



Alluvial systems as archives for environmental change at a Hominid site with Oldowan archaeological occurrences: the Homa Peninsula, southwestern Kenya

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The Homa Peninsula, southwestern Kenya, preserves fossiliferous sedimentary sequences dating to the Plio-Pleistocene. Evidence of hominids inhabiting an open grassland setting and utilising Oldowan tools has been reported here, as well as some of the oldest known traces of hominin activity. Reconstructions of the palaeoenvironment have suggested that alluvial and lake marginal environments on a grassy plain, between wooded slopes and a permanent water body might be plausible. However, these interpretations are based only on field sedimentological analyses and stable isotope analysis at a single site on the peninsula (Kanjera South). It is the aim of this study to utilise a multiproxy approach to develop our understanding of the palaeoenvironmental characteristics here. Sediments will also be characterized at a new site (Nyayanga) through field analyses, as well as through analyses of particle size, siliceous microfossils (diatoms, phytoliths and sponge spicules), pollen and stable isotopes. By utilizing this approach, new insights into the palaeoecology, palaeohydromorphology and palaeoclimate of the locale may be revealed, expanding the limited data available to palaeoanthropological studies of Oldowan occurrences in east Africa.

Efforts to refine palaeoenvironmental reconstructions of Kanjera South through particle size analysis have shown that sediments in the lower beds of the sequence are characterised by poor sorting, a bimodal distribution and sand/silty-sand grade material. This suggests rapid deposition and/or a variable hydrological regime and may represent the role of relatively unconfined ephemeral channels in the transportation and deposition of sediments. Fluvial reworking of aeolian sediments, most likely during unconfined flood events may also have occurred.