



Stomatopod Crustacea of the KUMEJIMA 2009 Expedition, Japan*

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Abstract

The stomatopod Crustacea collected during the KUMEJIMA 2009 expedition to Kume Island, Ryukyu Islands, southern Japan, are reported. The collection comprises 20 species from three superfamilies, six families and 15 genera. Of these 20 species, 10 are new records for Japan, of which one species, *Gonodactylellus kume*, is new to science. The new species ranges from Japan to northern Australia and is most similar to *G. micronesicus* (Manning, 1971), differing in the colour of the meral spot of raptorial claw and shape of the pleopod 1 endopod of adult males. The identities of *Alima angusta* Dana, 1852, and *A. gracilis* H. Milne Edwards, 1837, as junior synonyms of *A. neptuni* Linnaeus, 1758, are fixed by neotype selection. A checklist of the 68 species of Stomatopoda recorded from Japan is provided.

Keywords: Stomatopoda, *Gonodactylellus*, *Alima*, Kume, Ryukyus, Japan, Australia, mantis shrimp

Introduction

In November 2009, the KUMEJIMA 2009 expedition explored coral reefs and adjacent environments around Kume Island, Ryukyu Islands, southern Japan. Sampling was conducted using a variety of methods including dredge, trawl and on SCUBA. Prior to the present study, 58 species of Stomatopoda were known from Japanese waters, with only 13 species reported from the Ryukyus (Komai 1927, 1940; Moosa 1989; Ah Yong *et al.* 2000; Ah Yong 2001; Osawa *et al.* 2004; Ah Yong *et al.* 2008). The present report details the Stomatopoda collected from Kume Island, comprising 20 species of which one is new to science, 10 are first records for Japanese waters and 15 are first records for the Ryukyus; all are first records for Kume Island.

Materials and methods

Morphological terminology follows Ah Yong (2001) and Ah Yong *et al.* (2008). All specimen measurements are given in mm. Total length (TL) is measured along the dorsal midline from the tip of the rostral plate to the apices of the submedian teeth of the telson. Carapace length (CL) is measured along the dorsal midline of the carapace and excludes the rostral plate. The abdominal-width carapace-length index (AWCLI) is given as $100 \times (\text{width of abdominal somite 5})/\text{CL}$. Specimens are deposited in the Ryukyu University Museum, Fujukan, Okinawa (RUMF), the Australian Museum, Sydney (AM), the Western Australian Museum, Perth (WAM), the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC) and the National Museum of Natural History, Smithsonian Institution, Washington D.C. (USNM). New records for Japan are indicated (*). New records for the Ryukyu Islands are indicated (#).

SYSTEMATICS

GONODACTYLOIDEA Giesbrecht, 1910

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