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## **ABSTRACT BOOK**

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## The Somursun mammoth locality, Amga District, eastern Yakutia

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Somursun site is located on the "Tonus-Kyusa" lake (translated from Yakut as Tunguska), in the middle reaches of the Amga River (61°15'N, 132°40'E), about 5 km north of Mikhailovka settlement (Somorsunskiy nasleg), Amginskiy Ulus, Yakutia, Russia. The "Tonus-Kyusa" lake (approximately 700 x 400 m) is located 1.5 km far from the left bank of the Amga River. The remains of mammoths were found at the foot of a small hill (height 3-3.5 m) on the south-west shores of the lake. Each autumn the bank is flooded due to rains. By the time of our third expedition, the location was completely flooded.

About 40 skeletal remains (mammoth bones, fragments, and tusks) of a single species, *Mammuthus primigenius* (Blumenbach, 1799) were discovered in one concentration, occupying an area of approximately 4 x 5 sq. m, excavated to 150 cm depth. The random arrangement of the bones indicates their random accumulation. In central Yakutia such bone concentrations are very rarely found. Postcranial skeleton bone measurements follow von den Driesch (1976) and Maschenko (2002).

At the time of the site discovery, the bones were found not deeper than 50-70 cm from the surface level; some slightly weathered bones were spotted on the surface. Skulls were not found, but few fragments a tusk were present. Possibly, due to bone's transportation (and re-deposition), the skulls were not preserved.

The tusk fragment comes from a young mammoth, based on its overall size and depth of the pulp cavity. Comparing the size of the tusk with those from other localities, we can estimate that the individual was about 16-17 years old.

The mammoth bones recovered from the site included 12 vertebra, 6 scapula and 4 femora. After comparative anatomical and morphological analyses we concluded that the vertebrae belong to at least three different individuals, because all the thoracic and one lumbar vertebrae were anatomically fitting together.

Continuing excavations yielded mammoth remains at a

depth 50-150 cm in two separate soil layers. All the bones were laying within 3-4 m. Traces of human activity on the bones were not found. Bones collected from a depth of 1.5 m had black coloration, which turned into tan or light brown when drying.

Based on total amount of bones from the left and right sides and their sizes, along with comparisons with those from the other sites an estimation of 4-5 individuals belonging to 2.5-3, 7-10 and 25-40 years old mammoths is given.

We believe that there were two main causes of the mammoth bone accumulation at the site. The swamp or bog, which was formed during the warm Karginsky interstadial, became a trap for the mammoths, which were unable to get out. The predominant remains of young individuals found at the site confirm this hypothesis. The second factor is the vicinity of the river, which could contribute to the bone accumulations on the bank, as it was recorded at the Berelekh "cemetery", although the small concentration of the bones evidences the one-season event. The radiocarbon date is 38.770 ± 320 (GIN 14740), i.e. the Karginsky interstadial.

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