posterior body were found to be variable and often inaccurately illustrated feature in nannoniscid taxonomy; this character complex is therefore unreliable for taxonomic concepts in the family. In replacement, new characters that distinguish this family from the Desmosomatidae Sars are described. These include the proximal segmentation of the antennal flagellum, a subdistal dorsal tooth on the left mandible incisor process and ventral pereonal insertions of the coxae. The composition and classification of the family is adjusted using this new information. Subfamilies recently proposed for the Nannoniscidae by George (2001) based on somite articulations are rejected. Diagnoses of several genera, including *Saetoniscus* Brandt, were reconsidered using this new information. This latter genus is found to be indistinguishable from *Nannoniscus* Sars and is placed in junior synonymy. A new diagnosis and a new key to the genera of the Nannoniscidae use the new character information, omitting somite articulations as a primary descriptor. New diagnoses for *Nannoniscus* Sars and *Nannonisconus* Schultz, and revised compositions for these genera are proposed. *Nannoniscus intermedius* Siebenaller & Hessler is transferred to *Nannonisconus*. *Rapaniscus* Siebenaller & Hessler is diagnosed and pereopods I–II of its type species, *R. dewdneyi* are illustrated.

Key words: Nannoniscidae, sexual dimorphism, terminal male, *Nannoniscus*, *Nannonisconus*, *Rapaniscus*, *Exilinisca*, systematics, standard views, somite articulation, mandible incisor process

Introduction

Although the asellotan isopod family Nannoniscidae Hansen, 1916 has not received a complete revision since Siebenaller and Hessler (1977, 1981), this taxon has reasonably well-defined generic concepts. These authors nevertheless indicated that the generic classification required further study, especially with regard to the type genus *Nannoniscus* Sars, 1870. In addition, their concept depended on just a single, possibly variable character to establish family membership, the position of a robust seta on the anterolateral margin of pereonites 1–4. Several changes to nannoniscid classification have been introduced since their study that brings some of their conceptual framework into question. Svavarsson (1984) transferred *Micromesus* to the Nannoniscidae. Wägele (1989) proposed a return of *Thaumastosoma* Hessler, 1970 to the Desmosomatidae and made other proposals regarding the placement of related taxa. George (2001) proposed new subfamily and genus-level names, and revised generic compositions.

Fully mature males ("terminal male", cf. Just & Wilson 2004) of Nannoniscidae are not known in many species, and indeed some characters states of *Nannoniscus oblongus* Sars, 1870 (the type species) have