

Occurrence of *Pseudodiaptomus gracilis* (F. Dahl, 1894), Copepoda, Calanoida in amazonian fresh waters

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(With 2 figures)

Among the family Pseudodiaptomidae, the genus *Pseudodiaptomus* assemblage of the blackish species shows a worldwide distribution (Walter, 1986). Most of them occur in estuaries in the neotropical region. In the Brazilian coastline, two species (*Pseudodiaptomus acutus* and *Pseudodiaptomus richardi*) are widely distributed from north to south constituting important material for various studies (Tundisi and Matsumura-Tundisi, 1968; Cipolli and Carvalho, 1973; Prado-Por and Lansac-Toha, 1984; Magalhães et al, 2006.).

Nevertheless, the species *Pseudodiaptomus gracilis* has been registered in fresh water by several authors. According to Wright, 1936 the species is widely distributed in the lower Amazon region. It was recorded by Dahl, 1894 in freshwater at the mouth of the Rio Tocantins (Baia do Marajó). Wright, 1928, based on the Merrill collection, reported the occurrence of *Pseudodiaptomus gracilis* in fresh water in the Lago Arary and Rio Arama, Marajó and in a bayou west of Santarem near where the Tapajoz joins the Amazon. Wright (also in 1935) collected at various points between the mainland at Belém and Marajo Island (Rio do Pará). Dussart, 1984 found the species in Venezuela in a pond near the Orinoco River at Barrancas. *P. gracilis* has been found also in brackish water (Stingelin, 1904) on the Marajó Island.

The occurrence of *Pseudodiaptomus gracilis* (Dahl, 1894) was observed in the material obtained from Rio

Xingu (Pará) during the limnological studies carried out at several points of the river located between the coordinates: 02° 04' 02" S - 03° 55' 16" S and 51° 30' 13" W - 53° 30' 49" W on an expedition on January, 2007

In the two places (RX15- Xingu River and BAC 01- River Bacaje) a great population of *Pseudodiaptomus gracilis* was found. The limnological characteristics of these places are presented in Table 1.

Comments

Pseudodiaptomus gracilis seems be an endemic species with its occurrence restricted to the Amazon region more in the freshwater than in brackish water. The conductivity of the samples where the species occurred showed the values 21.0 $\mu\text{S}\cdot\text{cm}^{-1}$ and 9.0 $\mu\text{S}\cdot\text{cm}^{-1}$, the pH 7.5 and dissolved oxygen between 7.5 to 8.0 $\text{mg}\cdot\text{L}^{-1}$

The species shows an opposite behavior of two other species (*P. acutus* and *P. richardi*) that are from brackish water and are able to tolerate high salinity. This could be a case of a "reciprocal biological gradient" as reported by Tundisi (1970) for the lagunar region of Cananeia (SP).

Figure 1 shows the general aspects of the female (a) and male (b) and Figure 2 the aspect of the fifth leg of the male. The peculiar characteristic of this species is the length of the abdomen as near as the size of cephalothorax.

Table 1. Sampling sites in the river Xingu (Pará), where *Pseudodiaptomus gracilis* was found and its chemical characterization.

Coordinates:	Places	
	RX-15 (Xingu river)	BAC-01 (Bacajé river)
Local depth (m)	4.3	2.7
Temperature (°C)	31.0	30.0
pH	7.4	7.5
Conductivity ($\mu\text{S}\cdot\text{cm}^{-1}$)	21.0	90.0
Dissolved Oxygen ($\text{mg}\cdot\text{L}^{-1}$)	8.0	7.5
Oxygen saturation (%)	110	95
Total phosphorus ($\mu\text{g}\cdot\text{L}^{-1}$)	16.87	51.87
Total nitrogen $\text{mg}\cdot\text{L}^{-1}$	1.04	0.42

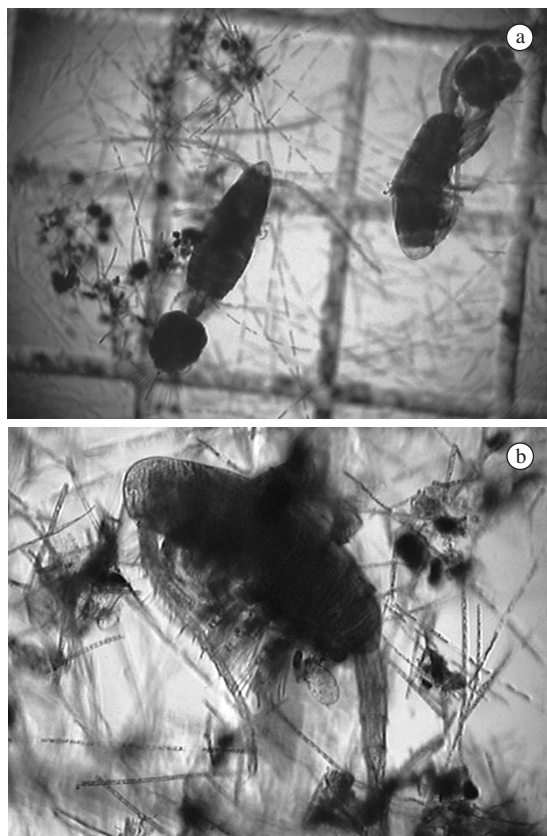


Figure 1. General aspects of; a) female; and b) male.

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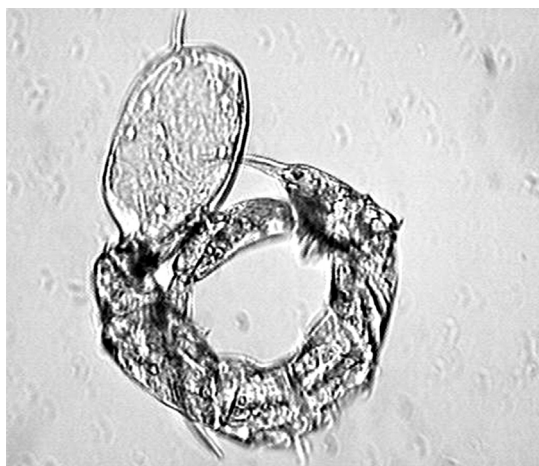


Figure 2. Aspect of fifth leg of male.