



Rediscovery and redescription of a sponge-associated axiid shrimp, *Eiconaxius acutifrons* Bate, 1888 (Crustacea: Decapoda: Axiidea)

TOMOYUKI KOMAI¹ & SHINJI TSUCHIDA²

¹Natural History Museum and Institute, Chiba, 955-2 Aoba-cho, Chuo-ku, Chiba, 260-8682 Japan. E-mail: komai@chiba-muse.or.jp.

²Japan Agency for Marine-Earth Science and Technology, 2-15 Natsushima-cho, Yokosuka, Kanagawa, 237-0061.
E-mail: tsuchidas@jamstec.go.jp.

Abstract

A poorly known deep-water axiid shrimp, *Eiconaxius acutifrons* Bate, 1888, the type species of the genus, is redescribed on the basis of the two type specimens (lectotype and paralectotype, designated herein) from the Banda Sea, Indonesia, and three recently collected specimens from the Myojin Knoll, Izu Islands, Japan. Diagnostic characters of this species are reassessed, and the comparison with closely allied congeneric species is made. Previous records referred to *E. acutifrons* are reviewed. It has been confirmed that none of the subsequent records under the name represent the true *E. acutifrons*. We found that *Eiconaxius albatrossae* Kensley, 1996 and *E. faxoni* Sakai, 2011 were based on the same series of material from the eastern Pacific, referred to *E. acutifrons* by Faxon (1895), but the Sakai's (2011) taxon name is unavailable because of the lack of an explicit type fixation.

Key words: Crustacea, Decapoda, Axiidea, Axiidae, *Eiconaxius*, redescription, new record, synonym

Introduction

The deep-water axiid shrimp *Eiconaxius acutifrons* Bate, 1888 was originally described on the basis of two specimens (one male and one ovigerous female) from the Banda Sea, Indonesia, collected during the world voyage of H.M.S. *Challenger* (Bate, 1888). Although Bate (1888) did not designate a type species of his new genus *Eiconaxius*, Borradaile (1903) subsequently selected *E. acutifrons* as the type species of the genus (as a subgenus of *Axius* Leach, 1815). Since the original description some axiids have been recorded under this name from various localities in the Pacific Ocean, viz., Pacific Panama (Faxon 1895), Banda Sea, Indonesia (de Man 1925), and the Gulf of California (Wicksten 1982). Sakai (2011) attempted to review these previous records based only on a survey of literature. Two new specific taxa have been proposed for the specimens reported by Faxon (1895) and De Man (1925), i.e., *E. faxoni* Sakai, 2011 and *E. indonesicus* Sakai, 2011, respectively. However, his diagnostic characters were unconvincing and the validity of the taxa described by Sakai (2011) remains rather obscure.

During the recent cruise to the Izu-Bonin Arc, Japan, conducted by the RV *Kairei* of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) (cruise KR10-E04), three specimens representing a species of *Eiconaxius* were collected from Myojin Knoll, Izu Islands, by using a slurp gun installed on the ROV *Kaiko7000II*, and these specimens were sent to the senior author for identification. In the attempt to identify these specimens from existing literature, it became apparent that the identities of *E. acutifrons* and *E. indonesicus* are central. In order to clarify the diagnostic features of *E. acutifrons*, we have examined the two syntypes in the collection of the Natural History Museum, London (NHM). We concluded that the specimens from Myojin Knoll represent *E. acutifrons*. In this paper, *E. acutifrons* is redescribed and illustrated in detail based on the type material and the additional specimens from Myojin Knoll. Previous records of *E. acutifrons* are reviewed.