Stratigraphy of early Pleistocene tephras and geological structure in the east part of Musashino upland, central Japan

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Four all cores from boring conducted at Wadabori Park of Suginami Ward (core W), Kinuta Park of Setagaya Ward (core K), Tamagawadai Park (core T) and Unoki (core U) of Ota Ward, east part of Musashino upland, Tokyo were reexamined. Mineral composition, shapes of volcanic glass shard, refractive indices of volcanic glass and heavy minerals and chemical composition of volcanic glass of several tephra layers from these cores were determined. As a result, it is revealed that four tephra layers are correlative with the key tephra layers in the Kazusa Group of the Boso Peninsula. W-1 tephra (from core W) is identified as Kd8 tephra in the Kiwada Formation, which showing the sediments of 22 m depth at Wadabori Park is correlative with the upper part of the Kiwada Formation deposited at 1.21-1.27Ma. K-7 (from core K) and T-7 (from core T) tephras are identified as Kd16 tephra in the Kiwada Formation, and T-18 tephra (from core T) is identified as Kd18 in the Kiwada Formation. These identifications of tephras indicate that the sediments of 40 m depth at Kinuta Park and 32-85 m depth at Tamagawadai Park deposited at 1.27-1.45Ma. Geological structure deduced from the correlative tephras suggests the Mizonokuchi Syncline developed in the Tama Hills extends to the east part of Musashino upland.