



Two new species of hermit crabs of the genus *Areopaguristes* Rahayu & McLaughlin, 2010 (Crustacea: Anomura: Paguroidea: Diogenidae) from the eastern tropical Pacific

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Abstract

The genus *Areopaguristes* Rahayu & McLaughlin, 2010 is represented in the eastern Pacific by a single species, *A. mclaughlinae* (Ayón-Parente & Hendrickx, 2006). Based on material recently collected in the Gulf of California, Mexico, and held in museum collections, two new species of this genus are described. *Areopaguristes lemaitrei* **sp. nov.** and *A. waldoschmitti* **sp. nov.** Both have the typical 12 gills of the genus. In addition to its color pattern, *A. lemaitrei* **sp. nov.** is distinguished by the presence of corneous-tipped spines on palm and fingers, a broadly rounded rostrum shorter than lateral projections, and by the shape of the external lobe of the first pleopod. *Areopaguristes waldoschmitti* **sp. nov.** also features a distinctive color pattern, a less spinous armature of chelipeds, antennular peduncles proportionally longer and antennal acicle shorter, a deep median cleft on the posterior margin of telson, and the distal margin of the inferior lamella of the first male pleopod is unarmed; this last character separates *A. waldoschmitti* **sp. nov.** from all its congeners.

Key words: Crustacea, Diogenidae, *Areopaguristes*, new species, eastern Pacific

Introduction

Among the hermit crabs from the eastern tropical Pacific, the family Diogenidae is the more diverse. To date, a considerable number of studies and reviews of this group are available for the region, but many undescribed species are yet to be described (Ayón-Parente & Hendrickx 2010). Species of the genus *Paguristes* sensu lato occurring in the eastern Pacific have caused considerable taxonomic problems, even among specialists, due to the fact that many species are very similar. In many cases, detailed morphological analysis is required to correctly identify the specimens to genus and species level. When McLaughlin (2002) proposed the genus *Pseudopaguristes*, she stated that in all cases a detailed description of the number and type of gills was needed, particularly in order to elucidate the status of species related to or identified with the genus *Paguristes*.

The genus *Areopaguristes* was recently proposed by Rahayu & McLaughlin (2010) to replace the preoccupied name *Stratiotes* Thomson, 1899. According to the diagnosis proposed by Rahayu (2005), species of *Areopaguristes* are characterized by having 12 pairs of gills. Until now the genus contained 22 species, with only one described from the tropical eastern Pacific, *Areopaguristes mclaughlinae* (Ayón-Parente & Hendrickx, 2006) (McLaughlin *et al.* 2010).

While revising the series of hermit crabs held in the collections of the Laboratorio de Invertebrados Bentónicos, UNAM, in Mazatlán, Mexico, and specimens received on loan from other institutions, we found several specimens of unidentified hermit crabs with morphology similar to the genus *Paguristes*. Following the recommendation of McLaughlin (2002), we examined the gills of these specimens and concluded that they belong to two new species of *Areopaguristes*. These are described herein.