

New stratigraphic data on the quaternary sediments in the Peschanaya River Valley, Northwestern Altai

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Abstract

© 2017 Siberian Branch of the Russian Academy of Sciences. This paper presents new data on the structure and the lithological, pedological, paleontological, and paleomagnetic features of the Middle and Upper Quaternary sediments in the Peschanaya River valley, the foothills of northwestern Altai. Those horizons contain a loess-soil sequence and sediments relating to two Middle Pleistocene interglacials. On the basis of palynological characteristics of one of the Middle Pleistocene interglacials, the succession of floras during the respective stages is reconstructed. The Middle Pleistocene interglacial floras of Western Siberia are compared with that reconstructed on the basis of the Karama site, evidencing marked differences. The flora around Karama included broad-leaved taxa, which were absent during the Middle Pleistocene interglacials of Western Siberia, when apart from modern arboreal taxa, only cold-resistant broad-leaved ones were present (*Tilia*, *Corylus*, *Ulmus*, and *Juglans*). The Karama flora resembles the last Western Siberian thermophilic flora-Barnaul, which existed during the long climatic warming of the Early Pleistocene, corresponding to the Tiglian in northwestern Europe (2.23-1.59 Ma BP). Since the beginning of the Middle Pleistocene, interglacial floras of Western Siberia have resembled modern ones. In terms of phytocenotic and palaeoclimatic features, Middle Pleistocene interglacial environments of Western Siberia display a sharp contrast with those of Barnaul and Karama.

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Keywords

Altai Mountains, Karama, Paleolithic, Quaternary, Stratigraphy

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