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ABSTRACT BOOK

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Small mammals from the Paleolithic site Strashnaya cave (Russia, Altai)

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The Strashnaya Cave, a multilayered Paleolithic site, is located in the Charysh River basin of Northwest Altai, just below the Inya and Tigirek Rivers. At this point, the Strashnoy stream meets the Inya river at its left bank. The name of the stream gives the name to the cave. The Strashnaya Cave is located on a steep slope of the south-eastern exposure of the left side of the Inya River valley at the height of 40 m above the river's edge. This cave is characterized by a simple horizontal structure and a length of about 20 m. The average width of the passage is approximately 2-3 m. The width and the ceiling height of the cave increase from the entrance inwards.

The archaeological materials of Strashnaya cave belong to the Upper Paleolithic and Mousterian complexes (Krivoshapkin and all, 2013). The remains of large and small mammals were found along with stone tools. Taphocenosis of large mammals is generally formed by the activity of predators, especially cave hyenas and wolf. Fragments of skeletons of typical representatives of the mammoth fauna were found: *Bison priscus* (Bojanus, 1827), *Equus ferus caballus* (Linnaeus, 1758), *Coelodonta antiquitatis* (Blumenbach, 1799), *Saiga tatarica* (Linnaeus, 1758), *Ovis ammon* (Linnaeus, 1758), *Bos* (*Poëphagus*) *baicalensis* (Vereshchagin, 1954), *Capreolus capreolus* (Linnaeus, 1758), *Gazella gutturosa* (Pallas, 1777), *Capra sibirica* (Pallas, 1776), *Crocuta spelaea* (Goldfuss, 1823), *Panthera spelaea* (Goldfuss, 1810) and *Panthera uncia* (Schreber, 1775) (Vasiliev, Zenin, 2009).

Accumulation of finds of small mammals was possible through the activity of predator birds, which could have nest near or directly into the cave. The small mammals have been used for paleoecological reconstructions of ancient man.

The bone material of small mammals was obtained as a result of the fieldwork in 2006-2009.

13 layers were described from Strashnaya cave. Lays № 11, 12 and 13 are sterile, without archaeological or paleontological finds. Part of the remains of middle-sized rodents and lagomorphs, which did not fall into small sieves, are viewed as large mammal fauna.

Altogether more 34 thousand small bone elements were found and ascribed to various groups of small vertebrates: Pisces, Amphibia (Anura), Reptilia, Mammalia (Insectivora, Chiroptera, Lagomorpha, Rodentia). The material is from light yellow to brown color. Most of remains are scattered teeth, mandibles, and long bones of limbs.

The total list of the small mammals includes 43 species. The quantities of each species were determined by counting all isolated teeth. The calculation results were included in

Layer Taxon	Chiroptera	Sorex minutus	Sorex araneus	SOLEX LUDUTATUS SOLEX SD.	Crocidura	Asioscalops altaica	Sciurus vulgaris	Eutamias sibiricus	Pteromys volans	Spermophilus undultus	Marmota sp.	Apodemus sp.	Cricetus cricetus Cricetulue herebeneie	Allocricetulus eversmanni	Fllobius sp.	Clethrionomys rufocanus	Clethrionomys rutilus	Clethrionomys glareolus	Clethrionomys sp.	Alticola strelzowi	Alticola macrotis	A 141 1	Alucola sp.	Lagurus lagurus	Lagurus sp.	Eolagurus	Lemmini	Stenocranius gregalis	Microtus oeconomus	Microtus hyperboreus	Microtus middendorffii	Microtus arvalis	Microtus agresus	Microtus sp.	Arvicola terrestris	Myospalax myospalax	Sicista sp.	Allactaga sp.	Alactagulus sp.	Allactaginae	Ochotona alpina- hyperborea	Ochotona pusilla	Ochotona sp.	Lepus sp.	Pisces	Allipiilulä (Aliura) Ptii:	Kepuna Arvicolidae	AIVICOLIUAG		Cricetidae		Number of specimens studies
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• Less than 1 %

Fig. 1. General composition of small mammals in Strashnaya cave.

the prepared tables. The percentage of each species was calculated layer-by layer. Based on this table a graph was drawn, which reflects the dynamics of the small mammals composition (Fig. 1).

The dominant groups during the whole sediment accumulation in the Strashnaya cave were: rock voles Alticola strelzovi (Kastschenko, 1899), narrow-skulled voles Stenocranius gregalis (Pallas, 1779), grey voles Microtus, and Altai zokor Myospalax myospalax (Laxmann, 1773). Co-dominant groups are Altai mole Asioscalops altaica (Nikolsky, 1883), marmot Marmota sp., long-tailed Siberian ground squirrel Spermophilus undulates (Pallas 1778), red-backed vole Clethrionomys, steppe lemming Lagurus lagurus (Pallas, 1773), pika Ochotona. Smaller percentages characterize common shrew Sorex, black-bellied hamster Cricetus cricetus, Baraba hamster Cricetulus barabensis (Pallas, 1773), Eversmann hamster Allocricetus eversmanni, (Brandt, 1859) mole-voles Ellobius sp., yellow steppe lemming Eolagurus luteus (Eversmann, 1840), water vole Arvicola terrestris (Linnaeus, 1758), birch mice Sicista sp. and five-toed jerboas Allactaga sp. Bats, which are typical for the cave faunas, are also few in numbers.

The conducted study has indicated that:

1. The general composition of the small mammal association of the Strashnaya Cave points to a Late Pleistocene-Holocene age.

2. The dominating landscapes during the whole deposit accumulation were mountain steppes, semi-deserts (except for the sand semi-deserts), open rubbly and stone scatterings, stone accumulations with numerous niches and hollows.

3. The times of Late Pleistocene are characterized by highly mosaic landscapes.

4. The Pleistocene climate was much milder and more humid than at present.

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