horizon

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The Amarna Project and Amarna Trust newsletter



A bouquet of flowers once painted on the walls of the main chapel at the Workmen's Village, mounted by Fran Weatherhead, with restored infilling. The paintings are the subject of a new book (see page 5).

Reaching a wider audience

As a registered charity the Amarna Trust has a duty to engage the public's interest in the city of Tell el-Amarna. The magazine Horizon is one way to do this. Another arose last year when the BBC Timewatch documentary team came to Amarna to film the current research. The result (entitled 'The Pharaoh's Lost City') was shown on January 26th in the UK. It was watched by an estimated 2.1 million people (some nine per cent of viewers). It told the Amarna story, but then explored the seeming paradox of a religious cult designed for the distribution of food on a large scale, and the evidence from recently excavated skeletons for a general standard of health and nutrition significantly lower than that expected for ancient Egypt. This has provoked controversy, most notably in the Egyptian press. A lecture and press conference hosted by the Supreme Council of Antiquities is planned for March 27th in Cairo. On the agenda is not only the evidence paradox but also the way that research is reported.

By the end of 2007, three substantial books on the Amarna excavations had been published by The Egypt Exploration Society (see pages 4, 5). A further major update of the Amarna Project website,

www.amarnaproject.com, had also been carried out. It includes reports on the Stone Village and the South Tombs Cemetery fieldwork, plus a new section devoted to the Early Christian remains at Amarna.



Jerry Rose, Professor of Anthropology at the University of Arkansas (Fayetteville), explaining his findings on living conditions at Amarna in the BBC Timewatch Amarna film 'The Pharaoh's Lost City'. The first tour in the name of the Amarna Trust took place between the 1st and 11th of February (see page 10). It was accompanied by myself and Dr Rawia Ismail with whom I have enjoyed a long working association. The tour began in Cairo, tarried in Middle Egypt, and ended in Luxor. We explored sites, discussed our encounters with modern Egypt, found some time for relaxation, and were generally swept along by good will and co-operation from all those in authority. An element costed into the tour raised funds for the Trust. We are developing a programme for the future, which will take in different parts of Egypt as well as countries outside. The tours are organised through the Cairo-based company Gateway to Egypt. Their website www.gatewaytoegypt.com includes a separate Amarna Trust page where details of coming tours are posted.

The research programme itself goes forward. In November and December a more extensive examination of the Stone Village was carried out (reported on pages 2, 3). Late February sees the resumption of excavation at the South Tombs Cemetery, the study of the human remains by the anthropological team, and specialist research on various categories of material held in store on site. This programme of work is now largely dependent upon funds that the Amarna Trust raises. The growing response from an interested public is very encouraging.

Barry Kemp

Chairman of the Trustees

The train set

Notes from the field

An update on the Stone Village



excavation underway in the nain trench in 2007. The iew is to the east, with the diffs of the high desert isible in the background.

In November 2007, a small team of archaeologists returned to the Stone Village to continue the examination of this intriguing site on Amarna's desert fringe. Anna Stevens provides an update on the work.

Situated on the side of a plateau in the low desert, the Stone Village is dominated by a large spread of loose limestone boulders. This represents the collapsed and sanded-up remains of a complex of Amarna-period buildings constructed from uncut boulders and brick. On top of the plateau nearby are the remnants of several more stone-built structures. The site was probably ringed by a network of 'roadways', many of which are still visible, although these may be better understood as boundary markers than as transport alleys (see pages 8, 9). Our interest in the Stone Village lies not only in our almost complete lack of knowledge regarding its function, but in what it may offer to our understanding of life on the urban periphery in ancient Egypt.

Amarna-period 'roadways' – tracts of desert surface cleared of larger stones – are a feature of the desert environment, and probably surrounded the Stone Village in antiquity.

This was the third season of work (a summary of previous work can be found in Horizon 2). This year, we expanded our operation quite considerably, working with a bigger team and for a longer season of eight weeks. After several weeks of surface survey, when we planned three prominent stone structures on top of the plateau, we turned our attention to excavation. In the 2006 season, a small trench in the 'main site' had exposed the back two rooms of a narrow building that continued northwards beyond the excavation area. We wondered if they were part of a small house, but too little of the building was exposed to be sure. This year, therefore, our aim was to fully reveal this structure.

As we removed the archaeological deposits we found that the site had been disturbed, probably by looters seeking saleable 'treasures' within just the last century. Despite this, the underlying structures were relatively well preserved. The building extended northwards from the two rooms exposed in 2006. Two roughly built walls divided its northern half into three chambers, entered perhaps from the west, but we can't be sure that these were full-scale floor-to-ceiling walls and not partition walls or emplacements of some sort. The entrance to the building itself may have been located in its north-west corner, now badly damaged. Most of the floor is also lost, revealing several pits through the desert surface below, many of which probably predate the walls. Several of the walls preserve a coating of gypsum plaster, which may have extended over some of the floors. To the north of the building lay an unroofed space largely covered by a surface of trampled ash, and elsewhere were walls belonging to several further buildings or enclosures.



The main trench at the completion of excavation. The view is to the east.

We are unsure about the function of the building. The narrow chambers, especially, are not consistent with what we know of domestic architecture of the time. Maybe they are some kind of storage or production chamber. Certainly the prominence of gypsum must be providing some kind of clue. This surface finish is found elsewhere at Amarna in such spaces as bathrooms, butchering yards and on ritual emplacements. It seems to have helped demarcate a clean space, in some cases also purifying it. But just what its purpose was here remains unclear.

In a second smaller trench this year we also exposed the remains of several ovens and buried storage vessels. These seem to form part of a large food production complex that may extend along much of the eastern margin of the site.

So at the close of the work, we were left wondering if the site may have been some kind of supply centre serving state interests in the border zone of Akhetaten. An important find was part of a mud document seal impressed with the name of Akhenaten. This probably indicates that correspondence was being sent to the Stone Village during this king's reign, and supports the idea that it was built under Akhenaten rather than one of his successors. Otherwise, the object corpus is rich in objects of 'everyday use', suggesting a strong domestic strand to life at the site.

Next year we hope to shift our attention to the extramural area and explore how the setting of the Stone Village and its relationship to the surrounding network of 'roadways' served to define its function and the experiences of its occupants.

Many thanks are due to the McDonald Institute for Archaeological Research Fieldwork Fund, Wainwright Fund for Near Eastern Archaeology, Thomas Mulvey Fund and Michella Schiff Giorgini Foundation for their support this year; and to our hard-working volunteer archaeologists.





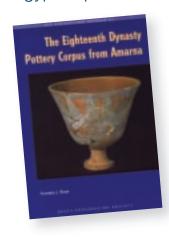
Wendy Dolling,
James Milner and
Hamada Mohammed
Abdel Moyein
Kellawy record and
excavate in the
main trench.



A selection of finds from the 2007 season. Clockwise from left: limestone figurine of a monkey; wooden ear stud; faience pendant of the goddess Taweret; bronze ring bezel with an incised Bes-image; and part of a mud document seal bearing part of the name of Akhenaten.

Amarna in print

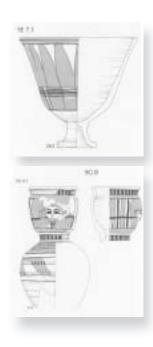
Full scientific reports from archaeological excavations are notoriously difficult to complete and publish. Modern professional standards place a great strain on limited resources. It is therefore especially satisfying that no less than three Amarna volumes have appeared in the latter part of 2007, all published by the Egypt Exploration Society.



Pamela J. Rose, The Eighteenth Dynasty Pottery Corpus from Amarna. Excavation Memoir 83. London: Egypt Exploration Society 2007. 301 pages, numerous line drawings and photographs.

Even small-scale excavations at Amarna bring in potsherds by the thousand. They derive from a range of common utensils that Amarna people had around them all the time, useful in a variety of ways. It is important to establish what was common and what was rare in particular circumstances, for example, in the houses of the rich and the poor, and to seek patterns of citywide variation — comparing, for example, pottery from the Workmen's Village and the Stone Village — and what they mean.

Pamela Rose's volume is the essential and definitive reference collection of pottery types, fully described and illustrated. From it, the necessary work of analysis can proceed.





Paul T. Nicholson, Brilliant Things for Akhenaten. The production of glass, vitreous materials and pottery at Amarna Site O45.1. Excavation Memoir 80. London: Egypt Exploration Society 2007. 393 pages, numerous line drawings and photographs, CD with extra illustrations in cover pocket.

Manufacturing, mostly on a small scale, was widespread across the city at Amarna. Many aspects are poorly documented. Site O45.1, just south of the Central City and close to the modern fields, was a factory with kilns on a slightly larger scale than those found amidst the houses. Here was practised a mixture of crafts: glass and faience manufacture, and the production of pottery. The evidence obtained from excavation for each of these crafts is assessed. Glass is of particular importance, as the question has been raised in the past as to whether the Egyptians at this time could only work with imported glass ingots as against making it themselves. An experimental glass kiln at Amarna has helped to provide an answer.



ending in a hand modelled in faience as an inlay probably for a stone relief.



Vultures holding ostrich-feather fans occupied the walls above the doors of the flanking shrines (F. Weatherhead restored).



The likely owner of the Main Chapel and his wife, in a scene of honouring from the Inner Hall (F. Weatherhead restored).



Fragments of painted hieroglyphic text from the Inner Hall.

F.J. Weatherhead and B.J. Kemp, 2007. The Main Chapel at the Amarna Workmen's Village and its wall paintings. Excavation Memoir 85. London: Egypt Exploration Society 2007. 432 pages, numerous line drawings and photographs.

A perennial topic of interest is how far Akhenaten wanted to impose his ideas on everyone. It came to the fore in 1921. T.E. Peet, directing the first season of the Egypt Exploration Fund's expedition to Amarna, made the 'momentous discovery' of evidence for the honouring of traditional deities in chapels built not far from the Workmen's Village. Most shocking were two prayers addressed to Amun and Amun-Ra. Peet's solution was neat. These chapels dated to the short interval between Akhenaten's death and the abandonment of Amarna. The return to tradition had already begun.

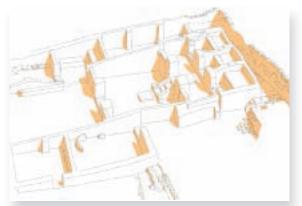
In the 1980s the Egypt Exploration Society excavated the largest chapel at the site. Hundreds of fragments of painted wall plaster lay mixed in with the rubble from the collapse of the walls. Over several successive years, artist and paintings conservator Fran Weatherhead worked over them, recording every piece and reconstructing several panels of the designs. Her results, meticulously illustrated, are the core of this new publication. The archaeological setting is described by Kemp.

The purpose of these chapels was to honour heads of families, who became ancestors when they died. Honouring entailed communal meals. Within this family setting there is no hint of a sunray or of a depiction of the royal family. To judge from fragments from other chapels (also included in this book) the same was true for them also.

The Main Chapel and several others fit the general layout of the village so snugly as to challenge Peet's easy way out, reasonable though it seems at first. The chapels were an integral part of the village community and thus belong within the reign of Akhenaten. They were decorated in traditional form because that was what was most fitting to their purpose, the honouring of families. The Aten cult did not belong there. Akhenaten's purge of iconography was dependent on context.



Part of a winged sun disk from above the door of the central shrine in the Sanctuary of the Main Chapel (F. Weatherhead restored).



Drawing of how the chapel looked immediately after excavation.



from a colossal granite statue. It holds the broken

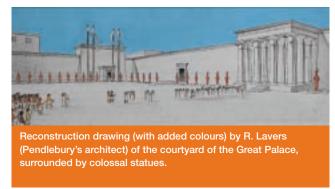
flail. Length 11.2 cm.

end of perhaps a crook or

Work in progress

Akhetaten's missing statues

Akhenaten's showpiece at Amarna was the Great Palace in the centre of the city. At its centre lay a huge courtyard cleared in the 1930s by the Pendlebury expedition of the Egypt Exploration Society. It had been lined with stone bases for statues. In the surrounding debris Pendlebury found (in his own words) 'many thousands of fragments' from red granite colossal statues.



Several hundred of them (and some in quartzite) were subsequently dumped over the ground behind the Pendlebury dig house. Over the years the present expedition has gathered them in, and they are now stored in the expedition magazine at Amarna. They are currently the subject of study by Kristin Thompson assisted by artist Andy Boyce.

Akhenaten had earlier lined a courtyard of a building at Karnak with the sandstone colossi that have provided the defining image of the king's appearance. The Karnak colossi were of easily worked sandstone. Their counterparts at Amarna were made of red granite and quartzite. They are so broken, and so much is still missing (buried somewhere at the Great Palace?), that a set of reconstruction drawings seems almost out of reach. Yet without them, an account of Amarna art will remain partial.



In the meantime we puzzle over particular fragments. One featured here (S-6181) seems to be a streamlined representation of a fist grasping a cylindrical object. A first interpretation is that it comes from hands grasping a crook and flail. No amount of rotation, however, aligns it to an easily recognisable posture. The back of the fragment, moreover, is flat with a rectangular cut for fitting to a corresponding tenon presumably on the body. Was it a repair or a deliberate element in a composite statue?

For the moment all we can do is to record the pieces by photography and through Andy Boyce's delicate drawings.

The Amarna statue project is funded by the Amarna Research Foundation.

Three views of a granite fist with cut space for a tenon on the back (S-6181). Length 15.6 cm. The modern hand is roughly two-thirds the size of the granite fist.

Drawing by A. Boyce of the fist S-6181.



How they lived Amarna's firewood

One of the city's basic requirements was fuel for fires. The central palace area consumed huge quantities to meet the demands of a major centralised food-rationing system channelled through the Aten temples; every household needed fires for cooking and the cold nights of winter; and many of the same people manufactured objects in backyard workshops or little factories. The relic of this demand is charcoal. It occurs in more or less every bucketful of spoil that is removed during excavation, whether it is sand, rubble or ashy layers beside ovens and fireplaces. The grey stain of wood ash must have been one of Amarna's colours once the city was established.

Charcoal is a source of information. Experts can identify the wood species. At Amarna, over many years botanist Rainer Gerisch (Free University, Berlin) has made tens of thousands of identifications. His raw materials are the samples carefully collected from sieving the different parts of the site excavated in the last thirty years. A consistent pattern emerges. There are charcoal pieces from many species, including fruit trees and the imported cedars of Lebanon, presumably offcuts and waste that people would have constantly kept an eye open for. Overwhelmingly, however, they were burning wood from the acacia tree, and to a lesser extent the tamarisk. This was a sensible choice.

Acacia has a heavy and durable heartwood which burns steadily with high calorific value and also was an important source for prefabricated charcoal needed for achieving high temperatures. It had been exploited since Predynastic times. The robust and thorny tree is easy to recognize by its compact rounded crown, the rough dark stem, bright yellow flowers in round heads, the stipula spines and the long indehiscent pods. It grows along the Nile and channel banks, in the oases and on moist ground in the western desert. *A. nilotica* formed the dominant wood element in the local vegetation.

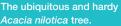
TA MC, House of Ranefer (N49.18)	Presence	Count	Volume	Weight
Charcoal/Wood taxa	[spls]	[pcs]	[ml]	[g]
Acacia nilotica-type	76	10,179	8,674.9	4,646.1
Acacia sp.	18	82	50.7	25.6
Cedrus libani	12	29	13.6	5.3
Faidherbia albida	37	220	392	122.4
Ficus sycomorus	18	144	64.4	18.7
Hyphaene thebaica (stem wood)	1	1	0.4	0.2
Mimusops sp.	15	75	45.6	25.3
Palmae, scal. perf. pls.	1	1	1.1	0.3
Palmae, perf. pls. not obs.	1	2	0.5	0.2
Pinus sp., pinoid pits	1	1	0.3	0.1
Prunus sp., semi-ring to ring-porous				
P. dulcis	1	1	0.1	0.1
Punica granatum	2	4	2.9	0.8
Salix sp.	4	4	1.6	0.4
Tamarix sp.	52	810	390.7	146.5
Ziziphus spina-christi	5	8	9.9	5.9
	76	11,561	9,648.7	4,997.9

Table of charcoal identifications from excavated units from the house of the chariot-officer Ranefer (house N49.18).



Section through the material used to raise the floor of the second, larger house that belonged to Ranefer. One of the units is dark from the presence of ash and charcoal.







Acacia leaves and seed-pods are distinctive in appearance.

We will never have proper figures, but Amarna must have consumed many tons of firewood every year. Any local sources on the Amarna plain will quickly have been wiped out. The city must have relied upon a constant import, from across the river and from further afield. The scale of demand and the consistency of the species supplied point to some degree of management of the growing and cutting of trees. It is one of the many aspects of Amarna's life that only field archaeology reveals.

The fundamental reference book for the anatomical identification of wood species from charcoal in Egypt is R. Gerisch, Holzkohleuntersuchungen an pharaonischem und byzantinischem Material aus Amarna und Umgebung. (Ein Beitrag zur Identifizierung von Hölzern unter Berücksichtigung des Gebrauches von Holz als Brennmaterial und seiner Rolle bei der Rekonstruktion der lokalen Vegetation. Mit einem anthrakologischen Atlas in Deutsch und Englisch.) Foreword by B. Kemp. Münchner Ägyptologische Studien 53. Mainz am Rhein, Philipp von Zabern 2004.

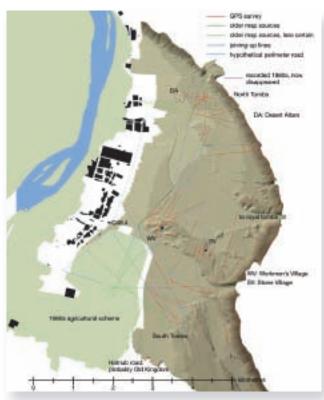
A supplement, detailing the species from across the different parts of Amarna, will appear in the excavation report on the house of Ranefer and the adjacent small houses that the Amarna Project is preparing for publication.

Notes from the field Amarna's ancient roads

The desert plain and hills of Amarna are criss-crossed by a set of tracks or roads that are clearly not modern. They were first noticed in the middle of the 19th century, and some of them take a course that links them directly to features of the Amarna Period. They are undoubtedly part of Akhetaten's layout.



A particularly well preserved stretch of ancient boundary road heading southwards across the desert in front of the valley that leads to the royal tombs.



A fresh mapping of the Amarna desert has been proceeding since 2000, by Dr Helen Fenwick (University of Hull), using differential GPS equipment of phenomenal accuracy. For the first time the ancient tracks have been properly planned. The new map confirms the impracticality of much of the system, if it is regarded as solely intended to provide a series of routes for regular patrolling by a police force. They pay only limited heed to the topography of the site, tackling steep slopes head on and jumping across ravines.

An alternative explanation is that many of the lines were boundaries which should not be crossed without good reason (though this in itself implies a degree of patrolling). Their overall aim was to keep people away from the desert behind Amarna, and especially to prevent them from entering the area in front of the valley that leads to the royal tombs. This was territory sacred to the Aten. A parallel can be found at Abydos where, from the Middle Kingdom onwards, a set of free-standing boundary stelae helped to delimit a piece of desert sacred to the god Wepwawet. Unauthorised entry merited death.

At western Thebes in the New Kingdom a set of five 'walls' or 'fences' marked out an area that included the workmen's village of Deir el-Medina. It was a matter of official record when, on several occasions, the inhabitants crossed these lines when seeking redress for failed deliveries of foodstuffs. The parallel community of the Workmen's Village at Amarna would have had to have crossed five of the Amarna trackways if they wanted to reach the main city of Amarna at its nearest point.





Seen in this light, the trackway system is an early form of landscape management. It also emphasises the special position that the Stone Village and Workmen's Village had at Amarna. They are unique exceptions to the general exclusion of human activity from the central desert zone, and were tightly circumscribed by the boundary track system.

From the Archives The train set

Dig diary entry by C.L. Woolley for 25 October, 1922: 'Public Custodian accepted my offer of £LE 52 for railway'.

Spoil from excavation comes up in inconvenient quantities, and in the past posed the same problem that confronted managers of quarries and open-cast mines. A common solution was to turn to the narrowgauge off-the-shelf railway system created by Paul Decauville (1846–1922) and widely used by European countries in their colonies, and also in their wars of 1914–18.

To judge from a photograph taken the following year, Woolley had bought a very basic 'layout' which was already quite old and used. It consisted of 60 or so lengths of short steel track (each two metres long?) welded to steel sleepers, two turntables, and ten sidetipping trucks. Sadly they did not buy a locomotive, relying upon their workmen to push the trucks by hand (Woolley was employing 183 men and children). They hauled it up to the Workmen's Village and ran two lines southwards from the walled village. By November 11th the contents of 120 of the rooms in the village houses had been trundled out and tipped to form the embankments beneath the lines. Four days later the men began to carry the railway back to the dig house, its work for the season completed.



The EEF Decauville railway piled on the desert beside the southern expedition house in 1923. EES archive photograph.



It subsequently saw only limited use in the housing areas of the city and not at all at the North Palace. Pendlebury brought it back into service whilst clearing the Great Palace in the 1930s. By this time sets of points had been acquired. In 1936, in anticipation of the Amarna equipment being disposed of, the railway was described as: 'not a good one, but in decent order, with 8 workable trucks and about half a mile of line, with all accessories.'

As that era recedes, the distinctive Decauville embankments become just one more episode in the shaping of archaeological sites, Amarna and innumerable others.

Taking to the road

The first Amarna Trust tour



In Old Cairo





Lunch at Amarna



Beneath the gaze of Hathor at Dendera





Holding forth at the North Palace, Amarna photo. M. Coultas



Silk weaving in Akhmim

Details of coming tours will be found on the website www.gatewaytoegypt.com



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 negligible.

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.



At the Stone Village, archaeologist James Milner cleans the interiors of pottery storage jars that had been sunk into the ground close to a set of ovens.

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.





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Thanks to those who have supported the Amarna Project in the last year

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