doi:10.4322/rca.2012.028 Rev. Ci. Agra., v.54, n.3, p.314-317, Set/Dez 2011

NOTA CIENTÍFICA

Revista de Ciências Agrárias
AMAZONIAN JOURNAL of Agricultural and Environmental Sciences
www.ajaes.ufra.edu.br

Presence of Penaeus monodon in the continental shelf of the State of Para, Northern Brazil (Crustacea, Decapoda, Penaeidae)

Presença de Penaeus monodon na plataforma continental do Estado do Pará (Crustacea, Decapoda, Penaeidae)

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Recebido: *20/09/2011*
Aceito: *29/12/2011*

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ABSTRACT: In October 2010, a specimen of tiger shrimp *Penaeus monodon* was captured by a vessel from an industrial fishery fleet using a bottom trawling net in the area of the continental shelf of the State of Para. The female sample was collected at 25 m depth. This capture shows that since the 1980s this species has occurred in the north Brazilian continental shelf.

RESUMO: Um espécime do camarão-tigre-gigante *Penaeus monodon* foi capturado em outubro de 2010 com rede de arrasto de fundo, por embarcações da frota industrial de peixes diversos, na plataforma continental do Estado do Pará. O exemplar é uma fêmea e foi coletado em profundidade de 25 m. O registro comprova que, desde a década de 1980, a espécie ocorre em águas da plataforma continental norte brasileira.

PALAVRAS-CHAVE:
Camarão-tigre-gigante
Espécies exóticas
Costa Norte
Pesca industrial

KEY-WORDS:
Giant tiger prawn
Exotic species
North Shore
Industrial fishery

1 Introduction

The industrial fishing of penaeids along the Brazilian north coast is an important economic activity that has as a main target the pink shrimp *Farfantepenaeus subtilis.*

The industrial fishing of shrimps occurs from the mouth of Parnaiba River (02° 53' S) to the mouth of Oiapoque River (04° 23' N), on the border of Brazil and French Guiana. In other words, this area covers the coast of three States: Maranhao, Para and Amapa. This area is part of a huge shrimp bench that goes up to the Orinoco River in Venezuela, covering an area of 223.000 km² (IBAMA, 1994).

In the North region of Brazil, Silva et al. (2002) reported that, besides *F. subtilis*, other five species of the Penaeidae family were captured: *Farfantepenaeus brasiliensis*, *Penaeopsis serrata*, *Rimapenaeus constrictus*, *Rimapenaeus similis* and *Xiphopenaeus kroyeri*.

Also, the capture of two specimen of tiger prawn, *P. monodon*, was registered by Silva, Ramos-Porto and Cintra (2002) in the continental shelf of the State of Amapa. This shrimp is one of the largest penaeids in the world with considerable commercial importance in the international markets and its production originates from grow-out farms and commercial capture. According to authors, anglers of the "Pesca Leal Santos Company" have reported occasional fishing of *P. monodon* on the State of Amapa coast since 1993.

The purpose of this study was to show the presence of *P. monodon* in the Brazilian north continental shelf, in particular in the State of Para, to warn about the possible impacts associated to this species.

2 Materials and Methods

In October 2010, a specimen of tiger shrimp *Penaeus monodon* was captured by a vessel from an industrial fishery fleet using a bottom trawling net in the area of the continental shelf of the State of Para; this vessel was catching fish of different species. This specimen was conserved in ice in a cold chamber until the vessel reached the harbor.

In the Crustaceous Laboratory at the Center for Research and Management of Fishery Resources of the North Shore (Cepnor), this specimen was identified using the Pérez-Farfante and Kensley (1997) and Dall et al. (1990) key of identification. Also, the sex of the animal was identified (through the presence of petasma in males and thelycum in females), as well as the biometrics total length – TL (from the apex of the rostrum to the end of the telson) and the total weight – TW. Length measurements were performed with the aid of a graph ictiometer and a caliper, a precision scale was used to obtain the weight.

3 Results and Discussion

The specimen captured in October 2010, using a bottom trawling net, by a vessel from an industrial fishery fleet in the area of the continental shelf of the State of Para was analyzed (Figure 1).

Family Penaeidae Rafinesque, 1815

Genus Penaeus Fabricius, 1798

Penaeus monodon Fabricius, 1798

Material examined and biometric data – State of Para: 00° 10' N, 047° 47' W, a female (217 mm LT - 84,6 g WT), 25 m depth (Figure 2). The specimen can be found in the crustacean collection of the Crustaceous Laboratory at 'Cepnor'.

Color – The specimen showed blue gray color, brown crossed stripes both on the carapace and abdomen; on the abdomen, the stripes are located close to posterior segments margin, they are preceded by cream, yellow and red-gray stripes; pleopods with red bangs. The specimen's color is similar to

Figure 1. Specimen of *Penaeus monodon* Fabricius, 1798, captured in October 2010 in the continental shelf of the State of Para, Brazil.

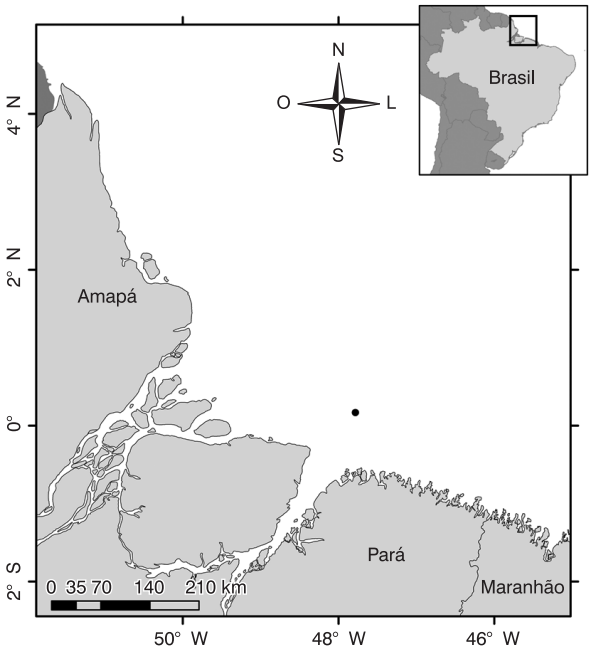

Figure 2. Capture location of giant tiger shrimp in the continental shelf of the State of Para, Brazil.

that described by Coelho, Santos and Ramos-Porto (2001) and Silva, Ramos-Porto and Cintra (2002).

Habitat-Shallow water to 100 m depth. Sandy and muddy sand bottom. When juvenile, they inhabit the estuary and go to the salt water when adults (HOLTHUIS, 1980).

Occurrence in the South of the Occidental Atlantic – Brazil, State of Maranhao, Tutoia (FAUSTO-FILHO, 1987; SANTOS; COELHO, 2002); State of Amapa (SILVA; RAMOS-PORTO; CINTRA, 2002); State of Pernambuco, 'Piedade' beach, Barra de Sirinhaem, Sao Jose da Coroa Grande; State of Alagoas, Coruripe, 'Manguaba' lagoon; State of Sergipe, South shore (COELHO; SANTOS; RAMOS-PORTO, 2001; SANTOS; COELHO, 2002). Colombia, La Vera cape and Punta Gallinas (GÓMEZ-LEMOS; CAMPOS, 2008). Venezuela, 'Anzoátegui' coast, Orinoco River delta and 'Paria' golf (AGUADO; SAYEGH, 2007; ALTUVE et al., 2008).

Species acknowledgment in the South of the Occidental Atlantic – Escape from experimental or commercial aquaculture farms in the 1970s and 1980s, in ballast water used to provide stability to ships when not carrying cargo.

Acknowledgements

The authors are grateful to the Federal Rural University of the Amazon (UFRA) and the Center for Research and Management of Fishery Resources of the North Shore (CEPNOR) for the motivation and logistics support at the "Fishing and Fisheries Resource Assessment" Research Group of the National Council for Scientific and Technological Development (CNPq).

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