Terhorst, Birgit¹; Meyer-Heintze, Simon¹; Damm, Bodo²; Frechen, Manfred³

The relevance of periglacial cover beds and interbedded loess-like slope deposits

¹University of Würzburg, Deutschland; ²University of Vechta, Germany; ³LIAG Hannover; birqit.terhorst@uni-wuerzburg.de

Multilayered periglacial sediment sequences with intercalated slope wash deposits are well known for the loess regions. For the Central European subdued mountains, however, they are hardly a subject of research. In the transition areas between loess basins and higher regions, loess-like slope wash sediments occur rather regularly in and along concave slope structures, such as channels or Pleistocene valley bottoms. Locally, deep cuts expose the Quaternary sequences as well as older geological layers. For landscape research, it is highly relevant that loess-like sediments of Pleistocene valley floors enable reliable OSL dating if they are sufficiently bleached. Thus, these reworked loess deposits can complete the chronostratigraphic interpretation of cover-bed sequences and give a more complex impression of landscape evolution in upland regions, as they represent indispensable paleoenvironmental archives with almost untapped scientific potential.

In Central Europe, the occurrence of Upper Weichselian reworked loess shows that modification of primary loess by slope wash was a rather common phenomenon on subdued mountain slopes as well as on river terraces in/near loess landscapes in the Late Pleistocene. Studies in Austria in the Vienna Forest in the Alpine Foreland, as well as in the Neusiedlersee area show the relevance of such sediments in transitional areas between loess regions and subdued mountains. Recent research in the mountain and loess regions of Poland and Germany is focused on periglacial loess as well as on loess-like slope deposits interfingering with periglacial layers.

The presentation focuses on loess-like slope deposits associated with periglacial cover beds in subdued mountain ranges located in close vicinity to loess regions in order to i) refine the chronostratigraphy of periglacial cover beds, to ii) establish the mentioned archives as valuable records of Pleistocene landscape genesis, and to iii) expand the knowledge on different periglacial sediments and processes.

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