

FÜKÖH, L.:

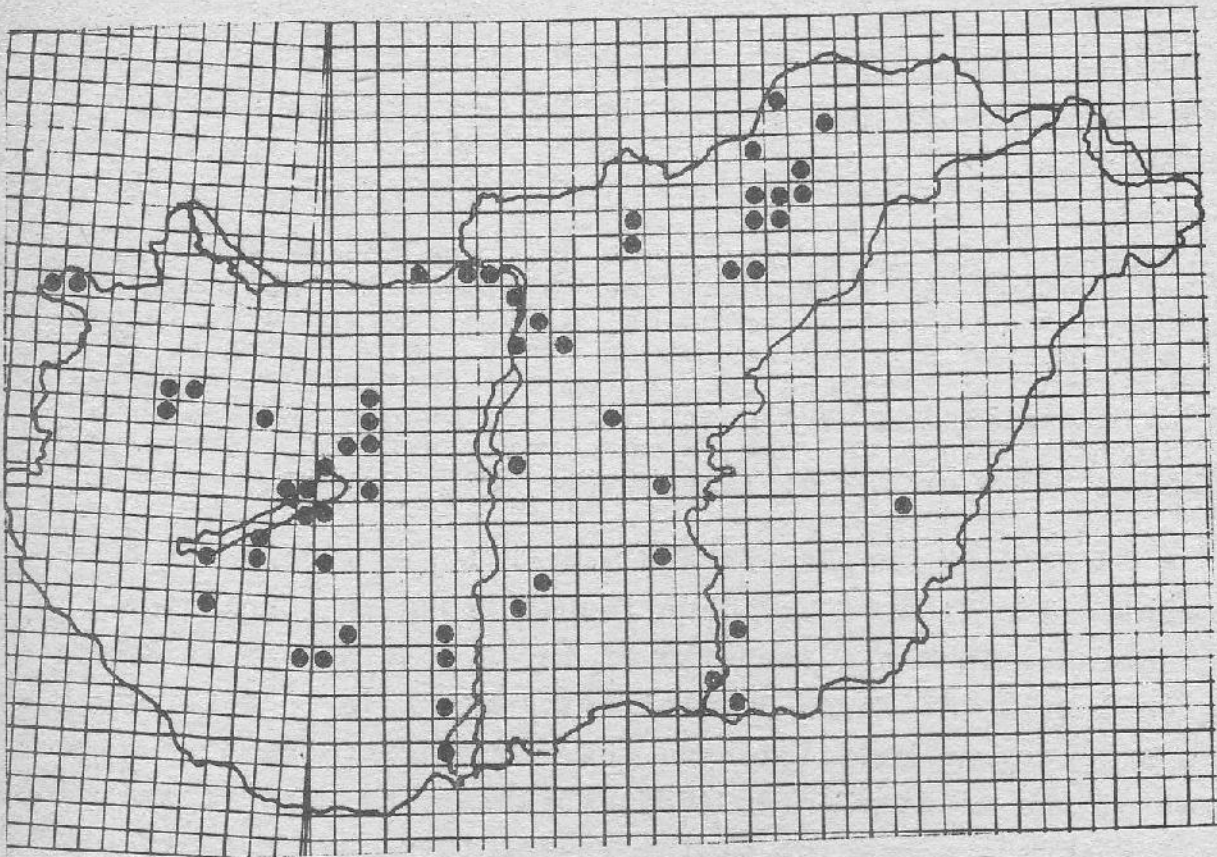
COMPARING THE HOLOCENE AND THE RECENT MOLLUSK FAUNAS OF HUNGARY - MAGYARORSZÁG HOLOCÉN ÉS REGENS MOLLUSCA-FAUNÁJÁNAK ÖSSZEHASONLITÁSA

ABSTRACT: Author compares the Holocene and recent faunas of present-day knowledge. The tabular illustration well shows that the two chronologically differentiated faunas have a similar combination in their main features. The existing differences arise from the continuous - natural or artificial - development of the fauna. Subsequent investigations on the faunas may reduce or enhance the identities or the differences between the two.

In a preceding paper /FÜKÖH und KRÖLOPP, 1985/ we have presented the list of Holocene faunas found in Hungarian collections. In the possession of these data we try to keep a breast with the fauna-development. An earlier paper of such a scope was restricted to the fauna-development of some areas of the country only /FÜKÖH, 1982/. The papers which dealt with the spreading of the recent fauna of Hungary /PINTÉR, RICHNOVSZKY és SZIGETHY, 1979; PINTÉR und SZIGETHY, 1979, 1980/ and which gave a taxonomic evaluation /PINTÉR, 1984/ of it were of great help.

The evolution and the spreading of our recent fauna is estimated to have taken place in the Quaternary. A considerable part of contemporary species can be found in Pleistocene deposits, too. The number of such elements which do not occur in our fauna, owing to extinction or the withdrawal of habitat, is very small. /The comparison of Pleistocene and recent faunas will be treated later./

In the course of the Holocene we have to reckon mostly with the influences of the climatic changes, anthropogenic activity which may result in habitat regrouping.



The malacological exploration of the Holocene deposits of our country is estimated to be moderate /Figure 1/. We have sufficient data from the areas mainly of the central range of mountains. The territory east of the river Tisza and the southern part of Transdanubia are white spots on our map. In spite of this explorative deficiency we can attempt to compare already the fauna of the two epochs /Holocene, recent/.

We have chosen the tabular illustration for the sake of a better understanding, in which the species appear in taxonomic grouping. The species which were found only in alluvial deposits are not figured in the table. In the "note" we refer to the possible reasons of the divergence of the two

fauna-lists. We do not consider data of the table as final, we collected them in the function of the actual time cross-section. The present Holocene fauna researches and the natural and/or artificial development of the recent fauna can approach or abduct the two fauna-lists.

The following may be established: The combination of the Holocene and recent fauna shows a remarkable conformity in the main features. At the same time we can point out that the development of our fauna is continuous in the present days, too, - as a result of anthropogenic activity /introductions, e. g. Alopi species/, and, on the other hand, by means of the natural transmission along the rivers /e. g. Helicigona banatica/. At the same time we have to reckon with a progressive spreading of the species which today show isolated spreading picture.

#### ÖSSZEFOGLALÁS

A dolgozat része annak a sorozatnak, mely a magyarországi csiga-fauna fejlődését mutatja be a harmadidőszektől napjainkig. A korábbi dolgozatok /KROLOPP, 1983; KROLOPP, 1984; FÜKÖH und KROLOPP, 1985/ ismertették a pleisztocén és holocén faunát. Jelen dolgozat a faunisztika szintjén mutatja be a holocén és recens faunák közötti kapcsolatokat, az azonosságokat és különbségeket. A két faunalista egybevetése rámutat a jelenleg is folyó faunafejlődésre, mely egyrészt természetes folyamat, másrészt mesterséges tevékenység eredménye.

#### Family

#### Holocene Species

#### Neritidae

Theodoxus transversalis

Theodoxus prevostianus

#### Viviparidae

Viviparus acerosus

Viviparus contectus

#### Recent Species

Theodoxus transversalis

Theodoxus prevostianus

Theodoxus fluviatilis 1.

Theodoxus danubialis 2.

Viviparus acerosus

Viviparus contectus

Valvatidae

Valvata naticina  
Valvata piscinalis  
Valvata cristata  
Valvata pulchella

Valvata naticina  
Valvata piscinalis  
Valvata cristata  
Valvata pulchella

Pomatiasidae

Pomatias elegans

Pomatias elegans  
Pomatias rivulere 3.

Hydrobiidae

Lithoglyphus naticoides  
Sadleriana pannonica

Lithoglyphus naticoides  
Sadleriana pannonica  
Paladilhia hungarica 4.  
Bythinella austriaca 5.  
Potamopyrgus jenkinsi 6.

Bithyniidae

Bithynia leachi  
Bithynia tentaculata

Bithynia leachi  
Bithynia tentaculata

Aciculidae

Acicula polita

Acicula polita  
Acicula banatica 7.

Melanopsidae

Fagotia acicularis  
Fagotia esperi

Fagotia acicularis  
Fagotia esperi  
Melanopsis parreyssi 6.  
Melanoides tuberculata 6.  
Amhimelania holandri 8.

Ellobiidae

Carychium minimum  
Carychium tridentatum

Carychium minimum  
Carychium tridentatum

Acroloxidae

Acroloxus lacustris

Acroloxus lacustris

Lymnaeidae

Lymnaea stagnalis  
Lymnaea palustris  
Lymnaea truncatula  
Lymnaea auricularia  
Lymnaea peregra

Lymnaea stagnalis  
Lymnaea palustris  
Lymnaea truncatula  
Lymnaea auricularia  
Lymnaea peregra  
Lymnaea columella 6.

Physidae

Anlexa hypnorum  
Physa fontinalis

Anlexa hypnorum  
Physa fontinalis  
Physella heterostropha 9.  
Physella acuta

Planorbidae

Planorbarius corneus  
Planorbis planorbis  
Planorbis carinatus  
Anisus septemgyratus  
Anisus leucostoma  
Anisus spirorbis  
Anisus vortex  
Anisus vorticulus  
Bathyomphalus contortus  
Gyraulus albus  
Gyraulus laevis  
Gyraulus crista  
Hippeutis complanatus  
Segmentina nitida

Planorbarius corneus  
Planorbis planorbis  
Planorbis carinatus  
Anisus septemgyratus  
Anisus leucostoma  
Anisus spirorbis  
Anisus vortex  
Anisus vorticulus  
Bathyomphalus contortus  
Gyraulus albus  
Gyraulus laevis  
Gyraulus crista  
Hippeutis complanatus  
Segmentina nitida  
Helisoma duryi

Ancylidae

Ancylus fluviatilis

Ancylus fluviatilis  
Ferrissia wautieri 10.

Cochlicopidae

Cochlicopa lubrica  
Cochlicopa lubricella  
Cochlicopa nitens

Cochlicopa lubrica  
Cochlicopa lubricella  
Cochlicopa nitens

Pyramidulidae

Pyramidula rupestris

Pyramidula rupestris

Vertiginidae

Columella edentula  
Truncatellina cylindrica  
Truncatellina claustralis  
Vertigo angustior  
Vertigo pusilla  
Vertigo antivertigo  
Vertigo moulinsiana  
Vertigo pygmaea  
Vertigo alpestris

Columella edentula  
Truncatellina cylindrica  
Truncatellina claustralis  
Vertigo angustior  
Vertigo pusilla  
Vertigo antivertigo  
Vertigo moulinsiana  
Vertigo pygmaea  
Vertigo alpestris  
Truncatellina callicratis 11.  
Vertigo substriata 10.

Orculidae

Orcula dolium  
Sphyradium doliolum  
Pagodulina pagodula

Orcula dolium  
Sphyradium doliolum  
Pagodulina pagodula

Chondrinidae

Cranaria frumentum  
Chondrina clienta

Cranaria frumentum  
Chondrina clienta

Pupillidae

Pupilla muscorum  
Pupilla triplicata

Pupilla muscorum  
Pupilla triplicata  
Spelaeodiscus triarius 12.

Valloniidae

Vallonia pulchella  
Vallonia costata  
Vallonia enniensis  
Achantinula aculeata

Vallonia pulchella  
Vallonia costata  
Vallonia enniensis  
Achantinula aculeata

Enidae

Chondrula tridens  
Ena montana  
Ena obscura  
Zebrina detrita

Chondrula tridens  
Ena montana  
Ena obscura  
Zebrina detrita

Succineidae

Succinea putris  
Succinea oblonga  
Oxyloma elegans

Succinea putris  
Succinea oblonga  
Oxyloma elegans

Clausiliidae

Cochlodina cerata  
Cochlodina laminata  
Cochlodina orthostoma  
Ruthenica filograna  
Macrogastra ventricosa  
Macrogastra plicatula  
Macrogastra latestriata  
Clausilia dubia  
Clausilia pumila  
Clausilia cruciata  
Laciniaria plicata  
Balea biplicata  
Bulgarica cana

Cochlodina cerata  
Cochlodina laminata  
Cochlodina orthostoma  
Ruthenica filograna  
Macrogastra ventricosa  
Macrogastra plicatula  
Macrogastra latestriata  
Clausilia dubia  
Clausilia pumila  
Clausilia cruciata  
Laciniaria plicata  
Balea biplicata  
Bulgarica cana  
Alopiia straminicollis monacha 6.  
Alopiia livida bipalatalis 6.  
Pseudofusus varians  
Clausilia parvula 13.  
Balea perversa 10.  
Vestia gulo 14.  
Vestia turgida 15.  
Bulgarica rugicollis 6.

Ferussaciidae

Cecilioides acicula

Cecilioides acicula  
Cecilioides petitiiana

Endodontidae

Punctum pygmaeum  
Discus rotundatus  
Discus perspectivus  
Discus ruderatus

Punctum pygmaeum  
Discus rotundatus  
Discus perspectivus  
Discus ruderatus  
Helicodiscus singleyanus

Vitrinidae

Vitрина pellucida

Vitрина pellucida  
Semilimax semilimax 13.  
Phenacolimax annularis 12.

Zonitidae

Zonitoides nitidus  
Vitrea diaphana  
Vitrea subrimata  
Vitrea crystallina  
Vitrea contracta  
Aegopinella minor  
Aegopinella pura  
Aegopinella ressmanni  
Aegopsis verticillus  
Nesovitrea hammonis  
Oxychilus orientalis  
Oxychilus glaber  
Oxychilus inopinatus  
Oxychilus depressus  
Daudebardia rufa  
Daudebardia brevipes  
Daudebardia helenae

Zonitoides nitidus  
Vitrea diaphana  
Vitrea subrimata  
Vitrea crystallina  
Vitrea contracta  
Aegopinella minor  
Aegopinella pura  
Aegopinella ressmanni  
Aegopsis verticillus  
Nesovitrea hammonis  
Oxychilus orientalis  
Oxychilus glaber  
Oxychilus inopinatus  
Oxychilus depressus  
Daudebardia rufa  
Daudebardia brevipes

Zonitoides arboreus 6.  
Oxychilus translucidus 6.  
Oxychilus draparnaudi  
Oxychilus hydatinus 16.

Euconulidae

Euconulus fulvus

Euconulus fulvus

Bradybaenidae

Bradybaena fruticum

Bradybaena fruticum

Helicidae

Helicella obvia  
Helicopsis striata  
Monacha cartusiana  
Perforatella bidentata  
Perforatella incarnata  
Perforatella vicina  
Perforatella rubiginosa  
Trichia unidentata  
Trichia hispida  
Euomphalia strigella  
Helicodonta obvoluta  
Helicigona faustina  
Helicigona arbustorum  
Isognomostoma isognomostoma  
Cepaea vindobonensis  
Cepaea nemoralis  
Cepaea hortensis  
Helix pomatia

Helicella obvia  
Helicopsis striata  
Monacha cartusiana  
Perforatella bidentata  
Perforatella incarnata  
Perforatella vicina  
Perforatella rubiginosa  
Trichia unidentata  
Trichia hispida  
Euomphalia hispida  
Helicodonta obvoluta  
Helicigona faustina  
Helicigona arbustorum  
Isognomostoma isognomostoma  
Cepaea vindobonensis  
Cepaea nemoralis  
Cepaea hortensis  
Helix pomatia  
Candidula unifasciata 6.  
Perforatella dibothrion 14.  
Perforatella umbrosa 13.  
Hygromia cinctella 6.  
Hygromia transsylvanica 17.  
Hygromia kovacsi 18.

Trichia striolata 19.  
Trichia filicina 13.  
Trichia erjavecii 13.  
Trichia lubomirskii 20.  
Helicigona banatica 21.  
Helicigona planospira 22.  
Eobania vermiculata 6.  
Helix aspersa 6.  
Helix lutescens 10.

#### Localities of the Holocene Faunas of Hungary

1. In the Tisza 2. Eastward from the Danube only in the I-poly 3. Fen-wood of Bátorliget 4. In the caves of the Mecsek 5. In the springs of the Northern-Central Range of Mountains 6. Introduced 7. In the Mecsek 8. Westward from the lake Balaton 9. In Délegyháza 10. Insular-like spreading 11. Westward from the Danube 12. In the Bükk. 13. In Transdanubia 14. In Zemplén 15. Bükk, Karst of Aggtelek 16. In Békéscsaba 17. In Bükk and Mátra 18. In the county Békés 19. Along the Danube 20. Mátra and Zemplén 21. Near to Vásárosnamény 22. Along the Dráva

#### REFERENCES

FÜKÖH, L. /1982/: A holocén faunakutatás jelentősége a recens fauna feltárásában. Mal. Táj., 2: 12-13. - FÜKÖH, L. und KROLOPP, E. /1985/: Verzeichnis der holozänen Mollusken Ungarns. Soosiana, 13: 145-146. - KROLOPP, E. /1983/: Verzeichnis der pleistozänen Mollusken Ungarns. 10/11: 75-78. - KROLOPP, E. /1984/: A magyarországi pleisztocén Mollusca-fauna jellemvonásai. Soosiana, 12: 7-10. - PINTÉR, L., RICHNOV-SZKY, A. és S. SZIGETHY, A. /1979/: A magyarországi recens puhatestűek elterjedése. Soosiana, /Suppl.I./: 1-351. - PINTÉR, L. und S. SZIGETHY, A. /1979/: Die Verbreitung der rezenten Mollusken Ungarns: Neunachweise und Berichtigungen, I. Soosiana, 7: 97-108. - PINTÉR, L. und S. SZIGETHY, A. /1980/: Die Verbreitung der rezenten Mollusken Ungarns: Neunachweise und Berichtigungen, II. Soosiana, 8: 65-80. - PINTÉR, L. /1984/: Magyarország recens puhatestűinek revideált katalógusa. /Mollusca/. Pol.Hist-nat.Mus.Matr., 9: 79-90.



DR. FÜKÖH LEVENTE

Mátra Múzeum

Gyöngyös

Kossuth u. 40.

H-3200