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## New records of *Pagurixus* Melin, 1939 (Crustacea: Decapoda: Paguridae) from the Ryukyu Islands, southwestern Japan, with description of a new species

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### Abstract

Seven hermit crab species of the pagurid genus *Pagurixus* Melin, 1939 are reported on the basis of material recently collected from the northern and central islands of the Ryukyu Islands, southwestern Japan. Four species are new to the hermit crab fauna of the Ryukyu Islands: *P. acanthocarpus* Komai & Okuno, 2009; *P. fasciatus* Komai & Myorin, 2005; *P. formosus* Komai, 2010; and *P. tweediei* (Forest, 1956). One species is described as new to science: *P. vicinus* **sp. nov.** is closely similar to *P. fasciatus* in both morphology and coloration, but distinguished by the armature on the left cheliped and right second pereopod. *Pagurixus carinimanus* Komai & Osawa, 2006 and *P. pseliophorus* Komai & Osawa, 2006, both previously known from the Ryukyu Islands, are here reported from new localities.

**Key words:** Crustacea, Decapoda, *Pagurixus*, new species, Ryukyu Islands, Japan, distribution

### Introduction

*Pagurixus* Melin, 1939 is currently known as one of the most species-rich hermit crab genera of the family Paguridae in tropical and warm temperate waters of the Indo-Pacific, being represented by 39 species (McLaughlin *et al.* 2010; Komai & Poupin 2013; Komai & Rahayu 2013). Many of the known species live in shallow rocky and coral reefs and are cryptic in their habits, dwelling in crevices of coral rocks, under stones, or in submarine caves. Some species are widely distributed in the western Pacific or the entire Indo-West Pacific (Komai & Osawa 2006; Komai 2010; Komai & Poupin 2013; Poupin *et al.* in press), but distribution and ecology of most species have not been precisely understood yet.

The Ryukyu Archipelago, defined as the entire island chain between Kyushu main island in southern Japan and Taiwan, is a relatively well-studied area with respect to *Pagurixus* (Komai 2006; Komai & Osawa 2006, 2007; Komai & Takada, 2006; Osawa *et al.* 2006; Osawa & Komai 2007; Komai & Okuno 2009). Minei (1973) recorded *Pagurixus laevimanus* (Ortmann, 1892) (as *Pagurus laevimanus*) from Okinawa-jima island, but no information on the morphology of the examined material was provided. *Pagurixus laevimanus* is reliably known only by the holotype from Tahiti and the occurrence of this species in the Ryukyu Islands has not been confirmed (Komai & Osawa 2006). Not counting this doubtful record, 14 species of *Pagurixus* have been hitherto recorded from the Ryukyu Islands: *P. anceps* (Forest, 1954); *P. carinimanus* Komai & Osawa, 2006; *P. concolor* Komai & Osawa, 2006; *P. dissimilis* Osawa & Komai, 2007; *P. haigae* Komai & Osawa, 2007; *P. longipes* Osawa, Fujita & Okuno, 2006; *P. maorus* (Nobili, 1906); *P. nanus* Komai & Takada, 2006; *P. nomurai* Komai & Asakura, 1995; *P. patiae* Komai, 2006; *P. pulcher* Osawa, Fujita & Okuno, 2006; *P. pseliophorus* Komai & Osawa, 2006; *P. purpureus* Komai & Okuno, 2009; and *P. ruber* Komai & Osawa, 2006. Nevertheless, recent collection efforts in the northern (Osumi Group and Tokara Group) and central (Okinawa-jima island and Kume-jima island) areas of the Ryukyu Islands resulted in findings of additional five species, one of them undescribed. These new records increase the total number of *Pagurixus* species known from the Ryukyus to 19. In the present study, a new species of *Pagurixus*