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Title: *DIATOMS IN PERMAFROST SEDIMENTS OF BERINGIA as indicators of ecological changes*

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Investigation of changes in the environment of Beringia is of a great interest in term of paleoclimatology, archeology, palaeoecology and ecology. Most often the permafrost deposits represent archives of various palaeoindicators, including, diatoms as a source of information on occurring changes. Investigation was conducted on the Big Lyakhovsky island, Russia (73,35 °N; 141,24 °E), and on the northern coast of the Seward Peninsula, Alaska, the USA (66,34° N; 164,18° W). Comparative investigation of environmental changes from the late Pleistocene to Holocene at Beringiya's different sites was the main goal of the conducted study. Comparison of species structures of two cores from different parts of Beringia showed higher species richness of diatoms in the eastern Beringia that indirectly reflected more diverse conditions for their development from the late Pleistocene to Holocene. Index of species similarity of diatoms between west and east Beringia is low (33, 6%) that confirms some similarity of diatom floras and differences in conditions of their formation. Dominant species are differing considerably. Also the higher ratio of benthic, halophylic and mezohalobic taxa is characteristic for East Beringia. Reconstruction of palaeoecological changes from late Pleistocene to Holocene in the territory of west and east Beringia has shown, that diatom flora of East Beringia as a whole was formed at low water levels, higher mineralization and in the conditions of constant velocity. Investigation was conducted with financial support of DAAD, Germany and the Ministry of Education and Science of Russian Federation.