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ABSTRACT BOOK



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The rests of a cave bear (*Ursus (Spelearctos) spelaeus*) from the territory of Belarus

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The territory of Belarus repeatedly became covered by glaciers, which destroyed a relief and destroyed burial places of fossil animals. Therefore in territory of republic there are seldom mass burial places of animals except for burial places of top Pleistocene, when Poozhersky (Wurmian) the glacier borrowed only northern areas of Belarus. Among the fossils of animals in three locations the fragments of bones of a cave bear (*Ursus (Spelearctos) spelaeus* ROSENMÜLLER) have been found out. In site Rumlovka near about the Grodno city on the left bank of the river Neman in 1937 the burial place of mammals has been discovered. The specific structure of fauna was defined by V. V. Shcheglova – *Ursus (Spelearctos) spelaeus* ROSENMÜLLER, *Ursus (Ursus) arctos* L., *Mammuthus primigenius* BLUM., *Coelodonta antiquitatis* BLUM., *Equus caballus* L., Bovidae gen., *Cervus elaphus* L., *Rangifer tarandus* L.. The rich site of fossil animals is known in area of the city of Smorgon. By different experts there were defined: *Ursus (Spelearctos) spelaeus* ROSENMÜLLER, *Ursus (Ursus) arctos* L., *Mammuthus primigenius* BLUM., *Coelodonta antiquitatis* BLUM., *Equus caballus* L., *Megaloceros giganteus* BLUM., *Cervus elaphus* L., *Rangifer tarandus* L., *Ovibos moschatus* ZIMM.. For the different reasons rests *Ursus (Spelearctos) spelaeus* from noted sites have been lost, and their morphological description in due time has not been made.

In 2007, the new site of fossils of large mammals in career of a granite extraction in area of the city of Mikashevitchi has been studied. It was known since 1982 about the finds of fossil animals, but they did not involve attention of experts because of the fragmentariness until these materials have interested the teachers of high schools of the city. Together with pupils who were engaged in mugs on geography and ecology, they have started to collect remains of mineral animals, as a study of local lore material. From the structural geology point of view the territory of the career is located in the eastern part of Mikashevitchi horst, which is structural unit of Mikashevitchi-Zhitkovitchi ledge of the crystal basement. The horst constitution is of Archean age granite-gneisses, which are taken from career. Crystal rocks of the basement are blocked by sea deposits of Palaeogene. There are mainly glauconite sand and aleurite of the Kiev suite. With washouts the layers of Palaeogene are blocked by deposits of the Poltava series of Neogene, which, in turn, upwards are replaced by complex lithological series of the Quaternary period. Depending on height of a surface of the crystal basement the thickness of Palaeogene, Neogene and Quaternary deposits variate from 3 m up to 100 m. On border between Neogene and Quaternary deposits in places of high marks of the crystal base the horizon of washout, which consists of rudaceous material is observed. The finds of remains of large mammals are connected with this horizon. Studying of school collections by teachers and students from the Belarusian State University in 2007 has enabled to reveal specific structure of fauna of mammals, which were in Quaternary granite deposits of the Mikashevitchi career. Remains of following animals have been defined: the chasarc steppe elephant – *Mammuthus chosaricus* DUBROVO, the woolly rhinoceros – *Coelodonta antiquitatis* BLUMENBACH, a long-horned bison – *Bison priscus priscus* BOJANUS, a wild horse – *Equus caballus latipes* GROMOVA, a reindeer – *Rangifer tarandus* L., the big cave bear – *Ursus (Spelearctos) spelaeus* ROSENMÜLLER, the fine wolf – *Canis lupus* L. The fauna of mammals of such specific structure for the first time is found in the territory of Belarus. It



allows to fill the so-called “white spot” in ancient history of the Quaternary fauna of western regions of East European plain. The age of fauna and of deposits in which it has been found out belong to the time of existence of Sozh (Rissian II) glacier in its Polessian stage on territory of republic. Approximately it is 300-200 thousand years ago. Chasartic steppe elephants, which rests dominate over a site, were ancestors of mammoths and the largest representatives in a line of steppe elephants. On the second place by quantity of finds is the long-horned bison the scope of horns of its male reached 1m 37sm The cave bear also reached very large sizes (*Ursus (Spelearctos) spelaeus*). In general all fauna is characterized by presence of large animals, which lived on tundra-steppe open spaces outside the glacier edge.

There is a whole left cave bear humeral bone (*os humerus*) of good safety. The bone is mineralised, and it is of black colour on all thickness of a bone. On a front surface of a bone in the bottom part the large roughness (*tuberositas deltoidea*) is developed. On the internal part the thick medial epicondyle (*epicondylus medialis*) is allocated. Big lateral hump of a humeral bone (*tuberculum laterale*) is almost identical in height with the medial one (*tuberculum mediale*). Measurements of a humeral bone are given in table 1.

| Measurements, mm | Mikashevitchi (male) | Urals Mountains | |
|---|-------------------------|-----------------|---------|
| | | (females) | (males) |
| 1. The maximal length | 435 | 353-357 | 408-450 |
| 2. Width of the top end | 93 | - | - |
| 3. A diameter in the same place | 111 | - | - |
| 4. Width of the bottom end | 129 | 93-108 | 115-133 |
| 5. A diameter in the same place | 87 | 48-60 | 60-76 |
| 6. Width of the articulate block | 90 | 71-86 | 90-93 |
| 7. The least diameter in the same place | 33 | 26-35 | 32-34 |
| 8. Width corpus of humeral | 51 | 31-35 | 41-47 |
| 9. A diameter in the same place | 47 | 34-45 | 41-47 |

Tab. 1. The sizes of humeral bone *Ursus (Spelearctos) spelaeus* from site Mikashevitchi in Belarus.

Comparison of the sizes of humeral bone *Ursus (Spelearctos) spelaeus* from Mikashevitchi with the similar sizes of a humeral bone from territory of Northern Urals Mountains has shown, that the humeral bone from Mikashevitchi belongs to a large male with thick corpus of humeral. At the same time it is necessary to note, that the sizes of humeral bone *Ursus (Spelearctos) spelaeus* almost have not changed for such long time. Relative age of fauna of mammals from Mikashevitchi in structure of which the humeral bone of a cave bear was found out, estimated in 200-300 thousand years, and the Ural cave bears lived 30-40 thousand years ago. Such stable morphological structure of a humeral bone could exist in case of high specialization of an animal and in a constancy of natural conditions in which the cave bear lived.