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Officers and Directors

The President's Papyrus

Greetings Amarnaphiles,

I hope that you are enjoying your summer and that it is not to hot where you live.

In a recent communication from Barry Kemp, he told us that plans for a season of work at Amarna have been approved by the Egyptian Ministry of Antiquities and will commence September 20. This is good news because there is so much yet to be done and you may remember that not too long ago, Barry was not allowed to work at Amarna because of "security reasons". The same was true for many foreign archeological missions. But it would appear that things have stabilized in Egypt politically and things seem to be getting back to a state of normalcy.

As you all know now, this is the season for membership renewals. For those of you who have done so, I want to thank you. And for those of you that have yet to do so, I sincerely hope that you will. I hope that you continue to enjoy our newsletter and believe that what continues to be accomplished at Amarna, as reported in the articles of our newsletter still deserve your financial support. I helped found this organization over twenty years ago and I still believe in its mission to day as when we started. Thanks for your support.

I wish all of our member's good health, prosperity and a great summer.

Best wishes to you all,
Floyd

Tracking Malaria at Amarna

By Nicole E. Smith-Guzmán, Ph.D.
Smithsonian Tropical Research Institute

How can we detect malaria in the human skeletal remains excavated from Amarna's South Tombs Cemetery? What is the likelihood that malaria at Amarna (the center of modern-day Egypt) could spawn a twenty-year epidemic more than 2,000 kilometers away in the Hittite capital of Ḫattuša (the center of modern-day Turkey)? These were the questions that I faced as I began my job as research assistant for Amarna Project bioarchaeologist Jerry Rose in August of 2011 As I very quickly discovered, these questions were anything but simple, leading me to spend the next four years of my life dedicated to the pursuit of their answers.

I began my research by learning as much as I could about the disease and its behavior in modern populations. Malaria is a fascinating disease, whose long co-evolution with humans (and likely our hominin ancestors) advanced a myriad of techniques by which the pathogen – protozoans of the genus *Plasmodium* – continues to wreak havoc on human populations today. Each of the four human malaria species generates a similar but unique reaction in the body, with each having different incubation periods, fever wave rates, and potential to cause a relapse by hiding parasites in the liver. Acute diseases (i.e., those which do not remain active in the body for months or years on end) typically do not leave their trace on the human skeleton; however, malaria is a special case given that it is both an acute and chronic disease simultaneously. Each infection lasts around one month, depending on the species of malaria, but individuals may be infected multiple times, causing chronic illness. In other words, based on malaria's disease ecology, it *should* be possible for malaria to leave its trace on bones. The reason why this skeletal manifestation of malaria had never been investigated in the paleopathological literature was likely the same reason we still do not have a functional malaria vaccine – it is a highly complex and highly variable disease.

Figure 1. Inferior view of the cranium from a Galloway collection individual showing cribra orbitalia.

The hemolytic stage of malarial infection is what makes us feel sick. It is the simultaneous explosion of red blood cells in our bodies, releasing thousands of parasite clones and their waste products into the blood stream, provoking severe malarial anemia in addition to the typical symptoms of fevers, chills, and malaise. Anemia has long been connected with porous lesions on the cranial vault and eye orbits called porotic hyperostosis and cribra orbitalia, respectively. Although these anemic lesions were thought to be caused principally by a diet deficient in iron, some authors have pushed back on this theory recently, implicating megaloblastic anemia (like that caused by vitamin B deficiency) and hemolytic anemia (caused by malaria

and other infectious diseases) as the primary causative agents. In this scenario, we would expect to see drastic differences in the frequencies of skeletal indicators of anemia between areas of the world with rampant malaria and those places with no malaria.

Figure 2. Medial view of the left humerus from a Galloway collection individual showing humeral cribra.

This theory of increased anemic lesions in malarial areas was demonstrated just six months after I began my malarial research in an article focused on malarial prevalence in Britain. In their 2012 article, Gowland and Western showed that higher rates of porous cranial lesions followed spatial patterns of low, marshy environments, historical cases of "fever and ague," and modern distribution of the malaria mosquito vector. Such a meta-analysis should be possible using the vast published literature on cribra orbitalia in the Nile Valley, Jerry Rose encouraged during a discussion of the article. So I set out to do just that in the summer of 2012, with Rose's cabinets of accumulated articles on Egyptian and Nubian skeletons as an invaluable resource. The study, which I later published in 2015, showed a steady rate of cribra orbitalia over time and space in the Nile Valley – a steady *high* rate. With an overall mean of 43% of individuals showing evidence of the porous orbital lesions, cribra orbitalia was much more frequent than at any of the sites surveyed by Gowland and Western in Britain. What could account for this difference in anemia? There were several possibilities including differences in nutrition, exposure to tropical diseases, and the virulence of the malaria species (i.e., *P. falciparum* malaria in Africa would have been much more severe than *P. vivax* malaria in the British Isles). For me, this study emphasized the need for better diagnostic criteria for malarial infection on the skeleton, one which considered not only the cranium, but postcranial lesions and their dynamic interaction. As malaria paleopathologist Teddi Setzer reasoned over coffee with me in April 2012, someone needed to go study a skeletal sample of known malarial exposure to see what lesions showed up. That someone, I thought, might as well be me.

Figure 3. Anterior view of the proximal femora from a Galloway collection individual who died of anemia showing bilateral femoral cribra.

Figure 4 . Right lateral view of the thoracic vertebrae (left) and anterior view of the sacrum (right) from a Galloway collection individual who died of anemia,
showing large porous lesions to the bodies.

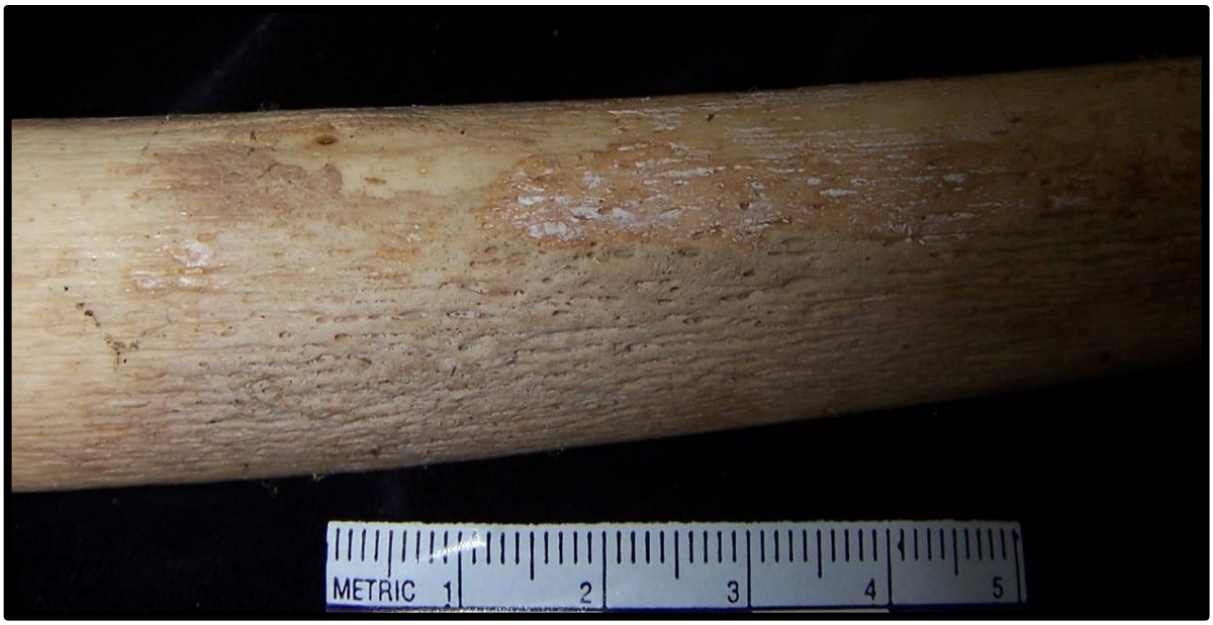

Figure 5. Medial view of the right tibia from a Galloway collection individual showing periosteal new bone formation.

Through contacts with my dissertation committee member, paleoanthropologist Mike Plavcan, I was directed to the Galloway osteological collection, housed in the basement of the Anatomy Department at the Makerere University Medical School in Kampala, Uganda. Here, I was assured, I would find that most individuals would have had malaria and would have received treatment only in severe cases. Since these were individuals who had died in a hospital, most were associated with a specific cause of death. As I prepared for a six-week research trip studying the collection in Uganda, I received two pieces of advice that allowed my research to take a more epidemiological approach. First, Jerry Rose recommended that I set up my data as a cohort study – for every individual I analyzed who had died of malaria, I would analyze another individual of the same age and sex who had died of something else. This way I could be sure that demographical factors were not influencing my results. The second piece of advice came from Cambridge paleoparasitologist Piers Mitchell, who suggested that I compare my findings with a similar reference collection from a non-malarial area as a control sample. I decided to use data I had already collected on the lesions present in the forensic collection at Louisiana State University's FACES laboratory for this critical comparative sample. So in July of 2013, off I went to Kampala.

Figure 6. A view of Kampala from the tower of the Uganda National Mosque.

In the Ugandan collection, I found that indeed porous lesions were common, not just in the cranium, but in focal areas of the humeral and femoral necks, as well as in the spine. These were accompanied by periosteal new bone formation in the lower limb bones, signaling generalized inflammation. All lesions were found at higher frequencies in individuals who had died of malaria. In comparison with the control sample, I found that the Louisiana skeletons had much lower rates of porous and inflammatory bone lesions than the Ugandan skeletons in general. To account for the potential of other nutritional and infectious causes of these lesions, I developed an outcome algorithm using the Ugandan malarial individuals as a gold standard for positive malarial diagnosis. I tried different combinations of lesions until I found the one with the least false positives. Individuals most likely to have had malaria needed at least one lesion of anemia, and one inflammatory lesion. This made sense with what I knew about malaria – illness involved high fevers causing general inflammation, and hemolysis causing severe anemia.

At this point I was finally ready to address the possibility of malaria's impact on the individuals buried at Amarna's South Tombs Cemetery. The presence of malaria during the Amarna period had recently been demonstrated through the ancient DNA of the pharaoh Tutankhamun and other royal family members who once lived at Amarna. Tutankhamun himself was found to have a double infection of two different strains of *P. falciparum* malaria at his time of death. Thus, the city was likely endemic for malaria during the Amarna period. If my meta-analysis of cribra orbitalia in the Nile Valley was any indication, malaria had been present in ancient Egypt since before dynastic times. To calculate a probable prevalence of the disease on the non-elite population, Amarna Project bioarchaeologists Jerry Rose, Gretchen Dabbs, and Heidi Davis worked to record each of the lesions identified as being associated with malaria for each of the South Tombs Cemetery individuals. By inputting this data into the outcome algorithm, I calculated that approximately half of the Amarna individuals showed evidence of a recent malarial infection on their skeletons. New data from the North Tombs Cemetery, currently being excavated and analyzed by Anna Stevens and Gretchen Dabbs, suggests an even higher prevalence of malaria in the individuals buried there.

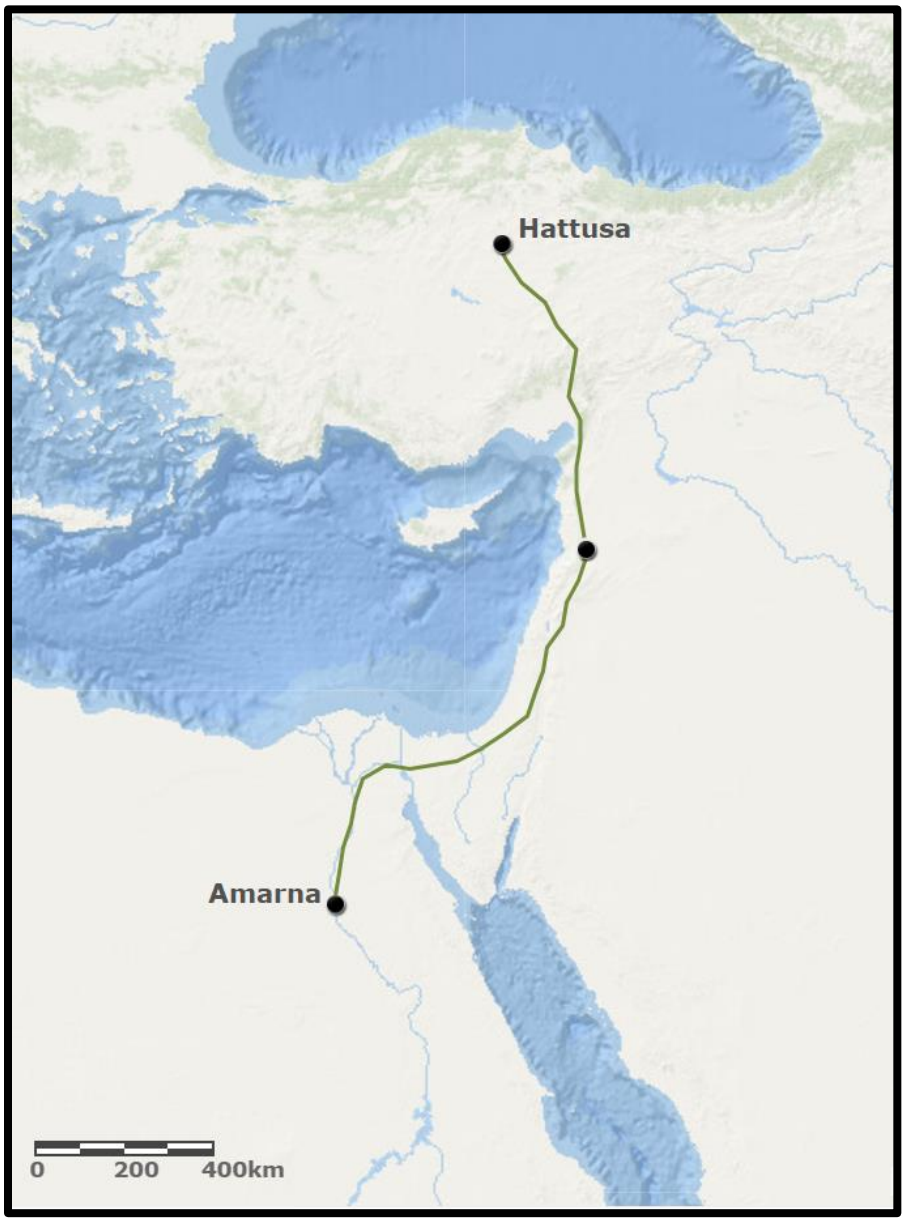

Figure 7. Map of the Near East showing the probable walking route from Amarna to Hattusa with likely site of conflict marked in between. Map created and modified using ArcGIS® software by Esri.

But what of the Hittite plague? From the ancient texts left by both Egyptians and Hittites, we know the two civilizations maintained contact, and that just previous to the aforementioned plague in approximately 1320 BCE, Egyptian prisoners of war had been brought into the capital city of Ḫattuša, which purportedly spawned the epidemic. After the plague killed the Hittite king and his successor, the third in line Mursili II describes the epidemic as affecting all peoples, regardless of age or class. Although many possibilities have been suggested as to the cause of this plague, malaria fits the profile – having a long incubation period of around two weeks and being indiscriminate of age or class, particularly in naïve populations with little or no previous exposure to the parasite. Paleoclimate reconstructions suggest a warm and wet period between 1500 and 1100 BCE, allowing for increased mosquito population size and geographical range. The dominant malaria vector in Anatolia today is *Anopheles sacharovi* – a mosquito whose ability to live at high altitudes and overwinter would have allowed *P. falciparum* malaria to gain a foothold in the capital city of Ḫattuša at the height of the Hittite Empire. Movement of the population into and out of the rural outskirts and surrounding villages would have provided the fuel needed to keep the epidemic going for 20 years, as lamented by Mursili II.

So what does Amarna have to do with it? Since the city was abandoned around 1332 BCE, the former inhabitants, perhaps carrying the malaria parasite, would have had time to move throughout ancient Egypt, including the region from which the Hittites took Egyptian prisoners-of-war ten years later. The high prevalence of malaria in the population as suggested by the skeletal lesions at the Amarna non-elite cemeteries make it likely that this disease at least featured in this and other noted epidemics in the Near East at this time. We are still trying to understand the dynamics of malaria's impact on the population at Amarna through the analysis of the human skeletal remains from the North and South Tombs Cemeteries. A heavier burden of disease on certain demographic sub-groups could reveal whether this disease was endemic, epidemic, or both. What is increasingly clear is that malaria loomed large in the daily lives of ancient Egyptians during the Amarna period and beyond.

Further reading:

R.L. Gowland and A.G. Western, 'Morbidity in the marshes: using spatial epidemiology to investigate skeletal evidence for malaria in Anglo-Saxon England (AD 410-1050).' *American Journal of Physical Anthropology* 147 (2012), 301-11.

Z. Hawass, et al, 'Ancestry and pathology in King Tutankhamun's family.' *Journal of the American Medical Association* 303 (2010), 638-47.

N.E. Smith-Guzmán, 'The skeletal manifestation of malaria: An epidemiological approach using documented skeletal collections.' *American Journal of Physical Anthropology* 158 (2015), 624-35.

N.E. Smith-Guzmán, 'Cribra orbitalia in the ancient Nile Valley and its connection to malaria.' *International Journal of Paleopathology* 10 (2015), 1-12.

N.E. Smith-Guzmán, J.C. Rose, and K. Kuckens, 'Beyond the differential diagnosis: New approaches to the bioarchaeology of the Hittite Plague.' In M.K. Zuckerman and D.L. Martin (eds.), *New Directions in Biocultural Anthropology*. Hoboken, NJ, Wiley-Blackwell, 2016, 295-316.

View across the South Bank of the Amarna Cemetery, photo by Anna Stevens

Wendy Dolling excavates an undisturbed burial of three children interred together in a grave at the North Bank, photo by Anna Stevens.

Kelly Accetta lifts the skeletons from a grave on the South Bank, photo by Anna Stevens.

Reclaiming antiquities land

by Barry Kemp

The Egyptian government owns large tracts of land, some of it under the control of the Ministry of Antiquities. There has long been a temptation for private individuals to take plots of state land for agriculture, housing or industry without obtaining permission. The practice accelerated in the aftermath of the January 2011 revolution. Amarna has seen its share of illegal encroachment, most notably at the important site of Kom el-Nana (where the expedition has, through private donations, surrounded the most important part with a barbed-wire fence, completed last year). When land is taken, government officials pursue those responsible through the courts, but this is a slow process and, without forceful backing from the police, not necessarily effective.

In May of 2017 President Abel-Fattah El-Sisi gave a public address to the effect that the governors of provinces, the interior ministry and the armed forces must put an end to such transgressions. The effect of this locally is that the governor of Minia Province has made Amarna one of the areas where the enforcement policy is to be applied. Accompanied by local inspectors of antiquities, a force from the police and army has very recently reclaimed a substantial area (said to be 600,000 square metres) of land belonging to the Ministry of Antiquities, around the villages of El-Till and El-Hagg Qandil. This has involved the destruction of cultivated fields and irrigation equipment, and the demolition of houses and enclosures. One area of reclamation has been the land adjacent to Kom el-Nana which includes a buffer zone around the site itself. Another is a series of small fields beyond the northern edge of the modern cemetery which occupies the northern side of the Great Aten Temple and more extensive reclamation of fields by the ticket office.

One might feel sad that houses get demolished and carefully tended fields destroyed, but those responsible will have known, through the constant work of the inspectors, that the land was not theirs to take. When the law and the courts are ignored, what is left but forceful repossession?

Barry Kemp with Mahmud Mohammed Bakr (and son)
the unofficial guardian of the Great Aten Temple excavation

Resumption of fieldwork at Amarna

By Barry Kemp

Further investigation of the cemeteries

The long-delayed permit to work at Amarna was finally issued early in April. This was not too late, however, for the assistant director, Dr Anna Stevens, to assemble a team to resume the examination of the cemeteries of the people of Amarna. The previous season (early 2015) had concentrated on a cemetery on the floor of the wadi behind the North Tombs. One of the anthropologists, Gretchen Dabbs, wrote an account in the Sun for June, 2016. The new season, of seven weeks, was intended to sample other areas of the cemetery to see if previous results were typical. Those previous results were remarkable. Almost all of the individuals recovered at this time were aged between around 7 and 25 years of age, their burials modest, with few grave goods and no wooden coffins (the remains of around 40 having been found at the South Tombs Cemetery). Their skeletons showed repeated signs of heavy and damaging labour. There were, in addition, a striking number of graves (nearly half) that contained more than one person. The new results continue the same picture and suggest that it applies to hundreds if not thousands of others who are likely buried in this extensive cemetery. In one area, which had escaped disturbance by robbers, the individuals in multiple graves were sometimes wrapped together in a single mat before interment, confirming that they were buried at the same time.

Anna writes the following general conclusion:

> The 2017 excavations confirm the main results of the 2015 season. The North Tombs Cemetery is a burial ground for young people, who were buried very modestly in textile and basic matting, usually without any burial goods. There is little sense that they were buried in family groups. The working hypothesis for the site remains that these are burials of a workforce, conscripted on the basis of youth and subject to extreme working/living conditions that resulted in large numbers of deaths. The multiple burials are presumably of individuals who died at roughly the same time, and were interred together, sometimes with very little care given to laying out and preparing the body. The overall lack of grave goods, and sense of basic 'care for the dead', suggests that the bodies of the deceased were not returned to their families for burial, and from this we can posit that they were living separately, perhaps in work camps. It may be noteworthy that the main limestone quarries are also located to the north of the city, although there are no signs of settlement nearby.
>
> It is not clear where these people came from. Perhaps they were conscripted from the suburbs of Akhetaten itself, their families unable to claim the bodies upon death. They might alternatively be the children of peasant farmers living on the west bank, the river forming a barrier that prevented the return of bodies to their families upon death. It is also possible that they were brought in to Akhetaten from elsewhere, and could even be foreign slaves.

When a cemetery covers a relatively short period of time, it is not quite like a census or snapshot of the population. Individuals who had lived for a bit longer might have survived to have left Amarna for another destination, with another burial ground their final destination. And if the conditions of their lives had been perhaps only a little kinder so that they survived for another ten or fifteen years then the evidence for them having begun working lives as young people would have been lost. As it is, the generally low age at death suggests the presence of an extra factor, most likely that conditions of life, from an early age, had rendered them especially susceptible to disease and organ failure.

The harsh reality of conscripted labour

A written record of catastrophic death on an organized quarrying expedition has survived from the reign of Rameses IV (*c*. 1155–1149 BC, thus two centuries later than Akhenaten). It is a lengthy text carved on a rock face in the Wadi Hammamat and dated to the king's third regnal year. It contains an itemized list of expedition personnel. In addition to high officials and craftsmen were 5000 'people of the army', 800 'Aperu warriors' (from a region of Palestine and either captured or recruited into the Egyptian army; they appear in a variety of contexts in Egypt in the New Kingdom, including working in vineyards) and 2000 'people of the shrines and establishments of Pharaoh' (civilians, in other words). They were watched over by 50 Medjay police (under a 'deputy chief'), the same kind of police who guarded the desert at Amarna. They were supplied by ten wagons, each pulled by six pairs of oxen, and many porters 'laden with bread, meat and biscuits beyond counting'. The total of the whole expedition is given as 8638 persons. Following this total comes the statement: 'Dead who are omitted from this list: 900.' No cemetery from this event (a true decimation of the expedition) has been found, however.

This raises an uncomfortable topic. How uncomfortable it can be is illustrated by a detailed study by Mark Lehner of the labour that might have been used for the building of the Giza pyramids. In order to put the subject into perspective (though without wishing to draw a specific parallel) he refers the reader to a study by Paul Jaskot (*The Architecture of Oppression*, published in 2000) of the Nazi-run forced-labour camps set up near clay deposits and granite outcrops in 1938 to provide materials for Hitler's large-scale building programme. To begin with, when a labour supply seemed unlimited, a very high rate of death was accepted. Jaskot cites that from 5000 Soviet prisoners in early 1942, only 80 were alive by March.

Another uncomfortable topic is that child labour might have been widely used to build Amarna, something that might have been more common in the past than we like to think. In Britain it reached its peak during the Industrial Revolution, in the second half of the 18th and for much of the 19th centuries, recent studies revealing that it was even more extensive than has sometimes been thought. The autobiographies of working men from this period reveal the terrible effects on people of excessive labour at a time when they were too young adequately to bear it (often coupled with near-starvation), something summed up in this quote, by one mill worker:

> When I was a young man the term 'to have been through the mill' had a grim meaning. It described a mill worker whose childhood had been ruined by hard labour and little sleep, and who, in manhood, looked shrunken and white faced. J.R. Clynes (1869–1924)

Perhaps this is the picture we should have of those buried in our northern cemetery.

Egyptian written sources, even when administrative, pay little attention to people's ages. The Egyptians had no system for registering births and thus of ages for entitlement to benefits or of the onset of obligations. This leaves it to us to picture how their terms for males who were not yet men convert into real ages. One starting point is the unusually detailed account of his career by the priest Bakenkhonsu of the time of Rameses II. He begins: 'I spent 4 years as a promising youngster (***nḏs***). I spent 11 years as a youth (***ḥwn***), when I was a trainee stable master.' In another place, he declares that he 'had passed out from the scribal school as a promising youngster.' He does not say how old he was when he began his schooling, however. As a bright boy, he could have started to read and write from the age of 4 or 5. His time in the stables would then have been between 8/9 and 19/20. This is the range of ages of most of those buried in the north cemetery. The word ***ḥwn*** was also used for young men in the army, especially in the combination ***ḥwnw nfrw*** ('fine young men'). The word could, however, be flexible with respect to actual age to the point when youth had actually passed. In his autobiography, an official of the reign of Senusret III (Ikhernefret) states

that ‘I was a young man (***ḥwn***) of 26 years.’ Funerary texts from the Late Period go so far as to record the deaths of ‘young men’ of 32 years and 36 years.

In the New Kingdom, especially in administrative texts, another term for a young male became common: ***mnḥ***. The word is contrasted to words for ‘child’ and ‘man’ and thus more specifically indicates an adolescent. ‘Lad’ or ‘stripling’ are two English translations that have been used. In the Instruction of the scribe Any, being a ***mnḥ*** is the time when ‘you take a wife, and you are settled in your house’. The most pertinent examples are to be found in collections of texts which scribes of the Ramesside Period kept with them as models for different kinds of compositions. They are often referred to as Miscellanies. One provides a list of the staff of a temple-owned vineyard: 7 men, 4 lads (***mnḥ***), 4 old men, 6 children (***šrỉ***): total 21 persons. One regular theme of these collections is the contrast between the fortunate lot of the scribe and all other (male) professions, amongst them that of the soldier.

> ‘Man comes forth from his mother’s womb and runs to his master: the child (***šrỉ***) is in the service of a soldier, the lad (***mnḥ***) is a skirmisher. The old man is put to be a cultivator, and the grown man to be a soldier.’ (Anastasi II, 7.3–4)

> ‘All subjects are mustered, and the finest of them are taken. The grown man is put to be a soldier; the lad (***mnḥ***) to be a skirmisher; the child (***šrỉ***), he is brought up (only) to be taken away from his mother’s bosom. He reaches manhood, his bones being battered.’ (Anastasi V, 10.4–10.7)

As for the life of a soldier: ‘He is taken whilst young (***nḫn***), (being) of a pole’s length, and imprisoned in a barrack’ (Anastasi III, 5.6–7). A ‘pole’ is a unit of length thought to be up to one and a third cubits (i.e. *c.* 70 cm).

Other ***mnḥ*** -boys could be groomed so that they could be admired, although still appearing amongst slaves presented to Pharaoh, as we find in comprehensive lists of things to be made ready for Pharaoh’s arrival:

> ‘Canaanite slaves of Khor, fine lads (***mnḥw nfrw***), and fine Nubians of Kush fit to give shelter with their fans,’ etc. (Anastasi IV, 16.4–5)

> ‘Slaves of Kerke and lads (***mnḥ***) from the priestly phyle’ (Anastasi IIIA, 5–6= IV, 16.2)

The personnel for military expeditions and work in quarries seem generally to have been interchangeable. Even the word which is translatable as ‘army’ is also used to describe expeditions which did not have fighting as their main purpose. The convergence is apparent in the method that Akhenaten used at the beginning of his reign for the supply of sandstone blocks for his buildings at Karnak, as recorded in a text at his quarry at Gebel el-Silsila. The responsibility for providing these blocks was laid on a high official and on ‘the leaders of the army to perform a great forced-labour duty of quarrying sandstone’. The army, by the New Kingdom, seems to have become the insatiable, predatory collector of people (primarily adolescents) by force from their homes for service involving physical exertion — fighting or cutting and moving stone, it did not matter which. In another text in the Miscellanies, a model letter, a scribe writes to his superior thus:

> The vizier brought three boys (***ʿḏd***), saying: ‘place them as priests in the Mansion of Merenptah… in the House of Ptah.’ And people seized them and took them northwards, saying: ‘They shall be soldiers.’ Go, overtake them and write to me of their condition. (P. Bologna 1094. 5.2–5.5)

In *ʿḏd* we have yet another word for a boy, and (again in the Miscellanies) is used for one who is a pupil studying to be a scribe. Here even the priesthood of a prestigious temple has become a victim of forcible recruitment.

Whilst we cannot be sure, the boys and young men buried in the north cemetery fit fairly well the profile of conscripted youths, as they appear in New Kingdom scribal texts. The scornful tone of these texts makes one think, in the first instance, that what is being depicted is a caricature and that we should be wary of taking them at face value although it is still possible to read them as having a general ring of truth. But now, in the north cemetery at Amarna, we probably have an illustration of the harsh reality behind them. Just how harsh is brought out by another of the cemetery's characteristics: a seeming preponderance of girls and young women. In her article in the last issue Gretchen cautioned about the statistics:

> 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.

This still leaves a large number of females. Remembering that the cemetery is not like a census, did females succumb more readily to the factors leading to early death? But even in extreme conditions, would this really happen? Although we can posit in general terms the status of these people we know far too little about their lives, even whether they all lived in the same place and did the same kind of work. Egyptian texts supply terms for girls and young women, which are often feminine versions of the terms for their male counterparts. Scribes, including those who compiled the Miscellanies, were, however, far less interested in them as administered entities and so, sadly, do not provide us with the kind of details that shed light on this particular topic.

In broad terms the relation between the Egyptian state and the people was based upon an unstated social contract. Through a multitude of complex institutional arrangements people had opportunities to receive subsistence rations which were carefully calculated and distributed. In return they were expected to perform duties. These were often light, as in the running of cults at temples and tombs, and so the positions were desirable and a matter of pride. The same approach, of mutual obligation in which the state (ultimately Pharaoh) provided and the people served, also covered short-term projects which demanded large-scale participation. And so the requirement of a large labour force to serve a grand royal vision is an important part of the story of ancient Egypt, going back to the building of the pyramids. Akhenaten's father, Amenhetep IV, would have required an army of workers particularly for his buildings and colossal sculpture at Thebes and for the digging of the giant ceremonial lake, the Birket Habu, at western Thebes. The requirement must have reached its limit in the reign of Rameses II when, to judge from the scale of monumental building and statuary, the whole country must have become a giant camp of conscripted labour. Rameses IV's expedition to the Wadi Hammamat is a further example. The leaders of this expedition — quite a large group — were named and would have been there in fulfillment of their duties as senior and well-rewarded figures in the administration. The bulk of the expedition would have been there because they had been conscripted, but could at least have expected to be given rations supplied by the ox-wagons and porters. What went wrong, leading to the deaths of a tenth of the expedition, the sources do not say. It is against this background that we should view the north cemetery at Amarna.

When large projects were commanded, the organizers must have decided beforehand on a rough total of people required and what their needs were. Written demands would then have been sent to administrative departments throughout the country, with detailed quotas of people and commodities which had to be delivered. For a local official, satisfying his quota would have been paramount. Particularly in the absence

of written information on ages, he might not have been too scrupulous in how young many of the people were whom he demanded from their families, or whether all of them were boys, especially if this was a time of ambitious royal projects when one set of quotas could be followed by others.

From the beginning, it has been one of the main aims of the Amarna expedition to explore the nature of life in the city and in the New Kingdom in general through detailed attention to the archaeology. Excavations at the cemeteries, which began in 2005/6, are gradually adding a whole new dimension to the picture, one which still requires considerable further work and thought.

Our next fieldwork

Our fieldwork is planned to start again in September, this time at the Great Aten Temple. Last time (early 2015) we stopped at a point where we were beginning to uncover areas of the original floor of the temple enclosure, later buried by rubble which, in places, has not been disturbed since the end of the Amarna period. This offers a chance of detecting the remains of structures which served purposes supplementary to the cult of the Aten but which are not well understood. It will also be an opportunity to resume repairs to the fabric of the temple.

And our thanks to …

We remain enormously indebted to the Amarna Research Foundation for its continuing support. Thank you all once more.

Notes

The Wadi Hammamat text of Rameses IV: K.A. Kitchen, *Ramesside Inscriptions, Historical and Biographical* VI. Oxford, Blackwell, 1983, 14.9; *Ramesside Inscriptions, Translated & Annotated: Translations* VI. Chichester, Wiley-Blackwell, 2012, 15; L. Christophe, 'La stèle de l'an III de Ramsès IV au Ouâdi Hammâmât (no 12).' *Bulletin de l'Institut français d'Archéologie orientale* 48 (1949), 1–38.

A short explanation of who the Apiru were is given in J.C. Darnell and C. Manassa, *Tutankhamun's Armies; Battle and Conquest during Ancient Egypt's Late 18th Dynasty*. Hoboken, NJ and Chichester, Wiley, 2007, 153–4.

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Autobiography of Bakenkhonsu: K.A. Kitchen, *Ramesside Inscriptions, Historical and Biographical* III. Oxford, Blackwell, 1980, 298.3–298.4; *Ramesside Inscriptions, Translated & Annotated: Translations* III. Oxford, Blackwell, 2000, 214; B. Davies, *Ramesside Inscriptions, Translated & Annotated: Notes and Commentary* III. Chichester, Wiley-Blackwell, 2013, 242–4.

The various texts of the Miscellanies are published as hieroglyphic transcripts in A.H. Gardiner, *Late-Egyptian Miscellanies,* Brussels, Fondation Égyptologique Reine Élisabeth, 1937; and as translations in R.A. Caminos, *Late-Egyptian Miscellanies*, London, Oxford University Press, 1954. For the 'pole' unit of

length, see A.H. Gardiner, *Egyptian Grammar, being an Introduction to the Study of Hieroglyphs,* 3rd, rev. ed. Oxford, Oxford University Press, 1957, §266.2. Also P. Chester Beatty IV, vs. 5.6–6.1; V, rt. 7.4–7, translated in R.M. and J.J. Janssen, *Growing Up and Getting Old in Ancient Egypt*. London, Golden House Publications, 2007, 86–7.

Akhenaten's Gebel Silsila text is translated in W.J. Murnane, *Texts from the Amarna Period in Egypt*. Atlanta (GA), Society of Biblical Literature, 1995, 29–30.

One of the undisturbed burials on the North Bank at the North Tombs Cemetery, here of three young individuals.

What do personal names tell us about the Amarna Period?

By Barry Kemp

Personal names have meanings and etymologies, but how significant are they to the bestowers, the owners and others? When I asked my parents why they named me Barry, their answer was that they wanted a name that was not easily abbreviated and Barry was their choice. That was all. As far as I know, there had never been a Barry in the family. The name comes from an Irish word meaning 'spear' but I do not think that was in their minds. As for my middle name, John, it was the first name of my father's father, who had died some years before I was born. I am one of probably a majority of English people whose names are of weak or no significance or represent a moment of sentimental reflection. At the other extreme are names from England's Puritan period of the 16th and 17th centuries.

> A wide variety of Hebrew names came into common usage beginning in 1560, when the first readily accessible English Bible was published. But by the late 16th century many Puritan communities in Southern Britain saw common names as too worldly, and opted instead to name children after virtues or with religious slogans as a way of setting the community apart from non-Puritan neighbors. Often, Puritan parents chose names that served to remind the child about sin and pain.

An example is Praise-God Barebone/Barbon, a member of the British Parliament in 1653, who gave one of his sons the name Nicholas If-Christ-had-not-died-for-thee-thou-hadst-been-damned Barebone/Barbon (who went on to become a noted economist). Some of the names of this period, especially for females, have survived, such as Felicity and Prudence. I would guess that parents now choose these names because they are euphonious rather than to express hope for particular moral characteristics.

Most ancient Egyptian personal names — though not all — are translatable, and this leaves one wondering what, if any, wider significance they had. More particularly, given that the promotion of the cult of the Aten lies at the heart of the Amarna Period, we might look for signs that, as in Puritan England, people of this time were moved to introduce, into the naming of their children, or even into a renaming of themselves, something of the fervour which we like to see in Akhenaten's mind.

Naming clearly mattered to the king himself. He signalled the new alignment in his thoughts by changing the second of his formal names from Amenhetep ('Amun is content') to Akhenaten ('devotee of Aten'), although his first formal name ('beautiful are the forms of Ra, the chosen one of Ra') gave priority to Ra, the sun god of whom the Aten was its visible manifestation. Amenhetep was a favoured name of the Eighteenth Dynasty and fits the Theban origin of the family and their promotion of the cult of Amun to national prominence. Four of the kings, however, were given the name Tuthmosis/Thothmes ('Thoth is born') a family tradition that is harder to explain. It illustrates a fairly common practice in ancient Egypt for a name, chosen for reasons which we cannot elucidate, to become a strong family identifier (Intef is an example from earlier centuries, and for a time early in the Eighteenth Dynasty the name Iahmes, 'The moon is born' came into vogue). Tuthmosis was the name of Amenhetep III's son (presumably the eldest) who was chosen to succeed but died before his father. If this name had been given to the next son, would he have changed his name from Tuthmosis to Akhenaten since the name and image of Thoth seem to have been acceptable to Akhenaten? The most important members of his family also took or were given names which honoured the Aten: Nefernefru-aten Nefertiti (his wife), and Meritaten, Meketaten and Ankhsenpa-aten, his three eldest daughters. Tutankhaten (evidently a son) is another, and the fact that these Aten names carried a sense of allegiance that mattered is shown by the change of Tutankhaten's name to Tutankhamun, in parallel to the change of Ankhsenpa-aten's name to Ankhsenamun, once the rejection of Akhenaten's ideas had got under way.

The names of the royal family — as in the first cartouche names of Akhenaten and of his two successors and in the name of his youngest daughter, Setepenra ('chosen of Ra') — also illustrate an intellectual technicality of the times. In formal contexts, most obviously the decoration of temple walls, the object of veneration is the orb of the sun, named the Aten. But in other contexts it was acceptable, indeed preferable, to use the name Ra in its place. This reflects a line of thinking which made Aten one of several of the elements of which the sun-god (fully defined as Ra-Horakhty, 'Ra-Horus-of-the-horizon) was composed (I use a scene from the Ramesseum to illustrate this, Figure 1). People in the Amarna Period evidently kept to this nuanced use of the two names Aten and Ra.

Figure 1. An Egyptian table of the elements, with the composition of the sun-god explained, according to a text in the Ramesseum, mortuary temple of Rameses II. The temple offerings are to include (1) Ra, (2) his disc/orb (Aten); (3) his body; (4) his hand; (5) the two horizons; (6) Maat in the bark of Ra. These six elements are a subset of 38 component parts of Ra-Horus-of-the-horizon (Ra-Horakhty).

The preference within the royal family for Aten names had little obvious influence on the senior officials and courtiers at Amarna. Of the owners of the rock tombs and known owners of houses only the vizier Nakht (whose full name was Nakhtpa-aten, house K50.1 and tomb 12), the royal scribe and general Pa-atenemheb (tomb 24) and the chief bowman and master of the horse Nekhuempa-aten (original house uncertain) used a name in which the Aten is recognizable, although several had names honouring the sun-god Ra. The 'chief of seers' (whom we see as the chief priest of the Aten) Meryra is one, although Panehsy (Figure 2) and Pawah, both of them also senior figures in the cult of the Aten (Pawah had the same title as Meryra), were not. The sculptor who might have made the painted head of Nefertiti was called Thutmose (or Thothmes), the name of the god Thoth written with the ibis-headed sign for the god, and the name continuing the liking of this name by Akhenaten's forebears. Another way of expressing loyalty in the New Kingdom was to have a personal name compounded with that of the king (or with the word 'ruler', *heka*). This was a practice often followed by men of foreign origin. We have one example from Amarna: Neferkheperu-hersekheper, the

first element in his name being Akhenaten's first name shorn of the word Ra, the name translating as something like 'Neferkheperur(ra)-brings-me-into-existence'. This was the name of the 'mayor of Akhetaten', owner of tomb 13 (Figure 3). Another official with a similar name was Neferkheperu-neheh ('Neferkheperur(ra)-for-ever'), known from a hieratic jar label and so someone not necessarily resident in the city.

Figure 2. The 'first servant of the Aten' Panehsy, depicted in his tomb at Amarna, his name written behind him in a vertical column of hieroglyphs.

It would be wrong to conclude, however, that to some individuals what their name expressed did not matter. For a few changed their names. A figure at the Amarna court, for whom we have both his house (P47.19) and his tomb (no. 11), was a royal scribe and general (and steward for Amenhetep III). When he moved to Amarna he had the name Ptahmes and this was recorded on a limestone door frame (which perhaps he had transported from his former house). The hieroglyphs for Ptahmes were filled with gypsum and the name Rames carved over the top. His neighbour, two houses further along the same street, was the sculptor who made the painted head of Nefertiti. If the ivory horse-blinker inscribed with the name of 'the chief of works and sculptor' Tuthmosis/Thothmes really was the owner of this house, it had belonged to someone whose scruples in the matter of personal names were less. A similar change of name is known from Memphis/Saqqara. A relief (now in Berlin) from a Saqqara tomb had belonged to a 'priest and steward of the House of the Aten' whose original name, Merytneith, had been changed into Merytra (but only in two places out of three). But such changes seem to have been rare. Within this elite group of men we can see no consistency of thinking. A few chose to align themselves with the king's ideas whilst for others it mattered less, and there was evidently nothing in court practice to force them to think differently.

It was quite common in the New Kingdom to abbreviate one's name to the point at which its meaning was no long explicit. Tuyu and Yuya, Akhenaten's grandparents, are examples. Another is variously spelt Hiy/Huw/Huya. We can tell from some examples that it is an abbreviation of Amenhetep (specifically Amenhetep I as god). The interest here is that a Huya was the steward of Queen Tiy (and owner of Amarna rock tomb no. 1). The fact that his name was accepted implies that it had become simply a name and that

people had generally stopped thinking about its origin and meaning. The name of Akhenaten's chief of police Mahu was likewise an abbreviation of Amenenheb ('Amun is in festival'). It is inevitable from the nature of the sources that most of the names we have are of men. But we should note a woman who belonged to the royal circle, Nefertiti's sister and perhaps the future principal wife of Horemheb. She kept the name Mutnedjmet ('Mut is sweet'), honouring the goddess who was the consort of Amun.

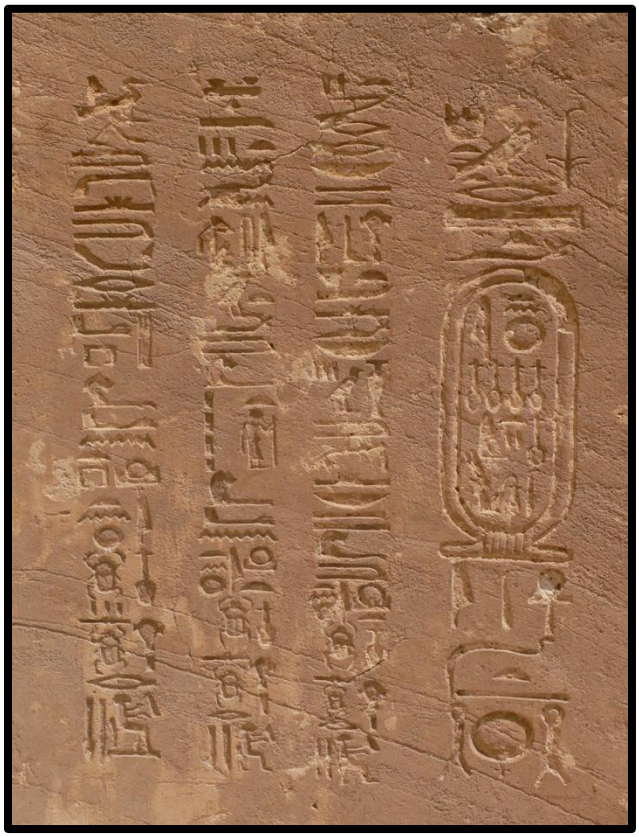


Figure 3. Façade of the tomb of the 'mayor of Akhetaten', Neferkheperu-hersekheper. His name comes at the end of the second, third and fourth columns of hieroglyphs from the right.

This kind of evidence suggests a widespread pragmatic attitude to the times: the Aten had gained greater recognition than before, but not particularly at the expense of family custom. Most officials, who would have been born before Akhenaten's changes, did not alter their names out of respect for his ideas despite their dependence upon him and their protestations of loyalty.

Outside those with senior positions, we have relatively few names of people who are likely to have lived at Amarna. A wooden coffin from one of the general cemeteries (the South Tombs Cemetery) had belonged to a woman who alternated the name Hesy-enaten with Hesy-enra ('one praised by Aten'/'one praised by Ra'), a revealing alternation in itself. A stela from the Workmen's Village (Figures 4 and 5) gives us the names of one fairly lowly family: a man, his wife, one son, four daughters and a married woman (perhaps the son's wife). Despite calling himself 'one praised by the living Aten' (an interesting sign that ordinary people saw the Aten as having a personally benevolent aspect) he had kept his name which honoured the god Ptah, Ptahmay (short for Ptahemheb, 'Ptah is in festival' or Ptahemhat, 'Ptah is at the fore'), and had given two of his daughters the name Bakist ('servant of Isis', one of them perhaps having died before the birth of the other). The remaining names record no divine associations. It is reasonable to think that some at least of the children might have been born at Amarna. To judge from the main scene and prayer on the stela, Ptahmay felt a particular affinity to Isis, but his stela also records a person making his own adjustment to the times, modifying his personal pantheon to take in the Aten.

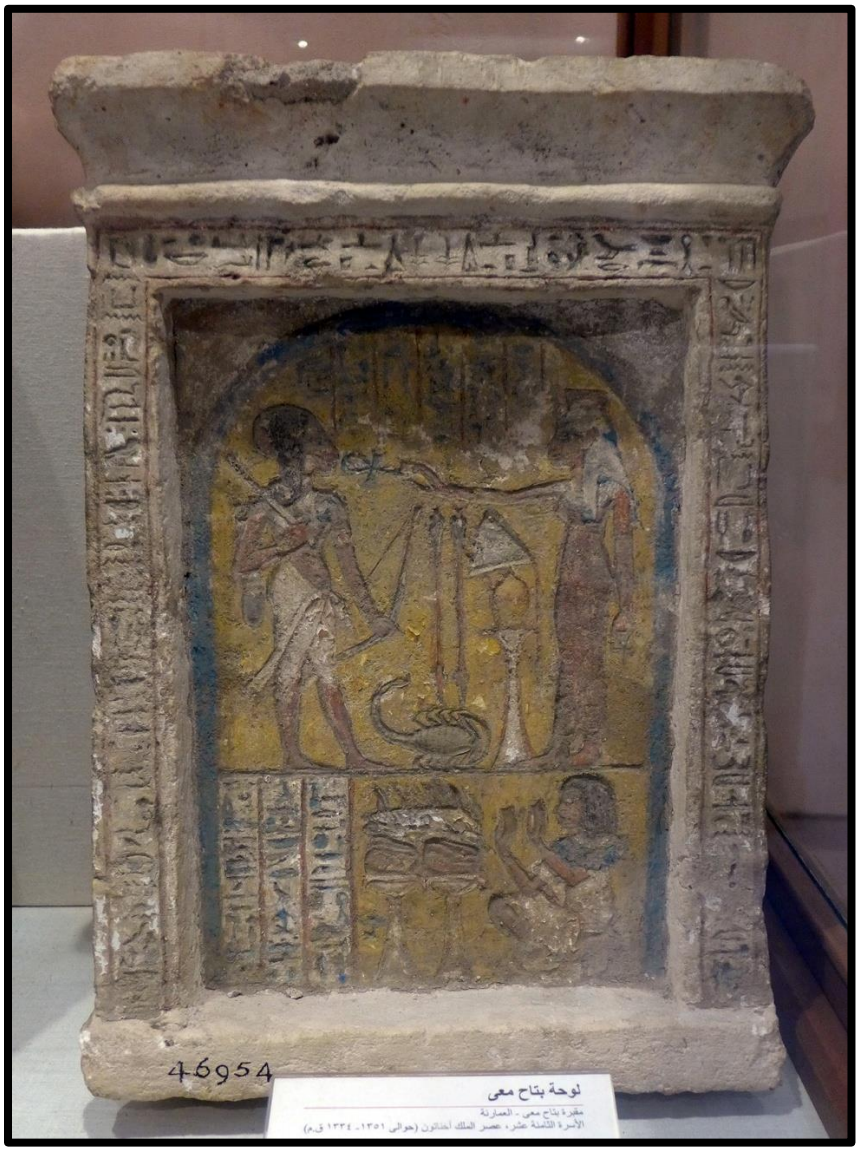


Figure 4. The stela of Ptahmay in the Egyptian Museum, Cairo. Ptahmay, who is given no title, offers a prayer to the saviour-god Shed, protector against scorpions. The goddess Isis stands in front of Shed.

A published list of names of men on inscribed objects found in the city (many of them involved in the production of commodities and written on the shoulders of pottery amphorae) must include a proportion from outside Amarna, particularly those working in vineyards in the north. Out of 86 names, only 3 (or 5) use the name of the Aten, roughly the same number as names built around Amun. An example of the latter is a man responsible for producing wine for the 'House of the Aten' whose name was Amenemipet ('Amun is in Luxor'). The name Nebamen ('Amun is my lord') appears three times in the list, perhaps for the same man.

Another source of names is two fragments of accounts papyri (provenance unknown) which record deliveries of commodities to a river boat at places in Upper Egypt, possibly the Theban area. Each person making the delivery is identified by name and parentage, providing a sample of 46 personal names. Four of the names are compounds using the name Aten: Nebpa-aten ('The Aten is lord', a father), Baketpa-aten ('Servant of the Aten', a daughter), Pa-atenemweskhet ('The Aten is in the Broad Hall', the name appears

twice for a female but linked with different husbands and so perhaps there were two women with this name) and Pa-atennakht ('The Aten is strong', a father). The riverine villages had regular contact with an institution and thus would have heard about what was happening in the wider world. The news of Akhenaten's ideas and actions seems to have been received with positive interest amongst at least a modest proportion of the people concerned. It might signal no more than a pragmatic adjustment by powerless people to a new regime, but in its tiny way it cautions against thinking that Akhenaten's moves caused national outrage. The Aten names appear to cover three generations and it is even possible that the document dates to after the Amarna Period, perhaps as late as the early Nineteenth Dynasty, thus some 40 to 50 years after Akhenaten's death.

Figure 5. Left side of Ptahmay's stela. At the top he is shown seated and waited on by a woman who is identified as his wife, Thefy. Ptahmay's name is written above him. The middle columns state that he is 'one praised by the Aten'. In the bottom scene two of his daughters, named Heket (?) and Neferu, entertain him with music and dance. The height of the stela is 44.4. cm.

What do personal names tell us about the Amarna Period? Only that people were individuals holding opinions from across a broad spectrum, just as today. Unanimity of view is not a natural characteristic of human groups. Some individuals will hold to one opinion, others to one that is antithetical, and most will have a weak interest somewhere in between. The distinctive Puritan names which I mentioned at the beginning and which illustrate so well the temper of the times are, in fact, not common. Most people living at that time, and naming their children, followed older conventions. The list of those who signed the death warrant for Charles I has many Johns and Henrys and none with Biblical or odd Puritan names. The pattern of personal names of the Amarna Period is really what we should expect, particularly since their owners were living in a society which was only just beginning to discover partisanship based on ideas (as distinct from family and dynastic considerations).

Notes

The quotation on English Puritan personal names comes from:

http://www.slate.com/blogs/the_vault/2013/09/13/puritan_names_lists_of_bizarre_religious_nomenclature_used_by_puritans.html

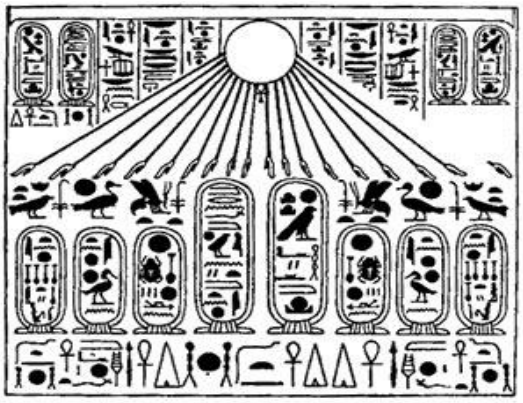
The main source for personal names in the Amarna Period is Robert Hari, *Répertoire onomastique amarnien*. Aegyptiaca Helvetica 4. Genève, Éditions des Belles-Lettres, 1976. H. Ranke, *Die ägyptischen Personennamen*, 3 vols, Glückstadt, Augustin, 1935–76 is the fundamental reference source for ancient Egyptian personal names generally. That the names Huya and Mahu are, respectively, abbreviations for Amenhetep and Amenemheb are referenced in I, 234.12; 233.18; II, 127, 218–9, 239 and I, 163.13; II, 127.

The names of most of the leading figures at Amarna are given in translation (with references) in W.J. Murnane, *Texts from the Amarna Period in Egypt*, Atlanta (GA), Society of Biblical Literature, 1995.

The stela of the man Ptahmay found in a chapel at the Workmen's Village is now in the Egyptian Museum, Cairo and is published in T.E. Peet and C.L. Woolley, *The City of Akhenaten* I. London, Egypt Exploration Society, 1923, 96–7, Pl. XXVIII.1–3.

The list of names (with titles) found inscribed on objects from the city is in J.D.S. Pendlebury, *The City of Akhenaten* III, 2 vols, London, Egypt Exploration Society, 1951, 176–9.

The fragments of accounts papyri (which are in The Brooklyn Museum) are published and discussed by V. Condon, *Revue d'Égyptologie* 35 (1984), 57–82; J.J. Janssen, *Varia Aegyptiaca* 1(3), 109–12; V. Condon, *Varia Aegyptiaca* 2(1), 23–29.



Fears in the Night
By Barry Kemp

Countering imaginary fears

Many texts from the New Kingdom detail the imaginary fears that stalked Egyptians (in contrast to the real fears of hostile accusations by others, being seized for conscription, and sickness and injury). These imaginary fears gave purposeful shape to life's misfortunes. One direction of blame was towards the spirits of the dead. Whilst in one frame of mind the dead could be revered, the word used to describe this honourable state (*akh*) could, when worries became uppermost, be transformed in meaning to refer to something akin to the modern idea of a poltergeist.

> Satisfy the *akh*; do what he desires; and abstain for him from his abomination, that you may be safe from his many harms. Every misfortune is his. The head of cattle taken from the field? It is he who did it. Any damage (to) the threshing-floor in the fields? 'It is an *akh*!' they say again. Uproar in the house? Hearts are discouraged? All of these are his doing (Instruction of Any).

Spells offered protection from a wide range of threats, real and imagined, in one case 'male snake, female snake, scorpion, reptile, male dead or female dead' (who are prevented from entering the house after it has been sprinkled with a mixture of garlic and beer; Borghouts spell 121).

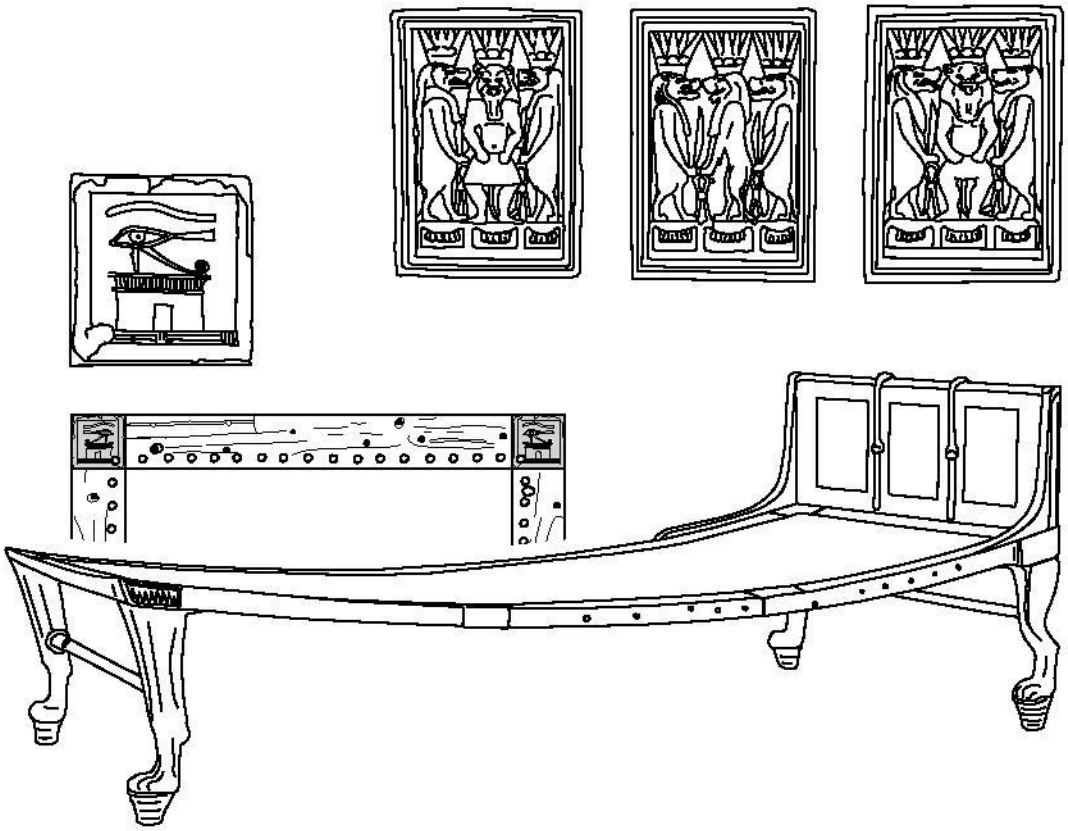


Figure 1. Drawing (by M. Bertram) of the Yuya-Tuyu bed in the Egyptian Museum, Cairo, based on illustrations in the two publications cited above and photographs by B. Kemp.

Such spells depended on harnessing the power of certain gods, amongst them Ra, Horus, Seth, Nephthys and Isis. One spell is even addressed to both Ra and Aten (Borghouts spell 63). For those who used them there were instructions for what to do and what to recite in order to open up the necessary channel of contact with the gods. What is found in excavation, however, suggests that it was not necessary to possess images of most of these gods. It was enough to know and speak their names. The principal exceptions in the New Kingdom were three. Two of them were imaginary beasts, Bes and Taweret, whose characteristics were variously interpreted at the time. It is also not clear if the name Bes was invariably given to the former. The third is a more abstract symbol but one, nevertheless, thought to hold great power, the Eye of Horus (*Wedjat* in Egyptian). All three form the decoration of one of the beds found in 1905 in the tomb of Yuya and Tuyu, Akhenaten's grandparents, in the Valley of the Kings. It is to be seen in the Egyptian Museum, Cairo, where it has the catalogue number 51110 (Figure 1).

The bed is a good example of Egyptian craftsmanship in wood. Its length is 1.78 m, its width 0.78 m, and its height 0.78 m. Its basic design is standard for ancient Egyptian beds but the status of its owners is advertised by the areas of decoration in gold leaf (over a layer of plaster) which are prominent on both the front and back of the head board and occur on small gold plates fixed to the wooden bed frame, at both ends and along the sides.

Figure 2. The head board of the bed from the tomb of Yuya and Tuyu, in the Egyptian Museum, Cairo. Photo by B. Kemp.

The front of the head board has three separate panels (Figure 2). Each has been made by laying on to the surface of the wood areas of gypsum plaster which have been modelled in very low relief and then covered with gold leaf. Within a double frame stand three figures. Those at the sides show a standing corpulent woman (in other places sometimes made to look more like a hippopotamus) with short legs whose head, appearing between thick tresses of hair covering her shoulders, is that of a crocodile. The remainder of the hair hangs down the back as a long plait reaching to the ankles. Her paw-like hands rest on an object representing a 'rolled up herdsman's shelter of papyrus' which is actually the hieroglyph which communicates the word for 'protection', *sa*. At the same time, she holds a long butcher's knife. She is the

goddess Taweret, 'The Great One'. Between each pair stands Bes. His body when seen from the front is that of a male human dwarf, feet splayed, dressed to resemble a lion. A short kilt from which hangs a lion's tail covers his thighs, and a mask composed of the mane and ears of a lion surrounds his face. In the centre panel, however, he is shown in profile and is now fully a lion, his front paws also resting on the *sa*-hieroglyph. All three of the figures wear a head-dress shaped like the flower of a lily and stand on the hieroglyph for the word 'gold'.

Figure 3. The centre panel of the reverse side of the head board of the bed from the tomb of Yuya and Tuyu, in the Egyptian Museum, Cairo. Photo by B. Kemp.

The back of the head board is similarly divided into three panels of decoration made from gilded low-relief plaster. One (on the left) shows Bes and Taweret facing each other, Bes in this case in profile as dwarf human beating a tambourine as well as carrying the *sa*-symbol slung on one arm. On the other (on the right) Bes appears twice in profile, once with tambourine and once with a butcher's knife. It is the central panel that arrests the attention (Figure 3). Bes fills it, facing the viewer (supposed to be an evil spirit itself) with arms outstretched so that he can support symbols of power, including the *sa*-hieroglyph (repeated four times, as is the *ankh*-sign for 'life'). A pair of extended wings adds the possibility that he can swoop on malevolent forces.

If we return to the front side of the bed and focus attention on the foot end, above each of the two corners, where the frame is attached to the legs, the square space has been covered with plaster and then gold leaf (Figures 4 and 5). In both cases a design has been neatly incised. It shows an eye resting on a pediment. This is no ordinary eye but the eye of the god Horus which, in an ancient myth, had been ripped out by the god Seth. It was seen as having a life of its own, one of its powers being that of safeguarding both the living and dead.

Figure 4. One of the gold-covered plates at the foot end of the bed from the tomb of Yuya and Tuyu, in the Egyptian Museum, Cairo. Photo by B. Kemp.

Figure 5. Close-up picture of Figure 4. Photo by B. Kemp.

Daylight, and in Egypt this is often bright sunlight, together with being in the midst of busy life, are in themselves powerful suppressants of fears created within the imagination. When both fade, night encourages them to return. The long hymn to the Aten admits this.

When your movements cease and you set in the western horizon,
The land is in darkness, in the manner of death.
(People), they lie in their bedchambers, heads covered up, and one eye does not see another.
All their property is stolen, although it is beneath their heads, and they do not realize it.
Every lion is out of its den, all creeping things bite.
Darkness gathers, the land is silent.
The one who made them has set within his horizon.

Figure 6. Faience amulets from the Workmen's Village: left, Bes (obj. 7344); right, Taweret (obj. 7265). They originally had tiny suspension loops at the top. Photo Amarna Project.

Figure 7. Eye-of-Horus (Wedjat) ring made from faience (obj. 34128) and found in a housing area in the Main City. Photo Amarna Project.

Having taken leave of the earth, the Aten offers no protection against the dark forces which are now released. This matches the absence at Amarna of images of the Aten which might suggest that people looked to him for protection. Evidently they did not. The Yuya-Tuyu bed dates, of course, to before the reign of Akhenaten. I have chosen it because it is a particularly vivid expression of combat against night fears using frightening invented beings that were a match for invisible assailants. The same three figures — Bes, Taweret and the Eye of Horus — were by far the commonest images of imagined protectors at Amarna. We see this in tiny designs made in usually turquoise-coloured glazed materials to be worn as amulets (Figure 6). Mostly they are made to be suspended from a thread as part of a collar. But the Eye of Horus was also the commonest design for a finger ring (Figure 7). They were worn in life, and accompanied the dead in their graves, as has emerged from the excavations at the South Tombs Cemetery. The scope for images of Bes extended further. An ostracon depicting Bes (his name given a variant spelling) was found in dumps outside the Royal Tomb at Amarna (Figure 8), presumably left by one of the workmen; whilst the plate or bezel from a bronze ring found at the Stone Village is so small as to point to it having been made for a child (Figure 9). A gold signet ring with the image of Bes is also claimed to have come from the Royal Tomb. These two rings, in fact, offer 'a nice illustration of the shared symbolic repertoire that existed across vastly different social classes in the realm of personal protection, status difference expressed largely via the materials used.'

Figure 8. Ostracon from debris outside the Royal Tomb at Amarna (obj. 272). After G.T. Martin, *The Royal Tomb at El-Amarna* I. London, Egypt Exploration Society, 1974. Pl. 49, p. 75. Height 25.7 cm.

At the Workmen's Village, figures of Bes and in one case Taweret were painted on one of the walls in at least two of the houses (Figures 10 and 11). The location of one was in the front room of the house and not in the bedroom. Was this because it was to deter evil beings who would enter by the front door? The Workmen's Village was unusual in several respects, including in the good state of preservation of the houses which had rapidly filled with sand after the village had been abandoned. This often left the original mud plaster surface on the walls, whereas in houses large and small in the main city most wall plaster weathered away leaving little trace. Thus we cannot tell if the wall paintings in the Workmen's Village were unusual in houses, or if something similar was to be found in the main mass of Amarna housing.

Figure 9. Bronze ring bezel from the Stone Village at Amarna (obj. 38361) depicting Bes, with arms akimbo. Photo Amarna Project.

Figure 10. Linear painting, in white, on the north wall of the front room of house Main Street 3 at the Workmen's Village. Traces remained at the right-hand end of the scene of a figure of Taweret. EES archive photograph, 21/78.

Figure 11. Copy, by Hilda Pendlebury, of a painting of Bes figures on a wall in a house (number not known) at the Workmen's Village. EES archives.

As with personal names so with the means of protection against fears, what we see at Amarna is the strong survival of customary practice.

Notes

The quotation from the Instruction of Any is included, with comments and references, in A.G. McDowell, *Village Life in Ancient Egypt; Laundry Lists and Love Songs*. Oxford and New York, Oxford University Press, 1999, 104, 252–3, no.76.

The two spells that are mentioned are in J.F. Borghouts, *Ancient Egyptian Magical Texts*. Leiden, Brill, 1978, 83, for spell 121; and 40, for spell 60.

The bed from the tomb of Yuya and Tuyu is published in J.E. Quibell, *Catalogue général des antiquités égyptiennes du Musée du Caire, nos. 51001–51191. Tomb of Yuaa and Thuiu*. Cairo, Institut français d'Archéologie orientale, 1908, Pl. XXVIII; T.M Davis, *The Tomb of Iouiya and Touiyou*. London, Constable, 1907, p. following 36. The bed is in the Egyptian Museum, Cairo.

For Bes, Taweret and the Eye of Horus (Wedjat) at Amarna, see A. Stevens, *Private Religion at Amarna; The Material Evidence*. Oxford, Oxbow, 2006, passim.

The explanation of the shape of the hieroglyph *sa*, 'protection', is given in A.H. Gardiner, *Egyptian Grammar, being an Introduction to the Study of Hieroglyphs*, 3rd, rev. ed. Oxford, Oxford University Press, 1957, 523, sign V17.

For the quotation from the long Hymn to the Aten, see W.J. Murnane, *Texts from the Amarna Period in Egypt*. Atlanta (GA), Society of Biblical Literature, 1995, 113.

The gold ring with the image of Bes supposedly from the Royal Tomb at Amarna is published in G.T. Martin, *The Royal Tomb at El-Ámarna* I. London, Egypt Exploration Society, 1974 77, cat. 275, Pl. 50. The quotation comparing this ring with the tiny one from the Stone Village comes from A. Stevens, *Akhenaten's Workers: the Amarna Stone Village Survey, 2005–2009* I. London, Egypt Exploration Society and Amarna Trust, 2012, 442.

The painted scenes in the Workmen's Village houses are published by B.J. Kemp, 'Wall paintings from the Workmen's Village at el-'Amarna.' *Journal of Egyptian Archaeology* 65 (1979), 47–53; B. Kemp, 'A wall painting of Bes figures from Amarna.' *Egyptian Archaeology* 34 (2008), 18–19.

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