



Deep-sea *Rhachotropis* (Crustacea: Amphipoda: Eusiridae) from New Zealand and the Ross Sea with key to the Pacific, Indian Ocean and Antarctic species

ANNE-NINA LÖRZ

National Institute of Water & Atmospheric Research, Private Bag 14901, Kilbirnie Wellington, New Zealand.

E-mail: a.loerz@niwa.co.nz

Abstract

The amphipod genus *Rhachotropis* has a worldwide distribution. Four species new to science are described, increasing the total number of *Rhachotropis* species to 59. Only one species was previously known from New Zealand and none from the Ross Sea. Two species *Rhachotropis chathamensis* **sp. nov.** and *R. delicata* **sp. nov.** were collected at the same station in 420 m depth off eastern New Zealand; *R. rossi* **sp. nov.** and *R. abyssalis* **sp. nov.** were collected below 3000 m depth in the Ross Sea, Antarctica. Investigation of recently collected material as well as historic material from the NIWA Invertebrate collection revealed several specimens of *Rhachotropis antarctica* K.H. Barnard, 1932 sampled in the Ross Sea. Four damaged *Rhachotropis* specimens, recently collected from 5170 m in the Kermadec Trench, north of New Zealand, are reported. Epibionts have been discovered on the mouthparts of several specimens from New Zealand as well as the Ross Sea. Preliminary molecular investigations of the phylogeny of *Rhachotropis* are briefly discussed. A key to Pacific, Indian Ocean and Antarctic species of *Rhachotropis* is provided.

Key words: Amphipoda, *Rhachotropis*, New Zealand, Antarctica, COI, epibionts

Introduction

The genus *Rhachotropis* (Eusiridae) contains more than 50 known species and has a worldwide distribution. Only one species via three specimens has been previously reported from New Zealand: *Rhachotropis levantis* Barnard 1961 from the Tasman Sea in 610 m depth. Dahl (1959) reported one damaged *Rhachotropis* specimen in 7140–7180 m depth unsuitable for species identification. Both New Zealand *Rhachotropis* findings, totalling four specimens, were collected during the Danish Galathea expedition. The present paper describes two new species collected at the same station in New Zealand waters.

So far, five species of *Rhachotropis* are known from the Southern Ocean, four from the Atlantic side of Antarctica: *Rhachotropis anoculata* J.L. Barnard, 1962; *Rhachotropis antarctica* K.H. Barnard, 1932; *Rhachotropis kergueleni* Stebbing, 1888 and *Rhachotropis schellenbergi* Andres, 1982; and one from the Davis Sea, Indian Ocean side of Antarctica, *Rhachotropis hunteri* Nicholls, 1938.

Examination of recent material collected in the Ross Sea during The International Polar Year expedition 2008, the BIOROSS expedition 2004 and historic material held at the NIWA Marine Invertebrate Collection, Wellington, revealed two further *Rhachotropis* species new to science from the Ross Sea. Additionally, new distribution records of *Rhachotropis antarctica* K.H. Barnard, 1932, so far only known from the western Antarctic, including the Bransfield Strait, Falkland Islands, Palmer Archipelago, South Georgia, South Orkney Islands, South Shetland Islands and Weddell Sea were discovered.

Material and methods

Recent amphipod collections were made during RV *Tangaroa* voyages to the Chatham Rise east of New