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Environmental factors affecting sedimentation of organic matter in Lake Takkobu, Kushiro Marsh

Youichi UENO¹⁾, Yasushi ISHIKAWA¹⁾ and Hidetoshi MIKAMI¹⁾

1) Hokkaido Institute of Environmental Sciences

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Abstract

In this study, the vertical profiles of C and N of sediment cores at 3 offshore stations were examined to better understand the environmental factors affecting the sedimentation of organic matter in the lake. Organic contents of sediments in this lake were higher than those in most lake sediments. The organic matter of aquatic plant origin along the shore influenced the sediments in this lake. In the upper part of sediment core from the central point, the C/N ratio was comparatively low. It was expected that the organic matter of phyloplankton origin had recently increased. Near the central point and the northern offshore area, the vertical profiles of C and N in the sediment cores showed a clear peak. The age of this peak matches that in the early years of development (ca. 1890) in the basin of the lake. The sediment was mainly composed of particles supplied from the Takkobu River, and had recently increased in organic content in the southern offshore part of the lake. This could be explained by human development around the river after 1890.

Key Words: Lake Takkobu, sediment, organic matter

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