



Loess archives and Paleolithic hunter-gatherers at the desert margins, northern Negev, Israel

Mae Goder-Goldberger^{1,2}, Elisabetta Boaretto³, Lotan Edeltin⁴, Oriol López-Bultó⁵, Liora Kolska-Horowitz¹, Ron Lavi⁶, Naomi Porat², Michael Toffolo^{7,8}, Tami Zilberman², Yael Jacobi², and Onn Crouvi²

¹Hebrew University of Jerusalem, Israel

²Geological Survey of Israel, Jerusalem, Israel

³D-REAMS Radiocarbon Dating Laboratory, Weizmann Institute of Science, Israel

⁴Ben-Gurion University, Beer-Sheva, Israel

⁵Museu d'Arqueologia de Catalunya, Barcelona, Spain

⁶Zinman Institute, School of Archaeology and Maritime Cultures, University of Haifa, Israel

⁷CNRS UMR 6034, Pessac, France

⁸Centro Nacional de Investigación sobre la Evolución Humana (CENIEH), Burgos, Spain

Understanding the environment within which archaeological sites are situated is crucial to accurately interpret mobility and activity patterns of past hunter-gatherers. During the late Pleistocene, an enormous influx of eolian loess was deposited and reworked simultaneously in the northern Negev Desert, filling the valleys with fluvial loess deposits up to 20 m thick. The largest valley filled with fluvial loess is the lower Besor basin. The extensive erosion of loess over the past 12,000 years led to badlands morphology and exposure of numerous paleolithic sites. An interdisciplinary study has been initiated to combine excavations of the Paleolithic sites and a study of the loess depositional sequence. The goal is to better understand diachronic shifts in the local environment and changes in cultural material from the late Middle Paleolithic to the late Upper Paleolithic/Early Epipaleolithic (~80-12 ka). As a result of slow accumulation of the fluvial loess, these archives open windows onto short habitation events, exhibiting archaeological sites with minimal spatial movement of finds, preservation of structures as well as faunal and botanical remains.

In this talk we will present initial results of a paleoenvironmental reconstruction of the northern Negev loess badlands in the lower Besor basin combining results from excavations at five sites dating between ~70 to 27 ka.