

Deforestation and soil-loss linked to Bronze and Roman occupations recorded in the Amik Basin (Southern Turkey)

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Continuous human occupation is attested in the Amik Basin in the Middle East since 6000-7000 BC. The low-lying Amuq plain located in Turkey near the Syrian border is covered by *tell* settlements first explored by Robert Braidwood in the 1930s. The Basin also is crossed by The Dead Sea Fault (DSF), a major neotectonic structure in the Middle East extending from the Red Sea in the south to the East Anatolian Fault Zone in the north. The study focuses on the sedimentary record of the Amik Lake occupying the central part of the Basin. Our objective is to constrain major paleo-environmental changes in the area over the last 4000 years and assess possible human impact. The lake has been drained and progressively dried up since the mid-50s so that it is not watered during the summer season and constitutes a unique opportunity to collect sediment records. Sediments were collected at 1 cm to 2 cm intervals in a trench and in cores up to a depth of 5 meters in the clay deposits. A diverse array of complementary methods is applied to study the records: magnetic susceptibility, grain size, organic matter and inorganic carbon (L.O.I), XRD mineralogy, XRF geochemistry, carbon geochemistry and clay mineralogy. The age of the record is constrained combining radionuclide and radiocarbon dating. The record shows two intense phases of soil erosion. The most recent erosion phase is modern. The oldest one would have occurred during Roman period. This episode would probably be related to an intensive upland cultivation (olives, grapevines, grain, and orchards) and to exploitation of mineral resources associated with the growth of the Antioch City. The sediments also record a large deforestation phase, which started earlier in the Bronze Age and that continues during the Roman period.
