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Change of recent sedimentary environment recorded to the coastal Lagoon sediment in the Lake Ogawara , Aomori Prefecture

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To analyze paleoenvironment and paleoclimate, we must understand the feature of sediments as recorder and recent environment. In particular, the coastal lagoon is necessary to investigate before performing the paleoenvironmental study because of shows each characteristic lake environment. In this study, we performed a field study in the Lake Ogawara from November, 2012, to clarify a characteristic of sediments.

The Lake Ogawara, is located in east part of Aomori Prefecture, have a halocline around 20m for water depth throughout the year. The water column of Lake Ogawara divided into 3 water masses, as an epilimnion (0-10m), a metalimnion (10-18m), and a hypolimnion (deeper than 18m).

In this study, Og 20 , 33 , 64 , 84 , 95 and 97 in the 6 point short core samples.

As a result of grain size analysis, the frequency distribution of muddy sediment have a mode at 3.5, 5.5, and 7.5 phi. As a result of CNS element anaysis of core samples, the total organic carbon (TOC) contens value of surface sediments is 9% decrease toward deep, and show very low value (around 2%) .The total sulfur (TS)contens value of surface sediments is 2.5% decreased towards a lower value 0.4%.

From the epilimnion of the current environment, the environment has changed and metalimnion and salinity in reductive of the current.

Characteristics of grain size composition is based on density flow from the Pacific Ocean, floating suspended solids, by the density flow and floating suspended solids by rivers.

Shows that by comparing the current and 2000 year, in the metalimnion into salinity in proceeded, has been an increase in the supply of coarse sediment by density currents from the Pacific Ocean.

Keywords: Coastal Lagoon, Lake Ogawara, TOC content, TS content, grain size analysis