



## ***Holodentata* gen. nov. (Isopoda: Asellota: Paramunnidae) with a description of two new species: *H. caeca* and *H. triangulata* from the Southern Ocean\***

BRENDA LÍA DOTI<sup>1#</sup>, MADHUMITA CHOUDHURY<sup>2</sup> & ANGELIKA BRANDT<sup>2</sup>

<sup>1</sup>Departamento de Biodiversidad y Biología Experimental, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Ciudad Universitaria, C1428EHA, Buenos Aires, Argentina

<sup>2</sup>Zoological Institute and Museum, University of Hamburg, Martin-Luther-King-Platz 3, 20146 Hamburg, Germany

#Corresponding author: bdoti@bg.fcen.uba.ar

\* In: Brökeland, W. & George, K.H. (eds) (2009) Deep-sea taxonomy — a contribution to our knowledge of biodiversity. *Zootaxa*, 2096, 1–488.

### **Abstract**

A new genus of Paramunnidae, *Holodentata* (type species: *Paramunna gaussi* Vanhöffen, 1914) is erected. The new genus comprises two new species: *H. caeca*, from the deep Weddell Sea and *H. triangulata*, from the Ross Sea. The new genus is distinguished by the following characters: article 3 of the antenna short and with strong denticles, mandible palp absent, article 2 of maxilliped palp longest, coxal plates visible in dorsal view in all pereonites, pleotelson broad and laterally denticulated.

**Key words:** Isopoda, *Holodentata*, Ross Sea, Powell Basin, Southern Ocean, taxonomy, new genus, new species

### **Introduction**

The family Paramunnidae Vanhöffen, 1914 (Isopoda: Asellota) includes more than 100 species which are characterized by their small size (approximately 0.6–3 mm). The species belonging to this family are distributed all over the world from the poles to the tropics, but their major diversity lies in the temperate/cold water of the southern hemisphere (Wilson 1980). This family is species rich and abundant in shallow waters. However, the Paramunnidae also have a wide bathymetric range and includes some abyssal species. Several paramunnids have been described from Antarctic waters, mainly from the Antarctic Peninsula, McMurdo Sound, Davis Sea, Adélie and Queen Mary Coasts (Richardson 1906, 1908 and 1913; Hodgson 1910, Vanhöffen 1914, Hale 1937, among others). Recently, a worldwide revision of this family was published by Just and Wilson (2004, 2006, 2007), who erected several new genera and re-diagnosed many others. As a result of these studies the Paramunnidae has proved to be a more highly diverse family than previously thought.

A high percentage of Southern Ocean isopod species appear to be endemic, probably due to an intense speciation processes in geographic isolation (Brandt 1992). However, this fauna is far from being well known. With regard to this, it is worth noting that the ANDEEP (ANtarctic benthic DEEP-sea biodiversity, colonisation history and recent community patterns) surveys, recently carried out in the deep Weddell Sea on board the RV *Polarstern*, revealed high levels of previously unrecorded biodiversity. In particular, of the 674 isopod species collected 585 were new to science (Brandt *et al.* 2007a).

The species descriptions are based on material from two recent Antarctic expeditions; the ANDEEP III expedition, with RV *Polarstern*, which took place in 2005 in the deep Weddell Sea, and the 19<sup>th</sup> *Italica*