

# horizon

ISSUE 2 JULY 2007

The Amarna Project and Amarna Trust newsletter



A digital reassembly of the individual fragments of Akhenaten's foundation text, Boundary Stela S, now in store at the site magazines. It will assist the reconstruction of the fragments in the new Amarna site museum.

Horizon is a magazine that exists to spread knowledge of Amarna, an ancient city of Egypt that has much to tell us about the past. It was the place for a bold experiment by an Egyptian Pharaoh, Akhenaten, to reach beyond the conventional religion of his day. The city of his court, and of the thousands of people who briefly lived there in the service of his dream, opens a window on to a way of life that is simultaneously recognisable yet different.

Since the last issue of Horizon two field seasons have taken place at Amarna, from November to early January, and from March to early May. An international team of people with diverse skills and special areas of knowledge came for excavation, survey and the study of material kept in store. The maintenance programmes at the North Palace and Small Aten Temple were also continued. The following pages illustrate just a few aspects of what was achieved. In March a television film team from the BBC history series, Timewatch (under the direction of John Hayes-Fisher), spent ten days making their own record of what the site means and what we, the archaeologists, do with it.

We have also relaunched our web-site. The web-site began on a modest scale in 2000, created by Jenny Doole of the McDonald Institute for Archaeological Research in Cambridge. By last year it had reached a level of internal complexity that prompted a full rebuilding. This has now been done by Popcorn Webdesign of Stansted, UK. It can be found at: [www.amarnaproject.com](http://www.amarnaproject.com). The new version contains a lot more material. We plan to continue with updates in the summer, both to take in the latest work and to extend the site's range and usefulness.

Visitor numbers to Amarna are set to increase. Tour companies are considering resuming boat cruises through Middle Egypt, and a new road bridge across the Nile has been started downstream from Amarna. In addition to its research aims, the Amarna Trust has a role to play in making the site more intelligible to visitors, through the development of the site museum and the better laying-out of parts of the city. For this it depends upon the generosity of a caring and interested public.

**Barry Kemp**  
Chairman of the Trustees

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# Notes from the field

## lives of the have-nots

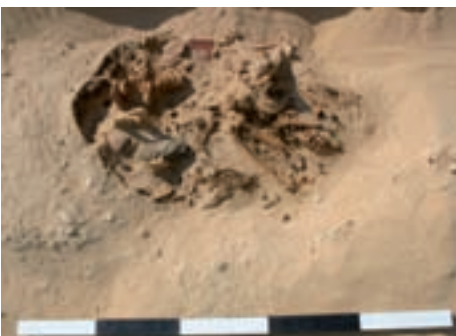


Work begins at the new trench beside last year's, at the South Tombs Cemetery.

During March and April we returned to the cemetery behind tomb 25 (that belonged to the god's father Ay) to resume excavation. Last year the digging team examined a strip measuring 5 by 35 metres. This year the target was an adjoining strip of the same size. Under the supervision of archaeologist Wendy Dolling the soft yellow sand was scraped away in thin layers to expose the remains of burials. Although disturbed in antiquity, more of the bones seemed to lie in their original positions than last year, in grave pits faintly outlined in the sand. Their density seemed higher, too.

A distinctive culture of burial is emerging, of funerary practice stripped down to its essentials. The graves do not cut into one another, a sign that they were marked on the surface. It is now pretty clear that this was often done with nothing more than a headstone – perhaps part of a small stone pile – that could be a small dark rounded boulder, an elongated unworked slab, or a piece of limestone roughly chiselled to the shape of a round-topped stela (though with no attempt at decoration).

Each burial required decisions: in which direction to lay the body (preferences varied considerably), how to protect the body (mostly in a roll of matting or sticks roped together) and what objects, if any, to place with it (a few pots of cheaper wares and probably occasional pieces of jewellery around the head, to judge from the way that later robbers concentrated their attention on the heads). One family folded the deceased's body into a tight circle and buried it in a large basket. Another family had managed a coffin coated with a thin layer of white plaster that was mostly painted black but bore some decoration



Burial (Individual 28) on its left side in a contracted position, knees bent up and arms bent up to the head. It lies in a woven basketry container.

in blue and yellow (we found it reduced to fragments that await restoration).

So far, apart from the brick tomb chamber found last year, our burials show a near-uniformity of minimum expenditure, to be contrasted with the ambitious schemes for grand burial entertained by Amarna's official class and visible now in the two groups of rock tombs. This striking division between rich and poor in death is much less clearly reflected in Amarna's housing. Whilst the houses of the officials stand out by virtue of their size and solidity of construction, they stand at the peak of a gradient of size that runs fairly smoothly down to the smallest. Between richest and poorest were many at all the intermediate stages. Our cemetery might therefore mark a stage in social development, a turning away from using burials as a way of displaying how well-off you were. You treated your dead with dignity but spared yourself unnecessary expense.



Burial pit for Individual 27. At the east end stands a rough narrow limestone slab, perhaps the original grave marker.



Workroom at the expedition house temporarily serving as the bone lab.

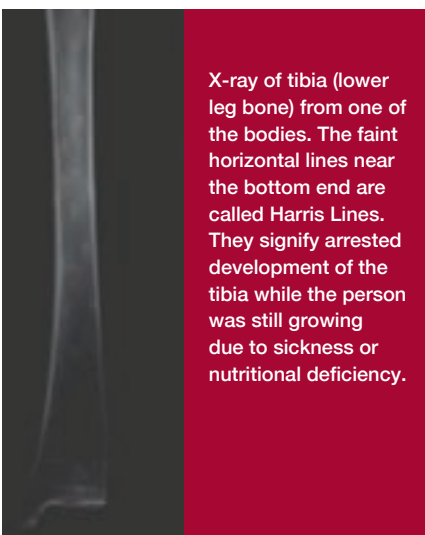


Carefully prepared hair ringlets on the head of Individual 17 (2006 season).

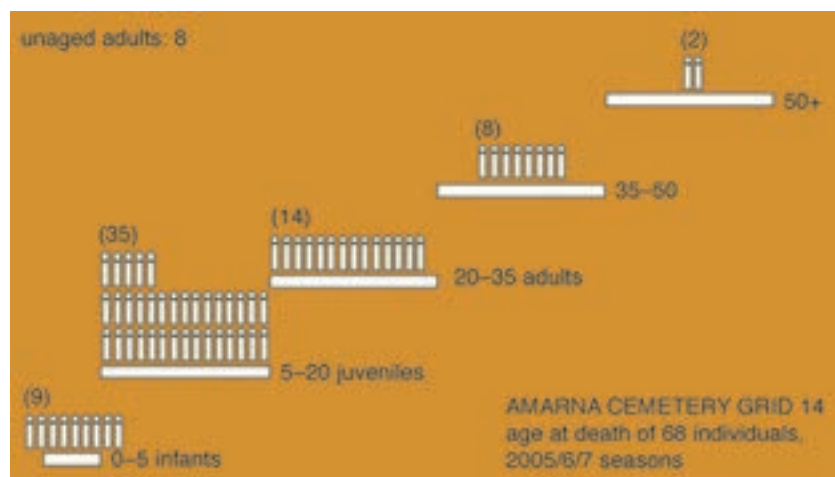
Particular interest lies in the bones, studied by Prof Jerry Rose assisted by Melissa Zabecki.

Last year's sombre picture has largely been borne out, the high rates of spinal trauma and anaemia implying that the population was not a particularly healthy one. If you were not one of the elite, hard work and a low-quality diet contributed to an early death.

We now have the ages at death of 68 individuals. Infants are few, probably because they were buried elsewhere. Rare individuals made it through to their fifties. But for most, death intervened before the age of thirty-five. It takes a little effort to imagine a society in which, for most people, all life's experiences and expectations are so compressed in time. By sixteen, you are in the middle years of your life or beyond. The prospects of accumulating possessions are greatly reduced, as are the opportunities for moving on from the mistakes you make in life. It also puts into perspective the early deaths in Akhenaten's family. They were not so abnormal.



X-ray of tibia (lower leg bone) from one of the bodies. The faint horizontal lines near the bottom end are called Harris Lines. They signify arrested development of the tibia while the person was still growing due to sickness or nutritional deficiency.







Photograph taken in 1923, looking north, of the north wall of the animal building at the North Palace. Against the north wall are the remains of a row of mangers each carved with a picture of an ox. EES archive photograph.

## Amarna inherited Arresting the decay of a palace

Akhenaten and his family gave themselves buildings where they could spend time in a setting which was at once informal and ritualistic. The North Palace was one such place, owned in succession by one of Akhenaten's wives (perhaps Kiya) and then by the eldest daughter Meretaten. It is arguably ancient Egypt's most beautiful surviving mud-brick building.

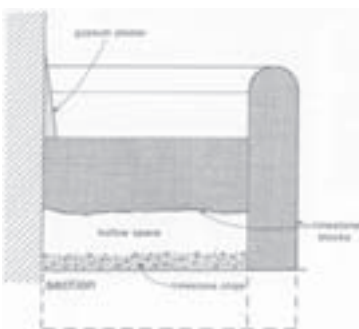
Dug in 1923 and 1924 by the Egypt Exploration Society, it was left open to the elements. By 1997 it had reached an advanced state of decay. Then, thanks to the enthusiasm and support of Bob Hanawalt of Denver, Colorado, and the Amarna Research Foundation that he had founded the previous year, a programme of cleaning and repair was started which is still running.

In March 2007 one of the local repair teams, working under the supervision of Surésh Dhargalkar, began work on a part where animals had been tethered and fed. Closely spaced limestone feeding-troughs



The view shown above as it appears today, with the east boundary wall newly rebuilt.

had been built against the walls, separated by tethering-stones. One set of troughs bore carved pictures of fat cattle; on another were ibexes and antelopes. Hardly anything is left of the troughs now although a few of the carved blocks were sent to museums. The most immediate task is to mark



On the left, a section through one of the limestone animal troughs, and on the right a reconstruction drawing of an ibex feeding-trough (80 cm long) and its tethering-stones.



Cattle being hand-fed in a building fitted with feeding-troughs (along the top of the scene) and tethering-stones. Tomb of the high-priest Meryra, Amarna.



out the lines of the near-vanished walls with new mud bricks. But the option is also there of replacing at least some of the troughs using freshly carved limestone blocks.

#### Why were there animals there at all?

Followers of the Aten cult were as ambiguous as ancient Egyptians generally about animals that were edible. They might be creatures created by the sun-god and even manifestations of the sun-god himself. Akhenaten had promised that he would make a tomb at Amarna for the Mnevis-bull, sacred to the sun-god Ra of Heliopolis. But joints of meat were a vital part of the offerings to the Aten, too. The North Palace itself contained offering-tables in an adjacent court. So were the animals objects of admiration or a source of food, Meretaten's pets or dinner for the palace? Probably they were both.



Local builder Mohammed Mahmoud Hussein at work, recreating the line of the front wall of the animal building.



Bob Hanawalt (far left, with Bill Petty) visiting excavations at Amarna.

## Amarna on screen

### Timewatch looks at Amarna

In March 2007, the Amarna Project hosted a film crew from the BBC's Timewatch programme, headed by producer John Hayes-Fisher. In ten busy days of filming, the crew collected footage of the events on site and back at the dig house, and interviews with Amarna Project members, to allow them to construct a combined picture of life at the Eighteenth Dynasty city, and of how archaeologists go about their work. The programme is scheduled to air in the UK later in 2007.



Facing up to the fact that Amarna was not all sunshine: the BBC team film a gathering sandstorm on the cliffs above Amarna.



Archaeologist Wendy Dolling about to lift one of the occupants of the South Tombs Cemetery, recorded by the BBC Timewatch cameraman Julian Clinkard.

timewatch

[bbc.co.uk/timewatch](http://bbc.co.uk/timewatch)



31 March 2007: a parade in honour of local sheikhs approaches the tomb of Mohammed Farag at el-Hagg Qandil, on the festival of Mawlid el-Nabi (the Prophet's Birthday). The unfinished building at the right edge marks the tomb of Sheikh Mahdi, who died last year.

## Mawlid

Within the present villages at Amarna a portion of the population pays much heed to men (and the occasional woman) who stand out as figures of spiritual authority, offering guidance and teaching. They become sheikhs. On their deaths a day is set aside for their festival, a mawlid. The greatest mawlid of all, Mawlid el-Nabi (that of the Prophet Mohammed), is also an occasion to celebrate local sheikhs.

At El-Hagg Qandil, the village at the southern end of the ancient city, on Mawlid el-Nabi portable shrines (called mahmal) covered with bright red, green and white drapes are paraded through the streets on camels or on carts, their final destination the compound of a particularly popular sheikh, Mohammed Farag (born 17th March 1919, died 24th September 1986). Mawlid is a time of exuberant celebration and release through music, chanting and dance. And once over, there is never long to wait for the next one.



A camel bears a memorial to Sheikh Mahdi of El-Hagg Qandil during the festival of Mawlid el-Nabi.



A leaflet advertising the 2006 mawlid of Sheikh Mahdi of el-Hagg Qandil.





Air from the bellows' nozzle raises the temperature of the charcoal over the small area of the crucible.



The melting temperature of bronze achieved inside a small crucible. Blacksmith Kamal Shawki pumps the bellows, archaeo-metallurgist Mark Eccleston watches the result.

## How were things made? Amarna's small-scale metal industry

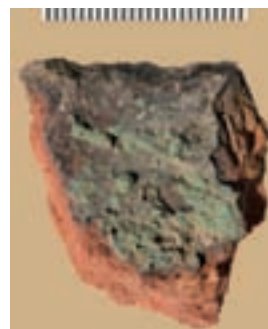
One of the lessons of the past is that fine craftsmanship is possible with very basic technology. Skilled hands are precision tools in themselves.

In 2004 and 2005 a small group of typical Amarna dwellings was carefully excavated by the Project at a part of the site designated Grid 12. Amongst the myriad bits of debris were fragments of crude clay crucibles in which particles of bronze were embedded, turned bright green over the centuries. The same colour stained clumps of sand grains cemented together perhaps from being splashed by molten metal. Of the metal itself, some fragments of bronze had been cut down into pieces roughly the size of a fingernail. Everything points to a local, small-scale recycling industry in which bronze objects were cut and melted down. But of kilns or furnaces there was no clear trace. This year Mark Eccleston, an ancient technology expert at La Trobe University tackled head on how the Amarna metal-smiths worked.

A local blacksmith, Kamal Shawki, made available his skills. He began by fashioning, from very simply modified goatskins, a pair of hand bellows, and an iron y-shaped tube or nozzle that would direct their draught to a small patch in a bed of charcoal. In a short time he dug a small scoop in the sand behind the expedition house, and set the nozzle in a little construction of bricks and mud mortar that he built on the edge. Mark made crucibles from local clay similar to those from the excavation, poured in some powdered bronze and heaped charcoal over the top. Making it look deceptively easy, Kamal pumped the bellows long and vigorously. As registered on special measuring equipment the heat rose to the critical temperature. A puddle of yellowish liquid metal that quickly set into a rough round smoky plate was the triumphant result.



One of the experimental crucibles after use. A cake of bronze rests in the bottom; the inside surface of the crucible has blistered, as had its ancient counterparts.



Fragment of ancient bronze-melting crucible from Amarna grid 12 (T8, unit 10826).



Damaged but delicate: a tiny bronze spoon from grid 12 (object 35400, the end broken off), made from a single piece of bronze sheet, the handle rolled into a tube, a difficult task when the technology was so basic.

An important lesson is how insubstantial a usable 'kiln' can be. One kick and all that is left are bits of burnt clay, some charcoal, and a weakly defined shallow hole in the desert. It is not yet clear what the Grid 12 metal-smiths were making, or to what extent they were specialists. The debris from the very same houses contained evidence for making faience and working with glass, and for crafts that needed a variety of stone tools. Squatting and kneeling in their little mud houses they turned their busy hands to a variety of skills.



The Stone Village, in the right of the image, lies on the eastern side of a low desert plateau. The site is marked by a roughly rectangular spread of small limestone boulders.

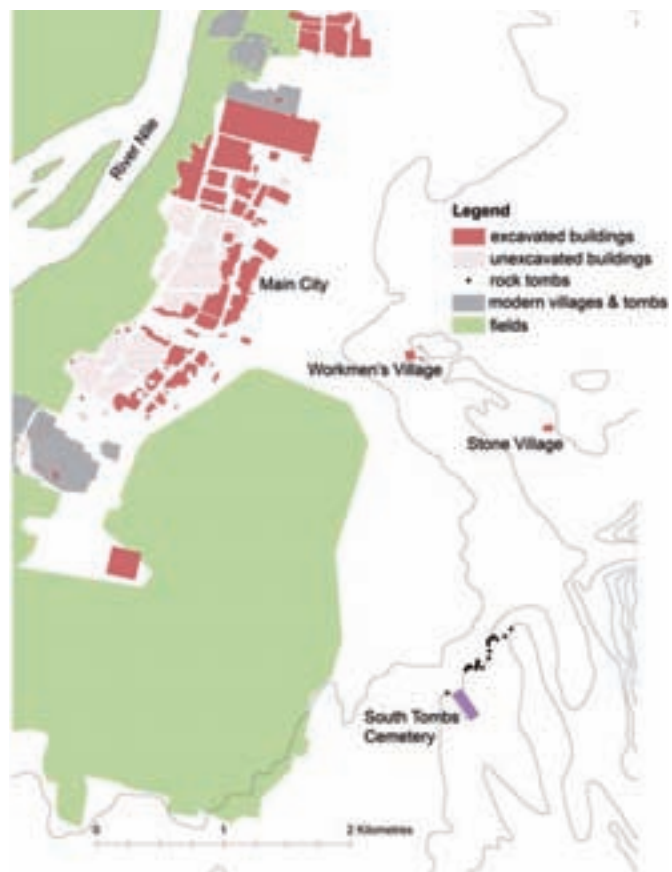
## Notes from the field

### the Stone Village

The city of *Akhetaten* was not confined to the riverside, but spread onto the low desert beyond. Here were ceremonial buildings, roadways, cemeteries and a settlement for workers involved in tomb cutting. Understanding how these sites related to the built-up riverside city is an important part of the research programme of the Amarna Project.

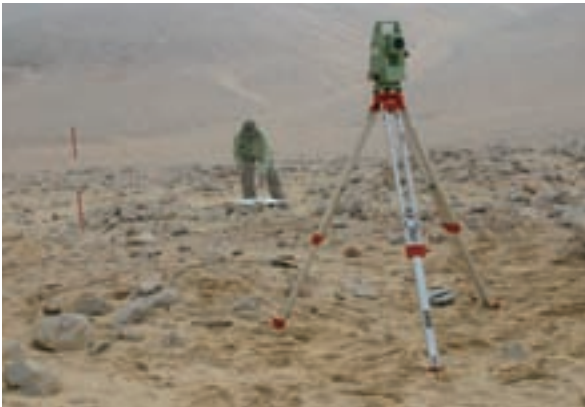
Most of these desert-based sites have been known to archaeologists for over a century. But in 1977, when surveying the low desert, Barry Kemp came across a new site. It was marked by a concentration of limestone boulders (many more than are found naturally on the desert surface), interspersed with fragments of pottery vessels – also a tell-tale sign of past human activity. The site was soon labelled the 'Stone Village'. But it has remained an enigmatic element of the Amarna landscape. What was its purpose? An army outpost, perhaps, or another workers' settlement. How did it communicate with the rest of the city? Did it support a permanent population? In 2005, a research project began at the site, with the aim of introducing the Stone Village into the Amarna story.

The first task has been to plan the remains visible on the surface of the site. In doing so, we are generating a record of the present phase of the site's 'life history'; but the next challenge is to relate the surface features to the structures that lie beneath the sand. Here, excavation comes to the fore. Excavation allows us, of course, to view any surviving structures directly – and compare them with what we see on the surface – whilst also generating the other kinds of organic and artefactual evidence needed to understand the site.



Map of the Amarna plain showing the position of the Stone Village, out in the desert beyond the Main City site.





Planning the surface remains, with the assistance of a total station.

But we had no idea of what to expect before we commenced excavation. Had the site been eroded down to its foundations? Would we find just a few centimetres of archaeological deposit? It was a welcome surprise to find stone-built walls preserved, in places, up to 60 cm high – comparable to what we find in the main city. Unfortunately, it was also soon clear that the site has been quite badly looted, probably only within the last century. In 2005, we exposed a group of rough stone-built walls and the remains of ovens, presumably belonging to a food-production area. In 2006, the back two rooms of a narrow building (a house?) were revealed, and we hope to extend excavations here in late 2007 to learn more about this building. The work is also generating a rich body of plant and animal remains, well preserved in the dry desert conditions, and a corpus of objects that can now be compared and contrasted with those found elsewhere at Amarna.

We can already propose that a more-or-less permanent population lived at the site, since it had food-production facilities and structures to provide shelter against the elements. The discovery, in 2006, of a fragment of pottery inscribed with a date that could relate to the very early years of Akhenaten's reign has prompted us to speculate (and speculation it remains!) that the site was established quite early in the history of the city. These little moments of discovery are very welcome, although fitting the

The work is revealing a small but informative collection of objects; here, a flint blade, part of a wooden spindle whorl, and pieces of glass and faience jewellery, some in the image of protective deities or the sacred *wedjat*-eye.



Excavation underway in 2006. The limestone boulders visible here were used as rough building blocks for walls.

Stone Village into the Amarna story will certainly be a matter of teasing out all we can from as wide a range of evidence as possible. What is now beyond doubt is the promise of the site to offer this evidence.



The 2006 trench at the end of excavation. Two rooms (one subdivided by a rough stone wall) were exposed. They are part of a narrow building that is continuing beyond the northern edge of the trench. The photographer faces west.

The past two field seasons at the Stone Village have been supported by: The Egypt Exploration Society Centenary Fund; The G. A. Wainwright Fund; The Thomas Mulvey Fund; The Chadwick Fund; and The Seven Pillars of Wisdom Trust.

# Copying Nefertiti

Replicas of the coloured bust of Nefertiti are widely available for purchase. Most are of poor quality but not all are. Some of the best go back to close in time to the original discovery. The origins of these ancestral copies are explained here by Olaf Matthes, Curator at the Museum für Hamburgische Geschichte, who has written on the life of James Simon.

Discovered on December 6th, 1912, by February 1913 the 'coloured queen' (as the German archaeologists called her) was already in Berlin following the division of finds at the end of the season. For some weeks she entertained her owner, James Simon (1851–1932), in his house at the Tiergartenstr. 15a. Simon was one of the ten richest persons in Prussia, co-owner of the largest cotton wholesale firm in continental Europe. Known as the most important donor to the Royal Museums in Berlin he gave not only many fine works of art to the museums but also financed excavations of the Deutsche Orient-Gesellschaft (DOG, German Oriental Society) in Mesopotamia, Asia



James Simon's sculpted copy of the painted Nefertiti bust at his home in Berlin.

Minor, Palestine, as well as in Egypt. Simon was one of the founders of the DOG and rapidly made it the most important digging society before World War I. It was he who persuaded the Kaiser to take over as Honorary President of the DOG and support it with private money as well. And it was Simon, too, who gave all the money needed for the German Amarna excavation campaigns during the winter periods from 1911 to 1914. Actually every year 30.000 Goldmark was needed (today worth about 300.000 Euro!). Because the digging contract was made with Simon personally (to avoid a newly introduced donation tax that applied to the DOG), the excavation formally was a private one, although directed by Borchardt on behalf of the DOG. So it was that all of the finds



On the left, the original Nefertiti, photographed in Berlin, summer 2006. On the right, the other sculpted copy made at Simon's request for Kaiser Wilhelm II and now at the family home in Huis Doorn, Netherlands. Some damaged parts of the original, and the missing eye, were restored by the sculptor.

the Germans were allowed to take to Berlin belonged automatically to James Simon. Shortly after the arrival of Nefertiti in Berlin the Kaiser learned that she was to be seen at Simon's house. Wilhelm II invited himself to Tiergartenstr. 15a and was immediately fascinated by the beauty of the queen. Simon had a special relationship with the Kaiser. He not only belonged to the small group of so called Kaiserjuden but – and this was particularly special – exchanged gifts at least twice a year with His Majesty. No other Jew in Germany was allowed to do so. Simon's spring gift in 1913 was a stone copy of Nefertiti. It was one of two copies made by a young Berlin sculptress Tina Haim. The other copy Simon kept for himself, donating the original bust in the same year to the Egyptian Department of the Royal Museums in Berlin.

The Kaiser, when receiving his copy, wrote a long letter to Simon, expressing his high estimation of what Simon had done for the Amarna excavations. Indeed, Wilhelm II so valued his copy that, following the end of World War I he took it with him into his Dutch exile at Huis Doorn, where it remains to this day. The second stone copy James Simon kept (with other copies of royal statues found at Amarna) until his death, giving them a place of honour in his living-room, directly under the portraits of his parents. Most probably it was his housekeeper, Therese Marner (who was not Jewish), who took the stone copy of Nefertiti after Simon's death and retained it during the Nazi period. In the 1950s the copy went to a grandson of James in England and it remains part of the family property. There is currently a plan for a James Simon exhibition to be held at the Fine Arts Museum in San Francisco in late 2008. This copy will be displayed together with some of the finest pieces from the Berlin Amarna collection, amongst them some of the other images of Nefertiti. The ultimate icon, however, the coloured bust, will not leave Berlin.



Portrait photograph of James Simon.



A new road bridge under construction across the Nile, linking the main west-bank highway south of Mallawi with the eastern desert near El-Bersheh. It is likely to offer direct road access to Amarna.

## The Amarna Trust

The Amarna Trust is registered with the Charity Commission as no. 1113058. Its registered address is

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### 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.





Although digital systems have transformed archaeology, the eye and hand of a skilled and experienced illustrator retain their place. Here Andy Boyce records a fragment of a statue of Akhenaten.

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.

Further information, including downloadable forms, are available at [www.amarnatrust.com](http://www.amarnatrust.com) where you can also donate on-line.



Horizon is currently distributed free of charge. Should any recipient not wish to receive future issues please email [bjk2@cam.ac.uk](mailto:bjk2@cam.ac.uk)

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