

Contribution to the knowledge of molluscs (Mollusca) of the Nature Reserve Ivachnovský luh

Marek Sekerčák

*HBH Projekt Spol. s. r. o., Partizánska cesta 97,
97401 Banská Bystrica, e-mail: m.sekercak@hbhprojekt.sk*

Abstract: The Nature Reserve Ivachnovský luh (5th level of protection) is situated in the Liptovská basin near the same-name village Ivachnová, on the east side of the Ružomberok town (GPS coordinates of the center of the site are 49° 05' 36" N, 19° 23' 09" E). It is one of the northernmost situated floodplain forests in Slovakia and therefore it deserves the very strict protection. Results of introductory research of molluscs of this site is available in this article. The main factors which exert influence on malakocoenoses are the vegetation, altitude, exposition and intensity of human activities. Finally, one of the most important factors is the flow of the river Váh having influence upon the whole biota of the floodplain community.

Key words: Gastropoda, Bivalvia, Mollusca, Ivachnová, Ivachnovský luh, Liptov

Introduction and methods

Monitoring of the mollusc communities in the Nature Reserve (later only “NR”) Ivachnovský luh has been carried out during years 2013 and 2014 in the studied site (fig. 1) and its close surroundings.



Fig. 1. Wetland habitat of the NR Ivachnovský luh (photo M. Sekerčák)

The main method used for monitoring of molluscs was regular kitchen sieve (strainer with a diameter of 20 cm, size of holes was 0.8 x 0.8 mm), which was used for washing the vegetation or / and sediment. This method was supplemented by visual examination of various subjects in the water or on bank terrestrial habitats (fig. 2, 3). I would like to thank my colleague Ing. Tomáš Čejka, PhD who reviewed this article.



Fig. 2. Bank meadow habitats and Fig. 3. Forest pool in the studied site (photo M. Sekerčák)

The site is a mixture of riparian vegetation and banks which are either original or are partially affected by man. In the southern part, there are elements of lowland forest as well as the margin of agriculturally managed fields. The diversity of biotopes is therefore quite high, which is reflected in the species composition of molluscs.

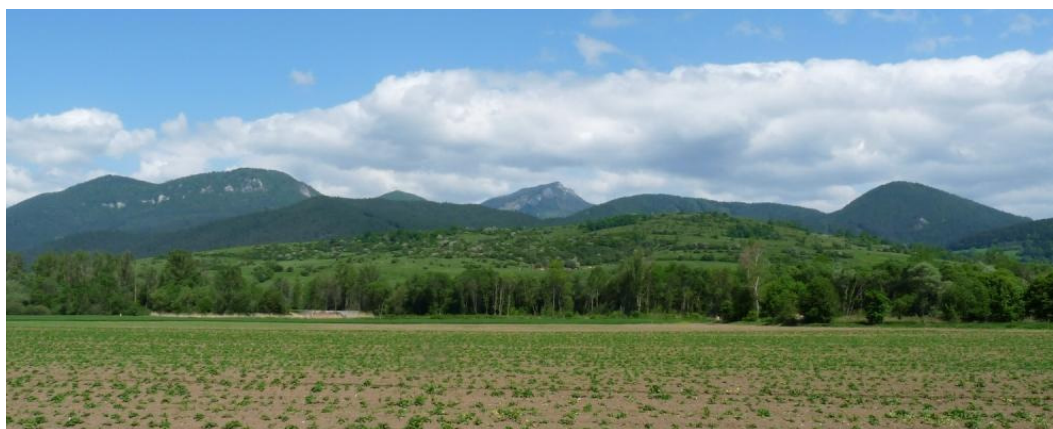


Fig. 4. Distant view of the studied site (photo M. Sekerčák)

In 2013, 21 species of molluscs were observed in the site, one of the most valuable is *Vertigo antvertigo* (in Slovak pimprlík mokrad'ový), subject of protection SKUEV0253 Váh). In 2014, number of observed species was decreased for 2 species, the presence of *Vertigo antvertigo* has not been confirmed.

The diversity of species as observed during the monitoring in 2013 and 2014 confirms that conditions for mollusc communities are favourable within the NR Ivachnovský

luh as well as in its surroundings and fragment of the original alluvial forest still retains high biodiversity and not only with reference to the molluscs.

From the confirmed species, which were observed in both years of monitoring (2013, 2014) we present the following ones (fig. 5 – 17):



Fig. 5, 6. *Aplexa hypnorum* inhabits shallow periodic wetlands (photo T. Kizek)



Fig. 7, 8. *Ena montana* inhabits humid deciduous forests (photo T. Kizek)

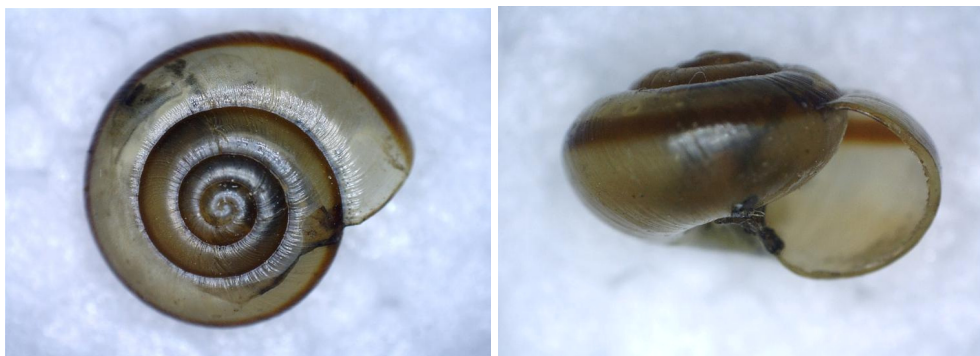


Fig. 9, 10. *Faustina faustina* endemic in the Western Carpathians, inhabits humid parts of mountain forests (photo T. Kizek)



Fig. 10, 11. *Stagnicola palustris* inhabits stagnant water and river arms (photo T. Kizek)

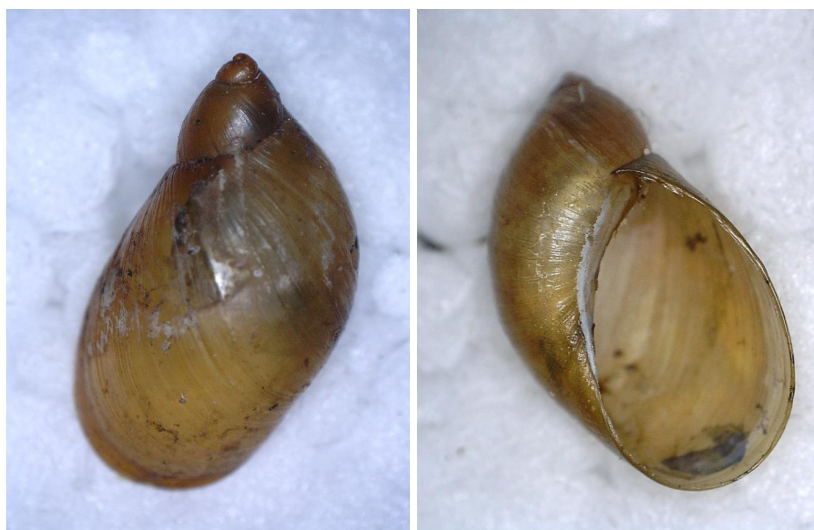


Fig. 12, 13. *Succinea putris* inhabits humid river bank vegetation (photo T. Kizek)

Tab. 1. Preview of observed species confirmed in years 2013 and 2014

Scientific name Class / Family / Species	Slovak name
Gastropoda	
Bradybaenidae	
<i>Fruticicola fruticum</i> (O. F. Müller, 1774)	bacuľka hájová
Clausiliidae	
<i>Alinda biplicata</i> (Montagu, 1803)	alinda preplietavá
<i>Clausilia dubia</i> Draparnaud, 1805	ciha premenlivá
Enidae	
<i>Ena montana</i> (Draparnaud, 1801)	ena horská
Helicidae	
<i>Faustina faustina</i> (Rossmassler, 1835)	skalnatka malá
Helicidae	
<i>Helix pomatia</i> Linnaeus, 1758	slimák záhradný
Hygromiidae	
<i>Trochulus villosulus</i> (Rossmassler, 1838)	srstnatka huňatá
<i>Urticicola umbrosus</i> (C. Pfeiffer, 1828)	žihľavovka pupkatá
Lymnaeidae	
<i>Radix labiata</i> (Rossmassler, 1835)	vodniak premenlivý
<i>Radix ovata</i> (Draparnaud, 1805)	vodniak oválny
<i>Stagnicola palustris</i> (O. F. Müller, 1774)	vodniak močiarny
Physidae	
<i>Aplexa hypnorum</i> (Linnaeus, 1758)	fyza močiarna
Planorbidae	
<i>Anisus spirorbis</i> (Linnaeus, 1758)	kotúľka svetácka
Pupillidae	
<i>Pupilla muscorum</i> (Linnaeus, 1758)	pikulík lúčny
Succineidae	
<i>Oxyloma elegans</i> (Risso, 1826)	jantárovka úhladná
<i>Succinea putris</i> (Linnaeus, 1758)	jantárovka veľká
Valvatidae	
<i>Valvata cristata</i> O. F. Müller, 1774	valvata ploská
Vertiginidae	
<i>Vertigo antivertigo</i> (Draparnaud, 1801)	pimprlík mnohozubý
Bivalvia	
Sphaeriidae	
<i>Pisidium casertanum</i> (Poli, 1791)	hrachovka potočná

Monitoring of the site will be repeated in 2019 when the impact of natural climate phenomenon, and the flow of the Váh river (influenced by the régime of Liptovská Mara dam), and impacts of agricultural activity and traffic (D1 highway construction) in the rather close neighborhood of this site will be observed. At the present time, we can not estimate that any of the factors mentioned above, more or less driven by human control, would significantly influence the structure and functioning of this ecosystem. Never-

theless, it will be interesting to follow changes of malacocoenosis in such outstanding, rich and at the same time fragile ecosystem of beautiful Liptov.



Fig. 12, 13. *Valvata cristata* inhabits shallow stagnant wetlands (photo T. Kizek)



Fig. 14. *Alinda biplicata* inhabits forest and scrubby habitats (photo M. Sekerčák)

References

1. Čejka T., Dvořák L. & Horsák M., 2006: Malakologické novinky na Slovensku v poslednom štvrtstoročí. New records of mollusc species for Slovakia during the last 25 years. Malakologický bulletin, 14 August 2006, p. 1-6. «<http://mal-bull.blogspot.com>»
2. Haršáni L., Zuskin J. & Šteffek J., 1995: Hodnotenie lokality Ivachnovský luh a návrh opatrení jej manažmentu, p. 114-117. In: Liška M. (ed.), Biodiverzita a ochrana prírody v oblastiach využívaných bývalou sovietskou armádou v Slovenskej republike. Nadácia IUCN, 127 pp.
3. Horsák M., Juříčková L. & Picka J., 2014: Měkkýši České a Slovenské republiky / Molluscs of the Czech and Slovak Republics. Nakladatelství Kabourek, Zlín, 270 pp., 68 tab.
4. Lisický M., 1991: Mollusca Slovenska. Veda, Bratislava, 344 pp.
5. Lisický M. & Šteffek J., 1994: Ekosoologické hodnotenie mäkkýšov Slovenska. (Ecosoological evaluation of molluscs in Slovakia). In: Ochrana biodiverzity na Slovensku, Záhorská Bystrica, 6. – 8. 4. 1993, Bratislava, p. 103-109.
6. Ložek V., 1956: Klíč Československých měkkýšů. Vydavatel'stvo SAV, Bratislava, 438 pp.
7. Országh I., Čejka T. & Országhová Z., 2012: Slovenské mená mäkkýšov (Mollusca). Univerzita Komenského, Bratislava, 208 pp.
8. Pflieger V., 1988: Měkkýši. Artia, Praha, 192 pp.
9. Šteffek J., 1987: Ohrozené, vzácne a významné druhy mäkkýšov na Slovensku. Ochrana prírody (Bratislava), 8: 43-52.