

Investigation of paleo-lake history based on borehole cores at the northern foot of Mt. Fuji, central Japan

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The present feature of Mt. Fuji is geologically divided into the two sequence layers; those formed before and after about 11000 yB.P. called Older Fuji Volcano(OFV) and Younger Fuji Volcano(YFV), respectively. It was observed that the most part of distribution of their volcanics near Mt. Fuji is composed of YFV. Therefore, it was hard to observe OFV in the area of surrounding Mt. Fuji. Further, it is geohistorically recognized that the five lakes located at the northern foot of Mt. Fuji, such as Yamanaka, Kawaguchi, Sai, Shoji and Motosu Lakes, were formed and transformed by lava and tephrae spewed in the volcanic activities of Mt. Fuji. In order to understand detail geohistorical characteristics of Mt. Fuji volcano and environmental history of the five lakes, borehole cores were extracted at Yamanaka, Kawaguchi and Motosu Lakes and Oshino paleo-lake, respectively.

Based on radiocarbon age determination, geochemical analysis and microfossil analysis for these samples, geological information of OFV as well as YFV were confirmed for each borehole cores. Especially, the information of OFV made clear about Mt. Fuji volcanic history. Further, these borehole cores also provide a valuable information of geohistorical change of the Fuji five lakes and the environmental history of the area.