



## A catalogue of the Antarctic and sub-Antarctic Phoxocephalidae (Crustacea: Amphipoda: Gammaridea) with taxonomic, distribution and ecological data

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## Abstract

An up-to-date catalogue of Antarctic and sub-Antarctic Phoxocephalidae is presented, including 35 species. Extensive list of bibliographical references with synonymy, detailed information on geographic and bathymetric distribution, ecological data, museum locations of type-material, remarks on taxonomic and biogeographical status, are provided for each species. The catalogue is based on taxonomic and ecological literature until 31 December 2006. Additional unpublished records of species from the Antarctic and sub-Antarctic collections held at the Alfred Wegener Institut für Polar- und Meeresforschung, Bremerhaven, and at the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, have been included. The taxonomic status of all the Southern Ocean species has been checked. Species allocated to the genera *Paraphoxus* and *Parharpinia*, and *Fuegiphoxus uncinatus* require further study to clarify or confirm the genus allocation. Most of the Southern Ocean phoxocephalids have a wide bathymetric distribution, equally present in the Antarctic and sub-Antarctic regions. The highest species richness is found above 200 meters depth in the sub-Antarctic region. Of 35 phoxocephalid species reported, 25 are endemic to the Southern Ocean *s.l.*, 15 are endemic to the Antarctic region and 6 are endemic to the sub-Antarctic region, the latter distributed only in the Magellan province. Endemicity at genus level attains 22% for the whole Southern Ocean, with 3 genera restricted to the Magellan province and one genus to the West Antarctic, Magellan and sub-Antarctic islands provinces. Habitat and substrate preferences, dietary and burrowing behaviours are scarcely known for most of the phoxocephalid species from the Southern Ocean.

**Key words:** Amphipoda, Phoxocephalidae, checklist, distribution, ecological notes, Southern Ocean, Antarctic and sub-Antarctic areas

## Introduction

All phoxocephalid species known from the Southern Ocean were included in the checklist elaborated by De Broyer and Jazdzewski (1993). After this publication, two new genera, several new species and some new records have been reported, *e.g.* by Andres (1991), Alonso de Pina (1993, 2001, 2003), De Broyer *et al.* (1999), De Broyer and Rauschert (1999), Gutt *et al.* (2000), and Chiesa *et al.* (2005). New unpublished additional records for many phoxocephalid species were provided by two of us (Rauschert; Alonso de Pina). De Broyer *et al.* (2007) compiled a comprehensive catalogue of gammaridean and corophiidean amphipod species of the Southern Ocean, after the present phoxocephalid list had been checked.

The catalogue herein elaborated is updated and extended for all phoxocephalid species reported in Antarctic and sub-Antarctic waters. It comprises a complete list of references, including all the known synonyms, detailed geographical distributions, bathymetrical information, ecological data, type material location and taxonomic and/or biogeographical remarks for each species. Moreover, extralimital distribution and depth are indicated when the species are also present outside the Southern Ocean.