

ON THE TAXONOMY AND DISTRIBUTION OF *CALLINECTES*
STIMPSON (CRUSTACEA, DECAPODA, PORTUNIDAE)
IN RIO GRANDE DO NORTE

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ABSTRACT. A faunistic survey of the species of *Callinectes* Stimpson, 1871 carried out in the coastal and estuarine regions of the State of Rio Grande do Norte yielded five species: *C. bocourti* A. Milne Edwards, 1879; *C. danae* Smith, 1869; *C. exasperatus* (Gerstaecker, 1856); *C. larvatus* Ordway, 1863 and *C. ornatus* Ordway, 1863. Specimens examined consist of those collected on a monthly basis from three fixed stations within the estuary of Potengi, Natal during a period of two years and those obtained from other localities. Among the species occurring in the region, *C. danae* is more abundant and has a wider range of tolerance of salinity while *C. larvatus* is restricted to the marine habitat. Though *C. danae* sustains important artisan fishery, *C. bocourti* of large size also contribute to the fishery.

KEY WORDS. Taxonomy, distribution, *Callinectes*, Portunidae, Crustacea, Rio Grande do Norte

The genus *Callinectes* Stimpson, 1871 is widely dispersed in the Atlantic and East Pacific and contains 14 species (WILLIAMS, 1974). More recently, *C. affinis* Fausto-Filho, 1980 was described from Fortaleza.

Among the species of *Callinectes*, *C. sapidus* Rathbun, 1896 is known to have the widest range of distribution from Massachusetts to Argentina (WILLIAMS, 1974) and has been recorded from Rio de Janeiro by MOREIRA (1901), from Ceará by FAUSTO-FILHO (1978), from Alagoas by PEREIRA-BARROS (1981) and from São Paulo by SAMPAIO & FAUSTO-FILHO (1984) and by PITA *et al.* (1985). However, the species was not encountered during the present survey.

Though extensive literature is available on the species of *Callinectes* from the coastal waters of Brasil, there has been no intensive study of this genus of the State of Rio Grande do Norte except for those of FAUSTO-FILHO (1984) and COELHO *et al.* (1986). The present study is an attempt to fill the lacuna in our knowledge.

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MATERIAL AND METHODS

The present study, initiated in 1987, examined extensive material collected from the different regions of the State of Rio Grande do Norte. Three fixed stations within the estuary of Potengi, Natal were subjected to an intensive investigation to collect material on a monthly basis which provided additional information. Five species were collected during the present study: *C. bocourti* A. Milne Edwards, 1879; *C. danae* Smith, 1869; *C. exasperatus* (Gerstaecker, 1856); *C. larvatus* Ordway, 1863; *C. ornatus* Ordway, 1863; *C. marginatus* Ordway, 1863 recorded by earlier workers from western Atlantic is now called *C. larvatus* Ordway, 1863 (MANNING & HOLTHUIS, 1981; PITA *et al.*, 1985 and COELHO *et al.*, 1986).

While monthly sampling within the estuary of Potengi was done with a shore seine of 9m length pulled by two people, material from other localities was obtained from fishermen.

RESULTS

Callinectes bocourti A. Milne Edwards, 1879

C. bocourti; Williams, 1974: 766-772, various localities. -Fausto-Filho, 1984: 118, Rio Grande do Norte. -Coelho *et al.*, 1986: 91, material not examined, reference to the study of FAUSTO-FILHO (1978).

Material examined: 11 males and 2 females. Largest male measuring 62/118/94mm (carapace length/carapace width with lateral spines/carapace width without lateral spines) and larger female measuring 54/104/86mm.

Localities of collects: Baía Formosa, Maracajaú and São Gonçalo do Amarante (Fig. 1).

Geographic distribution: Known to occur from Jamaica to Santa Catarina, Brasil (WILLIAMS, 1974).

Remarks: Largest specimen reported by WILLIAMS (1974) were distinctly larger than those collected during the present study. The species is known to tolerate a wide range of salinities. The specimens collected from this region were from marine environment of salinity 35‰ and estuary with a salinity of 20‰.

Callinectes danae Smith, 1869

C. danae: Williams, 1974: 746-752, various localities. -Fausto-Filho, 1984: 118, Rio Grande do Norte. -Coelho *et al.* 1986: 91, material not examined, reference to the study of FAUSTO-FILHO (1978).

Material examined: Several adult and juvenile specimens of both sexes; largest male measuring 60/133/103 mm and largest female measuring 53/109/88mm.

Localities of collects: Macau, Areia Branca, Baía Formosa, São Gonçalo do Amarante and Maracajaú (Fig. 1); estuary of Potengi (Fig. 2).

Geographic distribution: From southern Florida, Bermuda to Santa

Catarina, Brasil (WILLIAMS, 1974).

Remarks: The largest specimen examined here, both male and female, are almost as large as those reported by WILLIAMS (1974).

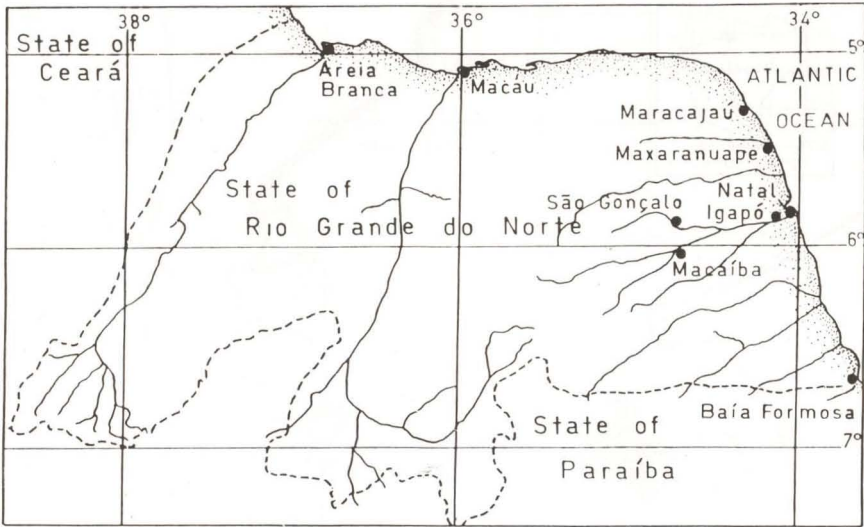


Fig. 1. Map of the state of Rio Grande do Norte, Brazil showing the localities of collection.

The species has been observed to survive in freshwater as well as hypersaline conditions. The specimens collected during the present study were from areas where the salinity was as low as 20‰ or as high as 42‰.

The species is widely distributed in the estuary of Potengi supporting an artisan fishery. The analysis of data collected on a monthly basis within the estuary (Fig. 3) shows that the number of crabs collected increased progressively from Station 1 to 3. It can also be seen from figure 3 that the period of abundance of the species was from October to March.

Callinectes exasperatus (Gerstaecker, 1856)

C. exasperatus: Williams, 1974: 757-761, various localities. -Fausto-Filho, 1984: 118, Rio Grande do Norte. -Coelho et al., 1986: 91, Canguaretama.

Material examined: Several specimens of both sexes; largest male measuring 59/108/94mm and largest female measuring 62/113/99mm.

Localities of collects: Baía Formosa (Fig. 1); estuary of Potengi (Fig. 2).

Geographic distribution: From southern Florida, Bermuda to Santa Catarina, Brasil (WILLIAMS, 1974).

Remarks: Females were observed to be relatively larger than males and

the largest specimens studied here are slightly smaller than those examined by WILLIAMS (1974). Though known to tolerate wide range of salinities, specimens collected locally were from estuarine areas only (20‰ to 25‰).

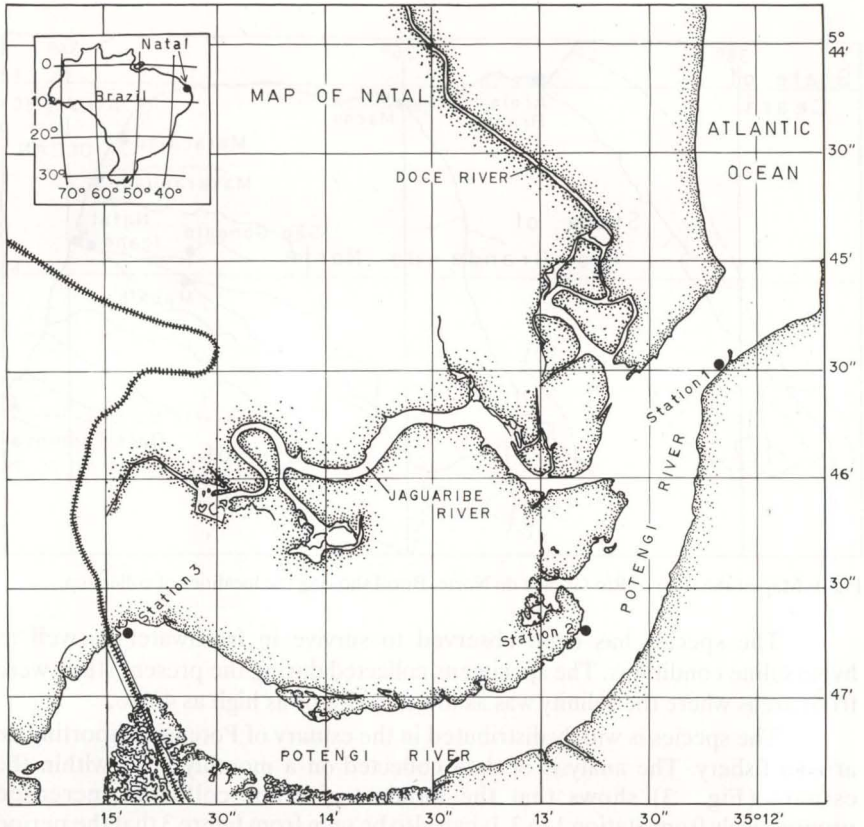


Fig. 2. Map of Natal, Brazil showing the location of the three stations within the estuary of Potengi.

Callinectes larvatus Ordway, 1863

C. larvatus: Manning & Holthuis, 1981: 93, 94. -Coelho et al., 1986: 91, material not examined, reference to the study of FAUSTO-FILHO (1978).

C. marginatus: Fausto-Filho, 1984: 118, Rio Grande do Norte.

Material examined: Several specimens of both sexes; largest male measuring 44/95/80mm and largest female measuring 57/99/89mm.

Localities of collects: Baía Formosa, Maracajaú, Areia Branca, Macau (Fig. 1); mouth of estuary of Potengi (Fig. 2).

Geographic distribution: From southern Florida to São Paulo, Brasil (WILLIAMS, 1974).

Remarks: Largest specimens obtained from this region were smaller than those reported by WILLIAMS (1974). The species was observed to be restricted to the marine environment where salinity was recorded between 35‰ and 42‰.

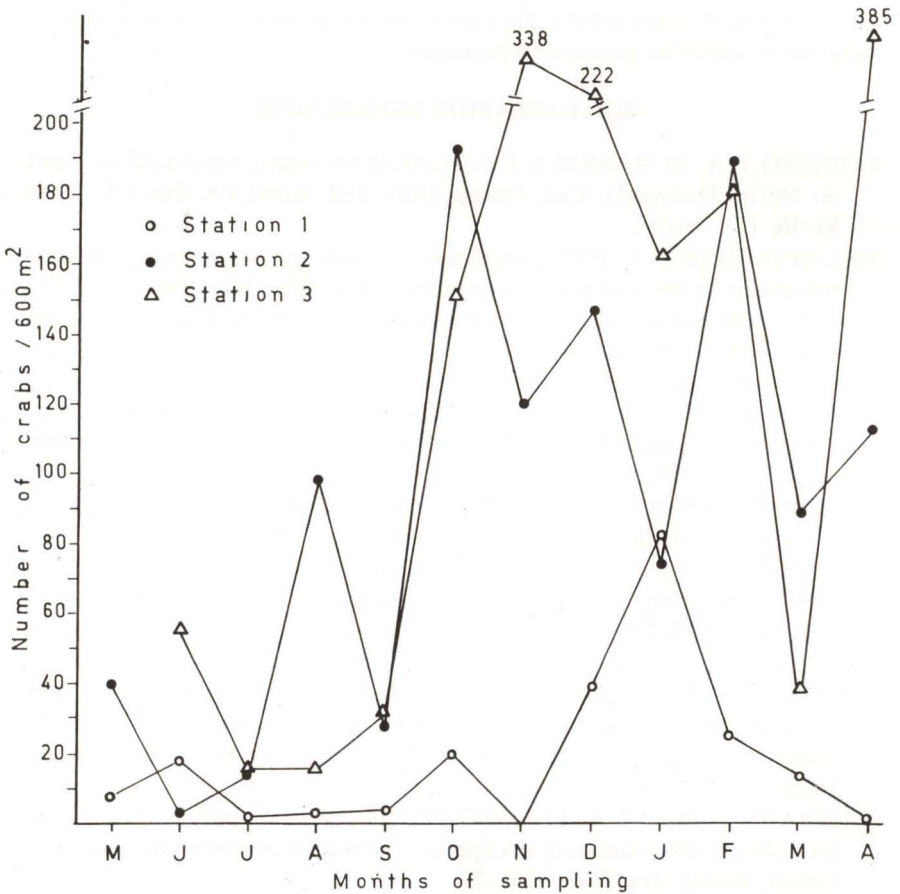


Fig. 3. Annual fluctuation in the number of crabs collected at the three stations within the estuary of Potengi.

Callinectes ornatus Ordway, 1863

C. ornatus: Williams, 1974: 739-746, various localities. -Coelho et al., 1986: 91, Natal.

Material examined: 16 females and 19 males; largest male measuring 39/89/71mm and largest female measuring 32/68/56mm.

Locality of collects: Maxaranguape (Fig. 1).

Geographic distribution: North Carolina, through Florida, Bermuda to São Paulo, Brasil (WILLIAMS, 1974).

Remarks: Largest specimens collected here were relatively smaller than

those reported by WILLIAMS (1974). The same author also reports that the species withstands large range of salinities (0‰ to 59‰). Specimens from this region were all from an estuary where salinity was 8‰.

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