

Colonisation pattern on three glacier forelands of the Ötztal Alps

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The master thesis focused on primary succession of three adjacent glacier forelands – Gaisberg Valley, Rotmoos Valley and Lang Valley. Colonizing species and communities were compared.

The project revealed fundamental differences of the valleys, due to the contrasting geology.

Gaisberg- and Rotmoos Valley

Pioneer community:

3 to 40 years old moraines exhibit a mean plant cover of 17 %. The dominant species are *Saxifraga aizoides* and *Saxifraga oppositifolia*.



Early successional stage:

40-60 years old moraines show a mean cover of 56 %. The typical species are *Silene acaulis* s.l. and *Trifolium pallescens*.



Initial grassland:

60-156 years old moraines exhibit a more or less closed grass carpet with a cover of 71 %. The dominant species are *Anthyllis vulneraria* ssp. *alpicola* and *Kobresia myosuroides*.



Lang Valley

Pioneer community:

This community has a rather low plant cover (less than 2 %). The most frequent species is *Cerastium uniflorum*.



Successional stage 1:

Cover increases up to 22 %. The vegetation is characterized by *Saxifraga bryoides* and *Leucanthemopsis alpina*.



Successional stage 2:

Species number and cover (67 %) further increases. *Festuca halleri* and *Gnaphalium supinum* are the dominant species of this stage.

Initial grassland:

Here, the highest plant cover can be recorded (79 %). Typical species are *Oreochloa disticha* and *Scorzoneroides helvetica*.

