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K O N I N K L I J K E N E D E R L A N D S E
A K A D E M I E V A N W E T E N S C H A P P E N

TAXONOMICAL, TAPHONOMICAL AND PALEOECOLOGICAL ASPECTS OF A LATE EARLY PLEISTOCENE VERTEBRATE FAUNA FROM THE SOMSSICH HILL 2 SITE (SOUTH HUNGARY)

P. Pazonyi^{1*}, L. Mészáros², Z. Szentesi³, M. Gasparik³, A. Virág¹, K. Gere², R. Mészáros², D. Botka², B. Braun² and L. Striczky²

¹MTA-MTM-ELTE Research Group for Paleontology, POB 137, 1431 Budapest, Hungary

²Eötvös Loránd University, Department of Palaeontology, Pázmány Péter sétány 1/C, 1117 Budapest, Hungary

³Hungarian Natural History Museum, Department of Palaeontology and Geology, Ludovika tér 2, 1083 Budapest, Hungary

*pazonyi@nhmus.hu

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The Somssich Hill 2 site is a 10 m deep karstic cavity situated in the Villány Mts (South Hungary), which yielded one of the richest late Early Pleistocene vertebrate assemblages of Central Europe. The age of the locality is around 950 ka based on ESR dating, but an approximately 200 kyr age difference were suggested between the lowermost and uppermost part of the section.

Small mammals (including bats, shrews, voles, lemmings, hamsters, mice, dormice, squirrels, ground squirrels, pikas and hares) are the most abundant faunal elements, but frogs, lizards, snakes and birds are also frequent. A few remains of fish, salamanders, turtles and larger mammals (carnivores, most frequently mustelids and canids) were also found. Besides the vertebrates, snails are very common elements of the fauna in the upper part of the section. The fauna represents a mixture of Early Pleistocene relict taxa (including *Beremendia*, *Dryomimus*, *Borsodia*, *Allophaiomys*) and elements, which are characteristic for the Middle Pleistocene (e.g. modern *Microtus* species, such as *M. nivaloides*).

According to the taphonomical analysis, the frogs and snakes most likely fell into the cavity during their lifetime, whereas the small mammal remains most plausibly spent a short time period buried in shallow soil and then they were transported into the pothole by temporary water streams. The fact that the assemblage was accumulated by at least two different and partly selective processes, suggest that a few distortions might be present in the taphocoenosis compared to the biocoenosis once lived in the surrounding area, which must be taken into account in the palaeoecological interpretation of the locality.

Several different and recurring environments (from relatively dry steppe to humid climate with closed vegetation) were detected based on the abundance changes of the faunal elements within the section. However, hygrophilous frogs (such as *Bombina variegata*, *Hyla arborea* and *Rana temporaria*) are indicating that moist habitats were present in the close surroundings of the locality even in the driest intervals. Such mosaic and shifting environment represents well the climate and faunal changes during the Early–Middle Pleistocene transition.

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