

Redescription of *Bithynia cettinensis* Clessin, 1887 (Gastropoda: Bithyniidae)

PETER GLÖER¹ & LUBOŠ BERAN²

¹ Schulstraße 3, D-25491 Hetlingen, Germany
gloeer@malaco.de

² Kokořínsko Protected Landscape Area Administration, Česká 149,
CZ-27601 Mělník, Czech Republic
lubos.beran@schkoc.cz

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> Abstract

Syntypes of *Bithynia cettinensis* Clessin, 1887 are compared with a recently collected *Bithynia* sp., which could be identified as *B. cettinensis*. So, for the first time, we can provide the anatomy of the species under discussion.

> Kurzfassung

Wiederbeschreibung von *Bithynia cettinensis* Clessin, 1887 (Gastropoda: Bithyniidae). – Die Syntypen von *Bithynia cettinensis* Clessin, 1887 wurden verglichen mit einer kürzlich gesammelten *Bithynia* sp., die als *B. cettinensis* identifiziert werden konnte. Dadurch können wir erstmals die Anatomie dieser Art darstellen.

> Key words

Bithynia cettinensis, *Bithynia tentaculata*, redescription, anatomy, syntypes.

Introduction

Bithynia cettinensis Clessin, 1887 is a poorly known species. After its original description it has, to our knowledge, never been mentioned in the literature. Only GLÖER & PEŠIĆ (2007) compared the *Bithynia* spp. from Lake Skadar with the syntypes of *B. cettinensis*. From neighbouring regions *Bithynia mostarenensis* Möllendorf, 1873, a species of which the taxonomic state is unknown, has been reported. Further, because the type locality of *B. majewskyi* was possibly misinterpreted by SCHÜTT (1988, see GLÖER & PEŠIĆ 2007), and have been in the region of Benkovac (Dalmatian coast), this species could occur in the neighbourhood of *B. cettinensis*, too. Already CLESSIN (1885: 62) compared *B. cettinensis* in his original description (Fig. 2) with *B. majewskyi*.

Material and methods

The snails were collected by hand from the river Cetina in Omiš town (Dalmatian coast). The samples were put into 75% ethanol. The dissections and measure-

ments of the genital organs and shells were carried out using a stereo microscope (ZEISS); the photographs were made with a digital camera system (Leica R8).

To clarify the taxonomic status of the *Bithynia cettinensis* we borrowed the syntypes from the Museum Senckenberg, Frankfurt (SMF).

Study area

Results

The recently collected *Bithynia* sp. from Omiš, the type locality of *B. cettinensis*, is conchologically identical with *B. cettinensis*. Investigations of the anatomy and morphology revealed that *B. cettinensis* is distinct from *B. tentaculata* and as well as from *B. mostarenensis*.



Fig. 1. Map of the study area with the sampling site Omiš (=Almissa) at the River Cetina, the type locality of *Bithynia cettinensis*.

Fig. 2. Faksimile of the original description of *B. cettinensis* from Clessin 1887.

Gen. XXI. *Bythynia* Gray.

73. *Byth. cettinensis* m. n. sp. *B. tentaculata* v. minor Brus. Enum. p. 108.

Gehäuse kegelig, geritzt, dünnschalig, glänzend, fein gestreift von heller brauner Farbe. Umgänge 6, gewölbt, durch tiefe Naht getrennt, langsam und regelmässig zunehmend, der letzte nimmt etwa $\frac{2}{5}$ der Gehäuselänge ein; Wirbel stumpf; Mündung ciförmig, oben ziemlich spitz ausgezogen; Mundsaum zusammenhängend, verstärkt; Deckel kalkig. Nucleus in der Mitte gelegen und etwas eingesenkt.

Länge 9 mm, Durchm. 6 mm.

Unter Steinen in der Cettina bei Almissa.

Die Art unterscheidet sich von *B. tentaculata* durch mehr gewölbte Umgänge, gedrungene Gestalt und etwas weiteren Nabelritz. — Die ihr nahestehende *B. Mostariensis* Müll. hat kürzeres Gewinde und rascher zunehmende Umgänge, so dass der letzte fast die Hälfte der Gehäuselänge erreicht. — *Byth. Majewskii* Frauf. ist kleiner. Da sie aber nur 4 Umgänge zählt, scheint sie auf unvollendete Gehäuse gegründet zu sein.

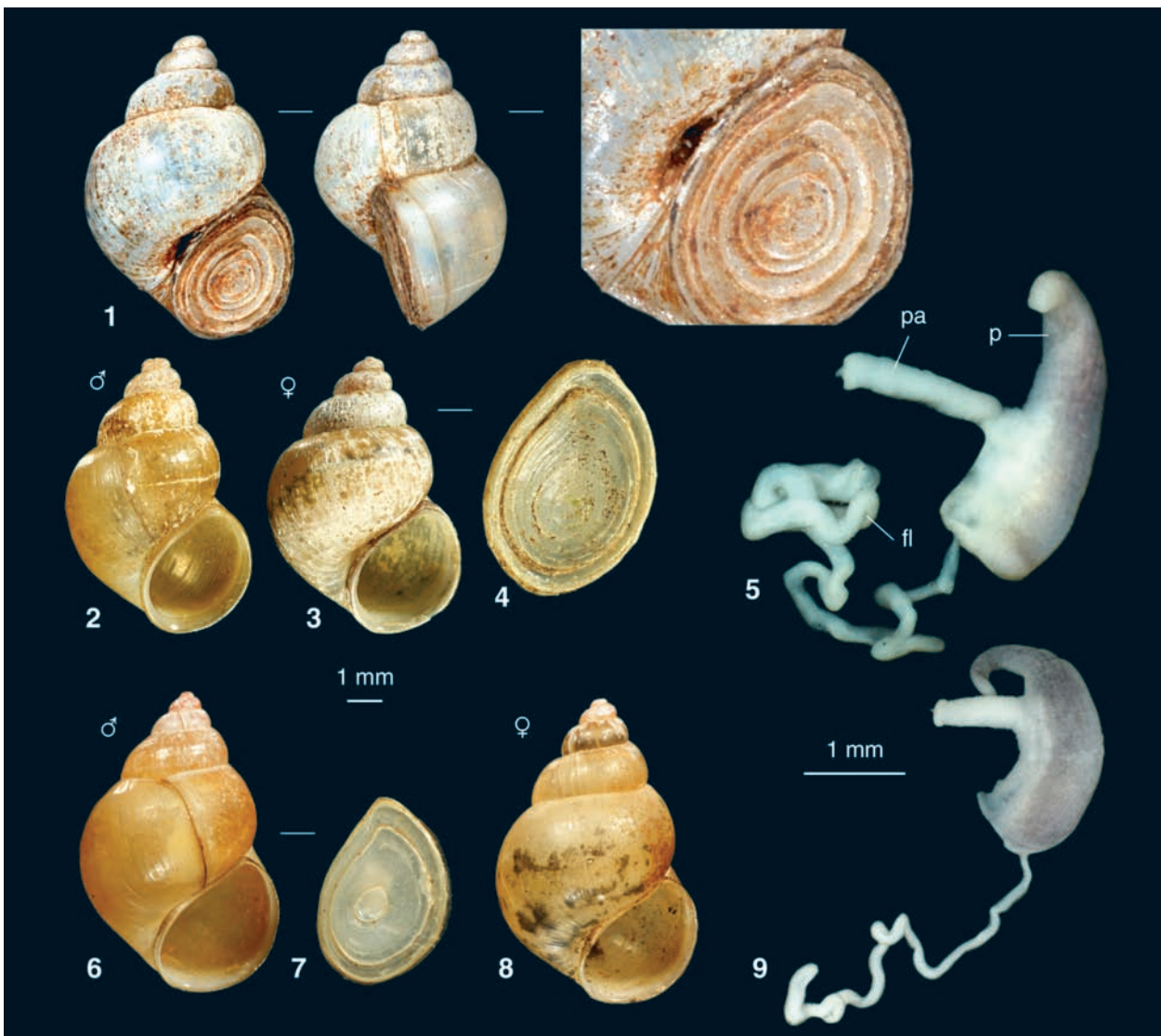


Fig. 3. Shells and penes of *Bithynia cettinensis* and *B. tentaculata*. 1: *B. cettinensis* (syntype SMF 4070a), 2–5: *B. cettinensis* (topotypes), 6–9: *B. tentaculata* from Sweden (Öland); – fl = flagellum, p = penis, pa = penial appendix.

Genus: *Bithynia* Leach, 1818

Type species: *Helix tentaculata* Linnaeus, 1758

***Bithynia cettinensis* Clessin, 1885**

Type locality: „Unter Steinen in der Cettina bei Alm-issa.”

Description: Shell conical, glossy, finely striated, light brown to yellowish horn-coloured. 5.5–6 regularly growing whorls with a clear suture, which is bordered with a white rim. The body whorl is prominent and takes 2/5 of the shell height. The apex is blunt, the aperture is ovate, on the upper side attenuated with a rounded top. The umbilicus is slit-like to closed. There is a slight sexual dimorphism visible because the body-whorl of the females is a little broader than that of the males. Shell height 9.0–9.5 mm.

Anatomy: The oviductual loop is coiled once. The distal part of the penis is as long as the penial appendix, and a little shorter than the proximal part of the penis. The flagellum of *B. cettinensis* is long.

Discussion

Bithynia cettinensis can be distinguished from *B. tentaculata* by the more swollen whorls, the stout shape of the shell and the rounded, not angled, operculum.

The closely related *B. mostarensis* has a shorter spire with more rapidly increased whorls, so that the last whorl reaches the half of the shell's height. *B. majewskyi* is smaller but has been described as a species that consists of 4 whorls. Thus it is possible that the specimen described was a juvenile.

In addition the oviductual loop of *Bithynia tentaculata* is coiled twice (see also BOETERS 1998: Fig. C. 4) and not once as in *B. cettinensis*. The flagellum of *B. cettinensis* is longer than that of *B. tentaculata*. The anatomies of *B. mostarensis* and *B. majewskyi* are unknown so far.

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