

Paleohydrology information from the deposit cores and their porewater, Lake Kasumigaura and Choushi, Japan

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As one of the directionality of the hydrology in the future, there is research the scale-up in the time direction, that is, paleohydrology which is studied hydrological phenomenon of past. In the viewpoint of transition of the global environment not only as hydrology transition, it is very important thing that understanding a hydrology transition of a past global environment to predict in the future. For the future, it will be necessary to research the time scale including past water in addition to a present hydrological cycle.

Then, this study bored all cores for clay and the silt Holocene deposit in Lake Kasumigaura and Choushi where depositional speed of 10,000 years in the past was fast, and we analyzed paleohydrology from a clay and silt low-permeable deposit and its porewater.

Three boreholes with SiteK-1 (15.25m in drilling depth, water depth of 6.6m) and SiteK-2 (29.70m in drilling depth, water depth of 6.0m) in Lake Kasumigaura and SiteC (27.00m in drilling depth, altitude of 10m) in Choushi were drilled, and the sample for the pore water extraction was gathered. The EC, inorganic chemistry content, hydrogen and oxygen isotope ratio in the extracted pore water by using centrifuging methods were analyzed. The ^{14}C age analyses were done for the organic materials from the different depths to confirm the formation age. The diatom fossil analyses of Kasumigaura core were also done to confirm the salinity condition during the deposition periods.

In this time, we will introduce the result of paleohydrological analysis by using these methods.