

NOTE

Redesignation of the porcellanid crab *Pisidia brasiliensis* (Rodrigues da Costa, 1968) (Crustacea: Decapoda: Porcellanidae)

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Abstract

The porcellanid crab, *Pisidia brasiliensis* (Rodrigues da Costa), reported from the Brazilian coast as a new species and attributed to Haig by Rodrigues da Costa (1968), is now transferred to the genus *Porcellana* Lamarck and a detailed description is provided for the first time.

Studies conducted so far from the Caribbean and Brazilian coastal waters have recorded the presence of 43 species of porcellanid crabs (Coelho, 1963-1964, 1967-1969; Coelho *et al.*, 1986; Fausto-Filho, 1978, 1979). *Pisidia brasiliensis* Rodrigues da Costa, 1968 was first reported from the Brazilian coastal waters by Rodrigues da Costa (1968) and the species, though attributed to Haig, was created by him to designate a new species of *Pisidia*. Coelho (1967-1968), Haig (1968), Gore and Abele (1976), Werding (1977), Veloso and Melo (1993) and Melo (1999) have since then reported the species. However, a detailed description of the species is wanting. Based on a large series of material from our collection, it became clear that the specimens do not present characteristics typical of the genus *Pisidia* Leach, as such should be transferred to the genus *Porcellana* Lamarck. A detailed description of the species is now provided, designating one of the specimens as a neotype collected from Macau, Rio Grande do Norte, Brazil which is deposited in the

National Museum of Rio de Janeiro, Brazil (Ref. No. MNRJ 13770).

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Material and methods

Several specimens of porcellanid crabs were collected while undertaking a faunistic survey of the estuaries near the city of Macau, Galinhos and Guaraira, Rio Grande do Norte, Brazil. They were all obtained from the sublittoral region, employing an Okelman dredge and a common dredge with a mouth size of 40 x 10 cm and mesh size of 1 mm.

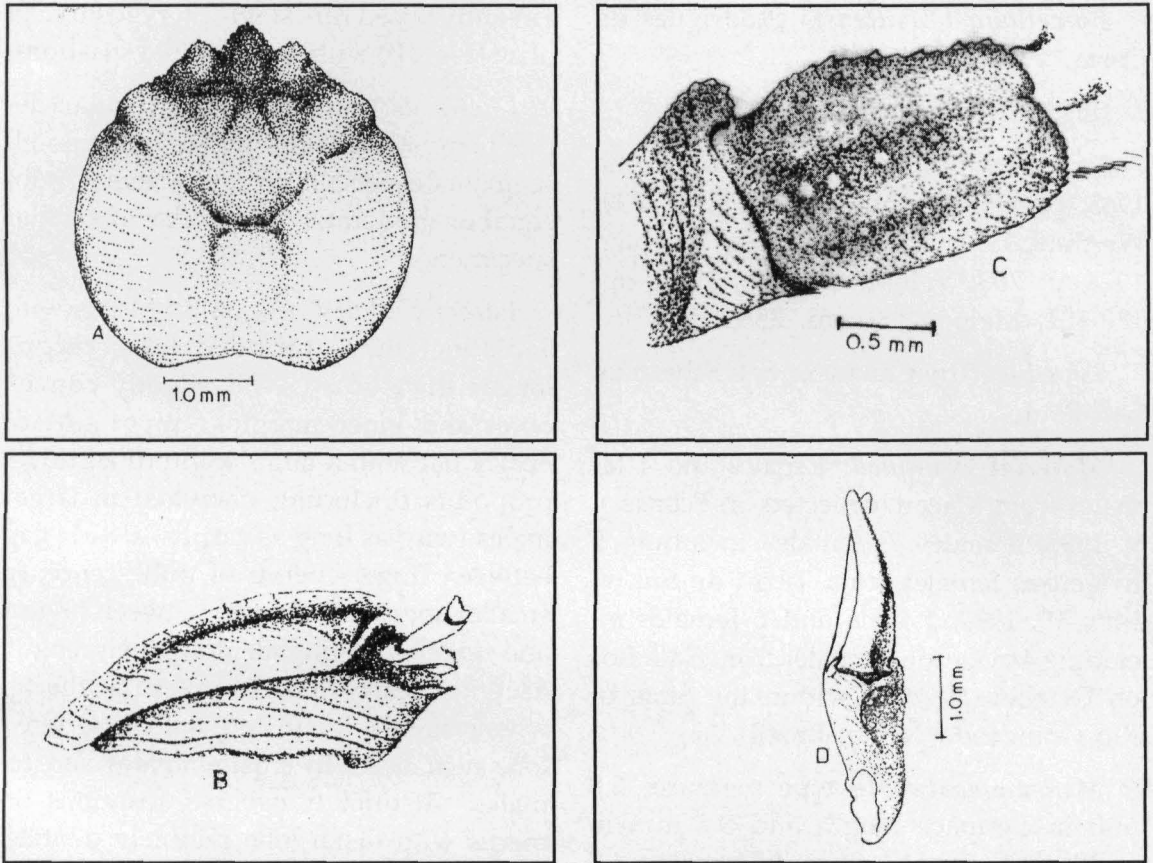


Fig. 1. A. Carapace (dorsal view) B. Side view of carapace, showing pterygostomian plate, C. carpus of chela, D. Chela viewed from above - *Porcellana brasiliensis*

The bottom at the place of collection was covered with seaweeds, broken pieces of rocks and shells.

Results

Key to species of *Porcellana* from Brazil (Adapted from Melo, 1999)

1. Lateral margin of carapace with a narrow and deep cleft at cervical groove *P. sigsbeiana* A. Milne Edwards

Lateral margin of carapace without a cleft2

2. Proximal inner margin of carpus

of cheliped without any distinct lobe
P. brasiliensis (Costa)

Proximal inner margin of carpus of cheliped wider in the form of a lobe3

3. Carapace with pubescence; hiatus between fingers with long setae; lobe on inner margin of carpus of cheliped with spiny edge*P. platycheles* (Pennant)

Carapace without pubescence; hiatus between fingers without long setae; lobe on inner margin of carpus of cheliped entire*P. sayana* (Leach).

Porcellana brasiliensis (Rodrigues da Costa, 1968) com.n.

(Fig. 1 A-D and Fig. 2 A-D)

Pisidia brasiliensis, Rodrigues da Costa, 1968, p. 406; Coelho, 1967-1968, p. 233; Werding, 1977, pp. 211-212, Fig. 28; Haig, 1978, p. 708; Veloso & Melo, 1993, pp. 180-181; Melo, 1999, pp. 258-259.

Type locality: Cananeia, Sao Sebastiao, Sao Paulo.

Material examined: 4 males and 4 females from Macau, collected on February 9, 1998; 4 males, 8 females including 5 ovigerous females from Tibau do Sul on May 18, 1999; 1 male and 6 females including 4 ovigerous females from Galinhos on October 21, 1999 within the State of Rio Grande do Norte, Brazil.

Measurements: Neotype measures 3.8 mm in carapace length and 3.7 mm in width, rest ranged from 1.7 mm to 4.0 mm in carapace length/width; smallest ovigerous female measured 3.0 mm in carapace length/width.

Distribution: From Panama and Caribbean waters to Sao Paulo, Brazil.

Description: Carapace (Fig. 1 A) as long as broad, with convex lateral borders, moderately convex across and in antero-posterior axis; surface nude but with striations on lateral region; front tri-lobed with dented border, each lobe triangular and median lobe overreaching lateral; supra-orbital margin moderately convex and serrate; margin behind epibranchial notch without any teeth and nearly smooth; lateral margin distinctly convex and with

a slightly raised rim; single pterygostomial plate (Fig. 1B) with longitudinal striations.

Chelipeds: Surface with irregular depressions, strongly dissimilar with smooth segments especially in larger males; subequal or moderately dissimilar in smaller specimens.

Larger cheliped (Fig. 2 B): Merus with a distinct inner rounded lobe; carpus longer than broad with slightly convex outer and inner margins, upper surface nearly flat with a faint longitudinal ridge; propodus (including dactylus) in larger males twice as long as carpus, a wide gap between fingers bereft of pubescence; in smaller specimens no gap between fingers and fingers meeting all along their length; dactylus nearly straight except at the tip where slightly bent and with a serrated lobe near base. In smaller males and females distinct transverse striations on merus with distal lobe minutely dentate; carpus distinctly longer than broad with striations on outer margin and two longitudinal grooves and two rows of tubercles on upper surface (Fig. 1 C) - one near the middle and another near outer margin, inner margin dentate; outer surface of propodus tuberculated, so also upper surface of dactylus; propodus and dactylus with pubescence on outer margin and on cutting edges.

Smaller cheliped (Fig. 2 C): Differs from larger in having thick tuft of long hairs starting from proximal end of propodus till tip of fixed finger, such hairs more numerous near middle and on cutting edge of dactylus; a longitudinal groove on upper surface of propodus; dac-

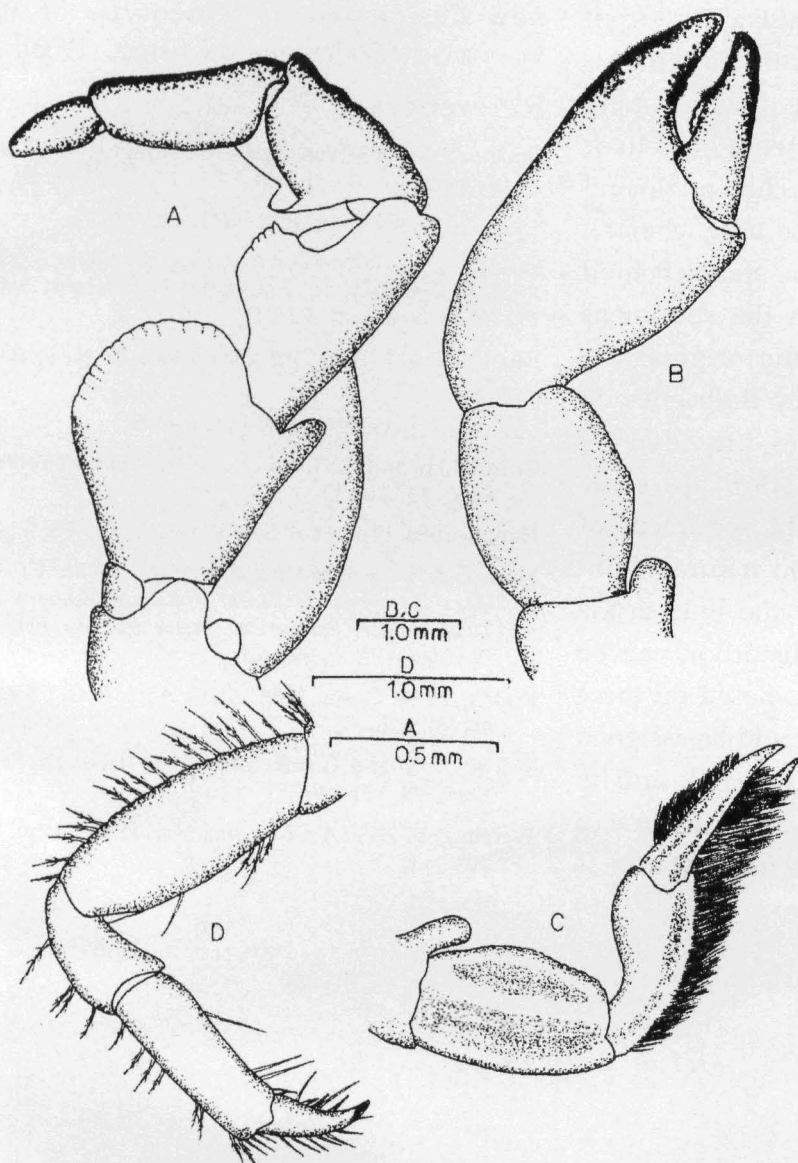


Fig. 2. A. Third maxilliped. B. Larger cheliped. C. Smaller and cheliped and D. Walking leg of *Porcellana brasiliensis*.

tylus slightly distorted (Fig. 1 D)

Walking legs (Fig. 2 D): Segments with shallow striations and with sparsely distributed bristly setae and plumose setae on all segments; propodus with a spine at

distal end on ventral side; dactylus with three spines and distal horny claw.

Telson: With seven plates.

Variations: In smaller specimens larger chela also possesses a line of plumose setae along the outer margin of propodus, but lacks dense hairs on dactylus; density of hairs on smaller chela also varying according to size of animal (such setae confined to outer margin of dactylus and not on cutting edges of dactylus and propodus) – smaller with fewer hairs. Inner margin of carpus of smaller specimens granulated and with a distinct longitudinal ridge. Surface of carpus and propodus

may also be granulated.

Discussion

Haig (1968) has listed a total of 13 species of the genus *Pisidia* Leach (7 from

Indo-Pacific, 1 from eastern Pacific, 2 from western Atlantic and 3 from eastern Atlantic). Of the two basic distinguishing features of the genus (presence of teeth or spines behind the epibranchial angle and twisted finger of one or both chelae), *Pisidia brasiliensis* lacks the spines behind the epibranchial angle in the specimens examined here and in the original description of the species by Rodrigues da Costa (1968). The figures provided by Werding (1977) and Melo (1999) also show absence of this feature. In specimens of moderate size, the twisted nature of fingers is not quite evident and only in the larger specimens such distortion can be seen in the smaller chela. Based on these findings, *P. brasiliensis* should be assigned to the genus *Porcellana* Lamarck and in the absence of a designated holotype, a male specimen collected from Macau is

now designated as a neotype of *P. brasiliensis* (Rodrigues da Costa, 1968).

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