



Calcareous palaeosols and temples in the floodplain of Thebes, Egypt: droughts and decisions

Angus Graham (1), Morag A. Hunter (2), Benjamin T. Pennington (3), and Kristian D. Strutt (4)

(1) Honorary Research Associate, Institute of Archaeology, University College London, United Kingdom (angus_graham@yahoo.co.uk), (2) Teaching Fellow, Department of Earth Sciences, University of Cambridge, United Kingdom (mah1003@cam.ac.uk), (3) Graduate, Department of Earth Sciences, University of Cambridge, United Kingdom (penningtonbt@gmail.com), (4) Experimental Officer, Archaeology Department, University of Southampton, United Kingdom (kds@soton.ac.uk)

The Egypt Exploration Society Theban Harbours and Waterscapes Survey (THaWS) works in the area around modern Luxor (Egypt), and investigates the extent to which the Egyptians manipulated the Nile and floodplain through canal and basin construction. A current focus of the project is to understand the relationship between the floodplain and a series of temples on the West Bank. A longstanding puzzle on the West Bank is why the temple of Amenhotep III (1390-1352 BCE) is not located in the same area as all the others. While 19 kings of the Egyptian New Kingdom (1550-1070 BCE) built their temples on the toe-slope of the limestone cliffs fronting onto the edge of the modern alluvium, Amenhotep's sits entirely on the modern floodplain. Egyptologists have suggested this was done to allow the inundation of the Nile to wash into the temple, symbolising and recreating the essential Egyptian cosmogony of the primeval mound. However, was it possible that a period of low Nile discharge enabled him to build on the alluvium whilst keeping the temple dry from the Nile floods?

The project is testing this hypothesis through an interdisciplinary approach which provides focussed information on the development of the floodplain over historic time periods. It combines geophysical survey (Electrical Resistivity Tomography, Ground Penetrating Radar and magnetometry) with geoarchaeology using an Eijkelkamp hand auger and gouge auger with facies being dated using the stratigraphic sequence of ceramic fragments within them.

Two fieldwork seasons have been carried out to date (Graham et al. 2012, 2013). Calcareous palaeosols c. 4m below the surface have been identified in three separate augers across a distance of 3 km on the West Bank floodplain, suggesting a period of low inundation levels / drought. At one of the locations an ancient surface appears to lie 0.3-0.4m above the calcisol. Ceramic fragments from this unit tentatively indicate a New Kingdom date. The strontium isotope record from Lake Manzala (Nile Delta) suggests this period was one of declining discharge (Stanley et al. 2003).

Amenhotep III's temple floor lies 2m above the calcareous palaeosol and its construction lies within the broad dating of the ancient surface. It is possible that low discharge levels enabled him to build his temple high and dry of the Nile floods. Future seasons should allow us to clarify this using ¹⁴C and OSL dating, and in time we hope to shed more light on the fluvial history of the Nile and how this affected the decision making of the ancient Egyptians.

References

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