

First Record of the Diogenid Hermit Crab *Aniculus erythraeus* (Crustacea: Decapoda: Anomura) from Japan

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Aniculus erythraeus Forest, 1984, a poorly known species of hermit crab, is reported for the first time from Japan based on a single specimen collected from Kume Island, Ryukyu Islands. This discovery increases the number of Japanese species of *Aniculus* to seven and greatly extends the distributional range of the present species to the north. Differences between *A. erythraeus* and its close congener *A. ursus* (Olivier, 1812) are discussed on the basis of the specimens from the Ryukyu Islands.

Key Words: Crustacea, Decapoda, *Aniculus*, Ryukyu Islands, distribution.

Introduction

The diogenid genus *Aniculus* Dana, 1852 includes nine species, all known from Indo-Pacific waters (Forest 1984; McLaughlin and Hoover 1996; McLaughlin *et al.* 2010). Among these species, six are currently recorded from Japan: *A. aniculus* (Fabricius, 1787); *A. maximus* Edmondson, 1952; *A. miyakei* Forest, 1984; *A. retipes* Lewinsohn, 1982; *A. sibogae* Forest, 1984; and *A. ursus* (Olivier, 1812) (Nomura *et al.* 1996).

Recently an unusual hermit crab was collected by the third author from Kume Island in the central Ryukyu Islands and sent to the first author for identification. Examination revealed that it belongs to a poorly known species, *Aniculus erythraeus* Forest, 1984. This hermit crab is herein reported as a new record for the Japanese crustacean fauna, and as the seventh species of *Aniculus* known from Japan.

Materials and Methods

General terminology follows McLaughlin and Hoover (1996) and McLaughlin *et al.* (2007). Shield length (sl), measured from the tip of the rostrum to the midpoint of the posterior margin of the shield, indicates specimen size. The present specimen of *A. erythraeus* is deposited in the collection of the Ryukyu University Museum, Fujukan (RUMF), Nishihara, Okinawa. For comparative purposes, the following specimens of *A. ursus* collected from Kume Island were also examined: KUMEJIMA 2009, Stn Dive 4, 26°21.2'N, 126°53.1'E, 5–50 m, 10 November 2009, one male, sl 18.6 mm (ZRC 2011.0704; deposited in the Zoological Reference Collection of the Raffles Museum of Biodiversity

Research, National University of Singapore, Singapore); KUMEJIMA 2009, Stn Dive 15, 26°17.5'N, 126°47.8'E, 10 m, 13 November 2009, one male, sl 21.8 mm (NTOU A01137; deposited in the National Taiwan Ocean University, Keelung, Taiwan).

Family **Diogenidae** Ortmann, 1892

Genus ***Aniculus*** Dana, 1852

Aniculus erythraeus Forest, 1984

[New Japanese name: Sarasa-oni-yadokari]

(Figs 1, 2A–D, 3)

Aniculus erythraeus Forest, 1984: 21 (keys), 41, figs 12, 19, 41–45 (type locality: Red Sea); Haig and Ball 1988: 158; Rahayu and Wahyundi 2008: 23, unnumbered fig.; McLaughlin *et al.* 2010: 18 (list); Poupin 2010: 34 (list); Poupin and Juncker 2010: 218, fig. a.

Material examined. Aka, Kume Island, 26°22.4'N, 126°47.8'E, about 7 m depth, coll. T. Kawai, 15 June 2012, 1 male (sl 8.7 mm), RUMF-ZC-02041.

Distinguishing characters. Shield (Fig. 1A) longer than broad; mesogastric region in form of irregular diamond, delimited laterally by furrows. Rostrum (Fig. 1A) triangular, overreaching lateral projections; lateral projections each with submarginal spinule directed laterally. Ocular peduncles (Fig. 1A) slender, 0.7–0.8 as long as shield; corneas not dilated; ocular acicles each with 4 terminal spinules. Antennular peduncles (Fig. 1A) when fully extended, barely reaching corneal bases. Antennal peduncles (Fig. 1A) ending far short of distal margins of corneas; antennal acicle short, reaching slightly beyond proximal margin