

Introduction of underwater sediments of Khuvsgul Lake, Mongolia

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Khuvsgul Lake is located in the Baikal depression zone at an elevation of 1645 m. Thirteen short (15-150 cm) sediment cores were recovered from the lake in 1999 and 2001. From visual and microscopic observations on these cores, three lithological units were identified in almost all of the cores: layer A is olive-black diatomaceous mud (layer Ao is the oxidized layer A); layer B is calcareous silt marked by submillimeter-scale laminae in various colors; and layer C is black and olive-grey calcareous silt with lenticular sands. Radiocarbon ages of total organic carbon in sediments demonstrate that the layers A, B and C correspond to sediments of postglacial, deglacial and last-glacial, respectively. Fine structure of the deglacial climate (such as Younger Dryas and Bolling/Allerod) can also be found in the profiles of physical properties of the cores, simultaneously with that of the Greenland Ice Sheet Project Two (GISP2) core. The marked changes of the lithology reflect drastic changes of the lacustrine environments. It may be related to changes of the system of sediment inputs, of the lake level, and/or of the duration of the winter ice-cover over the lake.