

[Supplementary material]

The shifting Nile and the origins and development of ancient Karnak

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Description of the deepest levels (-1 to 2) in the stratigraphic trench at the Ptah temple

Level -1: fluvial sandbar (66.87–69.67m asl)

The texture (sand), colour (10YR 4/3), grain-size (fine sand) and well-sorted nature of the samples, which are primary without any of anthropogenic materials, identify them as typical deposits of a fluvial sandbar (Pennington 2018).

Level 0: upper bar (69.67–71.67m asl)

This level appears to be a natural upper bar (or levee sediments) related to the same river channel, which deposited samples of the previous level. The well-sorted silty loams and loams of coarse silt/very fine sand appear to have been originally laminated, containing siltier and sandier layers. They display some rhizoconcretions and black organic mottling. They also contain some pottery, with a gradual density starting from the bottom of the level (Pennington 2018).

Level 1a: first trace of temporary use of the bank surface (71.67–71.71m asl)

The first attestation of human activity is a small domestic hearth discovered in the north-west corner of the 2 × 2m square at the bottom of the trench. It is installed in a reserved space, despite a slope towards the north-west. The very fatty and almost black ash in the centre of the hearth was bordered by baked edges. This hearth suggests the first use of the Nile banks for short itinerant and temporary activities (radiocarbon dating: 2193–1978 cal BC). Several ceramics with a complete profile and a fragment of a seal impression collected in the hearth guarantee the accuracy of this dating to the middle of the Eleventh Dynasty.

Level 1b: alluvial and aeolian cover of the bank (71.71– 71.67m asl)

The hearth is covered with brown clay-silty layers abundant in archaeological material and rhizoconcretions, with a strong slope towards the north-west. These layers include very inclined deposits of grey sand. A thick layer of virgin yellow sand in the southeast corner of the 4 × 4m square and with a strong slope to the north-west is probably of aeolian origin (very well-sorted nature, despite the abundant presence of mica). This thick heterogeneous level seems to indicate natural accumulations (flood and wind).

Level 2: first domestic dwellings

Level 2 corresponds to the first building phase in the area. It consists of narrow mudbrick walls built on a probably levelled surface of the previous phase. Seven architectural phases (3–9) have been identified in total. The remains are oriented identically during each phase and divert by +9 degrees from the axis of the temple of Amun, as it was known at the end of the Eleventh Dynasty. Each architectural phase is marked by progressive sedimentation of the floors (dust, organic and anthropogenic accumulations). No floor preparation was observed; only occasionally a few more compact or dense areas, either in connection with the hearths or due to possible water run-off and biodeterioration processes. This domestic level ends with an abandonment of the habitat, the collapse of the mudbrick structures, and some late ephemeral remains (Level 3: Phases 10–11).

References

PENNINGTON, B. 2018. Report on sediment samples originating from augering to the south of Ptah temple, Karnak. Unpublished report, Ptah Temple Archaeological Project.