

Diatoms of sediments of plescheevo lake (Russia) as indicators of environmental changes in holocene

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Abstract

© SGEM2018. Bottom sediments of continental limnic ecosystems are of great interest to researchers as paleoarchives of changes taking place in the environment. Use of diatoms allows to reconstruct the main stages of life of lakes against the background of changing environmental conditions caused by natural and anthropogenic causes. The core of the bottom sediments selected from Pleshcheyevo Lake (Russia). The maximum age of the core was 5070 ± 150 year BP (Holocene period). Diatom analysis of 73 samples revealed 127 taxa. In the number of valves dominated by cosmopolitan, alkaliphilic benthic, oligogalobic indifferent species. In addition, three mesohalobic species were found *Campylodiscus clypeus* (Ehrb.) Ehrb., *Navicula halophila* (Grun.) Cl., *Surirella ovalis* Bréb.. The diatom analyses indicated two periods in existing of the lake. The first period reflected the stage with a low water level, later-increasing the water level and the formation of a deep, less mineralized water body in a cool, humid climate. Changes in the diatom complex in the upper part of core reflected a rise in water levels, decrease in mineralization and a slight decrease in a temperature of environment.

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Keywords

Diatoms, Holocene, Palaeoenvironment, Pleshcheyevo Lake

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