

**Volume 22, Number 1,  
June 2016**

Published twice per year since  
1993

Copyright 2016, The Amarna  
Research Foundation

**Table of Contents**

Article -- Author	Page
<b>The Northern Cemeteries of Amarna -</b> Gretchen Dabbs	2
<b>Ranefer's sovereign: who was the last ruler at Amarna? -</b> Barry Kemp	11

**Officers and Directors**

- President – Floyd Chapman
- Vice President – David Pepper
- Secretary – Anita McHugh
- Treasurer – Robyn Steffelin
- Membership – Jill Taylor Pepper
- Publications – David Pepper
- Website – Merrie P. Wycoff
- Director – Tim Henry
- Director – Laura Engel
- Director – Joni Teter
  
- Founder – Robert Hanawalt

**The President's Papyrus**

Greetings Amarnaphiles,

Well, summer is now in full force and the heat is on here in Colorado. I hope that it is more pleasant where you are.

Last Saturday, I was up in Estes Park working on my website ([www.ancientworldarts.com](http://www.ancientworldarts.com)) with my webmaster, Marlin Steward, who also manages the TARF website as well. It was during our work that he demonstrated the **stat counter** that he has installed on the TARF website to monitor the activity of people who visit our website. I have long known about these web tools but had never actually seen how they work and the information they contain. It was a real revelation to see. The chief reason that we created a website was the hope that it would facilitate greater membership growth. This, unfortunately, has not happened. Still, I was amazed to see what this tool had to show. The first thing that you see is the country of origin where the website visitor lives. Next, you see an exhaustive account of each area on the website visited and how long he or she was there. The third thing that you see is any activity engaged in while there, such as downloading free articles. Even though our website has yet to produce a lot of new members, I am very pleased to report that our website is very popular with visitor from all over the world. I was amazed to see how many people have downloaded articles. Many have downloaded every article currently available on our website. Furthermore, the TARF Facebook page has received over 5000 likes.

For those of you who are members and continue to support the work of the Foundation, I wanted to let you know that you are not only supporting the excavation, conservation and research of Amarna but you are also helping to inform a vast number of interested individuals from around the world. Thank you!

Best wishes to you all,  
Floyd

# The Northern Cemeteries of Amarna

by *Gretchen Dabbs*

## Background:

This past year (2015) marked the beginning of a new chapter in the long-term study of the cemeteries at Amarna, which originally began in 2005. The goals of excavating cemeteries at Amarna are to gain a better understanding the health, life experiences and beliefs of the people of *Akhetaten* through an integrated study of human remains and burial practices. From 2005 to 2013, fieldwork focused upon the South Tombs Cemetery (STC) (**Fig. A**). This largest cemetery at Amarna is located in a long *wadi* adjacent to the southern group of officials' tombs [1].

Over 400 simple burial pits were excavated from the STC. The bodies were usually laid in an extended position, wrapped in textile and placed in a plant-fiber mat or wooden coffin. The graves were originally marked by simple stone cairns, and sometimes by small pyramidions or pointed stelae showing images of the deceased. Grave goods typically fell into one of three overlapping categories: pottery vessels, presumably used to hold or symbolise offerings of food and drink; personal goods such as cosmetic vessels and jewellery; and objects of ritual or symbolic importance, such as scarabs. Amongst the most significant finds is a group of poorly preserved wooden coffins with painted decoration, some showing traditional funerary gods and others a new iconography in which human offering bearers replace these gods. The study of the human remains revealed a population suffering heavy workloads and a poor diet, a picture well at odds with the theme of abundance and opulence depicted in reliefs from the city and elite tombs [2].

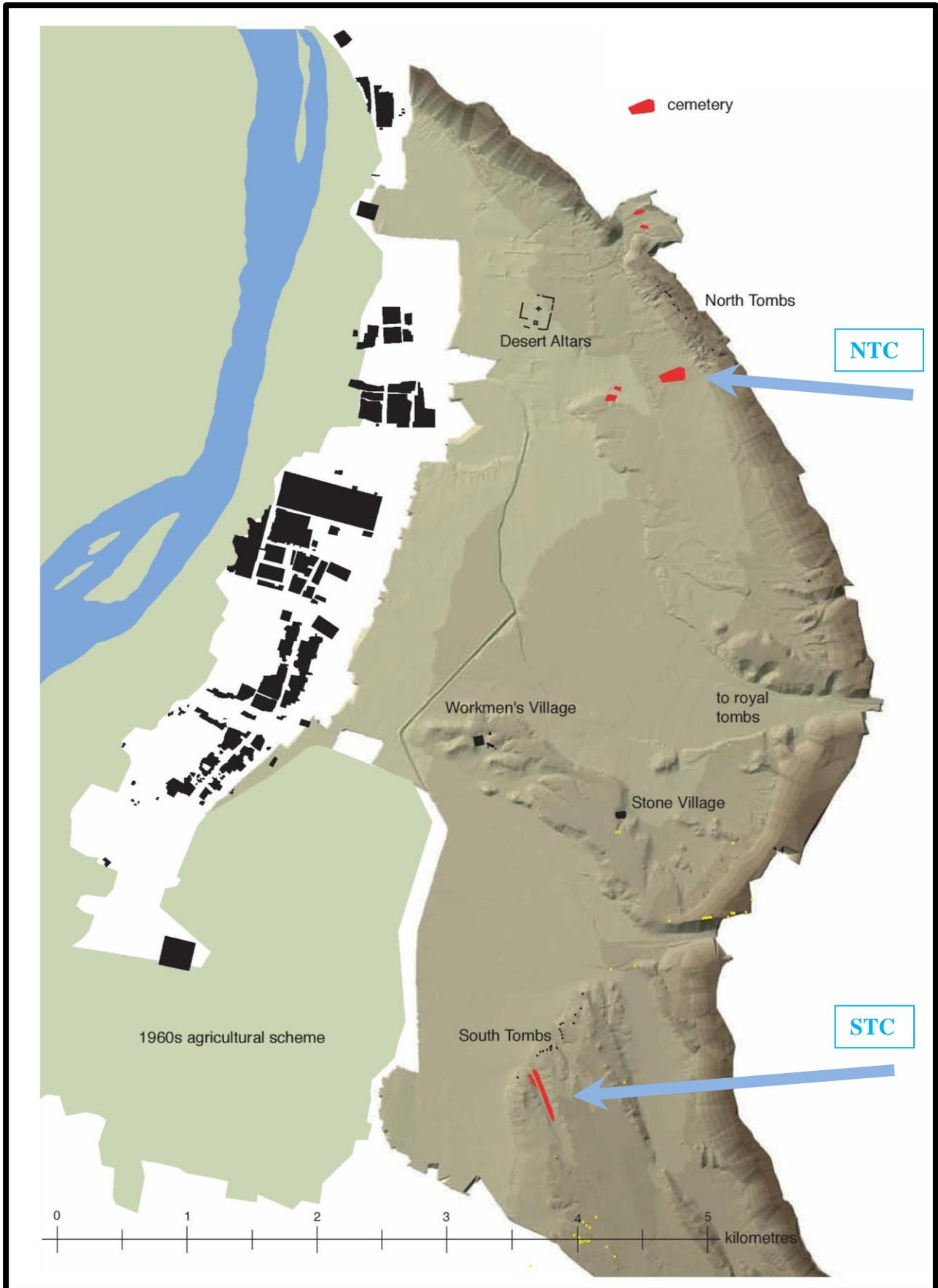
In Spring 2015, a second phase of the cemeteries project commenced. Excavations were begun at a group of burial grounds in the north of the city, identified as the North Tombs Cemeteries (NTC) (**Fig. A**). The goals of extending the excavations to another area within the city include further understanding the city and its inhabitants through the analysis of burial practice and human remains, as well as to assess whether the results from the STC are typical for Amarna as a whole. From 30 March to 7 May 2015 excavations were undertaken at the largest of these the northern cemeteries, which lies in a *wadi* between tombs 2 and 3 of the northern tomb group.

## North Tombs Cemetery - 2015 excavation season:

*Site description:* Unrecognized until about 15 years ago, when surveyor Helen Fenwick identified several cemeteries at Amarna, the North Tombs Cemetery is located within a bay formed by two adjacent *wadi* mouths, which breaks the steep cliffs of the high desert between North Tombs 2 and 3 (**Figs. A, B, C**). This northern tomb group, encompassing Tombs 1-7 at Amarna, have been recognized as elite burial tombs since the early 19<sup>th</sup> century.

The bay contains three flat sandy banks, with a spur of limestone rising up in the center to separate the two *wadis*. Several modest, undecorated, and largely unrecorded, rock-cut tombs have been identified in the cliffs around the bay, including one in its east end (**Fig. C**). Robbers' pits and the associated spoil mounds are spread across the banks. These pits and mounds are associated with modest quantities of bleached human bone and occasional Amarna period potsherds, materials that have likely been dug up from graves below. The robbers' pits appear to be several decades old. Overall, there is less surface bone, pottery and boulders than at the South Tombs Cemetery.

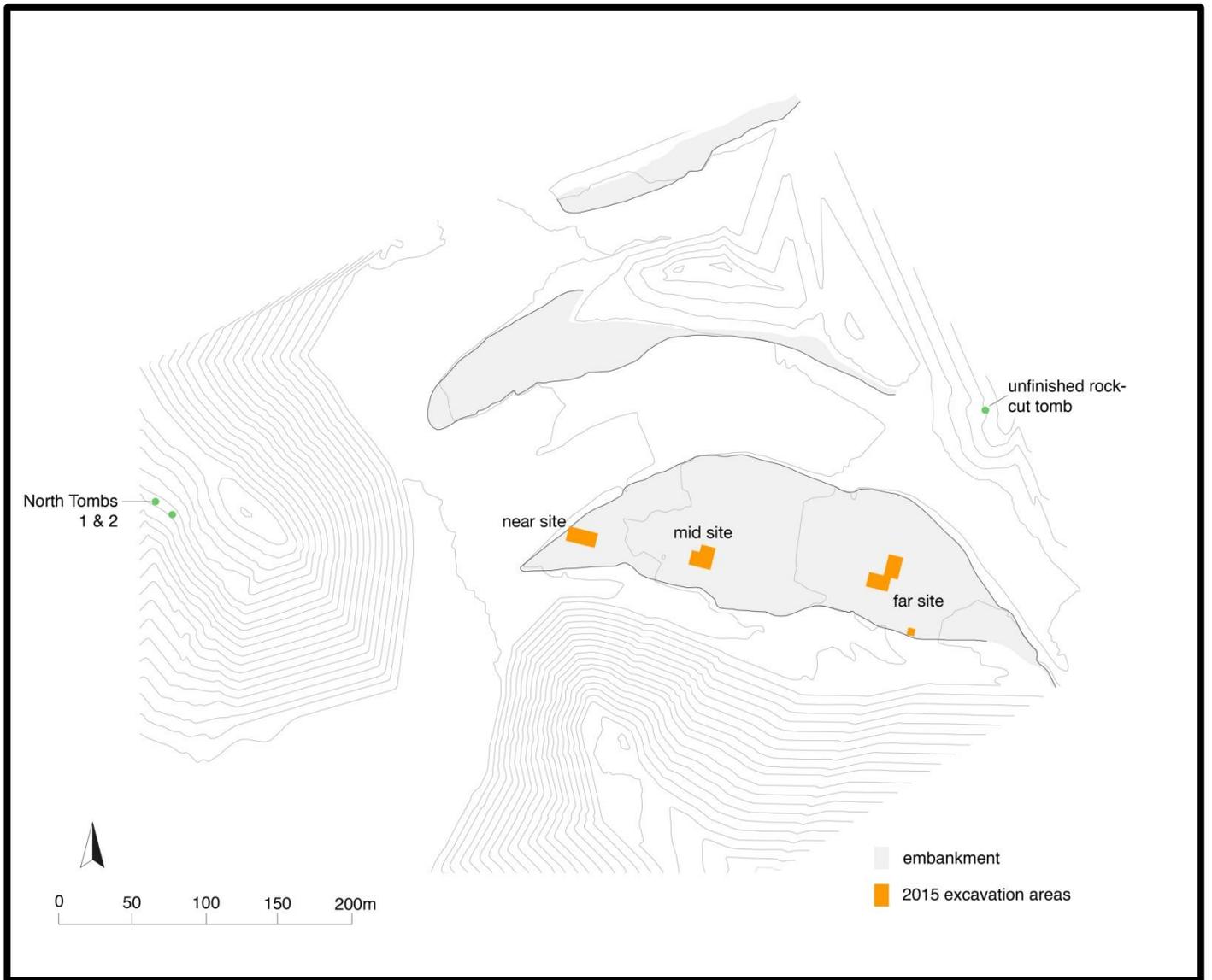
*Excavations:* Excavation was undertaken exclusively on the broad, southern bank (**Fig. C**). Twenty-seven 5 x 5m grid squares were laid out in three areas (**Figs. D, E**): close to the *wadi* mouth (the 'near site'), approximately half way along the bank (the 'mid site'), and far the end of the bank (the 'far site'). Excavations proceeded as is typical for the site, with the first step being to remove layers of overburden. As the bulk deposit was removed, oblong patches of orange marl often began to emerge. These seem to be water-laid deposits that have settled into depressions of robbers' pits, dug in turn into underlying graves. At this stage, each pit was investigated individually.



**Figure A: Plan of Amarna**

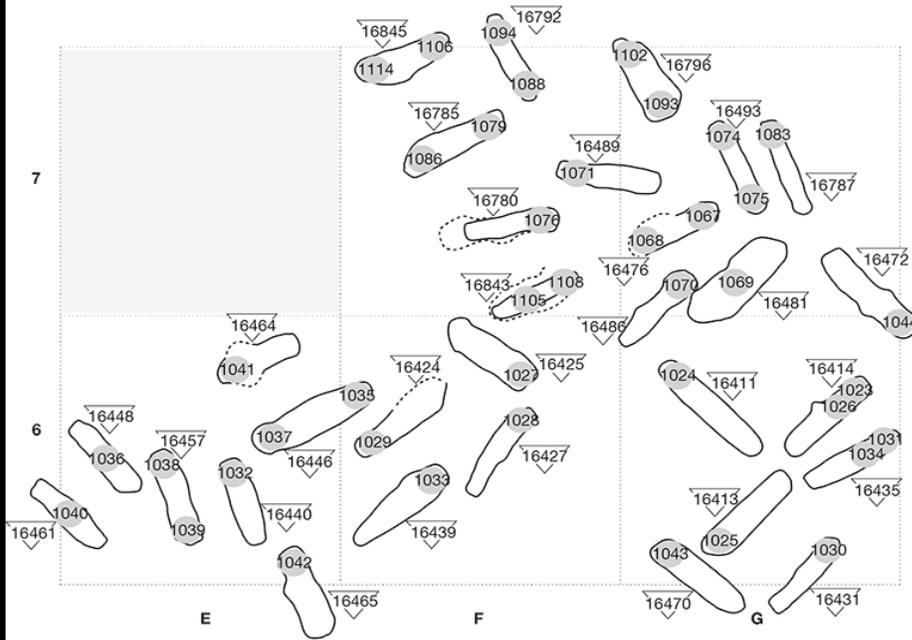


**Figure B:** Panorama of the North Tombs Cemetery taken from near the wadi mouth, facing east.

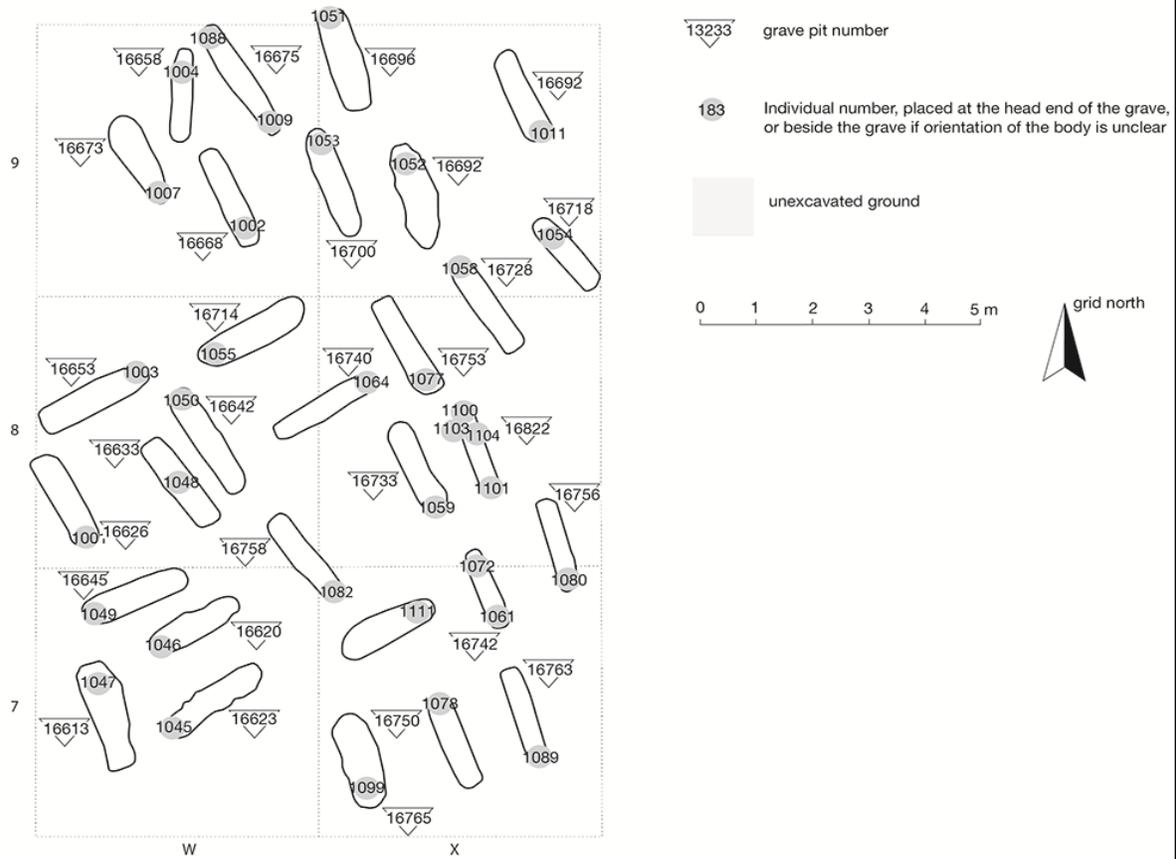


**Figure C:** Plan of the North Tombs Cemetery showing the 2015 excavation areas.  
Base map derived from a topographic survey by Helen Fenwick.

### North Tombs Cemetery 2015: near site



### North Tombs Cemetery 2015: mid site



**Figure D:** Graves excavated at the near and mid sites in 2015

This lower horizon of robbers' pits, no longer visible from the surface, represents looting that took place well before modern times, but is difficult to date more precisely. Almost all of the graves excavated this season had been robbed to a substantial degree. Often, the robbers simply rummaged around in the grave pit, disarticulating the skeleton, but leaving much of the bone inside the grave. Sometimes they threw bone out of graves onto the surface of the site or into an adjacent grave, leaving a more complicated record for the archaeologist to trace. There is no sign within the stratigraphy of the original Amarna period surface, which was probably destroyed by the looting and perhaps by subsequent flooding.

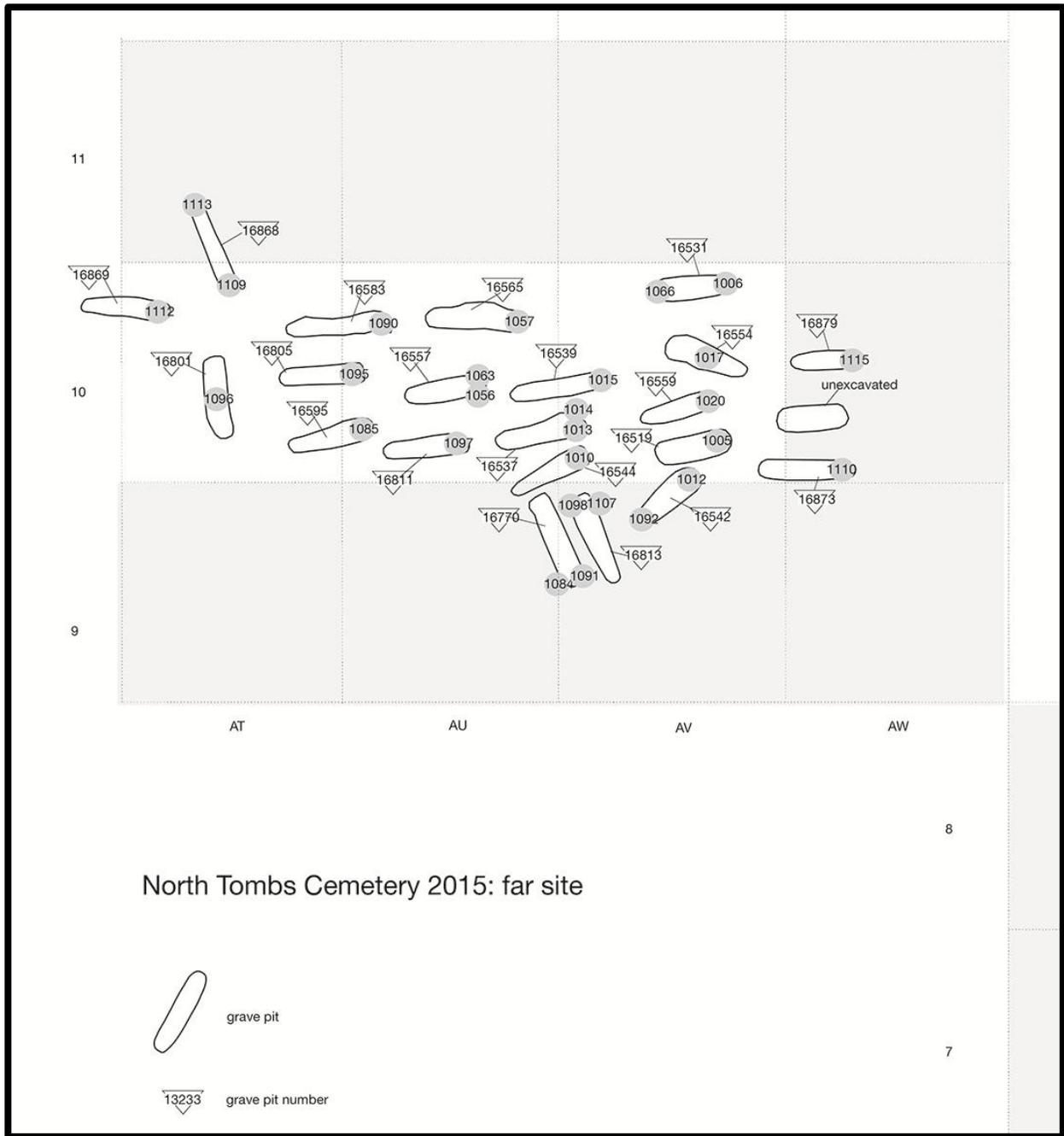
*Results:* A total of 85 graves were excavated over the six weeks, with 25 of those burials containing the remains of more than one individual. In the field, 115 individual numbers were assigned when parts of the individual were identified in situ (**Table 1**). Later, bioarchaeological analysis revealed an additional 36 individuals hidden in the co-mingled remains of multiple burials, bringing the total number of individuals excavated from the NTC in 2015 to 151.

Area	Number of graves excavated	Number of individual numbers assigned in the field	Number of single burials	Number of multiple burials	Individuals identified in lab from comingled remains
near site	30	41	19	11	13
mid site	30	36	26	4	5
far site	25	38	15	10	18
<b>totals</b>	85	115	60	25	36

*Table 1: Breakdown of individuals and graves excavated across the three 2015 excavation areas at the North Tombs Cemetery.*

*Grave layout and architecture:* Like the STC, the graves took the form of simple oblong pits cut into the gravel-rich sand. With few exceptions, each 5 x 5 m grid square typically contained five to six graves, a density that is comparable to the South Tombs Cemetery. No clear pattern of grave alignment has been identified. Although they often seem to fill the ground in two main directions (**Figs. D, E**). None of the graves cut into one another and it can be assumed that they were marked at surface level, probably by simple stone cairns, as at the South Tombs Cemetery, although no *in situ* examples of these were encountered.

*Treatment of the body:* The bodies were generally wrapped in textile and in a plant fiber mat, although the preservation of both was very poor. The matting remains to be systematically studied, but was usually of leaf, grass, or reed. The thicker and more rigid *gereed* and tamarisk-stick matting that was common at the South Tombs Cemetery was rarely encountered. Nor were there any examples of wooden coffins, whether decorated examples or simple unpainted boxes.



**Figure E:** Graves excavated at the far site in 2015

While most of the individuals were buried singly, a feature of the cemetery so far is the large number of graves containing more than one person. Over a quarter – about 27% - of the graves were multiple interments. Multiple burials were encountered at the STC too, but they only comprised about 17% of the graves, and they were not actually typical of the site as a whole, occurring mostly at one of the excavation areas. In most cases at the NTC, the individuals were placed closely side-by-side or stacked one on top of each other, often with their heads at opposite ends of the grave.

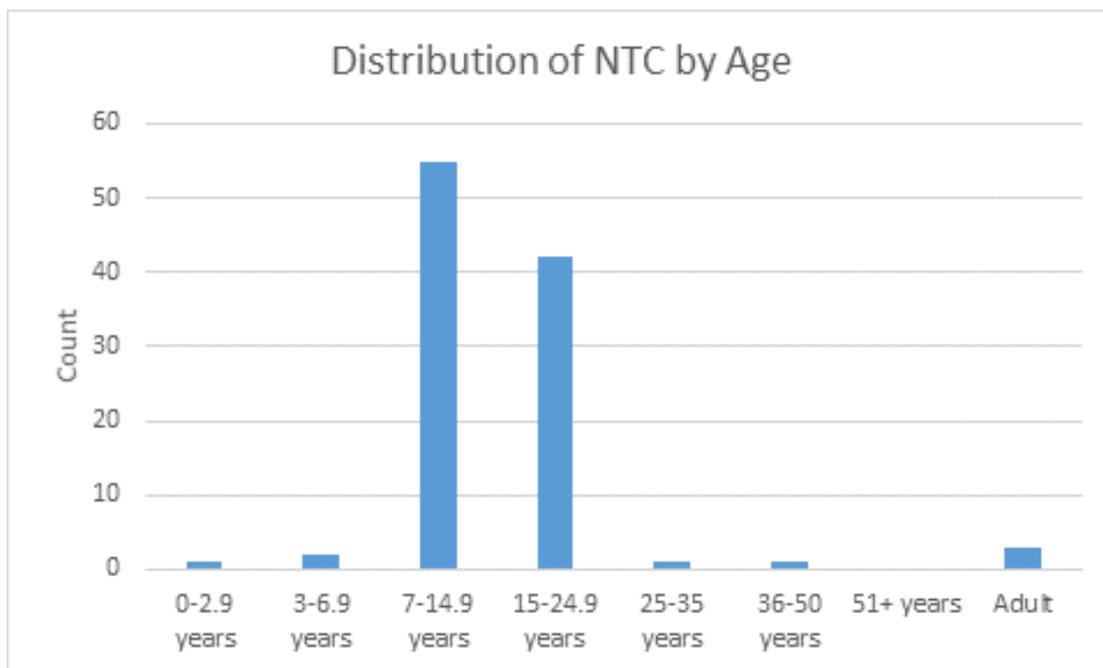
Most of the multiple burials contained just two individuals, but others accommodated up to five bodies. In all of the multiple burials, the bodies had been wrapped separately in textile and matting. In one example, at the far site, a layer of sand about 5 cm deep separated each body, suggesting perhaps that the grave had been reopened for each interment, but generally the bodies were so tightly packed that it seems likely they were interred at the one time.

*Burial goods and offerings:* Very few artefacts were found during the excavations, apart from a few pieces of jewellery (e.g. beads in glass and faience, a *wedjat*-eye ring in faience and a wooden ear plug). An unexpected find was a metal needle [3]. Occasionally pieces of pottery with smoothed edges were encountered that were perhaps used as digging tools, and one disturbed grave yielded a flat piece of limestone with edges chipped as though to form a rough blade. Relatively little pottery was encountered, although one robbed grave contained a mass of broken bowls, probably dumped by the looters.

### The skeletal analysis

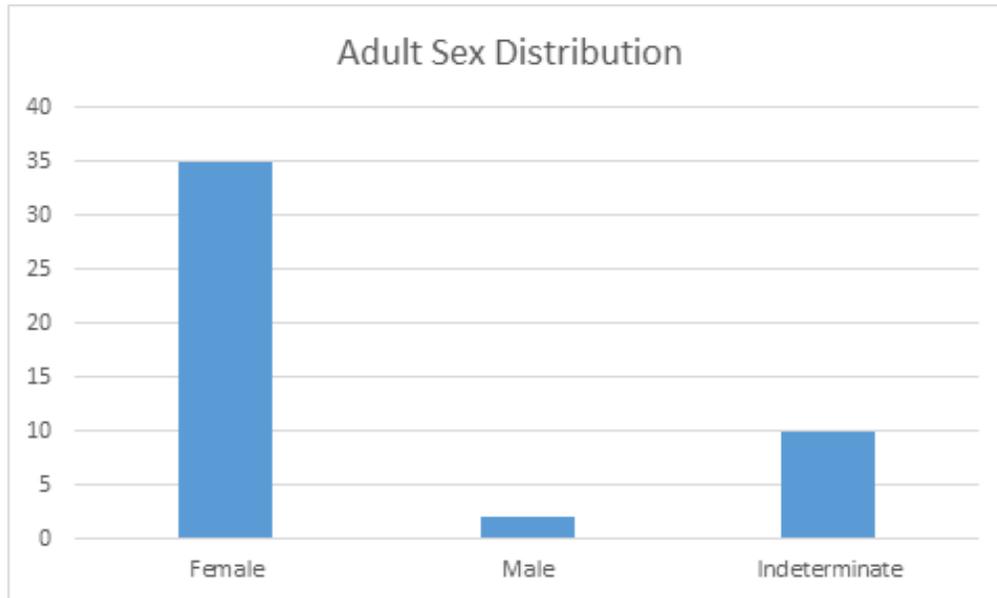
The skeletal remains excavated during the first season of excavations at the NTC is ongoing. Two seasons of analysis have been completed. The first, 15 May to 15 June, involved an international team of students led by Jerome Rose and Gretchen Dabbs. The second season of analysis was 1 to 28 October 2015. Preliminary results from these two seasons of analysis are reported below. Data were collected on the age and sex of each individual in order to group them into social categories for demographic analysis. Information was also collected on the diseases observed on the skeletal remains, the impact of labor on the skeletal joints, and the calculation of individual and average statures. Pathological lesions were photographed and some of them were x-rayed to enable later review of the fracture diagnosis.

In total, 105 individuals and 33 isolated skulls were analyzed. A major theme in the North Tombs Cemetery sample analyzed to date is one of youth. One infant was identified (0.95%). Two individuals were aged as early subadults (3.0–6.9 years) (1.90%) and 55 individuals were classified as late subadults (7.0–14.9 years) (52.38%). Forty-seven individuals were classified as adults (over 15.0 years) (44.76%), but the vast majority of these were categorized as young adults, with 42 individuals aged between 15.0–24.9 years of age at death (40.00% of the total analyzed sample) (**Fig. F**).



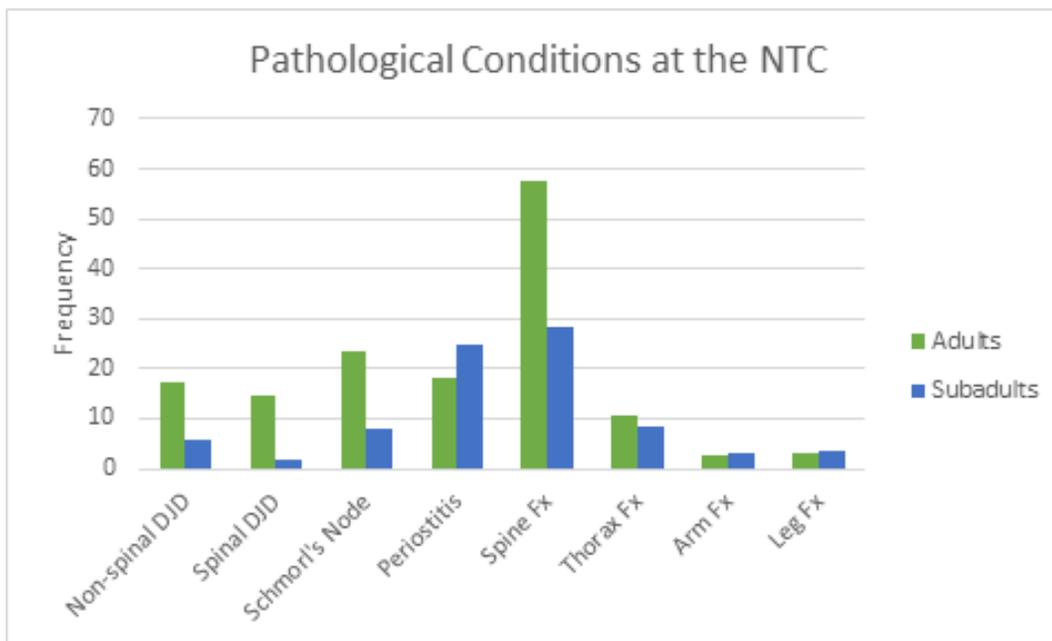
**Figure F:** Distribution of individuals by estimated age for the 2015 analyzed North Tombs Cemetery sample

Thirty-five of the 47 adult individuals were estimated to be females. Two individuals were identified as male, and the other ten individuals were too incomplete or fragmentary to make a sex estimation. This phenomenon is likely due to the young age of the adults: young adult males often present similar morphological features as females, because the secondary sexual characteristics have not yet had time to develop during the post-puberty phase (**Fig. G**).



**Figure G:** Distribution of adults by estimated sex for the 2015 analyzed North Tombs Cemetery sample

Much like the STC, the individuals interred in the NTC exhibited a wide variety of skeletal indicators of disease and injury. The most common affliction identified from the skeletal remains was the presence of malaria, which was observed in 98.8% of the individuals (n=83) for whom all five areas of assessment required were available for analysis. The presence of malarial infection was documented through the observations of a suite of skeletal lesions. Unlike many pathological conditions, malarial infection does not manifest as a single, identifiable lesion. Diagnosis of malaria from the skeletal remains requires identification of porosity on either the superior eye orbits (*cribra orbitalia*), the humerus neck, or the femoral neck and either spinal porosity or periostitis (generalized infection) (**Fig. H**).



**Figure H:** Frequency of observed pathological conditions in the NTC sample, by age (adults, >15 years; subadults <15 years)

Other types of physical trauma were also present, including fractures of the arms and legs and even spinal fractures and injuries, which were the most common feature of the STC skeletal analysis.

## **Discussion**

While the North Tombs Cemetery is generally similar in character to the South Tombs Cemetery, there are several distinctive aspects of the results from this first season of excavation. The first is the young age of many of the individuals buried here. Age estimations based on the small sample so far analyzed, and on observations in the field, suggests a very constrained age profile of the cemetery, with most of the individuals (92.38%) having died between the ages of 7 and 24 years. This pattern is not typical of other contemporaneous cemeteries and does not match that identified in the South Tombs Cemetery. Leading on from this, there is little immediate sense of ‘family groupings’ amongst the graves.

A second aspect is the simplicity of the interments, with a paucity of grave goods, no evidence yet of wooden coffins, and little sign of the use of multiple layers of matting around the burials, as was sometimes attested at the South Tombs Cemetery. The few undisturbed graves excavated contained no objects at all, suggesting that the low number of grave goods is not the result entirely of looting. And a third aspect of note is the somewhat disorderly nature of the graves; more multiple burials, and burials placed upside down, were encountered than would be expected based on the results from the South Tombs Cemetery. The multiple burials are not obviously family burials (although this cannot be ruled out entirely), and may therefore represent either less ‘care for the dead’ than single burials or the death of multiple individuals in a short space of time and their expedient burial in ‘mass’ graves.

A preliminary conclusion must be that the burials within the areas excavated this season at the North Tombs Cemetery represent a somewhat different or more restricted portion of the Amarna population than was found at the South Tombs Cemetery; namely, one that is young, relatively poor, and heavily affected by malarial infection. A key question is where were these individuals were living, and we might suppose they were from the northern suburbs of the city, although the fact that Panehesy, owner of Tomb 6 of the North Tombs group, had his main residence in the Main City needs to be borne in mind. It is perhaps noteworthy that the Egypt Exploration Society excavators working in the North Suburb in the 1930s noted the very modest nature of part (although certainly not all) of the housing areas here [4].

Explaining the seemingly young overall age-at-death of these individuals is not straightforward. Are they being subject to a particular disease that is affecting the young? The high malaria rate seems noteworthy, but on its own does not satisfactorily explain the young age at death. Might this be a workforce, conscripted on the basis of youth and subject to extreme working/living conditions that reduced their ability to fight off diseases of this kind? It may be significant that the main limestone quarries are also located to the north of the city. Recent survey by the Dayr al-Barsha Project is revealing a busy landscape of Amarna period quarries and associated roadways extending some 10 km north of the Amarna bay, suggested to have once formed a network with harbours and perhaps workers’ settlements [5]. No evidence of any substantial workers’ settlement has been identified at the quarry sites, but we need to allow that camps with semi-permanent architecture may have existed, or that settlements were located along the floodplain.

## **Endnotes:**

- [1] For previous reports, see B. Kemp, ‘Tell el-Amarna, 2005–06’, *JEA* 92 (2006), 21–56; id., ‘Tell el-Amarna, 2006–7’, *JEA* 93 (2007), 11–35; id., ‘Tell el-Amarna, 2007–8’, *JEA* 94 (2008), 13–44; id., ‘Tell el-Amarna, 2008–9’, *JEA* 95 (2009), 11–27; id., ‘Tell el-Amarna, 2010’, *JEA* 96 (2010), 1–21; id., ‘Tell el-Amarna, 2011–12’, *JEA* 98 (2012), 1–7; id., ‘2012–13’, *JEA* 99 (2013), 2–20. Also B. Kemp, A. Stevens, G. R. Dabbs, M. Zabecki and J. C. Rose (2013). ‘Life, Death, and Beyond in Akhenaten’s Egypt: Excavating the South Tombs Cemetery at Amarna’, *Antiquity* 87(335) (2013), 64–78.

- [2] See, most recently, G. R. Dabbs, J. C. Rose and M. Zabecki, (2015). “The Bioarchaeology of Akhetaten: Unexpected Results from a Capital City.” In *Egyptian Bioarchaeology: Humans, Animals, and the Environment*, edited by S. Ikram, J. Kaiser, and R. Walker, pp. 31–40. Leiden: Sidestone Press.
- [3] Michaela Binder (pers. comm.) reports finding needles in burials at Amarna West, and suggests they were used to hold the textile burial wrapping in place.
- [4] They assigned the term ‘slum’ to the south-east block of houses here: H. Frankfort and J. D. S. Pendlebury, *The City of Akhenaten, Part II. The North Suburb and The Desert Altars* (EES Excavation Memoir 40; London, 1933), 2-3.
- [5] H. Willems and R. Demarée, ‘A Visitor’s Graffito in Dayr Abū Hinnis. Remarks on the Source of Limestone Used in the Construction of al-Amarna’ *Revue d’Égyptologie* 60 (2009), 222–6; A. Van der Perre, ‘The Year 16 Graffito of Akhenaten in Dayr Abū Hinnis. A Contribution to the Study of the Later Years of Nefertiti’, *Journal of Egyptian History* 7 (2014), 67–108; V. De Laet, G. van Loon, A. Van der Perre, I. Deliever and H. Willems, ‘Integrated Remote Sensing Investigations of Ancient Quarries and Road Systems in the Greater Dayr al-Barsha Region, Middle Egypt: A Study of Logistics’, *Journal of Archaeological Science* 55 (2015), 286–300.



**Fig. I:** The bioarchaeology team at Amarna: from left to right – Julia Rodriguez (sitting in white shirt); Sofie Schiodt (standing in grey); Eleanor Simper (standing in green); Heidi Davis (behind Eleanor in maroon); Alissa Bandy (standing in black); Heather Manning (standing in purple); Erika Morey (standing in aqua); Jessi Spencer (standing in blue); and Gretchen Dabbs (standing in grey)

# Ranefer's sovereign: who was the last ruler at Amarna?

*by Barry Kemp*

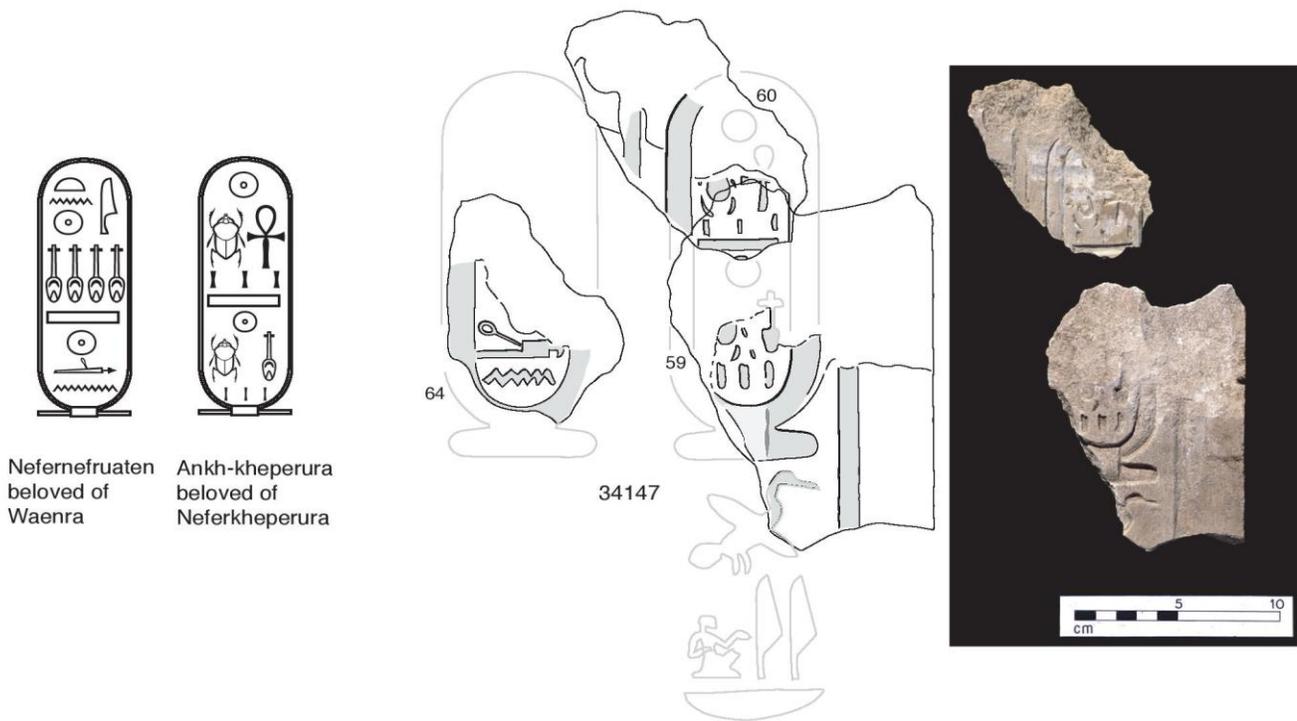
It is widely thought that, after the death of Akhenaten, a woman became king and that this woman was Nefertiti. What is the main evidence and how well does it support this claim?

Between 2002 and 2004 the Amarna Project (then part of the Egypt Exploration Society's fieldwork programme) re-excavated one of the houses in the main part of the city, towards its southern end (**Fig. 1**). It had first been examined in 1921, by T.E. Peet, the Society's first director at Amarna. The house had belonged to an officer of chariotry named Ranefer. Peet's excavation uncovered how Ranefer's house stood over the remains of an earlier house which had preserved surprisingly deep rubbish layers. This provided the motive for returning there in 2002, to look for organic deposits which would benefit the researches of some of the experts who form part of the team. The re-examination not only achieved this, it showed that Ranefer's house had been considerably larger than its predecessor. Ranefer had either rebuilt his house on the foundations of his old one or had moved to the city and obtained an existing house which he could redevelop.



**Figure 1:** Ranefer's house during the re-clearance of 2004. The letter X marks the original position of the left-hand door jamb. The limestone threshold which filled the wide doorway was still present when the house was excavated in 1921. The brick floors and walls within the large square room behind the doorway belong to the smaller house over which Ranefer had erected his own larger house, the brick floor of the later house having been removed in the course of re-excavation. Photograph by B. Kemp.

The 1921 excavation had recovered many fragments from carved limestone doorposts which stood within the doorway between the reception room and the main central room. They had contained prayers for the benefit of Ranefer. The fresh work added more fragments, sufficient to show that the columns had begun at the top with the names of the king whom Ranefer was honouring in his prayers (**Fig. 2**).

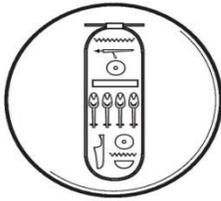


**Figure 2:** Photograph and copy of the royal name fragments from the left-hand door jamb of Ranefer's house, objects 34147.59, .60 and .64. To the left is a restored transcription of the cartouches. The photograph of the fragments is by G. Owen.

In preparation for the publication I made an attempt to complete the missing parts of the texts, a series of short wishes, mainly using parallels from the rock tombs at Amarna. At the top were fragments from a pair of cartouches. To complete these, I turned to fragments of a wooden box found broken in the entrance to the tomb of Tutankhamun and given the number 1k by Howard Carter (**Fig. 3**). The box had been made to be secured by string wound around two adjacent knobs, one attached to the lid and one to the end of the box (the latter found broken off and loose).

A pair of cartouches on the knobs gives as the owner a king with the cartouches 'Ankh-kheperura beloved of Neferkheperura' and 'Nefernefruaten beloved of Waenra' (the 'beloved' elements being the two parts of Akhenaten's first cartouche name). These cartouches provide a satisfactory basis on which to complete the fragmentary cartouches on Ranefer's door jambs. In **Figure 4** they are shown restored, with the addition of a restoration of the lintel which would have stood above them (the model for this being the well-preserved lintel, now in the Egyptian Museum, Cairo, from the house of the 'overseer of works' Hatiay in the North Suburb, found face downwards in 1930–31 where it had fallen during the city's abandonment). It should be noted, in passing, that although much of the upper part of Ranefer's door jamb is restored, the right-hand cartouche is immediately followed by a masculine definite article, in the phrase which refers to Ranefer's relation to the owner of the cartouche, namely, 'my lord'.

The Tutankhamun box lid had also been decorated with a column of royal names and titles on a narrow panel (length 58 cm) which had run down the central axis of the curving lid. It repeats the cartouches of Ankh-kheperura Nefernefruaten in the middle. Above them come the twin cartouches of Akhenaten, and below them the single cartouche of 'the great royal wife, Meretaten'. Some have seen the presence of the cartouches of Akhenaten and Nefernefruaten as evidence that both were alive and ruling at the same time, an example of the practice of co-regency. We know, from clear evidence in the 12<sup>th</sup> Dynasty, that co-regencies had existed, but it is a matter of debate whether this remained a practice that was repeated from time to time or was something exceptional.



Knob from box side: ‘Neferneferuaten beloved of Waenra’



Knob from box lid: ‘Ankh-kheperura beloved of Neferkheper(u)ra’

**Figure 3:** Schematic reconstruction of the text on the knobs and reinforcing strip on box Carter 1k from Tutankhamun’s tomb.



‘King of Upper and Lower Egypt, who lives on truth, lord of the two lands, Neferkhepure-Waenra’

‘Son of Ra, who lives on truth, lord of appearances, Akhenaten, long in his duration’

‘King of Upper and Lower Egypt, lord of the two lands, Ankh-kheperura beloved of Neferkheper(u)ra’

‘Son of Ra, lord of appearances, Neferneferuaten beloved of Waenra’

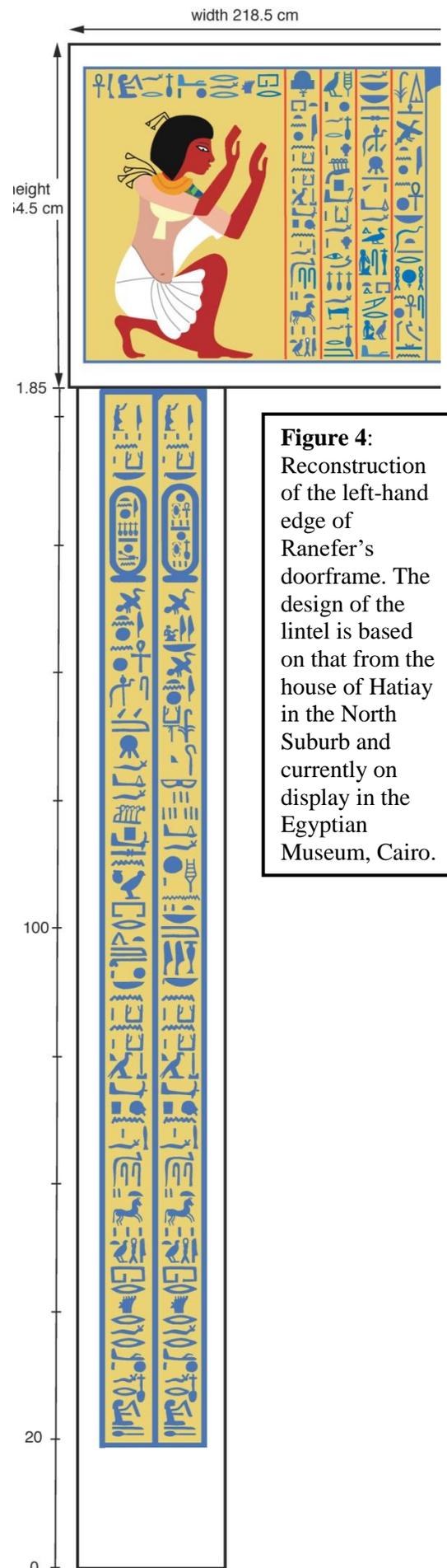
‘Great royal wife, Meretaten, living forever and eternally’

The idea of co-regency, of sharing power, runs counter to so much historical experience of better documented times that, it seems to me, it should only be invoked when the evidence is really strong and clear. In this case the appearance of both sets of names can just as easily be seen as a gesture of respect to the king, now dead, who had created Amarna as well as the situation which Nefernefruaten was now responsible either for maintaining or for negotiating a way out of. The last part of the inscription makes it as clear as one could wish that he was married to Akhenaten's eldest daughter, Meretaten.

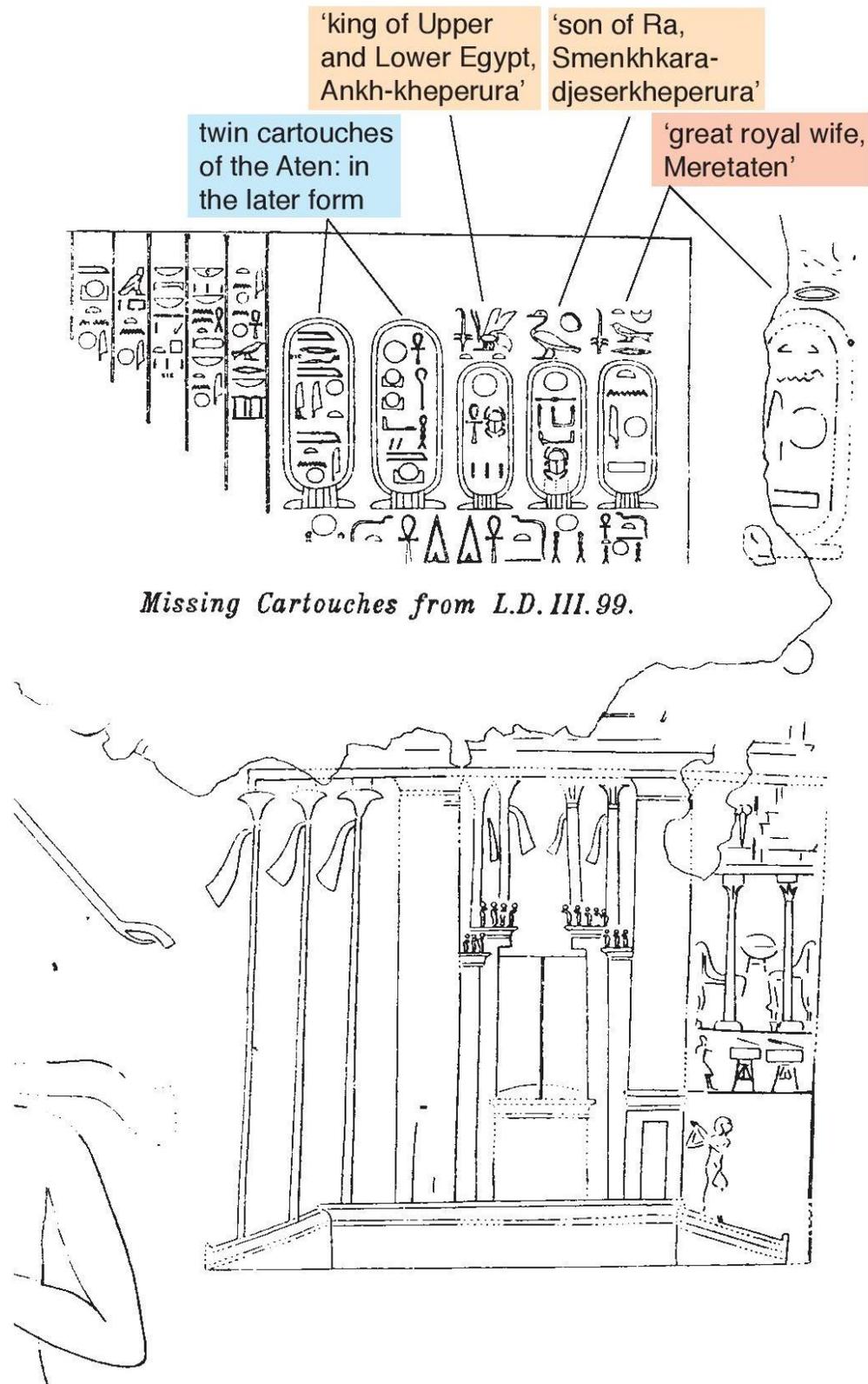
The evidence so far thus seems to fit together. Ranefer built his new house over the foundations of an earlier one near the end of the life of the city, the king being now Ankh-kheperura Nefernefruaten, Akhenaten having presumably died. Ranefer, without realising it, was actually beginning the process of piecemeal replacement of the residential part of Amarna which, had it continued for long enough, would have turned it into a multi-layered archaeological mound, a true *tell*.

The cartouche names Ankh-kheperura, as 'King of Upper and Lower Egypt' (but without the epithet 'beloved of Neferkheperura'), and the 'Great royal wife' Meretaten occur in an early 20<sup>th</sup> century drawing of a wall scene in the tomb of Meryra II at Amarna which depicted a royal couple (Fig. 5). The names are no longer visible, and the drawing of them (made by Norman de Garis Davies) relied largely on a copy made around fifty years earlier by the Lepsius expedition who visited Amarna in the 1840s. Ankh-kheperura's second cartouche is, however, different. It is Smenkhkara-djeserkheperura. Both king and queen are separately 'given life forever and eternally'. The coincidence of the same first name for the king and the name of the queen creates a case for accepting that Smenkhkara was another name for Nefernefruaten, either a simultaneously valid name or one used earlier or later. The twin cartouches of the Aten were changed during Akhenaten's reign, the later form evidently expressing a preferred meaning (although most of the earlier examples were left unchanged). Perhaps the Smenkhkara name was introduced to replace the rather odd second cartouche which developed (as will be explained shortly).

The wall scene in question stands adjacent to an extensive scene of a ceremonial reception of foreign tribute which bears the date 'year 12'. It has been argued that their proximity shows that the scene with Smenkhkara dates to shortly afterwards and thus that this is a different person to another Ankh-kheperura, this one ruling briefly (and then presumably dying) shortly after year 12. The year 12 date, however, applies to the event and not to the carving of the scene. The fitful and seemingly slow progress that officials faced in having their tombs cut and decorated makes it possible that five or six years elapsed between the event – perhaps the defining moment in Meryra's career – and its recording on one of the walls of his tomb. There is no compelling reason on the basis of Meryra II's tomb for doubting that Ankh-kheperura Smenkhkara, married to Meretaten, ruled for a time after Akhenaten's death



**Figure 4:** Reconstruction of the left-hand edge of Ranefer's doorframe. The design of the lintel is based on that from the house of Hatiay in the North Suburb and currently on display in the Egyptian Museum, Cairo.



*Missing Cartouches from L.D. III. 99.*

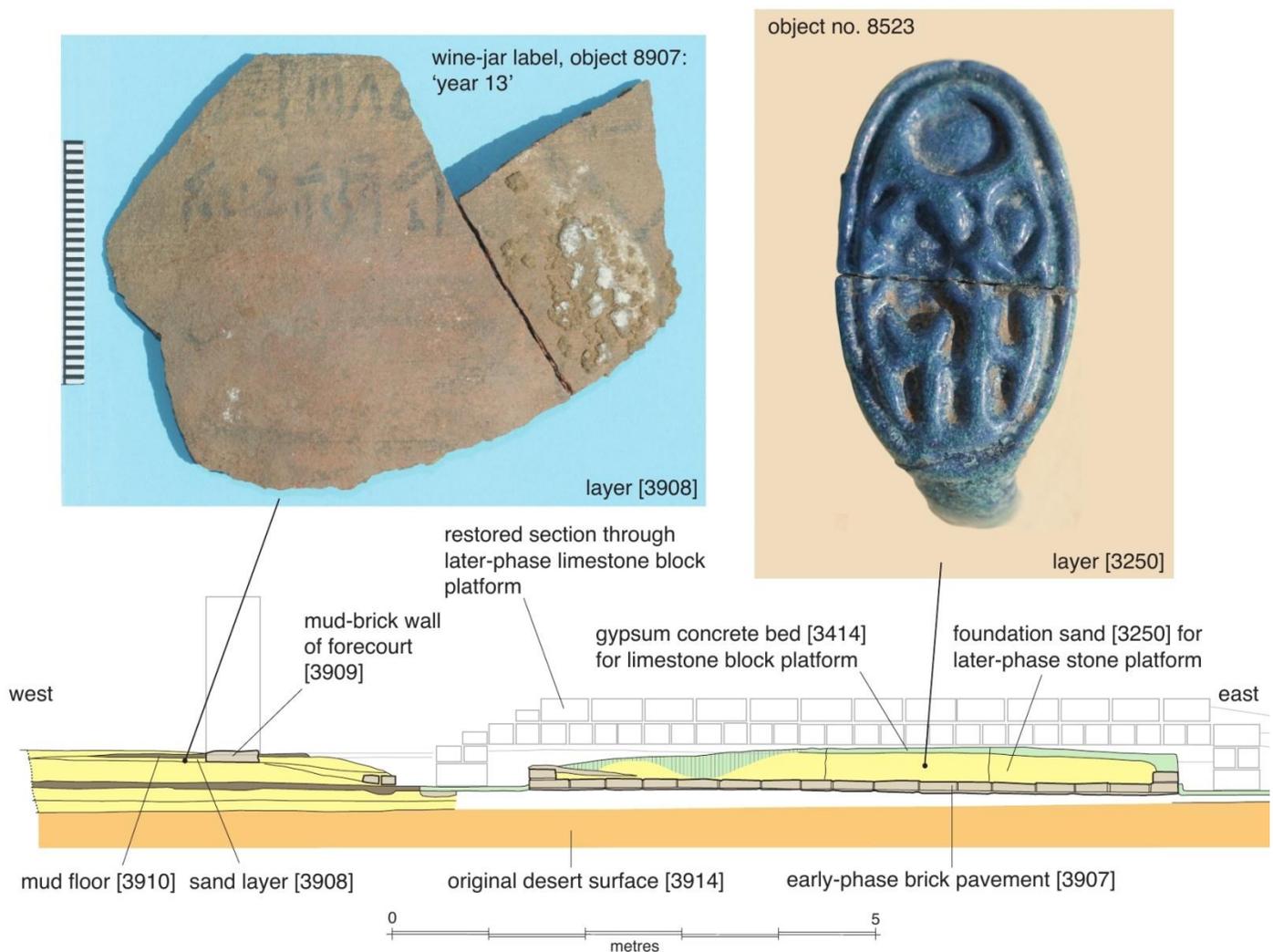
**Figure 5:** Part of a scene in the tomb of Meryra II at Amarna (no. 2), partially outlined in red ink and partially carved (including the architectural part). It showed a royal couple beneath the rays of the Aten and, behind them, a schematic rendering of a palace containing a Window of Appearance. The hieroglyphic text above was copied in the mid-19<sup>th</sup> century by the Prussian expedition led by C. Lepsius (the abbreviation L.D. standing for Lepsius, *Denkmäler*). N. de Garis Davies, whose copy this is, found that the text had subsequently been destroyed except for the cartouche of Meretaten at the right edge. He has therefore incorporated the Lepsius copy into his own copy. After N. de G. Davies, *Rock Tombs of El Amarna II*. London, Egypt Exploration Fund 1905, Pl. XLI.

The cartouche name Ankh-kheperura is common at Amarna, as one of the names on the easily made (and brittle) faience rings which were produced in large numbers. One of them (object no. 8523) had been found by the expedition in 1987 at the Small Aten Temple, lying in a bed of sand beneath the gypsum foundations of a stone entrance system between the mud-brick towers of the outermost pylon (**Fig. 6**). This stonework, which included a platform in the middle of the wide doorway, had replaced an earlier brick threshold over which the bed of sand had been spread. It seemed to make sense that, after Akhenaten's death, a programme of improvement had been started in which stonework was to replace brickwork. This piece of evidence was published (by Michael Mallinson) in a preliminary report in the *Amarna Reports* series. The report also states that a jar label bearing a hieratic text recording a 'year 13' was found nearby. The brevity of reporting (in what was intended to be a preliminary report) has allowed the interpretation that the proximity of the two finds makes them more or less contemporary, and thus that Ankh-kheperura ruled in or not long after Akhenaten's year 13 (thus making him a short-lived co-regent, as argued from the evidence in the tomb of Meryra II). The sherd with the label came from a context which, if it had been specified more clearly in the report, could have been located in one of the illustrated section drawings. It is object 8907 (and Antiquities Register number 41/87) and was found in unit [3908]. The section drawing in question (**Fig. 7**) shows that there is a stratigraphic disjunction between the finding place of the Ankh-kheperura ring and the finding place of the sherd. The date of one should not be transferred to the other.



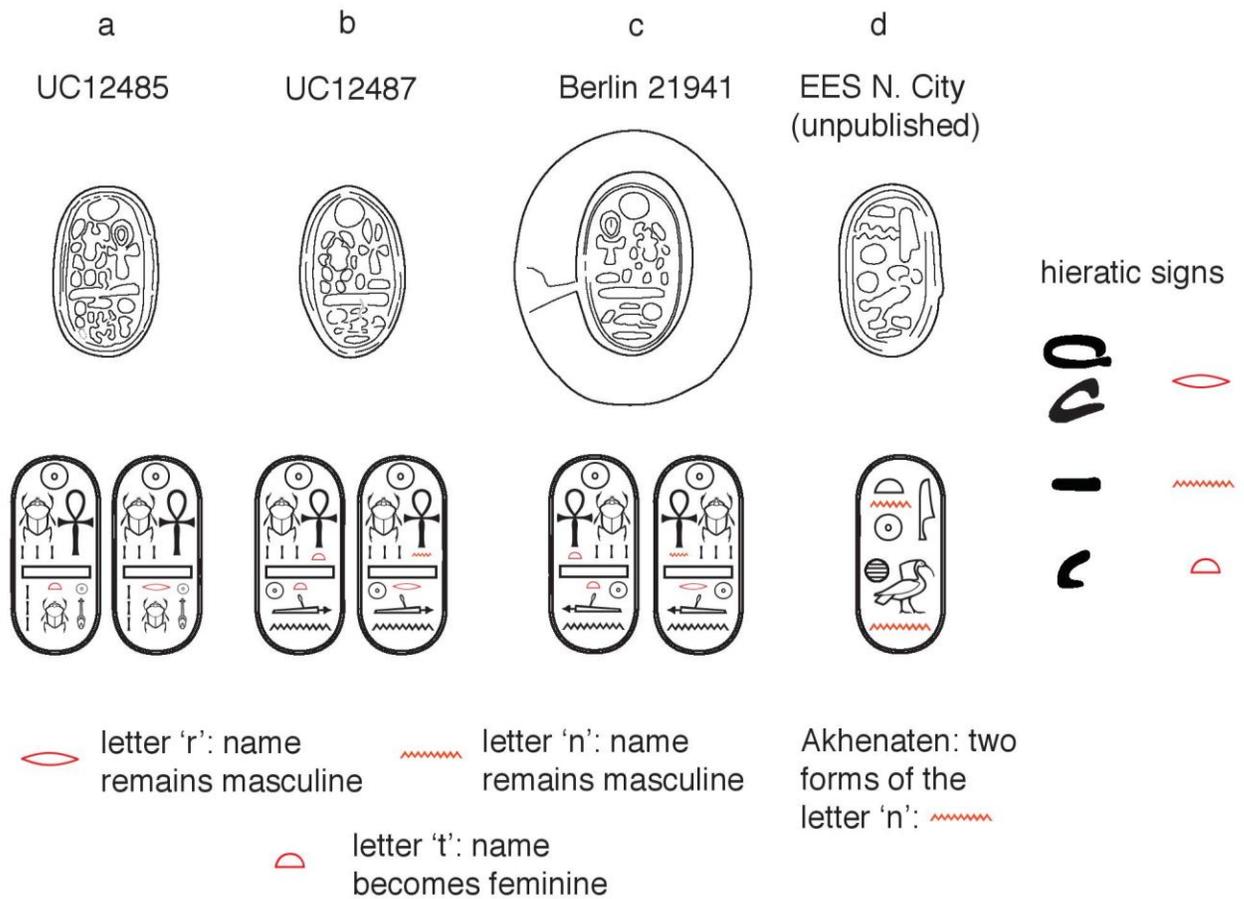
**Figure 6:** The entrance between the outermost pylons of the Small Aten Temple at an early stage of excavation in 1987, viewed to the south. The 'x' labels the edge of the layer of sand which underlies the upper layer of gypsum concrete (largely reduced to powder). The Ankh-kheperura faience ring was recovered in the sand bed once the gypsum concrete layer had been removed. Towards the top right of the picture is the relatively narrow mud-brick wall which created a small forecourt. The hieratic label of year 13 was found in sand beneath a mud floor on the outside of this wall. Photograph by B. Kemp.

It is appropriate to the history of the Small Aten Temple that the Ankh-kheperura ring bezel belongs to a late stage in its history, perhaps the very last stage. The temple stands opposite a huge extension to the Great Palace, a hall of many rectangular mud-brick piers or columns and a late addition to the site. Although none were found in position, it is very likely that a small number of mud bricks stamped with the cartouche Ankh-kheperura come from it. The building has often, in the past, been referred to as the Coronation Hall of Smenkhkara although this does not properly explain how it was used. Was it a banqueting area, a giant tent of solid materials?



**Figure 7:** Section across the east-west axis of the entrance between the outermost pylons of the Small Aten Temple. An original flooring of mud brick [3907] was later replaced by a stone layer in the middle of which a low platform of stone blocks was built. The stones had been later removed, but leaving their impressions in a bed of gypsum concrete [3414] which had been laid over a bed of sand [3250]. The faience ring 8523 bearing the name Ankh-kheperura was found in the bed of sand. To the west, and a little outside the mud-brick wall [3909] which had created a small court in front of the pylons, a thin mud floor [3910] had been spread over a layer of sand [3908]. The hieratic label from a wine jar which bears the date ‘year 13’ was found in this sand layer. There is no stratigraphic (and therefore no chronological) connection between the two sand layers ([3909] and [3250]) and thus between the two objects. Object photographs by B. Kemp.

Faience rings are small, delicate objects. Typically the flat, bezel part which bears the design is about 2 cm long, sometimes a bit less. They were made as casts from small open pottery moulds, one for the shank and one for the bezel. The designs on some bezels are sharp and well crafted. Many of those presenting royal names, however, are not sharply made. The edges of the signs are rounded, the details often reduced to blobs. The poor quality could, in part, have come from using one faience ring to make a mould to produce a copy, by pressing it into a small ball of clay which was then fired, and then repeating the exercise. The cycle most likely began with a bronze ring, itself cast from a wax original. The blobby nature of the signs is particularly noticeable when they are small, including those for *t*, *r* and *n*. So whilst larger, more complex signs (including the *kheper* beetle and the *ankh* sign for ‘life’) can be identified and read objectively, how one reads the small signs depends on what one expects to find (**Fig. 8**).



**Figure 8:** Drawings (from photographs) of four cartouches on small objects from Amarna. Pieces ‘a’ and ‘b’ are faience ring bezels in the Petrie Museum (UC12485 and UC12487, the sources being in <http://petriecat.museums.ucl.ac.uk>); ‘c’ is a mould made by pressing an existing faience bezel into a piece of clay which has subsequently been fired (Berlin 21941, after R. Krauss, *Das Ende der Amarnazeit. Beiträge zur Geschichte und Chronologie des Neuen Reiches*. Hildesheim, Gerstenberg 1981, 285, Abb. 1); ‘d’ is a faience ring with the name Akhenaten, included for comparison (unpublished EES North City excavations, archive photo 30/31 O70, 3<sup>rd</sup> line, 2<sup>nd</sup> from left). On ‘a’ to ‘c’ the signs transcribed in red determine whether the name is male or female. On ‘d’ they illustrate two ways of forming the sign *n*. At this tiny scale, the person making the sign could have followed the finger movements made when writing the letters in hieratic. The UC rings have the following dimensions: 12485. Ht 2.2 cm; w 1.3 cm; 12487. Ht 2.2 cm; w 1.4 cm.

In a minority of examples of the cartouche beginning Ankh-kheperura, the following sign ‘beloved of’, *mr*, which is fully written by a long plain rectangle, has a blob beneath it. There has grown up a tradition of interpretation which reads this blob as *t*. This seems to make the cartouche feminine thus implying that Ankh-kheperura was a woman. It is a feature of Egyptian hieroglyphs that signs which represent more than one consonant can, as an option, have one of the consonants written as an additional sign. Thus the single sign for ‘beloved’, *mr*, can be followed by the sign *r*. There are clearly written examples of this, in places other than rings, for the cartouche Ankh-kheperura. The letter *r* at the scale of faience rings is as much a blob as *t*. The same applies to the *ankh* element in Ankh-kheperura. Some examples show a blob beneath the distinctive *ankh* sign. It can be read as *t*, so creating a female royal name, Ankh-t-kheperura. It can also be read as a supplementary *n*. Instances where a tiny *n* has been reduced to a blob where the upper line is slightly curved (as it is in cases where it is found beneath the *ankh* in Ankh-kheperura and is read by some as the letter *t*) can be found in writings of the name Akhenaten on faience rings (Figure 8).

You have to ask yourself, if I were trying to write these tiny signs (around 2 mm across) in the material from which the master ring bezel was made (wax or conceivably the marzipan-like faience mix itself) using a stylus how distinctive would the result be? Bear in mind that a literate Egyptian used to writing in the hieratic script would form the letter *r* with a slightly upwards curving top stroke (made from right to left) followed by a flatter

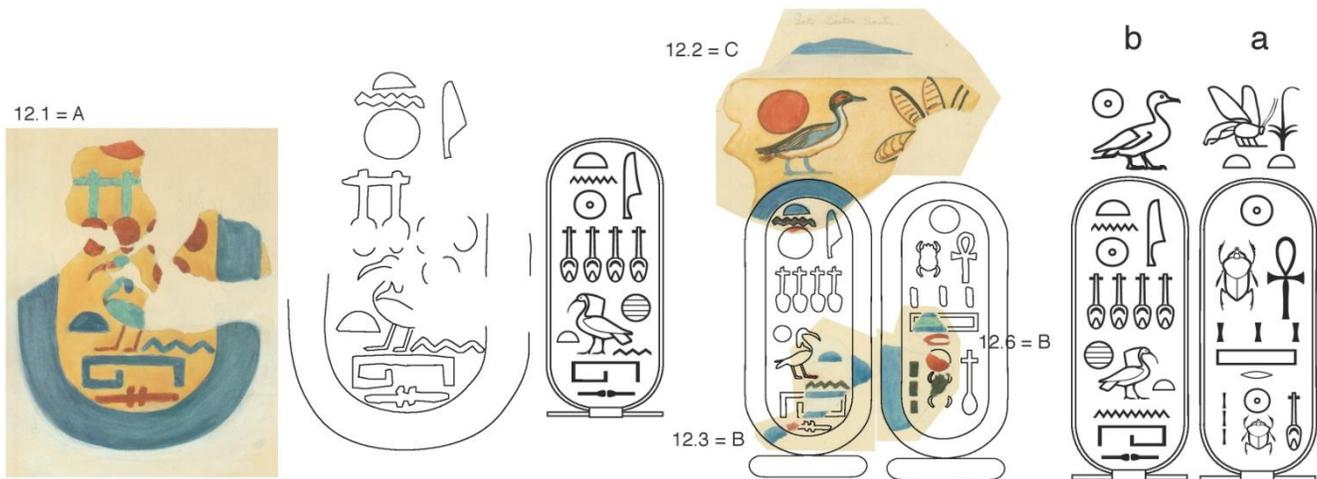
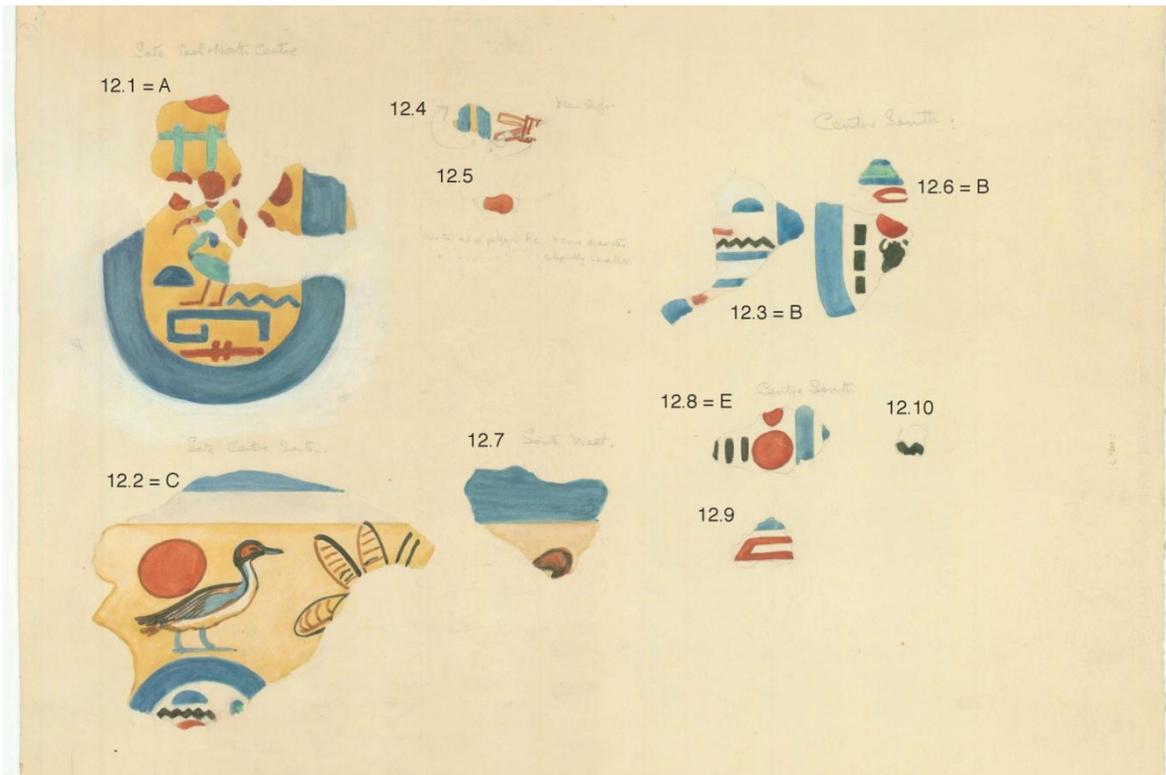
return stroke beneath. He would write the letter *n* as a short horizontal dash. At this tiny scale a natural sweeping movement with the fingers might merge the detailed delineation of the signs that the same person would make if working at a larger scale. Remember also that the *r* beneath the *mr* is well attested in better-formed examples, including the painted version at the North Riverside Palace (see below, which also has a somewhat flattened shape, a bit like the hieratic form). The faience rings provide a weak basis on which to found a theory that Ankh-kheperura was a female ruler.

When Amarna was abandoned, royal names by the hundred must have been present on its walls, in palaces, temples, houses and rock tombs. Mostly they were still of Akhenaten and Nefertiti and, out of deference for having been the founders, might have remained if Amarna had had a rosy future. But alterations were already beginning. At the Small Aten Temple, for example, the royal couple's names had been erased ready for recarving, presumably with new names, in a layer of plaster which was then left blank. Ranefer had marked his loyalty to Ankh-kheperua on his new doorway in his new house. At the North Riverside Palace, one or more painted mud-brick walls also carried cartouches which were not those of Akhenaten and Nefertiti. The painted plaster had collapsed to form a heap of rubble that had filled a wide gateway in the thick and conspicuous enclosure wall (**Fig. 9**). The rubble was examined and removed in the 1930–31 season of excavation by the Egypt Exploration Society, when John Pendlebury was director of excavations. The painted fragments were not many and open up more than one possibility for the subject-matter to which they had belonged. It is not even certain from where they had fallen: from a room or suite of rooms high over the gateway or from the inside surface or surfaces of the deep gateway itself?



**Figure 9:** View of the gateway in the wall of the North Riverside Palace in the North City at Amarna. The picture, facing north-west, was taken in 1978. The painted plaster fragments were within a heap of brick rubble which filled the gateway and was excavated in 1931–2. Photograph by B. Kemp.

Some of the fragments were photographed (but not apparently those with the cartouches). More of them (we hope all of them) were copied as water colours by Hilda Pendlebury (**Fig. 10**). One of her sheets contains fragments of cartouches which had been present in several pairs at different scales. One of the pairs matches one of the cartouches on the Tutankhamun box: 'Ankh-kheperura beloved of Neferkheperura'. It is written in a slight fuller way, so that the plural strokes of 'kheperu' are included, as is the single letter *r* (painted in red, the lower stroke being almost flat rather than symmetrically curved) beneath the blue and green rectangle which writes the word *mr*, 'beloved'. It is, in other words, written as a male name. The other cartouche is only half familiar. It occurs twice, at a larger scale and facing left, and at a smaller scale, facing right and paired with the Ankh-kheperura cartouche. The top part reads, as one would expect, 'Nefernefruaten'. The lower part substitutes for the expected 'beloved of Waenra' a separate name, Akhetenhiyes'. This was recognised by Marc Gabolde in an initial publication of the fragments.



a: 'King of Upper and Lower Egypt, Ankh-kheperura beloved of Neferkheperura'  
 b: 'Son of Ra, Nefernefruatén/Akhetenhiyes'

**Figure 10:** At the top is a reproduction of one of the sheets of watercolour copies made by Hilda Pendlebury of fragments of painted plaster excavated from within the gateway of the North Riverside Palace in 1931–2. The numbers 12.1 onwards are those of Fran Weatherhead in her book *Amarna Palace Paintings*. The letters A, B, C and E are those of Marc Gabolde in his book *D'Akhenaton à Toutânkhamon*, 154, fig. 2. The present location of fragments 12.3 and 12.6 is not known (12.1 is in Liverpool Museum). Fran Weatherhead separates 12.3 and 12.6 with the following comment on fragment 12.6: 'On one side is a blue band infilled with turquoise, interpreted as part of a border. Next to it appears to be a small *r* hieroglyph. It is assumed that on the facsimile this fragment has been wrongly placed close to fragment 12.3, since it is not believed they are connected.' The facsimile in question is Hilda Pendlebury's. Her positioning of the fragment does actually make good sense and has been kept in the reconstructions of the cartouches. The fragments were not photographed at the time. The watercolour is copyright EES.

The name Akhetenhiyes is parallel in meaning to the name Akhenaten. Both are constructed around the word *akh*, widely used as an adjective and as a noun describing a person with particular attributes. One could be, or aspire to be, an *Akh*. Some texts of the New Kingdom which reveal the possibilities of existence after death include the desirable prospects ‘doing what is right’, ‘praising god’, ‘achieving merit upon earth’, ‘keeping silent and calm’, possessing ‘straightforwardness and restraint’ and having ‘exalted character’. At the end, one could become a ‘perfect Akh of Ra’, the process described by the verb ‘to make high’, thus to ‘elevate’ or ‘exalt’.

A standard English translation of the word *akh* as adjective is ‘to be serviceable’. Akhenaten, by this translation, is ‘Serviceable to the Aten’. The second element in the name Akhetenhiyes is ‘her husband’, so that the full translation, along these lines, is ‘Serviceable to her husband’. Translating sentiments, especially between languages and cultures that are so different, is bound to be an inexact process. That said, ‘serviceable’ seems to me to be particularly inadequate. People are devoted to their gods, and husbands and wives are (one hopes) devoted to one another. The names in question capture human feelings better if they are translated ‘Devoted to the Aten’ (Akhenaten) and ‘Devoted to her husband’ (Akhetenhiyes) or even, if we take *Akh* as a noun, ‘Devotee of...’. Further down the scale of importance, two of the named donors of material to Tutankhamun’s burial equipment, the military officer Nakht-min and the overseer of the treasury Maya, describe themselves as ‘*akh* to his lord’ – ‘devoted to his lord’ sounds a very suitable translation.

This leads to the broader subject of how we identify ancient Egyptians. Most Egyptian names are translatable. Because ancient Egyptian is not our language, turning hieroglyphs into letters and thus into sounds which are pronounceable in modern speech, and writing the first letter as a capital letter, gives us the appearance of names. But to an ancient Egyptian they would have been phrases or sentences. We have the option, therefore, of using translations rather than transcriptions. Ask yourself, when you hear the names Prudence or Charity or Faith, is the name or the meaning uppermost in your mind?

If we prefer to refer to the founder of Amarna as Akhenaten, rather than ‘Devoted to the Aten’, then we should do the same with Akhetenhiyes. That is her name, the name of a queen. But who is the husband referred to? One possibility is that it refers to Akhenaten. Hence the conclusion that this person is actually Nefertiti. An alternative is that it is the king whose names occupy three-quarters of the two cartouches: Ankh-kheperura Nefernefruaten. There is a partial parallel. Royal family members of the early Eighteenth Dynasty, both female and male, liked to use the name Ahmes/Ahмосe in their own name, so honouring the king who had expelled the Hyksos, giving us at least seven compound female names of which the first element is Ahмосe. The most famous is queen Ahмосe-Nefertari. An obvious difference is that Ahмосe-Nefertari is identified as a queen by hieroglyphic titles whereas in the few cases where the name Nefernefruaten-Akhetenhiyes is accompanied by titles they are those of a male king. I interpret this cartouche as recording the name of Akhetenhiyes whilst emphasising the meaning of the name by absorbing it into the names of her husband, Ankh-kheperura Nefernefruaten. It could have been the unconventionality of this experiment in naming that led to its replacement by the name Smenkhkara and the separate naming of Meretaten as queen.

The top of the larger cartouche, Nefernefruaten, is missing. Hilda Pendlebury’s copy and that by Fran Weatherhead of the fragment as it survives in the Liverpool Museum place the position of the sun disk at the top, a little to the left of centre, implying that the word Aten was written from right to left, whereas the word *akh*, ‘devoted to’, was written from left to right. It was a characteristic of Nefertiti’s name that the first part, Nefernefruaten, wrote the Aten element in the reverse direction to the rest of her name. One could seize upon this as support for the idea that the name masks Nefertiti. But the painter of these cartouches could have been so used to seeing the Nefernefruaten group written in this way for Nefertiti that he unthinkingly followed the convention for this new name. That his mind might not have been wholly on his work is suggested by the fact that he then wrote the *h* hieroglyph (the plan of the house, which is the last but one sign) also in the reverse direction to what was normal, and did the same in the smaller cartouche.

The same cartouches appear on fragments of a small stela found by Petrie and now in the Petrie Museum of University College, London, where it has the catalogue number UC401 (**Figs. 11a & 11b**). Some of the fragments join together, others remain unconnected, and it is not certain that they all belong to the same piece (the thicknesses vary somewhat). There is also a piece in the Egyptian Museum, Cairo, which is normally assumed to belong (I have not examined it). The main pieces are also carved on the reverse side. Here the subject is a picture of an official in the act of adoration, hands raised before his face, and the ends of two vertical columns of hieroglyphs. The design and the significantly larger scale point to them having come from the lintel of a doorway in the house of an official, of the kind exemplified by Hatiay's lintel in the Egyptian Museum. The 'stela', which is a key piece of evidence in discussions of Amarna chronology, has been carved on the other side at a smaller scale. To accomplish this the sculptor must have used a piece broken from an existing lintel. Such slabs would normally be quite thick, thicker than the 3 cm of UC410. This, together with the fact that it has been carved on the other side from the larger design makes it likely that we are looking at two phases of re-carving, and that the thinness of the slab results from removing the original back surface which had itself borne a carving.

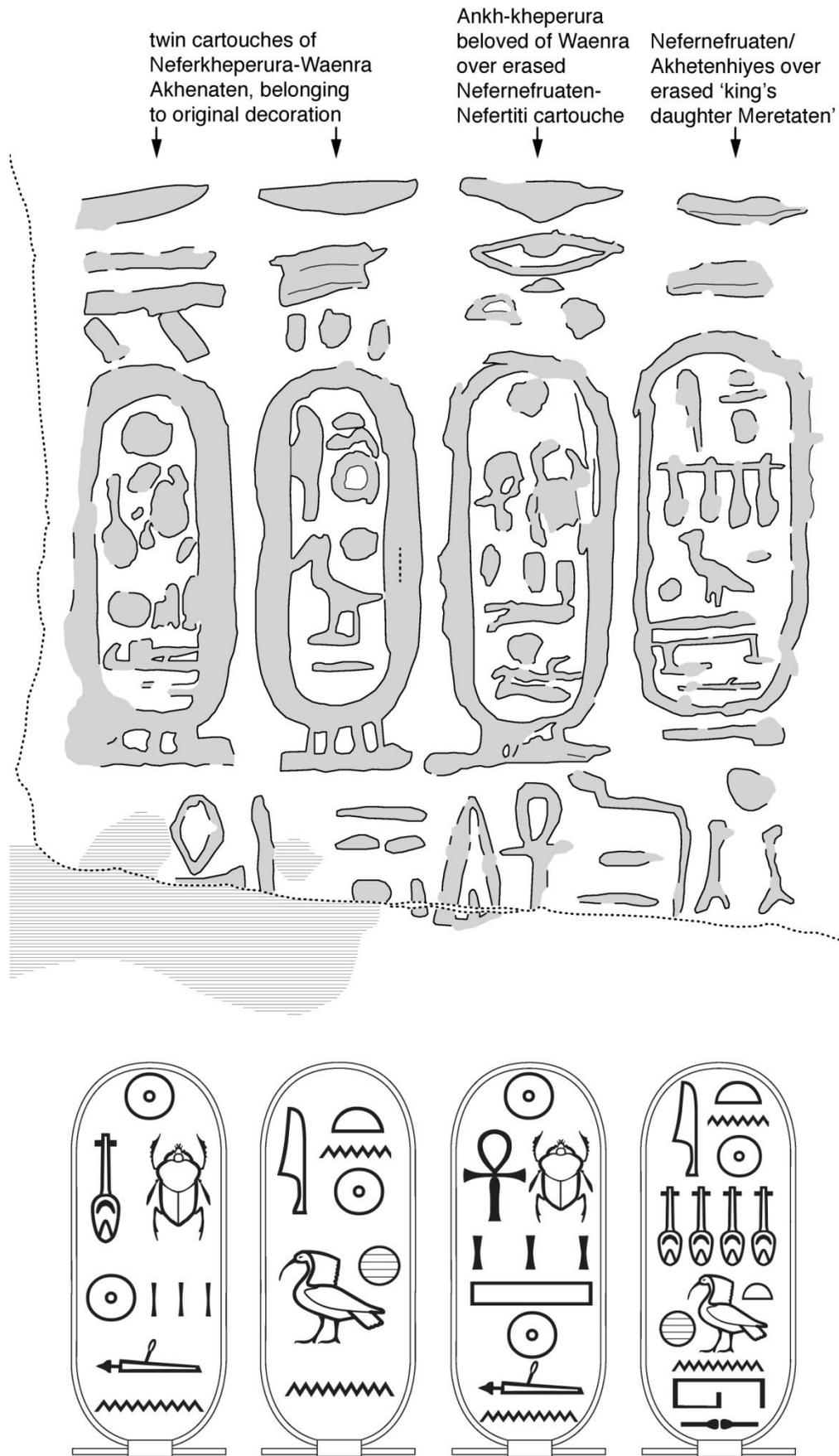


**Figure 11a:** The main fragments of stela UC410. Width 14.0 cm. Photograph by B. Kemp. See also the image and bibliography at <http://petriecat.museums.ucl.ac.uk>.



**Figure 11b:** Close-up of the cartouches on UC410.

The visible surviving design on the stela side shows an Aten disc with rays. The royal figures who must have been arranged below it no longer survive. To the right of the Aten disc are the remains of nine vertical columns of hieroglyphs carved on a very small scale. From left to right, the first three are epithets of the Aten, whose location is 'in the house of the Aten in Akhetaten'. Then came a pair of cartouches containing the names of the Aten. These have been erased (something uncommon but not unique for Aten cartouches). Finally four small cartouches give, in turn, the first and second names of Akhenaten, and then Ankh-kheperura beloved of Waenra and Nefernefruaten/Akhetenhiyes, the same pair of cartouches as found in the painted fragments from the North Riverside Palace (**Fig. 12**). They have been carved on a surface which is very slightly lower and is the result of being scraped down but so shallowly that traces of an earlier text have not been entirely lost. These fugitive traces have been analysed by Marc Gabolde, who reconstructs them as (in the left-hand of the pair) the normal cartouche of Nefertiti (thus Nefernefruaten-Nefertiti) and (in the right-hand of the pair) the writing of the name of Meretaten, without cartouche and described as the 'king's daughter, of his body, his beloved'.



**Figure 12:** A tracing of the text in the top right-hand corner of stela UC410 which was carved over a partially erased earlier text. For the earlier text see the article by Marc Gabolde cited in the notes at the end of the article.

Across the whole surface of the fragment are traces of a coating of red pigment. It is best preserved down the right-hand border (the bouquets of flowers and pair of fish), fills much of the outline of the Aten disc and is present here and there in the hieroglyphs. If the surface had been left in this condition it would not have been easy to read the texts, given that they are small and not very skilfully cut. Common practice was to highlight individual hieroglyphs in another colour (blue was the commonest) but I could see no sign of this (leaving open the possibility that the intention was there but not carried out).

The re-cutting is a piece of up-dating. I interpret it as marking a moment following Akhenaten's death. His names are still honoured but Nefertiti is no longer a significant figure. Her cartouche has been replaced by that of the newly crowned king Ankh-kheperura, and Meretaten's name (as princess) has been replaced by the combined cartouche in which, as the second element, she appears as Akhetenhiyes.

'Up-dating' or re-assignment is a process visible on some of the objects found in Tutankhamun's tomb. Sometimes the word 'usurping' is used, but this implies an intention to take something by stratagem from its rightful owner and does not seem appropriate here. The contents of Tutankhamun's tomb (which must be our guide to what other royal burials of the time were like) seem to come from three different sources. One comprises pieces made especially for the burial, the manufacture of which must have been ordered whilst the king was alive. The most obvious piece that would have taken some time to prepare is the stone sarcophagus and lid. In the case of the four shrines of wood covered with gold leaf, their tightly-fitting nesting implies that they were manufactured as a set. Otherwise, shrines of this kind, statues and other pieces made with skill and valuable materials were the regular product of workshops, sent periodically (on the occasion of the New Year) to the king, sometimes for presentation to temples. When a royal burial had to be prepared, suitable pieces were presumably chosen from the stock already in store, not necessarily in magazines at the same place. Finally, as the burial was prepared, relatives, friends and others around the king made personal donations. The wooden statuette and wooden shabti-figures given by the military officer Nakht-min and the overseer of the treasury Maya are identifiable examples amongst Tutankhamun's burial equipment. It is tempting to see the many common faience rings found in the tomb as the donations of palace attendants.

An early death of a king must have disrupted the work of craftsmen who were preparing pieces either for his future burial, or for use or storage in the palace or the temples. Half-finished pieces, and perhaps some that were completed, remained in workshops and stores that might not have been centralised. The picture one has from Amarna is that the making, even of fine things, was distributed amongst many small 'workshops' in the city though presumably the finished products were then transferred to storerooms under central administrative oversight. The natural next step after a premature royal death would have been to re-assign unfinished or remnant pieces to the new king. This leads to a consideration of some of the Tutankhamun pieces.

It was noticed early on that some of the objects in Tutankhamun's tomb had not originally been made for him and bear the cartouches of Ankh-kheperura (in one case, the bow Carter no. 48h, he is 'Ankh-kheperura beloved of Ankh-kheperura', an example of the flexibility allowed in writing royal names). Nicholas Reeves has added the gold face mask in Tutankhamun's tomb to the list. The gold-covered pectoral Carter no. 261 p 1 has altered cartouches, one of which appears originally to have been that of Nefernefruaten/Akhetenhiyes. In 1940, Reginald Engelbach, then a curator in the Egyptian Museum and with ample opportunity to examine them, had this to say of the four nested gold-leaf-covered shrines: 'A close examination of the four shrines of Tut'ankhamûn, reveals the fact that in the inside and front of one, the second outermost, every cartouche, which must have been Smenkherê', has been changed to that of Tut'ankhamûn... The other shrines bear no signs of re-appropriation.' He illustrated this with a carefully lit photograph (**Fig. 13**) of one of the interior walls of the second shrine (Carter no. 237) where the cartouches have a different reflective quality.

The shrines are made of wood. Because they are largely undamaged it is not easy to observe the details of how the surfaces were prepared. But the fragmentary panels from the shrine of Queen Tiy, from tomb 55 in the Valley of the Kings and on display in the Egyptian Museum, Cairo, provide the opportunity to do this with comparable material. They have been treated with conservation materials and this will have modified colours

and textures but still the method of manufacture is clear. The wood has been covered with a thin, fine and evidently hard layer of white material the composition of which has not, as far as I know, been determined. No textile fibres are visible. It has been 'carved' in shallow relief which has nowhere penetrated far into the layer. The gold leaf has been spread across, pressed into the relief details and smoothed over flat areas. Perhaps a slight moistening of the plaster surface created sufficient adhesion.



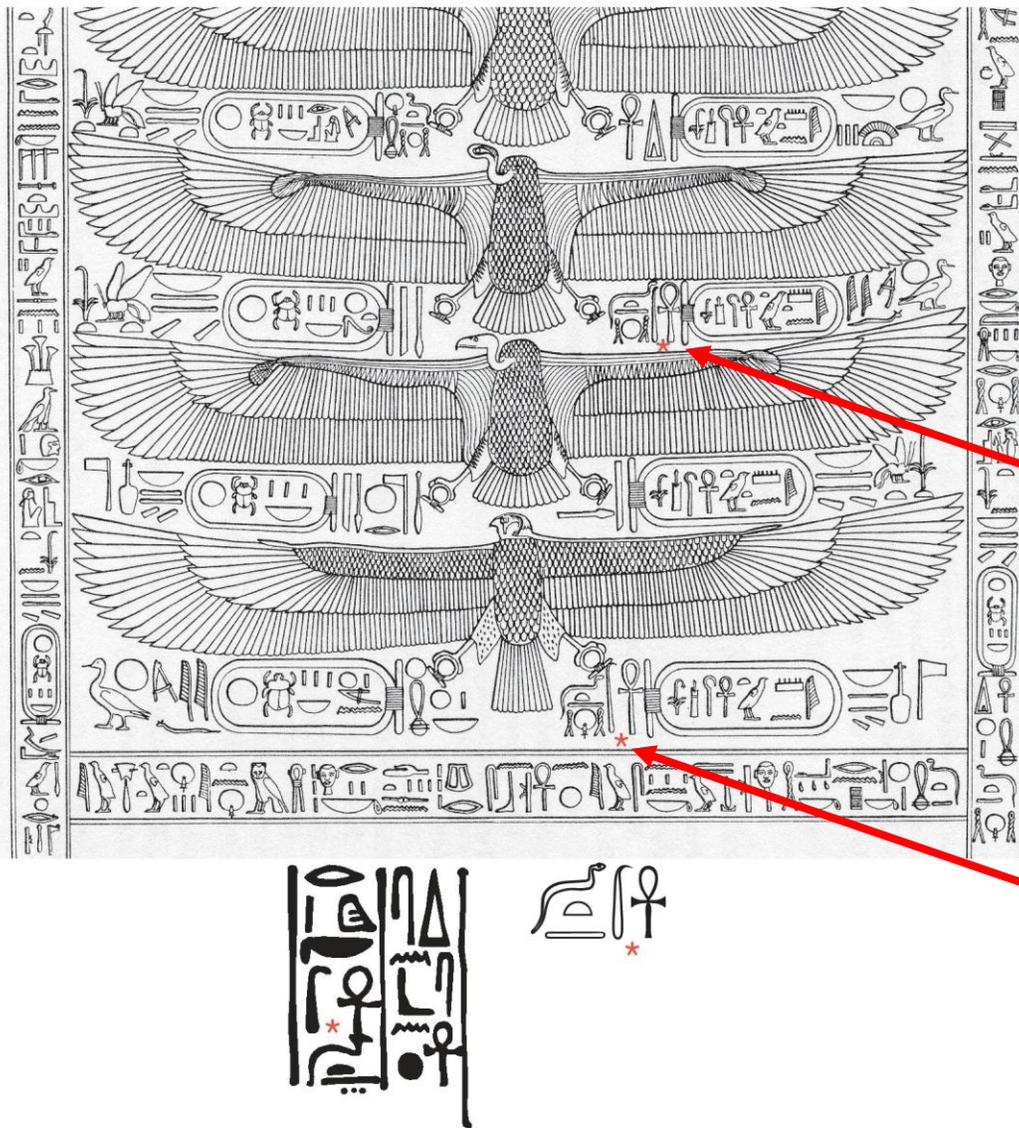
**Figure 13:** Photograph of part of the left-hand inner wall of the second of Tutankhamun's shrines (Carter 237) published by R. Engelbach in *Annales du Service des Antiquités de l'Égypte* 40 (1940), Pl. XXIV. Inside view of the second outermost shrine, showing the cartouches changed for Tutankhamun. Note that even the very small cartouche on the head of the king on the extreme right in the sun-boat also bears signs of alteration.

The limited set of changes on one shrine (the second), as noted by Engelbach, are what one might expect if the death of Tutankhamun's predecessor happened early on in the preparation of the shrines, panel by panel. Changing the cartouches (and any grammatical endings supposing the original owner was female) required not only that the gold leaf be cut away but also the surface of the underlying plaster which then needed a patch, to be re-carved in shallow relief, finally to receive a new piece of gold leaf. It is not possible to view the interiors of the shrines and thus see for oneself what Englebach saw and photographed. But on the outside surfaces, even of the second shrine (including the reverse side of the panel which Engelbach photographed, which is the left side as one faces the doors), I have been unable to see signs of alteration (**Fig. 14**). Over time the wood of the shrines has moved a little, occasioning cracks and splits to appear in the surfacing materials, sometimes across the lines of cartouches. One might expect that where such weaknesses have developed, replacement cartouches (and grammatical endings) would be starting to show. But they seem not to.



**Figure 14:** A part towards the top of the rear outer wall of the second of Tutankhamun's shrines. The slight splitting of the surface reveals no trace that the cartouche has replaced one of an earlier owner. Photo by B. Kemp.

One or other of Tutankhamun's cartouches occurs many times (in excess of 200; one can count them in Piankoff's edition). Within a very small number of the phrases that are added to them as wishes either the single consonant *t* or a bi-consonantal sign *ti* appears. These can be used as evidence that the shrines were originally made for a woman because the signs can signify a 3<sup>rd</sup> person feminine subject in a particular verbal form (the 'Old Perfective', sometimes called the 'pseudo-participle'). The examples are sprinkled seemingly haphazardly through the texts on the shrines. In the example I have chosen to illustrate (**Fig. 15**) eight large birds spread their wings across the ceiling of the third shrine (six have vulture heads, one the head of a cobra and one the head of a hawk). Beneath each is one or other of Tutankhamun's cartouches. In six cases an epithet has been added. In two cases it is 'given life', with no grammatical ending. In two cases it is 'living for ever and for eternity' and the *.ti* ending is present. The *.t* ending to the phrase 'true of voice' is similarly occasionally encountered on the shrines. To take these few endings as evidence that the objects were made for a woman creates a surreal line of reasoning. There is no suggestion that Tutankhamun, whose names are everywhere on the shrines, was a woman. The handful of variant grammatical endings are supposed to be left over from an earlier owner all traces of whose names have been skilfully erased, although the craftsmen who did this managed to leave a few obvious telltale grammatical endings unaltered. It implies that the craftsmen did not see these *.ti* and *.t* endings as designating a female owner.



**Figure 15:** One half of the ceiling of Tutankhamun’s third shrine (Carter no. 238). Each of the eight cartouches of Tutankhamun is followed by an epithet. Six of them call for no comment, but two of them (marked with a red asterisk) write the phrase ‘she/you living for ever and eternally’ using the *.ti* ending of the Old Perfective verbal form. This can indicate both a 3<sup>rd</sup>-person feminine subject (yielding a translation ‘she living for ever and eternally’), or a 2<sup>nd</sup> person undifferentiated feminine/masculine subject (‘you living for ever and eternally’). A clear example of 2<sup>nd</sup> person usage occurs in the painted texts on the east wall of Tutankhamun’s burial chamber, of which a small part is reproduced below. The subject is the goddess Nut, and the text reads: ‘she gives health and life to your nose, you living forever.’ The copy of the ceiling design is after A. Piankoff, *The Shrines of Tut-Ankh-Amon*. New York, Harper & Row 1962, 70–1, Fig. 28.

An alternative explanation is suggested by a painted text in the burial chamber of Tutankhamun’s tomb. The goddess Nut is depicted beside the words which she utters for the benefit of Tutankhamun. They conclude: ‘she gives health and life to your nostrils, you living forever.’ The writing of the word ‘living’ has the same *.ti* ending. The reason for this is that the Old Perfective verbal form presents the same grammatical ending – *.ti* (sometimes abbreviated to *.t*) – for the 3<sup>rd</sup>-person feminine as it does for both the masculine and feminine 2<sup>nd</sup>-person cases. Although one might expect consistency in ‘voice’ in repeated formulaic phrases, the occasional use of the 2<sup>nd</sup>-person (‘you living for ever’, ‘you being true of voice’) falls within known usage and removes the need to accept that the makers of the pieces in question allowed remnants of a previous design to survive their thoroughgoing alterations (which might not actually have taken place).

Some who study the period like to draw on Manetho. No copy of Manetho's *History* survives. What we have are summaries and excerpts made by others. The ones that attract the greatest credence are those of Josephus (J), Africanus (A) and Eusebius (E). When combined, their lists for the latter part of the Eighteenth Dynasty read as follows:

- J, His son Amenophis, 30 yrs. 10 ms.; A, E, Amenophis, 31 yrs. 'Reputed to be Memnon and a speaking statue', A, E.
- J, His son Oros, 36 yrs. 5 ms; A, Oros, 37 yrs.; E. Oros, 36 or 38 yrs.
- J, His daughter Acencheres, 12 yrs. 1 m.; A, Acherres, 32 yrs.; E, Achencherses, [12 yrs.]
- J, Her brother Rathosis, 9 yrs.; A, Rathos, 6 yrs.; E omits
- J, His son Acencheres, 12 yrs. 5 ms.; A, Chebres, 12 yrs.; E, Acherres, 8 yrs.
- J, His son Acencheres II, 12 yrs. 3 ms.; A, Acherres, 12 yrs.; E, Cherres, 15 yrs.
- J, His son Harmais, 4 yrs. 1 m.; A, Armesis, 5 yrs.; E, Armais, 5 yrs.

The first of this list is clearly Amenhotep III and the last, being the last king of Manetho's Eighteenth Dynasty, ought to be Horemheb. Those who want a female king highlight the 'daughter Acencheres', successor to Oros, he of the 36–38-year reign and himself the successor to the king who is Amenhotep III.

We do not know how Manetho worked and from what sources. Did he undertake antiquarian tours or rely upon written material in libraries, perhaps only that at Alexandria? We can be reasonably sure that he would not have seen papyri written in the late Eighteenth Dynasty unless they had been regularly copied and re-copied on new materials (as did happen), since papyri would not survive for long periods if stored on shelves or in boxes in normal conditions in Egypt (those that have survived were in sealed desert contexts). We do know that, in the later centuries BC, there was an interest in fantasy tales set in the past. Herodotus encountered some of them. But we cannot tell how far, if at all, Manetho viewed his sources with scepticism. He is always on trial himself. If we were sure of the sequence of rulers after Amenhotep III then we could judge how reliable he is in this section of his history. But since the sequence is the very thing we are trying to find out, it seems to me that nothing is gained by citing him in support of one theory or another.

### **Conclusion:**

Ancient Egypt maintained consistency of style over long periods. Yet at levels of detail – as in the writing of names (including royal names) and words generally – variation was accepted. At the heart of this discussion is the question, where do we set our limits of tolerance when faced with variation and (as it seems to us) inconsistency? At what point do inconsistencies justify the pursuit of ingenious historical explanations?

People approach knotty problems of evidence from different standpoints. When faced with a body of evidence is one a 'lumper' or a 'splitter'? Does one like to wield Occam's razor or indulge in conspiracy theory? I am an Occamist by nature, although I realise that, in historical discussion, the razor is more of a rhetorical device than a form of proof, and that complex dealings – conspiracies, in fact – are a part of human nature and the affairs of states. I am nevertheless predisposed to see as more likely a relatively normal process of succession, in this case a husband-and-wife very close to Akhenaten (the new queen being Akhenaten's eldest daughter) becoming king and queen immediately following Akhenaten's death and then, in turn and after the premature death of the new king, being similarly replaced by the couple who were Tutankhaten/Tutankhamun and Ankhsenpaaten/Ankhsenamun. If there are minor inconsistencies in the evidence, that is not surprising for sources which are minimal in supplying the evidence we need. I accept that a more elaborate interpretation, involving extra kings and a woman (perhaps Nefertiti) occupying the position of king, is possible (and is certainly more entertaining; perhaps Manetho was attracted in the same way) but seems to me not very plausible.

As to how we should name Akhenaten's successor, it is important when referring to a particular source, to spell out how the name was written, preserving the several forms which display a tolerance towards variation. But in general historical discourse I see nothing wrong in keeping to the traditional name for this king, Smenkhkara. Although the evidence is sparse, it is likely that he took an active interest in Amarna, perhaps holding his court there for a time. The city continued to be extensively occupied in the reign of Tutankhamun but there is nothing

to suggest a personal involvement in the city. Even in the time of Horemheb building work was undertaken at the Great Aten Temple. Smenkhkara thus stands as the last probable ruler at Amarna.

For those who wish to pursue the subject further the literature is extensive. The following cover most of the points: R. Krauss, *Das Ende der Amarnazeit. Beiträge zur Geschichte und Chronologie des Neuen Reiches*. Hildesheim, Gerstenberg 1981; J. Samson, *Amarna. City of Akhenaten and Nefertiti; Nefertiti as Pharaoh*. Warminster, Aris & Phillips 1978, Part II, 107–39; M. Gabolde, *D'Akhenaton à Toutânkhamon*. Paris, Boccard 1998; J.P. Allen, 'The Amarna succession.' In P. Brand and L. Cooper, eds, *Causing his Name to Live: Studies in Egyptian Epigraphy and History in Memory of William J. Murnane*. Leiden, Brill 2009, 9–20; A. Dodson, 'Amarna sunset: the late-Amarna succession revisited.' In S. Ikram and A. Dodson, eds, *Beyond the Horizon: Studies in Egyptian Art, Archaeology and History in Honour of Barry J. Kemp*. Cairo, Supreme Council of Antiquities 2009, 29–43; A. Van der Perre, 'The year 16 graffito of Akhenaten in Dayr Abu Hinnis. A contribution to the study of the later years of Nefertiti.' *Journal of Egyptian History* 7 (2014), 67–108.

Ranefer's fragments are published in B. Kemp and A. Stevens, *Busy Lives at Amarna: Excavations in the Main City (Grid 12 and the House of Ranefer, N49.18)*. Vol. I. London, Egypt Exploration Society 2010, 119–27, although without detailed historical discussion.

The context of the faience ring of Ankh-kheperura found beneath a stone pavement at the Small Aten Temple is described in M. Mallinson, 'Report on the 1987 investigation of the Small Aten Temple' in B. Kemp, ed., *Amarna Reports V*. London, Egypt Exploration Society 1989, 115–42, initially on p. 126 and then more specifically on p. 133. The layer in which it was found, [3250], is marked in Section 5, p. 125, Figure 6.10. The ring is given the incorrect catalogue number 8524 rather than 8523 (my fault).

A detailed discussion of the word *akh* is to be found in R.J. Demarée, *The 3h ikr n R'-Stelae; On Ancestor Worship in Ancient Egypt*. Leiden, Nederlands Instituut voor het Nabije Oosten 1983, 263–7.

For Manetho I have resorted to the summary in Sir Alan Gardiner, *Egypt of the Pharaohs*. Oxford, Clarendon Press 1961, 444.

A detailed study of the small stela fragments in the Petrie Museum, UCL401, is Marc Gabolde, 'Le droit d'aïnesse d'Ankhesenpaaton (à propos de deux récents articles sur la stèle UC 410).' *Bulletin de la Société d'Égyptologie de Genève* 14 (1990), 33–47. His are the copies which elucidate the underlying, partially erased texts of the two right-hand columns. I am grateful to Dr Alice Stevenson of the Petrie Museum for giving me the chance to examine the object for myself.

In addition to the many illustrated books on the objects from Tutankhamun's tomb, the photographs taken at the time of the clearance of the tomb (by Harry Burton) and copies of the object descriptions (by Howard Carter with notes on some of the inscriptions by Alan Gardiner) are available online at <http://www.griffith.ox.ac.uk/discoveringTut/>. All hieroglyphic texts are available in H. Beinlich and M. Saleh, *Corpus der Hieroglyphischen Inschriften aus dem Grab des Tutanchamun*. Oxford, Griffith Institute 1989, and A Piankoff, *Les chapelles de Tout-Ankh-Amon*. Cairo, Institut français, 1951–2; *The Shrines of Tut-Ankh-Amon*. New York, Harper & Row 1962. Reginald Engelbach's comments on Tutankhamun's shrines, with photographs, are in his article 'Material for a revision of the history of the heresy period of the XVIIIth Dynasty.' *Annales du Service des Antiquités de l'Égypte* 40 (1940), 133–65. His comment, cited above, is on p. 138, with reference to Pl. XXIV. M. Eaton-Krauss, *The Unknown Tutankhamun*. London, Bloomsbury 2016, Chapter 5 reviews discussions about the precise dating of items within Tutankhamun's tomb. On p. 80 she also discusses the little evidence we have for Tutankhamun's involvement with Amarna.

Hilda Pendlebury's water-colour copies of the painted fragments from the North Riverside Palace are part of the archives of the Egypt Exploration Society. They are presented in detail (though not as colour reproductions of the originals) in F.J. Weatherhead, *Amarna Palace Paintings*. London, Egypt Exploration Society 2007, 257–60.

# Honorary Trustees of the Amarna Research Foundation

**Bob Brier, PhD**

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

**Rita E. Freed, PhD**

Norma-Jean Calderwood Curator  
Egyptian, Nubian & Near Eastern  
Art  
Museum of Fine Arts, Boston

**W. Raymond Johnson, PhD**

Director Epigraphic Survey  
Oriental Institute, University of  
Chicago

**Barry J. Kemp, CBE**

Field Director Amarna Expedition  
Egypt Exploration Society (EES) &  
Professor of Egyptology, Retired  
Cambridge University

**Geoffrey Martin, PhD, LittD, FSA**

Field Director  
Cambridge Expedition to the Valley  
of the Kings  
Christ's College, Cambridge  
University

**Dietrich Wildung, PhD**

Director, Retired  
Egyptian Museum, Berlin

**Richard Wilkinson, PhD**

Director Egyptian Expedition,  
Retired  
University of Arizona

**The Amarna Research Foundation, Inc.**

**3886 South Dawson Street**

**Aurora, CO 80014**

e-mail: [RTomb10@comcast.net](mailto:RTomb10@comcast.net)

website: [www.TheAmarnaResearchFoundation.org](http://www.TheAmarnaResearchFoundation.org)