Paleovegetation and paleoenvironmental changes in the northern Mongolia since MIS 3 (preliminary results)

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We present results of paleovegetation and paleoenvironmental analysis for new lake sediment record of Sangiin Dalai lake in the northern Mongolia. We took a surface sediment core in August 2016 (16SD02; 84 cm length), and five boring cores in March 2019 (19SD01~05; totally ca. 16 m length) from Sangiin Dalai lake, a large permanent hard water lake. The studied lake is located in the southern margin of Siberian continuous permafrost zone, and surrounded by forest-steppe vegetation dominated by Larix Sibirica. In order to reconstruct paleoenvironmental and paleovegetation change, we conducted palynological analysis and high-resolution elemental composition analysis using μXRF core scanner (Cox, Itrax) at Center for Advanced Marine Core Research, Kochi University. We also performed ^{14}C and OSL age dating. On the basis of palynological analysis and biome reconstruction (Tarasov et al., 2000), marked vegetation changes from steppe-desert in last glacial to steppe-taiga in the Holocene were reconstructed. We also note the periodic lithological change indicating drastic lake environmental change during MIS 3. Further palynological analysis for reconstructing variations in paleovegetation and paleoenvironment in the northern Mongolia since MIS 3, and comparison with palynological record in surrounding area (e.g., Kotokel lake in southern Siberia: Shichi et al., 2009; and Orog lake in southern Mongolia: Yu et al., 2019) are now ongoing.

References

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