



Periglacial stratigraphy and dating from the Channel Islands (English Channel)

Mary Evans and Jasper Knight

University of the Witwatersrand, Geography, Archaeology & Environmental Studies, Johannesburg, South Africa
(jasper.knight@wits.ac.za)

Although exposed during the global sea-level lowstand of the last glacial cycle, the periglacial stratigraphy and environmental history of the western English Channel region has not been well studied. Here, new field and lab data are presented on Quaternary-age slope sediments exposed in cliff sections on the islands of Guernsey and Alderney, Channel Islands. Sediment stratigraphic evidence is also supported by new OSL ages on wind- and slope-deposited sediments. Although the macroscale stratigraphy reflects different periods of slope activity spanning MIS3 and 2, this varies according to the geometry of and sediment supply to bedrock basins. The stratigraphy generally comprises a raised bedrock platform (sometimes with preserved raised beach fragments) overlain by interbedded loess and solifluction (slope) deposits. The slope deposits are commonly deformed by cryoturbation structures. The sediment record in many places is curtailed as accommodation space is filled. In particular, the stratigraphic presence, OSL ages and trace element geochemistry of windblown loess deposits can be used to reconstruct regional scale patterns of climate and environment during the last glacial cycle, confirm an interpretation of an arid and windy periglacial environment in the western English Channel.