

Registers of two species of Crustacea Decapoda Brachyura in Brazilian waters

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Abstract

Surveys on the carcinofauna of deeper water, in the Brazilian Northeast, have been held by the Research Vessel “Natureza”, through releases of bottom traps, after the implementation of the Program of Evaluation of the Alive Resources of the Exclusive Economic Zone (REVIZEE). These samples have revealed the presence of two species not known previously for Brazilian coast: *Acanthocarpus bispinosus* A. Milne Edwards, 1880 (Calappidae) and *Portunus floridanus* Rathbun, 1930 (Portunidae). *Acanthocarpus bispinosus*, presently collected off Pernambuco and Sergipe States between 278 and 405 m deep, was just known of the Florida and Antilles region. *Portunus floridanus* known, until then, in Western Atlantic, from North Carolina to Surinam is now referred to Paraíba State.

Key words: Decapoda Brachyura, REVIZEE NE Program, Brazilian waters

Introduction

Experimental fisheries have been carried out by the Centro de Pesquisa e Extensão Pesqueira do Nordeste (CEPENE/IBAMA), aiming the survey of the living resources potential of the Exclusive Economic Zone (ZEE), work of fundamental political-economic importance and strategy to Brazil.

These survey results have brought significant contributions to the carcinological knowledge, mainly to the batyal fauna, revealing the presence of species not known previously for the Brazilian coast.

The genus *Acanthocarpus* Stimpson, 1871 was represented, until the present moment, in Brazil, just for *A. alexandri* Stimpson, 1871, species mentioned for the Southeast and South regions, in depths between 70 and 480 meters deep, according to Melo (1996).

The genus *Portunus* Weber, 1795 is represented in the Western atlantic, by thirteen species, from which seven are referred for Brazilian waters: *P. anceps* (Saussure, 1858), *P. gibbesii* (Stimpson, 1859), *P. ordwayi* (Stimpson, 1860), *P. rufiremus* Holthuis, 1959, *P. spinicarpus* (Stimpson, 1871), *P. spinimanus* Latreille, 1819 and *P. ventralis* (A. Milne Edwards, 1879). They occur from the surface up to 550 meters deep, in sand, mud, shells and corals bottoms. *Portunus floridanus* was found, until then, in the Western Atlantic, from North Carolina to Surinam.

Material and Methods

The specimens were collected from november/1999 until october/2000, during oceanographic prospections, accomplished by the Research Vessel “Natureza”, as part of the activities of the REVIZEE/NE Program, under the responsibility of the Centro de Pesquisa e Extensão Pesqueira do Nordeste do Brasil (CEPENE /IBAMA / MMA).

The equipment used to capture the specimens was a bottom trap.

The samples were preserved in frigorific chambers in the vessel. After landing they were taken to the Aquatic Bioecology Laboratory of CEPENE, where the identification (male = m; female = f; ovigerous females = ov) and measurement of the carapace width and length in millimeters were made.

The identification was accomplished to the light of the works of Abele and Kim (1986), Rathbun (1930; 1937), Williams (1984); its classification followed the one that recommended by Melo (1996). The material is deposited in the carcinological collection of CEPENE (REVIZEE Museum), County of Tamandaré, Pernambuco, Brazil.

Results

FAMILY CALAPPIDAE De Haan, 1833

Acanthocarpus bispinosus A. Milne Edwards, 1880

Acanthocarpus bispinosus A. Milne Edwards, 1880: 19. - Rathbun, 1937: 244, pl. 68, figs. 1-3. - Powers, 1977: 30. - Abele & Kim, 1986: 465; 469, fig. b.

Type-locality - Reefs of the Grenadines, 256m.

Diagnostic characters - Carapace circular, with a long lateral spine. Postero-lateral margin tuberculate. No tooth on posterior margin and no conical tubercle on sternal plastron (Rathbun, 1937).

Material examined - Pernambuco: Cruise 5, station 120 (08°44,9'S-34°45,3'W), 405 m, 11-20-1999, 1 male, carapace width, excluded spines: 48 mm; included spines: 90 mm, carapace length: 45 mm. Sergipe: Cruise 3, station 2 (10°41,1'S-36°18,8'W), 278 m, 10-27-2000; 1 male, carapace width, excluded spines: 53 mm; included spines: 110 mm, carapace length: 51 mm.

Range - Western Atlantic: Off West and northwest coasts of Florida; Dry Tortugas; Grenadines, Windward Islands (Abele and Kim, 1986).

Habitat - Found in depths between 201 and 405 m, on mud-shell, coral and clay-mud bottoms.

FAMILY PORTUNIDAE Rafinesque, 1815

Portunus floridanus Rathbun, 1930

Portunus (Achelous) floridanus Rathbun, 1930:82, pl.40.

Portunus floridanus - Powers, 1977:83. - Williams, 1984:388, fig. 304. - Abele and Kim, 1986: 53, 575, 585.

Type-locality - Key West, Florida (24°25'45"N - 81°48'W).

Diagnostic characters - Carapace narrow; anterolateral teeth 2 - 7 small, spiniform and similar; lateral spine short, strong, larger than adjacent teeth, tip trending forward. Frontal teeth triangular. Chelipeds long, ridges appressed, granulate. Posterodistal margin of merus of swimming leg unarmed (Williams, 1984).

Material examined - Paraíba: Cruise 1, station 4 (07° 26,1'S - 34°27,3' W), 215 m, 03/19/2000, 1 male, carapace length (18 mm), carapace width (25 mm).

Range - Western Atlantic: Cape Lookout, North Carolina to Honduras and Nicaragua, through Antilles and northern South America to Surinam (Williams, 1984).

Habitat - Coral bottom, hard bottom, muddy sand or mud; 9 to 640 m, but most common from 60 - 80 m (Williams, 1984).

Discussion

Little information exist regarding to *A. bispinosus*, mainly concerning to its habitat and ecology, fact perfectly comprehensible, considering the depth strip where this occurs, between 201 and 360 m

deep, registered in the literature. Powers (1977) refers, for the Gulf of Mexico, mud shell, coral, and clay-mud bottoms; depth between 201 and 360 m, even so still lower than the 405 m, presently registered.

There are remarkable morphological differences between *A. bispinosus* and *A. alexandri* which were pointed out by Milne Edwards (1880), especially in relation to the length of the spines of the carapace postero-lateral margins. It is short in the former and long in *A. bispinosus*. Such character is the most important in the differentiation of these species, and also used in most of the consulted identification keys.

The main difference presented by *P. floridanus* compared to *P. anceps*, *P. gibbesii*, *P. rufiremus* and *P. ventralis* is related with the carapace width. In *P. floridanus* the carapace width is narrow, with antero-lateral margins forming an arc of a circle with the center near the middle of cardiac region. When *P. floridanus*, *P. ordwayi*, *P. spinicarpus* and *P. spinimanus* are compared, the first is distinguished by having 2 spines on the upper margin of the palm near articulation of dactyl and the postero-distal margin of merus of fifth legs rounded and .

In spite of being performed five oceanographic cruises until the moment, with a total of 120 stations, only two specimens of *A. bispinosus* and one of *P. floridanus* were presently collected; perhaps these are rare in the area or the capture procedures has not been the most appropriate.

The occurrence of *P. floridanus* in the coast of Paraíba State and *A. bispinosus* in the Pernambuco and Sergipe States coasts are the first references of these species for Brazilian waters.

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