

# *Acanthocyclops iskrecensis* PANDOURSKI, 1992 (Crustacea, Copepoda, Cyclopoida) from the Karstic Groundwaters of Eastern Serbia

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**Abstract:** During the field biospeleological research in caves near the village of Zlot, Eastern Serbia, six females of *Acanthocyclops iskrecensis* PANDOURSKI, 1992 were collected. A morphological description of this new species for the fauna of Serbia accompanied with taxonomical and zoogeographical notes is presented.

**Key words:** Cyclopoida, groundwaters, karst, Serbia

## Introduction

During the field investigations (in May and June 1997) organized by the National Museum of Natural History of Belgrade and financed by the community of Bor we had the possibility to carry out biospeleological research in the surroundings of the village of Zlot (Kučaj Mountain). In this work we represent a short morphological description of females of *Acanthocyclops iskrecensis*, which is new to the Serbian fauna. Taxonomical and zoogeographical notes are given.

## Material and Methods

Six females of *Acanthocyclops iskrecensis* were collected from rimestone pools in Lazareva pečina Cave, village of Zlot, Serbia, 3.06.1997. The material was collected after filtering of the groundwater through a hand net with a mesh of 0,110 mm.

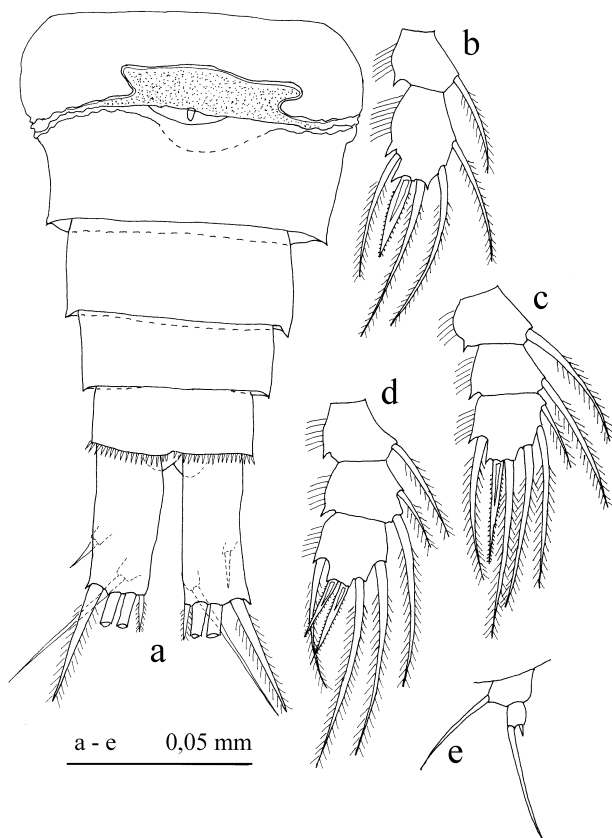
## Results

*Acanthocyclops iskrecensis* PANDOURSKI, 1992 (Fig. 1 a-e).

**Morphological description:** Body length of two females (except apical setae of caudal ramus) 0,481 mm. Short antennules of 11 segments do not exceed the posterior margin of cephalosome. Maximal width of cephalosome in the posterior part: 0.167 mm. Five metasomite segment broad as much as genital complex: 0.098 mm. Genital complex wider than longer: 1,6/1; 1,58/1. Caudal rami: 2,24-2,35 times longer than broad. Length of dorsal seta equal to caudal ramus.: 0.04 mm. Ratio between apical setae of caudal ramus (from inner to outer): 1/23,8/16,4/3,6.

Formulae of swimming legs 1-4: 3.2/3.2/3.3/3.3; ornament and setation identical with those of *Acanthocyclops propinquus* (PLESA, 1957). Leg 4

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**Fig. 1.** *Acanthocyclops iskrecensis*, female: a – Genital segment, seminal receptacle, abdominal somites and caudal rami; b – Leg 2 endopodite; c – Leg 3 endopodite; d – Leg 4 endopodite; e – Leg 5.

endopodite article 3 long as much as broad, with interior apical spine 1,3-1,4 times longer than article and 1,33-1,35 times longer than exterior spine. Leg 5 typical of genus *Acanthocyclops*.

## Discussion

Up to now *A. iskrecensis* was known only from groundwaters of the karstic basin of Iskretsz, the western part of Stara Planina Mountain chain in Bulgaria and belongs to the exclusively stygobionte “*kieferi*” group of cyclopoid species with 11-segmented antennulae (PANDOURSKI, 1992a; 1994). Lazareva pečina Cave is the first locality of this species on the territory of Serbia. Morphologically the

observed specimens (including the above mentioned measurements) are entirely identical to the material from Bulgaria (see table 1, page 10 in PANDOURSKI, 1994). This fact shows that the morphological signs of *A. iskrecensis* are well-defined in different parts of the geographical area of the species.

Lazareva pečina Cave is locus typicus of *Acanthocyclops stygius* (CHAPPUIS, 1924), belonging to the same “*kieferi*” species group. In spite of our efforts we could not find this species again in rimestone pools as well in two siphon lakes of the cave. The results were also negative in the pools of the neighbour caves: Mandina, Haidutchitsa, Vodena and Vernikitsa.

Another two subspecies of typical form are described: *A. stygius deminutus* (CHAPPUIS, 1925) and *A. stygius macedonicus* (PETKOVSKI, 1954). According to PANDOURSKI (1997) they have a status of separate species and belong to the group of species “*kieferi*” of genus *Acanthocyclops*.

DAMIAN-GEORGESCU (1963) reports *A. stygius* for Roumania and Hungary. The individuals from Bulgaria attributed to this species (PETROVA *et al.* 1986) are determined by Dr. W. NAIDENOW. These authors did not give description or any illustrations and in our opinion the taxonomical status of this material is uncertain. In PANDOURSKI (1992b) the material includes captured juveniles, dead or morphologically destructed individuals what make their determination impossible. According to some morphological criteria this material belongs to the group of species “*kieferi*” of genus *Acanthocyclops*.

*Acanthocyclops iskrecensis* differs clearly from *A. stygius* by several morphological signs with taxonomic value: ratio between lengths of apical setae of caudal ramus, ornamentation and setation of endopodites P1-P4, general morphology of leg 5, etc. Unfortunately CHAPPUIS (1924) had not preserved typus material of *A. stygius* and the description of this species is rather schematic.

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Received: 05.11.2007  
Accepted: 13.02.2008

## ***Acanthocyclops iskrecensis* PANDOURSKI, 1992 (Crustacea: Copepoda: Cyclopoida) от подземните карстови води на Източна Сърбия**

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### **(Резюме)**

По време на биоспелеологични изследвания в пещерите около Злот, Кучай планина, Източна Сърбия, са уловени и изследвани шест женски екземпляра от *Acanthocyclops iskrecensis* PANDOURSKI, 1992. Представени са кратко морфологично описание на този нов вид за фауната на Сърбия, таксономични и зоогеографски бележки.