



Synopsis of Amphipoda from two recent Ross Sea voyages with description of a new species of *Epimeria* (Epimeriidae, Amphipoda, Crustacea)

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Abstract

Two recent voyages to the Ross Sea in 2004 and 2008 collected over 3000 benthic Amphipoda. The composition of 30 amphipod families is presented, and a focus is given to the family Epimeriidae from which a new species described. *Epimeria larsi* **sp. nov.** from 1950 m depth, is the deepest occurring species of the genus known from Antarctic waters. This increases the number of known species of Epimeriidae from Antarctica to 27. *Epimeria larsi* can be distinguished from similar species by the unique combination of following characters: coxa 5 posteroventral corner produced, epimeral plate posteroventral corner rounded, and coxa 1–3 apically rounded.

Key words: Antarctica, IPY, deep sea, taxonomy, *Epimeria*, Epimeriidae, Amphipoda, Crustacea

Introduction

Recent Ross Sea research voyages by the RV *Tangaroa* in 2004 (BIOROSS) and 2008 (IPY, International Polar Year) collected numerous benthic Amphipoda using an assortment of gear types. A preliminary survey of amphipod diversity is presented along with a description of a new species of *Epimeria*.

Material and methods

Taxon sampling. Benthic amphipods were collected during RV *Tangaroa* voyages to the western Ross Sea, BIOROSS (TAN0402) and IPY (TAN0802) via grabs, cores, sleds and trawls (and also via an epibenthic sled, here termed Brenke sled (Brenke 2005) during IPY). Specimens were immediately sorted on deck, often pictured alive on board, fixed in 98% ethanol and later transferred to 70% ethanol.

The present examination includes all Amphipoda caught during BIOROSS, but excludes material collected by the epibenthic sled during IPY. Processing and sorting of the rich Brenke sled samples remains to be completed.

Standard amphipod literature as well as the online family-level Intkey (Lowry & Spingthorpe, 2001), was used to identify Amphipoda to family level. The numbers of specimens per sample split by amphipod family were plotted on a bar graph (Fig. 1).

Morphological description. Specimens were examined and dissected under a Leica MZ9.5 stereomicroscope and drawn using a camera lucida. Small appendages (mouthparts, uropods, telson) were temporarily mounted in lactic acid and examined and drawn using a Nikon compound microscope fitted with a camera lucida. The body lengths of specimens examined were measured by tracing individual's mid-trunk lengths (tip of the rostrum to end of telson) using a camera lucida. All illustrations digitally 'inked' following Coleman (2003). Setal terminology follows Watling (1989). In the description, abbreviations are used for