



First record of *Euchirograpsus americanus* A. Milne-Edwards, 1880 (Crustacea: Decapoda: Plagusidae) from northeastern Brazil

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ABSTRACT

The crab *Euchirograpsus americanus* A. Milne-Edwards, 1880 (Plagusidae) has so far only been recorded in Brazil in the state of Rio Grande do Sul. Here we report its first occurrence from northeastern Brazil, from the Potiguar Basin in the state of Rio Grande do Norte.

KEY WORDS

Continental shelf, geographic distribution, Potiguar basin, Grapsoidea.

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The family Plagusidae is represented by marine crabs with a subcircular to quadrate carapace, and the anterolateral margins with one to several teeth behind the exorbital angle (Melo, 1996; Ng *et al.*, 2008). This family currently is comprised of five genera: *Plagusia* Latreille, 1804, *Euchirograpsus* H. Milne Edwards, 1853, *Miersiograpsus* Türkay, 1978, *Davusia* Guinot, 2007, and *Guinusia* Schubart & Cuesta, 2010, with a total of 20 species (Ng *et al.*, 2008).

The genus *Euchirograpsus* currently comprises ten described species, largely occurring on bottoms of sand, sandy mud, mud, rock with gorgonians and sponges, from 10 to 510 m depth (Manning and Holthuis, 1981; Melo, 2010; Wilson and Pohle, 2016). Only two species have been recorded in Brazilian waters: *Euchirograpsus antillensis* Türkay, 1975 distributed in the states of Maranhão, São Paulo and Rio Grande do Sul and *Euchirograpsus americanus* A. Milne-Edwards, 1880, so far recorded only from the state of Rio Grande do Sul (Melo, 1996; 1998; 2010). In this study we report for the first time the occurrence of *E. americanus* from northeastern Brazil.

The Potiguar Basin is situated in the extreme northeast of Brazil, between the states of Ceará (CE) and Rio Grande do Norte (RN) (Alves-Júnior *et al.*, 2016). The samples were collected on board of the R/V “Seward Johnson” in 2011, as part of the project “Avaliação da biota bentônica e planctônica da Bacia Potiguar e Ceará (Bpot)” sponsored by “Petróleo Brasileiro S/A (Petrobrás)”.

The samples were obtained by bottom trawls (otter trawl semi-balloon type with 50 mm mesh size and 18 m of mouth opening), conducted on the continental slope between 150–2068 m of depth. All material collected was preserved in 70% ethanol. In the laboratory, the specimen was sorted and identified to species level by observing the diagnostic morphological characters according to A. Milne-Edwards (1880), Türkay (1975) and Melo (1996). The specimen was measured with a digital caliper (0.01 mm) at: carapace length (CL), carapace width (CW) and abdomen width (AW). The specimen has been deposited in the Carcinological Collection of the “Museu de Oceanografia Prof. Petrônio Alves Coelho (MOUFPE)”, of the “Universidade Federal de Pernambuco” in Recife, Brazil. In the geographic distribution section, the new record is listed in bold.

SYSTEMATICS

Order Decapoda Latreille, 1802

Infraorder Brachyura Latreille, 1802

Family Plagusiidæ Dana, 1851

Genus *Euchirograpsus* H. Milne Edwards, 1853

Euchirograpsus americanus A. Milne-Edwards, 1880

(Fig. 1A–C)

Material examined. 1 ovigerous female (CL 8.52 mm, CW 9.08 mm, AW 6.98 mm), Potiguar Basin, MT-52-2, 04°44'S 036°25'W, 23 May 2011, 180 m, 28.8°C, salinity 36.6, MOUFPE 15697.

Geographic distribution. Western Atlantic–Canada (Bay of Fundy), USA (towards the Carolina's in Toms/Meys Canyon and Baltimore Canyon, Massachusetts in Canyon at the edge of Georges Bank, New Jersey, Louisiana, Florida), Gulf of Mexico, Dry Tortugas, Cuba, Caribbean Sea, Antilles, West Indies, Barbados, Colombia, Venezuela and Brazil (**Potiguar Basin - Rio Grande do Norte** and Rio Grande do Sul) (Zariquiey Alvarez, 1968; Türkay, 1975; Melo, 1996; 1998; Wilson and Pohle, 2016).

Remarks. The single specimen is in agreement with the original description of A. Milne-Edwards (1880), as well as subsequent descriptions by A. Milne-Edwards and Bouvier (1894), Rathbun (1918), Türkay (1975) and Melo (1996). The species was represented by only one specimen among 30 sampling stations in the Potiguar Basin.

The only two species of genus *Euchirograpsus* found in Brazil (*E. americanus* and *E. antillensis*) are very similar to each other; however, *E. americanus* has three to four subdistal teeth on the inferior margin of the merus of the second pair of pereopods, being at least one of them larger, *versus* all short and of the same length in *E. antillensis*; moreover, the lateral spines of the carapace are slightly longer in *E. antillensis* than in *E. americanus* (Türkay, 1975, fig. 16) (Fig. 1C).

Some specimens of *Euchirograpsus* were identified as *E. americanus* from Galapagos Islands and Madagascar by Crosnier and Thomassin (1975), but, after further review, the individuals were described as two new species, *Euchirograpsus pacificus* and *Euchirograpsus madagascariensis* by Türkay (1975; 1978). Until the revision by Türkay (1975), *E. americanus* was also wrongly recorded in the eastern Atlantic

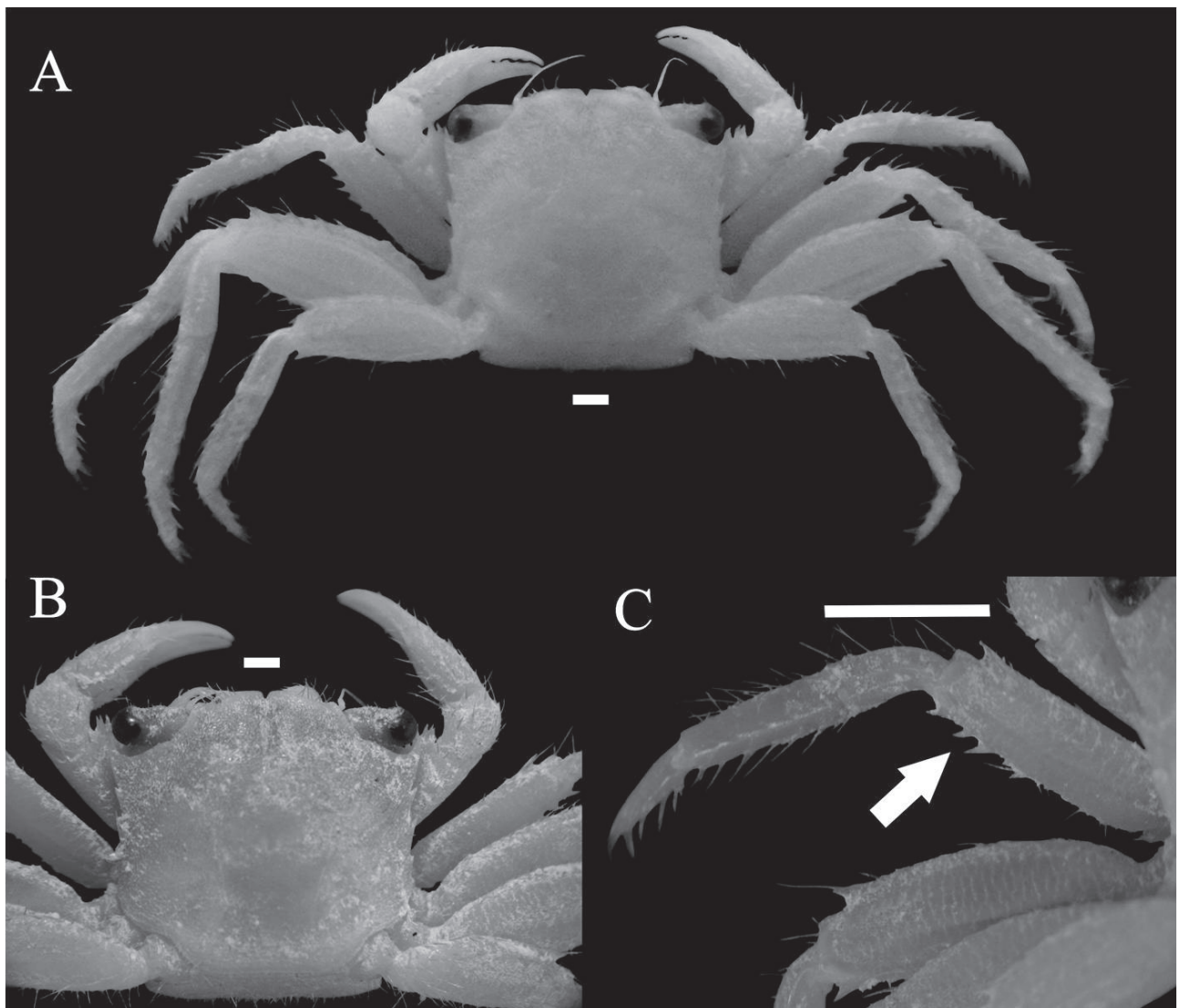


Figure 1. *Euchirograpsus americanus* A. Milne-Edwards, 1880, ovigerous female from northeastern Brazil (Potiguar Basin, MT-52-2; MOUFPE 15697). (A), Habitus, dorsal view; (B) carapace, dorsal view; (C) second pair of pereopods (P2), merus indicated by arrow. Scale bar = 1 cm.

(these specimens are juveniles of *Euchirograpsus liguricus* H. Milne Edwards, 1853). *Euchirograpsus americanus* is, therefore, restricted to the western Atlantic only (Manning and Holthuis, 1981). The species *E. americanus* and *E. antillensis* have a disjunct geographical distribution along the Brazilian coast, but these species probably have a wider distribution than is currently documented.

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