



Paleogeographic significance of the Middle Ural cave deposits records

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Due to the limited spreading of fine stratified river terrace deposits and their low information richness (absent of multilayered Palaeolithic sites etc.) on the western megaslope of the Middle Urals, the cave deposits became to be of great importance as Quaternary paleogeographic/paleoclimatic records for this area. The total amount of karst caves at Ural and pre-Ural (both of limestone and gypsum karst) is more than 2000, but only few of them contain deposits older than Middle Holocene. Most of them are known from the carbonate hypogenic karst, developed in Carbon limestones and dolomites. In some gypsum quarries, like Shubino (near Kungur, Perm district), developing Permian sulphate sediments, Quaternary filling (mainly terrace alluvium) of buried cavities can be observed. There are more than 100 caves with Quaternary deposits, represented with Vertebral palaeontological or Palaeolithic sites, which contain mainly Late Pleistocene sediments, and only in some of them (like Mahnevskaya Cave) the Middle Pleistocene layers are known till now. Nevertheless much older cave sediments - up to Pliocene, can be revealed in the area. Many famous cave sites with rich bone accumulations (so-called “bear-caves”) were robbed by “black paleontologists” and their paleogeographical potential was completely destroyed. The most of large subfossil karst cavities are of hypogenic genesis and were exposed by erosion during Pliocene-Quaternary time. We suppose existence of at least three taxonomic types of caves in the area: a) vertical trap-pits Temnaya Cave, Mariinskaya (not a lot); b) sub-horizontal galleries with domination of zoogenic and anthropogenic accumulation; c) ice-caves with ice accumulations, containing organic materials (including stems of trees etc.). Due to investigations of paleozoologists from

St.-Petersburg, Ekaterinburg and Perm, it is a great progress in analysis of Vertebral fauna of most of the known Quaternary cave sites. But other aspects of cave deposits studying, which can be used as paleo-climatic and paleolandscape indicators, like speleothem dating, paleomagnetic studies, pollen analysis etc. are still not used widely. According to above-stated, it is necessary: a) to analyse paleogeographical information richness of known (and still not destroyed) Quaternary cave deposits; b) to find the most complete and thick sections of cave deposits among a lot of Quaternary cave sites; c) to start the multidisciplinary investigation of this sections, probably with international participation.