

A New Species of the Genus *Rhachotropis* (Crustacea: Amphipoda: Eusiridae) from Japan

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ABSTRACT. A new eusirid amphipod, *Rhachotropis lowryi* sp. nov., is described from off Amamioshima Island, Japan, at 402 m depth. This new species differs from its congeners by the features of urosomite 1, pereopods 5–7 bases, uropod 3, and telson. A key to species of *Rhachotropis* from Japanese and adjacent waters is provided. Additionally, a nucleotide sequence of mitochondrial cytochrome *c* oxidase subunit I from the holotype of *R. lowryi* was determined for the future study.

Introduction

The genus *Rhachotropis* Smith, 1883 occurs in shallow to deep waters of the world's oceans (Barnard & Karaman, 1991; Lörz *et al.*, 2018a, b). This genus is composed of carnivorous amphipods that prey on zooplankton, such as copepods (Fanelli *et al.*, 2009; Lörz *et al.*, 2018b), and many species live as planktonic predators. To date, 64 species of *Rhachotropis* have been described (Lörz *et al.*, 2018a, b; Okazaki *et al.*, 2020). Nine species have been recorded from Japanese and adjacent waters: *R. aculeata* (Lepechin, 1780); *R. distincta* (Holmes, 1908); *R. inflata* (Sars, 1883); *R. macropus* Sars, 1893; *R. marinae* Lörz, Jażdżewska & Brandt, 2018; *R. natator* (Holmes, 1908); *R. oculata* (Hansen, 1887); *R. reiwa* Okazaki, Ohtsuka & Tomikawa, 2020; and *R. saskia* Lörz, Jażdżewska & Brandt, 2018 (Okazaki *et al.*, 2020).

Field surveys of the deep-sea amphipod fauna around Amamioshima Island, Amami Islands, Japan, have produced several previously undescribed species. One of these was described recently as *Rhachotropis reiwa* Okazaki, Ohtsuka & Tomikawa, 2020. In this study, we describe another new species of *Rhachotropis*.

Materials and methods

Collection. The present specimens were collected using a beam trawl (mouth opening 50 cm × 170 cm; mesh 15.5 mm) deployed from the TRV *Toyoshio-Maru* (Hiroshima University). The specimens were preserved in 99% ethanol on-board ship. For DNA extraction, muscle tissue was removed from the dorsal side of the pleon of the holotype.

Morphological examination. Appendages were dissected in 70% ethanol and mounted in gum-chloral medium on glass slides under a stereomicroscope (Olympus SZX7). The specimen was examined using a light microscope (Nikon Eclipse Ni) and illustrated with the aid of a camera lucida. Bodies were dehydrated through a graded ethanol series, and dried using hexamethyldisilazane (HMDS) (Nation, 1983). They were then sputter-coated with gold and observed using scanning electron microscopy (SEM, JSM-6510LV). The body length from the tip of the rostrum to the base of the telson was measured along the dorsal curvature to the nearest 0.1 mm. The specimens are deposited in the Tsukuba Collection Center of the National Museum of Nature and Science, Tokyo (NSMT).

Keywords: Amami Islands, Japan, Northwest Pacific Ocean, *Rhachotropis lowryi*, new species, taxonomy

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