

## THE CONTRIBUTION TO OCCURENCE OF THE FOSSILS IN THE VOLCANICLASTIC DEPOSITS OF DOUPOVSKÉ HORY MTS.

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Volcanic area the Doupovske hory Volcanic Complex provides excellent settings for preservation of fossil material, especially when composed of predominantly fine pyroclastic material. The localities as Dvěrce, Dětaň, Valeč Vrbice and Úhošťany or Úhošť Hill, and some other rare occurrences along the south-eastern, eastern and northeastern periphery of Doupovske hory Mts. represent typical area, where the fossils plants and animals are found.

The first notice of a fossil from the Doupovske hory Mts. was described in Mylius [1]. The complete skeleton of a small rodent (“*Wassermanus*” also known as “*Rongeur de Waltsch*”) was found in about 1690. The fossil is preserved on a limestone slab from Valeč (Waltsch)(Fig. 1). The most productive site for animal remains is situated in a large clay pit south of the village Dětaň [2-4]. The layer of white sandy kaoline clay is covered by 45 to 50 m of basaltic tuff. Leaf imprints are rare. Parts of calcified woody roots, some of them in situ, are common in some parts of the outcrop. Small pieces of wood charcoal are present very rarely. Skeletal remains of vertebrates (predominantly mammalian) are highly fragmented and widely scattered through the basal ash beds. The whitish bones are often covered with fine traces of gnawing by small carnivores. Doubled traces of rodent incisors are not present. Fejfar [2] ascertained the following taxa. Marsupialia: *Amphiperatherium* sp. Insectivora: cf. *Paratalpa* sp.; cf. *Neurogymnurus* sp.; *Quecysorex* sp. Rodentia: *Suevosciurus ehingensis* Dehm; *Palaeosciurus* sp.; *Plesispermophilus* cf. *atavus* Schmidt-Kittler & Vianey-Liaud; *Gliravus* sp.; *Bransatoglis* cf. *micio* (Misonne); *Eomys* cf. *zitteli* Schlosser; cf. *Parasminthus* sp.; *Paracricetodon* cf. *dehmi* Hrubesch; *Eucricetodon* cf. *murinus* (Schlosser); *Pseudocricetodon montalbanensis* Thaler. Artiodactyla: *Gelocus laubei* Schlosser; *Bachitherium* cf. *curtum* Filhol; *Lophiomeryx mouchelini* Brunet & Sudre; *Paroxacron* sp.; *Propalaeochoerus* cf. *paronae* Piaz; *Entelodon antiquum* Repelin; *Antracotherium* cf. *monsvalense* Zigno; *Elomeryx crispus* Gervais. Perissodactyla: *Ronzotherium* cf. *filholi* Osborn. Carnivora: *Cephalogale* sp.; *Pseudocyonopsis* cf. *antiquus* Ginsburg. Deltatheridia: *Hyaenodon* sp. Other vertebrates include *Geochelone* (giant turtle), a small crocodile and small forms of reptiles. This assemblage excludes the age before the Grande Coupure and proves the mammalian Paleogene zones MP21 or MP22. A more precise dating to the older zone MP21 is given by the index form *Entelodon antiquum* Repelin and by the general evolu-

tionary level of some rodent species as well. A unique black lens was discovered in the lower part of the ash sequence during fieldwork in 2000 [3-4]. The lens contains shiny black shells of terrestrial Gastropods. They are represented by *Patula (Anguispira) ?frici* Klika, *Patula densestriata* Klika *Strobilus elasmodontata* Reuss, *Acme (Acicula)* sp. and other yet undetermined gastropod genera and species. Molluscs are otherwise completely unknown in the Detan site. The lens also contains concentration of crushed small bones and rare rodent molars, both light gray in color. Within the black lens, the most dominated mammal is the small dormouse *Gliravus*. Other known rodents are *Bransatoglis*, *Paracricetodon*, *Pseudocricetodon*, *Eomys*, and indeterminate insectivore molars are rare and partly crushed. Remains of lower vertebrates are diverse but very fragmented, they contain amphibians: Salamandridae indet., Pelobatidae indet., Discoglossidae indet.; reptiles: Lacertidae sp. 1, Lacertidae sp. 2, Anguidae indet. The lens is interpreted as the remnant of an insect colony, probably of termite mound. The tuff beds of Dětaň contain frequent insect trace fossils (ichnogenera *Celliforma* div. isp., *Coprinisphaera* isp., and *Palmiraichnus* isp.) and rare burrows of small mammals. Root traces vary in density and diversity. The insect traces indicate purely subaerial environment of the respective beds [2-4].

The second famous and important locality are fine-bedded tuffites and thin freshwater limestones closed to the Dvěrce. They contain limnic and terrestrial molluscs, leaf and seed flora. The rich gastropods fauna is known from 19<sup>th</sup> century. The tuffites and limestones from Dvěrce (Fig. 2) used to belong to lower Miocene after Boettger [5] and Klika [6] on the basis of the gastropods fauna (*Stagnicola* sp., *Radix* sp., *Gyraulus* sp., *Strobilus* sp.). In 1958 and 1965, two individuals of a small early Oligocene anhracothere *Elomeryx crispus* Gervais were found there. This founds assigned tuffites around Dvěrce to the lower Oligocene. It seems that molluscs fauna from Dvěrce is similar to fauna from other localities (e.g. Úhošťany, Zvoníčkov) on the northeastern and eastern periphery of the Doupovske hory Mts.

At present time molluscs fauna from locality Dvěrce, Úhošťany and Dětaň is under systematic study.

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Fig. 1: The complete skeleton of a small rodent (“*Wasserm Maus*” also known as “*Rongeur de Waltsch*”) was found in about 1690. The fossil is preserved on a limestone slab from Valeč (Waltsch). Photo after O. Fejfar

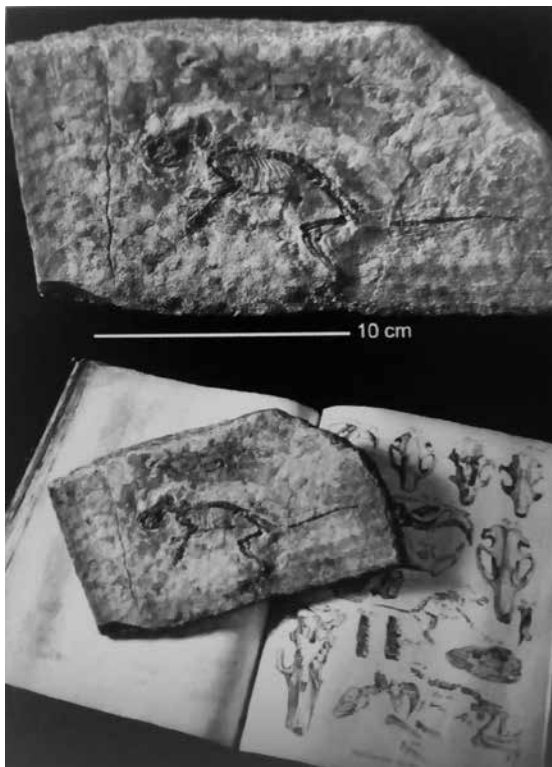
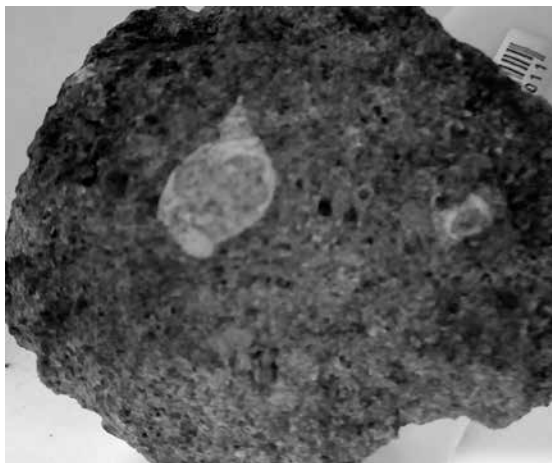


Fig. 2: The freshwater gastropod from Dvorce.



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