

**Preliminary Results of the Palaeontological Investigations of the Late Early
Pleistocene Somssich Hill 2 Locality (South Hungary)**

Piroska Pazonyi¹, Lukács Mészáros², Zoltán Szentesi³, Mihály Gasparik³, Attila Virág^{1,2}

¹ MTA-MTM-ELTE Research Group for Palaeontology, H-1431 Budapest, P.O. Box 137;
pinety@gmail.com

² Eötvös Loránd University, Department of Palaeontology, H-1117 Budapest, Pázmány Péter sétány 1/c;
salpin@freemail.hu, virag@caesar.elte.hu

³ Hungarian Natural History Museum, H-1431 Budapest, P.O. Box 137; crocutaster@gmail.com,
gasparik@nhmus.hu

The Somssich Hill 2 site, situated near the municipality of Villány (South Hungary) was originally excavated by Dénes Jánossy between 1975 and 1984. It is one of the richest Pleistocene vertebrate localities of Hungary. Present study aimed to revise the fauna and to draw biostratigraphical, taphonomical, and palaeoecological consequences.

On the basis of the vole fauna, the age of the locality (approximately 900-800 ka) is slightly older than the Early-Middle Pleistocene boundary (Betfian or Nagyharsányian Phase within the Biharian Stage of the local biochronological system). Similar conclusions can be drawn from the insectivore remains.

The exceptionally rich fauna allowed us to separate six different stage (representing 6 different environments) in the section. The oldest part (from layer 50 to 47) is characterized by the dominance of the genera *Mimomys* and *Lagurus*. This period represents most plausibly a wet climate with closed, forested vegetation. Between layer 47 and 35 the abundance of *Lagurus* species and cricetids are indicators a somewhat drier climate with probably the oldest known open steppe vegetation of Hungary. In the next phase (between layer 35 and 25) the abundance of the lemmings is replaced by the dominance of *Pitymys*, *Myodes* and *Pliomys*. In addition, mice belonging to the genus *Apodemus* and dormice also become frequent. Species that are closely bound to areas of water (such as the shrew, *Beremendia fissidens*, and the frogs, *Bombina variegata* and *Rana temporaria*) are also present. This phase represents a warmer and more humid climate with the re-closure of the vegetation. Semi-closed areas with a creek or a lake in the area are likely. The phase attributable to layers 25-18 is characterized by the dominance of voles *Microtus* and *Myodes* and the small decline of *Pitymys* and *Pliomys*. The fauna is most likely the result of further closure of the vegetation to deciduous forest. The absence of some shrews and frogs can be explained by this suggested dense vegetation. Lemmings become abundant from layer 18 to 12 again, which suggest the re-build of the cool, dry and open steppe conditions. However the stable presence of the *Beremendia fissidens* and some moist environment preferring frogs indicate, that a few shrubby areas and an open water surface were somewhere near the locality. In the youngest part (from layer 12 to 1) the abundance of the lemmings is replaced by the dominance of *Pitymys*, *Myodes* and *Pliomys* again. The presence of forest elements (e.g. *Apodemus* and dormice) with *Desmana* sp. and *Beremendia fissidens*, as well as some moist environment preferring frogs (e.g. *Hyla arborea*, *Bombina variegata*, and *Rana temporaria*) suggest warm and humid climate with closed vegetation.

Layer 28 was selected for a preliminary taphonomical study. Approximately 10% of the small mammal remains can be originated from animal carcasses, which were get stucked on the surface or in the uppermost soil horizon before the final accumulation. More than 60% of the remains were originally accumulated as owl pellets. The remains were transported after the loss of the collagen fibres by water (probably by the intense spring rainfalls) within a short distance into the carstic fissure of the Somssich Hill 2 site.

This project was supported by the OTKA K104506 grant.

Keywords: late Early Pleistocene, microvertebrates, palaeoecology, taphonomy, South Hungary

Book of Abstracts of the RCMNS 2013

Publisher : Istanbul Technical University
ISBN : 978-975-561-438-0
Editors : Namık ÇAĞATAY
Cengiz ZABCI
Printing Layout : Tolga KOÇ
Cover Design : Ayşenur AYTAÇ
Composition : ARBER Professional Congress Services / www.arber.com.tr

Printed by
General Directorate of Mineral Research and Exploration (MTA)

