A new species of *Fizesereneia* Takeda & Tamura, 1980  
(Crustacea: Decapoda: Brachyura: Cryptochiridae) from Japan

YUNA ZAYASU1,4, KEIICHI NOMURA2, KOUTARO SENO3 & AKIRA ASAKURA1

1 Seto Marine Biological Laboratory, Field Science and Education Center, Kyoto University, 459, Shirahama, Nishimuro-gun, Wakayama 649-2211, Japan. E-mail: yunazayasu.san@gmail.com; asakura.akira.6w@kyoto-u.ac.jp
2 Kushimoto Marine Park Center, 1157, Arita, Kushimoto, Higashimuro-gun, Wakayama 649-3514, Japan. E-mail: alpheus.nomura@nifty.com
3 Oshima Branch, Tokyo Metropolitan Islands Area Research and Development Center of Agriculture, Forestry and Fisheries, 18, Habuminato, Oshima-machi, Tokyo 100-0212, Japan. E-mail: Koutaro_Seno@member.metro.tokyo.jp
4 Corresponding author. E-mail: yunazayasu.san@gmail.com

Abstract

A new species of pit crab of the genus *Fizesereneia* Takeda & Tamura, 1980, *Fizesereneia daidai* sp. nov., is described and illustrated based on specimens collected from the scleractinian corals *Micromussa amakusensis* and *Micromussa* sp. in Japan. The new species, the sixth assigned to the genus, can be separated from its congeners by having an orange posterior carapace in life, a subrectangular carapace, the width to length ratio of the carapace depressions being approximately three-halves, the midline of the carapace depression being almost invisible in lateral view, and the ocular peduncles being mostly exposed. The usefulness of the fusion or separation of the pterygostomial region to the carapace as a generic character is discussed.

Key words: taxonomy, Cryptochiridae, *Fizesereneia*, pit crabs, Lobophylliidae, coral, symbiosis, new species

Introduction

Members of the family Cryptochiridae Paul’son, 1875, known as pit or gall crabs, are among the most unusual of all decapod crustaceans, as they live within the skeleton of scleractinian corals by causing the growing coral to form pits (cylindrical cavities) or galls around them in which they then live (Hiro 1937, Simon-Blecher et al. 1999). The family consists of the 21 genera and 47 species (Ng et al. 2008, Wetzer et al. 2009, Badaro et al. 2012) recorded from waters shallower than 512 meters depth mainly in the Indo-West Pacific region (Kropp & Manning 1987, Kropp 1990).


*Fizesereneia* is characterized by a moderately depressed carapace, a dorsum with the anterior half completely or incompletely divided into two large concavities, and by having biramous second abdominal appendages with a rudimentary exopod in females.

During the course of study on the biology of scleractinian corals in shallow waters in Japan, we found an unknown pit crab species from the scleractinian corals *Micromussa amakusensis* (Veron, 1990) and *Micromussa* sp. We herein describe the species as new and discuss intraspecific variations in morphology and coloration.