

Solifluction processes in the Holocene, observed at the northwestern slope of the Mount Akaishi, Southern Alps of Japan

Yudai Sugasawa^{1*}, Yusuke Arai¹, Reisuke Kondo², Hidetsugu Yoshida², Yosuke Miyairi³, Yusuke Yokoyama³, Takehiro Masuzawa⁴

¹Graduate Student, Meiji Univ., ²Meiji Univ., ³Univ. of Tokyo, ⁴Shizuoka Univ.

It can be observed periglacial landforms such as periglacial smooth slope, patterned ground and solifluction lobe in alpine zone and arctic area. These landforms are formed by freezing and thawing action under the cold climatic condition. Because they are the geomorphic markers indicating past and current environment of alpine zone and arctic area, it is important to understand distribution of these periglacial landforms. The purpose of this study is to clarify the depositional structure and the timing of formation of solifluction lobes at the northwestern slope of Mt Akaishidake (c. 3,120m a.s.l), Southern Alps of Japan. On this slope, a distribution of periglacial smooth slope ranges from 2550 m to 2850 m a.s.l., and that of patterned grounds and solifluction lobes are limited upper part than 2800 m a.s.l. Based on the stratigraphic observation and AMS¹⁴C dating of paleosol buried by the solifluction lobes, we obtained the tentative result that the solifluction lobes were active also in the Late Holocene. According to Veit (1993), solifluction activity became a widespread from 1,800 yr B.P. to 800 yr B.P. Thus, the solifluction lobes at Mt. Akaishidake are possibly, too, active in the same period.

Keywords: solifluction lobe, buried soil, AMS¹⁴C dating, Holocene, Southern Alps of Japan