

Development of paleolakes related to landslide activities in the late Pleistocene epoch on the eastern foot of Mount Kushigata, the Koma Mountains in central Japan

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A north-south strike elongated depression 5 km long and 1-1.5 km wide is present on the eastern piedmont of Mount Kushigata, west of the kofu basin in central Japan. This depression is filled by older landslide deposits formed in the middle Pleistocene epoch. The older landslide deposits are covered with thick lacustrine sediments consisting of peat and silt, bearing On-Pm1 (100 ka) and On-In (90 ka) pumice layers. Stratigraphy, petrography, lithofacies, and the result of pollen analysis of the lacustrine sediments reveal the historical development of paleolakes on the older landslide bodies. The lacustrine sediments are seen at several outcrop localities with different altitudes in the depression, suggesting the presence of several lakes or ponds. The water bodies were formed initially during from Marine Isotope Stage 6 to 5d (185-110 ka) and had persisted for ten thousand or a few tens of thousands years. The paleolakes were buried by the younger landslide deposits after 90 ka. The historical development of the depression and paleolakes would be related to large-scale gravitational slope deformation of Mount Kushigata as well as the displacement of Ichinose fault located between Mount Kushigata and the Kofu basin.

Keywords: Landslide, Lacustrine sediments, Tephrochronology, Pollen analysis, On-Pm1 tephra, On-In tephra