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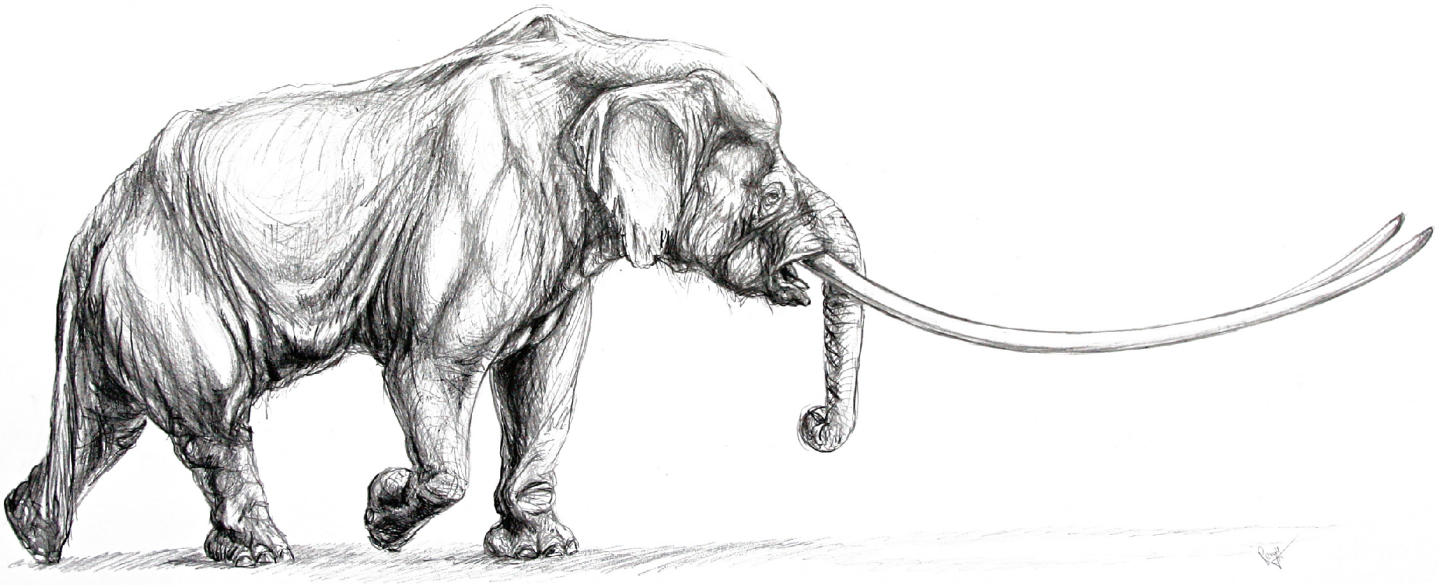

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ABSTRACT BOOK

Editors:
Dimitris S. KOSTOPOULOS, Evangelos VLACHOS, and Evangelia TSOUKALA

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Quaternary sites in Central Yakutia, containing remains of mammoth fauna

Innokenty BELOLUBSKY ✉, Pavel NIKOLSKIY, Alexander BASILYAN, Anatoly SERGEENKO, and Gennady BOESKOROV

Mamontova Gora outcrop, stretching for about 12 km, is located at the left bank of Aldan river (325 km upstream from its mouth, figure). Blanket loams and sandy loams with lenses of humic material and scattered plants remains occur at the 80-, 50- and 30- meter terraces. Layers are saturated with vein ice. Strata thickness is of 10-12 m. Remains of mammal fauna are represented by *Mammuthus primigenius* (Blum.), *Rangifer tarandus* (L.), *Coelodonta antiquitatis* (Blum.), *Equus lenensis* Rusanov and other representatives of the Upper Paleolithic faunal complex. Fresh water mollusks *Gyraulux gredleri* (Gred.), and *Valvata aliens* (West.) are also found. An absolute age of 35300 + 1500 years (MGU-IOAN-123) is estimated for timber from the lower half of the strata.

Steppe species (*Spermophilus undulates* Pall., *Microtus gregalis* Pall.) and tundra species (*Lemmus sibiricus* Kerr, *Dicrostonyx torquatus* Pall, *Microtus hyperboreus* Vinogradov), do not co-exist here at present time, whereas intrazonal meadow species (*Microtus oeconomus* Pall.), that live today in the area, are also found among rodents in Late Neopleistocene (=late Latest Pleistocene) of Mamontova Gora.

It is noteworthy that, fruits of *Trapa natans* L., 1758 were found in beaver dam remains. This suggests significantly more favorable climatic conditions than at present time (Boeskorov & Agadjanyan, 2004). Beaver bones were also found in Neopleistocene deposits of Mamontova Gora (Vangengeim, 1977) .

Part of a bighorn sheep skull found in Tandinskoe outcrop (figure), located in a small distance from Mamontova Gora suggests that this species was possibly present in the studied area.

Peschanaya Gora outcrop is located 60 km upstream from Aldan river mouth (62053'41"NL, 129048'07"EL; Fig. 1), and extends for 7 km along the right bank up Lena river. The outcrop is confined to the scarp of Lena river Bestyakh terrace, 20-30 m high.

Peschanaya Gora outcrop was previously described in detail by Alexeev et al. (1990). According to their data, the following formations occur within the frame of the outcrop: the Middle Neopleistocene Bestyakhskaya formation (sands with pebble, of a thickness of 1-7 m), the Mavrinskaya formation (14-16 m thick sands), and the Late Neopleistocene Diolkuminskaya formation, represented by sands with plant remains and buried soils, and with a thickness of 5-20 m. According to radiocarbon data, the age of Diolkuminskaya formation is 17200+500 yr BP (IM-759) 2 meters above the brink, and -14000+500 yr BP (IM-760) at 8 meters above the brink is. An age of 11850+150 yr BP (GIN-2461) is also estimated from soil samples at the top of the section consisted

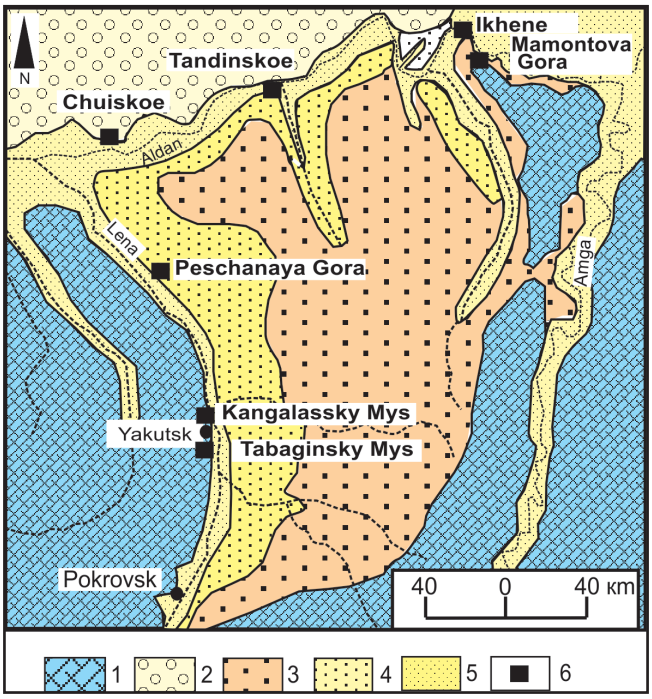

Fig. 1. Geomorphologic diagram of the Central Yakutia (by P.A.Soloviev, 1959).
1, denyfation plateau; **2**, accumulation glacial-fluvioglacial plain; **3**, Abalakhskaya accumulation plain; **4-5**, terraces: 4, tuyngulunskaya and bestyakhskaya;5, II (sergelyakhskaya) and I (yakutskaya) terraces above flood-plain, high and low flood-plain terraces; **6**, exposured

of fine-grained sand layers with horizontal lamination. Alternation of eolian, lacustrine and soil layers, belonging to Holocene, occurs in the uppermost part of the section. The total thickness of the Holocene deposits is about 3 m. According to several researchers (Alexeev et al., 1990, Péwé & Hournaux, 1983, Grinenko et al., 1993), the sands of Diolkuminskaya formation are of eolian origin. Proof of this is the observed unidirectional cross-lamination in sections, with dip 25-300, close to angles of natural slope. Deposits of Diolkuminskaya formation close to Peschanaya Gora,– namely the Sullar Myran site (at about 60 km from Peschanaya Gora upstream the Lena river; figure) includes rather numerous mammal remains of mammoth fauna. Bone remains of *Mammuthus primigenius, Coelodonta antiquitatis, Equus lenensis, Bison priscus*, and *Saiga tatarica borealis* were found here. The presence of saiga, indicator of steppe habitats, further suggests cryoarid conditions during the formation of Diolkuminskaya strata. A single radiocarbon dating on rhino bone from Sullar Myran, give an age of 20530+440 yr BP (GIN-14410), indicating a Sartanian period of inhabitation for this extinct species. The combinations of species found in Sullar Myran, is generally typical for Late Neopleistocene of the Siberian

platform, including its Sartanian cryochron, characterized by tundra-steppe, cryo- and xerophyte type of vegetation.

Based on palynological data analysis, it can be concluded that, open landscapes prevailed during the sand accumulation in the lower part of the section. Vegetation cover is treeless, very sparse, and fragmentary, indicating severe climatic conditions, extremely unfavorable for the existence even of shrubby and herbaceous associations.

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belolubsky@diamond.ysn.ru

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