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Contribution to the knowledge of snails (Gastropoda) of limestone caves near Moldova Noua (SW Romania, Banat).

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Summary

14 limestone caves near Moldova Noua (SW Romania, Banat) were searched for snails. 12 species were found by the author. Only 4 species of these occur in the internal parts of the caves, while 8 species inhabit the cave entrances. 3 species were known from literature. The most common species was *Oxychilus glaber* (ROSSMÄSSLER 1836).

Introduction

Many papers were published on snails of the caves of Europe, see e.g. the list of references in RIEDEL (1996). Several malacologists studied the snails of Romanian caves, predominantly A. NEGREA; she published data from the surroundings of Moldova Noua too (NEGREA 1962, 1963, 1964, 1965). The author multiplied the data by own research and the results represented in this short paper. The snail were collected by hand picking only.

List of localities

In parentheses the dates of author's collections of snails in individual caves; negative controls are not included into this list.

- 1. Pestera Gaura cu Musca (Aug. 14, 1999, Aug. 16, 1999, Aug. 20, 1999, Aug. 20, 2000, Aug. 26 2000)
- 2. Pestera near Nr. 1 (Aug. 18, 1996, Apr. 13, 2001)
- 3. Pestera Gaura Haiduceasca (Aug. 20, 1996, Aug. 19, 1999, Aug. 24, 2000, Apr. 12, 2001)
- 4. Pestera Filipovo díra
- 5. Pestera de la Padina Matei
- 6. Pestera de la Izvorul Minzului
- 7. Pestera din Valea Čeuca
- 8. Pestera Kulhavá skála (Aug. 15, 1999, Aug. 20, 2000, Apr. 13, 2001)
- 9. Pestera Iasinoca (Aug. 15, 1999, Apr. 13, 2001)
- 10. Pestera Sirovica (Aug. 23, 2000)
- 11. Pestera U Lomu (Aug. 23, 1996, Aug. 15, 1999, Aug. 19, 2000, Apr. 15, 2001)
- 12. Pestera Topolica (Aug. 18, 1999, Aug. 21, 2000, Aug. 25, 2000)
- 13. Pestera Potoc (Aug. 15, 1999, Aug. 19, 2000, Apr. 14 2001)
- 14. Pestera Velebný žlábek (Aug. 15, 1999, Aug. 23, 2000)

List of species

Pomatias rivulare (EICHWALD 1829): Own data: 14.

Very common species in the study area on available biotopes. Only one record in the cave entrance.

Granaria frumentum (DRAPARNAUD 1801): Own data: 14.

Common species in open rocky stands. Only one record of two empty shells in the cave entrance.

Bulgarica vetusta (ROSSMÄSSLER 1836): Own data: 11, 14.

Relatively common species in forest habitats. Only two records in the cave entrances.

Cochlodina laminata (MONTAGU 1803): Literature data: NEGREA (1962): 3. NEGREA (1964): 6. Own data: 3.

Common species of forest habitats in the study area. Only one record of one empty shell in the cave entrance.

Laciniaria plicata (DRAPARNAUD 1801): Own data: 3.

Relatively rare species in the study area. Only one record of two empty shells in the cave entrance.

Oxychilus montivagus (KIMAKOWICZ 1890): Literature data: GROSSU (1983): 3. Own data: 3.

This troglophilic species (sensu RIEDEL 1996) is endemic for SW-Romania (RIEDEL 1996, GROSSU 1983). The author's records were published in DVOŘÁK & HORSÁK (2002). A very rare species only found in one cave.

<u>Oxychilus glaber</u> (ROSSMÄSSLER 1836): Literature data: NEGREA (1962): 3, 4. NEGREA (1963): 3, 5. NEGREA (1964): 1, 4, 7, 9, 11, 12. NEGREA (1966): 1. Own data: 1, 2, 3, 8, 9, 11, 12, 13, 14.

This wide distributed, troglophilic species (sensu RIEDEL 1996) is very common in caves of SE Europe. Some data of the author were published in DVOŘÁK (2000). A very common species in the whole study area. Together with the published data, this species is documented from 12 of all 14 studied caves. It lives on the ground predominantly, but finding of some specimens on the wall up to 1.8 m high is also possible. The species prefers ground with stony debris; it is relatively rarer in the caves with muddy ground. Very strong populations are known in some caves: up to 29 specimens on locality Nr. 2. This species lives very deep in some caves, on the locality Nr. 1 about 60 metres from the entrance.

Limax cinereoniger WOLF 1803: Literature data: NEGREA (1964): 11. Own data: 3 (6 ex), 11 (7 ex), 12, 14.

A common species in the study area, it occurs in woodland especially under the bark of fallen trunks. This is one of several species inhabiting the internal parts of caves.

Xerolenta obvia (MENKE 1828): Own data: 10.

One of the most common species, occurs in open habitats in the study area. Only one record of one empty shell in the cave entrance.

Monachoides incarnatus (O.F. MÜLLER 1774): Own data: 11.

Not a common species, occurrs in damper habitats. Only one record of one empty shell in the cave entrance.

Cepaea vindobonensis (A. FÉRUSSAC 1821): Own data: 11.

Common species in shrubby habitats and light forests in the study area. Only one record of one empty shell in the cave entrance.

Campylaea planospira planospira (LAMARCK 1822): Own data: 2, 14.

Common species in forests on rocky substrates in the study area. One record of one empty shell in the entrance of cave Nr. 14 and a strong population (up 25 specimen) in the cave Nr. 2.

From the study area, three other species are reported only by literature: *Orcula jetschini* M. VON KIMAKOWICZ 1883 from cave Nr. 3 (NEGREA 1962, 1966), *Causilia dubia* DRAPARNAUD 1805 from the same cave (NEGREA 1962), and *Vitrea subcarinata* (CLESSIN 1877) from the cave Nr. 4 (NEGREA 1964). The latter mentioned species occurs in the western part of the South Carpathians only; it is a ground digging species and occurs in caves too (RIEDEL 1996).

Discussion and conclusions

Together with literature data, 15 snail species are recorded from 14 limestone caves in the study area. The author found 12 species, only 4 species of these occur in the internal parts of the caves, while 8 species inhabit the cave entrances only. Species of the inner parts were: *C. p. planospira* (2 caves, in one of them very common), *L. cinereoniger* (4 localities), *O. montivagus* (cave Nr. 3 only), and *O. glaber* (12 localities, own and literature data). These results indicate *O. glaber* is the most common species.



Abb.: Lage der Fundorte

Only one species was found in 8 of 14 surveyed caves; in 6 cases *O. glaber* was this species. This indicates *O. glaber* is the most typical species of caves in the study area. More than two species were recorded in three caves: caves Nr. 11 (5 species), 14 (6 species) and 3 (7 species).

The most interesting species, only documented in cave Nr. 3, is *O. montivagus*. This very rare species is typical troglophilic and an endemic species of southwest Romania (cf. GROSSU 1983, RIEDEL 1996, DVOŘÁK & HORSÁK 2002). *L. cinereoniger* is typical for the cave fauna too; it is one of the most common species in the underground shelters (e.g. SW-Bohemia: DVOŘÁK 1999). It has a wide amplitude of colour morphs in the studied caves. The most typical species of caves in the study area is *O. glaber*. By literature and own data, this troglophilic species (RIEDEL 1996) is documented in 12 of 14 surveyed caves. NEGREA (1966) summarised all data on cave molluscs of Romania: *O. glaber* is thrice as common as other common species concerning the number of localities. The same author (NEGREA 1966) reports up to 14 specimens from one cave; during the current research even 29 specimens were found in cave Nr. 2.

Table: List of snail species in individual caves. Numbers of caves correspond with numbers in in the list of caves (Explanations: "T" – number of localities for each species; "L" – literature data; "O" – own data).

species / Nr. of cave	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Т
Pomatias rivulare														0	1
Granaria frumentum														Ο	1
Orcula jetschini			L												1
Bulgarica vetusta											0			0	2
Cochlodina laminata			.OL			L									2
Laciniaria plicata			Ο												1
Causilia dubia			L												1
Vitrea subcarinata				L											1
Oxychilus montivagus			OL												1
Oxychilus glaber	LO	0	LO	L	L		L	0	LO		LO	LO	0	Ο	12
Limax cinereoniger			0								LO	0		0	4
Xerolenta obvia										0					1
Monachoides incarnatus											0				1
Cepaea vindobonensis											Ο				1
Campylaea p. planospira		0												0	2
total number of species	1	2	7	2	1	1	1	1	1	1	5	2	1	6	15

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