

モンゴル南西部オログ湖堆積物から復元される最終氷期～完新世の古環境変動とホモ・サピエンス定着との関係性

Paleoenvironmental changes recorded in Orog Lake, southwestern Mongolia during MIS 3 and its relationship with *Homo sapiens'* s migration into northern Asia

*長谷川 精¹、野間 七瀬¹、勝田 長貴²、村山 雅史³、田村 亨⁴、出穂 雅実⁵、イチノロフ N.⁶、ダワドルジ D.⁷、長谷部 徳子⁸、笹岡 美穂⁹、岩井 雅夫⁹

*Hitoshi Hasegawa¹, Nanase Noma¹, Nagayoshi Katsuta², Masafumi MURAYAMA³, Toru Tamura⁴, Masami Izuho⁵, Niiden Ichinnorov⁶, Davaasuren Davaadorj⁷, Noriko Hasebe⁸, Miho Sasaoka⁹, Masao Iwai⁹

1. 高知大学理工学部、2. 岐阜大学教育学部、3. 高知大学農林海洋学部、4. 産業総合研究所地質情報研究部門、5. 首都大学東京人文社会学部、6. モンゴル科学アカデミー、7. モンゴル国立大学、8. 金沢大学環日本海域環境研究センター、9. 高知大学海洋コア総合研究センター

1. Faculty of Science and Technology, Kochi Univ., 2. Faculty of Education, Gifu Univ., 3. Faculty of Agriculture and Marine Science, Kochi Univ., 4. Geological Survey of Japan, AIST, 5. Faculty of Social Sciences and Humanities, Tokyo Metropolitan Univ., 6. Mongolian Academy of Sciences, 7. National University of Mongolia, 8. Institute of Nature and Environmental Technology, Kanazawa Univ., 9. Center for Advanced Marine Core Research, Kochi Univ.

An aim of the present study is to understand detailed paleoenvironmental changes in Mongolia, situated at a key crossroad for *Homo sapiens'*s migration between central, eastern, and northern Asia during the Initial and Early Upper Paleolithic (IUP-EUP). Available archaeological evidences have suggested the emergence of IUP at around ca. 45-40 ka (e.g., Zwyns *et al.*, 2014; Rybin *et al.*, 2016; Izuho *et al.*, 2018). However, yet the paleoenvironmental changes of this period in Mongolia is largely unclear, preventing us to understand whether the possible environmental changes were significant as a major driving forth for modern human' s lifeway.

In this paper, we present a new record of paleoenvironmental changes in southwestern Mongolia during MIS 3. In January 2017, we took two parallel cores (OROG01, 24 m; OROG02, 21 m) from Orog Lake, a shallow saline lake located in northwestern margin of Gobi Desert. The high-resolution major and minor element composition changes were obtained using μ XRF core scanner (Cox, Itrax) at Center for Advanced Marine Core Research, Kochi University. Based on the preliminary results of OSL and ¹⁴C age dating, basal age of sediment core OROG01 yielded ca. 38 ±4 ka, nearly accordant with the basal age of ~45 ka reported in the previous study (Yu *et al.*, 2019). On the basis of our high-resolution elemental composition data, in conjunction with previous sedimentological and palynological data (Yu *et al.*, 2019), the paleoenvironments of southwestern Mongolia were more humid with higher lake levels during MIS 3 than Holocene. Our results also suggest periodic and higher amplitude paleoenvironmental changes in this region, which likely correspond to Dansgaard-Oeschger events. This new record would allow us to discuss potential relationship between paleoenvironmental changes and ecosystem changes in Mongolia during the IUP-EUP.

キーワード：湖底堆積物、塩湖、古環境変動、ダンスガードイベント、ホモ・サピエンス、上部旧石器時代初期および前期

Keywords: Lake sediments, Saline lake, Paleoenvironmental changes, Dansgaard event, *Homo sapiens*, Initial and Early Upper Paleolithic

