A NEW SPECIES OF THE PETROLISTHES GALATHINUS SPECIES COMPLEX FROM THE SOUTHERN CARIBBEAN SEA (DECAPODA, ANOMURA, PORCELLANIDAE)

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ABSTRACT

A new species of porcellanid crab, *Petrolisthes bolivarensis*, is described as an additional member of the *Petrolisthes galathinus* species complex (Werding, 1983). The new species is distinguished morphologically from all other Caribbean members of the complex except from *P. columbiensis* by its conspicuously broad chelae. From *P. columbiensis* it is distinguished by the presence of only one epibranchial spine instead of two and three instead of four movable spines on the dactyli of the walking legs. Living specimens can be identified by their colouration, especially by a yellow to orange spot on the articulation of the dactylus of the chelae.

ZUSAMMENFASSUNG


INTRODUCTION

In the last four decades colour pattern has been frequently used to distinguish species of decapod crustaceans. Knowlton (1986) listed members of the genera *Uca* and *Macrophthalmus* (Ocypodidae), *Trapezia* (Trapeziidae), *Periclimenes*

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(Palaemonidae), and *Alpheus* (Alpheidae) as examples of cryptic species distinguished by different colour patterns. In all cases differences in other aspects could be found after separating the colour morphs.

In the case of *Petrolisthes galathinus*, the differences in colouration have been the first indication of the existence of a species complex as well. There is a marked consistency in colour pattern in all species of the *Petrolisthes galathinus* species complex, even though some species show a relatively wide range of colour intensity and tone. This complex is now represented by six species in the southern Caribbean Sea: *P. caribensis* Werding, 1983; *P. columbiensis* Werding, 1983; *P. galathinus* (Bosc, 1802); *P. rosariensis* Werding, 1978; *P. sanmartini* Werding & Hiller, 2001, and *P. bolivarensis* sp. nov. The true identity of *P. galathinus* still remains unclear (Werding & Hiller, 2001). In all other cases, species were first identified in the field by their different colour and colour pattern, and then by diagnostic morphological features determined subsequently for each species. During recent collections of porcellanid crabs on the Caribbean coast of Colombia, the new species was recognized first by the yellow spots on the chelae and the pattern of broad transversal stripes on carapace and chelipeds.

The type specimens are deposited in the collection of the Instituto de Investigaciones Marinas y Costeras, Santa Marta, Colombia (INVEMAR), the collection of the Naturmuseum Senckenberg, Frankfurt a. M., Germany (SMF), the National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A. (USNM), and the Nationaal Natuurhistorisch Museum (Naturalis), Leiden, Netherlands (RMNH). The measurements refer to the maximum carapace length followed by maximum carapace width and are given in millimetres.

**SYSTEMATICS**

**Family PORCELLANIDAE**

*Petrolisthes bolivarensis* sp. nov. (figs. 1, 2a-i)

Material. — Holotype: male, Colombia, Dept. Bolívar, Islas del Rosario, Isla San Martín de Pajarales, 0-1 m in dead *Porites porites* (Pallas, 1766) formations, February 2001, leg. B. Werding. INV-CRU 03399.

Paratypes: 3 males, 2 females (ov.) INV-CRU 03400; 2 males, 2 females (1 ov.) SMF 28351; 2 males, 2 females (1 ov.) USNM 1004632; 2 males, 2 females (ov.) RMNH D-50026. All same data as holotype.

Measurements. — Largest male: 14.6 × 13.9 mm; largest female 9.0 × 8.7 mm; holotype: male, 8.0 × 7.5 mm.

Description. — Carapace slightly longer than broad, evenly rounded along branchial margins, broadest on midbranchial level; weakly convex front to back