

A new genus with two new species of hermit crabs (Crustacea, Decapoda, Paguroidea, Paguridae) from an unique habitat

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Abstract

A new genus, *Pteropagurus*, is proposed for two new species of hermit crabs that are described and illustrated herein. These species, *Pteropagurus inermis* n. sp. and *P. spina* n. sp. are unique in that their shelter of choice is empty pteropod mollusk shells. The taxon can be categorized as a deep-waters genus, with a bathymetric range of 285 to 700 meters. Although both species are presently known only from New Caledonia, it is quite possible that their occurrence in other areas has been overlooked because their unique habitat has been neither expected nor heretofore considered a resource for hermit crabs.

Key words: Decapoda, Paguroidea, Paguridea, new genus, new species, pteropod shells

Introduction

Among the hermit crab collections from the MUSORSTOM 5 expedition to New Caledonia and environs, the authors were astounded to encounter several specimens that exhibited a very unusual hermit crab-mollusk association. These tiny (4.0–5.0 mm total body length) crabs each occupied an empty pteropod shell (Fig. 1). Discussions with Dr. Alain Crosnier, who initially sorted the MUSORSTOM materials, disclosed that these pteropod shells originally were thought to house members of the crustacean peracaridan order Tanaidacea and had been sent to Dr. Roger Bamber at the Natural History Museum, London, for study. Upon discovering that the occupants were hermit crabs rather than tanaids, Dr. Bamber returned the specimens to the Muséum national d'Histoire naturelle, Paris, where they were subsequently “rediscovered” by the authors. Despite their small size, the animals all were mature as indicated by male sexual tube development and the