

# A New Species of the Mud Shrimp Genus *Axianassa* (Crustacea: Decapoda: Gebiidea: Axianassidae) from Japan

Tomoyuki Komai

Natural History Museum and Institute, Chiba, 955-2 Aoba-cho, Chuo-ku, Chiba 260-8682, Japan  
E-mail: komai@chiba-muse.or.jp

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A new species of mud shrimp, *Axianassa japonica* (Gebiidea: Axianassidae), is described and illustrated on the basis of a single male specimen from Kushimoto, Wakayama Prefecture, Japan, collected at a depth of 15 m. It represents the first record of the genus from Japanese waters. Of the nine congeneric species it appears closest to *A. heardi* Anker, 2011, known from Queensland, Australia. The presence of two pairs of short longitudinal carinae on the anterior part of the carapace, the ventrally blunt pleuron of the first pleomere, and the presence of an incomplete suture on the uropodal endopod immediately distinguish the new species from *A. heardi*. The status of Axianassidae is briefly discussed, and an identification key to the species of *Axianassa* is provided.

**Key Words:** *Axianassa japonica*, Laomediidae, Kushimoto, Japan, new species.

## Introduction

The mud shrimp genus *Axianassa* Schmitt, 1924 (Decapoda: Gebiidea) is currently represented by nine species, four from the western Atlantic (*A. arenaria* Kensley and Heard, 1990, *A. australis* Rodrigues and Shimizu, 1992, *A. intermedia* Schmitt, 1924, and *A. jamaicensis* Kensley and Heard, 1990), two from the eastern Pacific (*A. canalis* Kensley and Heard, 1990 and *A. mineri* Boone, 1931), and three from the western Pacific (*A. ngochoae* Anker, 2010, *A. heardi* Anker, 2011, and *A. sinica* Liu and Liu, 2010). *Axianassa* had been characterized by the lack of a transverse suture on each uropodal endopod and exopod, but the discovery of *A. heardi* by Anker (2011), which has a transverse suture on the uropodal exopod, required modification to the diagnosis of the genus. Practically, *Axianassa* is characterized by the following combination of characters: antennular peduncle with elongate third segment; antennal acicle spiciform; third maxilliped devoid of exopod; chelipeds fully chelate, dissimilar; second pereopod simple; uropodal endopod without transverse suture. All species are burrowers in shallow-water soft sediments. Kensley and Heard (1990) thoroughly reviewed the genus, providing the foundation of its taxonomy. It is remarkable that the discovery of species of *Axianassa* in the western Pacific has occurred only in the last five years, reflecting the scarcity of the animals and the difficulty of sampling them.

The new species described herein is the first of *Axianassa* to be recorded from Japan. Only a single male specimen, collected in 1996 while SCUBA diving by Mr Keiichi Nomura (Kushimoto Marine Park), was available for study. The formal description has long been postponed in the hope of further collection of material, but no additional specimens have become available. The status of the family Axianassidae

is briefly discussed, and an identification key to the species of *Axianassa* is provided.

The holotype is deposited in the Natural History Museum and Institute, Chiba (CBM) in Chiba Prefecture, Japan. The size of the specimen is indicated by its carapace length (cl), measured from the tip of the rostrum to the midpoint of the posterodorsal margin of the carapace. The terminology for pereopodal epipods follows Batang *et al.* (2001).

Family **Axianassidae** Schmitt, 1924

Genus ***Axianassa*** Schmitt, 1924

***Axianassa japonica*** sp. nov.

[New Japanese name: Nihon-suna-shako-ebi]

(Figs 1–5)

**Material examined.** Holotype: male (cl 3.8 mm), Ando-no-hana, Shionomisaki, Kushimoto, Wakayama Prefecture, 15 m, under rock on sand bottom, 30 October 1996, SCUBA diving, coll. K. Nomura, CBM-ZC 12479.

**Description.** Body (Fig. 1) with sparse long, erect setae on dorsal surface; integument rather soft.

Carapace (Figs 1, 2A) with straight linea thalassinica extending along entire length and well-defined cervical groove passing beyond midlength of carapace; anterolateral margin with rounded lobe just inferior to end of linea thalassinica; pterygostomial margin rounded, fringed with setae increasing in length ventrally; anterior part with short dorsolateral ridges, all beginning at base of eyestalks and slightly diverging posteriorly. Rostrum (Fig. 2B, C) flattened dorsoventrally, slightly broadened basally, distinctly longer than broad, reaching far beyond anterior margin of eyestalks to midlength of second segment of antennular peduncle, terminating in sharp tooth; lateral margins each with 4 denticles increasing in size distally; dorsal surface slightly channeled, with short longitudinal ridge extending from base of second