18 October 1989
PROC. BIOL. SOC. WASH.
102(3), 1989, pp. 646–650

CHACEON RAMOSAE, A NEW DEEP-WATER CRAB FROM BRAZIL (CRUSTACEA: DECAPODA: GERYONIDAE)

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Abstract.—*Chaceon ramosae*, a species with depressed dactyli on the walking legs previously identified with *C. quinquedens* (Smith, 1879), is described as new, based upon material from Brazil.

Almost no attempt has been made to study the deep-water fauna off the Brazilian coast since the *Challenger* Expedition (1873–1876). Collections made by subsequent oceanographic expeditions such as those carried out aboard the *Albatross* in 1887 and the *Calypso* (1961–1962) were largely restricted to areas of the Brazilian continental shelf. Information on the Brazilian deep-water decapod crustaceans is scarce and is largely confined to studies by Miers (1886), Bate (1888), Henderson (1888) (all based on the *Challenger* collections), Moreira (1901), and Rathbun (1937).

Knowledge of the deep-water species of Brazil has been broadened as a result of the cruise in 1987 of the *Marion Dufresne*, an oceanographic ship of the TAAF (Terres Australes et Antarctique Françaises). The cruise was conducted off southeastern Brazil (Fig. 1) as part of a formal agreement between the Muséum National d'Histoire Naturelle, Paris, and the Universidade Santa Ursula, Rio de Janeiro. Among the materials collected were four large specimens of the deep-sea crab genus *Chaceon* which proved to represent an undescribed species. That species is named below.

The holotype has been deposited in the Museu Nacional, Rio de Janeiro (MNRJ). Other specimens, all paratypes, are in the collections of the Museu de Zoologia, Universidade de São Paulo (MZUSP), the Muséum National d'Histoire Naturelle, Paris (MNHN), and the National Museum of Natural History, Smithsonian Institution, Washington (USNM).

The following abbreviations are used below: cb, carapace width (including lateral spines); cl, carapace length, along midline; fm, fathoms; m, meters; mm, millimeters.

Chaceon ramosae, new species
Figs. 2–3

Geryon quinquedens.—Rathbun, 1937:270, 271 [part, specimen from Brazil only].—Scelzo & Valentini, 1974:561 [part, specimens from Brazil only]. [Not *Geryon quinquedens* Smith, 1879.]

Previous records.—Brazil: 24°17′S, 42°48′30″W, 671 fm (1228 m) (Rathbun 1937).—24°28′S, 43°43′W, 800 m, and 25°13′S, 44°33′W, 1200 m (Scelzo & Valentini 1974).

Material.—Brazil: 19°38′S, 38°43′W, 960 m, sta. 55 CB 95, 30 May 1987: 1 male (MZUSP 9363).—21°31′S, 40°07′W, 750–785 m, sta. 4 CP 7, 10 May 1987: 1 male (holotype, MNRJ-MD-1381).—23°46′S, 42°09′W, 592–610 m, sta. 64 CB 105, 2 Jun 1987: 2 males (MNRJ-MD-1382; MNHN).—24°17′S, 42°48′30″W, 671 fm (1228 m), *Albatross* sta. 2763, 31 Dec 1887: 1 male (USNM 22072).

Description.—A large *Chaceon*, cl to 143 mm, cb to 158 mm in adults, with 5 anterolateral teeth on the carapace and dorsoventrally depressed dactyli on the walking

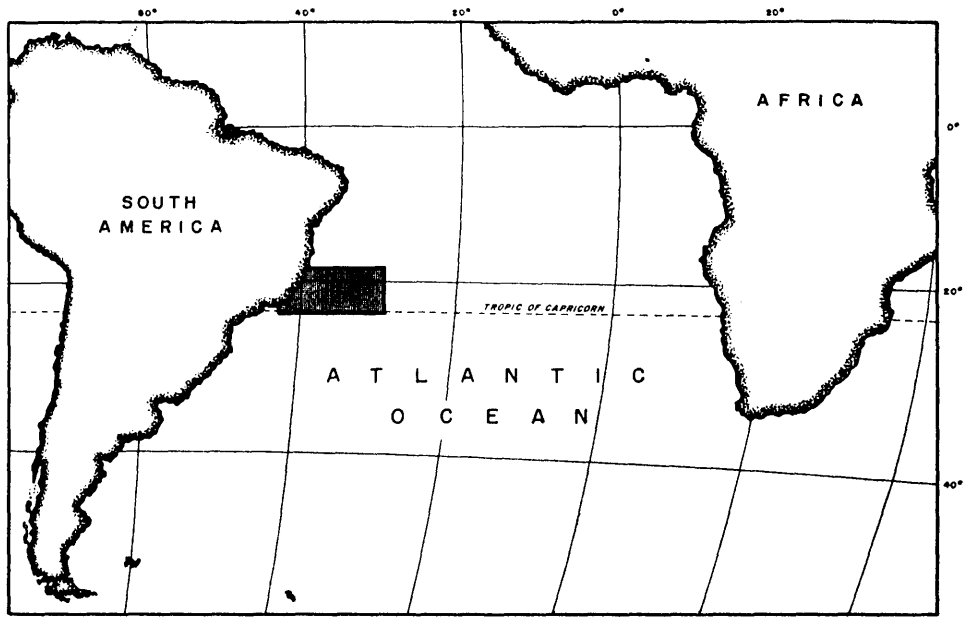

Fig. 1. Area sampled by the *Marion Dufresne* in 1987.

legs. Carapace 1.1 to 1.2 times broader than long. Median pair of frontal teeth separated by U-shaped sinus. Distance between submedian frontal teeth less than distance between them and lateral frontal teeth. Second, third, and fourth anterolateral teeth obsolete in adults, second and fourth smallest of all; distance from first to third tooth less than that from third to fifth tooth. Carapace with distinct raised ridge mesial to fifth anterolateral tooth, carapace surface finely granular, especially posterolaterally, smooth only at hepatic regions. Suborbital tooth short and broad in adults, not extending to level of lateral frontal teeth. Cheliped merus with sharp tooth subdistally, lacking distal tooth or angled lobe; carpus roughened dorsally, usually with irregular, curved granular ridge extending from middle of proximal margin to inner spine, anteri or margin of carpus with at most an angled lobe but no spine; propodus with at most distal angled projection dorsally. Meri of walking legs with at most indistinct distal, dorsal tooth. Dactyli of walking legs depressed, height at midlength less than width. Fifth leg: merus usually less than 5.0 times (range 4.6–4.9 in adults, 6.4 in juvenile male) times longer than high, length 0.65 to 0.66 cb in adult; carpus with line of sharp granules dorsally; propodus length 4.1 to 4.3 times height in adult, 5.1 times height in juvenile, longer than dactylus.

Size.—Males only known, cl 28 to 127 mm, cb 36 to 146 mm in material examined. Rathbun's specimen is the smallest specimen reported here. Scelzo & Valentini (1974) studied two males with cl 133 to 143 mm, cb 146 to 158 mm.

Color.—The specimens taken by the *Marion Dufresne* were cream colored in life. Scelzo & Valentini (1974) reported that the color of their two specimens was "cremoso."

Depth range.—Our specimens were taken in depths between 601 (592–610) and 1228 meters, with all records from depths in excess of 600 meters. Scelzo & Valentini (1974) reported two specimens from 800 m and 1200 m. The smallest specimen studied, a male with cl 28 mm, came from 1228 meters.

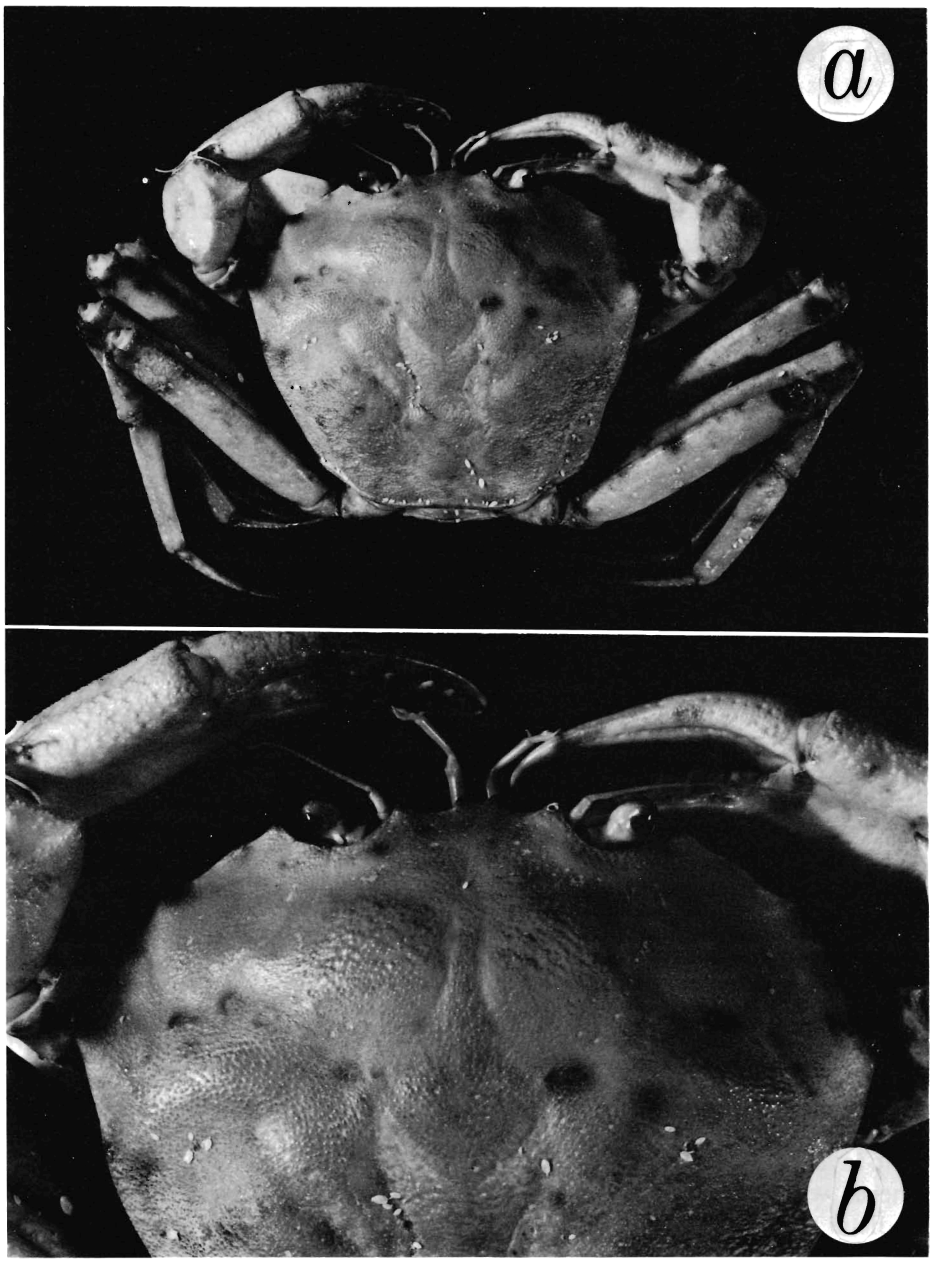

Fig. 2. *Chaceon ramosae,* male paratype, cl 107 mm, sta. 64 CB 105: *a,* Dorsal view; *b,* Carapace.

Remarks.—This species resembles *C. quinquedens* (Smith, 1879) in having depressed dactyli on the walking legs, but differs in numerous features: the carapace is much more granular posterolaterally, the suborbital tooth is less developed, the carpus of the chela completely lacks an outer spine in adults, the propodus of the chela lacks a distal dorsal spine, the meri of the walking legs lack a distinct distal dorsal spine, and the propodus of the fifth leg is less than 5 times as long as high.

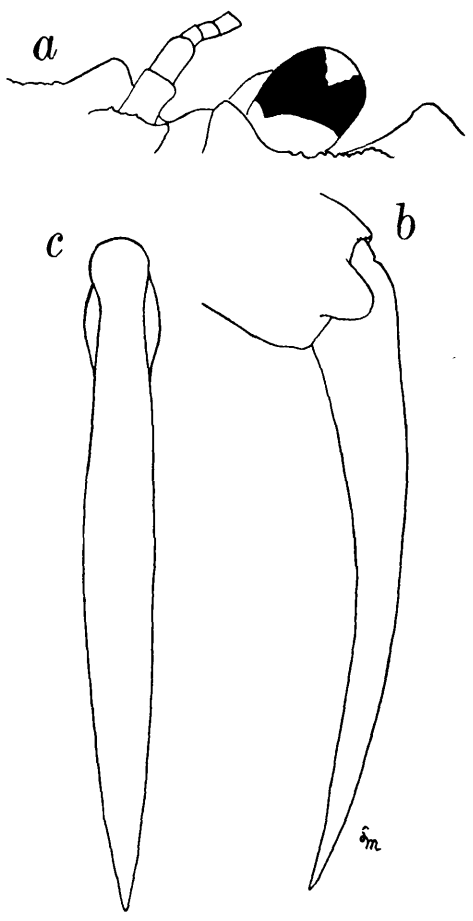

Fig. 3. *Chaceon ramosae*, male paratype, cl 107 mm, sta. 64 CB 105: *a*, Suborbital margin; *b*, Dactylus of fifth leg, posterior view; *c*, Dactylus of fifth leg, dorsal view.

Chaceon maritae (Manning & Holthuis, 1981), from West Africa, also has depressed dactyli on the walking legs, but differs from *C. ramosae* in several features: the carapace granulation is much coarser, the suborbital spine is smaller, and the walking legs are shorter. The merus and propodus of the fifth leg are about 4 times as long as high.

The anterolateral spines of the carapace are more distinct in the smallest specimen; in very large specimens the second and fourth teeth are scarcely discernible, and the third tooth is very low, an obtuse lobe. The merus of the fifth leg is more than 6 times longer than high only in the smallest specimen, cl 28 mm.

Scelzo & Valentini (1974) reported two specimens taken off Brazil in addition to numerous specimens taken off Uruguay and Argentina. Their material from Brazil differed from the other specimens they identified as *Geryon quinquedens* in being cream rather than reddish in color, and in the length/height ratios of the propodi of the walking legs, 4.3 to 4.5, which is similar to our findings. Their material from south of Brazil has been referred to *C. notialis* Manning & Holthuis (1989), who also transferred all large geryonids with 5 anterolateral spines on the carapace to the genus *Chaceon* Manning & Holthuis (1989).

Etymology.—We take pleasure in naming this species for Jeanete Maron Ramos, Universidade Santa Ursula, one of the organizers of the cruise of the *Marion Dufresne* off the Brazilian coast.

Acknowledgments

We thank Alain Guille, Muséum National d'Histoire Naturelle, Paris, and Janete Maron Ramos, Universidade Santa Ursula, for making available the material of *C. ramosae*. Enrique Macpherson of the Instituto de Ciencias del Mar in Barcelona informed one of us (RBM) of the *Chaceon* taken by the French-Brazilian expedition, and he is responsible for our establishing contact. The photographs were taken by Roy Kropp and Marilyn Schotte. Lilly King Manning made the line drawings, and prepared all of the figures for publication.

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