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Original Article

A new species of Bythiospeum Bourguignat, 1882 (Hydrobiidae, Gastropoda) from Montenegro

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***Abstract*:**
Pešić, V., Glöer, P.: A new species of Bythiospeum Bourguignat, 1882 (Hydrobiidae, Gastropoda) from Montenegro. Biologica Nyssana, 3 (1), September 2012: 17-20.

A new minute hydrobid species, *Bythiospeum bogici* **sp. nov**. from one small spring near Podgorica, Montenegro is described. The list of subterranean species of the family Hydrobiidae from Montenegro is given.

Key words: *Bythiospeum,* new species, subterranean, Montenegro.

Introduction

The rissooidean family Hydrobiidae Troschel, 1857 is one of the largest gastropod families with more than 400 recent genera assigned. The gastropods of the family Hydrobiidae of Montenegro have been studied by several authors during the 20th and 21th century (e.g., Schütt 1960, Bole 1961, Radoman 1973, 1983, Reischütz & Reischütz 2008, Glöer & Pešić 2010, Falniowski *et al*. 2012a, b). However, our knowledge still remains incomplete. To date, 42 hydrobioid species and subspecies belonging to 15 genera have been recorded in Montenegro. It is notable that 62% of these species and subspecies are endemic for Montenegro. The IUCN Red List of Threatened Species includes 18 hydrobiid species from Montenegro. Five of them are classified as Critically Endangered, six as Endangered, two as Data Deficient and the rest as Least Concern (Cuttelod et al. 2011). Some of hydrobiid gastropods are stygobiote species, i.e. living in underground waters. However, most of these species rarely been sampled in subterranean habitats and only being recorded in springs which flows directly out of the ground (see Table 1). Many of these springs are intermittent, and this may explain the limited recording of hydrobioid species, especially during the summer months when the freshwater springs dry up.

Because acess to, and sampling in hypogean habitats are difficult, subterranean hydrobiid gastropods have been described mainly from very few living animals or from empty shells only, and often collected outside the subterranean networks. Consequently, ecological status (strict vs. occasional subterranean species) for most of these species are still unclear and subject to various opinions.

Recently, first author collected the spring in central Montenegro, empty shells of one hydrobiid gastropod species which did not correspond to any described species. Description of this species is given in this paper.

Table 1. List of subterranean species of the family Hydrobiidae from Montenegro

Taxa	Sampling localities	References	Red List Category & Criteria:
***Bracenica spiridoni* Radoman, 1973**	spring „Spirov izvor“ (Skadar Lake area)	Radoman (1973)	Endangered B1ab(iii)+2ab(iii) ver 3.1
***Saxurinator orthodoxus* Schütt, 1960**	spring of river Zeta near Straganik and Tunjevo	Schütt (1960)	Critically Endangered B1ab(iii)+2ab(iii) ver 3.1
***Paladilhiopsis tarae* Bole & Velkovrh, 1987**	groundwater system underlying the Tara Valley	Bole & Velkovrh (1987)	Data Deficient ver 3.1
***Plagigeyeria montenigrina* Bole, 1961**	spring in Obodska Pećina cave near Rijeka Crnojevića	Bole (1961)	Critically Endangered B1ab(iii)+2ab(iii) ver 3.1
***Plagigeyeria zetaprotogona zetaprotogona* Schütt, 1960**	spring of river Zeta near Tunjevo village	Schütt (1960)	Endangered B2ab(ii,iii) ver 3.1
***P.zetaprotogona pageti* Schütt, 1960**	spring of river Zeta near Tunjevo village	Schütt (1960)	Endangered B2ab(ii,iii) ver 3.1
***P. zetaprotogona zetadidyma* Schütt, 1960**	spring of river Zeta near Tunjevo village	Schütt (1960)	Endangered B2ab(ii,iii) ver 3.1
***P. zetaprotogona vitoja* Reischütz & Reischütz, 2008**	spring Vitoja (Skadar Lake area)	Reischütz & Reischütz, (2008)	Endangered B2ab(ii,iii) ver 3.1
***Vinodolia matjasici* (Bole, 1961)**	small spring in Lipovik village (Skadar Lake area)	Bole (1961)	Critically Endangered B1ab(iii)+2ab(iii) ver 3.1
***Vinodolia gluhodolica* (Radoman, 1973)**	spring at Velje Oko below the Gluhi Do village (Skadar Lake area)	Radoman (1973)	Endangered B1ab(iii)+2ab(iii) ver 3.1

Figure 1. Photo of the *locus typicus* (spring Taban near Spuž, Podgorica). Photo. V. Pešić.

Materials and methods

The empty shells of one minute hydrobiid gastropod from a spring Taban (42º31.653 N, 19º13.145 E, 105 m asl. – Fig. 1) near Spuž, Podgorica, were collected by hand and fixed with 80% ethanol. The spring water and sediment had a smell of hydrogen sulphide. Since population abundance of this species seems to be low in the spring where it was found, only 10 specimens were collected.

Shell morphometric variables (namely shell height and width, aperture height and width) were measured using a stereo microscope (Zeiss). Shells were photographed with a Leica digital camera system. The type material is stored in the Zoological Museum of Hamburg (ZMH).

Results and disscusion

Systematics

Hydrobiidae
Genus *Bythiospeum* Bourguignat, 1882

Bythiospeum bogici sp. nov.
(Fig. 2)

Material examined: 10 ex. from the type locality, 05.06.2012, leg. Pešić & Gligorović.

Holotype: Shell height 2.3 mm, shell width 1.2 mm, ZMH 79649.

Paratypes: 4 ex. ZMH 79650; 5 ex. in coll. Glöer

Type locality: Montenegro, Pogorica, spring Taban, 42º31.653 N, 19º13.145 E, 105 m asl.

Description: The conically cylindrical shell consists of 5.5 convex whorls with a deep suture and a blunt apex. The shell is whitish and translucent. The umbilicus is slit-like. The surface is smooth and silky. The periostome in adults is bent to the outside from the lateral view. The basis of the aperture is pulled forward. Shell height 1.85 – 2.3 mm, width 0.9 – 1.0 mm.

Etymology: Named after PhD student Bogić Gligorović who lead the first author to the spring and helped in the collecting.

Diferential diagnosis: Due to the shape of the periostome which is bent to the outside in the adults, we ascertained the new species to the genus *Bythiospeum*. The new species resembles *Bythiospeum montenegrina* (Schütt, 1959) (= *Paladilhiopsis montenegrina* Schütt, 1959) a species described from Čeplica spring near Bileća, Bosnia and Hercegovina (Schütt, 1959). From the latter species *Bythiospeum bogici* **sp. nov**. can easily be distinguished by the lower number of whorls and the aperture which is not oblique.

Remark: This taxon is a typical stygobiont. Its very likely that *Bythiospeum* represents a complex of closely related genera, probably with a limited distributions (e.g. *Balkanospeum* Georgiev, 2012 from Bulgaria - see Georgiev 2012). Further researches are certainly needed to collect living specimens for providing a proper anatomical description.

Distribution: Known only from the type locality.

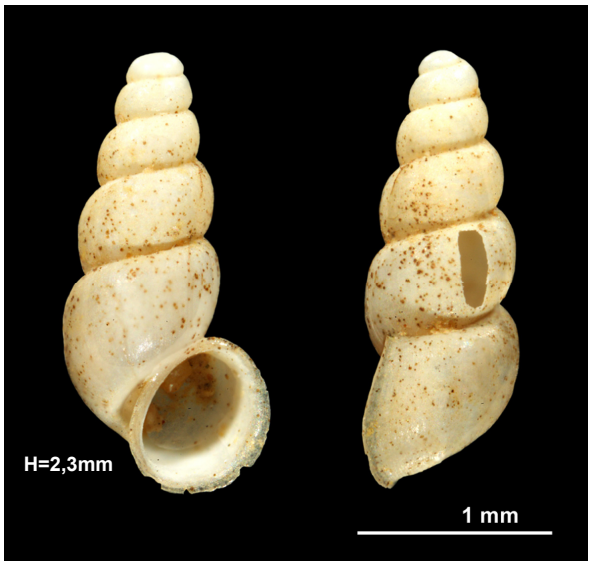

Figure 2. *Bythiospeum bogici* sp. nov.: shell (holotype).

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