



Late Pleistocene landscapes and human mobility east of the Jordan Rift Valley: Results of geoarchaeological research in Wadi Sabra

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Landscapes east of the Jordan rift valley are largely characterized by semi-arid to arid biomes that make human occurrences seem comparatively remote.

Since 2008 we have conducted geo-archaeological research in the Wadi Sabra investigating Pleistocene terrestrial stratigraphies and archaeological sites related to the presence of humans during time slices and under different climatic conditions. The main time span of sedimentation and associated presence of *Homo sapiens* in the Wadi Sabra stretches from mid OIS 3 to the younger Dryas. The chronological framework has been established by combined C14, TL and OSL-dating.

The first half of the sedimentary record is characterized by fulvio-aeolian sedimentation during OIS 3. While the OIS 2 record indicates comparable sediment origins, they are intercalated with stable surfaces related to phases of increased precipitation and possibly initial soil formation. Since the early Holocene, continuous erosion and possibly flash-floods lead to the modern appearance of the deeply incised Wadi Sabra as we know it today.

On the archaeological side, human occupation is confirmed from various periods, such as Middle Palaeolithic, Initial Upper Palaeolithic, Early Ahmarian, Aurignacian, Masrahan, Kebaran and Natufian, with evidence mainly coming from Upper Palaeolithic contexts.

In respect to human mobility patterns during the Upper Palaeolithic, we recognized increasing mobility during OIS 2 as indicated by diversified raw material sources and microlithisation (Dufour bladelets) in contrast to previous local exploitation and heavier tools and blanks. This alteration is accompanied by a change from blank transport during OIS 3 to carinated core transport during OIS 2. These changing mobility patterns in the Wadi Sabra coincide with phases of stable surfaces that might indicate either soil formation processes or at least phases of high precipitation.