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A new species of *Fissarcturus* Brandt, 1990 (Isopoda, Valvifera, Antarcturidae) from the Southern Ocean, off the South Sandwich Islands

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Abstract

A new antarcturid species, *Fissarcturus dorotheae* **sp. nov.**, from the Southern Ocean is described. During the ANDEEP II expedition in March 2002, specimens of the new species were collected aboard the RV *Polarstern* off the South Sandwich Islands. The new species is most similar to *Fissarcturus sandwichi* Brandt, 2007, but can be easily distinguished from it by the absence of the cauliflower-like spination, the number of articles of the antennal flagellum as well as the coxal spination. It also can be differentiated from *F. sandwichi* by the spinulation of the supraocular spines, the tubercular-like spination of the cephalothorax and the absence of tubercles and denticulate spines on the pereopods. The new species differs from all other species of the genus by the strong spinulated frontally bent supraocular spines and the weakly pronounced dorsal spination. A distribution map of all known *Fissarcturus* species is provided.

Key words: taxonomy, Crustacea, *Fissarcturus dorotheae* **sp. nov.**, Southern Ocean, biogeography

Introduction

During the ANDEEP (ANtartic benthic DEEP-sea biodiversity: colonisation history and recent community patterns) expedition II in March 2002, a new and herein described species was collected amongst the sampled antarcturid isopods in the Southern Ocean (SO). In the framework of ANDEEP, three expeditions were performed with the research vessel *Polarstern* between 2002 and 2005 for the purpose of analysing the isopod biodiversity of and the zoogeographic distribution in the Southern Ocean. Samples were taken mainly in the Atlantic sector in water depths between 774 m and 6348 m, amongst others at the South Sandwich Islands, where the new species was found. During the ANDEEP expeditions to the SO deep sea, a high isopod diversity was discovered and the results increased our understanding of the isopod biodiversity and their zoogeography (Brandt *et al.* 2007).

Isopods of the family Antarcturidae Poore, 2001 are most diverse in the SO. One of the included genera is *Fissarcturus* Brandt, 1990 with the type species *Fissarcturus emarginatus* Brandt, 1990. Until now, eighteen species of the genus *Fissarcturus* are known and described, including the new species.

Most of the *Fissarcturus* species described are located between South America and Antarctica, mainly in the Weddell Sea and the Scotia Sea; individual species were found in the Bellingshausen Sea, the Ross Sea and between Antarctica and the Kerguelen Plateau as well as in the Argentine Basin. For a complete overview of the zoogeographic distribution, samples of *Fissarcturus* species from further Antarctic locations will be needed.

Material and methods

Specimens of the new *Fissarcturus* species were sampled during the ANDEEP II expedition from aboard the RV *Polarstern* (ANT XIX3/4) in the SO deep sea off the South Sandwich Islands at station 143, 58°44.69 S, 25°10.28 W–58°44.45 S, 25°10.66 W in March 2002 by means of an epibenthic sledge (EBS) at 774 m depth (Brandt & Barthel, 1995, Brenke, 2005, Brandt 2007). To allow future molecular analyses the material was immediately fixed