

Papéis Avulsos de Zoologia

CALCINUS TIBICEN (HERBST, 1791), IN BRAZILIAN LITTORAL (DECAPODA, PAGURIDEA)

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Calcinus tibicen (Herbst, 1791), is frequently recorded in studies of Paguridea without mentioning the precise locality of occurrence. For instance a common indication is "Brazil" (Schmitt, 1935; Provenzano, 1959; Chace Jr., 1956), hence there is no possibility to conclude about the range of its distribution.

Previously published studies reveal that the species was found in Brazil for the first time by Smith (1869), who gave Bahia (Abrolhos) as the locality of occurrence. Rathbun (1900 p. 144) found *C. tibicen* on the coasts of Paraíba (Mamanguape), Alagoas (Maceió) and Pernambuco (without the precise locality). Moreira (1901 p. 27) reported that the species occurs in Abrolhos. Recently Forest (1967 p. 106) studied the Paguridea collected by the "Calypso" in South American waters. Although *C. tibicen* was not present in the "Calypso" samples, he described specimens from Pernambuco (Recife and Piedade) given to him by others collectors. He reported the distribution of the species as "from Bermudas, south of Florida until Abrolhos".

In the Abrolhos (aproximatly 18° lat. S), mainly in Santa Barbara Island, Narchi in 1965 collected some specimens of *C. tibicen*. Later we received one animal from Espírito Santo (Santa Cruz), 19° 57' lat. S. More recently, studying the intertidal fauna, Narchi and Hebling found a few specimens in Ubatuba and São Sebastião in the northern littoral of São Paulo, 23°27' and 23°50' lat. S. respectively.

Calcinus tibicen (Herbst, 1791)

(Fig. 1)

Cancer tibicen Herbst, 1791: 25, pl. 23, fig. 7.

Calcinus sulcatus Smith, 1869: 17, 39; Rathbun, 1900: 144; Moreira, 1901: 27, 86; Verrill, 1908: 439, figs. 56, 57, pl. 28, fig. 7.

Calcinus tibicen; Rankin, 1900: 533, pl. 17, fig. 1; Schmitt, 1935: 193, fig. 60a, b; Chace Jr., 1956: 152; Provenzano, 1959: 393, fig. 4; Forest, 1967: 106.

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Examined specimens

Bahia: Abrolhos (Santa Bárbara Island), 17°55' lat. S, on rocks, intertidal zone, W. Narchi col., 1965, 11 ♂ of 5,0 to 8,0 mm length; 18 ♀ ov. of 4,0 to 8,0 mm length.

Espírito Santo: Santa Cruz, 19°57' lat. S, on muddy sand beach, intertidal zone, M. L. Cruz col., 1970, 1 ♂ of 8,0 mm length.

São Paulo: Ubatuba, 23°27' lat. S, on rocks, intertidal zone, W. Narchi col., 1971, 2 ♂ of 8,0 to 9,0 mm length; 1 ♀ of 5,5 mm length. São Sebastião, 23°50' lat. S, on rocks, intertidal zone, N. J. Hebling col., 1971, 1 ♂ of 6,0 mm length.

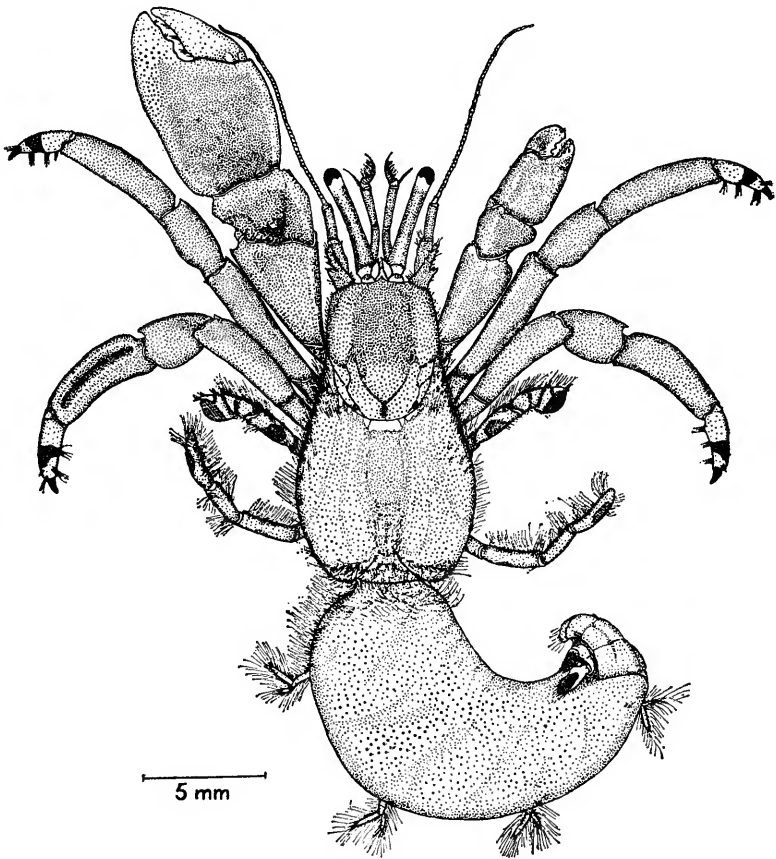


Fig. 1, *Calcinus tibicen*: a male specimen showing the characteristic grooved propodus of the second left ambulatory leg.

Discussion

In the present study, *C. tibicen* is reported from the shore of southern Brazil (Fig. 2). This is the first record south of the Abrolhos, 17°55' lat. S. São Sebastião 23°50' lat. S represents a southern extension of the distribution range and of the limits of the biogeographic subdivision established by Forest (1967: 62). Forest recognized that these subdivisions must be revised because the collecting stations of the "Calypso" are far apart.

He placed *C. tibicen* in the tropical area and found it from 18° lat. S northward. The sub-tropical area ranges from 28° to 22°-24° lat. S and Forest considered the latter as the limit of the range of many endemic species. The new occurrences of *C. tibicen* show that it extends southward at least to 23°-24° lat. S. Based on the new data, Forest's concept of the tropical-subtropical area must be revised. The extension of the distribution area to 23°-24° lat. S, seems to favor Balech's opinion (1951 p. 189), who considers 23°-24° lat. S the southern limit of the Antillean province. This includes the region between 23°-24° lat. S and the United States of America, containing a tropical fauna.

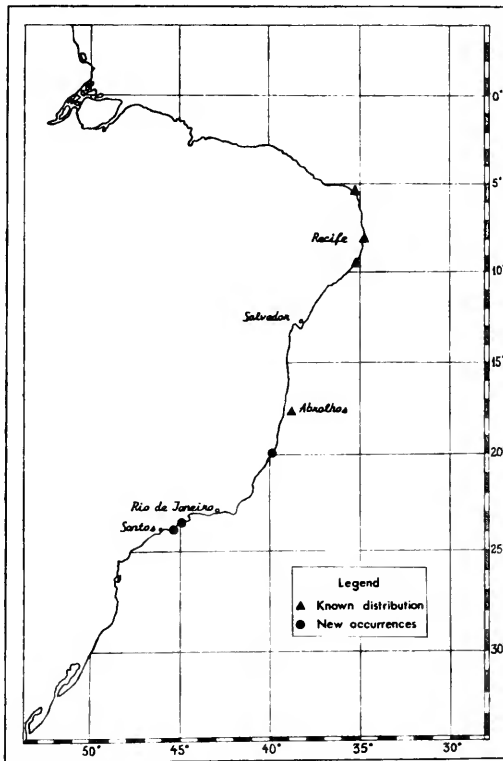


Fig. 2. Occurrence of *Calcinus tibicen* in the Brazilian littoral.

Ekman (1953: 47) confirmed this view limiting the region of warm waters at the latitude of Rio de Janeiro (22° 30' lat. S) or a little farther south.

Doubtless *C. tibicen* belongs to the Antillean fauna and the finding of this species in the littoral of São Paulo confirms the range proposed by Balech. Future collectors will probably find the species along the Brazilian littoral from 23°-24° lat. S northwards.

RESUMO

Calcinus tibicen (Herbst, 1791) foi coletada pela primeira vez abaixo do limite sul da distribuição conhecida, os Abrolhos, 17°55' lat. S. As novas ocorrências foram Santa Cruz (Espírito Santo) e Ubatuba e São Sebastião (São Paulo). Forest (1967) enquadrou a espécie no setor tropical propriamente dito, dando sua distribuição de 18° lat. S para o norte. Os novos registros da espécie no intervalo entre 18° e 23°-24° lat. S parecem mais favoráveis à divisão zoogeográfica proposta por Balech que coloca a fronteira sul da província antilhana na latitude 23°-24° S.

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