

# The Thirtieth Dynasty in the temple of Heliopolis

**Aiman Ashmawy, Max Beiersdorf and Dietrich Raue** report on the spring season at Heliopolis, focusing on the enclosure walls of what was, in pharaonic times, one of the largest temple precincts in existence.

The sun-temple of Heliopolis was the largest single *temenos* ever built in pharaonic Egypt. It was a place of pilgrimage from antiquity right up until the medieval era. Yet, there is little evidence of individual sanctuaries within the vast precinct of the main *temenos* at Matariya. Except for a structure of about 400 m in diameter, called the ‘fort bank of the Hyksos Period’ by its excavator W.M.F. Petrie, only few structures were observed and mapped in situ. These include the obelisk of Senusret I and the huge sphinxes at the western entrance of the *temenos*, as well as its enclosure walls.

It showed that the holes originally reached just about 1–1.3 m into the masonry. In contrast to, for example, the temple enclosure of Karnak, no pieces of wood were found in any of these holes. In Heliopolis, they can be interpreted as visible remains of scaffolding used to finish the outer shape of the wall. The vertical distance between the holes (about 1.8 m) would have provided enough space for the workers. The horizontal distance is about four ‘headers’, approximately 87 cm, easily bridged by simple planks that might have served as work platforms. The last hole at the end of the concave segment does



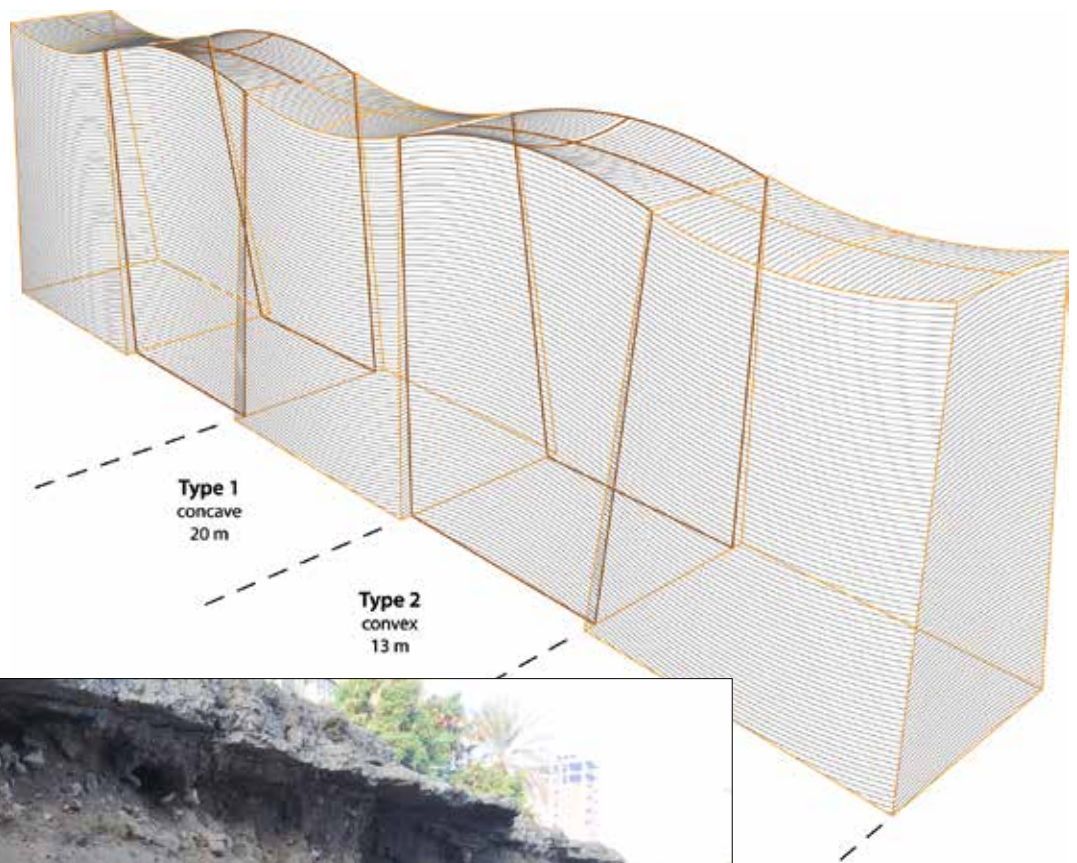
Main temenos of Matariya with excavation sites of spring 2015.  
(Image: Google Earth/  
Pieter J. Collet)

The southern undulating mud brick wall of Heliopolis was reinvestigated in spring 2015. It can be dated stratigraphically by pottery finds to the 4th century BC. It measures up to 17 m at the base, the segments of convex and concave brick layers measure alternately 20 m and 13 m respectively at the base. In order to explain the significance of the superimposed rows of holes in the outer façade, a section was dug in transverse direction.

not extend perpendicular to the outer wall, but at an angle of about 45 degrees. The investigation showed an absence of any binding agent in the internal brickwork. Only the segment transition and the outer façade of the wall were strengthened by the use of mortar. For the structural stability of the wall and its construction sequence, this fact is of utmost importance: a common *temenos* wall built in horizontal layers of unbaked mud

Right: southern enclosure of the main temenos of Matariya, outer wall of the 4th century BC. (Drawing: Max Beiersdorf)

Below: outer wall of the 4th century BC, concave segment. (Photo: Dietrich Raue)



bricks without the use of mortar would threaten to collapse. However, building without mortar had an enormous time advantage. So, in order to compensate for the weakened masonry, the builders had to come up with a solution. By dividing the enclosure wall into regular segments, they were able to raise the first units at the same time. Those first segments were raised with mud bricks laid in a rising curve. In this way, the dead load of the segments impacted on the centre, giving it a strong structural advantage.

In summary, the following preliminary hypothesis for the construction process can be proposed: as a first step the construction area was divided into regular

sections, corresponding to concave and convex segments. The construction of the wall began with the concave segments (Type 1, see the drawing above). In the transverse direction the bricks are laid in a slightly convex curve. This generates the effect of a shell and has a positive structural impact. Once the concave segment has been raised up a couple of layers, the construction of the adjacent convex segments (Type 2) started. In this way, a wall about 17 m thick and probably up to 20 m high was raised step by step without the need for cranes, winches or external ramps. Effectively, the wall, while under construction, served as its own ramp and eventually comprised an area of *c.* 1150 by 950 m.



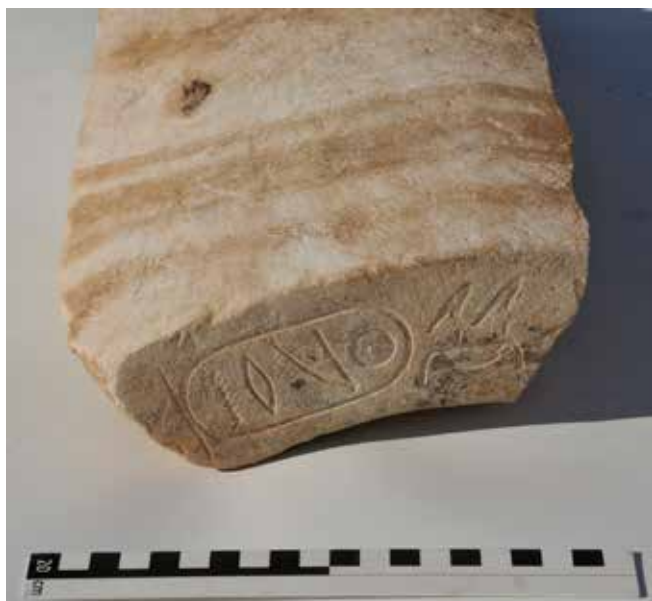
Excavation work focused on the dating and stratigraphy of the 'fort bank' in the centre of the *temenos*: the eastern and western sections of this structure were encountered in spring 2015. The evidence from pottery found alongside this huge embankment of probably up to 40 m in width points to the first half of the Eighteenth Dynasty. This might fit a historical inscription of the 47th regnal year of Thutmose III (15th century BC) that commemorates the construction of a wall, but it may also be mentioned in texts of the early New Kingdom. The same dating was obtained at the eastern section close to Midan Misalla. In addition, both areas testified to mixed masonry that was only in parts built of mud brick. Layers of sharp and angular fragments of silicified sandstone also point to stone dressing activities, most likely connected with the erection of a major piece of sacral monumental architecture. The enormous volume of the embankment was partly achieved by levelling surrounding areas: in the case of the eastern section it seems certain that sand, buildings and objects from the necropolis of the third and early second millennium were removed. The top of the eastern section was pierced by pits with pottery of the 4th century BC.

Except for a small number of objects, only little evidence for further building activity of the Thirtieth Dynasty is extant so far. The reinvestigation of the western section in the centre of the Misraa es-Segun, now almost entirely covered by garbage dumps, changed the state of research fundamentally. The wide prominent position on top of the embankment was chosen by Nectanebo I as the location of a temple of 'Atum, Lord of Heliopolis'. Just

50 cm beneath the water table, the excavation encountered a pile of basalt slabs. They would once have formed part of a geographical procession of Hapi figures that represented probably the nomes of Egypt in their entirety. The blocks that were recovered in a small section of about 8 by 4 m represent the scenes for the nomes of Herakleopolis (20th of Upper Egypt), Medum and Semenu-Hor (21st UE) and Aphroditopolis/Atfih (22nd UE). This section is therefore the end of the Upper Egyptian sequence. The texts present a most welcome amendment to the scarce first-hand evidence for Late Period sacral architecture in Lower Egypt. While these texts are considerably longer than those of the New Kingdom and the Third Intermediate Period, they are quite different from the textual evidence of the geographic processions with various fixed parameters for the nome descriptions that are well attested from the Ptolemaic Period. The Upper Egyptian sequence is followed by a résumé of the construction activity of Nectanebo and by another figure, accompanied by text columns that were left blank. All reliefs were brought to the Matariya Open Air Museum at the obelisk of Sesostri I. While limestone blocks from the temple were reused during the Byzantine and Islamic Periods, the basalt blocks remained in place as they were not a favoured building material after the Roman era. Nevertheless, a good number of fragments with remains of relief, suggesting ritual wall scenes and decorated columns, were discovered in the debris under the basalt blocks. Objects of other periods were also found in this limited area of investigation. Among the most interesting finds



Area 231, western section of the 'fort bank'. (Photo: Dietrich Raue)



Above: alabaster vessel of Merenre, Sixth Dynasty, found in Area 221. (Photo: Dietrich Raue)

Right: the 20th Upper Egyptian nome in the geographical procession at the temple of Nectanebo I for 'Atum Lord of Heliopolis'. (Photo: Pieter J. Collet)



is a fragment of a large, vat-like alabaster vessel carrying the titles of king Merenre of the Sixth Dynasty. Fifteen metres to the east of the basalt slabs, a torso of a royal statue was found. It shows a king with long ceremonial beard and *nemes* headdress, depicted at one-and-a-half times life-size, kneeling on one knee.

Such statues frequently offer the name of the king in the context of coronation and in connection with the rites at the sacred *ished* tree; other examples seem to appear in the context of the confirmation on the occasion of jubilee feasts. In addition, wall reliefs providing examples of statues offering ointments or god's barques are attested. This torso is the largest example of such a statue, attested since the earlier Eighteenth Dynasty, found so far. It carries the cartouche of Merenptah, but since that king frequently usurped statues of his predecessors this can only be taken as a *terminus ante quem*. Another large fragment of red granite was found close to the

reliefs of Nectanebo. It can be attributed to an undated sphinx of about double life-size. Such statues may have been rearranged within the sanctuaries of the later first millennium BC.

The forthcoming season will be mainly devoted to the excavation of the neighbouring squares. Current support by various institutions, foundations and donors, such as the American Research Center in Egypt, will offer one of the final chances to gain first-hand information of a sanctuary from the heart of the sun cult at Heliopolis.

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