

horizon

ISSUE 18 Autumn 2017

The Amarna Project and Amarna Trust newsletter

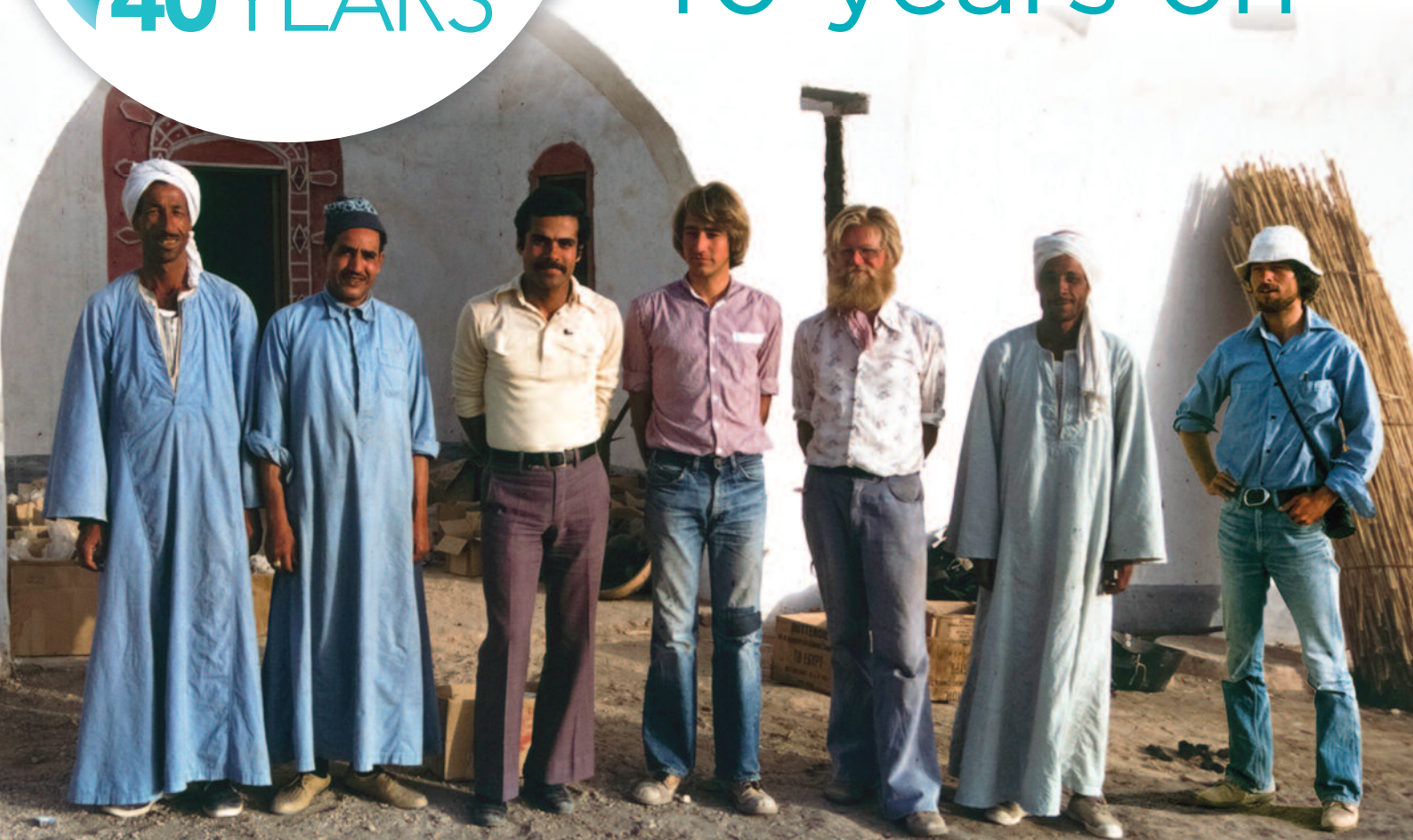
A beckoning view:

Amarna city as it appeared in early 1977, photographed from the upper platform of the old water tower.

CONTENTS		A new head of Akhenaten	10	Alf Baxendale	21
40 years on	2	Traversing into the Afterlife	12	Publications and communications	22
Akhenaten's workforce?	6	Carved limestone fragments	14	The Amarna Trust	23
Visualising the South Tombs Cemetery	9	The Amarna Digital Atlas	19	Acknowledgements	24



1977–2017 40 years on



The team for the first season of excavation (1979, at the Workmen's Village). Left to right: Nassar Omar Osman (provisions supplier), Nabil Yusef (cook), Ismail Mohamed Ali (inspector), Michael Jones, Barry Kemp, Mohamed Omar Osman (house caretaker), Mark Lehner.

January 25th, 1977
was the day when
what has become the
Amarna Project began.

1



2



1. EXCAVATING THE WORKMEN'S VILLAGE:

Excavations proper began at the Workmen's Village, through the late 70s and early 80s. The work here focussed on everyday living and set the scene for much of the fieldwork that would follow at Amarna. In this image, the ground just outside the walled village is being explored.

2. A PRIVATE MONUMENT: One of the most striking artefacts found in recent years – a funerary stela showing a private couple in a similar style to the Amarna royal couple.

3



4



3. PART OF THE MONASTIC COMPLEX AT KOM EL-NANA:

The monks cleared out some of the Amarna-period rooms and rebuilt them to provide the various elements of a monastery, here perhaps a refectory, its floor at a lower level than that of the surrounding ground. Archaeologist Duncan Schlee supervises a stage in the excavation.

4. SURVEYING BY AIR: Sometimes it is helpful to look at Amarna from another perspective. In the 1980s, Gwil Owen began a long-term programme to record the ancient city through aerial photography, with a succession of kites, hot-air- and helium-filled balloons. Thanks to his work, we now have a near-complete record of Amarna from the air.

5



5. KEEPING PIGS: A surprising discovery in the grounds outside the Workmen's Village was a series of animal pens, their floors impressed with bristles suggesting that pigs were housed here. That they were able to keep pigs, animals that require a frequent water supply, suggests that although the villagers were isolated from the riverside city, they were fairly well supplied.

It was represented on the ground by **Barry Kemp** (whose idea it was to be there), an inspector of antiquities (**Mohammed Abd el-Aziz Awad**), a number of guards, several **donkeys** and a modest collection of **surveying aids**.

The goal at this stage was to develop a fresh map of the city. Partly this was to bring together, for the first time, the many individual plans of excavated areas going back to Petrie's season of 1891/2. Partly it was to assess what further work could usefully be done.

The Egypt Exploration Society adopted the idea as one of its projects and, with an annual grant from the British Academy, supported the work until 2007. As the Academy changed its priorities, however, and withdrew the funding, the Amarna Trust was established (in 2005) and has, since then, raised much of the money on which we rely for continuity. From the outset, too, we have been indebted to the Egyptian antiquities authority (currently the Ministry of Antiquities) for annual permits to work at Amarna.

The history of the project is summarised in a gallery of pictures on the internet:
amarnaanniversary.wordpress.com/gallery

6



7



8



6. AS VISITORS SEE THE NORTH PALACE: Most visitors to the North Palace view it from an embankment outside the rear of the building and outside a barbed-wire fence. Our repairs have thus been concentrated here. From the excavations of the 1920s we know that the walls had originally been decorated with paintings, often of themes from nature, on a layer of mud plaster. This image dates to 2002.

7. QUARRYING FOR STONE: Understanding the ancient city of Amarna requires consideration too of its broader landscape. To the north of the site – extending some 10 km beyond the Amarna bay – are vast quarries where limestone for Akhenaten's city was extracted, here under study by Barry Kemp in 2001.

8. TEMPLE COLUMNS: A project to reconstruct two of the Small Aten Temple columns was undertaken to help give visitors a sense of the vertical scale of the temple. They are now one of the most recognisable landmarks at the site.



Celebration

To celebrate the completion of 40 years of work at Amarna, the Amarna Trust is holding a study day in Cambridge, on **Saturday, May 26th, 2018.**

The venue is The McDonald Institute for Archaeological Research in the centre of Cambridge. The study day will comprise lectures, an outline of plans for the immediate future and opportunities for discussion. We welcome members of our Akhetaten Circle. Members of our Meryra Circle will receive an invitation to a reception afterwards.



View of the courtyard buildings of the McDonald Institute for Archaeological Research.



You can be a part of something extraordinary by joining one of our **giving circles**:



The Akhetaten Circle

The Akhetaten Circle brings our supporters together to share in our work.

To join, we ask you to consider a gift of £10 per month. In appreciation for this gift, you will receive a donor pin, be included in a separate category of our donor lists and receive a complimentary ticket to our Study Day on May 26th, 2018. The Akhetaten Circle is proof that great things can happen when people band together in support. It takes only 33 members giving £10 per month, for example, to fund our conservation project for 2017.

To join the Akhetaten Circle, please visit our Justgiving page

<https://www.justgiving.com/amarnatrust>

and choose 'Make a monthly donation' at the top right, choosing the £10.00 option on the next page. The entirety of your gift will support our Annual Fund.

The Meryra Circle

The Meryra Circle was established to thank our most loyal and committed supporters.

To join, we ask you to consider a gift of £500 per year. In appreciation for this gift, you will receive a donor pin, be included in a separate category of our donor lists, receive a complimentary ticket to our Study Day on May 26th, 2018, and an invitation to a reception afterwards. If you are a UK high-rate tax-payer, your gift can also count towards a tax-deduction.

To join the Meryra Circle, please visit our Justgiving page

<https://www.justgiving.com/fundraising/AmarnaFund2017>

and enter a gift amount of £500 when prompted.



The Annual Fund

The Amarna Trust's Annual Fund seeks to establish support for the continuation of work at Amarna. Every penny of your gift will be put towards the exploration, documentation and protection of Egypt's one-time capital. In 2017, we are asking you to get involved with:

Excavating the Great Aten Temple

Conserving our coffins

Archiving our pottery data

Publishing the South Tombs Cemetery project

Our Field Station and Office

To learn more, see:

www.amarnatrust.com/supporting_amarna.shtml



Excavations underway on the South Bank in 2017.



Akhenaten's workforce?

The 2017 excavations at the North Tombs Cemetery

In 2015, after many years of excavation at the South Tombs Cemetery, the Amarna Project began fieldwork at a second large cemetery for the people of *Akhetaten* lying adjacent to the North Tombs. The results of the 2015 season had been remarkable. Unlike the South Cemetery, which contained burials of adults (young and old), children and infants, expected of a regular urban cemetery, nearly all of the North Cemetery burials were of a restricted age group — young people, aged between around 7 and 25 years. Nearly half of the graves also contained more than one person, packed closely into modestly sized graves. After the disappointment of not having security permits in 2016, it was a great relief when these arrived just in time to assemble a team and head to Amarna in April for a second season at this remarkable cemetery. Anna Stevens reports on the work:

The North Tombs Cemetery lies in large bay tucked behind the cliff face between North Tombs 2 and 3. It is a wonderful, peaceful setting in which to work, the cliffs of the high desert looming above. The bay contains three raised sandy embankments separated by broad channels that were created, long ago, by large floods. Much like at the South Tombs Cemetery, the sandy embankments provided a setting where simple pit graves could be easily cut to accommodate the dead of ancient *Akhetaten*.

In 2015, we concentrated our efforts on the largest of the three banks (the South Bank), but in 2017 decided to spread the excavation team across all three banks to understand how far the burials extended across each, and test for variation in demography and burial practice across the cemetery. Would the patterns encountered in 2015 continue, or would the site start to 'normalise' as a larger sample was obtained and other areas of the site tested? Seven weeks of digging saw 55 new graves opened and answered this question with little room for doubt: this is indeed a burial ground predominantly for children and young adults, whose graves are found across substantial portions of all three banks. Some 4000–5000 people seem to

be interred here. Most were buried very simply, wrapped in plant-fibre matting, with no burial goods at all, and again this year, significant numbers of multiple burials were encountered.

The cemetery is a challenging place to excavate because it has been so badly robbed, both within the last few centuries and also in the very distant past. As we record the graves, we're looking for information that can be difficult to retrieve when looters have disturbed the skeletons: how carefully was the person laid out for burial? How many layers of wrapping was the body enclosed in? How many people were in each grave — and were they interred at the same time?

Bearing this in mind, an important discovery this year was a section of the cemetery (the North Bank) that had remained untouched by robbers. Nine intact graves were excavated here, containing 16 young individuals. The graves were cut into coarse gravel-rich sand, evidently difficult to dig, the graves being shallow and often irregularly shaped. Some of the skeletons too were quite irregularly laid out, as though pushed into graves that weren't quite large enough. Five of the nine graves contained more than one person, the skeletons sometimes so closely entwined as to suggest they were placed in the grave at the

Kelly Accetta cleans one of the intact burials on the North Bank.



Wendy Dolling excavates an undisturbed burial of three individuals interred together in a grave at the North Bank.



One team of excavators investigating the undisturbed burials on the North Bank of the cemetery.



A child buried on the North Bank with a necklace of glass and faience beads.

same time. In at least two cases there was no doubt of this, the bodies clearly having been wrapped together in a single matting coffin before burial. These are the first incontrovertible examples of several people being interred at the same time in a single grave.

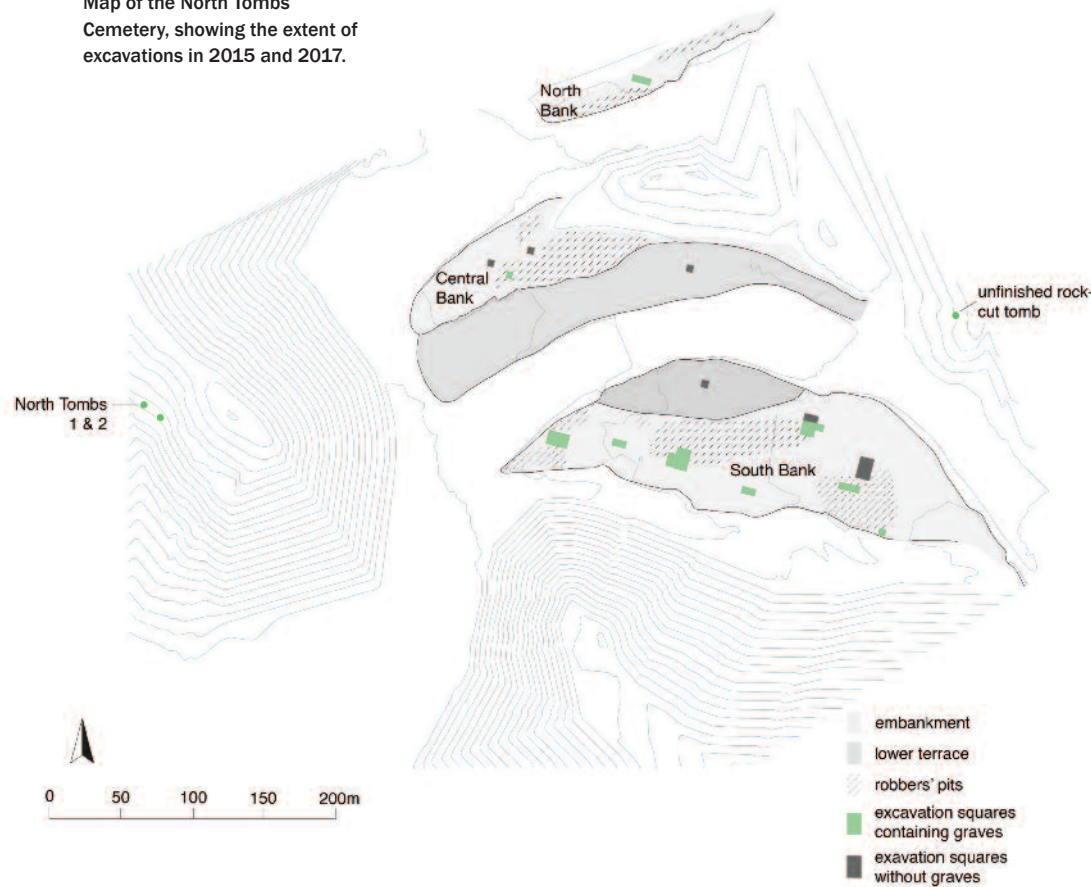
The North Bank graves also offered a cautionary note in generalising too far as regards treatment of the dead at the North Tombs Cemetery. One of the graves contained an individual who had been laid out quite carefully for burial, adorned with both a necklace of glass and faience beads, and also a separate scarab amulet, and then wrapped in not one but two layers of plant-fibre matting, suggesting a certain level of 'care for the dead'.

Overall, though, it is clear that the North Tombs Cemetery is highly unusual: a cemetery for young people buried, in general, very modestly, and not obviously in family groups. It is tempting

to see the deceased here as the victims of an epidemic, but this is not a very satisfactory explanation, at least on its own. If this were the case, we would expect to see far more infants and very young children, and also older adults, amongst the dead. Our working hypothesis is that these are burials of a workforce conscripted on the basis of their youth — the younger children just coming of working age, in fact — and subject to such extreme working/living conditions that they were less able than normal to fight off disease, resulting in large numbers of dead.

Preliminary work by our bioarchaeological director Gretchen Dabbs supports this, with evidence of traumatic injury and degenerative joint disease (arthritis) at rates consistent with a population undertaking arduous work. Many of the multiple burials can probably be understood as those of individuals who died at roughly the same time and were buried expediently in the same grave. The absence of obvious family groups amongst

Map of the North Tombs Cemetery, showing the extent of excavations in 2015 and 2017.



Kelly Accetta lifts the skeleton from a grave on the South Bank.



A view across the South Bank during the 2017 excavation season.



Gretchen Dabbs records a grave (with an unusually large number of potsherds) on the South Bank.

the burials, and the lack of care towards the dead that can sometimes be discerned, suggests that they were living apart from their families, perhaps in work camps. In trying to pinpoint what work they may have been doing, it may be noteworthy that the main limestone quarries are also located to the north of the city, although there are no signs of settlement nearby. There are a range of other tasks that would have been necessary to establish and maintain the city, such as making mud bricks, and carting water and supplies, all of which could have absorbed a large labour force.

The question of where they came from is unanswerable at present. Perhaps they were conscripted from the suburbs of *Akhetaten* itself, their families unable to claim the bodies upon death. They might alternatively be the children of peasant farmers living on the west bank, the river forming a barrier that prevented

the return of bodies to their families upon death. It is also possible that they were brought in to *Akhetaten* from elsewhere, and could even be foreign slaves.

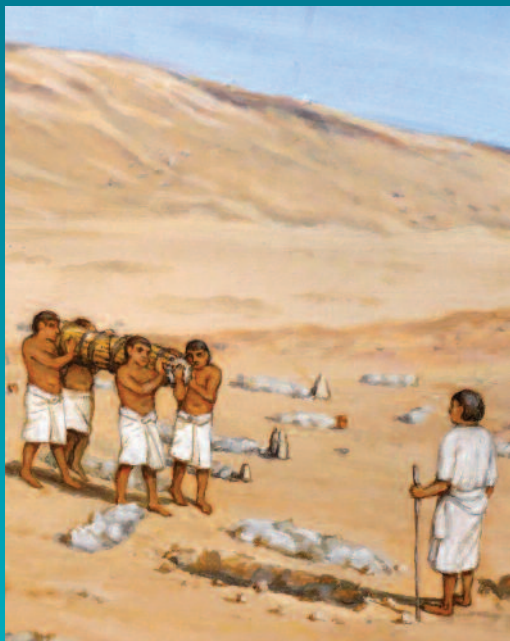
The North Tombs Cemetery may offer evidence of the *corvée*-style labour system known to have been used on major projects in ancient Egypt, but rarely witnessed archaeologically. If so, the Amarna evidence points to the inclusion of children in this system. It leaves us with a glimpse of *Akhetaten* that is unsettling and at odds with how we ourselves may prefer to imagine the ancient city, but jointly a sense of affirmation of the importance of archaeology as a discipline that helps us build a broader understanding of human experiences in the past, encompassing the lives of peripheral communities who were almost entirely excluded from formal records of the time.

Visualising the South Tombs Cemetery

Over the past few months, as we have continued work on the final publication of the South Tombs Cemetery, a challenge has arisen. At a site that has been so badly robbed that almost nothing remains of its original surface, how can we help readers understand its ancient appearance?



Fran Weatherhead at work on the cemetery reconstruction.



A snippet of the final reconstruction, showing the funeral party bringing the deceased for burial.



The reconstruction incorporates limestone grave markers with a distinctive pointed shape, several examples of which were found during excavations at the site.

We recruited Fran Weatherhead to help out. Fran is an artist based in Norfolk, and has a long-term connection to Amarna. She produced the seminal study of wall paintings from the ancient city, published in two EES monographs, and in the early 1980s also created a beautiful water-colour reconstruction of the Main Chapel at the Workmen's Village. Could she help us with a similar reconstruction of the ancient cemetery?

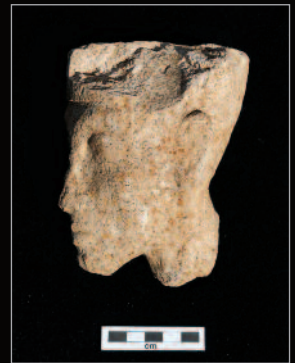
The challenge here was not to project vertically an ancient building from its ground plan, but to piece together a much more fragmented record of very modest structures — mostly stone and mud-brick grave cairns — and re-situate them in the sandy *wadi* in which the cemetery was located. And so began a process of brainstorming between Fran and the archaeological team, raising fundamental questions about the site. How common were funerary stelae? What kinds of pottery vessels might have been left as offerings? How densely occupied was the site, and how was it populated over time?

The end result is a painting of a funerary party bringing a deceased family member for burial in a simple pit grave. It is by no means intended as the definitive reconstruction of the cemetery — this is an impossible task. But we are delighted with how it communicates something of the character of the place, much more readily than excavation photographs and plans. Our reconstruction highlights the starkness of the landscape, and overall anonymity of the cemetery. We think there were very few graves, for example, that were individualised through grave stelae or distinctive superstructures. We also chose to insert relatively few offerings amongst the graves, since the excavations produced quite limited quantities of pottery vessels, the most common containers for food-offerings. This raises the question of how often people actually visited the cemetery, which lies about 3km distant from the city proper. The tomb in ancient Egypt is thought to have held central importance as a place for sustaining the deceased through offerings after the funeral, but this may not have applied to non-elite burial grounds of the kind represented here.

When based on reliable excavation data, and sensitively handled, reconstructions of archaeological sites can be powerful tools, not just as visualisation aides but for the questions they raise about how places functioned in the past. Fran's reconstruction has prompted us to think about the cemetery and its role in new ways and will be a centerpiece of the final monograph.



A New Head of **Akhenaten**



Conservator Hassân Ibrahim El-Amir (IFAO) finishes cleaning and consolidating the head.



Faint vertical lines on the front of the crown above the forehead might be the remains of a uraeus attached to the crown.



Work at the Great Aten Temple began on September 24th. Four days later came the discovery of a small head of Akhenaten, modelled in plaster made from gypsum mixed with fine dark grit. Although the head is damaged, the skill with which the artist — probably working quite rapidly — has modelled the king's features can still be appreciated. The height of the head, from the bottom of the neck to the top of the crown, is 12.8 cm. The head has the object number 41430.

The head was found in the 'levelling rubble' which separates the lower from the upper ground level in front of the stone temple. The fine indurated limestone torso of Nefertiti found in 2014 (see *Horizon*, 15, pp. 8–9) is from the same deposit.

Yannis Gourdon, co-director (with Roland Enmarch) of the French-British expedition to Hatnub which was, by happy coincidence, working at the same time and staying in the expedition house, generously permitted the expedition's conservator, Hassân Ibrahim El-Amir (IFAO), to clean encrusted sand from the surface and to consolidate it, and the expedition's photographer, Thomas Sagory (thomas@du-ciel.com/www.du-ciel.com), to take multiple photographs, sufficient for a 3D image.

On October 4th, the head was transferred to the secure antiquities storage facility at El-Bahnasa.

As the season continued, new evidence emerged both for the design of the final stone temple and for activities which belonged to a less formal usage of the surrounding ground. Progress was also made in recreating, in new stonework, the outlines of the final stone temple. The next issue of *Horizon* will illustrate these varied results.

Traversing into the Afterlife: Identifying a Wooden Fragment from the South Tombs Cemetery

By: **Nicholas R. Brown**, the American University in Cairo

The excavations at the South Tombs Cemetery at Amarna provide Egyptologists the opportunity to tell the untold stories of the working class of ancient Akhetaten. Judging from the intact burials found at the site, most burials probably contained no artifacts as offerings for the deceased. When graves do have burial goods, they are often few and poorly preserved. From the disturbed grave of a young female around 15 years old, an unusual decorated wooden fragment (object 40138) was found amongst the burial material.

The object is a small piece of wood, measuring 10.17 cm in length and with a diameter of 2.3 cm, with both original ends of the artifact missing. A large part of the decorated portion is likely made from silver birch (*Betula pendula*), since the bark it retains is pale pinkish-colored and has lens-shaped lenticles (identification by A. Clapham; Gale, et al. 2000, 337; Hepper 1990, 45). The central portion is decorated with two bands of red-colored bark inlay and two bands of intricate appliqués forming a cross-hatch pattern (**Figure 1**; for a photograph, see *Horizon* 13, 2013, 3). Due to its dimensions and shape, it is possible that this wooden object was once used as a handle of a larger object.

The bark from the silver birch tree was used in ancient Egypt as a decorative material, since it has an attractive silver colour when reflecting light. The tree does not naturally occur in Egypt, and the material was most likely imported to Egypt from Turkey or southern Europe. Large portions of the tree's bark can be removed in sheets, making its transport easy for trade (Gale, et al. 2000, 336; Hepper 1990, 45). One such birch bark 'roll' was discovered by the Egypt Exploration Society during their excavations at Amarna in 1924 (**Figure 2**).

40138



Figure 1. Object 40138: a wooden 'handle' discovered in the grave of a young female from the South Tombs Cemetery. Drawing by Andy Boyce.



Figure 2. Roll of birch bark discovered by the Egypt Exploration Society excavations at Amarna during 1924 (EES negative 24/118). The roll is on the right. Reproduced by courtesy of the EES.



Figure 3. Detail of a *medu*-staff top in the Egyptian Museum (TR 29-1-23-10). Courtesy of the Egyptian Museum in Cairo. Photo by the author.

One possible interpretation of the wooden object from the cemetery is that it is part of a shaft or handle for a walking-staff (ancient Egyptian, *medu*). At the Egyptian Museum in Cairo, the decoration of such a staff (TR 29-1-23-10; **Figure 3**) is strikingly similar to that of object 40138 from the South Tombs Cemetery. The staff at the museum differs in its dimensions, as it is more slender, and the handle is preserved. But the handle is also decorated with silver birch bark, and has alternating bands of red bark and intricate inlays of differently colored barks in a cross-hatch pattern.

Women in ancient Egypt were rarely shown carrying a staff as a status symbol, but instead are shown carrying them as walking-aids, supports, or as tools for herding animals (Hassan 1976, 97 and 197). Yet, there are many examples of women who were buried with staves from all periods of ancient Egypt, including queen Hetepheres of the Old Kingdom, and the Lady Senebtisi of the Middle Kingdom. From the Eighteenth Dynasty, there are two staves that were associated with female burials, either by their excavation context (Bruyère 1937, 176) or by the inscription of the shaft of the staff (Leiden Inv. Nr. AH.44b). If the wooden handle from the South Tombs Cemetery were, in fact, part of a walking-staff, this would provide another known Eighteenth Dynasty female staff.

The female skeleton was missing her leg and pelvic bones, making it difficult to know whether she needed a mobility-aid in life (G. Dabbs, personal communication). A staff could instead have been placed within the young woman's burial as a status symbol for the deceased in life, to help her traverse between this world and the next, or as a status symbol in the Afterlife. Since its elaborate decoration is made from imported materials, it is fairly certain that this young woman was buried with a valuable object, possibly indicating a higher socio-economic status amongst her peers.

Works Cited:

- Bruyère, B. 1937. *Rapport sur les Fouilles de Deir el-Médineh (1933–1934): Première Partie: la nécropole de l'Ouest*. Cairo, Institut français d'Archéologie Orientale.
- Gale, R., P. Gasson, N. Hepper, and G. Killen, 2000. 'Wood.' In P. T. Nicholson and I. Shaw, eds., *Ancient Egyptian Materials and Technology*. Cambridge, Cambridge University Press, 334–71.
- Hassan, A. 1976. *Stöcke und Stäbe im Pharaonischen Ägypten*. Munich, Deutscher Kuntsverlag.
- Hepper, F. N. 1990. *Pharaoh's Flowers: the Botanical Treasures of Tutankhamun*. London, Her Majesty's Stationery Office.

Carved limestone fragments

Since the beginning of excavations at the Great Aten Temple in 2012, hundreds of limestone fragments have been found. Most of them are the broken-off and left-behind remains of carved and decorated blocks. Barry Kemp report on progress in bringing order to this mass of material.

Although it is rare to find complete decorated blocks or column drums on the sites of the stone buildings at Amarna (we have so far not found one), we have much to guide us when trying to understand the small areas of design preserved on fragments. After the city was abandoned, most of the stonework was removed and re-used in other places, for example, at El-Ashmunein (Hermopolis) across the river and at Sheikh Abada (Antinöopolis), where they created the foundations for temples of Horemheb and Rameses II. Many at El-Ashmunein were re-discovered by an expedition from the Pelizaeus Museum at Hildesheim in the 1930s and mostly published in dense catalogue form (G. Roeder, *Amarna-Reliefs aus Hermopolis*. Hildesheim, Pelizaeus-Museum 1969; with a supplement, R. Hanke, *Amarna-Reliefs aus Hermopolis: Neue Veröffentlichungen und Studien*. Hildesheim, Gerstenberg 1978; also J.D. Cooney, *Amarna Reliefs from Hermopolis in American Collections*. New York, The Brooklyn Museum 1965). Even with this material one is dealing mainly with individual and isolated blocks. For complete scenes, we can turn to Amarna's rock tombs (as published in the six volumes of N. de Garis Davies, *The Rock Tombs of El Amarna*). Both are major sources of reference for identifying the motifs on our usually small

excavated fragments. We cannot hope to reconstruct the whole decoration of the buildings but, piece by piece, we can follow trails that add information that goes beyond the ground plans.

The quality of the limestone used varies greatly, from 'indurated', which is almost marble-like, through a variety with an even grain to one that is very coarse and rough from local quarries. In the process of study, we have categorised the limestone fragments into 11 initial groups which are only provisional, as a step to bringing order to a heterogeneous set of material. Each piece is entered into a database, and a selection is both drawn and photographed. The drawings (initially in pencil) are then rendered into ink line illustrations or into digital form. Those responsible at various stages are Gwil Owen, Andy Boyce, Juan Friedrichs, Bertram and Kemp.

References to material published in previous issues of *Horizon* can be checked through the complete set of issues available for viewing or download on the Amarna Project web site, www.amarnaproject.com/downloadable_resources.shtml

The following are the 11 groups, with the number of pieces in brackets and notes on some examples.

GROUP 1: Indurated limestone (67). Unlike the others, this group covers all carved pieces of indurated limestone, whatever their shape. One use was for cavetto cornices with compartments cut to receive inlays (made of either red quartzite or dark grey granodiorite) that created a 'feather' pattern. In fragment S-8326 (**Figure 1**) four examples of inlays (separately found) have been temporarily placed in their original positions. Fragment S-7991 illustrates the use of indurated limestone for decorated flat surfaces (**Figure 2**). The main motif is an open lily lying on its side, above a horizontal line which ends to the right with the beginning of another line descending at an inward-sloping angle. The torso of Nefertiti, S-8264 (illustrated in *Horizon* 15 (Autumn 2014), pp. 8–9), is an example where this stone has been used for making a statue.



Figure 1. S-8326. Cavetto cornice carved in indurated limestone, with inlays of granite and granodiorite (photo. Marsha Hill).

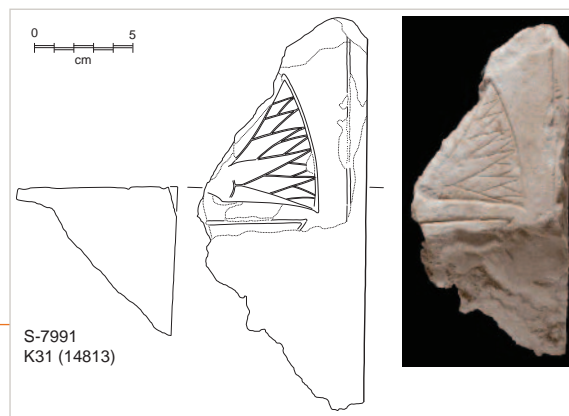


Figure 2. S-7991. Indurated limestone with part of a carved scene.

from the Great Aten Temple

fragments have been recovered from spoil heaps and deposits left behind by the Pendlebury painted walls and other elements, most often built of *talatat*-blocks. Miriam Bertram and

S-11092
I32–34 (14812)

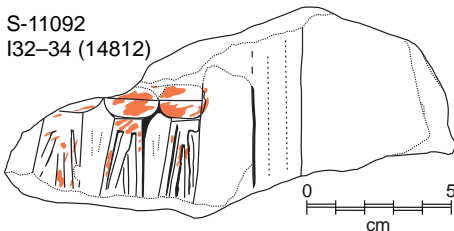


Figure 3. S-11092. Wooden stands with bowls.

GROUP 2: Flat, decorated fragments (373), a numerous group presumed to be fragments broken from *talatat*-blocks. **Figures 3 and 4** illustrate two fragments – S-11092 and S-11231 – which depict wooden stands supporting containers, a common motif in depictions of Amarna buildings. In the former, tall stands support round-based vessels, perhaps baskets; in the latter, a carinated bowl is in the bottom left part, and the handle of a large storage vessel appears at the right edge. Fragment S-11910 (**Figure 5**) shows the head of a calf, with an incised line passing behind it at an angle, with traces of blue colour on its mouth and around the eyes, as well as reddish-brown on the other incised areas including the long, angled line. Along the right edge, the back and rear leg of male figure leaning forwards and wearing a kilt is preserved. The meaning of this fragment is clarified by a scene in the tomb of Huya at Amarna (no. 1) where the celebrations of year 12 are shown (Davies, *Rock Tombs III*, Pl. XIV). These include the trussed carcasses of oxen, still retaining their heads, with Aten rays passing behind and servants in attendance. Fragment S-11910 is unusual in that a calf rather than a fully-grown and horned animal is shown. The piece, to judge from where it was found (square S35), is one of the few which, so far, can be fairly certainly be said to have come from the final temple building, on the north side.



S-11231
dump NE end
of first court

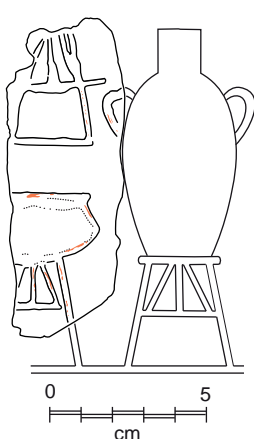
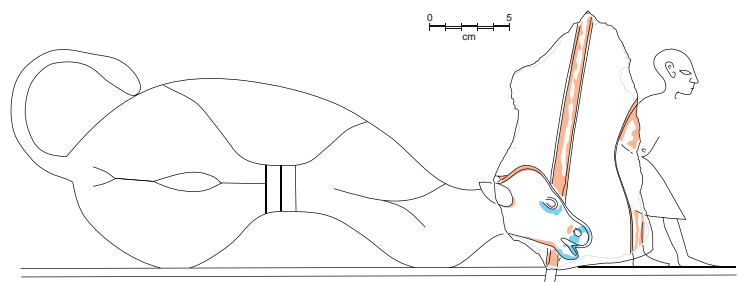


Figure 4. S-11231. Wooden stands with bowls, and the handle of a large storage vessel at the right edge.



S-11910
S35 (16195)



Figure 5. S-11910. Offering-scene with trussed calf and Aten ray.

GROUP 3: Uraei (26). Uraei, carved as projecting heads, painted blue, were a common decorative element in architecture, often used to create a frieze below or above a cavetto cornice and crowned with a sun disc.

GROUP 4: Cornice fragments (21). The defining characteristic is an area of curving surface to which a rounded moulding might be attached. Traces of red, blue or yellow colour sometimes survive. The best-preserved example is S-12233 (**Figure 6** and *Horizon 15* (Autumn 2014), p. 3). The beginning of the cornice is preserved above parts of two cartouches of the Aten (later form) carved in sunk relief. Visible on the left are the remains of a vertical border of rectangles and chevrons. The fragment (37 cm x 38 cm x 24 cm thick) is from a slab of stone originally larger than a *talatat*-block, yet is unlikely to have been a door lintel, because the lower parts of the cartouches had been carved on a separate block underneath. The piece was found within the levelling rubble that separated the lower from the upper temple ground level and thus comes from the earlier phase of building, which seems to have begun in or after Akhenaten's year 12 (*Horizon 15* (Autumn 2014), p. 6). The Pendlebury expedition found several cartouches of the Aten in its later form in this same area, although in what context is not said (*City of Akhenaten* III, 185).

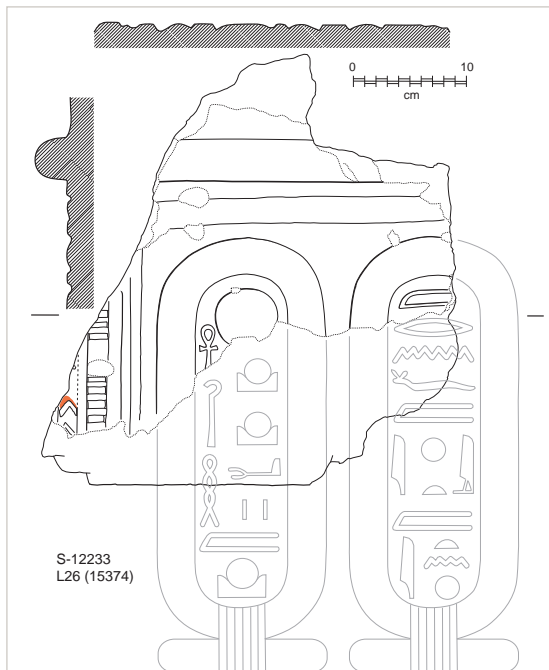


Figure 6. S-12233.
Cornice with
cartouches in the late
form of the Aten.

GROUPS 5 & 6: Rounded mouldings (23) and small rounded mouldings (54). Larger examples (with a diameter of up to 34 cm) were an architectural addition to the *talatat*-blocks that created the corner of a building. An example which preserves the decoration on both faces, S-11201, with incised cartouches of the later form of the Aten on both sides, was illustrated in *Horizon 15* (Autumn 2014), p. 3. The modest size of the corner moulding in this case (dia. 5 cm) suggests that the block belonged probably to a shrine. As buildings were demolished, it seems to have been common to knock off the mouldings so that the parent block could more easily be re-used. Several detached mouldings appear in a Pendlebury photograph (no. 32/40, on p. 9 of www.amarnaproject.com/documents/pdf/EES-photographs-1932.pdf). The smaller mouldings (diameter max. 6 cm) were fragments of a smaller torus moulding which could have been part of the frame, for example, around a door or an offering-table or to have been part of a cavetto cornice (group 4) though no longer identifiable as such.

GROUPS 7, 8, & 9: Decorated column fragments (230), plant sheathings around the lower part of a column (44), horizontal bands on a curving surface (2).

Many stone fragments derive from columns. Some are of sandstone, but these still await cataloguing. Many of the limestone fragments are small, the reason being that they have been struck from the surface of the columns like flakes, presumably so that the remaining stone (probably column drums) could be re-used. They show nevertheless that the basic shape of the columns was one which was common at Amarna, representing a cluster of papyrus stalks bound into a cylindrical bundle, with a sharply angled ridge running vertically along the division (or 'valley') between each stalk (the reconstructed column at the Small Aten Temple has this shape, see *Horizon 13* (Summer 2013), pp. 1, 12). To this basic shape a variety of decorative elements could be added. The fragments illustrated here (**Figure 7**) are where areas of the convex surface of the papyrus stalks have been carved and painted (for re-united fragments S-11448 and S-11458, see *Horizon 15* (Autumn 2014), p. 2). The fragments have been selected and arranged with overlapping elements to provide a short continuous area of design. The overall height of this area is only about 40 cm, and as yet no indication has been found as to whether it represents a band of decoration, perhaps towards the top of the column, or whether it, or something similar, covered a greater extent of the column surface. An estimate of the diameter of the parent column is about 80 cm, although the basis of estimation is weak.

The most recognisable element of the decoration is the lily ('lotus'), spread out so that it covers most of the sub-cylindrical surface of the papyrus rib. Instead of narrowing to a conical or triangular point at the bottom, at least two discs, outlined in red, are added. Below these are two rows of squares, alternately blue and red, and below these are shapes, painted blue, which might stand for bunches of grapes, a common design element at Amarna.

The front of the temple, in its final stage, consisted of pylon towers in front of which extended a pair of colonnades which

employed very large columns (the bases estimated to have been up to 2.5 m across (*Horizon 15* (Autumn 2014) p. 7; *Horizon 16* (Summer 2015), pp. 2–3). The columns themselves were of sandstone. We have uncovered one very large piece in the side of a Pendlebury trench. Further in front, and almost touching the mud-brick pylons of the enclosure wall, were the foundations for a smaller stone building which was probably a small palace (*Horizon 11* (Summer 2012), pp. 2–3). The foundations for its columns are much smaller than those for the sandstone colonnades. It seems likely, therefore, that the limestone columns belonged to the palace, which was also of the final phase and therefore would have been available for demolition at the same time as the main temple.

Many of the limestone column fragments were found in two concentrations (**Figure 8**). In both cases they lie in loose deposits of dusty sand and rubble over the hard-packed layer of rubble which was used to level up the ground before the second-phase of the temple's history. They are separated by one of Pendlebury's 1932 trenches cut into this rubble layer, but presumably they were once part of a continuous spread of debris left behind when the final buildings were demolished. There are good reasons for thinking that both patches had not been substantially disturbed in 1932. The position marked 'A' is a place where Pendlebury had sorted stones, leaving many in a pile over an undisturbed layer of sandy rubble (see the photograph 32/36, on p. 11 of www.amarnaproject.com/documents/pdf/ES-photographs-1932.pdf) but also burying some decorated pieces in the troughs surrounding one of the gypsum-coated platforms (marked 'B', and see **Figures 8, 9**). The scatter of column fragments on top of and to the west of the mud-brick enclosure wall and pylon are from the mounds which Pendlebury developed in the course of removing excavated spoil out beyond the limits of his excavations. It is encouraging to find that the debris in our area of excavation is not wholly chaotic, as seemed at first sight. Methodical cataloguing and interpretation of the find places of fragments can lead to particular conclusions.

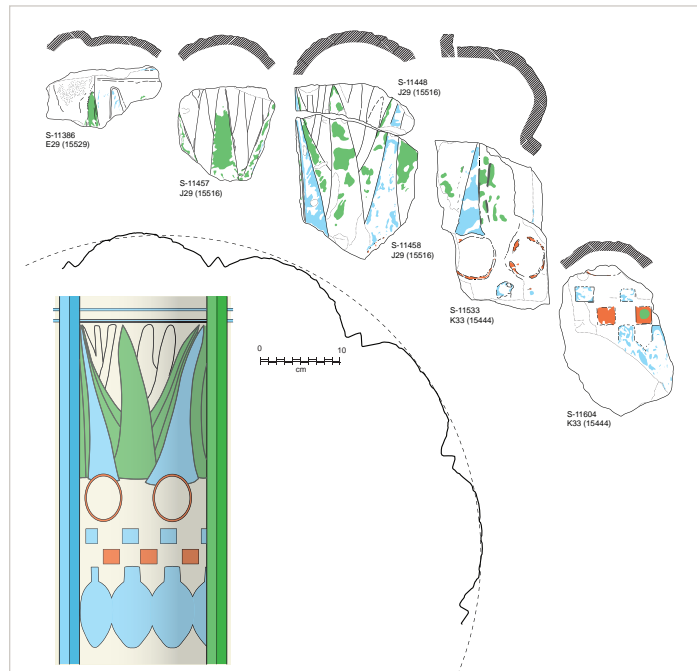


Figure 7. Column fragments assembled to form a section of restored decoration.

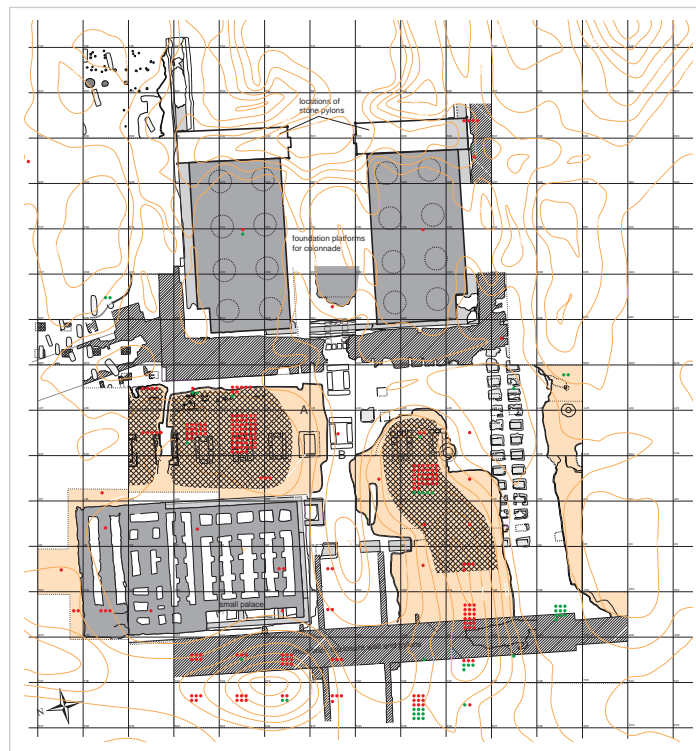


Figure 8. Distribution map of column fragments. The grid is of 5-metre intervals. The cross-hatched areas over the orange tint (levelling rubble) are estimates of surface debris not significantly disturbed by Pendlebury. Each red dot represents one fragment of limestone column shaft grouped according to its 5-m square. Green dots are fragments of sheathing from the bottom of column shafts.



Figure 9. Deposit of limestone fragments in one of the basins located in the entrance courtyard of the temple (**Figure 8**, 'B'). Some had been marked by the Pendlebury expedition.

GROUP 10: (Possible) statue fragments (21). Five fragments were made from granite or quartzite, but most of were carved from limestone (not of the indurated kind). Several comprise pieces with a rounded surface, but the curvature is not symmetrical, raising the possibility that it is from the limb of a statue. Fragment S-8197, part of a back pillar bearing the title and name of Nefertiti, was illustrated in *Horizon 13* (Summer 2013), p. 8. Another, S-8351 (**Figure 10**), preserves part of the base of a standing figure wearing sandals. Fragment S-8352 is the lower half of an inlay for a composite statue, part of a uraeus to be fixed to the forehead, by means of a tenon at the back (**Figures 11 and 12**). The material is a distinctive, fine-grained yellow limestone. The front has been carved with small incised panels, those down the central rib containing small amounts of yellow pigment.



Figure 10. S-8351. Part of the base of a statue, preserving feet wearing sandals (width 25.3 cm; length 11.3 cm; height 11.0 cm).



Figure 11. S-8352. Part of a uraeus made for attachment to the forehead of a composite statue.

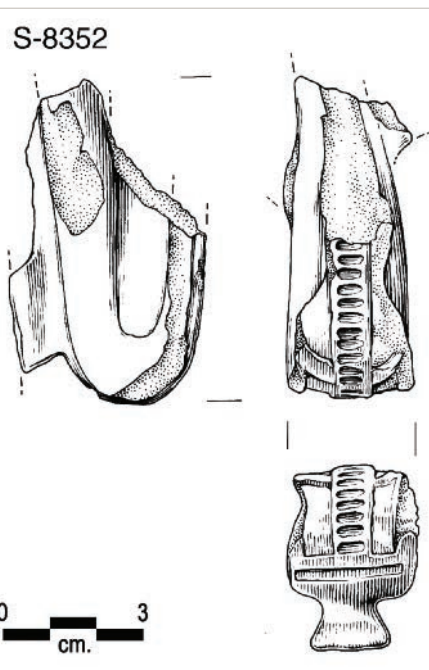


Figure 12. S-8352. Note the carefully carved tenon at the back of the uraeus (drawing by A. Boyce).

GROUP 11: Miscellaneous fragments (107). This group contains all those that do not fit into the other categories. Most have only a flat or finished surface with traces of paint and sometimes chiseled lines.

Two general conclusions arise from this brief survey. The first is that, so far, the excavations have concentrated on the area at the front of the temple. Here there were actually two stone buildings, one the colonnade and pylons that formed the front of the temple, and the other a stone building thought to be a palace. It turns out that it is possible, to some extent, to discriminate between material from the two buildings, although a more thorough analysis is needed of the contexts of pieces, and not only those of carved stone but also of inlays.

The second is that the material which we have so far catalogued illustrates an aspect of the creation of Amarna which has been commented on before, namely, the very variable quality of stone-carving. The builders had at their disposal teams of fine sculptors working in hard stones (quartzite, granite and indurated limestone) both for statues and (sparingly) reliefs. Others produced statues in regular limestone, but not of a uniformly high standard. When it came to adding decoration to the large areas of walls built of limestone blocks, and also to columns, the supply of skilled craftsmen seems to have been far from sufficient. Many areas were carved with an adequate level of skill (e.g. **Figure 5**). But others had been assigned to people who hacked outlines and applied paint with little finesse. The fragments of **Figure 7** are an example. They perhaps show that those who worked on them did not fully understand the designs they were supposed to be creating. Are we seeing the work of conscripted labour, in poor physical condition, inadequately trained and with low motivation, the kind of people now documented in the cemeteries at Amarna?



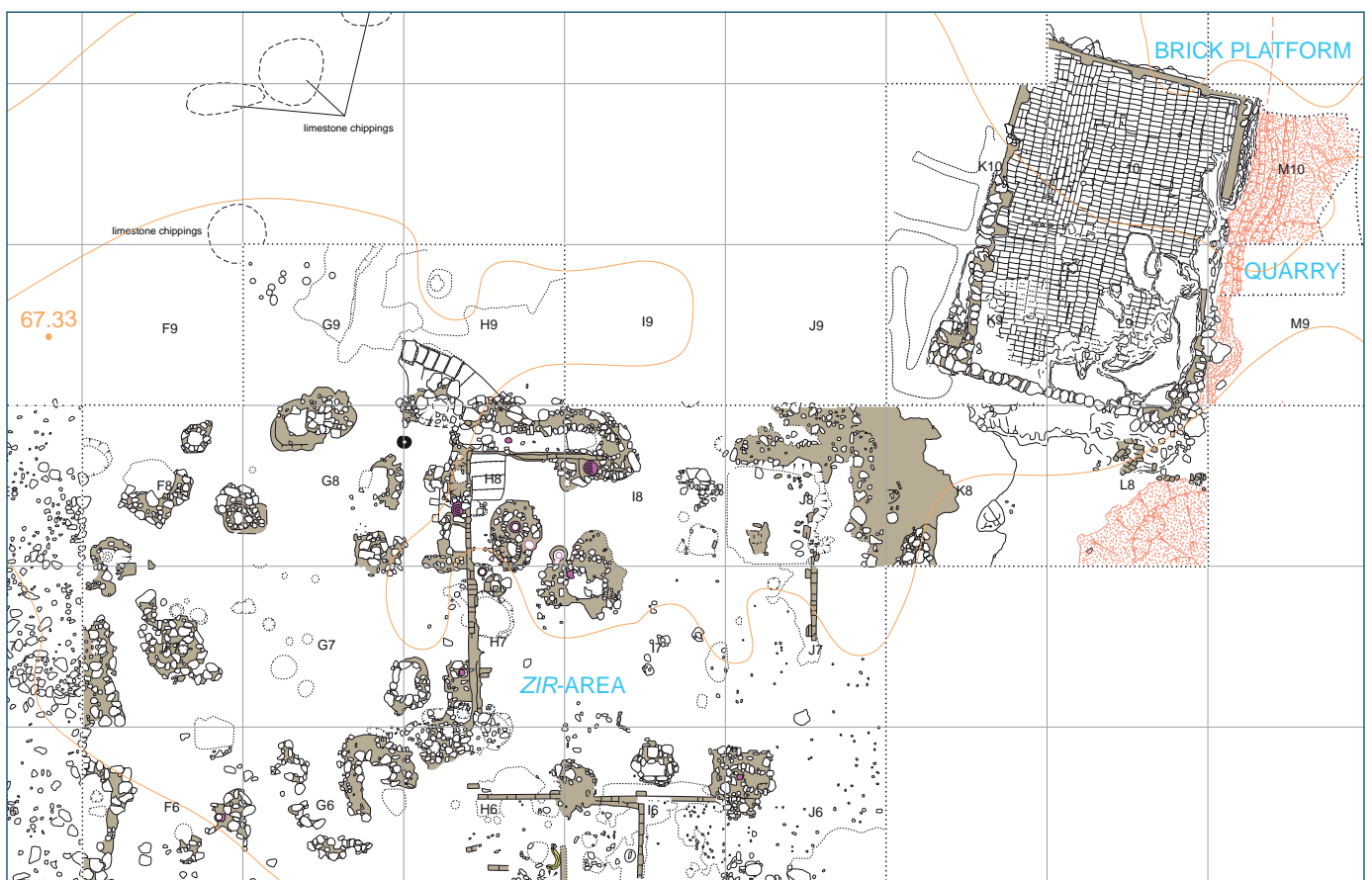
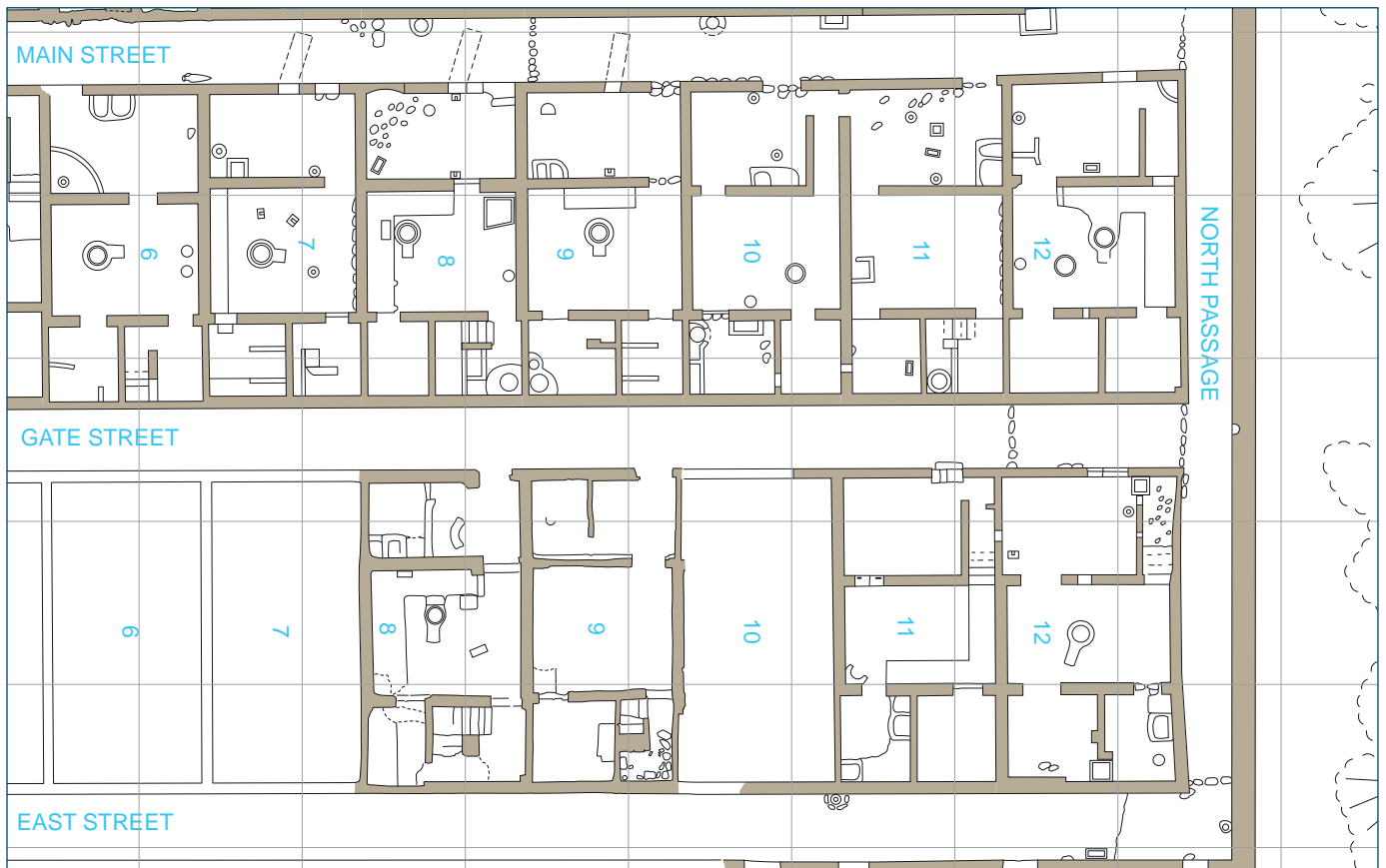
Progress with the Amarna Digital Atlas

View of the extra-mural area of the Workmen's Village in 1977, viewed to the south-west. The embankment on the right is the end of the main spoil heap from the Egypt Exploration Society excavations of 1922.

A basic part of the creation of a digital atlas of Amarna is a series of maps of individual parts of the site as well as of the whole of Amarna, such maps to be accompanied by descriptive texts and photographs. Because of the long history of research at Amarna an important step is the collation of records made over more than a century. One result which is close to completion is a map of the Workmen's Village. It combines the plans of the Egypt Exploration Society's work in 1921 and 1922, and between 1979 and 1986, and some of the results of the subsequent mapping by Helen Fenwick.

The map has been compiled as a .pdf file to be viewed at a scale of 1:50 and spreads across an area of 555 x 400 cms. It can, of course, be viewed (and printed) at smaller scales. It will be added to the Amarna Project's web site later in the year.

Two small sections are shown here at a reduced scale (each of the grid squares is 5 x 5 m). One is part of the walled village and includes the two houses (Gate Street 8 and 9 excavated in the 1980s; north is towards the right); the other is part of the extra-mural settlement, including the zir-area where water was stored in large pottery vessels (north is towards the top).





The Amarna Trustees after a meeting on June 3rd, 2006. Right to left: Alf Baxendale, Shirley Priest, Barry Kemp, Alison Gascoigne, Surésh Dhargalkar.



Alf inspecting one of the houses at Amarna in the early 1990s.

Alf Baxendale

1941–2016

It is sad to have to report the death, on Tuesday, August 2nd, 2016, of Alf Baxendale, a long-time enthusiast for ancient Egypt and supporter of the work at Amarna.

I first met Alf in Cairo following a lecture I gave in the late 1980s. We quickly became friends and, over the next few years, he had a string of notable successes in raising funds and getting donations of equipment and materials through his network of business contacts. Wheelbarrows, storage racking, even a huge reconditioned conveyor-belt for moving sand at the Small Aten Temple reached the Amarna dig house and, more in the public eye, a major sponsorship from one of Britain's leading brewers (Scottish and Newcastle through the kind support of Jim Merrington) paid for a research project into ancient Egyptian beer. His second contribution began around 2005, when I saw that our main source of funding (British Academy grants coming via the Egypt Exploration Society) was going to dry up. I had the idea of setting up a registered charity, the Amarna Trust, as a way of helping to raise funds from private sources. Alf immediately supplied his extensive experience of running businesses, became a founder trustee, steered us through the formative stages and continued to advise us for several years.

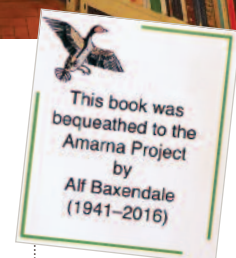
In addition to his enthusiasm and support for Amarna he was a good friend and entertaining companion, always ready with an amusing anecdote as well as with a bold practical solution to a problem. When his son, Nick, informed me of his passing, one of my first thoughts was: I will not see his like again.

Alf bequeathed to the Amarna Project a selection of his books and these have now been shipped to Cairo and incorporated into the Project's library in the Tahrir Square offices.

Barry Kemp



A section of the library in the Amarna Project's Cairo offices.



Book plate commemorating Alf's gift of books.

Publications and events

Jacquelyn Williamson, *Nefertiti's Sun Temple; a New Cult Complex at Tell el-Amarna*. 2 vols. Harvard Egyptological Studies 2. Leiden and Boston, Brill, 2016.

Prof. Jacquelyn Williamson (George Mason University) reconstructs the architecture, art and inscriptions from the site to demonstrate that Kom el-Nana is the location of Queen Nefertiti's 'Sunshade of Re' temple and another more enigmatic structure that served the funerary needs of the non-royal courtiers at the ancient city. The art and inscriptions provide new information about Queen Nefertiti and challenge assumptions about her role in Pharaoh Akhenaten's religious movement dedicated to the sun god Aten.



A. Stevens, G. Dabbs and **J. Rose**, 'Akhenaten's people; Excavating the lost cemeteries of Amarna.' *Current World Archaeology* 78 (2016), 14–21.

A. Garnett, 'Understanding pottery and people at the Amarna Stone Village.' *Egyptian Archaeology* 49 (2016), 16–19.

B. Kemp (ed.), 'Tell el-Amarna, 2016.' *Journal of Egyptian Archaeology* 102 (2016), 1–11. Includes contributions by **C. Simpson**, 'Bird bone study at Amarna'; **L. Skinner**, 'Amarna coffins project'; **G.R. Dabbs** and **J.C. Rose**, 'Report on the October 2015 skeletal analysis of the North Tombs Cemetery Project'.

K. Thompson, 'Stone inlays from the Great Aten Temple: new discoveries.' In **Christian Huyeng** and **Andreas Finger**, eds. *Amarna in the 21st Century*. Kleine Berliner Schriften zum Alten Ägypten 3 (2015), 8–44. [ISBN: 9783738616255]

Since the last issue of *Horizon*, the following items have been added to the Project's web site:
www.amarnaproject.com/downloadable_resources.shtml

- » *Amarna Reports* vol. VI (the last)
- » *Kom el-Nana 1989 Report*
- » *Kom el-Nana 1990 Report*
- » *Kom el-Nana 1993 Report*. This comprises a single item: **M. Serpico**, 'Report on architectural and relief remains from the North and South Shrines at Kom el-Nana.'

Akhetaten Sun is the newsletter of The Amarna Research Foundation, based in Colorado. Starting in 1996 it offers a complementary account of work at Amarna, as well as other pieces on the Amarna Period. These are made publicly available on its web site after a short delay. Recent pieces include:

G. Dabbs, 'The Northern Cemeteries of Amarna.' *Akhetaten Sun* 22, no. 1 (June 2016), 2–11.
www.theamarnaresearchfoundation.org/Sun2016_Spring%20Vol%2022%20No%201.pdf

B. Kemp, 'Ranefer's sovereign: who was the last ruler at Amarna?' *Akhetaten Sun* 22, no. 1 (June 2016), 12–31.
www.theamarnaresearchfoundation.org/Sun2016_Spring%20Vol%2022%20No%201.pdf

B. Kemp, 'The Royal tombs at Amarna.' *Akhetaten Sun* 21, no. 2 (December 2015), 2–13.
www.theamarnaresearchfoundation.org/Sun2015_Fall%20Vol%2021%20No%202.pdf

B. Kemp, 'The house of Ranefer at the Amarna Visitor Centre.' *Akhetaten Sun* 21, no. 2 (December 2015), 25–9.
www.theamarnaresearchfoundation.org/Sun2015_Fall%20Vol%2021%20No%202.pdf

B. Kemp, 'Work at Amarna — Autumn 2015.' *Akhetaten Sun* 21, no. 2 (December 2015), 30–1.
www.theamarnaresearchfoundation.org/Sun2015_Fall%20Vol%2021%20No%202.pdf

Also of interest:

W. Raymond Johnson, 'A royal fishing and fowling *talatat* scene from Amarna.' *Akhetaten Sun* 21, no. 2 (December 2015), 14–24.
www.theamarnaresearchfoundation.org/Sun2015_Fall%20Vol%2021%20No%202.pdf

Support in Argentina

At the invitation of Juan Friedrichs, a member of the excavating team at the Great Aten Temple and Director of the Natural History Museum of Formosa, Argentina, Barry Kemp led a video conference on the theme 'The Amarna Period seen from ground level' with a group of supporters in Buenos Aires on May 28th. Verónica Giménez acted as translator.



Juan Friedrichs (seated at the laptop) leads the Buenos Aires end of the video conference. Photo: Mónica Hernández.



A record of loss.

An aerial photograph, taken in 1964 by the French Geographical Institute, shows the site of Maru-Aten, its outline still visible, implying the survival of the foundations of its walls and other features, recently cut through by an irrigation canal dug to feed the new government desert reclamation scheme. Nothing now survives of Maru-Aten.

The Amarna Trust

The Amarna Trust is registered with the **Charity Commission as no. 1161292.**

Its registered address is

The Amarna Trust

Newton Hall
Town Street
Newton
Cambridge CB22 7ZE
United Kingdom

**The chairman of The Amarna Trust is
Prof. Paul Nicholson (Cardiff University)**

The contact for The Amarna Trust is

Prof. Barry Kemp, CBE, FBA
at the address to the left, or

The Amarna Project

1, Midan El-Tahrir
Floor 5, flat 17
Downtown
Cairo
Arab Republic of Egypt

Cairo office: **+2022 795 5666**
mobile: **+20122 511 3357**
email: **bjk2@cam.ac.uk**

**For donations and other financial matters
the contact is the Honorary Treasurer**

Susan Kelly

8 chemin Doctoresse-Champendal
1206 Geneva
Switzerland

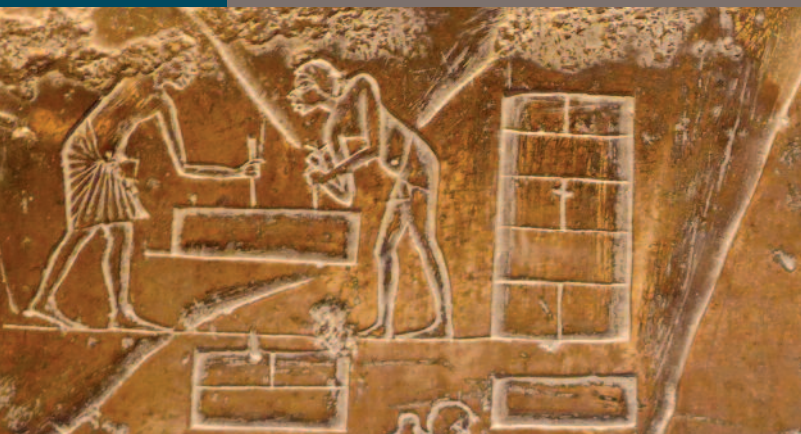
email: **suekelly.canada@gmail.com**

The Amarna Trust submits an annual set of accounts to the UK Charities Commission. None of its income is used in the furtherance of raising funds. Its overheads are modest.

The objectives of the Trust are:

To advance public education and to promote the conservation, protection and improvement of the ancient city of Tell el-Amarna, Egypt and the surrounding area for the benefit of the public in particular but not exclusively by:

- i) creating a permanent facility for study (the research base – The Amarna Centre);
- ii) undertaking and supporting field research (and publishing the useful results of such research);
- iii) promoting training in archaeological field skills;
- iv) providing, and assisting in the provision of, lectures and publications in furtherance of the stated objects;
- v) developing displays and exhibitions at a site museum for the benefit of the public and an educational outreach programme for the benefit of pupils at schools; and
- vi) working in partnership with the Supreme Council of Antiquities of Egypt to maintain the ancient city for the benefit of the public.



Part of an Amarna block in the Mallawi Museum which shows stonemasons at work. They appear to be dressing the surface of limestone *talatat*-blocks (each ideally 1 cubit long, thus 52 cm). The incised, angled lines are original and suggest that the action is set in a desert landscape and thus that the finished blocks stand in a stack at the quarry. The block is said to have been re-used in a modern house at Amarna.

The Trust invites donations from individuals or from corporations. Donations can be earmarked for particular purposes or they can be allocated by the Trust in pursuit of the stated objects of the Trust. The Trust is able to benefit from the present UK tax legislation by reclaiming tax on donations from UK tax-payers under the Gift Aid scheme, which increases the value of the gift by nearly a third. For this it is necessary to accompany each donation with a Gift Aid declaration form or a similar letter. There are further tax advantages for donors who pay at higher rates.

For residents of the USA, donations can be made either to the Amarna Research Foundation or to the Cambridge in America Foundation (both 501(c)(3) tax-exempt organisations) with the request that the donation be made into a grant for The Amarna Trust.

To make a donation to the Amarna Trust, go to http://www.amarnatrust.com/supporting_amarna.shtml



All work done at Amarna relies upon the support and agreement of the Ministry of Antiquities of the Arab Republic of Egypt. We are indebted to its personnel, both local and in Cairo.

Thanks to those who have recently supported the Amarna Project:

Amarna Research Foundation
Ancient Egypt Alive/Your Journey
(Anna Mackay, Laura Ranieri)
The British Museum (Institute for
Bioarchaeology grant)
Friends of the Petrie Museum (Lucia Gahlin)
Friends of the Society for the Study of
Ancient Egypt
King Fahd Center for Middle East and
Islamic Studies, University of Arkansas
McDonald Institute for Archaeological
Research, University of Cambridge
Mercia Egyptology
Metropolitan Museum of Art
Michela Schiff Giorgini Foundation
National Endowment of the Humanities
(USA), through Southern Illinois University
The Robert Kiln Charitable Trust
Seven Pillars Trust
Sussex Egyptology Society
Thames Valley Ancient Egypt Society
Wessex Ancient Egypt Society

Estate of Alf Baxendale
Verne Appleby
Kirstin Armstrong
Frances Baileys (*in memory*
of Michael Coultas)
Jan Bailey
William Beeston
Miriam Bertram
Kate Bowgett
Diana Bridge
Lucilla Butler
Elaine Charlson
Cheryl Davis
Robin Derricourt
Jim Dunn
Ian Flinn
Juan Friedrichs and friends
Lucia Gahlin
Rory Gavin
Anne Godfrey

Sharon Hague
Annie Haward
Anna Hodgkinson
Cary Jennings
Jussi Kalkinen
Barry Kemp
Samira Kirolos
Leonardo Lovari
Herve Lucas
Paul Nicholson
Jutta Oldendorf
Sachie Osada
Geoff Phillipson
Shirley Priest
Isabelle Rieusset
Catherine and John
Rutherford
Birgit Schmidt
Julia Schottlander
John Searson

Janet Shepherd
Allan Stevens
Anna Stevens
Tetsuya Takahashi
Judith Tulloch
Christopher Turner
Sònia Palau Vallès and
Maria Vallès Casanova
Julia Vilaró
Masabu Wada
Peter Weda
Carol Weinhaus
Stewart White
Toby Wilkinson
Kawada Yasuo
Claire Zarfahs



Ancient World Tours run regular tours that include Amarna and we are proud to be sponsors of the excavations carried out by the Amarna Project. Contact AWT on 0844 357 9494 or at www.ancient.co.uk or at amarna@ancient.co.uk