

EVOLUTION OF THE FRONT OF THE BERCHTESGADEN NAPPE COMPLEX – PRELIMINARY RESULTS

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The area of study is located next to Lofer and Unken (Salzburg, Austria), and comprises parts of the Reiter Alm area and Loferer Steinberge, as well as the Loferer Alm area and the Unkenbach valley, where Upper and Lower Juvavic units of the Berchtesgaden Nappe complex are thrust over Tirolic units of the Stauf-Höllengebirgsnappe.

In the Hallstatt limestones of the Lower Juvavic unit, slumping partly led to tilting and folding, which is indicated by geopetal fabrics.

In Aptian times (Early Cretaceous), Juvavic units were thrust upon the Lackbach-basin (correlates to the Roßfeld-basin). A strong argument in favour is the progradation of the submarine fans of the Lackbach Formation and the occurrence of Late Jurassic limestone pebbles resedimented in conglomerates of the Lackbach Formation (DARGA & WEIDICH, 1986). The Upper Jurassic Lärchberg limestone overlies the Hallstatt limestones of the Lower Juvavic unit. The Juvavic units continued to be transported and must have reached a position beyond the Unken Syncline. The thrust plane is not preserved due to later tectonics.

The Lower Juvavic units were folded into a large anticline trending SW-NE, but no detailed

time constraints about this deformation could be found.

The Upper Juvavic units thrust over the Lower Juvavic units, and thus cut the fold obliquely, which resulted in a wedging out of the latter towards the East.

Pregosauic erosion removed the Late Jurassic shallow marine limestones (Lärchkogel and Plassen limestone) from the Upper Juvavic units in the area.

During Tertiary times, N-S trending normal faulting resulted in a juxtaposition of Lower Juvavic and Tirolic units. Slices of Lackbach Formation mark the fault plane.

References:

- DARGA, R. & WEIDICH, K. F. (1986): Die Lackbachschichten, eine klastische Unterkreide-Serie in der Unken Mulde (Nördliche Kalkalpen, Tirolikum). – *Mitt. Bayer. Staatsslg. Paläont. Hist. Geol.*, **26**, 93–112.

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