



A new subtidal species of the genus *Petrolisthes* Stimpson, 1858 (Crustacea: Decapoda: Porcellanidae) from Okinawa, with an account of species of the genus known from the Ryukyu Islands, southwestern Japan

MASAYUKI OSAWA^{1,3} & DAISUKE UYENO²

¹Research Center for Coastal Lagoon Environments, Shimane University, 1060 Nishikawatsu-cho, Matsue, Shimane 690-8504, Japan. E-mail: osawam@soc.shimane-u.ac.jp

²Faculty of Science, University of the Ryukyus, Senbaru 1, Nishihara, Okinawa 903-0213, Japan. E-mail: daisuke.uyeno@gmail.com

³Corresponding author

Abstract

A new porcellanid crab, *Petrolisthes uruma* **sp. nov.**, is described based on a single specimen collected from Okinawa-jima Island in the Ryukyus, southwestern Japan. The unique holotype was collected from a subtidal depth of 10 m, though vast majority of the genus occur in intertidal to shallow subtidal zone. The new species is morphologically closest to *P. moluccensis* (De Man, 1888), but is distinguished by the weaker striation on the carapace, the proportionally longer carpus of the cheliped, the number of the anterior marginal teeth of the carpus of the cheliped, and the meri of the second and third pereopods each with a much stronger spine at the lateroventral distal angle. A brief note on species of *Petrolisthes* presently known from the Ryukyu Islands is given.

Key words: Crustacea, Decapoda, *Petrolisthes*, new species, Ryukyu Islands, fauna

Introduction

Petrolisthes Stimpson, 1858 is generally one of common decapod crustacean groups in the rocky and coral reefs of temperate to tropical coasts, and it is the most species-rich genus in the family Porcellanidae, with 105 species currently recognized in the world, of which 48 species are known from the Indo-West Pacific (Dong *et al.* 2010; Hiller & Werding 2010; Osawa & McLaughlin 2010; Osawa & Maenosono 2011). Some species are locally abundant in the intertidal region (Morton & Morton 1983; Asakura 1991; Jensen 1995; Mantelatto *et al.* 2011). The translation of *Petrolisthes* as “stone slider” is a good description of its habit as noted by Poore (2004). The crabs of the genus are found clinging to the undersides of stones and smoothly and rapidly move on the surfaces. Additionally, those crabs are known to have “hair-trigger” autotomy response, shedding the pereopods to escape from co-occurring predators (Wasson *et al.* 2002). Because of these habits, it is often difficult to collect the specimens, especially in structurally complex environments such as assemblages of large rocks or dead coral blocks with many crevices.

Okinawa-jima Island is the largest in the Ryukyu Islands, southwestern Japan, and it harbors various coastal environments, such as muddy embayments, exposed rocky and coral reefs, and boulder beaches. In the eastern coast of Okinawa-jima Island, the second author recently found unusual porcellanids in the area of large limestones on muddy slope at the depth of 10 m and could collect a single specimen from the turbid visual field. Examination of the specimen has revealed that it belongs to a new species of *Petrolisthes* hereby described.

The holotype is deposited in the collection of the Ryukyu University Museum, Fujukan (RUMF), Nishihara, Okinawa. Carapace length (cl), an indication of specimen size, was measured from the anterior median tip of the rostrum to the posteromedian margin of the carapace. Measurements of the cheliped and ambulatory legs are cited in Osawa (2007). Terminology mainly follows that of Osawa & Chan (2010), except for the uses of “dorsal” and “ventral” for “extensor” and “flexor” margins in the third maxilliped and ambulatory legs and “anterior” and “posterior” for “flexor” and “extensor” margins in the merus and carpus of the cheliped.