The people of Amarna have left behind few words of their own. Only archaeology breaks the silence. Within and around their houses they left behind a myriad of scraps that reflect the lives they led. This issue of Horizon coincides with the publication (jointly with the Egypt Exploration Society, and featured on page 6) of a major two-volume study of life in the Amarna suburbs, as revealed by excavations conducted within the last ten years.

For many of the people, their industrious lives ended before the city was abandoned. We encounter some of them, as they were buried in the city’s principal cemetery, currently the main excavation and research focus of the Project. Their alarming state of health has been the subject of comment from the beginning. Increasingly, we are also building up a picture of a distinctive burial culture, that helps to round out an account of the lives of the people of the Amarna suburbs.

This unique opportunity to research the life of a major Egyptian city by combining the study of houses and graves is made possible very largely through donations made to the Amarna Trust. I hope that you will continue to support us.

Last years excavation results (and the report on the last Stone Village season) are now available as downloadable pdf files on the Project web site, www.amarnaproject.com.
The cemetery of Amarna’s people — further results, from Spring 2010

The fifth season of excavation at the cemetery was conducted on a larger scale than before. At the two places of previous work, the Upper and Lower Sites, adjacent fresh ground was examined, and a third new area was begun. This, the Wadi Mouth Site, was intended to define the limits of the cemetery as it approached the nearest rock tomb, no. 24A.

The new site revealed a style and density of burial already familiar from past seasons. Although at the Wadi Mouth Site the graves lay close beneath the present surface, there had been less erosion. The survival of heaps of unmortared stones over the graves confirmed the previous suspicion that marking the graves in this way had been a widespread practice. It explains how the limits of the cemetery appear to be defined by the distinctive scatter of dark stones over the surface. They acted both as markers and protected the burials from digging animals.

More examples came to light of stones that had been shaped to act as personal memorials. In the most carefully made instances, a small carved scene commemorated the deceased and the spiritual goal of union with a peaked desert landscape.

Since the Amarna Period, periodic floods from heavy rain have scoured the valley floor, leaving loose human bones scattered along it, and creating the impression that, whilst the cemetery might originally have extended across the valley floor, all traces have been washed away. At the Lower Site, the excavation trench ran into the edge of the valley floor. Far from tapering away, the archaeological level grows deeper, and seems to point to the likelihood that, at least in this place, it continues beneath the valley floor. This is an exciting prospect to explore.
For most burials the main interest comes from the study of the bones. The Arkansas anthropology team completed their work on site, and this will be reported in the next Horizon. Individual burials, however, continued to provide significant cultural material as well. Two burials had been in painted wooden coffins (see page 4); more carved limestone grave markers were found that emphasised the shape of mountain peaks; a few people had been buried with personal amulets (including a group of three carved with hippopotamus backs); one woman with thick hair (or a wig) had been buried with a cone-shaped object on her head, perhaps a rare survival of the cones that contemporary scenes often depict at times of celebration.

Head of a woman, Ind. 150, aged 25–30 (from HS4 <13105>). On her head is a hollow cone of a pale, brittle, waxy substance (object 39920). It is perhaps an actual specimen of one of the cones often shown worn on the heads of men and women on festal occasions. Photo by Mary Shepperson.

Limestone stela with rounded top, showing a couple seated before a table of offerings. The stela is cemented into a recess cut into a slab of limestone given a pointed top. Height of stela, 25.5 cm. Object 39938, from Z104/105 (13338).

Three scaraboid beads with hippopotamus backs, made from glazed steatite, all from HS4 (13199), debris from the base of a wooden coffin that had contained an adult (Ind. 188A, woman, 40–45) and a child (Ind. 188B). The base designs show (left to right) Bes, a seated goddess, and Taweret. Objects 39933a, b, c.

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Belief on the edge of literacy
Two coffins from the South Tombs Cemetery

They come from towards the bottom of the Lower Site. With most of the wood decayed, they were necessarily removed as fragments. These await conservation, but in the meantime, a first record of the decoration has been made, from digital photographs. The coffins give the impression of being the products of ‘village’ craftsmen who worked to a standard coffin template but had not been trained as artists. The maker of (13281) had a set of correctly written funerary phrases to copy from, and (with the help of the purchaser?) could insert properly written personal names. By contrast, the maker of (13262) worked from a ‘copybook’ far removed from correct originals, that produced a result that superficially looked right but was actually not readable. The same applied to the personal names of which, presumably, the customer was also not able to supply a correctly written version.

Coffin (13281), from square Y105. One can pick out hieroglyphic phrases from wishes for the wellbeing of the deceased and, in wider vertical bands, the name of the deceased. This is given in at least two versions, Hesyenra and Hesyenaten, accompanied by the female version of the phrase ‘true of voice’.

Coffin (13262), from square Y105. The hieroglyphs are reasonably clear, and some familiar groupings are present. In total, however, they do not form texts that can be translated by the familiar rules.
From the archives
Collection and dispersal

In June 1921, the sale by auction took place in London of the private collection of Egyptian and ‘Oriental’ antiquities of the deceased Lord Amherst of Hackney. A special section was devoted to Amarna, amounting to many hundreds of objects (we will never know the true figure). Most were the fruit of Amherst’s sharing of the costs of the 1891–2 season of excavation directed by Flinders Petrie, when the young Howard Carter assisted and acted as Amherst’s representative. One of the areas given to Carter to supervise was the Great Aten Temple. It produced a haul of pieces of broken-up statues of Akhenaten and his family and of stelae, together representing the most important stonework to have been recovered from the ‘House of the Aten’.

Dispersals by sale of this kind are a tragedy. In this case it was, to a degree, mitigated by the Metropolitan Museum of Art of New York, that bought a large number of the fragments. A full study of them, by Marsha Hill, is nearing completion, complementing the study (by Kristin Thompson) of similar fragments later recovered from the Great Palace by John Pendlebury.

The practice of funding excavations for the purpose of building up collections of antiquities underpinned the next four decades of work at Amarna (German and British). At the end, Pendlebury, who had experienced the uncertainties of the system, commented: ‘I’m sorry Museums don’t want scraps. It always seems funny that they are willing to buy things in the market for hundreds of pounds – yet if they subscribe to a dig a fiver they expect a Nefertiti head.’ The ‘scraps’ he refers to must have included several hundred more statue fragments that he had recently buried behind his dig house, because no museum wanted them. In the most recent season at Amarna, a small excavation here completed the clearance of Pendlebury’s pits, providing more material for the Amarna statue project.

The full study of the statues from Amarna is hosted by the Amarna Project during its field seasons.


NEW PUBLICATIONS


The persecution of pigs at Amarna

Prof. Tony Legge of the McDonald Institute of Archaeological Research reveals a disturbing finding from a study of the Amarna animal bones.

In 1997, R. Luff and D. Brothwell described a pig skull bone found at Amarna, which had sustained a severe wound of an unusual annular form on the frontal bone. While the animal survived for some time, it probably died as the result of the deep bone infection which followed. They suggested that the wound was inflicted for a possible ritual purpose. Further work by the author on the Amarna animal remains has identified more pig bones with severe injuries, these with eventual healing and recovery.

Three complete pig scapulae have been identified, in which the blade had been pierced through with great violence, in one instance even breaking the scapula neck (specimens A and B from the Workmen’s Village and specimen C from the house of Ranefr, N49.18). The width of the wounds (arrowed in Figure 1) indicates the use of a metal spear or dagger blade rather than an arrow. In specimen B (lateral view), the overlapping margins of the displaced bone lower on the incision are evident, and the neck of this specimen was also broken. While the scapulae suffered some degrees of damage in excavation, in two specimens the width of the wounding blade can be measured at 30 mm (specimen C, medial view) and 40 mm (specimen B). Remarkably, each scapula shows almost complete healing of the broken bone, a process that would take many months. At some later time, the animals were killed for food, shown by typical cut marks for disarticulation and filleting.

While pigs are rare in Egyptian art, the Book of the Dead of Nakht (British Museum, late 18th Dynasty, 1350–1300 BC) shows him spearing a pig in the shoulder, the manner like that which would cause

Figure 1. Three pig scapulae with stab wounds (indicated by arrows).
the wound in specimen B (Figure 2). This specimen was first interpreted as a hunting wound, though this is now unlikely. While the scapula was pierced from above, the blade entering above the scapular spine, in B and C the wound was placed below the scapular spine, a point sheltered by the natural form of the bone. In these latter instances the wound was delivered from the animal’s side. The scapulae are from adult animals but small, their body size typical of the small domestic pigs at Amarna, the adults weighing perhaps 60 kg. It seems more probable that here, too, the wounding was a deliberate act rather than the result of a hunting incident.

A pig femur found at the Workmen’s Village had also suffered severe injury. In this instance, the bone shaft was shattered, the trauma again followed by complete healing, though after some infection, leaving the healed break penetrated by sinuses resulting from the severe infection. This specimen was found with the proximal and distal articulations unfused. While this cannot be certainly identified as a deliberate attack on the pig, this animal too had been maintained through a lengthy healing process.

Besides the specimen described by Luff and Brothwell, six further skull fragments, all from juvenile pigs, show what appear to be deliberate wounds. Four fragments of frontal bone have what appear to be healed stab wounds, deep pits with evidence of healing, the pits surrounded by porous and woven bone. Two further small fragments of frontal bone also show depressed and healed fractures, apparently arising from blows. In one specimen, the outer bony layer was depressed into the underlying sinus voids by a blow, with evidence of healing. In the second specimen, a similar depressed wound was inflicted with a flat-ended implement about 8 mm in diameter, rather like a small hammer, also with subsequent bone healing.

Unhealed wounds were seen on a pig frontal bone from the Main City excavation. This frontal is slightly charred around one eye socket, with stab wounds on both right and left sides. The left frontal bone shows a stab wound 5.2 mm long and 2.5 mm deep, and the right side has six smaller stabs, each with a slightly different orientation, two of these being delivered at an oblique angle. The narrow stab marks were evidently from a metal blade, each penetrating 2–3 mm into the frontal bone (Figure 3).

Evidently the wounds were not inflicted to cause death, as in all but one instance there is complete healing. The limb-bone wounds would have been a severe handicap, but the animals were maintained until healed. The wounds therefore appear to be a means of inflicting systematic torture on the unfortunate pigs, perhaps in some form of deliberately punitive ritual.

The distribution of pig bones at Amarna is highly variable, the species being more common in areas of lower status and in the outlying villages. The low status of the pig perhaps explains its rarity in Egyptian tomb art, the animal not desired in the afterlife of the wealthy, when compared to the abundant images of cattle and wild mammals. Pigs do not appear among the species favoured in images of the hunt.

Perhaps the lowly status of pigs in ancient Egypt was the result of the association with the god Seth. Is it possible that there were rituals to punish Seth by the torture of his animal associate?

A never-ending task
De-sanding the South Tombs

Most of the South Tombs are entered from a short descending flight of steps. The stair wells catch the sand that regularly blows across the site and, within a few years, blocks the entrances. From time to time, with the agreement of the SCA inspectorate, the Amarna Project employs a small group of men to clear the sand away. This was done in April of this year.

The cleaning exposed a side to the archaeology of the tombs that is often missed. The workmen who originally cut them had an eye to not wasting the stone they removed, and developed the tombs as small quarries. At the square stair well in front of tomb 16, they concentrated on column bases, perhaps intended for the many houses in the city which used them. The circular cuts left behind became briefly visible in April, until the next gust of wind started to cover them with sand again.

Amarna support

We are delighted to report a major donation, of funds for the purchase of an electronic surveyor’s total station (and two supplementary automatic levels). The donation comes from the Amarna Research Foundation, based in Denver, Colorado, which has long been a major supporter of the work at Amarna. The model we have purchased is a Sokkia. It quickly proved its worth in the many surveying jobs that underpin an excavation, in hastening them, and making the results far more accurate.

The Amarna Research Foundation was set up by Bob Hanawalt, a long-time enthusiast for Amarna. It raises funds through subscriptions and donations, and runs a membership list. See www.museum-tours.com/amarna/ where a membership form can be downloaded. It is a nonprofit 501(c)(3) organization incorporated under the laws of the State of Colorado. Members receive an illustrated newsletter, The Akhetaten Sun.
The survey of the Coptic church and settlement at the North Tombs, begun in 2007, had its final season in 2010. The many dwellings dispersed throughout the landscape of the North Tombs show a clear pattern in their organisation. Each comprises an element located within the geological matrix (a tomb, quarry, cave or overhang); with an adjacent area built with rooms or more open shaded structures, and a large unroofed space.

The daily drive to the North Tombs takes a route through the modern village of El-Till, passing through several wide streets in which exterior spaces are incorporated into the domestic space. These included several components that are similar to those observed at the North Tombs settlement. They offer insights into other elements that might have been present but are not detectable in the remains.

A small project, conducted at four houses over two days, examined the architectural and portable (i.e. tables, chairs, ovens, etc.) components of a modern village house, whether their use was restricted to specific spaces, and the influence of the local climate on the organisation of domestic space and strategies for its use. It soon became clear that climatic factors, especially heat — both in the long term during the summer months, and on a daily basis in the middle of the day — was an extremely important consideration, but attention was also paid to the cold during winter months.

Both interior and exterior spaces in the houses were found to be highly organised in order to maximise their usability. The only rooms that were clearly defined architecturally were the WC, and those with built mangers for feeding livestock, such as water buffalo, donkeys and cattle. Static architectural features, such as basins associated with tapped water, and semi-permanent water emplacements, were rare. The many portable elements, such as cookers, washing machines, storage cabinets, dining tables and various kinds of seating, were clearly associated with specific functions and were used in combination in different rooms or spaces. It was interesting that the function(s) of the spaces could not be distinguished without the presence of the portable elements, which of course are completely absent at the North Tombs settlement.

The exterior spaces in front of the houses were not delimited by a formal boundary, but architectural and portable elements were often arranged so that the perimeter was clear. The open space could include, for example, a small hut in which domestic birds were kept, and shaded areas that could be walled or supported on posts. These shaded areas were multi-purpose, providing shade for people, animals or equipment depending on the current need.
Other architectural elements included mud- and stone-built cooking installations built by family members, used for baking bread, and mud-built grain stores. Although static, these structures are relatively ephemeral, as are the posts for supporting washing-lines arranged around the perimeter of the space. Benches and low seats could be moved between the open area, the shaded areas, and the interior of the house, depending on where they were needed. Use of the exterior space varied throughout the day, with women undertaking daily tasks of washing and preparing food during the morning, and the whole family assembling to drink tea and to chat and relax on warm evenings. The space would not be used if the weather were cold, and when it grew too hot in the middle of the day or during the summer.

Visiting the houses in El-Till has provided an important insight into the non-western organisation and use of space. Of course, no direct comparison between the dwellings of the ancient and modern settlements is possible due to (among other considerations) the temporal, cultural and technological differences separating them. However, this examination of modern vernacular architecture, ephemeral and portable household elements, and the flexible use of interior and exterior spaces has emphasised the difficulties of interpretation inherent in the preservation of only the architectural components of the North Tombs settlement. This brief project has proved very valuable in thinking beyond a modern western conception of domestic space, and has also inspired more culturally and environmentally sensitive interpretations of the North Tombs settlement.

**Amarna Trust news**

On March 4th Dr. Zahi Hawass honoured Barry Kemp’s enormous contribution to Egyptian archaeology at a ceremony and reception at the Supreme Council of Antiquities in Cairo.

The event included brief speeches by Dr. Hawass, Mark Lehner, Pamela Rose, and Gwil Owen, culminating with the presentation of Barry’s two-volume Festschrift, *Beyond the Horizon: Studies in Egyptian Art, Archaeology, and History in Honour of Barry J. Kemp*, edited by S. Ikram and A. M. Dodson, published by the SCA Press. The event was extremely well attended, with guests including the British Ambassador, H. E. Dominic Asquith, and most of the Cairene Egyptological community, together with some Cambridge imports.
The Amarna Trust

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

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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.
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 where you can also donate on-line. Donations can also be made via www.justgiving.com/amarnatrust

All work done at Amarna relies upon the support and agreement of the Supreme Council of Antiquities of the Arab Republic of Egypt. We are indebted to its personnel, both local and in Cairo, and in particular to its General Secretary, Dr Zahi Hawass.

Thanks to those who have recently supported the Amarna Project:

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Ancient World Tours run regular tours that include Amarna and we are proud to be sponsors of the excavations carried out by the Amarna Trust. Contact AWT on 020 7917 9494 or at www.ancient.co.uk or at amarna@ancient.co.uk

The South Tombs Cemetery excavation, March 2010. The lower part of a trench at the Lower Site reaches the edge of the wadi floor. Deeper graves, one containing a wooden coffin, are at a level well below the wadi floor.