Geoenvironmental investigation of borehole cores at the northern foot of Mt. Fuji, central Japan

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Mt. Fuji is the largest basaltic stratovolcano in Japan. During the Quaternary Period it spewed a tremendous amount of volcanics. The present features of Mt. Fuji are geologically divided into the two sequence layers; those formed before and after about 11000yB.P. called Older Fuji Volcano(OFV) and Younger Fuji Volcano(YFV), respectively. It was observed that most the volcanics near Mt. Fuji are composed of YFV. The eruptions of YFV covered most of the material from OFV. Therfore, it is 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 tephras spewed in the volcanic activities of Mt. Fuji. In order to understand detail geohistorical characteristics of Mt. Fuji volcano and the environmental history of the five lakes, borehole cores were extracted at Yamanaka, Kawaguchi and Motosu Lakes, respectively. Based on radiometric age determination and geochemical analysis for these samples, geological information of OFV as well as YFV were confirmed for each borehole cores. Further, these borehole cores also provide a valuable information of geohistorical change of the Fuji five lakes and the environmental history of the area.