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HOLOCENE ENVIRONMENTAL CHANGES IN KHUDER PEATLAND, NORTHERN MONGOLIA

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Holocene paleoenvironment in Khuder peat bog, the northern Mongolia was reconstructed by diatom and pollen analyses on peat boring samples. Diatom records of two boring cores showed a general chronology of peat land development from stream environments, marsh and then to the present acidic peat bog established as early as in the mid Holocene. Pollen and diatom records revealed Mid-Holocene drought from 6,000 to 3,000 cal yr BP and its periodic extent was correlative with other studies in Mongolia and the southern Siberia.

Abrupt changes of water environment and vegetation observed are associated with global climatic changes such as the Bond events occurred in North Atlantic Ocean. Cooler period of Little Ice Age and the warmer period of Medieval Warm Period were also remarkably manifested respectively as dry and wetter spells implying a strong connection of climate changes around the Northern hemisphere. However, climate changes contradictive with the results of other studies were also often observed, so the geographical features, pedology and orography should be the key control factors for the moisture balance of the area. We inferred that the observed climatic changes would be reflecting displacement of continental dry region as the study area is located in the transitional vegetation zones between Siberian taiga and Mongolian arid steppe.

Keywords: Northern Mongolia, Holocene, Climate change, Peat sediment