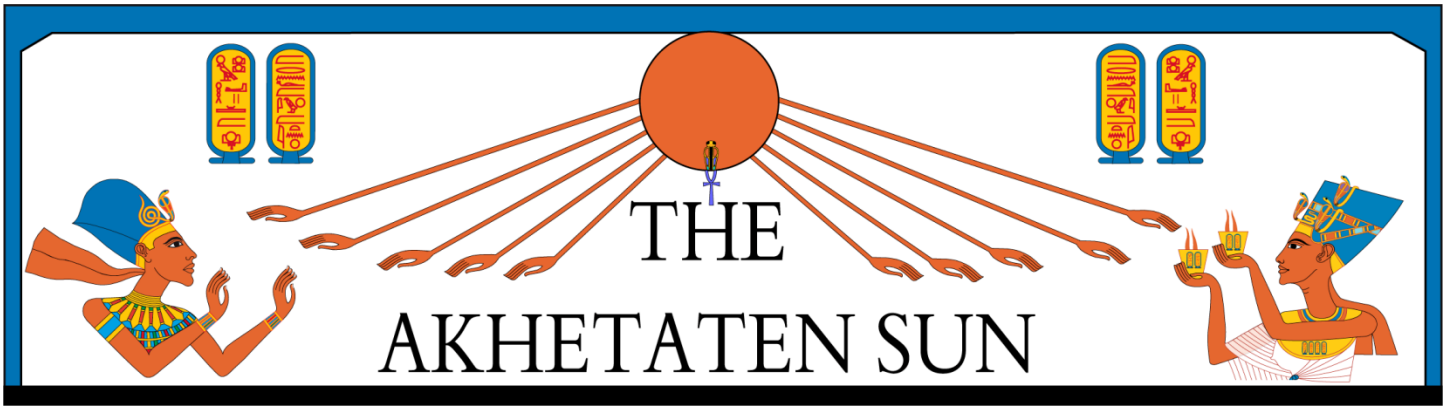


Volume 19, Number 1, June 2013

Published twice per year since 1993

Table of Contents

Officers and Directors

The President's Papyrus

Greetings fellow Amarnaphiles,

I hope that you are all having a great summer. I would like to talk about what we at the Foundation are working on. As you our faithful members know, the Akhetaten Sun is one of the few publications in the world that keeps you informed and updated about the archeological research ongoing at Amarna. However necessary such research is, let's face it; it is technical and specialized. Realizing this, we are making a concerted effort to expand the subject matter of this publication to include topics on Amarna period history, religion, art and culture. Starting with the fall addition of this publication, we hope to have some articles by other world class scholars and specialists, whose research focus is in these other areas of study. So please stay tuned and stay engaged with us in this endeavor for we are trying to make your continued support an exciting and rewarding experience.

This month, we will be asking you all to renew your memberships. It goes without saying that your continued support is absolutely necessary to the fulfillment of our mission.

Thank you all in advance for your continuing support.

Wishing you all the best,

Floyd Chapman

Amarna material in the Fitzwilliam Museum, Cambridge (UK)

By Barry Kemp

The Fitzwilliam Museum, Cambridge, owes its foundation to Richard, VII Viscount Fitzwilliam of Merrion who, in 1816, bequeathed to the University of Cambridge his works of art and library, together with funds to house them, to further "the Increase of Learning and other great Objects of that Noble Foundation". It remains part of the University, its governing body, the Syndics of the Fitzwilliam Museum, established in the university statutes and ordinances. It is one of the United Kingdom's leading collections of art and antiquities. Its well displayed collections include ancient Egyptian objects; an early donation to the university, by Giovanni Belzoni, being the granite lid of the sarcophagus of Rameses III from the Valley of the Kings.

Towards the end of the 19th century and through the first three decades of the 20th, the museum received objects from the divisions allowed by the Egyptian government of material found in the course of permitted excavations, including those of the Egypt Exploration Society at Amarna. The Egyptian collection has also been greatly enhanced by significant donations of private collections. One of these was amassed in Egypt by Robert ('John') Gayer-Anderson. Having served for many years as an officer in the British army of occupation, he established a home in a pair of large 16th century houses close to the mosque of Ibn Tulun in Cairo (and now a museum open to the public). On returning to England, he was allowed to bring with him most of his collection, which he presented to the Fitzwilliam Museum in 1943.

Fitzwilliam Museum, Cambridge University [1]

The following is a selection of six Amarna objects, four from the Gayer-Anderson collection, and two from the EES Pendlebury excavations of the 1930s at the Great Aten Temple, the site of current work by the Amarna Project.

E.GA.2300.1943 (photo on next page)

A complete limestone *talatat*-block, 21 inches long (1 ancient Egyptian cubit), 9 inches high and 2.5 inches thick (not its original thickness). In being of limestone rather than sandstone there is a presumption that it does not come from Thebes/Karnak, although sandstone blocks carved with very similar subject matter are amongst the huge collection of Amarna blocks from Karnak. It is not impossible that it comes from Amarna (via El-Ashmunein) but other places are not excluded (Memphis being one suggestion).

The Karnak examples were originally from a building entitled Gem-pa-Aten ('The Aten is found [in the House of the Aten]') that prominently featured in its decoration Akhenaten participating in a jubilee festival (or *sed*-festival).

The Gayer-Anderson block depicts the same ceremony. Akhenaten is shown twice.

On the left, in an act of worship before a table of offerings, he raises his arms to the Aten, holding in one hand a tall jar. A small hieroglyphic text on the right refers to the Aten as 'one who is in festival, the lord of heaven'. Then follows a tall narrow door leading to the next division of the temple. Now Akhenaten himself is part of the jubilee festival. He walks forwards, dressed in a knee-length robe that covers his shoulders and enfolds his arms, though his hands grip a flail that extends in front of him. Behind him a stooping man carries a box and a pair of sandals hung on a short stick. This man has his own hieroglyphic label, 'the first prophet (i.e. high priest) of Neferkheperura-waenra (i.e. Akhenaten)'. In front of the king another stooping man, described as a 'lector priest', carries what is probably a roll of papyrus. The inscription above names the Aten by means of its own cartouches and the epithet 'in southern Heliopolis' and, set slightly lower, the king himself.

The jubilee festival was a major celebration of kingship, sometimes delayed until a king had completed thirty years of rule. Akhenaten exploited its possibilities by both holding it early in his reign, and extending its scope to the Aten itself. Henceforth, including at Amarna, the Aten was commonly referred to as 'one who is in festival' or 'lord of festivals', the implication being that the jubilee or *sed*-festival was meant.

Festivals of this kind serve to unite a leader with the population, creating a mood of shared rejoicing and thankfulness.

Was Akhenaten aiming to be a feel-good Pharaoh?

E.GA.2300.1943

E.GA.5503.1943

Face modelled in plaster, presumed to be gypsum or a gypsum mix. Height 8 inches; width 6 inches; thickness 3 inches. Said to be from the Mallawi area, so almost certainly found at Amarna. The face emerges from a flange and must be a cast from a mould, the mould itself derived from a face that had perhaps been modelled in clay from life. The edge of the flange has been used to indicate hair, partly as a series of slots cut into the rim and partly as red-painted flecks. The face broadens considerably as it descends from the forehead, creating chubby cheeks that match the broad squat nose. The eyes appear to be closed. The mouth barely protrudes and is mainly marked as a very slightly curving groove.

I showed the photograph to our two lead anthropologists, Prof Jerry Rose and Dr Gretchen Dabbs, and they both said the same thing almost immediately: it is a dead baby. In size, the face is in the same range as plaster faces of adults, so if it is of a child it will have been modelled to a scale slightly larger than life-size. The purposes of the lifelike plaster faces from Amarna (and elsewhere) remain uncertain. One, that would fit a baby's face, is that some were memorials to the dead, to be kept in the house.

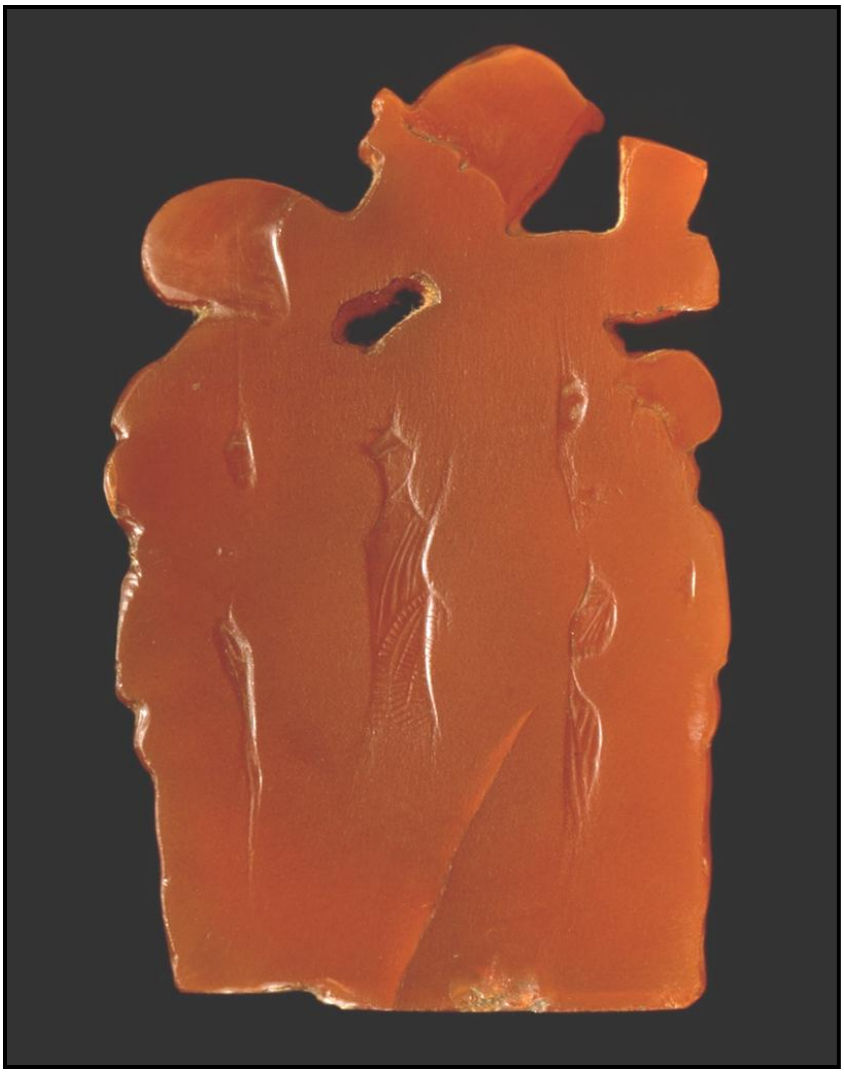
E.GA.5503.1943

E.GA.4606.1943

Unfinished plaque in carnelian, depicting the royal family. Height 2.3 inches; width 1.5 inches; thickness 0.2 inches. Of unknown provenance. The tallest figure is the king wearing the blue crown. In front of him is the queen. Their faces are sufficiently close as to suggest kissing. Behind each adult stands a daughter and it looks as though the king's arms were extended in an embrace.

The piece has been abandoned in the middle of several stages of manufacture. More needs to have been removed to complete the outline, particularly the jutting element from behind the king's shoulder, from which a pair of streamers were perhaps to have been cut. The artist seems to have wanted to model the royal bodies in very low relief and to this end was grinding down the surface of the bodies to create an even flat surface on which details would be subtly modelled. The modelling of garments was to be continued at a lower plane in the intervening spaces, and here the artist has been unable to resist making a start. The king's crown and the skulls of queen and one daughter have already been modelled and polished at a lower level. It has been suggested that gold leaf might have been applied to these parts.

Amarna artists and craftsmen treated glass and hard stones in the same way, expending much time on forming shapes and, as here, complex surfaces by grinding and polishing. The piece was perhaps to serve as an inlay in an item of wooden furniture.



E.GA.4606.1943

E.GA.4524.1943

Head of a princess carved in a limestone rich in fossil shells. Height 8 inches; width 6.7 inches. It has no recorded provenance but is sometimes regarded as originating from one of the statue groups that accompanied the Amarna Boundary Stelae. On the basis of size, Boundary Stela U has been proposed. But the limestone of the head is quite different to that of the stela, belonging more to the type of limestone found on the west bank and exemplified at Tuna el-Gebel. The surface is weathered, but not to the extent consistent with long exposure. If it comes from a western Boundary Stela group, it will have lain buried for a long time in the adjacent sand. The nose and patches on the left side have been damaged, one such area at the mouth having been repaired.

E.GA.4524.1943

E.77.1933

The rear part of a recumbent sphinx statue, from outside the mud-brick pylon at the Great Aten Temple. Length 12 inches, implying a full original length of around twice that figure. It was found by the EES Pendlebury expedition in 1932, and given the find number 32/20. It is made from a relatively fine-grained limestone often used for statues and other carvings at the temple. Its form as a lion has been expertly modelled but with limited attention to detail as if carved quickly. The rear foreleg has suffered damage to the paw but seems to have been simply shaped. The animal lies with its tail to the right, on a rectangular pedestal that has also been roughly carved. The animal's coat has been suggested by a series of flecks of red paint in rows crossing the back from side to side. Some red paint also lies in front of the rear paw.

The piece comes from an area that has been recently re-excavated, accompanied by the sieving of the large spoil heap that Pendlebury raised above it. Nothing further from this particular statue has come to light, but several pieces have, belonging to statues in similar limestone (and one in sandstone) that were of commensurate size and workmanship. The fragments are still only partially studied. The possibility should be considered that they are statues that private individuals had commissioned in the city's sculpting workshops for presentation at the temple, as gestures of loyalty and perhaps with a votive intention as well.

E.77.1933

E.75.1933

The leg of a statue of a man kneeling, from outside the mud-brick pylon at the Great Aten Temple. Length 4.7 inches. It was found by the EES Pendlebury expedition in 1932, and given the find number 32/28. It is made from a relatively fine-grained limestone often used for statues and other carvings at the temple. The preserved part shows the right leg of a man, wearing a pleated kilt, kneeling with his foot vertically extended, so creating a triangular negative space between the knee and foot (the foot being missing). As with the sphinx and other statue fragments from the area, it has been carved with skill but seemingly quickly and without finesse. The skin of the leg has been painted red. That it comes from a private statue adds to the case that the front of the temple was a place for statues commissioned by, and sometimes depicting private individuals.

E.75.1933

End Note:

[1] Photo from http://en.wikipedia.org/wiki/File:FitzwilliamMuseum.jpg

Counting the years at the House of the Aten

By Barry Kemp

(Drawing upon the field records of Sue Kelly, supplemented by those of Anna Hodgkinson and Miriam Bertram)

Amarna was not built in an instant. Within the fifteen years or so of its occupation, the major royal buildings – including the two main Aten temples and the Great Palace – even saw major alterations amounting to the rebuilding of some parts. For the current work of the expedition at the Great Aten Temple ('the House of the Aten'), reconstructing its history is a major aim.

The front part of the temple shows two major periods of building, clearly separated because, in order to make the ground flat for the second period, the foundations of the earlier period were buried beneath half a metre or more of sand and rubble (Figure 1). This essential fact was established in the 1930s by the Egypt Exploration Society Pendlebury expedition. In a study of some of the decorated stonework, H.W. Fairman, a member of that expedition, concluded that much of the decoration of the front part of the temple – the part called here the Long Temple that belongs to the second phase – was done after Akhenaten's 9th year.

Figure 1. The two periods of the Great Aten Temple, represented by two sets of gypsum-line basins at the lower, earlier level and at the higher, later level. View to the east.

A discovery made in March of this year shows that the building of the Long Temple did not really begin until year 12 or later. In front of the place (now represented by a trench) where the outer stone pylon had stood, a large and deep rectangular foundation had been laid out to support a series of massive columns. In the course of cleaning back the edge of one of Pendlebury's trenches a hieratic jar label was found, from an amphora that had originally contained wine that had been sealed in 'regnal year 12' (Figures 2, 3) at the base of a related rubble layer that had itself been sealed beneath a thick cement floor that had spread to the sides of the foundations.

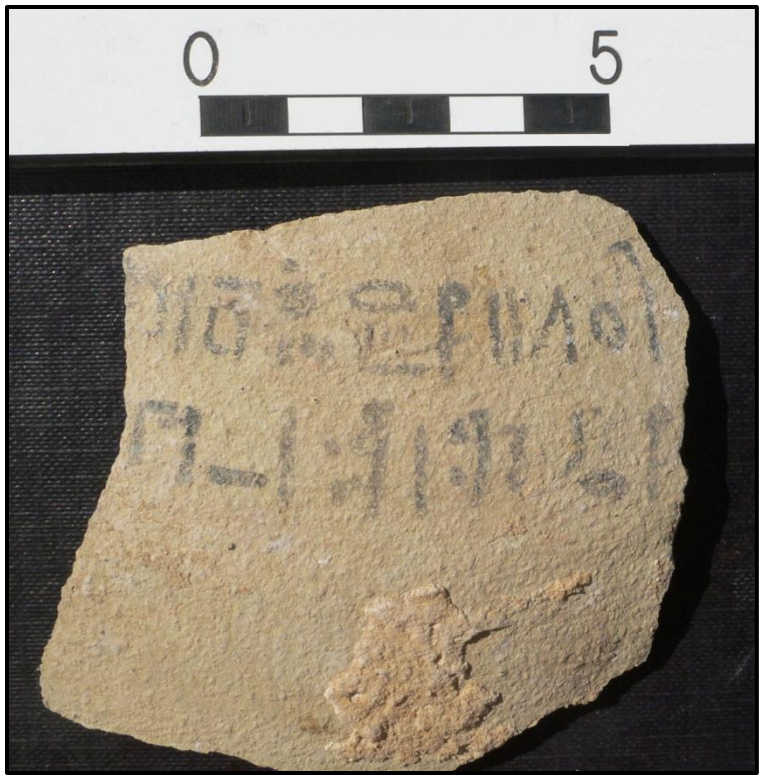


Figure 2. Potsherd from the shoulder an amphora. Written in hieratic is a text that identifies the contents as wine, and begins with the date 'regnal year 12'.

Figure 3. Workmen cleaning the sides of a Pendlebury trench on the floor of which are the gypsum foundations for a stone wall. One of the men points with his trowel to the place where the hieratic label was found. View to the north-east.

This discovery demonstrates that year 12 had arrived before the foundations had even been started, and, of course, we do not know how much time elapsed between the sealing of the jar and its fragments being thrown away. By his year 12, Akhenaten had only five more years of life remaining. Add three more years, into the early reign of Tutankhamun, and we have a period of eight years of full temple activity at the most. We have to reduce even this to give the builders time to put up this major stone building. How long would that have taken? Two years?

In the temple's later phase, the newly raised ground level extended from the mud-brick pylon for a distance of about thirty metres to the monumental portal and pylon of the stone temple. On the north side of the temple axis (the left side as one went in) stood a separate stone building that seems to have been a small palace, presumably a place of rest, privacy and secure storage. In March of this year, we laid out its plan with a single course of limestone blocks. Just beyond it, and still to the left of the axis, at least two sets of basins had been built into the ground and thickly lined with gypsum. Pendlebury had uncovered one ([14974] in our numbering series). We have found another beside it ([14913]). Whether more lay to the north has yet to be determined by extending the excavation in this direction (something planned for 2014).

These basins represent a continuation of a practice established in the temple's first phase. At the lower ground level, the Pendlebury expedition encountered the remains of three of them, laid out one after the other along the temple axis (the third and furthest largely destroyed by the second-phase reconstruction). This first-phase stone temple is known from loose broken fragments from walls and balustrades but not from traces of the foundations, so we have no evidence for its plan. The east and west troughs of basin [14826], however, actually have the temple axis marked on them, as a groove made in the gypsum surface. Despite this, they have been laid out by eye and are therefore somewhat irregular. The same applies to the upper, later set, where the variation in layout is more obvious, reflecting two different designs.

The tomb reliefs include basins in the detailed scenes of the temple but show them as a line of simple rectangular troughs, and supply no clue as to how they were used. Prayers of the time request 'the pouring of water for me', a practice long-established but done usually in connection with the presentation of food at an offering-place. Basins that were lined with desert clay rather than with gypsum were a feature of the ground outside the Workmen's Village, along a line that led from the main entrance of the walled village to the main chapel at the foot of a hill slope. They had the shape of the letter T and the last one, that stood on the axis of the main chapel, was provided with a model quay flanked with tiny flights of steps. The condition of the sides of the basins showed that they had been partially filled with water. Fragments of wooden model boats were amongst the finds from the Workmen's Village, and it is hard to resist the temptation of seeing them floating on these tiny ornamental lakes.

None of this, however, helps to explain our gypsum basins in the temple forecourt. The earlier set has suffered some compression damage on the floors of some of the troughs, represented by areas that have sunk and are marked with patterns of cracks. Is this a sign that people stood in them when they were filled with water? What they have in common is a central rectangular space, like an island, that was originally coated with gypsum, too. Were offerings placed on them over which water was poured? Unlike some stone offering-tables, no channels were made to direct poured water in particular directions, and in common with the sumps in domestic bathrooms, the basins lack drainage. Either the water stood in them until it evaporated or they were emptied by baling out by hand.

However the basins were used, they were regularly maintained. A key part of the maintenance was to line the basins with a fresh layer of gypsum. This had the effect, of course, of reducing their sizes and so perhaps in time they would have had to be remade. One of the upper troughs [14974] had been left exposed in the side of Pendlebury's excavation trench. Erosion has removed part of one side. This has exposed no less than seven layers of gypsum plaster: the original plus six (Figure 4).

Figure 4. The south-west corner of gypsum basin [14974]. Erosion has exposed successive relinings, the last of which is present on the far side and not visible in this picture.

The exposed surfaces look quite fresh, as if the replastering was done according to a predetermined schedule rather than when deterioration of the surface demanded it. In order to check if the other basin of the upper group had a similar history of resurfacing it would be necessary to destroy part of it, and we chose not to do this. But around the edges of the troughs patches can be seen of similar replasterings of the sides, in one place amounting to four layers (Figure 5). If the replastering was an annual event, the eroded upper basin would have seen six of them. This does, of course, approximate to the likely length of time between completing the new raised ground level and the likely end of the main occupation of Amarna.

For the first phase, traces of a similar schedule are also visible, although neither of the basins shows its history as well as the upper southern one. Basin [14826], nevertheless, has patches of four thin layers of resurfacing over its original first gypsum floor. Along the top edges, from two to three thicknesses of gypsum linings are visible in section. For the other lower basin [14904] resurfacings are visible only in the top edges of the sides.

Equivalent to the resurfacing of the gypsum linings of the basins was a periodic renewal of the surrounding floor. In last year's excavation around the inner entrance ramp and in this year's excavation around the basins of the first phase, at least three alternating layers of mud-floor and gypsum whitewash were identified. In one of the recent exposures, seven layers of mud floor could be counted, with whitewash showing on top of the fourth, fifth and sixth layers down. The whitewash layers on soft mud plaster are thin and easily erode from weathering and being walked upon. One cannot be sure, therefore, if the layers that do not show whitewash were preliminary to a whitewashed layer or were ones that have simply lost that coating in the narrow areas exposed for our inspection. So there might have been two or three renewals or six.

Figure 5. The two basins of the upper set, viewed to the south. In the sides of the nearer basin [14913] can be seen the remains of at least one replastering. Photo by Gwil Owen.

The application of fresh coats of gypsum plaster extended to the brickwork of the pylon and ramps. This is most obvious along the north face of the north outer ramp, which bears six successive layers of mud mortar coated with whitewash.

The basins were centres of attention in an outer court of the temple. In the early phase they lay along the axis. Were they for the benefit of the king? The casual style of laying them out and shaping them argues against this, and more in favour of them intended for use by non-royal people allowed perhaps only into this outer part of the temple enclosure. Whoever used them, they were supported by a system of maintenance that periodically laid a new clean floor over the surrounding area and gave the gypsum basins a bright fresh appearance. Re-purification rather than repair is the likely motive. There is a good chance that this was done every year, but was this at the time of the New Year festival or at some other moment in Akhenaten's calendar?

Amarna was chosen as the site of the new cult centre for the Aten in Akhenaten's fifth year of reign (according to the first set of Boundary Stelae). We must then allow time for the first temple to have been built. Two disruptions to the use of the front part then have to be added to our tentative chronology. The first came with the building of the brick pylon and its ramps, that was done after the earliest mud floors and ritual fixtures had been laid down. The second came with the raising of the ground and the construction of the Long Temple (late in, or after year 12). This involved the probable demolition of a mud brick building somewhere in the vicinity, perhaps a precursor to the small stone 'palace'. The periods when the gypsum basins were not accessible and the cult of the Aten within the main part of the temple not possible because of workmen must have accounted for a not insignificant part of the temple's short history.

Figure 6. Draft version of part of the new plan of the Great Aten Temple, the sector where the basins were present (originals by Sue Kelly).

Reference:

The earlier exploration of the temple is reported in J.D.S. Pendlebury, The City of Akhenaten III (London, Egypt Exploration Society 1951), 5–20, Pls. III–VI, XXV, XXVII, XXVIII. Fairman's notes on the inscriptions are given on p. 185.

Addendum to *Counting the years at the House of the Aten*

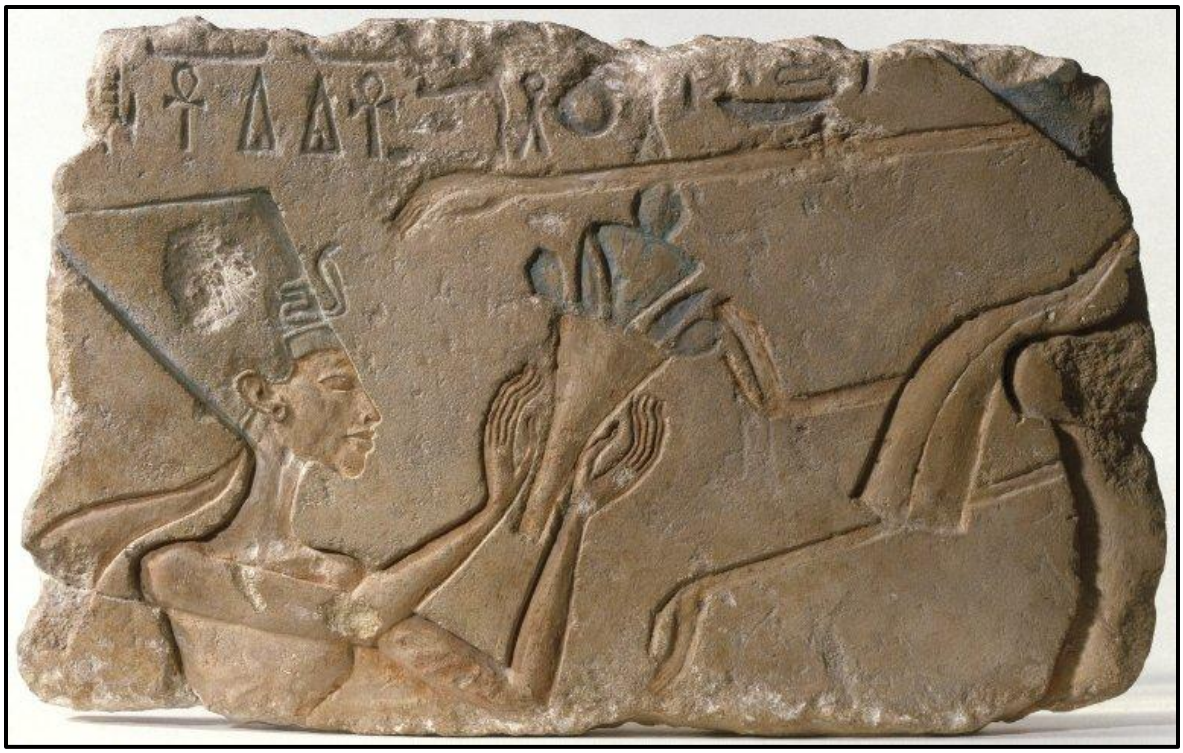
By Kristin Thompson

In March, 2013, I was at Amarna for three weeks during the excavation of the area at the front of the Great Aten Temple. I split my time between registering the statuary and other stone fragments that were found there and studying the pieces from the North House Dump (see *Akhetaten Sun* 7, 1 [May 2003] and 16, 2 [January 2011]) already in the magazine: research that will go into a book on the city's royal statuary.

During the excavation, members of the team discussed the possible function of the intriguing gypsum basins discussed in the previous article. As Barry Kemp points out, although the basins clearly held water, there are neither conduits for bringing water in nor drains for removing it. If the basins were used for washing the feet of people entering the temple, the water would rapidly have become dirty and would have required changing. Moreover, the basins are a very strange shape for standing in.

In Barry's recent book, *The City of Akhenaten and Nefertiti*, he stresses that "the city was a hive of people busy making things for the court and incidentally for themselves" (p. 20). In particular, huge amounts of items to be offered to the Aten flowed into the Great Aten Temple and other sites of offering throughout the city. Might the basins have served in the handling of a particular type of offering? What would need to be placed in water and would require narrow rectangular tanks of various sizes, as contained along the short and long sides of the basins?

One possibility that occurred to me after walking around the basins was that they might have been used to keep bouquets of flowers fresh between the time of their delivery and the point at which they were taken to the places in the temple where the offerings were to be made. Perhaps the larger channels at the sides would have held the long-stemmed bouquets placed on their sides, while the smaller sections of the basins could have held the shorter bouquets, placed upright.



An offering scene with Nefertiti holding up a small bouquet of water lilies. The original color suggests that these are blue Egyptian lilies. (Brooklyn Museum 71.89, Charles Edwin Wilbour Fund)

The bouquets are largely made up of blooms and buds of water lilies (previously referred to as "lotuses" but more properly blue and white lilies). Large bouquets of lilies, with long stems bound at intervals with straps or ribbons, are often depicted in the tomb reliefs as being limply draped over heaps of offerings or the tops of upright offering stands. The stems of such lilies, usually two to three feet long under the water, were quite soft and flexible. (Some such bouquets are depicted as bound together forming a large loop in the center, as in the Theban tomb of Sennefer.)

Such bouquets would not be able to stand up in a tank of water unless it was about three feet deep. They could probably, however, lie neatly end to end in the longer tanks on the sides of the basins.

Other bouquets shown in the offering scenes are much shorter, made up of smaller lily blossoms and buds with the stems cut shorter; they are encased in a sort of decorative binding that covers the stems entirely and has a flat bottom that apparently allows them to stand upright on the ground between offering stands. The royal couple sometimes hold up such bouquets, and the princesses occasionally handle them as well. Such small bouquets could be packed upright, side by side, into the smaller rectangular tanks in the basins.

Fran Weatherhead's partial reconstruction of the couple from the Workmen's Village Main Chapel, dressed in their best clothes and holding large bouquets
(from *The City of Akhenaten and Nefertiti*)

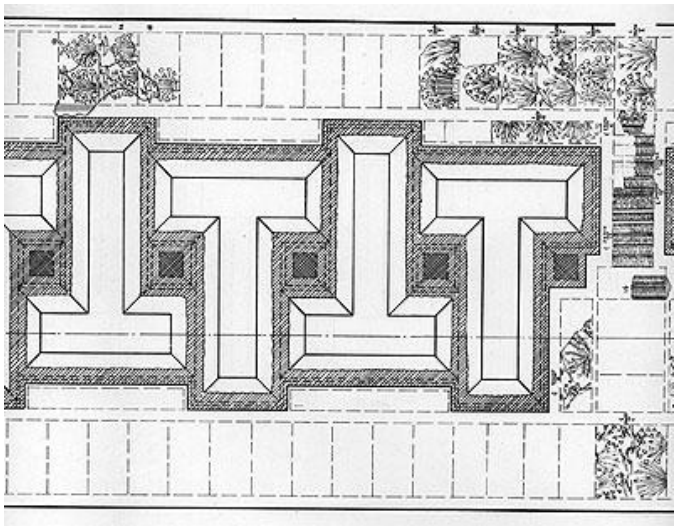
As to the flat, rectangular, gypsum-paved area in the middle of the basin, one could imagine this as a place where workers might sit to assemble the bouquets, if the flowers were delivered loose to the temple. The blossoms and buds might be placed in separate tanks, with the workers plucking them out, binding them, and replacing them in the tanks for later transport to the areas further inside the temple.

It is also possible that the bouquets were assembled elsewhere. It had already occurred to me that the lake at the Maru-Aten might have been a place for cultivating some of the lilies that were used in the bouquets. If the flowers were taken from there up the Royal Road to the GAT, they would logically have been taken in through the front entrance, where the basins would be waiting. The well-known row of T-shaped basins near Building II in the Maru-Aten might have similarly served as a place to store cut flowers, for use within the Maru-Aten or for transport to other temples. The T-shaped basins conceivably also might have been at the center of an area for the assembly of bouquets.

Model of Maru-Aten, showing the lush central water-garden
(from *The City of Akhenaten and Nefertiti*)

Flowers, if rinsed off before being brought to the Great Aten Temple, would not dirty the basin water very quickly. Part of that water might be absorbed by the stems. Thus the necessity to bail out water and replace it would probably be a less serious problem than if we assume that the basins were being used for washing feet or anything else.

As to the layers of gypsum used to renew the basins, flowers might also offer a hint as to its timing. In ancient Egypt, water lilies bloomed all year round, but there were fewer blossoms during the winter months. Possibly the smaller supply allowed temple officials to use only some of the basins, in rotation, for storage, while they were able to add new coats of gypsum to the ones left empty. This would suggest that the renewal would have been annual.



A section of the T-shaped water basins at the Maru-Aten, surrounded by the gypsum pavement painted with panels illustrating nature. [1]

References:

For a good account of water lilies, see Clair Ossian's "The Most Beautiful of Flowers: Water Lilies & Lotuses in Ancient Egypt," *Kmt* 10, 1 (Spring 1999): 49-59.

For a detailed description of the many variants of water-lily offerings at Amarna, with illustrations, see Cathie Spieser's *Offrandes et purification à l'époque amarnienne* (Turnhout, Belgium: BREPOLS, 2010), pp. 42-50.

End Note: [1] Photo http://www.amarnaproject.com/pages/amarna_the_place/maru_aten/index.shtml

Spring Season 2013 Work at Amarna

By Barry Kemp

The recently completed spring season at the Great Aten Temple saw a further stretch of ground exposed. During the previous year, we had put much effort into removing the large Pendlebury dump that covered the northern mud-brick pylon tower. The last remnants of it were finally cleared towards the end of the recent season, exposing the full length of the pylon plus the broad mud-brick threshold that runs across the temple axis (Figure 1). Along with this went the uncovering of the outer temple ramp, made from sand heaped between parallel brick walls. The purpose of exposing the brickwork is to make a fresh plan, and then (next year) to have new mud bricks made and laid as a protective layer that will also define its shape more clearly. The same applies to the outer access ramp. One question remains unanswered. The pictures of the temple in the tombs show wooden pylons in front of a pylon. But was this the mud-brick pylon at the front, or the stone pylon behind? This latter was largely obscured by a large colonnade that would seemingly have made it difficult to erect flagpoles in front. Our uncovering of the mud-brick pylon revealed that, at some time probably well in the past, much of the brickwork had been removed by villagers. It is preserved to a height that is below the level at which the deep niches for flagpoles are to be expected. So we lack that crucial evidence. The relative thinness of the pylon inclines me to doubt if flagpoles ever stood there.

From the front, the excavation proceeded along the temple axis, following a trench made by Pendlebury in 1932, and exploring some ground on the north. This simultaneously exposed features of both of the main building periods at the temple. These were separated by around half a metre of rubble that raised the ground level for the second period. The first period itself saw two phases, the first of them representing a layout made before the pylon was built. Its most obvious feature was a line of rectangular stone bases that cross the temple axis. One of them, exposed last year, had been broken up at the time of the temple redevelopment. Two more were revealed this year (Figure 2). They comprise a single layer of limestone blocks firmly set in a foundation of gypsum cement and still in good condition. They had been seen by Pendlebury but what is not clear from his report is that the top surface of the stone layer coincided with the ground level of the time and shows no trace of a second layer of stone or that anything else, such as a stele or statue, had been set on top. Could they have been offering-tables, perhaps covered with a mat when in use? The thought that some, at least, of the offering-tables were at ground level comes as a surprise. Maybe there is another explanation.

Figure 1. General view eastwards of the site of the current Great Aten Temple excavations, taken by Gwil Owen near the end of the spring 2013 season.

Figure 2. Two rectangles of limestone blocks from the temple's first period. They show no sign of having had anything fixed above them, yet they were built to be seen at ground level. View to the north. Photo by Gwil Owen.

Further along the axis, Pendlebury encountered sets of basins cut into the ground, lined with gypsum and surrounding a central island of mud floor. I have commented on these separately. The fact that there is much to say about things first excavated eighty years ago reflects the speed of the old work and the extreme brevity of their reports.

The final part of the spring season saw the cleaning of the northernmost of a pair of rectangular platforms or pedestals that straddle the temple axis and stood in front of what must have been a substantial pylon built of stone. Their top surface is exactly at the level of the floor of the temple in its second period. They appear to be platforms because they are built in pits, 1.2 metres deep (Figure 3). The Pendlebury expedition saw them as foundations for large columns, eight to each platform. Their architect, Ralph Lavers, set them within a hall, the outer wall of which was (rather oddly) built of mud bricks. Fairman, working with the inscriptions from the Central City, identified the name of the hall as the 'House of Rejoicing'.

The mud-brick surrounding wall can be discarded. It seems to have been a rubble layer that was temporarily useful in erecting the columns but which was then largely removed and covered with a thick pavement of gypsum concrete. The columns stood as an open portico. The platforms themselves had been paved over with limestone blocks that had left a complicated pattern pressed into the mortar when they were removed.

The detailed planning of the northern platform has only just been finished (10 June), along with drawings of all four sides. The whole construction gives the impression of an experimental use of gypsum in building, the intention of which was to replace the use of stone in foundations.

In the building method universally maintained today, concrete is given shape by being poured into spaces defined by wooden boards that are removed once the concrete has set. Not so for our Amarna builder. His mix of gypsum (more properly called lime-gypsum) and stone fragments (equivalent to modern aggregate) was quite stiff so that it could not be poured. Instead, it could be heaped into tall ridges in layers that did not slump, the outer faces roughly finished by hand (Figure 4). In this way, a set of large squares was formed, one for each giant stone column, linked to its neighbour by a short connecting wall.

Figure 3. View south-eastwards of the northern gypsum pedestal in front of the outer stone pylon of the temple. The construction method, of blocks of gypsum concrete and gravel fill, is clearly visible. Photo by Gwil Owen.

Figure 4. Detail of the construction method with gypsum concrete.

A smaller version of this method was found last year, used to create the foundations for the small stone palace that stood inside the brick pylon. Here, the spaces between the gypsum foundation elements were filled with sand. At the northern platform, however, instead of sand, the builder laid down in each compartment a bed of gravel that was itself weakly cemented together. He did this for only part of the depth, however.

On top, he filled the remainder of the space with layers of the same gypsum concrete until the top of the foundations were reached. It seems an excessive use of gypsum concrete when sand or the cemented gravel would surely have sufficed. It worked, however, for there is no sign of cracking or slumping from the weight of massive sandstone columns that were erected on top.

The oddness of the construction did not stop here. Along the east side, that would have abutted the face of the stone pylon, two of the spaces between the square column foundations have been reinforced by inserting two courses of stone blocks at the same time that the final layers of gypsum concrete were spread (Figure 5).

Figure 5. One of the spaces along the eastern edge that was reinforced with extra layers of stone blocks. Was it to be the foundation for a large and heavy statue group?

This looks to have been a way of providing even more robust foundations for two large and heavy objects that were to stand here. What else could they have been but statues, perhaps similar to those that flank the Boundary Stelae, where king and queen hold in front of them, on a separate plinth, an offering table? Something similar was done at the north-west corner, except that the courses of stone blocks, that formed a plain rectangle, descended to the very bottom. This implies that something even heavier and made of stone was intended to stand here. The whole structure was repeated in mirror-image for the southern platform on the south side of the temple axis. This will be exposed and recorded next year.

On looking at an outline plan it looks as though two separate architectural schemes were being provided for which are hard to reconcile (Figure 6). One is the twin sets of large columns that formed a deep portico in front of the pylons. This scheme conforms to the pictures of the front of the temple shown in the tombs, although it then becomes difficult to place the flagpoles (up to five are shown) also in front of the pylons.

The other scheme provided foundations for two colossal statues half in and half out of the portico and also backing against the pylons, with another large sculptural element at the outer corners. Neither of these are hinted at in the tomb pictures nor, amongst the many fragments of broken sculpture that were left behind, can one identify pieces from such large elements.

The solution in circumstances like this is often to be found by accepting either that the architect changed his mind or the project was never finished. In this case, it is clear that both schemes – giant columns and large sculptures – were part of the design from the beginning. But we cannot exclude the possibility that, in the end, nothing was actually put on these foundations, although the decision would probably have had to be made before the erecting of the columns had proceeded far.

At least, that is how I see it at the moment.

Another success of spring season was to complete the laying out of the small palace in new blocks from the limestone quarries of Turah.

But how we did that is a story for the next issue.

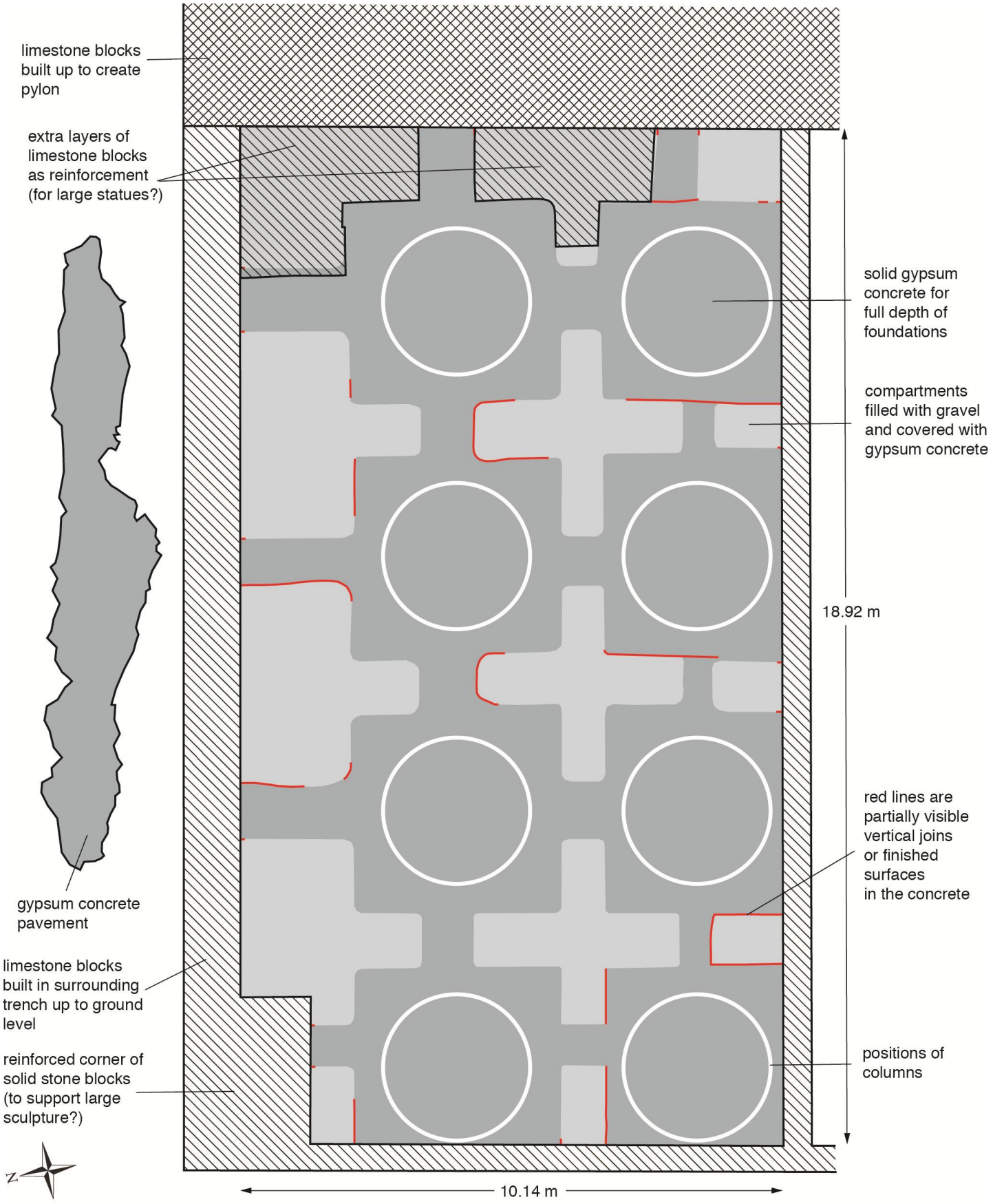


Figure 6. Outline plan of the north gypsum platform in front of the first stone pylon of the temple, showing the main constructional elements.

Honorary Trustees of the Amarna Research Foundation

Bob Brier, PhD
Senior Research Fellow
C.W. Post Campus
Long Island University, Brookville, NY

Rita E. Freed, PhD
Norma-Jean Calderwood Curator
Egyptian, Nubian & Near Eastern Art
Museum of Fine Arts, Boston

W. Raymond Johnson, PhD
Director Epigraphic Survey
Oriental Institute, University of Chicago

Barry J. Kemp, CBE
Field Director Amarna Expedition
Egypt Exploration Society (EES) &
Retired Professor of Egyptology
Cambridge University

Geoffrey Martin, PhD, LittD, FSA
Field Director
Cambridge Expedition to the Valley of the Kings
Christ's College, Cambridge University

Dietrich Wildung, PhD
Retired Director
Egyptian Museum, Berlin

Richard Wilkinson, PhD
Director Egyptian Expedition
University of Arizona

The Amarna Research Foundation, Inc.
3886 South Dawson Street
Aurora, CO 80014
e-mail: RTomb10@comcast.net
website: www.TheAmarnaResearchFoundation.org