# Report on the Brooklyn Museum's 2009 Season of Fieldwork at the Precinct of the Goddess Mut at South Karnak 

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## Abstract

The expedition concentrated on the area of the Taharqa Gate, uncovering the original paving of the approach from the west, and the north and south walls bounding it. The north wall is contemporary with the gate, but the south wall is built on an accumulation of dirt, perhaps part of a later phase when the gateway was narrowed. Between these walls were strata of debris that may be intentional landfill for the late Ptolemaic/early Roman habitations in the area. More mud brick buildings were uncovered south and west of the gate that appear contemporary with the baked brick building to the south, built on the remains of the Tuthmoside north enclosure wall. The purpose of the buildings is still unclear, but the pottery suggests an early Roman date. Work also continued on the Roman Period structures north of the east wing of the Mut Temple's $1^{\text {st }}$ pylon.

The remains of the Taharqa Gate were dismantled, conserved and rebuilt, and several fallen blocks were put back in place. The restoration of the remains of the small Ptolemaic chapel just inside the gate was also completed.
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The archaeological expedition to the Precinct of Mut at South Karnak is a project of the Brooklyn Museum conducted under the auspices of the American Research Center in Egypt and with the permission of the Supreme Council of Antiquities. ${ }^{1}$ Since 2001, work at the site has been divided between the Brooklyn Museum Expedition and an expedition from The Johns Hopkins University. The Brooklyn Museum Expedition works primarily in the front area of the

[^0]Precinct, from the precinct entrance to the Mut Temple's First Court, and from Temple A in the northeast corner of the site to the west enclosure wall.

While the 2009 season focused on the Taharqa Gate and the area to its south and west, limited excavation was also carried out east of the precinct's axis. This work will be described first. Fig. 1 is a plan showing the areas where the expedition worked in 2009.

## EXCAVATION

## Sounding at the South End of Temple A's First Pylon

Temple A's first pylon was built no later than Ramesside times and had two colossal statues and stelae of Ramesses II before it. ${ }^{2}$ It was built of mud brick, as was the Mut Temple's First Pylon. However, the Mut Temple's pylon was coated with white-painted plaster while Temple A's pylon had a facing of limestone. A sounding at the north end of the pylon several years ago revealed that the pylon was built over an earlier, probably Dynasty 18, enclosure wall for the temple. Under it were remains of Second Intermediate Period and Middle Kingdom domestic structures. ${ }^{3}$ In 2009 we opened a small sounding at the south end of the pylon to determine if similar earlier structures exist there (fig. 2a). We revealed a shallow sand foundation bed for the pylon below which were 2 strata of narrow mud brick walls that suggest a domestic use (fig. 2 b c) and several pieces of Second Intermediate Period pottery. The two soundings suggest that during the Second Intermediate Period this area had not yet become part of any temple precinct; ${ }^{4}$ that is confirmed by the Supreme Council of Antiquities' excavation of a Middle Kingdom structure within the precinct, just west of the Propylon.

## North of the Mut Temple's First Pylon

We have been excavating the mud brick structures in the area between the east wing of the Mut Temple's First Pylon and Temple A's columned porch for the past several seasons. ${ }^{5}$ The

[^1]later phases of the structures were Roman Period, based on pottery and coin evidence: the latest coins in these upper levels date to Antoninus Pius (131-168 AD). The whole area was much disturbed by pits dug from the Roman Period levels through the earliest phases of the structures and by an extensive network of animal holes. Fig. 3 is a plan of the area at the end of the 2008 season; fig. 4 the same area at the end of the 2009 season.

In the center, uncovered in 2008, is a construction of rectangular compartments of burned mud brick with a single curved course of baked brick to the west. It is too small to be a pottery kiln, but the presence of fragments of glass and copper slag discovered last year, and a bowl continuing blue pigment found this year, suggests it may have been an oven or kiln used for smelting copper or for producing faience or glass. The discovery of several bread moulds in the area this season suggests that the oven may have served both a domestic and an industrial use, as M. Eccleston has recently suggested was the situation earlier at Amarna. ${ }^{6}$

While it is surprising to find an oven/kiln in front of the main pylon of a temple, not to mention storerooms (later houses?) built against that pylon, it must be remembered that this area is enclosed by the east wall of the East Porch on the west, by the south side of Temple A's columned porch on the north (both of which had screen walls that would at the least obscure the view into the area north of the Mut Temple's First Pylon), and by the south wing of Temple A's First Pylon on the east. While these structures were standing, the whole area would have been essentially out of sight.

Excavations in 2009 confirmed the north, south and west boundaries of this installation: the outer sides of the mud bricks on these sides show no sign of burning. The oven/kiln stood at least one course higher than it does today as the tops of the remaining bricks also show no signs of burning. How far this installation extended to the east is still uncertain as we have not yet reached the bottom of the spill of burnt brick, pot sherds and stone fragments uncovered last year that seems to represent the collapse of the oven/kiln. The single-course-wide mud brick wall that

[^2]forms the west side of the oven/kiln continues to the south and may have run over the earlier mud brick construction uncovered this year north of the room 4, built against the face of the pylon ${ }^{7}$ (see fig. 4 and below). A mud brick wall 2 courses wide and at least 2 courses deep runs from the north to the south baulk along the east side of the oven/kiln square. This wall's northern end is cut by the ashy debris from the oven/kiln, suggesting that the wall pre-dates the oven and was damaged when (or possibly after) the oven was installed. Both this east wall and the installation's west wall run over another east-west wall that extends the length of the south baulk c. 30 cm below the preserved top of the oven/kiln (fig. 5).

As to the rest of the area, we are continuing to try to determine the several phases of construction of the buildings. Across the area this year we reached the level of the line of paving east of the East Porch and the broad expanse of mud brick to its east (plan, fig. 4). Fig. 5 is a general view of the area at the end of the season. The few coins found here this year were illegible, but the pottery found continues to suggest a general Ptolemaic date for the early phases of the structures.

The walls of rooms 3, 3a and 4 (see fig. 3), the damaged mud brick paving and the baked brick threshold at the NE corner of room 4 were built directly on a hard-packed surface with potsherds; the stones that lined the east side of room 4 were simply set into shallow holes cut in this surface. At the south end of room 4, a few centimeters below this surface, more of the lower footing of the pylon was revealed. Although cut by a pit west of room 4, it now continues across the room's entire width (see fig. 4); it has not been traced further to the east. Extending north from the west end of this footing, at c. 12 cm below the surface on which room 4's walls were built was a patch of mud brick of which further traces were found north of the aforementioned pit. This brickwork lies somewhat below the level of the foundations of the East Porch (fig. 7) and is $12-18 \mathrm{~cm}$ below the remainder of the brick found this year, described below.

In the area north of room 4 , immediately below a very shallow stratum of soil mixed with small stones and fragments of pottery we uncovered a carefully-laid mass of mud brick with wide mortar lines that runs east-west and is preserved to a width of 5-6 rows, on a line with the $6^{\text {th }}$ column (from the north) of the East Porch. The layer of stone chips that was found east of the

[^3]$6^{\text {th }}$ column in $2007^{8}$ cuts the west end of this brick. The brick's full extent to the east has not been uncovered yet. Stubs of two other walls project from the south face of this wall or platform; interestingly, these stubs are on approximately the line of the later walls of room 4 . North of the wall/platform the soil contains a mixture of small chips of stone and bits of pottery that continues to the southern edge of the (much damaged) mud brick mass that covers the northern part of the area (figs. 3, 4) ${ }^{9}$.

As mentioned, the walls of rooms 3 and 3a both rested on the same surface as the east wall of room $4 .{ }^{10}$ The north-south wall dividing room 3 a was cut by a bin with collapsed pottery walls; its east edge lay under the east wall common to both rooms. North of room 3a is a short section of a north-south wall (fig. 3), separated from the north wall of room 3a by a shallow pit. Excavation showed that the wall had been partially cut by the pit, but that it belongs to an earlier phase of construction, lying just below and c. 0.5 m west of the bottom of room $3 / 3 \mathrm{a}$ 's east wall and extending south to what had been the south side of room 3a's north wall before turning to the west for a few courses. To the north, it ends approximately on the line of the south face of the northern brick mass, but we have not yet been able to make a direct connection between the two.

In 2008 we confirmed that the $2^{\text {nd }}$ phase of room 3 's east wall involved thickening the wall by adding a row of bricks to the west side of the earlier wall. The wall between rooms 1 and 2 was similarly thickened, and the east and north walls of room 1 seem to belong to this phase as well. An earlier north-south wall (discovered in $2008^{11}$ ) ran through room 1 about 0.5 m east of its west wall. ${ }^{12}$ Fig. 3 shows the earlier east wall of room $2 .{ }^{13}$ Room 1 is not shown as we were below the foundations of the east wall of this phase at the end of the 2008 season and had as yet found no trace of an earlier wall.

Further careful clearing early in 2009, however, revealed the east wall of an earlier room 1 , although it is somewhat broken. The west wall is preserved somewhat further to the north, and turns to the west just south of the remains of the later baked brick cistern (?) that cuts through to

[^4]this level ${ }^{14}$ (fig. 4). In the angle of this corner are the remains of a step or threshold made of two pieces of limestone, both broken. Between the walls is a mud brick paving that is well preserved for 6 rows but is cut on the north. Traces of a few more courses are visible on the east side of the cut, but the center and west sides are robbed out (fig. 8). The broken, rectangular stone with a hole drilled in one corner (fig. 4 and visible in fig. 8) may be a displaced threshold block with door pivot. There is a gap between the northern preserved end of this paving and the cistern(?), but to its west and north is another area of brick paving, although the bricks here are laid eastwest instead of north-south.

These pavings, the long north-south wall in the center of the square, the east-west brick north of room 4 and the more massive expanse of brick to the north are all preserved to approximately the same height ( $0-9 \mathrm{~cm}$ above the threshold of the Propylon). While we have not as yet been able to make any definite connections among these disparate groups of mud brick, it is tempting to see them as being part of a single large structure that was razed later to make way for later construction in the area.

There is also, as yet, no connection among any of these walls and the wall along the east side of the oven/kiln square, although it, too, is preserved to approximately the same height as the other walls just discussed. The oven/kiln itself seems to belong to a middle phase in the area's history: the area of ash, charcoal and slag to its south lay under the extended north wall of room 4 , and the smear of ash and other burnt debris to its southeast seems to be on the same level. ${ }^{15}$ It is hoped that a further season of excavation will clarify this situation.

## West and South of the Taharqa Gate

Fig. 9 is a plan of the excavations in the area west and south of the Taharqa Gate.

## Area 1: Baked Brick Structure North of the Sacred Lake and the area to the north

In 2009 we returned to the unusual baked brick building south of the Taharqa Gate, at the point where the ground slopes down to the Sacred Lake, that we had begun to explore in late $2008 .{ }^{16}$ Its north and west walls were once covered with red-painted plaster, some of which survives. Within the building are two rectangular plastered areas whose purpose is not known.

[^5]The building's function is still uncertain. It does not seem large enough to have been a bath (our first thought), and the suggestion that it may have been a place for fulling or dyeing textiles ${ }^{17}$ cannot be confirmed. What is certain is that building sits partially atop the remains of the Tuthmoside Mut Precinct's north enclosure wall, whose south face we cleared this year along the length of the building (fig. 10a). Its north wall, which extends beyond the north face of the Tuthmoside wall, rests on a foundation of mud brick (fig. 10b), with evidence of a sand foundation bed under the north face.

Excavation in 2009 revealed a narrow channel running from the north wall to the east end of the round chamber south of the western plastered area (see plan, fig. 12). On the south side of the building, east of this chamber we found a rectangular hole cut into the mud brick of the Tuthmoside wall into which baked bricks from the floor (?) above had collapsed. The void is too regular in shape to be accidental. Unfortunately, the building's south side is not preserved, having fallen away as the wall on which it was built eroded over time.

East of the building is a deep well made of baked brick whose north side has collapsed, sending a spill of baked brick, stone and pottery into a gap between the Tuthmoside enclosure wall and the south end of the wall parallel to the Taharqa Gate wall (fig. 11). The broken stone visible in the photograph may be parts of a short wall that once ran between the well and the baked brick structure to its north, of which only 2 courses remain.

We wanted to determine how the baked brick building and its associated structures relate to the area in which it lies, so we laid out a 9 m . square to its north, measuring north from the north face of the Tuthmoside enclosure wall and west from the west face of the mud brick wall parallel to and west of the wall running off the south wing of the Taharqa Gate. Fig. 12 is a plan of the area showing the phases of construction as we understood them at the end of the 2009 season; the text below is keyed to this plan. Figs. 13a-c are general views of Area 1.

Immediately below the surface across the whole area south and west of the Taharqa Gate that we have explored so far we have found two strata of black ash separated by a stratum of soft, windblown earth. From the lower ash layer came two Greek ostraca, one found at the northeast part of the area, the other at the southwest. Although somewhat worn and damaged, both probably date to the $2^{\text {nd }}$ century AD. The first ${ }^{18}$ is dated to year 7 of a "kaisaros" whose name is

[^6]lost. On the other ${ }^{19}$ the surface has broken away immediately after the word "kaisaros", but does mention a tax master who may be one active under Antoninus Pius. ${ }^{20}$ The area-wide burning that produced the lower ash layer presumably occurred not long after wall ( $\mathrm{d}_{1}$ ) (orange) was reduced to its present height: the top of this wall is itself burnt and lies directly under the ash.

We uncovered a number of mud brick walls in Area 1, but their precise sequence is still uncertain. While the structures in the western part of the square were better preserved than those to the east, we have not yet uncovered enough of them to be able to determine their purpose or even the shape of the building(s) of which they were part. The rows of brick labeled (a) (dark green) so far appear to be the earliest in the area. They probably pre-date the baked brick building as the line of bricks off the east end runs under that building's foundations.

The south side of (c1) (yellow) sits directly on (a). There was a flat sandstone block set into the projecting course at the east end (a). A gap in the south side of (c1) in the area of this slab was filled with broken brick and stone (fig. 14). When we removed the (c1) brick in the southeast corner, we found more disturbed stone fragments, and there was additional broken stone in the gap between (a)/(c) and (d). Perhaps the sandstone slab and the stone and baked brick debris are remains of an entrance threshold and stairway into building (a) that was later destroyed when (c1) was built.

The three areas of brick labeled (b1-3) (blue) may be contemporary with (a). They definitely run under the center of the walls labeled (c1) and (c2), although the foundations of these two walls east and west of (b1) continue down at least 2 courses, as is visible in fig. 15, which also shows (b2). (b2) does not continue under the $\left(\mathrm{d}_{1}\right)$ as we discovered when we removed the northern part of that structure.

Built into the northeast corner of (c1), on top of the lowest course of mud brick uncovered to date, is a square block of stone ${ }^{21}$, presumably to reinforce the corner. The surface of the stone slopes sharply to the north and the bricks set on top of it were carefully cut to fit the uneven surface.

[^7]The space between (c1) and (c2) was filled with soft earth down to the top of (b1); there were no traces of stone, broken brick or other intrusive material; it seems this space remained open long after the buildings were destroyed.

There is a gap between (c1) and the structure labeled (d), although it is possible that the stub of brick projecting west from the south end of $\left(d_{1}\right)$ is broken and once filled the gap. Wall $\left(d_{3}\right)$ is a later addition (although probably not much later). It is not bonded to the main wall and is founded on a layer of earth at a higher level than the southern wall $\left(d_{2}\right)$. When we removed $\left(d_{3}\right)$ and the northern portion of $\left(d_{1}\right)$ we discovered that what is left of $\left(d_{2}\right)$ was built atop an earlier wall (e), shown on fig. 12 in darker orange. The northern row of bricks of (e) clearly continued to the west under (b2) (not shown). It is not certain, however, if this earlier wall is part of (a) as the space to the south of the preserved row of bricks is very disturbed.

While the space between the north and south rows of (e) at the east end has been robbed out, the curving line of bricks shown extending from the northern row may be collapse; It does not seem to have had any relation to the odd-shaped mass of brick (2) to its north.

The space between the baked brick building and (e)/(d) is intentional, with pottery against the south face of (e) opposite the northeast corner of the baked brick building. Whatever caused the subsidence of the east portion of this building had the same effect on the $\left(\mathrm{d}_{2}\right) /(\mathrm{e})$ wall.

The whole area east of the walls just discussed, was extremely disturbed, with only a few stubs of organized brick remaining (dark pink on fig. 12). Beneath this disturbed material we found traces of a plaster surface that covered much of the area between $(e) /\left(d_{2}\right)$ and (c2) and ran west as far as (b2). Walls $\left(d_{1}\right)$ and $\left(d_{3}\right)$ were built on this surface.

The situation in the northwest corner of the square is also rather complex; fig. 12 includes an inset showing the earliest phase we had reached by season's end. The south side of (c2) has been robbed out for about half its length. The lower part of an amphora had been built into the remaining north row of bricks (visible in fig. 13c).

The structure labeled (f), which corners to the north at its west end, was originally separate from (c2), the gap between them filled with chunks of stone and pottery. This debrisfilled channel was later capped with a single row of mud brick of which only the western portion survived. When we removed the capping bricks and the debris, we found 3 rows of mud brick ((b3) on the inset in the upper right of fig. 12) whose top is at the same level as the top of the bricks labeled (b1). The west side of (c2) is separated from the top of (b3) by 15 cm of debris,
while $20-30 \mathrm{~cm}$ of debris lie between the bottom of (f) and the top of (b2). We also found that under the cap and the debris, (f) corners to the south to abut the west face of wall (c2). At the south end of (f), however, the bricks running south to abut (c2) are part of the wall, not the cap. It seems likely that the channel was filled and capped in order to provide a firm foundation for a larger structure that has now disappeared.

There is also a gap between the south and west walls of (f) and the block of mud brick (i) (pale blue) projecting from the north baulk. This block is founded on a deeper level than (f); the lowest course uncovered so far is on about the level of the (b) walls. In the inset on fig. 12, the brick labeled (j) (violet) lies 2 courses below (i) and is somewhat broken, particularly to the west. How it relates to (f) and (i) is not yet known.

The stubs of brick at the east end of (c2) and (f), labeled g1 and g2 (maroon) are later additions that probably belong with each other; both were built on an accumulation of earth and layers of ash several centimeters above the surface associated with (c2). It is possible that the disconnected brick to the east (labeled 1) is associated with (g), but we will never know as this part of Area 1 was disturbed by a fairly widespread and deep dump of pottery, broken stone and baked brick that extended north into Area 3 (see fig. 9) and east almost as far as the bin/oven installation. Below (g2) at the end of the season we uncovered the remains of a north-south wall (h) that corners to run under (f) and seems to be part of the brick projecting from the south end of the west baulk of Area 3, which will be discussed below (fig. 12, inset; fig. 13 b , upper right).

At the east side of the area we found a group of ovens built against the west face of the wall parallel to the wall running south from the Taharqa Gate that were in use long enough to have burnt the face of the wall against which they sit and produced a heavy accumulation of ash in the vicinity around them. Figs. 12 and 16 a show the $2^{\text {nd }}$ phase of this installation. Three mud brick compartments enclose the ovens, and there are remains of a fourth compartment to the north of the oven 1, although no trace of an oven or bin remains. In this phase, oven 1's surround is the only complete one; the west sides of ovens 2 and 3 and the south side of oven 3 are missing. Oven 1 consisted of a small oven set into a larger bin or oven whose rim and shoulder are missing, the space between the west side of the two vessels being filled with mud brick, which extends over the top of the lower vessel. The center compartment contained two small vessels, their west and south sides also supported by mud brick. Oven 3, the most damaged,
seems simply to have sat on ash; there is no trace of supporting mud bricks as there is with ovens 1 and 2.

In the earlier phase of this installation there were only two ovens or bins: the large vessel into which oven 1 had been set, and a second, somewhat smaller vessel that had been completely covered by the two vessels of oven 2 . This earlier version of oven 2 was set in its own mud brick surround, some centimeters south of oven 1 (fig. 16b). There is no sign of burning on the inside of the two earlier vessels, so it is possible they were storage bins rather than ovens. When the cooking area was expanded, the old bins were filled in, new ovens built on their remains, and additional ovens added to the south (oven 3) and possibly the north, although only one side of the surround of this latter oven remains.

Unfortunately, we cannot yet determine how the ovens relate to the buildings to their west. As mentioned above, the area west of the ovens is badly disturbed, what mud brick that exists being cut and pitted out. The ovens may belong with strata uncovered in Area 3 (see fig. 9 ), on which see below.

The pottery found throughout the area seems to support a date in the $1^{\text {st }}-2^{\text {nd }}$ centuries AD; a selection is illustrated as fig. 25. In fact, there is a considerable consistency between the pottery in Area 1 and that found in association with the structures built against the Mut Temple's first pylon. ${ }^{22}$ As it is also in Karnak, it is not surprising that the closest parallels with the pottery found this year and in previous seasons continues to be found in the material from the Chapel of Achoris. ${ }^{23}$

Among the most characteristic vessels from the area are red-slipped bowls with bands of blue/black paint (sometimes augmented with rather blob-like flowers or leaves) around the center of the body ${ }^{24}$ and shallow bowls with ring bases and raised rims that are red-slipped inside and over the rim, with concentric circles or other decoration in blue/black on the floor of the vessel. ${ }^{25}$ The two amphora necks belong to the category of long-necked, smooth-sided brown amphora common in the early Roman Period ${ }^{26}$, as are the pointed, knobbed amphora toes. ${ }^{27}$ We found no

[^8]examples of the later, ribbed Roman amphora with the handles high on the neck. A pitcher of Aswan pink ware with a trefoil rim a flaking red slip and a single piece of a rim of Eastern Sigillata ware came from this area as well. ${ }^{28}$ The siga (keg) neck is known at Mons Claudianus in the $1^{\text {st }}$ and $2^{\text {nd }}$ centuries, ${ }^{29}$ although it is possible that the one illustrated is a residual Ptolemaic sherd ${ }^{30}$; as mentioned, the area is quite disturbed.

## Area 2: West of the Taharqa Gate

One of the goals of the 2009 season was to discover what the approach from the west to the Taharqa Gate had been in Dynasty 25. We knew from previous excavations, between 1977 and 2008, that the gate had been blocked, the ground level raised, and houses built to its west by at least the $1^{\text {st }}$ century AD , to judge by a group of ostraca found in one of the structures, ${ }^{31}$ and probably by the late Ptolemaic Period. The houses lie within the protection of the precinct's north and west enclosure walls.

In 2008 we excavated the gateway to its original paving and extended excavations c. 1.5 m to the west; there was little evidence of building here, but we did find that the paving of the gateway's approach continued into the west baulk. ${ }^{32}$

In 2009 we laid out a $7 \times 12$ meter trench, centered on the gate's west face (see fig. 9). Its northern border is the large mud brick wall (over 1m wide) discovered in 1977 that meets the wall running north from the Taharqa Gate's north wing (fig. 17) and runs west for at least 15 meters. The southern boundary was set 1.3 m south of the south wing of the gate. The wall that

[^9]ran west from the narrowed, Roman Period threshold of the gate excavated in 2008 divided the area naturally into a northern and a southern section. ${ }^{33}$ North of this wall were the Ptolemaic/Roman houses; south of it the area had not been much explored.

## Area 2 North

In 1977, built against the north boundary wall we uncovered an east-rising stairway with stone treads (fig. 17b); it was enclosed by mud brick along its south and east sides. Fig 18a shows the same area partway through the 2009 season. It seems likely that the sandstone block on the left of the photograph is the threshold of the entrance to the stairwell, which would have been entered from the south and turned immediately to the east. The stairwell itself has now completely collapsed: the two mud brick casements east of the sandstone sill are all that remain of its support. The northern casement was built over a heap of broken stone against the face of the north boundary wall and was filled with dirt. The southern casement was partially filled with broken pottery, probably dumped in as fill (see fig. 26). A Ptolemaic or possibly early Roman date seems appropriate for this pottery.

West of the stairway was a small room built in the NW corner of Area 2 north. It went through at least 2 phases of construction, the second phase consisting of adding a row of bricks to the existing north, south and west sides of the room (plan, fig. 12 and fig. 18b). The original west wall of this room is partially under the west baulk. A narrow cross wall to the east that abuts the south wall may have created a doorway into the room, and there is a projecting stub of brick halfway along the south wall (and also not bonded to it) that seems intentional. We found a considerable amount of pottery, particularly along the south side, sitting on an ashy surface, suggesting the area was used for food storage or preparation (fig. 26). G. Schreiber has recently published a detailed study of painted pottery from Thebes from late dynastic to Ptolemaic times. ${ }^{34}$ The two bowl fragments illustrated resemble G. Schreiber's simple floral style of carinated bowl, which he dates "from the Late Persian period at least to the $2^{\text {nd }}$ century BC," ${ }^{35}$ while the body sherds with bands of black/purple on a light background appear to fit in the

[^10]category of linear style B, which Schreiber says extends "well into the $2^{\text {nd }}$ part of the $2^{\text {nd }} \mathrm{c}$. BC". ${ }^{36}$

The oven with a mud brick surround built against the south face of the wall dividing Area 2 north (fig. 18a) seems to confirm the domestic nature of the building. This oven had been partially exposed in 1977, under an ashy surface that ran across the space between the two walls, so it is not clear if it is exactly contemporary with the room to the north. Running over the top of the oven was a layer of earth containing many small white flecks of plaster or decayed lime/limestone. This same layer was found to the south (see below). The large, irregular gap in the wall east of the oven is an animal hole, dug since the 1977 season. The animal hole was useful in allowing us to examine the construction of this wall. As with the (c2) and (f) walls of Area 1, this wall began as two walls separated by a gap that was later covered with a row of mud brick to create a wider, stronger wall.

To the east, where this wall is broken, we began to find a large concentration of broken pottery. The surface associated with the oven was built on this accumulation, which ran across the whole area from east to west and was found to lie against the south face of the wall cut by the animal hole. This heap of pottery, which we had already seen in the 2008 excavations just west of the Taharqa Gate, proved to be the top of a large dump of stone and pottery that extended west from the gate way to the west baulk (fig. 19). The accumulation seems to be confined mainly to Area 2 north, lying on a surface that at the center and west is $\mathrm{c} .65-70 \mathrm{~cm}$ above the paving but slopes down to the east. At the east end (lower right in fig. 19) the debris also seems to have been tipped from north to south, confirming what we saw in the west baulk of the 2008 excavation, and to spill down to a level c. 40 cm above the paving. From this accumulation came one imported stamped amphora handle and the neck of an Egyptian amphora handle with a pseudostamp. ${ }^{37}$ We also found a few feet from fire dogs; the almost complete example shown came from the lowest level of the build-up. ${ }^{38}$ All of the structures in Area 2 north, as well as the buildings to the west excavated in 1977-78, ${ }^{39}$ were built on top of this material, or on later debris that accumulated on it, suggesting the dumping was an intentional landfill to create a surface on

[^11]which to build the houses west of the Taharqa Gate. A selection of the pottery from this landfill is shown in fig. 26. The high proportion of painted sherds in this material argues strongly for a Ptolemaic date for its deposition.

When we cut a north-south section halfway across Area 2 north, taking the eastern half of the area down to the level of the paving, we found that the north boundary wall descends to the paving level and is thus contemporary with the Taharqa Gate (fig. 20a-b). Unfortunately, the corner where it met the wall running north from the gate (see fig. 17a) has collapsed since 1977. Fig. 20a shows clearly the later Ptolemaic/Roman house wall built against the face of the $25^{\text {th }}$ Dynasty wall.

## Area 2 south

The situation south of the dividing wall is very different: there is virtually no architecture. Instead, under the modern surface earth are several strata of debris, whose tip lines are clearly visible in the west baulk (fig. 21a), that run the full width of the area, being higher at the north and south ends than in the center. The upper stratum (c. 25-30 cm thick) is characterized by a heavy concentration of white flecks.

All these strata of debris, but in particular the white-flecked stratum, contained a heavy concentration of broken pottery (no whole vessels found) mixed with many small fragments of faience, bronze and glass; broken terracotta figures (mostly quadrupeds); beads; and some fragments of bone. This all appears to be domestic debris. Of the dozen coins found in Area 2 south, only one could be identified: a coin of Hadrian, possibly year $11(126-127 \mathrm{AD})^{40}$ that came from the top of the white-flecked layer and may be intrusive. Here, too, there was an unusually high concentration (for the Mut Precinct) of painted pottery (fig. 27), virtually all of it in the "floral styles" described by G. Schreiber. ${ }^{41}$ We also found more examples of Egyptian blackware than usual, and for the first time have fragments of imported Greek black-glazed pottery, mainly body sherds, as well as what seems to be a red-glazed kantharos or skyphos fragment with a white vine motif. ${ }^{42}$ From these strata came two more stamped amphora handles; these, and the ones from Area 2 north, are currently being studied and will probably prove to be

[^12]Ptolemaic in date. Fig. 27 shows samples of pottery from the area. This material all suggests that by the end of the Ptolemaic Period the approach to the Taharqa Gate was completely blocked.

The two phases of the dividing wall between Area 2 north and south can also be seen in fig. 22a. The eastern portion of the wall, broken at the west end, was built atop the landfill described above; its lowest course is c. 1.2 m above the paving of the approach to the gateway. The top of this phase serves as the foundation for the later, narrower phase whose western portion was built on and cuts into, the top of the white-flecked layer, the same stratum that ran over the oven north of the dividing wall.

The east-west stub of wall to the south (fig. 9) is the deepest of the remaining wall fragments in the area, its lowest course being at the preserved top of the earlier phase of the dividing wall. The other short walls, which formed a room built against the dividing wall, are at most 4 courses deep and are founded on the white-flecked stratum. The southwest corner of this room (which had a packed earth floor) was destroyed by a later pit that cut through to the whiteflecked stratum.

At the south side of Area 2 south, c. 90 cm below the top of the white-flecked layer, we uncovered a mud brick wall that runs across the area to meet the wall parallel to the Taharqa Gate wall. The white-flecked layer continued across the top of this wall and cut the west end of the north wall of the small mud brick building first found in 1977 (fig. 21b). The south wall of this building was built directly on top of the larger wall, ${ }^{43}$ which was preserved to a height of c . 1.1 meter ( 7 courses), although the coursing at the east end is unclear.

In the center of the area, beneath the white-flecked layer, we found a single round feature (not illustrated; possibly the bottom of a bin) set into a surface that was on approximately the same level as the floor in the rooms in the northwest corner of Area 2 north, but found no evidence of structures with which to associate this feature, and the surface was much broken.

Below this surface, at about the level of the top of the landfill to the north, we began to come on a mix of earth, ashy debris and fragments of baked brick that may be part of that landfill. Immediately beneath this layer lay the top of the one other piece of architecture in the area: a crudely-built wall of worked sandstone and limestone blocks about 1.5 m north of the south wall and extending about 3 m . east from the west baulk (fig. $22 \mathrm{a}-\mathrm{b}$ ). The blocks of the two courses are simply stacked on one another with no mortar. This wall and the larger wall to the

[^13]south were built on a surface c .40 cm above the paving of the approach to the gate. This is the same level as the top of the mud brick paving uncovered between the west jambs of the Taharqa Gate in 2008 that was part of the second phase of the narrowing of the gate. In the first phase, a new sandstone threshold was installed in the center of the gate, flanked by mud brick walls that narrowed the entrance. The stone threshold was laid directly on the original paving. A third threshold, a two-course construction of baked brick and sandstone, raised the threshold to the level of the surface on which the landfill was dumped, about $65-70 \mathrm{~cm}$ above the paving. ${ }^{44}$

On the southern part of the lower surface (i.e., c. 40 cm above the paving) we found a number of large pieces of pottery and broken sandstone that proved to be displaced paving stones; to the north there was relatively little pottery.

Below this surface we finally reached the paving of the approach to the gate (fig. 23), which curves somewhat to the south as it approaches the west baulk. The central part of the paving is in good condition, but to the south it is much disturbed and broken. As we discovered when we cut the section through Area 2 north (see above), the area north of the gate's entrance does not seem to have been paved; instead there was a packed earth surface between the north wall and the paving.

The north wall, then, seems to mark the northern boundary of the Taharqa Gate and its approach in Dynasty 25. We have not yet found a comparable contemporary southern boundary wall. The wall south of the gate uncovered this year was built later, probably in the Ptolemaic Period to judge by the pottery found in the area, when the ground level had risen and the gate had already been narrowed. We found no evidence of any structures (e.g., a colonnade, sphinx bases) on either side of the paving, although we did find a pink granite fragment of a ram and part of a large column drum in the area. If such monuments existed they were either removed in antiquity or began west of the west limit of our excavation.

## Area 3: Between Areas 1 and 2

We opened a third area between Areas 1 and 2 in part to determine the width of the wall that formed the south boundary of the approach to the Taharqa Gate (partially covered by Area 2's south baulk) and in part to determine what lies between this wall and the mud brick structures of Area 1. Area 3 (plan, fig. 9 and fig. 24) followed the line of the west baulk of Area 2 as far as

[^14]the north baulk of Area 1, which we cut through to link the two areas. The northeastern part of Area 3 had been partially excavated in 1977, at which time the long north-south wall parallel to the Taharqa Gate wall was uncovered; this is the same wall that forms the eastern limit of Area 1. The earth in this area sloped gradually to the south and rather sharply to the east. The potteryfilled strata of Area 2 continue over the edge of the south wall (see fig. 27), but are disturbed further south and east.

At the south end of Area 3, about 5 cm below the surface, we encountered the same layer of ash that overlay the whole of Area 1. It continued c. 1.35 m to the north, where it is cut. Immediately below the ash was the same level of disturbed mud brick that existed in the northeastern area of Area 1; it extended north into Area 3 for 1.8 m and c. 1.6 m east of Area 3's west baulk. This brick was mixed with, and partly sitting upon on a scrappy fill of mixed small sherds and charcoal fragments below which was a layer of black and brown ash with numerous charcoal fragments whose top lay c. 60 cm below the modern surface. Some of the pottery from this stratum is illustrated in fig. 27 and suggests a Ptolemaic date. When we cleared this fallen brick, we found more organized brick at the juncture of Areas 1 and 3 (fig. 12, inset, labeled (h)), with a thicker concentration of ash immediately to its east. From this patch came a small fragment of very fine black-glazed pottery with a white vegetal pattern. According to William Peck, this is certainly a piece of imported South Italian ware (fig. 27; shown at larger scale than the rest of the pottery). The layer of black ash continues to the south, running under walls (g1) (fig. 12).

About 30 cm . below the layer of black ash and separated from it by a stratum of earth, we found a distinctive stratum of pale gray ash that runs the full length of the west side of Area 3, up to the south side of the wall that forms the northern boundary of this area. It is c .25 cm deep at its thickest (west baulk at the north end of the area) but thins to a few centimeters further south. At its northern end it was cut c .30 cm east of the west baulk. To the south it runs into Area 1 at least as far as the $2^{\text {nd }}$ oven (early phase), and seems to continue below the plaster surface that is otherwise the lowest surface reached in this area in 2009 (see above). Opposite and north of the Area 1 ovens it was cut by the pottery dump mentioned above that disturbed the northeast corner of Area 1.

At its north end, the gray ash layer appears to stop at the wall that forms the southern boundary of the approach to the Taharqa Gate. This wall continued into the west baulk. It is
made up of four rows of brick laid north-south, with a fifth row laid east-west forming its north face. This northern row is broken about halfway along the wall, and there is also a break in the south row east of the west baulk. At the baulk there is evidence that the wall may be preserved one or possibly two courses higher further to the west, but the brick here is rather broken. The gray ash runs up to, but not over, this slightly higher level in the baulk.

As mentioned above, we did not find the gray ash layer in the eastern part of this area. However, south of the wall, about 2 m . west of the long north-south wall and several centimeters above the preserved top of the south wall was a rough surface made up of ash mixed with bits of broken mud brick and pottery, ${ }^{45}$ surrounding and running over what was left of an east-west row of 3 pottery ovens. The lower portions of the two eastern ovens were still intact, but only traces of the third oven remained. These ovens were set on an area of mud brick that abutted the south face of the wall bounding the Taharqa Gate approach. It is possible that they, small building to the north (see fig 9), and the mud brick abutting this wall belong to the same building phase.

Although the brick is broken east of the ovens, it runs 5 courses to the south before being cut by an odd construction of baked brick (plan, fig. 9 and fig. 24) that runs across the area and into the west baulk. The top course was formed by two rows of bricks laid north-south, separated by a row of bricks laid east-west; all the bricks are laid on edge. The second course, whose bricks were laid flat, was offset to the south by the width of a half brick. A section cut through the wall parallel to the Taharqa Gate wall showed that both the baked brick construction and the rows of mud brick terminate at this wall. We have so far followed the mud brick south of the baked brick for c .2 .5 m along the face of the wall, although there is a gap about a meter square at the northeast corner. At the southern end, the pattern of brick changes (see fig. 9), with a row of stretchers separating the 9 northern rows of headers from the 2 southern rows. The brick extends c. 3.75 m to the west, all the rows laid east-west except for the final row which is laid northsouth and seems to mark the end of the wall (or platform?) as there is no brick west of this row (see fig. 9). The brick to the south runs under the earth below the stratum of gray ash; we hope to explore the whole area further next year.

From the gray ash layer came a spouted vessel (fig. 27) of a type with which we were not familiar ${ }^{46}$. A very similar vessel was found in the lower levels of the debris in Area 2 north ${ }^{47}$

[^15](fig. 26), suggesting a possibly Ptolemaic date at least for the latter. Very similar objects were found at Edfu in 1938 (called "aiguières" by their excavator), and those that most resemble the ones found in Area 3 are dated to the Ptolemaic Period. ${ }^{48}$ From the same stratum came a fragment of a Nile silt vessel with a motif of vines above a band of cross-hatching, executed in red and black paint on a white background, and a piece of imported black-glazed pottery (fig. 27).

Although we now have a somewhat better understanding of the development of the approach to the Taharqa Gate and the growth of the houses to the north and west, the area southwest of the gate still leaves many questions to be answered. The wall that is parallel to and west of the wall running off the gate's south wing runs the full length of the area from the Taharqa Gate to the Tuthmoside enclosure wall. Is it contemporary with the gate or was it built at the same time as the wall that forms the southern boundary wall of the approach? How do the mud brick and baked brick features of Area 3 relate to that wall and to Area 1 to the south? What sort of structures are the large Roman Period mud brick walls (c1) and (c2)/(f) in Area 1? Could they be wings of a gateway? If so, to and from what does the gate lead? We hope to be able to answer at least some of these questions in the coming season.

## CONSERVATION AND RESTORATION

## Chapel D

In 2009 we completed the restoration of this Ptolemaic chapel to the extent possible. The east walls of all three rooms were rebuilt or restored and new paving was laid down throughout the chapel where the original paving was badly damaged or missing. Fig. 28 shows the chapel at the end of the season.

## Taharqa Gate

The season's major conservation project was to restore both wings of the Taharqa Gate to the extent possible. Fig. 29 shows the north face of the south wing and the south face of the north wing at the start of the season and fig. 30 after completion of the work. The blocks making up

[^16]both wings were badly deteriorated. Both wings were dismantled to their lowest courses and the blocks consolidated with Paraloid B-72. Where blocks were missing or too decayed to save they were replaced. A finishing coat of the mix used by the SCA (portland cement, sand and lime) tinted to match the color of the original blocks was applied to reconstructed but undecorated areas.

The facade of the north wing was supported by a core of large blocks that also had to be dismantled, consolidated and then repositioned and secured (fig. 31a-b). The corresponding core of the south wing was not preserved, although the foundation course of the south (core) side of the gate suggests there may have been such a core, but not as thick as that of the north wing.

The blocks of the south wing's facade were in much worse condition than those of the north wing, perhaps because of the lack of a supporting core. In order to stabilize and support this wing, the masons built a new core, following the outline of the foundation course (fig. 32ab).

We have been able to restore several blocks fallen from the gate to their original position. Fig. 33a-b shows the west face of both wings at the end of the work. On the north wing (fig. 33a) we restored two blocks of Amun's head and torso; on the south wing the lower legs and feet of Taharqa and Mut and a block from the next course up were restored.

Fig. 34a-b shows the east face of both wings. We restored one block of the god's lower body to the north wing and the lower body of a Nile deity to the south wing. This block was the only piece of decoration preserved from this face.

Fig. 35 looks east across the paving of the approach to the Taharqa Gate and to Temple A to which the processional way led.

There were a few blocks we were not able to put back in position, some because the upper part of the gate is missing and others because their precise location is not yet known. We hope to find and restore other blocks from the gate in coming seasons. ${ }^{49}$

[^17]

Fig. 1: Plan of the Mut Precinct showing areas of work by the Brooklyn Museum Mut Expedition in 2009.


Fig. 2a: View to the east of the sounding at the south end of the $1^{\text {st }}$ Pylon of Temple A showing the sand foundation layer under the mud brick.


Fig. 2b (top) and 2c (bottom): two strata of mud brick walls under the sand foundation. Both suggest domestic rather than temple structures.



Fig. 5: View to the west of the kiln/oven north of the Mut Temple's $1^{\text {st }}$ Pylon. The lower level wall is visible on the left.


Fig. 6: View to the north of the area north of the Mut Temple's $1^{\text {st }}$ Pylon at the end of the season.


Fig. 7: The brick at west end of pylon with East Porch to right.


Fig. 8: Looking east across the area north of room 1, showing the mud brick paving(?) and walls and the possible limestone threshold.


Fig. 9: Plan of the excavations south and west of the Taharqa Gate in 2009 (plan drawn by W. H. Peck)


Fig. 10a: View to the NW showing the south face of the northern Tuthmoside enclosure wall with the baked brick building built on it. The wall that forms the eastern boundary of the structures associated with this building is visible in the center of the picture.


Fig. 10b: View east of the same area showing the mud brick foundations of the north part of the building, the gap between it and the mud brick structures to the north, and the north face of the Tuthmoside enclosure wall, which lines up with the Mut Temple's $1{ }^{\text {st }}$ Pylon.


Fig. 11: View to the west of the collapse of stone, baked brick and pottery on the N side of the well cutting through the south end of the wall parallel to the Taharqa Gate wall.

Fig. 12: Detail plan of Area 1(plan drawn by W. H. Peck)


Fig. 13a: A view east of the mud brick walls of Area 1, north of the baked brick building. The plastered floor is in the center of the photo with the bins in the rear.


Fig. 13b: General view to the southwest of Area 1.


Fig. 13c: The same area, looking northeast


Fig. 14: The gap in the south side of wall (c), with tumbled stone and brick; wall (a) is in the foreground.


Fig. 15: View south across the western half of Area 1. Wall (b1) (to the right of the meter stick) runs between walls (c1), in the background, and (c2). The foundations of (c1-2) are deeper east and west of (b).


Fig. 16a: View south along the east side of Area 1 showing the $2^{\text {nd }}$ phase of the ovens built against the wall parallel to the wall running south from the Taharqa Gate.


Fig. 16b: View east of the 2 ovens/bins of the earlier phase.


Fig. 17a: The wall running north and west from the Taharqa Gate at the end of the 1977 season (photograph: D. Loggie).


Fig. 17b: A 1977 view to the east of the stairway built against the wall running west from the Taharqa Gate. (photograph: R. Bianchi)

Fig. 18b: The room in the northwest corner of Area 2 north, looking to the south.


Fig. 18a: The northern portion of Area 2 North, looking east to the Taharqa Gate. The stone threshold is on the left, with the remains of the support of the stairway to its east.


Fig. 19: View north across area 2 north with the dividing wall between the areas removed and the top of the dump of stone and pottery clearly visible.


Fig. 20a (left) shows the join between the wall of the Ptolemaic/Roman house (to the right of the meter stick) and the earlier wall. Fig. 20b shows the north wall of the area extending down to the level of the paving and running east to the wall that abuts the north wing of the Taharqa Gate.


Fig. 21a: The west baulk of Area 2 south in mid-season, showing the strata of debris; the row of limestone is the only architectural feature found in the center of the area.


Fig. 21b: The north and south walls of the small structure west of the south wing of the Taharqa Gate, first found in 1977. Its south wall was built on top of the earlier brick wall forming the southern boundary of this area.


Fig. 22a-b: Two views of the crudely-built stone wall at the south side of Area 2 south: (a) looking north to the wall dividing Area 2 north and south; (b) looking south to the south wall of the area.


Fig 23: The paving west of the Taharqa Gate, seen from the west. The central part of the paving is well-preserved, but the blocks to the south are disturbed.


Fig 24: View to the northwest of Area 3 showing the rows of baked brick with mud brick on either side and the thick layer of grey ash (center) at a higher level than the bricks. The wall forming the southern boundary of the paved area west of the Taharqa Gate is in the background and the 2 original bins of Area 1 are in the foreground.


Fig. 25: A selection of pottery from Area 1.


Debris/landfill under buildings of Area 2 north


Fig. 26: Pottery from Area 2 north.


Area 3
Continuation of debris strata of Area 2 South


From ovens in northern part of area


Ash layer underlying mud brick at junction of Areas 1 and 3

Stratum of light gray ash extending across Area 3 and into Area 1


Fig. 27: Pottery from Area 2 south and Area 3.


Fig. 28: Chapel $D$ at the end of the season, with the walls restored and new paving installed.


Fig. 29a-b: The inner faces of the north (top) and south wings of the Taharqa Gate at the beginning of the 2009 season.


Fig. 30a-b: The same area at the end of the season. Damaged blocks have been conserved or replaced and blocks fallen from the gate restored to their original positions.


Fig. 31a-b: The core of the north wing at the start of the season (left). The precarious condition of the blocks is clear. Below is the core at the end of the season.


Fig. 32a-b: In the south wing all that remained was the foundation course of the rear of the gate (top). On the right is the new core of the south wing, built on the original foundation to support the facade.



Fig.33a-b: The west faces of the north (left) and south wings of the Taharqa Gate at the end of the season with fallen blocks restored to their original positions.


Fig. 34a-b: The east face of the south (left) and north wings of the gate at the end of the season.


Fig. 35: Looking east through the restored Taharqa Gate, which opened a processional way to Temple A in the rear of the photograph.


[^0]:    ${ }^{1}$ The Expedition acknowledges with gratitude the cooperation and assistance of officials of the Supreme Council of Antiquities, in particular Dr. Zahi Hawass, Secretary General of the SCA; Dr. Sabry Abdel-Aziz, Undersecretary; Dr. Magdy El-Ghandour, General Director for Foreign and Egyptian Missions; Dr. Mansour Boreik, Director for Southern Upper Egypt; Dr. Mohammed Assem, Director for Luxor and Karnak; and Dr. Ibrahim Suleiman, Director for Karnak. The SCA inspector for this season was Mr. Osama Saadalla Hamdoun. The SCA conservator working with us was Khaled Mohammed Wassel. We thank them all for all their help with the season's work.

    The staff for this season were Richard A. Fazzini, Egyptologist, Director and Co-Field Director; William H. Peck, Egyptologist, Co-Field Director and Architect; Mary E. McKercher, Assistant Director, archaeologist, and photographer; Elsie H. Peck, archaeologist and artist; Jacobus van Dijk, Egyptologist and epigrapher; and John Steele, conservator. Funding for the 2009 season was provided by the Brooklyn Museum's Charles Edwin Wilbour Fund and by William and Elsie Peck, Richard Fazzini and Mary McKercher.

[^1]:    ${ }^{2}$ See, e.g., C. Van Siclen III, The Alabaster Shrine of King Amenhotep II, The Brooklyn Museum Archaeological Expedition to the Precinct of the Goddess Mut at South Karnak (San Antonio, 1986). The stelae have since been removed and reconstructed as part of the chapel of Amenhotep II: e.g., "5.2. La chapelle en calcite d'Amenhotep II," Cahiers de Karnak XII, fasc. 1 (Paris, 2007), pp. 35-36 and pl. IIIa; Cahiers de Karnak XII, fasc. 2 (Paris, 2007), pp. 469-470, and pl. LXIX.
    ${ }^{3}$ R. Fazzini and W. Peck, "The 1982 Season at Mut," NARCE 120 (Winter, 1982), pp. 43-44.
    ${ }^{4}$ See already, e.g., R. Fazzini, "Report on the 1983 Season of Excavation at the Precinct of the Goddess Mut," ASAE 70 (1985), pp. 305-307.
    ${ }^{5}$ For this work, see R. Fazzini, "Some Objects Found before the First Pylon of the Mut Temple," in Z. Hawass and J. Richards (eds.), The Archaeology and Art of Ancient Egypt. Essays in Honor of David B. O’Connor I, CASAE 36 (Cairo, 2007), pp. 277-289; idem, "Report on the Brooklyn Museum's 2006 Season of Fieldwork at the Precinct of

[^2]:    the Goddess Mut at South Karnak" ASAE 81 (2007), pp. 101-116; idem, "The Brooklyn Museum’s 2007 Season of Fieldwork at the Precinct of Mut, South Karnak", ASAE 82 (2008), pp. 67-88; and idem, "Report on the Brooklyn Museum's 2008 Season of Fieldwork at the Precinct of the Goddess Mut at South Karnak", ASAE (forthcoming). As we noted in the report on the 2008 Season, among our more important discoveries about the site are: (1) The area north of the Mut Temple's First Pylon was originally not in the Mut Precinct (Per Mwt or Isheru) but in terrain called Ipet or Opet. (2) It was not until Dynasty XXV that this terrain was brought into an expanded Isheru presumably because Temple A had come to function as a mammisi. Cf. most recently, R. Fazzini and J. van Dijk, "Recent Work in the Mut Precinct at South Karnak," Egyptian Archaeology 31 (Autumn, 2007), p. 10.
    ${ }^{6}$ M. Eccleston, "Metalworking at Amarna: A Preliminary Report", BACE 19 (2008), pp. 29-47, esp. pp. 40-42.

[^3]:    ${ }^{7}$ For a description of the rooms built against the pylon, see R. Fazzini, ASAE 81 (2007), 102-106 and idem, ASAE 82 (2008), pp. 70-73.

[^4]:    ${ }^{8}$ See R. Fazzini, ASAE 82 (2008), p. 72.
    ${ }^{9}$ The excavation of this area in 2008 is described in R. Fazzini, "Report on the Brooklyn Museum's 2008 Season", ASAE (forthcoming).
    ${ }^{10}$ The crossing walls within room 3a proved not to be preserved beyond the limits of that room.
    ${ }^{11}$ See R. Fazzini, "Report on the Brooklyn Museum's 2008 Season", ASAE (forthcoming).
    ${ }^{12}$ See idem, ASAE 81 (2007), fig 4a.
    ${ }^{13}$ This figure also shows remains of a wall to the north and east of room 2, of which only one course was preserved; its relationship to the other walls in the area is uncertain.

[^5]:    ${ }^{14}$ See R. Fazzini, ASAE 81 (2007), pp. 103-104.
    ${ }^{15}$ See R. Fazzini, "Report on the Brooklyn Museum's 2008 Season", ASAE (forthcoming)
    ${ }^{16}$ R. Fazzini, "Report on the Brooklyn Museum's 2008 Season", ASAE (forthcoming), fig. 20 (three views).

[^6]:    ${ }^{17}$ Personal communication by Luc Gabolde, with reference to work by Sylvie Cauville at Edfu.
    ${ }^{18}$ Expedition no. 23MW.20: h: 9.7 cm ; w: 10.1 cm

[^7]:    ${ }^{19}$ Expedition no. 23MW.31: h. of inscribed surface: 6.2 cm ; w. of inscribed surface: 6.0 cm
    ${ }^{20}$ We are very grateful to Dr. Robert Demarée, Dr. Brian Muhs and Dr. Klaas Worp of the University of Leiden for taking the time to examine photographs of the ostraca and provide us with this information.
    ${ }^{21}$ Remains of 2 columns of badly worn raised relief text are visible on the upper surface. According to Dr. Jacobus van Dijk, who examined the block, at the top of both columns is the name of Khonsu, in the right column followed by the epithet $n$ A Aw.t-ib "lord of joy". At the bottom of the left column, "Isis" can be faintly made out. The inscription is definitely pre-Ptolemaic, and could be Kushite or New Kingdom.

[^8]:    ${ }^{22}$ For examples, see Fazzini, $A S A E$ 82, fig. 9.
    ${ }^{23}$ J. Lauffray, La chapelle d'Achôris à Karnak: 1. Les fouilles, l'architecture, le mobilier et l'anastylose (Editions Recherche sur les Civilisations, 1995), pp. 87-109.
    ${ }^{24}$ A number of similar bowls are illustrated in K. Myśliwiec, Keramik und Kleinfunde aus der grabung im Tempel Sethos' I. in Gurna, MDAIK 57 (1987), p. 83 and figs. 864-893 and plate XV, nos. 5-7.
    ${ }^{25}$ K. Myśliwiec, Keramik und Kleinfunde, p. 89 and figs. 925-936, 940-945, and pl. XV, nos. 1-4.
    ${ }^{26}$ For amphora necks and handles, cf. S. Marchand, "Amphores de Karnak et de Dendara", in S. Marchand and A. Marangou (eds.), Amphores d'Égypte de la basse époque à l'époque arabe, CCE 8, vol. 1 (Cairo, 2007), pp. 369-

[^9]:    376, esp. p. 371 and fig. 14 (Dendara, $1^{\text {st }}-2^{\text {nd }}$ century AD); V. Maxfield and D. Peacock, The Roman Imperial Quarries: Survey and Excavation at Mons Porphyrites 1994-1998. Volume 1: Topography and Quarries, $67{ }^{\text {th }}$ EES Memoir (London, 2001), p. 271 and fig. 6.15, no. 11; and p. 280 and fig. 6.18, no. 35-36; (amphora rim, neck and handles)
    ${ }^{27}$ See, e.g., R. Tomber, "Early Roman Egyptian Amphorae from the Eastern Desert of Egypt: A Chronological Sequence," in S. Marchand and A. Marangou (eds.), Amphores d'Égypte de la basse époque à l'époque arabe, CCE 8, vol. 2 (Cairo, 2007), p. 529 and fig. 2, no. 4.
    ${ }^{28}$ cf. J. Hayes, in S. Sidebotham and W. Wendrich (eds.), Berenike 1995: Preliminary Report of the 1995 Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert (Leiden, 1996), p. 168 and fig. 16; V. Maxfield and D. Peacock, Mons Porphyrites, p. 274 and fig. 6.16, no. 2.
    ${ }^{29}$ V. Maxfield and D. Peacock, Survey and Excavation: Mons Claudianus 1987-1993, vol. 3:Ceramic Vessels \& Related Objects (Cairo, 2006), p. 97, Type 96 (fig. 1.37), where this shape is called "common. Mid-1 ${ }^{\text {st }}$ century through Severan."
    ${ }^{30}$ cf. R. Tomber, in S. Sidebotham and W. Wendrich (eds.), Berenike 1996: PreliminaryReport of the 1996 Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert (Leiden, 1998), pp. 163-165 and fig. 24.
    ${ }_{31}^{31}$ R. Jasnow and R. Fazzini, "Demotic Ostraca from the Mut Precinct in Karnak," Enchoria 16 (1988), pp. 23- 48.
    ${ }^{32}$ R. Fazzini, "Report on the Brooklyn Museum's 2008 Season", ASAE (forthcoming).

[^10]:    ${ }^{33}$ ibid.
    ${ }^{34}$ G. Schreiber, Late Dynastic and Ptolemaic Painted Pottery from Thebes ( $4^{\text {th }}-2^{\text {nd }}$ B.C.) Dissertationes Pannonicae Ser. III, Vol. 6 (Budapest, 2003).
    ${ }^{35}$ ibid., p. 26 and pl. 1, no. 3-22, esp. no. 16.

[^11]:    ${ }^{36}$ ibid., pp. 44-45 and pls. 4-6.
    ${ }^{37}$ G. Marouard, "Quelques amphores d'époque hellénistique et romaine de Karnak (CFEETK)", Amphores d'Égypte CCE 8, vol. 1, p. 353 and fig. 14a-15; he dates these to the $2^{\text {nd }}$ century BC.
    ${ }^{38}$ On firedogs and their possible use, see D. Aston, "Ancient Egyptian "Fire Dogs" - A New Interpretation", MDAIK 45 (1989), pp. 27-32 and pl. 1.
    ${ }^{39}$ R. Fazzini, in R. Jasnow and R. Fazzini, "Demotic Ostraca from the Mut Precinct in Karnak," pp. 23-25.

[^12]:    ${ }^{40}$ Excavation no. 23MW.43: diam 1.9 cm ; thickness 0.4 cm . Obverse: bust, laureate, to the right; reverse: stag standing to right. Inscription on obverse: AVT KAI [TRAI A $\triangle$ PIA CEB]. As always, we are indebted to Dr. Penelope Weadock Slough for her willingness to research the coins we find.
    ${ }^{41}$ G. Schreiber, Late Dynastic and Ptolemaic Painted Pottery.
    ${ }^{42}$ cf. K. Myśliwiec et al., "Remains of a Ptolemaic Villa at Athribis", MDAIK 44 (1988), p. 191 and pl. 39a-c: fragments of a kantharos or skyphos.

[^13]:    ${ }^{43}$ The east wall and its stone threshold had been removed in 2008.

[^14]:    ${ }^{44}$ See R. Fazzini, "The Brooklyn Museum's 2008 Season," ASAE (forthcoming).

[^15]:    ${ }^{45}$ The top of this level is the lowest point reached during the 1977 season.
    ${ }^{46}$ Expedition no. 23MW.94; h: 7.3 cm ; max. diam: 6.4 cm ; tall flaring neck, ring base, spout from shoulder.

[^16]:    ${ }^{47}$ Expedition no. 23MW.90; h. to break at neck: 5.9 cm ; max diam: 6.7 cm ; neck missing.
    ${ }^{48}$ K. Michalowski, et al., Fouilles Franco-Polonaises, Rapports II: Tell Edfou 1938 (Cairo, 1938), p. 105 (cat. 503504) and pl. XXIII, nos 12-15.

[^17]:    ${ }^{49}$ The decoration of this gateway will be published in R. Fazzini, et al., Aspects of the Art, Iconography and Architecture of Late Dynasty XX-early Dynasty XXVI (with Special Emphasis on the Temple Precinct of the Goddess Mut at Karnak) (in progress).

