



Macrostylis cerritus* sp. nov., a new species of Macrostylidae (Isopoda: Asellota) from the Weddell Sea, Southern Ocean

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Abstract

Macrostylis cerritus sp. nov. (Macrostylidae) is described from the Weddell Sea, Antarctica, at a depth of 2149 m. The new species differs from other species of *Macrostylis* due to the incisor with 4 cusps; the strongly hook-shaped ischium of pereopod 3; pereopod 4 being greatly reduced and juvenile in appearance; the operculum bearing a ventral spine-like seta; and the absence of pleopod 5. This species is the fourth deep-sea macrostylid identified from the Southern Ocean, and is one more species described from the specimens of ANDEEP I–III expeditions.

Key words: *Macrostylis*, Antarctica, deep sea, taxonomy

Introduction

Recent evidence indicates that a diverse and unique array of deep-sea Isopoda exists in the Southern Ocean (Brandt 2004, Brandt *et al.* 2007a,b). This is partly due to thermal and oceanographic isolation amongst other factors on the shelf (Kaiser & Brandt 2007), or due to habitat heterogeneity (e.g. grain size, drop stones or different sediments), currents and oxygen levels amongst other factors in the deep sea (e.g. Etter and Grassle 1992, Gage 1997, Levin & Gage 1998, Rex 2005, 2006). Recent ANDEEP studies have collected more than 13,000 specimens of 674 different species, 585 (86%) of which are new to science (Brandt *et al.* 2007a). These findings challenge previous knowledge of high-latitude deep-sea biodiversity, and indicate that the Southern Ocean deep-sea environment may play a greater role in ecological and evolutionary processes than previously believed.

The family Macrostylidae Hansen, 1916 is a group of specialised deep-sea asellotes comprising about 60 species in two genera worldwide: *Desmostylis* Brandt, 1992 and *Macrostylis* Sars, 1864 (Brandt 2004), both of which are present in the Antarctic deep sea. *Macrostylis* is found worldwide, with only *Macrostylis longeremis* Meiner, 1890, *M. spinifera* Sars, 1864, and *M. polaris* Malyutina & Kussakin, 1996 known from shallow continental waters, whereas the two *Desmostylis* species, *D. gerdesi* and *D. obscurus*, are exclusively Antarctic deep-sea species (Brandt 2002). The first species of the family Macrostylidae to be described from the Southern Ocean region was *M. spiniceps* Barnard, 1920, (from South African waters), and since then eight more have been described (see Table 1).

This contribution describes a new species of deep-sea *Macrostylis* from the Southern Ocean. Previously, only three *Macrostylis* species had been found in the deep Southern Ocean, but this new species is only one (species number 12) of thirty-one species of Macrostylidae (Stefanie Kaiser, personal communication)