

南アルプス南部, 大聖寺平および丸山における 風食ノッチの発達プロセス

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Processes of Turf Scarp Development Observed on Daisyujidaira and Mt. Maru-yama, Southern Japanese Alps

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Abstract

Turf scarps and patch-shaped barelands are clearly observed on windy alpine ridges and wind-swept slopes of Japanese mountains. This study investigates the formation and retreat of turf scarps at the Daisyujidaira site (2700 m a.s.l.) and Maru-yama site (3025 m a.s.l.), Southern Japanese Alps.

The average distances of scarp retreat are 2.2 cm/2 years (Daisyujidaira site: 2006-2008), 0.5 cm/year (Maru-yama site: 2006-2007), and 3.6 cm/year (Maru-yama site: 2007-2008).

At the Daisyujidaira site, generation of turf scarps started on the walls of trails or gullies. The retreat processes of turf scarps are considered to be a combination of frost-thaw action (needle ice creep), deflation, rain-splash erosion, and slope wash. However, at the Daisyujidaira site, turf scarps with curtain-like exposure of plant roots are protected from deflation and rain-splash erosion during summer.

On the other hand, at the Maru-yama site, eave collapsing and turf plucking occur frequently, and turf scarps continue to retreat. As a result, patch-shaped barelands continue to expand on the wind-swept slope of Maru-yama.

Key words : turf scarp, wind erosion, sediment structure, alpine zone, Southern Japanese Alps

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