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ABSTRACT BOOK

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Palaeoloxodon Elephant from the Pleistocene of Southwestern Siberia (Russia)

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During the Pleistocene, representatives of the mammoth lineage occurred extremely widely all over the territory of Eurasia. Elephants of the genus *Palaeoloxodon* Matsumoto, 1924 were not as numerous, but their distribution covered most part of Eurasia as well. Abundant finds of these so-called «forest elephants» have been recorded in Europe (Italy, France, Spain, England, etc.) as well as in India, Japan, and China.

Individual fossils of these elephants have been described from Early(?) and Middle Pleistocene localities of Eastern Europe (south-west of Russia, Moldova, Ukraine), Kazakhstan and Turkmenistan as the species *Palaeoloxodon antiquus* (Falconer et Cautley), with several subspecies (Garutt, Vangengeim, 1982). These finds correspond to deposits of the Likhvin Interglacial (Singilian fauna) which is synchronous to the Holsteinian Interglacial (North-European Scale) or the end of Late Galerian — beginning of Aurelian (Italy), the time of acme of paleoloxodont elephants in Western Europe.

As for Siberia, the finds of *Palaeoloxodon* are very rare. Isolated molars and their fragments were found on Aldan river (Lena river basin, Eastern Siberia) and on Irtysh and Ob' rivers (Ob' Plateau, Western Siberia). They were referred to *Palaeoloxodon namadicus* (Falconer et Cautley) and dated as Early and Middle Pleistocene by (Vangengeim, Zazhigin, 1969).

Recently, a fragment of a skull with three molars (M^3 dex, M_3 dex and M^2 sin) has been found in the supposedly Middle Pleistocene deposits on the Sharap river (one of the Ob' river feeders) in southwestern Siberia. The $M2$ is heavily worn out, while both last molars are in good condition: they are in the initial stage of wear (each molar has 1-2 broken plates in the rear part of the crown). Parameters of upper and lower third molars (respectively) are as follows: molar length: 280 and 330 mm; crown height: 250 and 200 mm; width: 80 and 85 mm; plate number: 16 and 17; average plate frequency 5.5-6.0 and 4.0-5.0 per 100 mm; highly folded enamel, average plate thickness: 2.0-2.5 mm (Fig. 1).

These morphometric data, proportions of crown, high hypsodonty and low plate width differentiate these molars from the ones of the mammoth lineage, allowing to attribute them to the genus *Palaeoloxodon*. Important fact is that in length and height the crowns of these molars are similar to *Palaeoloxodon namadicus*, while the crown width, the plate frequency and the antiquoid incipient wear figures correspond to *Palaeoloxodon antiquus*.

Rare finds of paleoloxodont elephants in Siberia indicate that their expansion to the East and North of Eurasia were impeded by continentality of the climate and environmental conditions that were drastically different from West-European environments. During cold epochs (when open landscapes were predominant in most part of the Eurasia) these elephants survived only in the warm

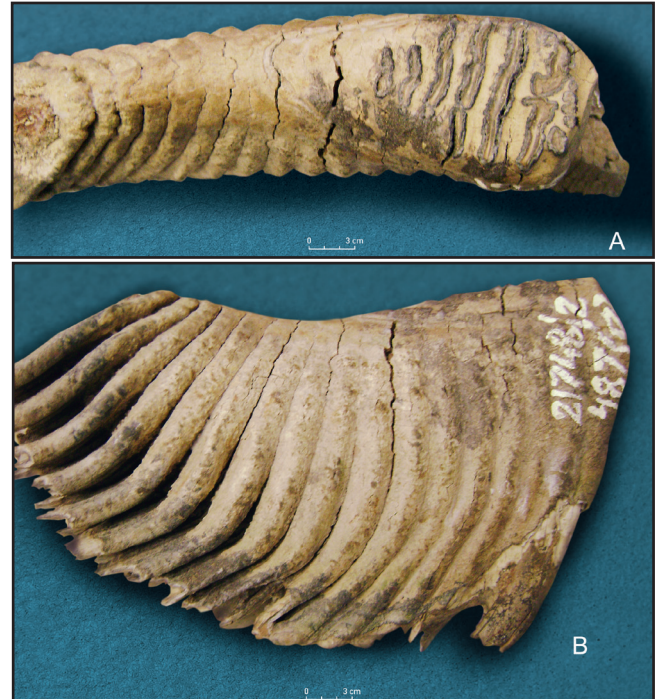


Fig. 1. *Palaeoloxodon* aff. *antiquus* (Falconer et Cautley), #21748(2), lower right third molar from Ob' River basin, Novosibirsk region, South of Western Siberia, Russia. (Collection of Novosibirsk State Museum of Local History and Nature). A, occlusal view; B, buccal view.

and moist forests of Southern Europe. In warm epochs paleoloxodonts were expanding to Middle and Eastern Europe and partly to Siberia, following the advancement of the forest zone. In this territory they could inhabit softwoods of moderate type with pine, larch, birch, alder and osier.

The findings of elephants of the genus *Palaeoloxodon* in Siberia, although extremely rare, indicate that we should pay closer attention to the expansion and the habitat of this branch of proboscideans in Asia.

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