



Transformation from Fluvial to Karstic Morphology - Case Study of Mid Altitude Alpine Plateau in NW Slovenia

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Geomorphology of Alpine area is very often related to fast processes related to tectonic events, glaciations and postglacial development. Where rocks prone to karstification are present interesting geomorphic features can be developed. In the area of the Dinaric Alpine karst transition zone process where the transformation from fluvial geomorphic system to the karstic geomorphic system is present is rarely preserved.

In this study we are presenting results of detailed geomorphological mapping of Mežakla plateau (between 1100 and 1700 m a.s.l.) in the region of NW Slovenia. On all sides plateau is limited with deep valleys where in the Pleistocene glaciers were present. However, available evidences show that in the last glacial period plateau was not covered with ice.

The plateau consists mainly of Triassic carbonates. In the south, in the stratigraphical lower part thin bedded limestone with chert is present, on the north thick bedded Dachstein limestone and dolomite is present. The whole area is dissected by NW-SE faults and thin bedded limestone is frequently folded.

In the whole plateau karstic features are developed. They geomorphology differ according to underlying lithology, however differences are also the consequence of different surface development. On north part with Dachstein beds typical karstic surface with large concentric dolines is formed. On the south thin bedded limestone is covered with thick soils and shallow valleys and dolines are developed within. Some sediment collapse features are also present. They are indicating the transformation from fluvial system to the karstic system due to the drop of groundwater level. This event has probably developed after the retreat of the glacier.