



A new genus of Paguridae (Crustacea: Decapoda: Anomura) for a new species from the tropical eastern Pacific and *Pagurus longimanus* Wass, 1963 from the tropical western Atlantic

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Abstract

A new genus, *Spathapagurus*, is described for *S. collinae* n. sp. from the tropical eastern Pacific and its geminate species *Pagurus longimanus* Wass, 1963 from the tropical western Atlantic. These congeners share grossly unequal chelipeds, the right being narrowly spatulate and up to four times longer than the left. The males have short sexual tubes consisting of slight extrusions of the vas deferens from the gonopores, though these short tubes are masked by long, forwardly directed setae. The females lack first pleopods and have unpaired left second to fifth pleopods. The new species is fully described, illustrated, and compared to *P. longimanus*, herein placed in the new genus. The diagnosis of the latter species is emended and its distribution expanded to include the Caribbean coast of Panama in Central America.

Key words: Crustacea, Decapoda, Anomura, Paguridae, new genus, *Spathapagurus*, new species, *Spathapagurus collinae*, geminate species, tropical eastern Pacific

Introduction

Over recent decades, collections of eastern Pacific decapod crustaceans near the Panamanian Isthmus have focused heavily on shoreline and shallow subtidal assemblages, including waters of the Panama Canal. From these efforts, it has become apparent that species diversity for at least some major decapod families is exceptionally high along the west coasts of Costa Rica, Panama, and Colombia (e.g., Abele 1972, 1976; Abele & Patton 1976; Gore & Abele 1976; Kim & Abele 1988; Abele & Kim 1989). However, no major contemporary efforts have been undertaken to augment early expeditionary sampling of offshore continental shelf benthic decapods in this region by trawls, grabs and dredges, leaving early works (e.g., Garth 1940, 1948, 1958, 1959, 1961; Haig 1960) as the primary information source for this element of the decapod fauna. To expand the limited knowledge of the deeper water invertebrate fauna from this region, as well as investigate its relevance to modern systematic and phylogenetic studies, R. Collin and associates of the Smithsonian Tropical Research Institute, Panama, initiated in 2002 a series of trawling and dredging cruises aboard the R/V Urraca.

In July 2005, while sampling shelf waters off Costa Rica, a series of distinctive hermit crab specimens of the family Paguridae with grossly unequal and sexually dimorphic chelipeds, were discovered. While the size and shape of the right cheliped in the specimens initially suggested similarities with species of *Goreopagurus* McLaughlin, 1988, closer study revealed various characters such as the absence of paired pleopods in females that precluded convenient placement of the specimens in that genus. Further examination of the specimens and comparisons to other pagurids from the neotropics revealed the specimens to represent a new species remarkably similar in morphology to *Pagurus longimanus* Wass, 1963 from the tropical western Atlantic. Both species have a strikingly shaped chela that is dorsoventrally flattened and spatula-like. Also, males of both the new species and *P. longimanus* were found to have short sexual tubes extending from their gonopores, a character that had not been