

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

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The Dakesawa basin is a stream tributary to the Azusa in Kamikochi Valley. It is believed that the whole of Dakesawa basin was formed by the Pleistocene glaciations. However, no direct evidences such as moraines have been found. In the Dakesawa basin, steep valley side slopes with sparse vegetation and wide valley floor with recent debris flow tongues are prominent. The Dakesawa basin is composed of welded tuff, diorite porphyry, and granodiorite. A large lobate form (DLB; 270 m wide, 370 m long, estimated volume $1.9 \times 10^5 \text{ m}^3$) is present in the lowermost part of the Dakesawa basin. DLB is composed of two smaller lobes whose altitudes are different (DLB-h and Dlb-l). DLB seems to continue to a wedge-shaped steep valley head whose geology is restricted to granodiorite. This valley head is situated at a peripheral convex break of gentle slopes with features of deep-seated gravitational deformation. Also DLB is arranged to cover the present debris flow tongues on the valley floor of the Dakesawa basin. Surface of DLB-h and Dlb-l is composed of a pile of megaboulders (>2-10 m in diam.) showing block fields with open-work textures. Restrictive lithology of these boulders to granodiorite is obvious. A possible cause of DLB is rockslide that occurred on the nearby valley head. Fallen materials would spread on the valley floor of the Dakesawa basin. Although the age of rockslide is measuring in progress, the Holocene epoch is practical certainty because of its stratigraphic relationships between recent debris flow tongues.

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