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## An enigmatic *Rhachotropis* (Crustacea: Amphipoda: Eusiridae) from New Zealand

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### Abstract

The eusirid genus *Rhachotropis* S.I. Smith, 1883 has a worldwide distribution and the largest bathymetric range known from any amphipod genus. A large, charismatic, colourful species was collected below 800 m at two sites 1000 km apart on the southern Kermadec Ridge and on the Chatham Rise in the south-western Pacific off eastern New Zealand. The new species, *Rhachotropis oweni* is described, increasing the total number of *Rhachotropis* to 61 species worldwide, including six species from New Zealand waters.

**Key words:** Amphipoda, *Rhachotropis*, deep sea, New Zealand

### Introduction

The genus *Rhachotropis* (Eusiridae) contains more than 60 species and has a worldwide distribution. Their latitudinal and vertical distribution is exceptional amongst Amphipoda (Lörz *et al.* 2012) and some *Rhachotropis* species are known to be locally very abundant (Cartes & Sorbe 1999).

Many *Rhachotropis* species are supposedly blind, but photographs taken immediately after sampling show distinct round, pigmented eyes for the new species described here. While the body is coloured light orange, the powerful gnathopods are dark red. Unlike most *Rhachotropis* specimens preserved in museum collections, the long delicate processes on the pleon, as well as very long pereopods, remain intact.

This paper describes a new species collected on Clark Seamount on the Southern Kermadec Ridge, and on the Chatham Rise, east of New Zealand. This increases the number of *Rhachotropis* known from New Zealand waters and the wider south-west Pacific to six species.

### Material and methods

Collections were made during RV *Tangaroa* voyages to the Kermadec Ridge and the Chatham Rise in New Zealand waters (TAN1206 and TAN1116). Specimens were immediately sorted on deck, fixed in 98% ethanol and later transferred to 70% ethanol. During the voyages freshly collected specimens were photographed on deck.

Specimens were examined and dissected under a Leica MZ9.5 stereomicroscope and drawn using a camera lucida. Small appendages (mouthparts, uropods, telson) were temporarily mounted in lactic acid, examined and drawn using a Nikon compound microscope fitted with a camera lucida. The body lengths of specimens examined were measured by tracing individual's mid-trunk lengths (tip of the rostrum to end of telson) using a camera lucida. All illustrations were digitally 'inked' following Coleman (2003, 2009). Setal terminology follows Watling (1989). Type material is held in the National Institute of Water and Atmospheric Research Invertebrate Collection, Wellington, New Zealand (NIWA).