

ACG032-P10

Room: Convention Hall

Time: May 26 17:15-18:45

The correspondence between historical extreme-flood records and lake sediments in Lake Yunoko, Nikko, Japan

Arata Kioka^{1*}, Hiroshige Negami¹, Masanori Hozumi¹, Toshiki Nakanishi², Naoya Iwamoto³, Yoshio Inouchi²

¹Human Sciences, Waseda Univ., ²Human, Waseda Univ., ³Tochigi Prefectural Museum

We retrieved new 70-80 cm cores from the north area of Lake Yunoko in order to reconstruct individual palaeofloods and/or to correspond with historical extreme-flood records of the Kanto Plain. Lake Yunoko may monitor the floods occurring in the Kanto Plain, which the lake has the same water source as Tone River and Kinu River flowing through the region. We cut the sediment cores into 0.5cm intervals to analyze median diameter and apparent densities. The sediment accumulation rate was estimated based on apparent densities, taking into account the depth of the volcanic ash layer which came from Nikko-Shirane volcano in AD 1649. The results reveal that the peak values of median diameter correspond with all AD 1704-1947 historical extreme-flood documents of the Kanto Plain within few time errors. Moreover, one might make the case that other extreme-floods occurred before AD 1704 using the peak values of median diameter. Implications of this study should help interpretation of flood frequency and magnitude change in prehistoric times caused by climatic changes.

Keywords: Lake sediments, extreme-flood, Kanto Plain, Lake Yunoko