

Late Pleistocene oscillations of the Drau Glacier (southern Austria)

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The Drau Glacier was the largest Pleistocene glacier in the southeastern part of the Alps and significantly shaped the landscape in this region. The study area is located at the termination of the Drau Glacier in the southern part of Austria (Carinthia).

The investigation aims to decipher glacial dynamics during the Late Pleistocene glacial advance, stabilisation and final recession of this glacier based on geological/geomorphological mapping, interpretation of airborne laser scan (ALS) topographic data and lithostratigraphic investigations of glacial and periglacial sediments. Special emphasis is laid on the reconstruction of the maximum extent of the glaciation (LGM).

Based on previous mapping by Bobek (1959) and Ucik (1996-1998) more details have been gained for the paleogeographic reconstruction based on glacial and non-glacial erosion and accumulation features.

These include traces of pre-Upper Pleistocene glaciation, drumlins, terminal moraines and kettle holes. Paleogeographic reconstruction was done with correlation of different outcrops based on lithostratigraphy and ALS topography. Sequences of gravel related to glacial advance covered by till, followed by periglacial sediments allowed detailed reconstruction of the glacial sequence in this area and the complex succession of various extents of the Drau Glacier.

References

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