

Geomorphological and geological characteristics and origin of landslide lobes in the Dakesawa basin, the Kamikochi Valley of Japanese Alps

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Recently, the features of deep-seated gravitational slope deformation and bedrock landslides have been discovered in the Kamikochi Valley in northern Japanese Alps, based on field investigation and GIS analysis of high resolution digital terrain models. In the JpGU 2016 meeting, we will show the geologic and geomorphic characteristics and historical development of a landslide feature with a large lobe (270x380 m) composed of angular blocks in the Dakesawa basin of the lower Kamikochi Valley.

The main results are as follows: 1) a landslide lobe was formed as a result of bedrock (granite and granodiorite) landslide occurred on the uppermost parts of valley side slopes, 2) those slopes are gravitationally deformed with formation of linear depressions and antiscarps, 3) geomorphic separation of a landslide lobe into the higher and the lower parts suggests the occurrence of two landslide events, 4) the initial landslide event would occur before 180-120 cal BP, according to ¹⁴C ages of surficial soils on the lobe, and 5) a series of landslide events can be classified into a medium-scale landslide phenomenon.

Keywords: Bedrock landslide, Deep-seated gravitational slope deformation, Block field, Holocene