

NEW MAMMAL ELEMENTS FROM HAJNÁČKA I LOCALITY

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Abstract. The Hajnáčka I site is one of the European paleontological localities dated to the Lower Villafranchian, MN 16a biozone (the Late Pliocene). From its discovery in 19th century, many scientists have dealt with the research of this site. After more than 35 years, the new systematic research was begun in 1996. This new research yielded the quantity of new data and material, especially paleontological one. This article presents tentative data on new mammal taxa, which has been found in the territory of the Hajnáčka I site during new research.

Key words: Mammals, Villafranchian, Late Pliocene, Hajnáčka, Slovakia

The paleontological locality Hajnáčka I is one locality type of the European Neogene Mammal time scale, dated to the MN 16a zone (Lower Villafranchian, Late Pliocene) (FEJFAR et al., 1998). The site is situated approximately 1.5 km SE of Hajnáčka village in the Rimavská Sobota district in southern Slovakia and covers an area from 1,000 to 1,500 square metres (FEJFAR, 1964). It consists of some deep erosive furrows. The biggest of these erosive ravines with E-W orientation is 400 m long, to 30 m wide and its depth comes to more than 20 m in some places. On the basis of the quantity of skeleton remains, which were found here, this natural object was named „Kostná dolina“ (Bone Valley or Bone George).

The locality belongs to the Cerová Basalt Formation, which is mainly build up of the nepheline basanit and volcanic clastics. The radiometric age of the basalt varies from 5.03 to 1.16 Ma (VASS et al., 2000). The fossiliferous layers are situated in a maar depression of the elliptical shape in the northern foothills of Matrač hill. The base of the maar filling consists of the redeposited Eggenburgian sediments of the Fil'akovo Formation (Tachty sands to sandstone) with overlying autochthonous tuff, lapilli tuff, tuffite, fragments of basalt, and fine sand. Limonite crusts often envelop the sandy beds. Also, redeposited palagonite tuff and breccias less frequently occur in the maar filling. Locally, relicts of laminated bituminous beds are situated in the upper part of this filling with the Quaternary loamy and loam-silty deposits, covering the marginal parts of the maar. The fossil findings have been found in more or less

disturbed sediments which forming completely preserved stratigraphical unit without hiatus. These fossiliferous beds were disturbed especially in the process of sliding during the Quaternary Period.

The fossil accumulation of the Hajnáčka I site originated in the drained lake after the disturbance of the basalt maar ring and the consecutive removing of the primary filling. Most of animals have been killed either by post-volcanic gas emanations, or during massive fall of both tephra and volcanic ash. From the paleontological point of view, the occurrence of the progressive species of the genus *Mimomys* in the Hajnáčka fossiliferous sediments is important. Thus, this fauna is differing from the former assemblages of Ruscian (MN 15). The presence of the both index species *Mimomys (Cseria) stehlini* KORMOS, 1931 and *Mimomys (Mimomys) hassiacus* HELLER, 1936 (= *M. hajnackensis* FEJFAR, 1961) is the evidence of that. On the basis of these key rodent fossils, the locality has been dated to the Lower Villafranchian (MN 16a) (FEJFAR et al., 1998).

After more than 35 years, new systematic research was begun in 1996. During this new research, five vertical pits (1/96, 2/96-97, 4/98, 5/98 a 6/98) and one horizontal pit (3/98) have been dug in the Bone Valley. Their research yielded a large quantity of new vertebrate material. Besides fossils of known taxa, remains of new mammal taxa (insectivores, carnivores, and rodents) have also been found in sediments of all pits besides 1/96 and 4/98.

FEJFAR et al. (1990) mentioned 4 insectivore taxa (*Desmana nehringi* KORMOS, 1913; *Petenya hungarica* KORMOS, 1964; *Blarinoidea mariae* SULIMSKI, 1959; *Beremendia fissidens* (PETENYI, 1864)) of 2 families (Talpidae, Soricidae), 4 carnivore taxa (*Lutra* cf. *bravardi* POMEL, 1843; *Parailurus hungaricus* KORMOS, 1934; *Pliocrocuta perrieri* (CROIZET et JOBERT, 1828); *Megantereon* sp.) of 4 families (Mustelidae, Procyonidae, Hyaenidae, Felidae), and 10 rodent taxa (*Pliopetaurista pliocaenica* (DEPÉRET, 1897); Seleviniidae gen. et spec. indet.; *Prospalax priscus* (NEHRING, 1897); *Apodemus* sp.; *Baranomys loczyi* KORMOS, 1933; *Mimomys stehlini* KORMOS, 1931; *M. hassiacus* HELLER, 1936; *Germanomys* sp.; *Castor fiber* ssp.; *Trogotherium minus* NEWTON, 1890) of 6 families (Petauristidae, Seleviniidae, Anomalomyidae, Muridae, Cricetidae, Castoridae) from the site. During new research, 17 taxa of micromammals and carnivores have been found only. Almost half of them have already been known formerly (*Desmana nehringi*, *Blarinoidea mariae*, *Lutra* cf. *bravardi*, *Pliocrocuta perrieri*, *Prospalax priscus*, *Mimomys stehlini*,

M. hassiacus, *Germanomys* sp., and *Castor fiber* ssp.), but further taxa have been tentative determined as new elements of Hajnáčka biocenosis.

Generally, seven new taxa (*Talpa* cf. *fossilis* PETÉNYI, 1864; *T.* cf. *minor* FREUDENBERG, 1914; *Deinsdorfia* sp.; Soricidae gen. et spec. indet.; Ursidae gen. et spec. indet., *Sciurus* sp.; and *Ungaromys* sp.) from five mammal families (Talpidae, Soricidae, Ursidae, Sciuridae, Cricetidae) have been found in sediments of the site. Thus, the number of mammal families from Hajnáčka I locality increased from original 18 to 20 (Ursidae and Sciuridae). Hereby, these new elements contributed to our knowledge of the Hajnáčka biocenosis and to the specification of paleoenvironmental conditions.

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