

モンゴル南部の湖の古水位変動

Paleo Lake level change in southern part of Mongolia

*長谷部 徳子¹、三寶 真²、Udaanjargal Uyangaa^{2,3}、Ganbat Shuukaaz³、福士 圭介¹、田中 幸哉⁴
、Davaasuren Davaadorj³

*Noriko Hasebe¹, Makoto Sambo², Uyangaa Udaanjargal^{2,3}, Shuukaaz Ganbat³, Keisuke Fukushi¹
, Yukiya Tanaka⁴, Davaadorj Davaasuren³

1. 金沢大学環日本海域環境研究センター、2. 金沢大学地球学教室、3. National University of Mongolia、4. Kyunghee University

1. Institute of Nature and Environmental Technology, Kanazawa University, 2. Department of Earth Sciences, Kanazawa University, 3. National University of Mongolia, 4. Kyunghee University

Lake Boontsagaan, Orog and Olgoy are located in the Valley of the Lakes, Gobi-Altai transition zone, which stretches from central to western Mongolia. This area suffers desertification probably due to the ongoing global warming and dried up lake sediments are worried as a source of contaminated sand storm. The flat surface in Valley of Lakes is covered with Quaternary lake sediments. Paleoshorelines are identified near the lakes. This study observed the sedimentary structures of the outcrops on the paleoshoreline and samples were collected to estimate the time when lake level was high by Quartz OSL dating method. The outcrop near the Ology, Boontsagaan, and Orog lakes are higher than the present lake level by 8 m, 15 m and 3 m, respectively.

The history of lake level change is proposed based on the age, altitude of the localities, and sedimentary structure of the outcrops. Data from Boontsagaan lake, for which coarse grains were analysed, scatter, therefore the youngest age component is extracted by plotting the data on the radial plot (Galbraith, 1988, Vermeesch, 2009). Ages from Boontsagaan Lake are around ~4-9 ka, while ages from Olgoy and Orog lakes are around ~1-2 ka. Because Boontsagaan Lake is larger and deeper than other lakes, its lake level change would be less active. Besides, relative height of the locality to the current lake level is higher than other two lakes. Therefore, the lake level was very high before ~5 ka, and relatively high at ~1-2 ka. The obtained results are consistent with previously reported data from the nearby sites (Lehmkuhl et al., 2018).

キーワード：湖水位変動、光励起ルミネセンス年代測定、モンゴル、完新世

Keywords: Lake level change, OSL dating, Mongolia, Holocene