A new species of Microstygia Georgiev et Glöer, 2015 (Gastropoda: Hydrobiidae) from Bulgaria

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Abstract: The second known species of the genus Microstygia Georgiev et Glöer, 2015 was described, Microstygia lakatnika n. sp. It was found as empty shells in the deposits of the temporary stream of the Temnata Dupka Cave, Iskar River Gorge, Stara Planina Mts in Bulgaria. M. lakatnika n. sp. is a little bit larger and has one more whorl than the type species of the genus, M. deltchevi Georgiev et Glöer, 2015.

Keywords: Balkan Peninsula, cave, stygobiotic

Introduction

The territory of Bulgaria is one of the richest areas on stygobiotic snails in the West Palaearctic. Many endemic species and probably even genera were found in the recent years from there (Glöer, 2022). In this paper I describe a new species from the known as a monotypic genus Microstygia Georgiev & Glöer, 2015. It was registered in one of the relatively well studied considering stygobiotic snails water caves named Temnata Dupka, from where Wagner (1927) described two species: Paladilhiopsis buresi Wagner, 1928, and Pontobelgrandiella hessei (Wagner, 1927), and later Georgiev (2011) found it as a new locality of Pontobelgrandiella pusilla (Angelov, 1959).

Material and methods

The material (3 empty shells) was collected on 6.08.2022 from the Temnata Dupka Cave, Iskar River Gorge, Stara Planina Mts in Bulgaria (Fig. 1). Deposits of a temporary stream, situated at the left (north) small gallery near the entrance and close to the grating were collected (Fig. 2). Later they were sun dried and then put again into water. Floating empty shells full with air were collected by a strainer.Specimens were stored, identified and some were photographed. Taxonomy followed Glöer (2022).


Results

Genus Microstygia Georgiev & Glöer, 2015

Type species: Microstygia deltchevi Georgiev & Glöer, 2015

The shell is white, elongate-conical to almost cylindrical fine growth lines and deep suture. The apex is strongly rounded. The aperture is ovoid with a simple lip having relatively thickened edge. The
operculum and the soft body are unknown (Georgiev & Glöer, 2015).

**Microstygia lakatnika n. sp.**

Type locality: Temnata Dupka Cave, near Gara Lakatnik Village, Iskar River Gorge, Stara Planina Mts, Bulgaria, N43 05 20.0 E23 23 00.5, 469 m a.s.l. (Figs 1, 2).

Type material: holotype: 1 shell, 6.08.2022, Temnata Dupka Cave, near Gara Lakatnik Village, Iskar River Gorge, Stara Planina Mts, Bulgaria, N43 05 20.0 E23 23 00.5, 469 m a.s.l., National Natural History Museum – Sofia, Bulgaria (Fig. 3B); Paratypes: 2 shells, from the type locality, 6.08.2022, National Natural History Museum – Sofia, Bulgaria.

Etymology: Named after the area of Lakatnik Rocks (= Lakatnishki Skali, Bulgarian) where the species was found.

Description: The shell is white, very small, elongate conical. The whorls are five, slightly rounded, regularly growing and have a shining surface and a deep suture. The apex is broad and rounded, the umbilicus is slit like. The aperture is ovoid with a simple lip having relatively thickened edge. The operculum and the soft body are unknown.

Measurements: Holotype: SH = 1.46 mm, SW = 0.64 mm, AH = 0.42 mm, AW = 0.44 mm, LWH = 0.80 mm, AH/SH = 0.29, LWH/SH = 0.55, SW/SH = 0.44. Paratypes: No. 1: SH = 1.34 mm, SW = 0.56 mm, AH = 0.40 mm, AW = 0.38 mm, LWH = 0.72 mm, AH/SH = 0.30, LWH/SH = 0.54, SW/SH = 0.42 (Fig. 1), No. 2: SH = 1.42 mm, SW = 0.54 mm, AH = 0.38 mm, AW = 0.32, LWH = 0.72 mm, AH/SH = 0.27, LWH/SH = 0.51, SW/SH = 0.38.

Differential diagnosis: The genus Microstygia differs from all the rest of the known stygbiotic genera with similar shell shape by its small size, rounded apex with very broad embryonic whorls. *M. lakatnika* n. sp.
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differs from *M. deltchevi* (Fig. 3A) by its slightly larger shell with five whorls (versus four), and the slit like umbilicus (versus wide open). However, there are some species assigned to the genus *Iglica* Wagner, 1928 (which evidently needs a revision) that have such a small shell and broad apex like *Microstygia*. They are *I. alpheus* A. Reischütz & P. L. Reischütz, 2004 (Peloponnesse, Greece) and *I. velkovrhi* De Mattia, 2007 (Klunove Toplice, Slovenia) (Glöer, 2022) but the first species has a strongly cylindrical shell (versus elongate conical), and in the second the last whorl comprises 2/3 of the shell height (versus 1/2). In addition, *I. velkovrhi* has different ecology, being a thermophile living in a hot spring.

Habitat and ecology: A stygobiotic species living in subterranean waters of a large limestone area. Other snail species found as empty shells in the sample were

*Paladilhiopsis buresi* Wagner, 1927 (considered by the author as *Saxurinator* Schütt, 1960), *Pontobelgrandiella hessei* (Wagner, 1927) and *Pontobelgrandiella pusilla* (Angelov, 1959).

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References


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