MALAKOLOGISCHE ABHANDLUNGEN
Staatliches Museum für Tierkunde Dresden

Band 19 | Ausgegeben: 15. Juli 1998 | Nr. 6

Lymnaea (Stagnicola) occulta (JACKIEWICZ, 1959) in the Selenga River delta at the Baikal Lake (Siberia) (Gastropoda: Basommatophora: Lymnaeidae)

With 3 Figures

MARIA JACKIEWICZ

Abstract. The author describes the shell morphology and the anatomical structure of the reproductive organs of *Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959) collected in the delta of the Selenga River at the Baikal Lake. All known up to now localities of this species, identified on the basis of the anatomical structure, are presented in a map.

Kurzfassung. ***Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959) im Flußdelta der Selenga am Baikalsee (Sibirien) (Gastropoda: Basommatophora: Lymnaeidae).** - Die Autorin beschreibt die Morphologie der Schale und den anatomischen Bau der reproduktiven Organe von *Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959), gesammelt im Flußdelta der Selenga am Baikalsee. Alle bisher bekannten Fundorte dieser Art, basierend auf der Bestimmung nach ihrem anatomischen Bau, sind auf einer Karte dargestellt.

Introduction

Some specimens of *Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959) have been found in the malacological collection picked by Professor BOGUCKI in Siberia. The distribution of this species is still poorly known because it can be confused with other species. The analysis of the anatomical structure is the only sure method for the specific identification of this lymnaeid.

The sure localities of *Lymnaea (Stagnicola) occulta* (with specimens identified on the structure of reproductive organs) are known from Poland (BERGER, 1961; CZAPSKI, 1965, 1973; JACKIEWICZ, 1959; KORALEWSKA, 1979; KORALEWSKA-BATURA, 1992; KOSIŃSKA, 1979; PIECHOCKI, 1979), Czech Republic (HUDEC & BRABENEC, 1966), former Yugoslavia (JACKIEWICZ, 1997), Ukraine (STADNIČENKO, 1968) and Jeniseysk in Siberia (JACKIEWICZ, 1992). This species lives also in Sweden where it was found only on the basis of the structure of shells in the collection of the Natural Museum at Göteborg (JACKIEWICZ & PROSCHWITZ, 1991). The presented new locality makes the distribution of the species wider.

Material and methods

Professor BOGUCKI collected 23 specimens of *Lymnaea (Lymnaea) stagnalis* (L.), 12 specimens of *Lymnaea (Radix) peregra* (O. F. MÜLL.) and 20 specimens of *Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959) at east banks of the Baikal Lake in the delta of the Selenga River. All specimens of the last mentioned species were young. Shell height was 9 - 16 mm.

Address of the author:
Prof. dr hab. M. Jackiewicz, Department of Animal Taxonomy and Ecology, Institute of Environmental Biology, A. Mickiewicz University, Szamarzewskiego 91A, 60-569 Poznan (Poland)

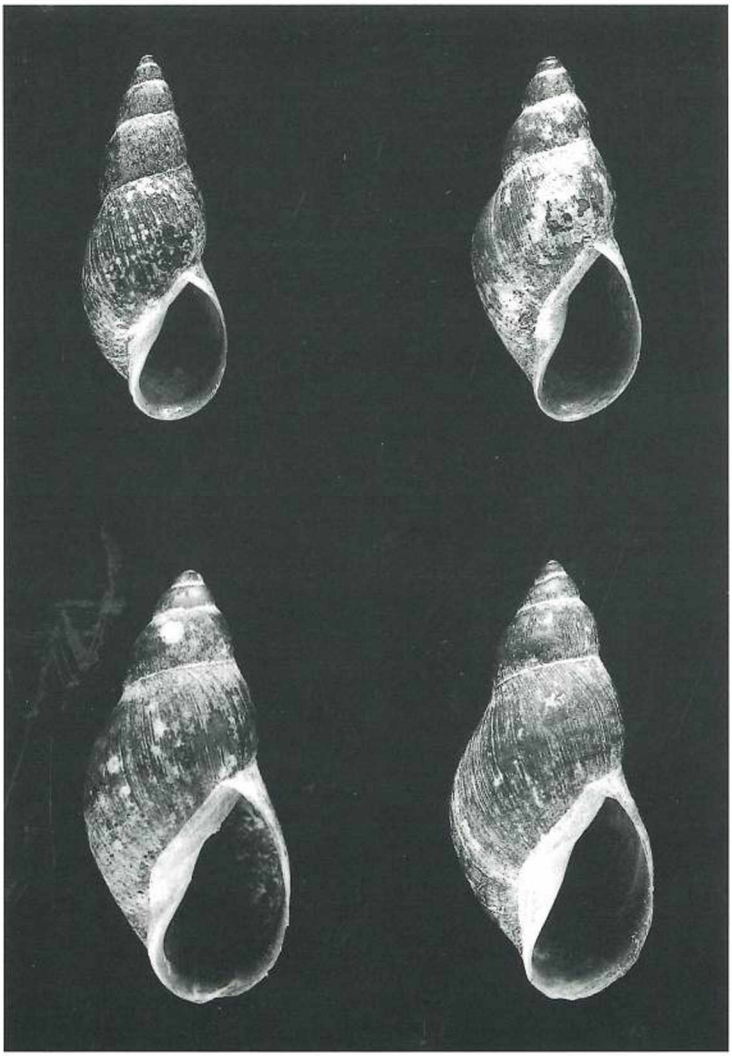

Fig. 1: Shells of *Lymnaea (Stagnicola) occulta*. Ca. 4× (Original).

The lymnaeids were preserved in 75% ethanol. The drawings of its reproductive organs were made under the binocular. The shells structure was presented in photographs.

Results and discussion

Shell (Fig. 1) cylindrically turriform, pale horny brown in colour. 5-6 strongly convex whorls, so its suture is quite a deep. The relatively slender spire grows slowly and the last whorl is the widest. The aperture is much lower than the half of the shell height, rarely equal to it. The columellar fold is wide and chalky white, very characteristic of this species.

Praeputium narrow and cylindrical. The penis sheath is much narrower and also cylindrical. The ratio of the praeputium length to the penis sheath length is 1:1 (Fig. 2B). The pro-

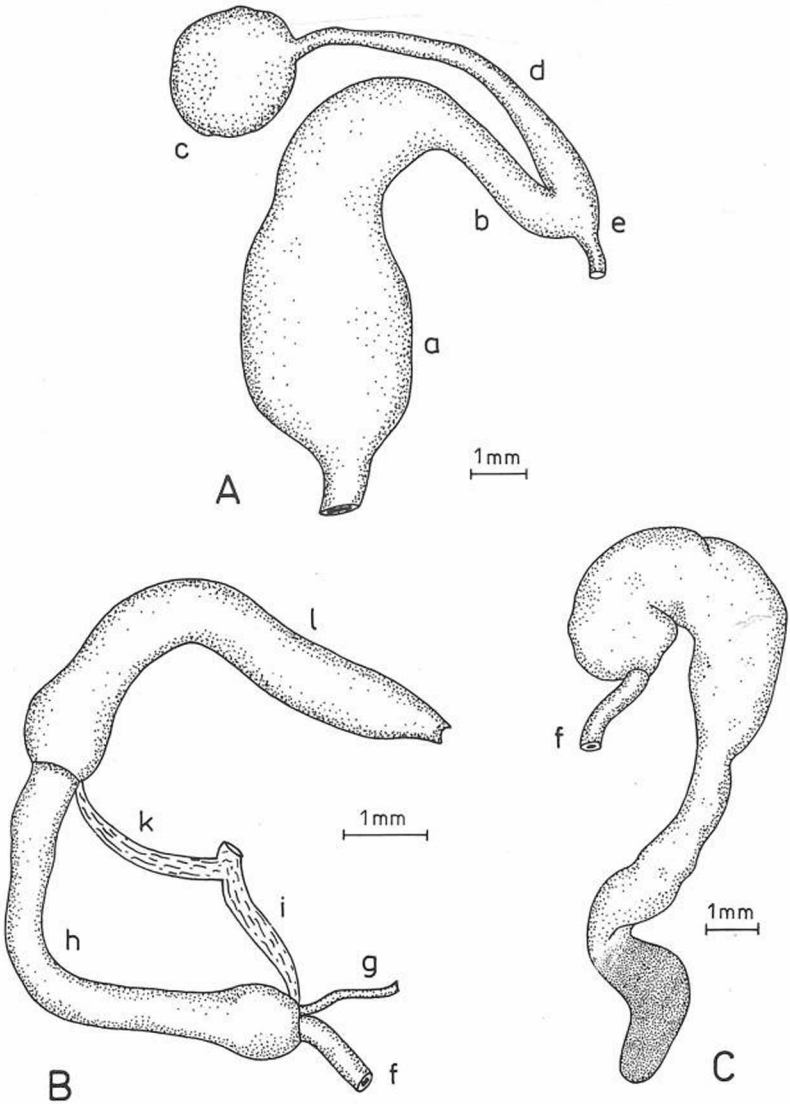

Fig. 2: Characteristic features of the reproductive organs of *Lymnaea (Stagnicola) occulta* - A: terminal part of the female reproductive organs; B: praeputium and penis sheath; C: prostate. Explanation: a - pyriform body, b - oviduct, c - spermatheca, d - duct of the spermatheca, e - vagina, f - vas deferens, g - nerve of the penis, h - penis sheath, i - retractor of the penis sheath, k - retractor of the praeputium, l - praeputium (Original).

ximal prostate part is slightly widened. There is a dark ligulate enlargement at their basis, which is very characteristic of this species. The distal prostate part is large, wide, and more or less plicate (Fig. 2C). The pyriform body in its proximal part is large and roundish, farther it is narrowed and turns into quite a long oviduct. The spermatheca is big and spherical. Its long duct is greatly widened into a funnel shape at the opening into the vagina (Fig. 2A).

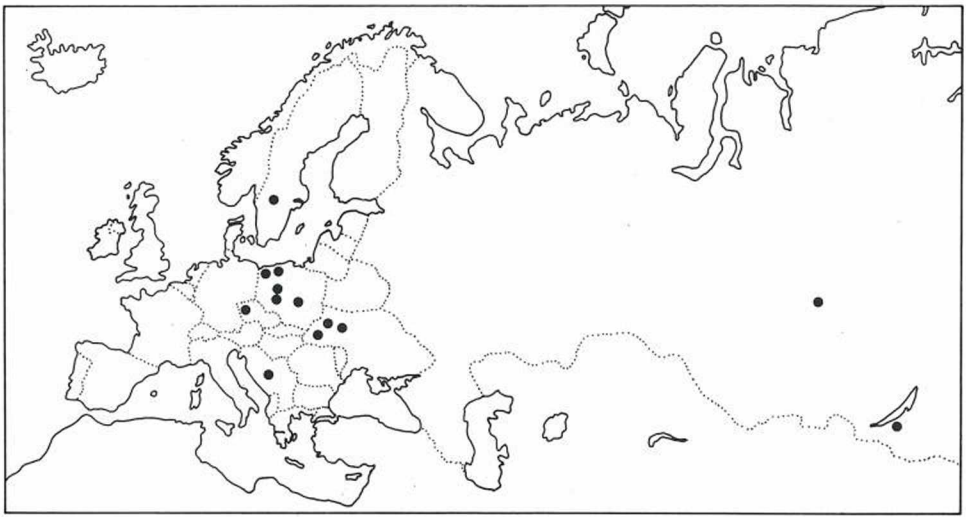

Fig. 3: Hitherto known localities of *Lymnaea (Stagnicola) occulta*.

The pyriform body is worthy of special notice. It is of very similar structure in specimens collected at Jeniseysk (JACKIEWICZ, 1992) and in the Selenga river delta. However, it slightly differs in its shape from the pyriform body of the specimens from Poland and Yugoslavia. They have the pyriform body which is almost of the same width in its all length and turns sharply into relatively short oviduct (JACKIEWICZ, 1959, 1997).

It may be assumed that the range of *Lymnaea* (*Stagnicola*) *occulta* (JACKIEWICZ, 1959) distribution is very large. It is proved by its localities in Sweden, through Yugoslavia, Czech Republic, Poland and Ukraine up to central part of Russia (Fig. 3).

Acknowledgement

I am very grateful to Professor dr hab. Z. BOGUCKI for the malacological collection given me for studies.

References

BERGER, L. (1961): Mięczaki pogranicza Wielkopolski, Śląska i Jury Krakowsko-Wieluńskiej. - Pr. Kom. mat. przyr. Pozn. TPN. Poznań **25** (1): 1-124.

CZAPSKI, Z. (1965): Z badań nad biologią *Galba occulta* JACK., 1959 - nowego żywiciela pośredniego *Fasciola hepatica* L. - Wiad. Parazyt. Warszawa **11**, suppl. 1-2: 273-277.

CZAPSKI, Z. (1973): Nowe stanowiska *Galba occulta* JACK. na zachodnich obszarach Polski. - Mat. 11 Zjazdu PTP, p. 16.

HUDEC, V. & J. BRABENEC (1966): Neue Erkenntnisse über die Schnecken der Gesamtart *Galba palustris* (MÜLL. 1774) aus der Tschechoslowakei. - Folia Parasit. Praha **13** (2): 132-143.

JACKIEWICZ, M. (1959): Badania nad zmiennością i stanowiskiem systematycznym *Galba palustris* O.F. MÜLL. - Pr. Kom. mat. przyr. Pozn. TPN, Poznań **19** (3): 86 pp.

JACKIEWICZ, M. (1992): *Lymnaea (Stagnicola) occulta* (JACKIEWICZ, 1959) (Gastropoda: Pulmonata) in Sibirien. - Mitt. dtsch. malakozool. Ges., Frankfurt a.M. **49**: 13-16.

JACKIEWICZ, M. (1997): New European locality of *Lymnaea* (*Stagnicola*) *occulta* (JACKIEWICZ, 1959) (Gastropoda: Basommatophora: Lymnaeidae). - Malak. Abh. Mus. Tierkd. Dresden **18** (23): 255-259.

JACKIEWICZ, M. & T. VON PROSCHWITZ (1991): *Lymnaea (Stagnicola) occulta* (JACK.), *Lymnaea (Lymnaea) vulnerata* KÜST. und *Lymnaea (Lymnaea) corvus* (GMEL.) - drei für Schweden neue Schlammschneckenarten (Gastropoda, Basommatophora: Lymnaeidae). - Malak. Abh. Mus. Tierkd. Dresden **15** (14): 125-132.

KORALEWSKA, E. (1979): Ślimaki (Gastropoda) Ziemi Wrzesińskiej. - Bad. fizjogr. Pol. Zach. Poznań **32**: 105-113.

KORALEWSKA-BATURA, E. (1992): Mięczaki (Mollusca) Wielkopolski. - Wyd. nauk. UAM, Ser. Zool., Poznań **18**: 41 pp.

KOSIŃSKA, M. (1979): Mięczaki Wrocławia. - Acta Univ. Wratislaviensis, 437, Prac. zool. Wrocław **9**: 13-40.

PIECHOCKI, A. (1979): *Lymnaea (Galba) occulta* (JACK.) (Gastropoda, Basommatophora) w Górach Świętokrzyskich. - Prz. zool. Wrocław **23** (3): 246-248.

STADNIČENKO, A.P. (1968): *Galba occulta* JACKIEWICZ, 1959 (Gastropoda, Pulmonata) novyj vid fauny SSSR. - Zool. Zhurn. Moskva **47** (6): 942-944.

(Received on January 5, 1998)

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Malakologische Abhandlungen

Jahr/Year: 1998-1999

Band/Volume: 19

Autor(en)/Author(s): Jackiewicz Maria

Artikel/Article: Lymnaea (Stagnicola) occulta (Jackiewicz, 1959) in the Selenga River delta at the Baikal Lake (Siberia) (Gastropoda: Basommatophora: Lymnaeidae) 53-57