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ABSTRACT BOOK

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Possible cause of death of a juvenile mammoth, called the Yuka mammoth

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Permafrost sediments of northern latitudes have a unique property to preserve skeletal remains of Pleistocene animals, as well as their frozen bodies. The arctic part of Yakutia, where glacial deposits of Yedoma are widespread, belongs to such regions. So far, 15 frozen carcasses are found here, amongst others are mammoths, rhinos, horses, bison etc. (Vereshchagin, 1979; Lazarev, 2008; Boeskorov, et al., 2011). Study of mummified bodies of Pleistocene mammals, preserved in the permafrost, provides a lot of new information, inaccessible during study of ordinary skeletal remains. At the same time, the question on reason of the animal's death, and in general, disappearance of particular population of species, often remains unclear.

In 2010-2011, 3 new frozen carcasses of mammals, including so called "Yuka" mammoth (Fig. 1), were found at the southern coast of the Dmitry Laptev's Strait (Boeskorov et al., 2013). It's the first record of a juvenile *Mammuthus primigenius* of adolescent (puberty) age, 6-11 years old. Radiocarbon age of the Yuka mammoth (about 34.300 BP) corresponds to relatively warm Marine Isotope Stage 3 (MIS-3, Karginian interstadial). Remains of the mammoth are represented by the hide, head with trunk, ears and lips and lower part of carcass almost completely preserved in anatomical position with the remains of internal organs. Deep scratches, likely produced by the cave lion (*Panthera spelaea*) claws, are found on the hide near the occiput, throat, belly and hind legs of the mammoth. But these wounds were not fatal, and the mammoth was not a lion's prey. Otherwise, trunk, lips and internal organs would have been eaten first of all. Young mammoth, being rather large animal (its height at withers reached 165 cm, and living weight estimated about 350-400 kg), apparently could fend off a predator and escape. If large predator's, whether a lion or tiger, first attempt failed to capture a prey, it usually doesn't pursue it (Heptner and Sludsky, 1972; Schaller, 1972). Further it can be assumed that, frightened wounded running away mammoth, lost orientation, fell into pitfall trap, made by Upper Paleolithic Man, or into one of crevices, or permafrost crack, which are often formed

in bank outcrops as the result of solifluction. The animal fell down on its head, that probably causing its death, and particularly, preservation of the trunk. Dead animal was found by Upper Paleolithic Man. Probably, they could not get it out of the pit, due to great weight. That is why they cut the hide on carcass and took available upper part of the meat with bones and internal organs of the mammoth. It can be assumed that the animal died in the spring, as evidenced by the absence of subcutaneous fat layer. The remains of animal were naturally buried by silting deposits during spring flooding. And after all, it favored mammoth preservation from predators and subsequent defrost.

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Fig. 1. The Yuka mammoth carcass (partly restored).