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Checklist of the marine and estuarine Brachyura (Crustacea: Decapoda) of northern and northeastern Brazil

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Abstract

A total of 272 species of brachyuran crabs are reported from marine and estuarine environments in northern and northeast Brazil. The checklist is derived from the literature published from 1847 to 2008, and includes all species that have been reported at least once from the study area. It is also partially supported by material deposited in the crustacean collection of the Departamento de Oceanografia, Universidade Federal de Pernambuco, city of Recife, Brazil (DOUFPE). The families containing the highest number of species in northern and northeastern Brazil are Majidae (31), Portunidae (22), Epialtidae (20), Panopeidae (20), and Xanthidae (18). The remaining species are distributed in 39 families. The analysis of the distribution of the species in the region, allows for identification of four patterns of longitudinal distribution (western Atlantic, Amphi-Atlantic, Amphi-American, and circumtropical species) and, in the western Atlantic, six patterns of latitudinal distribution (Virginian, Carolinian, Antillean, Central-South American, Boreal, and Endemic). Two non-indigenous species have also been reported. Most of the species represented in northern and northeastern Brazil have Antillean (94 species; 34.5%) and Carolinian (75 species; 27.6%) pattern of distribution.

Key words: Brachyura, biogeography, marine biodiversity, estuarine fauna, Brazil

Introduction

The Brachyura, or true crabs, is among the best known and most intensely studied groups of crustaceans. With 6793 valid species, distributed in 93 families and 38 superfamilies, they constitute the most diverse group of decapods. Brachyurans have colonized almost every marine (down to 6.000 m in the abyssal zone) and terrestrial habitat (in mountains up to 2.000 m) (Ng *et al*. 2008).

The number of species of brachyuran crabs reported from northern and northeastern Brazil has increased significantly since the publication of the Catalogue of Crustacea of Brazil (Young 1998), mainly based on collections carried out in the 1990's by the Recursos Vivos da Zona Econômica Exclusiva (REVIZEE) Program along most of the Brazilian coast (Cabral *et al*. 2000; Ramos-Porto *et al*. 2000a, 2000b, 2000c, 2002, 2003; Silva *et al*. 2002a, 2002b; Torres *et al*. 2002, 2006; Viana *et al*. 2002, 2003a; Cardoso & Serejo 2003; Rodrigues & Young 2003; Tavares 2003; Komai 2004; Tavares & Young 2004; Cardoso & Young 2005; Coelho Filho 2006; Serejo *et al*. 2006). The current knowledge on crustacean diversity, however, is still far from being satisfactory. In spite of its large extension and ecological heterogeneity, northern and northeastern Brazil contains some important areas of edaphic transition that remain poorly studied. Among these regions is the sector under influence of the Amazon River discharge, the coast of Maranhão state, and part of southern Bahia, which includes the largest and the richest coral reef area along the Brazilian coast and constitutes the southernmost coral reefs of the Atlantic Ocean (Leão & Dominguez 2000; Leão 2002).

The checklist includes species found from Cape Orange, northern Amapá State (04°17'N; 51°32'W) to the Abrolhos Archipelago, southern Bahia State (18°19'S; 39°40'W) (Fig. 1). Oceanic areas include the archipelagos of Fernando de Noronha (03º51'S; 35º25'W), located 345 km east off the coast of Rio Grande do Norte state, and São Pedro and São Paulo (0º55'N; 29º20'W), located about 500 km northeast of Fernando de Noronha (Fausto Filho 1974; Holthuis *et al*. 1980; Leão & Dominguez 2000). It also includes the Rocas Atoll (3°45'–3°56'S; 33°37'–33°56'W), 260 km east of Natal, Rio Grande do Norte (Kikuchi 2000), the only atoll in the southwestern Atlantic, as well as the seamounts of the North chain (= seamounts off Ceará) (01°00'–04°00'S; 37°00'–39°00'W) and off Fernando de Noronha (= seamounts off Rio Grande do Norte) (03°00'–4°30'S; 32°00'–37°00'W), where the homonym archipelago and the Rocas Atoll are located (Coelho Filho 2006).

The northern and northeastern coasts of Brazil are under direct influence of two main currents. The South Equatorial Current splits into two branches near 10º S, and continues towards the northwest as the North Brazilian Current. Another branch turns southwards as the beginning of the Brazil Current (Stramma *et al.* 1990). Climate between Cape Orange and Maranhense Gulf (2º00'S) is equatorial. The sector comprised between