

Main features of the development of the Hungarian Holocene Mollusc fauna

L. Fűkőh

Abstract: Development of the Hungarian Holocene Mollusc fauna is summarized briefly. Those species are stressed only which occurrence is characteristic for each stratigraphical units.

The former studies (Fűkőh, L.1986a, b, 1987, 1988, 1990, 1991, 1992a, b, c) sum up the main characteristic features, chronostratigraphical and biostratigraphical ranging of the mollusc fauna of the mountain-ranges of medium height and subsided zones. These studies are based on the dominance relations of the species within the fauna primarily.

There were lack of such a comprehensive estimation of the Hungarian Holocene mollusc fauna which shows the development of certain elements of the fauna on the level of species. It is why we have taken into consideration works on the fauna of the surrounding countries, though the different geographical conditions may strongly affect the applicability of these data in Hungary. The aim of the following table and brief evaluation is to try to retrieve the above mentioned insufficiency. Though these data are for not complete they could mean great help for the coming examinations.

Development of the Holocene Mollusc fauna of the mountain-ranges of medium height (Bakony Mountains, Bükk Mountains, Aggtelek-karst region)

There are 81 mollusc species are known from the studied cave deposits and streamside sediments hitherto. Among the species the author haven't taken account for those freshwater ones, which occurrence is rare in the sediment (*Lymnaea peregra*, *Lymnaea truncatula*, *Anisus spirorbis*). The only freshwater species which can be found in the list containing 81 species is the *Sadleriana pannonica*. Half of the species were the member of the fauna during the whole Holocene. There are only 39 species which haven't been found none of the chronostratigraphical and biostratigraphical units, yet. The number of the above mentioned species surely will decrease because of the further detailed elaboration of the fauna. On the other hand there will be species which lack will be significant during the examinations, so these could play important role in the determination of the age of the faunae:

<i>Sadleriana pannonica</i>	in spite of its high number of individuals it hasn't been found in boreal sediments
<i>Pyramidula rupestris</i>	known only from boreal and subboreal sediments
<i>Vertigo antivertigo</i>	known only from the latest subatlantic deposits
<i>Vertigo pygmaea</i>	known exclusively from the sediments of the atlantic and subatlantic phases
<i>Pupilla triplicata</i>	known only from the earliest sediment of the Holocene (boreal and atlantic phases)
<i>Ena montana</i>	it can be found in boreal sediments only
<i>Macrogastera latestriata</i>	known only from atlantic and subatlantic sediments
<i>Clausilia cruciata</i>	known only from the earliest sediments of the Holocene (boreal and atlantic phases)

<i>Bulgarica vetusta</i>	known only from atlantic sediments
<i>Laciniaria turgida</i>	its first appearance is known in the subatlantic phase
<i>Zonitoides nitidus</i>	known only from the latest subatlantic fauna
<i>Vitrea subrimata</i>	known only from the latest subatlantic fauna
<i>Oxychilus inopinatus</i>	known only from the latest Holocene deposits (subboreal, subatlantic phases)
<i>Oxychilus draparnaudi</i>	known only from the sediments of the subatlantic phase
<i>Daudebardia brevipes</i>	it isn't found in boreal sediments
<i>Daudebardia helenae</i>	known only from the sediments of the subatlantic phase
<i>Trichia hispida</i>	known only from the sediments of the latest Holocene fauna (subboreal and subatlantic phases)
<i>Semilimax kotulai</i>	known only from the Early-Holocene deposits (boreal and atlantic)
<i>Perforatella vicina</i>	known only from the subatlantic phase
<i>Monacha cartusiana</i>	it appears during the subatlantic phase

In the present period of the investigations we can state that the appearance of the following mollusc species can be traced only from the Late-Holocene at the Hungarian Mountain-ranges of medium height: *Vertigo antivertigo*, *Laciniaria turgida*, *Zonitoides nitidus*, *Oxychilus draparnaudi*, *Daudebardia helenae* *Perforatella vicina*, *Monacha cartusiana*.

Among the recent mollusc species the only one which is not known from Holocene sediments of the mountain ranges of medium height is the *Helicella obvia* up to now.

Development of the Holocene Mollusc fauna of the Hungarian subsided zones

During the author's examinations there have been 33 species found. Species which occur only in a certain period of the Holocene from significant proportion of the fauna (21 species). It is caused by the insufficient examinations of the outcrops. But there are species which lack or presence is significant feature of the sediments.

<i>Valvata piscinalis</i>	known only from the sediments of the boreal and atlantic phases
<i>Valvata pulchella</i>	known only from boreal deposits
<i>Bithyospeum cf. sandbergeri</i>	known only from the deposits of the latest subboreal and/or subatlantic phases
<i>Marstoniopsis scholtzi</i>	known only from boreal sediments
<i>Lythoglyphus naticoides</i>	known only from the Early Holocene ediments (boreal and atlantic phases)
<i>Lymnaea truncatula</i>	it is not known from boreal sediments
<i>Lymnaea auricularia</i>	known only from the Early Holocene deposits only (boreal and atlantic phases)
<i>Lymnaea peregra</i>	ovata known only from the Early Holocene deposits only (boreal and atlantic phases)
<i>Aplexa hypnorum</i>	known only from boreal deposits
<i>Planorbarius corneus</i>	known only from Late-Holocene deposits (subboreal, subatlantic phases)
<i>Planorbis carinatus</i>	known only from Late-Holocene deposits (subboreal, subatlantic phases)
<i>Gyraulus laevis</i>	known only from boreal sediments
<i>Gyraulus riparius</i>	known only from subboreal deposits

Table I.

**Occurrence of species with stratigraphical importance in sediments
of mountain-ranges of medium-height**

	B	A	Sb	Sa
<i>Sadleriana pannonica</i>		+	+	+
<i>Pyramidula rupestris</i>	+			
<i>Vertigo antivertigo</i>				+
<i>Vertigo pygmaea</i>		+		+
<i>Pupilla triplicata</i>	+	+		
<i>Era montana</i>	+			
<i>Macrogastrea latestriata</i>		+		+
<i>Clausilia cruciata</i>	+	+		
<i>Bulgarica vetusta</i>		+		
<i>Laciniaria turgida</i>				+
<i>Zonitoides nitidus</i>				+
<i>Vitrea subrimata</i>				+
<i>Oxychilus inopinatus</i>			+	+
<i>Oxychilus draparnaudi</i>				+
<i>Daubedardia brevipes</i>		+	+	+
<i>Daubardia helenae</i>				+
<i>Trichia hispida</i>			+	+
<i>Semilimax kotulai</i>	+	+		
<i>Perforatella vicina</i>				+
<i>Monacha cartusiana</i>				+

Legend: B = boreal A = atlantic Sb= subboreal Sa= subatlantic

Table II.

Occurrence of species with stratigraphical significance in sediments of subsided zones

	B	A	Sb-Sa
Valvata pscinalis	+	+	
Valvata pulchella	+		
Bithyospeum cf. sandbergeri			+
Marstoniopsis sholtzi	+		
Lythoglyphus naticoides	+	+	
Lymnaea truncatula		+	+
Lymnaea auricularia	+	+	
Lymnaea peregra ovata	+	+	
Aplexa hypnorum	+		
Planorbarius corneus			+
Planorbus carinatus	+		
Gyraulus laevis	+		
Gyraulus riparius			+

Legend: B = boreal
A = atlantic
Sb= subboreal
Sa= subatlantic

References

- FÜKÖH, L. (1986): Quartermalakologische Untersuchungen holozäner Sedimente in nordungarischen Höhlen. - Proc. 8th. Internat. Malac. Cong. Bp. (1983):81–83.
- FÜKÖH, L. (1986): Comparing the Holocene and the recent Mollusc faunas of Hungary Soosiana 14:61–63.
- FÜKÖH, L. (1987): Evolution of the Mollusca fauna of the Hungarian Uplands in the Holocene (in: Pécsi, M.-Kordos, L. Holocene Environment in Hungary).-Geogr. Res. Inst. Hung. Acad. Sci. Bp. p:49–56.
- FÜKÖH, L. (1988): Biostratigraphic Investigations in a Holocene Basin of Transdanubia (in: Pécsi, M.-Starkel, L.: Paleogeography of Carpathian Regions).-Geogr. Res. Inst. Hung. Acad. Sci. Bp. p:125-133.
- FÜKÖH, L. (1990): A magyarországi holocén Mollusca-fauna fejlődéstörténete az elmúlt tízezer év során. –Kandidátusi dissz. (PhD Dissertation) Gyöngyös, Mátra Múzeum p:1–118.
- FÜKÖH, L. (1991): Examinations on Faunal-history of the Hungarian Holocene Mollusc fauna (Characterization of the Succession Phase).-Fol.Hist.-nat.Mus.Matr.16:13–28.
- FÜKÖH, L. (1992): Holocene Malacology in Hungary.- Abs. 11th Unit. Mal. Congr. Siena p:115.
- FÜKÖH, L. (1992): The Holocene Mollusc fauna of the Bükk Mountains.- Abstracta Botanica 16(2): 10–108.
- FÜKÖH, L. (1992): Malacostratigraphical Investigation of the Late Quaternary Subsidised Zones of Hungary. – Fol. Hist.-nat. Mus. Matr. 17:97–106.

FÜKÖH Levente
Mátra Museum
H-3200 Gyöngyös
Kossuth 40.

