



A new genus and new species of pagurid hermit crab (Crustacea: Decapoda: Anomura: Paguroidea) from a submarine cave in Kume Island, Ryukyu Islands*

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* In: Naruse, T., Chan, T.-Y., Tan, H.H., Ahyong, S.T. & Reimer, J.D. (2012) Scientific Results of the Marine Biodiversity Expedition — KUMEJIMA 2009. *Zootaxa*, 3367, 1–280.

Abstract

A new genus and new species of pagurid hermit crab, *Kumepagurus cavernicolus*, is described on the basis of a single male specimen collected from a submarine cave in Kume Island, Ryukyu Islands, at a depth of 38 m. The new genus superficially resembles *Pylopaguropsis* Alcock, 1905, in having 13 pairs of biserial phyllobranchiae, the operculate right chela and the possession of two terminal spines on the fixed finger of the left cheliped, but it is unique in the combination of 13 pairs of biserial gills and the presence of male sexual tubes.

Key words: Crustacea, Decapoda, Anomura, Paguridae, new genus, new species, Ryukyu Islands, submarine cave

Introduction

The shallow coral reefs and nearby environments around Kume Island, Ryukyu Islands, were extensively surveyed in November 2009 during the KUMEJIMA 2009 Expedition. Among the collections of decapod crustaceans, there was an unusual species of pagurid hermit crab obtained by SCUBA diving collections from a submarine cave. This species reported herein represents a new genus and species noteworthy not only for its unique combination of characters but also for its possible endemism to cave environments where sampling is difficult.

The holotype and single specimen was collected by a bait trap set inside of the submarine cave at a depth of 38 m, about 50 m from the entrance. The holotype is deposited in the collection of the Ryukyu University Museum, Fujukan (RUMF), Nishihara, Okinawa. General terminology follows McLaughlin (2003) (for carapace sulci) and McLaughlin *et al.* (2007), except for numbering of thoracic sternites. Shield length (sl), measured from the tip of the rostrum to the midpoint of the posterior margin of the shield, indicates specimen size.

Taxonomic account

Family Paguridae Latreille, 1802

Kumepagurus n. gen.

[new Japanese name: Kumejima-doukutsu-yadokari-zoku]

Type species. *Kumepagurus cavernicolus* n. sp., by present designation.

Diagnosis. Gills biserial, 13 pairs (2 arthrobranches above bases of third maxilliped to fourth pereopods and 1 pleurobranch on each body wall of fifth to seventh thoracic somites). Rostrum roundly triangular. Ocular acicles