



Reconstructing environmental changes during the Late Pleistocene in southwestern Ethiopia – insights from geoarchaeological investigations at the Sodicho Rockshelter

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Ethiopia, a key area for hominin evolution and migration in Africa, experienced intensive tectonic, volcanic and climatic induced impacts through time. Prehistoric hunter-gatherer might have struggled but also coped with these environmental changes. One solution might have been the rescue into high-altitude areas during hyper arid phases, in accordance with the Mountain Refugium Hypothesis. The geoarchaeological sequence of the Sodicho Rockshelter in the southwestern Ethiopian Highlands encompasses multiple phases of human occupation and hints to environmental variations. The work is part of the interdisciplinary project A1 “Out of Africa - Late Pleistocene Rock Shelter Stratigraphies and Palaeoenvironments in Northeastern Africa” of the Collaborative Research Center 806 “Our Way to Europe”.

Since 2015, ongoing excavations at the Sodicho Rockshelter reached time slices of the Late Pleistocene to Holocene, with lithic techno-complexes of the Later Stone Age. The rockshelter contains a complex stratigraphy with a heterogeneous sediment composition – thick volcanic ash layers alternate with occupation sequences and a sterile clayish horizon. The research focus covers from macroscopic variations of the stratigraphy to microscopic fluctuations of single layers. The poster displays preliminary results of the geoarchaeological investigations at the sediment stratigraphy. A first attempt to reconstruct the site formation processes, post-depositional processes and human impact is done by micromorphological observations as well as sedimentological and geochemical lab analyses. With this multidisciplinary approach we hope to clarify questions such as: How does a volcanic fallout affect the sediment and what does this tell us about the environment? Did this hinder human occupation? How did the humans form and influence the sediment deposition? In the future the obtained data will be linked with the archaeological record to contribute to the understanding of the human-environmental interactions in Northeastern Africa.