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Vegetation and paleoenviroment during the Last Glacial around the border of Musashino and Yodobashi Uplands, Tokyo

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Peaty deposits around the Last Glacial Maximum (LGM) were cropped out from Site A of Tachikawa terrace (the construction site of 9th building), in the College of Humanities and Sciences, Nihon University. The vegetation history of this outcrop around AT tephra was investigated on the basis of pollen analyses.

About 32,000 years ago, in the vicinity of the investigated area, swamp woods of Alnus were dominant, accompanying conifer and cool-temperate-subarctic deciduous broad-leaved trees in swampy land and upland. It became a little warmer at about 30,000 years ago, the conifer and the cool-temperate subarctic deciduous broad-leaved trees decreased, and temperate to cool-temperate deciduous broad-leaved trees increased instead. Then, the climate became colder toward LGM and the cool- temperate subarctic conifer increased. The commencement of cold climate was shortly before AT tephra fallout.

The pollen diagrams of this site and another site of neighboring Sakuragaoka High School, Nihon University show continuous vegetation change before and after AT tephra. Moreover, those were compared with those of the Nogawa peat, the Shimo-Oshima peat and Kashima IMAGES core, including AT tephra. At a result, the cool-temperate- subarctic conifer forest began to increase shortly before AT tephra, and those were strongly increased shortly after the deposition of AT tephra. This cold phase corresponds to LGM.

Another site B, boring core samples were taken from Musashino Upland in the College of Humanities and Sciences, Nihon University. In this site, the formations of Tachikawa Loam, Musashino Loam, and the uppermost part of Shimosueyoshi Loam are overlying gravel layer. Among these formations, some peaty horizons are included. Therefore pollen analysis for this core may be a good example for clarifying the vegetation history for the past 100,000 years, especially early to middle of the Last Glacial Period.

From the result of pollen analysis, Alnus was dominant in the depth of 6 m peaty deposit, but Cryptomeria japonica was dominated around the depth of 8 m. And also, Hemiptelea which existed in MIS5 and maybe before LGM in Japan was found at the depth of 5 m. The vegetation history of the site B is examined in more detail to clarify climatic and environmental change during the last 100,000 years in eastern part of Musashino Upland.

Keywords: Musashino, Last Glacial Period, pollen, vegetation change, Japan