

Record of *Thermocyclops tenuis* (Marsh, 1910) (Copepoda: Crustacea) in the Pantanal (Mato Grosso do Sul – Brazil)

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(With 2 figures)

The aim of this note is to record the occurrence of the copepod Cyclopoida *Thermocyclops tenuis* in the Pantanal region, Central West of Brazil. The sampling was carried out in September, 2008, in a small artificial pond with an area of 22 m² and 0.5 m deep, located in the city of Corumbá, MS, at 19° 00' 02" S and 57° 37' 50" W. The material was concentrated in a plankton net with 68 µm mesh size and fixed in a 4% formaldehyde solution. The organisms were identified in an optical microscope with image capture and drawings accomplished with Turbo Cad 6.5 software.

Thermocyclops tenuis was found in the sample making up the main population of Cyclopoida (97%) together with *Mesocyclops longisetus* (Thiébaud, 1914).

1. Characteristics of the species

The mean body size from *T. tenuis* female (Figure 1a) was 1,124 µm (n = 10, SD = 61.72 µm), deposited in the USP Museum (MZUSP 19390). The appendages and the morphological characteristics used for differential diagnosis were: smooth hyaline membrane in the 16th and 17th segments (Figure 1c) of the antennule (Figure 1b); patterns of spine rows in the basipodite of antenna (Figure 1d); relationship about size of the apical spines in the 3rd segment of the endopodite of the leg 4 (Figure 1e); leg 5 (Figure 1f); shape of seminal receptacle and furca proportion about 4.4 as long as wide (Figure 1g). These charac-

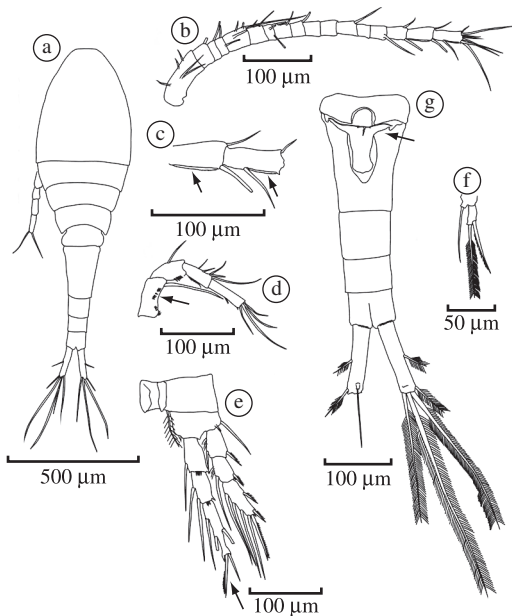


Figure 1. *Thermocyclops tenuis* female. a) General aspect; b) Antennule; c) Detail of the 16th and 17th antennule segments (setae: hyaline membrane); d) Antenna (setae: spine rows in the basipodite); e) Leg 4 (setae: apical spines of the endopodite); f) Leg 5; and g) Urosome (setae: seminal receptacle).

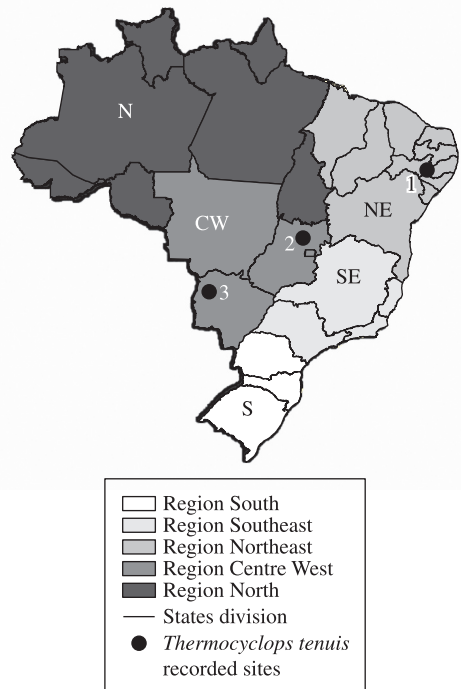


Figure 2. Brazilian territory and its political division, States and Regions: N = North; NE = Northeast; CW = Centre west; SE = Southeast; S = South; and the sites of the *T. tenuis* records: 1) Pernambuco State, records in 1936 and 1938; 2) Goiás State, records in 1980 and 1983; 3) Mato Grosso do Sul State, records in 2008.

teristics are in agreement with the taxonomical diagnosis made by Kiefer (1936), Coker (1943) and Smith and Fernando (1980).

2. Geographical distribution

The species was recorded for the first time in the northeast region of Brazil (Pernambuco State) (Figure 2) by Kiefer, (1936) and furthermore by Schubart (1938) in the same region. Reid (1989) recorded the species in the Central-West region of Brazil (Goiás State) and the present paper shows the occurrence of this species in the same region, but in Mato Grosso do Sul State, Pantanal.

The distribution of this species in the Brazilian territory seems to be restricted in the Northern and Central West region until 20° S. The species has not been registered at the present day at higher latitudes despite the extensive studies carried out by Silva and Matsumura-Tundisi (2005) in water bodies of São Paulo State (Southeastern part of Brazil- between 19° 47' S and 25° 13' S).

References

- COKER, RE., 1973. *Mesocyclops edax* (S.A. Forbes), *M. leuckarti* (Claus) and related species in America. *Elisha Mitchell Scientific Society*, vol. 59, no. 2, p. 181-200.
- KIEFER, F., 1936. Brasilianische ruderfußkrebse (Crustacea Copepoda), gesammelt von Herrn Dr. Otto Schubart. III. Mitteilung, *Zoologischer Anzeiger*, vol. 114, p. 320-322.
- REID, JW., 1989. The distributions of species of the genus *Thermocyclops* (Copepoda, Cyclopoida) in the western hemisphere, with a description of *T. parvus*, new species. *Hydrobiologia*, vol. 175, no. 2, p. 149-174.
- SCHUBART, O., 1938. Considerações sobre as investigações nas águas de Pernambuco. *Arquivos Instituto de Pesquisas Agronômicas de Pernambuco*, vol. 1, no. 1, p. 26-57.
- SILVA, WM. and MATSUMURA-TUNDISI, T., 2005. Taxonomy, ecology and geographic distribution of the species of the genus *Thermocyclops* Kiefer, 1927 (Copepoda, Cyclopoida) in São Paulo State, Brazil, with description of a new species. *Revista Brasileira de Biologia = Brazilian Journal of Biology*, vol. 65, no. 3, p. 533-540.
- SMITH, KE. and FERNANDO, CH., 1980. *Guía para los Copépodos (Calanoida y Cyclopoida) de las aguas dulces de Cuba*. La Habana: Editorial Academia. 27 p.