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## New Ampharetidae (Polychaeta) from the deep Southern Ocean and shallow Patagonian waters

MYRIAM SCHÜLLER<sup>1</sup> & IGOR A. JIRKOV<sup>2</sup>

<sup>1</sup> corresponding author: Animal Ecology, Evolution & Biodiversity, Ruhr-University, 44780 Bochum, Germany, email: myriam.schueller@freenet.de

<sup>2</sup> Department of Hydrobiology, Biological faculty, Moscow State University, Moscow, Russia, email: Ampharete@yandex.ru

### Abstract

The terebellomorph Ampharetidae are among the most speciose polychaete families in Southern Ocean waters, especially in the deep sea. Because specimens are very fragile and species are often only present in low abundances, identification of species is challenging. In the present study the Ampharetidae of the expeditions ANDEEP I–III to the deep Weddell Sea and adjacent basins and samples from Patagonia were identified. In 574 individuals over 40 different species were found, of which only 13 could be assigned to described species without doubt. At least ten new species were found in the material of which eight are described herein, one of them belonging to a new genus. These are *Abderos minotaurus* gen.nov. n.sp., *Amage micropaleata* n.sp., *Anobothrus paleaodiscus* n.sp., *Anobothrus wilhelmi* n.sp., *Noanelia orensanzi* n.sp., and *Zatsepinia antarctica* n.sp. from ANDEEP-samples, and *Amage septemdecima* n.sp. and *Anobothrus rubropalaeatus* n.sp. from the Knipovich expedition to Patagonian waters. In addition, diagnoses of all respective genera are given, as well as a key to all *Anobothrus* species recognized world-wide.

**Key words:** Antarctica, ANDEEP, Knipovich, taxonomy, identification key, *Amage*, *Anobothrus*, *Noanelia*, *Zatsepinia*, *Abderos*

### Introduction

The Southern Ocean, and especially its deep sea, hosts a rich fauna of Ampharetidae. However, as with Ampharetidae in general, their taxonomy is poorly resolved and many studies are characterized by potential misidentification of Ampharetidae, or, in few cases, identification to species level is all together avoided (Cantone 1995). Ampharetidae represent a rather large family within the Polychaeta with over 300 species described (e.g., Fauchald 1977; Holthe 1986; World Register of Marine Species—<http://www.marinespecies.org>). The Southern Ocean and also Patagonian waters represent an interesting geographical region, as many species recorded from these areas were originally described from the Northern hemisphere (compare e.g., Hartman 1966; 1967; 1978; Hartmann-Schröder & Rosenfeldt 1988; 1989; 1990; 1991; 1992). These records from Southern waters may possibly be the result of misidentification and give some substance for the discovery of new species from already well-defined genera. During the 20<sup>th</sup> and early 21<sup>st</sup> centuries, frequent expeditions were undertaken in the Southern Ocean. In the samples from the ANDEEP I–III expeditions to the deep Weddell Sea (2002, 2005) over 450 ampharetid specimens belonging to over 20 species (Schüller 2008; Schüller *et al.* 2009) have been found, many of which are undescribed. In this study we present first taxonomic results of a thorough survey of the Ampharetidae collected during the expeditions ANDEEP I–III and several expeditions from the Patagonian coast. New species are described where material was available that was suitably numerous and well-preserved. Descriptions of the genus *Sosane* were excluded from this work, as they will be the subject of a future separate study. Including the new species described herein, the number of named Ampharetidae (species and subspecies) reported for the Southern Ocean is now 39 (Augener 1932a; b; Benham 1921; 1927; Detinova 1993; Ehlers 1900; 1901; 1908; 1912; 1913; Gravier 1907; Grube 1877; Hartman 1952; 1953; 1966; 1967; 1978; Hartmann-Schröder & Rosenfeldt 1989; 1991; Hessle 1917; Kinberg 1867; Levenstein 1975; McIntosh 1885; 1922; Monro 1930; 1936; 1939), with 18 species exclusively reported for deep waters below 1000 m.