

Short Communication

**A subtidal porcellanid crab, *Petrolisthes militaris*
(Heller, 1862) (Crustacea: Decapoda: Anomura), from the
Persian Gulf, Iran**

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The family Porcellanidae is a group of crab-shaped anomurans and there are a series of studies on this group in the Persian Gulf. The first report of porcellanid crabs from the Persian Gulf was by Heller (1861); who referred incidentally to two species of this group in a discussion of Crustacea of the Red Sea. Nobili (1905) published preliminary diagnoses of new species of decapod crustaceans from the Persian Gulf and provided a complete account of them, including eight species of Porcellanidae, published in the following year (Nobili, 1906). Haig (1966) recorded 12 porcellanid species from the Persian Gulf and Oman Sea based on the collection of the Danish Expedition (1937–38). Apel (2001) reviewed the previous records of

decapod crustaceans from the Persian Gulf and its adjacent waters, and listed 19 porcellanid species including an unnamed species. Naderloo and Türkay (2012) subsequently reported 11 porcellanids from the littoral and shallow sublittoral zones of the Iranian coast of the Persian Gulf and for the first time recorded *Polyonyx loimicola* (Sankolli, 1965) from this area. Most recently, Ng *et al.* (2012) described *Raphidopus persicus* from the Persian Gulf and referred the records of *R. indicus* Henderson, 1893 by Haig (1966) and Apel (2001) to those of their new species. Naderloo and Türkay's (2012) material of *R. indicus* is also most probably referred to *R. persicus* instead, based on the armature on the carpus of the cheliped. Thus, 20 species –

belonging to nine genera in total are hitherto known from the Persian Gulf and its adjacent waters.

In the present paper, a subtidal species of the genus *Petrolisthes* Stimpson, 1858, *P. militaris* (Heller, 1862), is reported based on two specimens collected from the Iranian coast. Although *P. militaris* has been already recorded from of the Persian Gulf (Kuwait waters) and Oman Sea (Apel, 2001), the present material represents the first definite record of the species from the Persian Gulf based on the short description of illustrations.

Measurements of the specimens, in millimeters, are of the carapace length (cl) and carapace width (cw), respectively. The specimens are

deposited in the Fisheries Laboratory, Hormozgan University (FHU). Terminology mainly follows that of Osawa and 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.

Systematics

Family Porcellanidae Haworth, 1825

Genus *Petrolisthes* Stimpson, 1858

Petrolisthes militaris (Heller, 1862)

(Fig. 1)

For the synonymy, see Hiller and Werding (2010).



Figure 1; *Petrolisthes militaris* (Heller, 1862). Ovigerous female (cl 14 mm, cw 13 mm).

Material examined

West of Hormozgan, around Faror Island, Persian Gulf, 26°25' N, 54° 26' E – 26°26' N, 54° 22' E, 35–40 m, bottom

trawl, coll. M. Safaie, 4 December 2011, 1male (cl 8 mm, cw 7 mm), FHU. Same collection data, 1 ovigerous female (cl 14 mm, cw 13 mm), FHU.

Short description

Carapace slightly longer than broad; gastric region with conspicuous transverse ridges, protogastric ridges distinct; branchial margin moderately convex, with 4 or 5 spines on median portion, last spine largest. Branchial region with 2 epibranchial spines. Rostrum produced beyond eyes, relatively narrow, triangular; lateral lobes not produced; supraocular margin oblique, with distinct spine.

Chelipeds (first pereopods) subequal, moderately slender. Merus armed with sharp spine on dorsodistal margin, proximally followed by small spine on dorsoposterior surface; anterodistal margin with spine-tipped lobe; ventrodistal margin with 2 prominent, forwardly-directed spines. Carpus about 2 times as long as broad; dorsal surface with numerous distinct, scale-like transverse ridges; anterior margin with 4 spine-tipped, serrated teeth, distal angle forming additional blunt tooth; posterior margin with row of scale-like ridges and prominent distal spine proximally followed by 3 additional spines. Chela moderately slender; dorsal surface with numerous scale-like, transverse or oblique ridges (those on posterior half longer) and with elevated, well defined longitudinal median ridge; anterior margin serrated, with row of prominent spines and fringe of scattered setae; gape of fixed finger and dactylus without setae.

Ambulatory legs (second to fourth pereopods) relatively slender. Meri covered with irregular transverse ridges on lateral surface; dorsal margin with

scattered setae and row of spines as follows: 4 or 5 (second), 3–5 (third), fourth: 3 or 4 (fourth); ventrolateral distal margin unarmed (second to fourth); ventromesial distal margin with small spine (second) or unarmed (third and fourth). Carpi with scattered long setae; dorsal margin with small distal spine (second) or unarmed (third and fourth). Propodi with sparse setae; ventral margin with 3 widely-spaced, small corneous spines; ventrodistal margin also with 2 small corneous spines. Dactyli each with 4 corneous spines on ventral margin.

Coloration in life

Carapace generally reddish brown; median brachial regions each with red blotch. Chelipeds dark reddish brown; posterior half of palm with light brown tinge. Ambulatory legs generally reddish brown; meri each with red band on subdistal portion; carpi entirely red; propodi each with median red band.

Distribution

Widely distributed in the Indo-West Pacific. In the Indian Ocean: from Madagascar through the Seychelles, including the Red Sea, Persian Gulf, Oman Sea and eastward to the Nicobars. In the western Pacific: from the Java Sea through the South China Sea, the Philippines, Taiwan, southern Japan, New Guinea, and southwestward to north-eastern Australia, New Caledonia, and Vanuatu; shallow water down to depths of about 600 m (Apel, 2001; Hiller and Werding, 2010; Osawa and

Chan, 2010). Now for the first time is recorded from the Iranian coast.

Remarks

The specimens examined agree well with the descriptions of *P. militaris* by Hiller and Werding (2010) and Osawa and Chan (2010) in diagnostic aspects. As discussed by Hiller and Werding (2010), *P. militaris* very closely resembles their new species *P. holthuisi* Hiller and Werding, 2010, but the former differs from the latter in the narrower and more strongly forwardly-produced rostrum, palm of the cheliped with a distinct longitudinal ridge on the dorsal midline, and merus of the second pereopod (first ambulatory leg) without a spine on the ventromesial distal margin unlike in *P. holthuisi*. The present specimens were collected by a bottom trawl at depths of 35–40 m; it also agrees with the previously reported habitat of *P. militaris*, which is rather unusual for the species of the genus *Petrolisthes*. The present material represents the second record of *P. militaris* from the Persian Gulf, because Apel (2001) previously re-identified the illustrated specimen of *P. carinipes* (Heller, 1861) from Kuwait by Jones (1986) to *P. militaris*. Apel (2001) also recorded *P. militaris* from the Oman Sea, but unfortunately did not give the species-specific characters on his material. Thus, the present specimens from Iran can be regarded as the first definite occurrence of *P. militaris* in the Persian Gulf based on the given description and illustrations. Eight *Petrolisthes* species have been recorded from the Persian Gulf: *P. boscii*

(Audouin, 1826); *P. lamarckii* (Leach, 1820); *P. leptocheles* (Heller, 1861); *P. militaris*; *P. moluccensis* (De Man, 1888); *P. ornatus* Paul'son, 1875; *P. rufescens* (Heller, 1861); and *Petrolisthes* sp. (Apel, 2001). Apel (2001) mentioned that the last species could be regarded as new to science, although it is closely similar to *P. rufescens* and *P. borradalei* Kropp, 1984. Nevertheless, the formal description of the unusual species has not published yet. *Petrolisthes militaris* is readily distinguished from other seven local congeners by the possession of a supra-ocular spine on the carapace.

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