

Scales in Geoarchaeology beyond “a site”: The advance of a (Archaeo-)geomorphological perspective

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The importance and discussion about scales in Geoarchaeology is as old as its subject itself. Gladfelter (1977) was one of the first, who described the Micro-, Meso- and Macroscale context of archaeological features in a given environment related to a site. More recently, Butzer (2008) continues these tripartite approach, as he defines the Microscale environment to an “On-site Geoarchaeology” with focus on sediments, syn- and postdepositional processes and micro-stratigraphy. The mesoscale environment deals with the context of a proven site and the macroscale is the landscape in total, where the given site is located (Butzer 2008).

Where the applications of scale in Geoarchaeology always refer to a site as initial point, a great range of features beyond gets neglected. This is particularly important for Late Pleistocene Archaeology and in arid regions, where the meaning of space and information in between of archaeological records gets more and more important, as data density falls substantial. Therefore, also “non-site areas” and regions beyond a site and its site-catchment are crucial to investigate, still under a collaborated perspective of archaeology and geoscience. This is, where Archaeogeomorphology, the study of the landscape without any direct archaeological evidence, but still under an archaeological point of view respectively under the view of past human behaviour (Thornbush 2012), follows up. Archaeogeomorphology, in contrast to (most) geoarchaeological studies, is associated with the study of the landscape without any direct archaeological evidence, but still under an archaeological point of view, respectively under the view of past human behaviour. Questions about mobility and migration of hunter-gatherer during the late Pleistocene, e.g. when anatomically modern human spread out of Africa, cannot be answered without the context of the “off-site areas”. Therefore, the previous existed, site orientated scales in geoarchaeology are insufficient to these questions, as the human-landscape interactions subsists within a broader range beyond single sites.

The poster present an enlarged approach of scales for geoarchaeology-archaeogeomorphology, based on different sizes of relief forms, as (semi-) quantitative differentiation of various scales. With this classification, small-scale features related to “on-site” investigations can be integrated to the existing considerations of scale in geoarchaeology, but are expanded by characteristics of the landscape beyond the influence of a site.

We apply this concept to the Eastern Desert of Egypt, as it is a key region in the understanding of the migration of AMH from Africa to Europe and simultaneously serves as an example of a today's hyper arid environment.

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Butzer, K.W., 2008. Challenges for a cross-disciplinary geoarchaeology: The intersection between environmental history and geomorphology. *Geomorphology* 101, 402-411

Gladfelter, B. G., 1977. Geoarchaeology: The Geomorphologist and Archaeology. *American Antiquity* 42 (4), 519-538.

Thornbush, M.J., 2012. Archaeogeomorphology as an application in physical geography. *Applied Geography* 34, 325-330.