

Historical environmental changes and earth-surface processes inferred from lake-catchment systems

*Kenji Kashiwaya¹

1. Institute of Nature and Environmental Technology, Kanazawa University

Historical environmental changes in lake-catchment systems have been printed in lacustrine sediments. Earth-surface processes related to the changes are estimated with information on the systems. Onuma lakes in the southern Hokkaido were formed with the mountain decay of Mt. Hokkaido Komagatake in 1640. Some lacustrine sediments obtained in the lakes revealed environmental changes and earth-surface processes since then. Sediment discharge from the catchment seems to be related to the size of eruptions; size of material to be transported by surface discharge: sedimentation rate was large after the 1640 eruption, the rate after the 1694 eruption was comparatively small, the rate after the 1856 eruption was large and the rate after the 1929 eruption was comparatively small. Mineral grain size fluctuation may be corresponded to annual precipitation between the year of instrumental observation start (1872) and the 1929 eruption.

Keywords: Earth-surface processes, Lacustrine sediment information