



FIRST OCCURRENCE OF *PACHYCHELES RIISEI* (STIMPSON, 1858)
(CRUSTACEA: GALATHEOIDEA: PORCELLANIDAE)
IN ROCAS ATOLL, BRAZIL ¹

(With 1 figure)

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ABSTRACT: The present work redescribes *Pachycheles riisei* based on material from intertidal lagoons at Rocas Atoll, Brazil. This is the first record of *P. riisei* for Rocas Atoll, species previously found from Florida, Caribbean Sea, and Brazil (Paraíba to São Paulo, Fernando de Noronha and Trindade Isl.).

Key words: Porcellanidae. *Pachycheles riisei*. Rocas Atoll.

RESUMO: Primeira ocorrência de *Pachycheles riisei* (Crustacea, Porcellanidae) no Atol das Rocas Brasil. O presente estudo redescreve *Pachycheles riisei* com base no material coletado em poças de maré no Atol das Rocas, Brasil. Este é o primeiro registro de *P. riisei* para o Atol das Rocas, espécie anteriormente encontrada na Florida, Mar do Caribe e Brazil (Paraíba to São Paulo, Fernando de Noronha and Trindade Island).

Palavras-chave: Porcellanidae. *Pachycheles*. Atol das Rocas.

INTRODUCTION

The knowledge of the porcellanid fauna of Brazilian oceanic islands is scarce. Only two species have been recorded in this habitat: for Fernando de Noronha Archipelago, *Petrolisthes marginatus* (Stimpson, 1859) and *Pachycheles riisei* (Stimpson, 1858), the latter also occurring in Trindade Island (COELHO & RAMOS, 1972; VELOSO, 1998). At this time, no porcellanid species have been recorded in Rocas Atoll. Even islands with rich and large reef structures do not provide adequate habitats for some Porcellanidae species (WERDING, 1984). Forty-five species of porcellanids have been recorded for tropical Western Atlantic and, among these species, nineteen for Brazil. This study redescribes specimens of *Pachycheles riisei* from Rocas Atoll, a species usually found among calcareous algae or along the fringes of small intertidal lagoons within the Atoll. This species is widely distributed throughout the Western Atlantic, including several oceanic islands (HAIG, 1956; WERDING, 1984; VELOSO & MELO, 1993, WERDING *et al.*, 2003).

The carapace width (cw) was measured at its widest section and the reported specimens were deposited

in the crustacean collection of Museu Nacional, Rio de Janeiro (MNRJ).

Pachycheles riisei (Stimpson, 1858)
(Fig.1)

Pisosoma riisei STIMPSON, 1858:228.

Pachycheles riisei – RATHBUN, 1900:146; RODRIGUES-DA-COSTA, 1956:3; COELHO, 1963:54; COELHO & RAMOS, 1972:172; WERDING, 1984:6; COELHO *ET AL.*, 1990:26; VELOSO & MELO, 1993:178; VELOSO, 1998:401; MELO, 1999:240.

Material examined – Brazil, Rocas Atoll, Pools. P.S.Young and P.C.Paiva coll. 01/I/2001, 1♂, 2 ovigerous ♀ with eggs, cw: 41-51mm, MNRJ 19150; P.S.Young and P.C.Paiva coll. 26/X/2000, 3♂ and 2♀, one ovigerous, cw: 56-61mm, MNRJ 19161; P.S.Young and P.C.Paiva coll. 07/X/2000, 1♂, cw: 30mm, MNRJ 19153; P.S.Young and P.C.Paiva coll. 25/X/2000, 7♂ and 4♀, one ovigerous, cw: 14-46mm, MNRJ 19152.

Diagnosis – Carapace smooth, front depressed and trilobate with medium lobe finely serrated; outer angle of orbit pronounced into a spine. Chelipeds

¹ Submitted on August 8, 2005. Accepted on May 30, 2007.

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³ *In memoriam*.

without ornamentation, propodus carenate extending externally to fixed finger delimited by a sulcus; carpus with distal margin trilobate and lateral margin crenulated with a distal spine; merus with a triangular structure on the antero-distal angle. Telson with five plates. Males lacking pleopods.

Description – Carapace (Fig.1a) convex in a front to back direction, medium surface smooth and lateral surface slightly striated; anterior margin depressed, trilobate, medium lobe finely serrated;

lateral walls of the carapace incomplete, anterior portion with a large piece and posterior with smaller pieces separate by membranous inter-space from anterior portion (Fig.1b-d). Basal antennal article short, not pronounced forward, movable segments with free access to the orbit. Second antennal article three times longer than the first. Third article followed by a long flagellum with approximately eighty segments. Outer orbital angle pronounced into a spine. Chelipeds (Fig.1a) strong and broad, subequal in size. Both fingers unarmed.

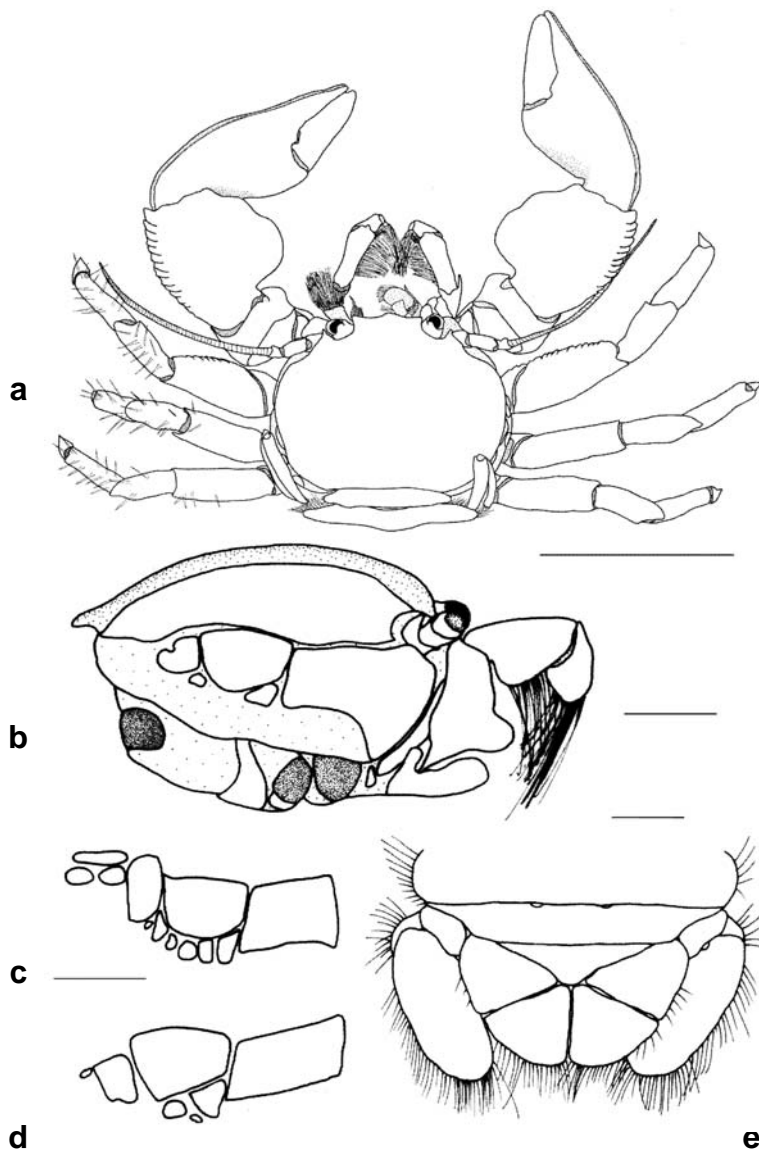


Fig.1- *Pachycheles riisei* (Stimpson, 1858), MNRJ 19150: (a) habitus, dorsal view; (b) habitus, lateral view; (c-d) pleural plates, lateral view of other specimens; (e) telson. Scale bars: a = 0.5cm; b-e = 0.1cm.

Propodus with a longitudinal sulcus delimitating a carina on outer margin; carpus with three lobes on distal margin and lateral margin crenulated with a distal spine; merus with large triangular lamellae projected anteriorly on inner margin. Walking legs (Fig. 1a) covered by numerous thick setae, especially from carpus to dactylus. Telson (Fig. 1e) with five plates. Male lacking pleopods.

Coloration – Carapace and chelipeds slightly pinkish on top. Lateral angle and outer angle of orbit white. Basal antennal article light brown. Walking legs with white stripes, ventral portion lighter than dorsal.

Distribution – *Pachycheles riisei* occurs from Florida to the Caribbean Sea and along the Brazilian coast, from Paraíba to São Paulo and also in the oceanic islands as Fernando de Noronha (VELOSO, 1998), Trindade (COELHO & RAMOS, 1972) and Rocas Atoll (present study).

Habitat – an intertidal species living under stones, in cavities of calcareous algae and among coral reefs (VELOSO, 1998).

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