

Quaternary paleoclimatic history in the Central Himalaya on the basis of palynological study

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We undertook core drilling in ancient lake sediments of the Kathmandu Valley, central Nepal Himalaya, in order to clarify the record of past Indian monsoon and its linkage to the uplift of the Himalaya. As the results, three cores were obtained: 218 m-long core (RB) in the central part of the valley in 2000, total 108 m-long core (LD) in the southern marginal part of the valley in 2001, and a 12.5 m-long core nearby Tau Daha pond, western part of the valley in 2002. We carried out lithostratigraphic and paleomagnetic study and AMS ¹⁴C dating of these cores. Furthermore, we have undertaken various kinds of analyses: pollen, diatom, clay mineral, grain-size distribution, bulk chemistry and organic chemistry, for the purpose of reconstruction of the environmental changes and paleoclimate.

In this paper, we report the results of pollen analyses on the whole samples obtained from RB core, at one-meter intervals and samples from the topmost part of RB core and TD core, at 50 cm intervals. Based on the obtained pollen diagram, we discuss on the paleoclimate in the Kathmandu Valley. We try to compare our results with other paleoclimatic curves reconstructed by other indexes, and discuss on the history of the Indian monsoon during Quaternary. Furthermore, we refer to the history of deforestation and cultivation in the Kathmandu Valley by human being.