



Discovery of a new genus and new species of Indo-West Pacific pilumnoidid crab from a semisubmersible oil platform (Crustacea: Brachyura: Pseudozioidea)

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Abstract

A new genus and new species of pseudozioid crab of the family Pilumnoididae is described from a fouling community on a semisubmersible oil platform in Singapore that had been operating in the Timor Sea and South China Sea. *Setozius incertus* **gen. et sp. nov.** superficially resembles species of *Pilumnus* (Pilumnidae, Pilumnoidea) but has male first and second gonopod structures characteristic of the Pseudozioidea. The form of the carapace, male anterior thoracic sternum and male abdomen indicates that it should be classified in the Pilumnoididae. *Setozius* is the first member of the family to be recorded from the Indo-West Pacific; all other known pilumnoidids occur in the Atlantic and eastern Pacific.

Key words: Crustacea, Brachyura, Pseudozioidea, Pilumnoididae, semisubmersible oil rig, new genus, new species, taxonomy

Introduction

In a study of crustaceans on a semisubmersible oil platform being cleaned in Singapore after operations in the Timor Sea and South China Sea, Yeo *et al.* (2009) reported a specimen that they believed belonged to a new genus and new species of acidopsid brachyuran crab.

The specimen superficially resembles species of *Pilumnus* Leach, 1815, especially in the setose carapace and legs, shape of the carapace, armature of the anterolateral carapace margin, and the male abdomen having all six free somites and telson freely articulating. The structure of the penis, male first and second gonopods, however, immediately excludes the species from the Pilumnidae Samouelle, 1819, as well as Pilumnoidea. The margins of the male first gonopod are lined with short spinules and not setae; and the second gonopod is long and not sigmoid shaped. More significantly, the penis does not exit from the condyle of the coxa of the fourth ambulatory leg, a diagnostic character of all pilumnoid crabs (Ng *et al.* 2008). Whereas the gonopod structures resemble those in Acidopsidae Števcíć, 2005, the species is not a member of this family as all acidopsids have male abdominal somites 3–5 fused (Ng 2002; Ng & Chen 2004; Števcíć 2005; Ng *et al.*, 2008). The structures of the male abdomen and gonopods indicate that the specimen is a member of the Pilumnoididae Guinot & Macpherson, 1987, a family currently containing only the type genus *Pilumnoidea* Lucas, in H. Milne Edwards & Lucas, 1844. The present paper describes the specimen as belonging to a new pilumnoidid genus and new species, *Setozius incertus*.

Specimens examined are deposited in the Zoological Reference Collection (ZRC) of the Raffles Museum of Biodiversity Research, National University of Singapore. The abbreviations G1 and G2 are used for the male first and second gonopods, respectively. Measurements provided, in millimetres, are of the carapace width × length.