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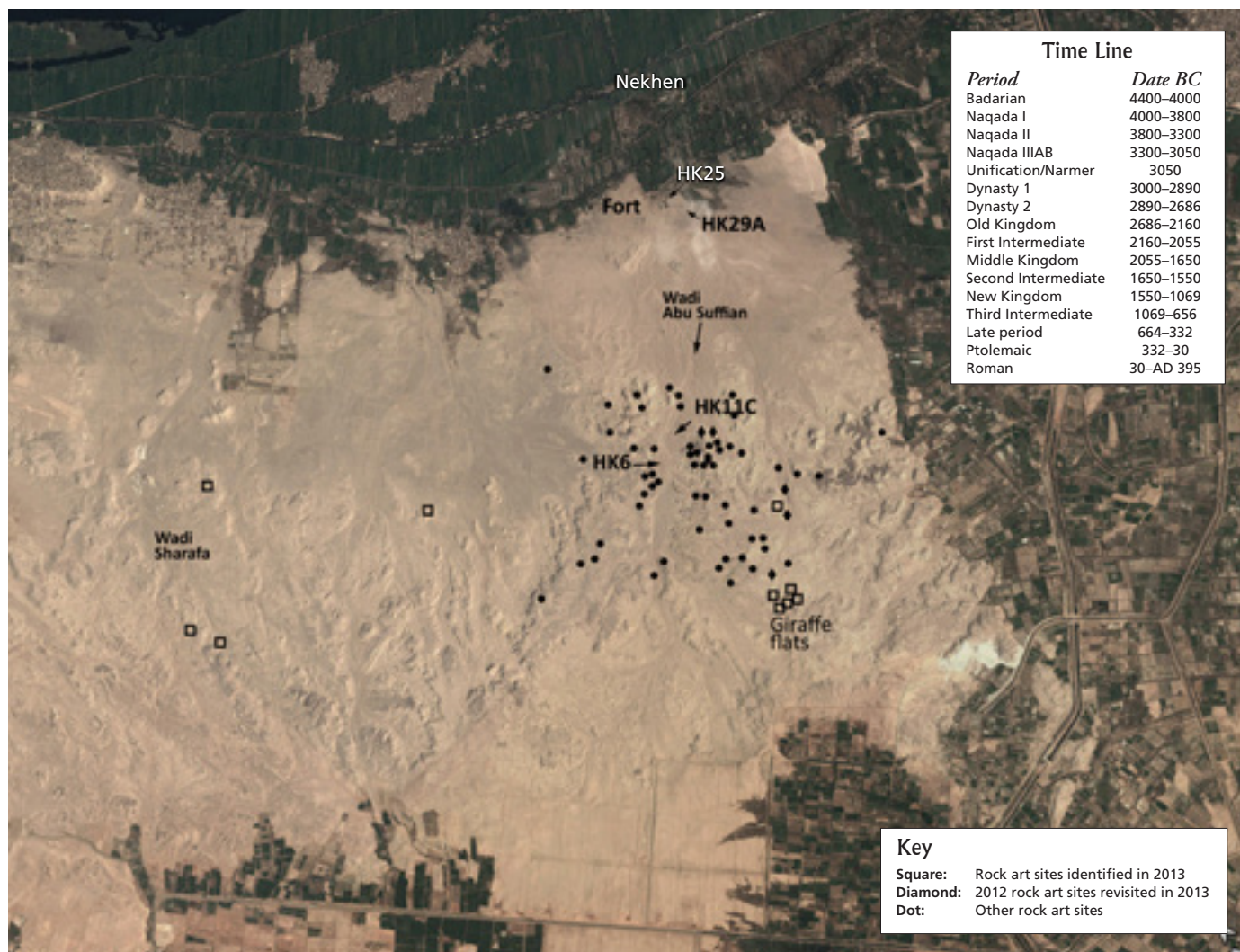
New Kid on the Block

In This Issue

Rocking at Hierakonpolis in 2013	2	The Horned Quadruped Conundrum.	20
A Time of Transition	3	In the Footsteps of Petrie? The HK25 Deposit Revisited . . .	21
In a Corner at HK6—At Last!	4	Administration Without Writing	23
Rendering the Space-Time Continuum at HK6	8	HK in Maidstone: Not Quite the Painted Tomb	24
Offering Up the Very Young at HK6	9	Looking Inside the Bones: X-ray Analysis at Hierakonpolis. . .	25
Through the Microscope: Messages from the Grave	10	More Tattoos!	26
Big Pink Pot Gets Bigger	11	Hierakonpolis in Kerma	27
Fishy Business? Excavation at HK11C in 2013.	12	The Tale of a Mysterious Photo Album	28
Fish and (Flint) Chips: An Experimental Approach	14	Farewell Old Friend	
Photo Highlights 2013	16	Hagg Sidain Abdel-Razzik Said Sidain	30
It's Oryx Season: Rock Art 2013	18	The Friends of Nekhen	31



Rocking at Hierakonpolis in 2013



Thank you again!

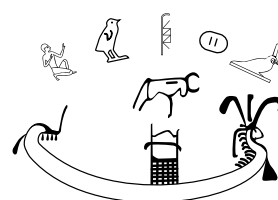
We are grateful to all our loyal Friends of Nekhen for their continued support during these turbulent times in Egypt. In particular, we are deeply grateful for the generous support of Tom & Linda Heagy, Darrell Baker & Christine Auth, Lyn Stagg, David Aid, Grier Merwin, David and Crennan Ray, Bonnie Sampsell, Dolores Schiffert, Patricia Perry, Dagmar Bird, John Wall, Richard Fazzini & Mary McKercher, Joe Majer, Mel & Joann Hunt, Art Muir, Leanna Gaskins, Helen Nash, Geoff Phillipson, Matthew J. Adams, and Robert Metzger. The Japanese Academy for the Promotion of Science funded the excavations at HK11C and a grant from the Thames Valley Ancient Egypt Society allowed us to take x-rays and examine our dwarfs further. The efforts of the Bioarchaeology Foundation to bring the x-ray machine to the site are deeply appreciated. We would also like to thank the Maidstone Museum and the Griffith Institute Archives for access to their collections and permission to publish. The invaluable assistance of our inspectors Mohamed Suliman and Mustafa Abdel Atri Mohamed is gratefully acknowledged along with that of our colleagues at the SCA office in Edfu. Finally, many thanks to Tina and the folks at Chicago House for thoroughly pampering our cat, Dusty.

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A Time of Transition

—Renée Friedman, Director, Hierakonpolis Expedition

While Egypt negotiates these changing times as it determines its future direction, we too at Hierakonpolis are adapting to some transitions of our own. The sad news of the passing of Hagg Sidain Abdel Razzik arrived just before Christmas. He was like a father to all of us in the expedition and tended to our every need, from Thanksgiving turkeys (*Nekhen News* 15: 30) and eggs for brownies (*Nekhen News* 16: 27) to bricks for the Fort. He will be deeply missed by all who had the privilege to know him.

Left shocked and uncertain by the news coming from both Hierakonpolis and Cairo, we still forged ahead with the 2013 season. Happily our worries were unfounded. Well trained by their father, Sidain's sons, Feisel, Mohammed and Abdel Bassett are filling his shoes just as he wanted, while his nephew Saad has now taken on the mantel of full time security. Just as willing to indulge our whims—from procuring fish for scaling experiments (see page 14) to enduring motorcycle surveys (see page 18), we know we are still in good hands.

Our concerns about site security were also without basis. Compared to the depredations experienced by other antiquities sites, thanks to our guards and the local SCA inspectorate, we have escaped pretty much unscathed. In fact, the most damaging problems were not the result of looting, but came from an entirely different quarter. Due to various incidents at the Wadi Sayyida land reclamation project to the west, for the first time in over 6000 years, large quantities of water (from the irrigation canals) flowed down our wadi on several occasions, wreaking havoc. We

did our best to relocate part of the sherd yard for HK11C, but we didn't have time to save it all from the fast moving flow. It was only the spoil heaps we created along the edge of the wadi that saved HK6 from a bath it definitely doesn't need. During the worst event, the water travelled the full 4km length of the wadi to reach the cultivation, pooling in front of the Fort and eroding the edge of the terrace on which it sits. We will now need to monitor the structure for the residual effects of this radical change to its environment.

We finally managed to get a bulldozer to build a dyke at the very end of the wadi, well beyond the archaeological zone, to stem or at least slow down any future flows. We keep our fingers crossed, but these events underscore the importance of our presence at the site. We need to be there to keep it safe as well as rescue the important information it still holds.

Our bags are already packed in anticipation of the 2014 season, when we will try to find the answers to some of the new questions posed by this year's work. For example, where are the rest of our new figurines? Will they be in the Big Hole at HK6 or within our new Wall F (see pages 4–7)? Is the mudbrick structure at HK11C really a fish factory? What are the enigmatic ostraca (pages 12–14)?

We are anxious to find out, but in the meantime we have been busy uncovering bits of Hierakonpolis that are closer to home in UK museums and archives (see pages 21–29), showing that when it comes to HK, new discoveries can be made just about anywhere. 🐦



The sons of Sidain: Mohammed, Abdel Bassett, and Feisel.



Water in the wadi: not a pretty picture.

In a Corner at HK6—At Last!

—Renée Friedman, Director, Hierakonpolis Expedition

You could have knocked me over with a feather when the reality of it finally sunk in that, after seven years of searching and 72m of chasing, the wall running along the edge of the wadi (Wall B7) finally turns a corner. Having just about conceded that it was going to circumscribe an oval, it took a while to recognize it for what it was, especially since I wasn't looking for a corner: I was looking for a crocodile.

As readers of *Nekhen News* (24:4–6) will recall, at the end of last season we only had time to collect the crocodile bones, which were observed on the surface just beyond the area excavated within the complex surrounding the leopard's tomb (Tomb 50). In order to pick up the rest of the pieces this season, we began working our way toward the collection zone along the northern trajectory of Wall B7. Initially the wall was easy to follow, but various pits and rodent burrows soon complicated matters. An oval feature seemed like it should be a grave, but it refused to be defined. Instead of bones, curiously, it seemed to produce only fragments of wood. When near the bottom, a foundation trench finally appeared, curving round and then continuing westward at an oblique angle, I just couldn't believe it: I was in a corner at last!

Once that was settled, finding the rest of the crocodile proved rather easy. Its tomb (Tomb 65)—or perhaps more accurately, its crocodile-shaped hole—was situated just beyond the corner. As was the case in all of the tombs examined this year, the bones had been badly disturbed. Luckily, just enough of the back feet remained *in situ* to show the body was originally oriented to face outward, toward the wadi. His role was apparently to stand guard against (spiritual) intruders, and with a length of about 2m, once reassembled, I am sure he was up to the task.



Fathy freeing the crocodile's foot in Tomb 65.

Fragments of the wooden bier, probably used to bring the animal to the site (he was no doubt unwilling to walk) were also found along the tomb's tapering edges.

Further search of the area outside the wall revealed no other graves to the north and only the tossed remains of a human buried in a small rectangular grave (Tomb 66) to the east, but this appears to date from the Early Dynastic period or possibly even later. It now seems that this enclosure wall marks the older nucleus of the cemetery, separating it from the Naqada III tombs further to the north, or at least that is the working hypothesis for the moment.

The tomb complex now defined on the east and north by Wall B7, it was time to move westward. Two depressions led us rapidly to Tombs 61 and 62. Although highly



Renée at the corner, Tomb 65 to her right.



Bea reassembling the crocodile.



Head of an animal shaped vessel from Tomb 67.



Fingernail from Tomb 67.



Clay cow horns from the trenches.

disturbed on the inside, around the outside the eagle-eyes of Joe Majer and Salah el-Amir spotted the remnants of architecture—the posts and trenches for roughly circular superstructures around these roughly circular tombs. In some of the trenches were horns from clay cow figurines, one painted black and white. These may be associated with some of the cow feet found last year, but joining them is going to be tough since the middle bits remain elusive.

Scraping back the surface crust around Tombs 53 and 54 revealed more wall trenches for round superstructures, and together this row of four seems to create a continuous façade along the west side of the complex. Interestingly, some of the trenches overlap the edges of the tombs lying to the east. This indicates that the architecture could only have been erected after all of these tombs had been filled. Another line of postholes in the central part of the complex suggests that the tombs in this area were also interconnected in some way by above-ground architecture. A look at the plan gives some idea of what a crowded place it must have been. Yet, this discrete mortuary complex, bounded on three sides, was

still missing one major component: the main tomb around which these graves were presumably arranged.

The search was on. Moving south we picked up three new tombs, but not the one we sought. Tomb 67, large and rectangular, contained at least five young and tall adults, but only the feet of two of them remained *in situ*. Nevertheless, several pottery jars, bottles and beakers could be reconstructed, suggesting a date of Naqada IIB. One notable find was the head from an animal-shaped stone vessel; another was a well-groomed fingernail of impressive length, its owner clearly not engaged in manual labor. The two tombs further to the south contributed substantially to our tally of animals, with Tomb 70 adding nine small goats and Tomb 71 providing 12 dogs with a child. The dogs were medium-sized and had shoulder heights of between 47 and 56 cm. The child was 7–10 years of age. Several lengths of twisted leather found mixed with their bones are no doubt the remains of the dogs' leashes, and the scene on one C-ware bowl now in Moscow probably gives a good approximation of how the tomb's occupants looked in life.



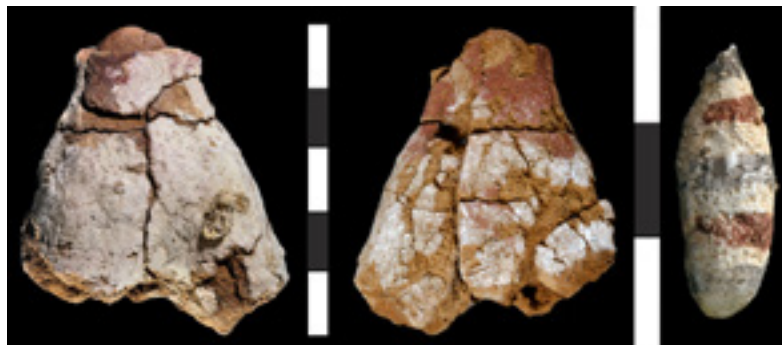
Twisted leather for dog leashes from Tomb 71.



Boy with dogs on a bowl in Moscow Museum of Fine Arts 2949.



Hats off to Salah as he uncovers the new kid.



The second statuette: front, back and bauble.

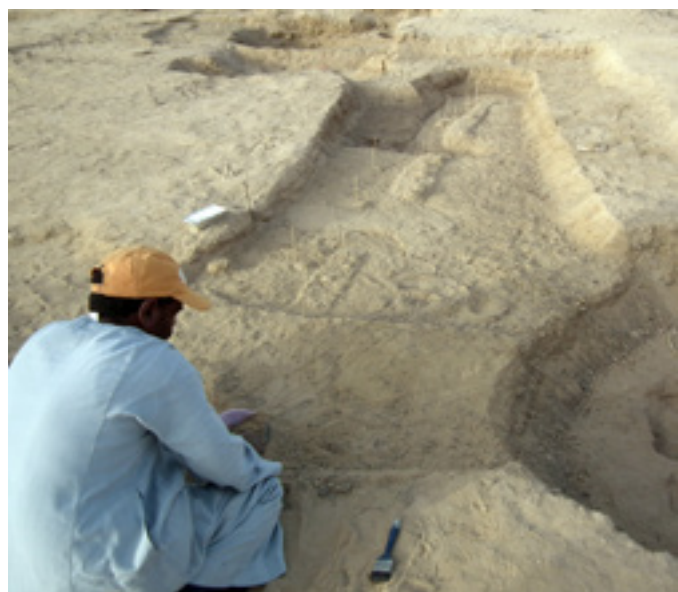


What took you so long?



Painted plaster, painted wall?!

The spoil heap impeding further progress to the south, there was only one direction left to go. With great trepidation we cast our gaze westward to the area designated on the map as 'large depression', but better known as the Big Hole, as it is indeed a very large and deep hole surrounded by an expansive corona of backdirt. The looters who made it must have found something of interest here to have caused so much destruction, and we didn't expect to find much the robbers would have missed. Fortunately, we were wrong.



Fathy and his wall.

On the north slope, just below the surface, was a small but precious treasure—a clay figurine of a man, who glared up at us as if to say: what took you so long? Our impatient little man with his bird-like face was not alone. Nearby we found the bottom part of a different male figurine, not so well preserved, but enough to show he was wearing a white kilt and seems to have had a white sash across his chest. He may also have been adorned with a painted plaster 'bauble', presumably attached to his kilt at the appropriate location. Nearly doubling the number of excavated examples of male figurines of this type, the significance of these finds is discussed further below.

The Big Hole had other gifts for us, such as several intriguing fragments of painted plaster, but its other presents were not quite so exciting. Concealed beneath its corona were three more tombs. Tombs 64 and 69 had been brutally plundered, but tiny Tomb 63 was relatively unscathed and yielded the bones of a still rather hairy dog. These were time-consuming to excavate and with the end of the season looming, we finally had to concede defeat. The Big Hole would not be conquered (this year). In the end, it may not be the object of our desire anyway.

While we were engaged in the battle of the Big Hole, just to the north, Fathy Said, master post finder, had quietly gotten on with uncovering Wall F (for Fathy). This turned out to be part of a rectilinear structure some 7.5m wide (N–S) with walls composed of two rows of wooden posts, set side by side but at different levels. Both the north and south

corners were located, but determining its extent and what it contains will be our task in 2014. We may well be in for a treat when we get there considering the fine lithics found beside this wall, as well as the large sheep in Tomb 68, perhaps not accidentally placed at its north corner. Although Wall F is separated from the east complex (Tombs 50–62) by an empty area, possibly some sort of a courtyard, the orientation of both—perpendicular to the north leg of Wall B7—shows they are closely related.

Putting it all together, it is quite possible that Wall F encloses the main tomb we seek and that the tombs we have discovered so far are only one part of a large and densely populated funerary complex, perhaps even more elaborate than we dare imagine. In this cemetery of surprises, we'll have to wait and see what corner we get into in 2014. 🐍



Map of HK6 in 2013.



For updates from the field visit us on Facebook beginning in February

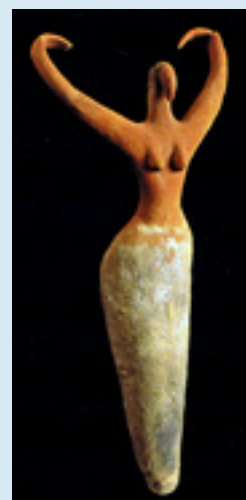
HK Human Figurines

Our new clay figurine with his schematic (but so expressive) bird-like head is a special treasure not only because 'goodies' were in short supply this season, but also because only three other male figurines of this type have ever been found during scientific excavations. One of those is the statuette uncovered by Barbara Adams near Tomb 19. Like our new additions, that figurine had a red painted body with white around the waist and across the body, but its arms were modelled only as stumps. Similar statuettes are known in various museums, but their authenticity remains an issue, and with so few provenanced examples, it has been difficult to tell the good from the bad. Unfortunately this is not a problem restricted to male figures.

Female figures with highly abbreviated bird-like heads are also poorly documented. The largest (if not the only) excavated collection of them comes, perhaps not coincidentally, from Mamariya, a site only 5km north of Hierakonpolis and certainly within its sphere of influence. The discovery there of the most famous of these figurines, now in Brooklyn, and 15 more like it, by Henri de Morgan in 1906 started a craze amongst forgers. While certain scientific tests are applicable, they are costly and problematic. So while many museums hold bird-headed figurines, the actual prevalence and distribution of this figurine type in Predynastic Egypt is hard to judge. From the evidence available to date, it is just possible that this style may be a speciality of the Hierakonpolis region. Now we just need to find more to prove it! 🐍



The figurine from HK6 Tomb 19 (painting by L. Liekens).



Statuette from Mamariya. Brooklyn 07.447.505.

Rendering the Space-Time Continuum at HK6

—Joel Paulson, San Diego, CA

In recent years, the technologies available to archaeologists have advanced greatly, and at Hierakonpolis, we are always interested to try them out. One such tool is Geographic Information Systems (GIS), computer software that organizes archaeological data using a spatial framework. Large amounts of data, much of which may not immediately seem geo-spatial in nature, can be linked in GIS and cross-referenced for various studies. GIS has revolutionized computer mapping, allowing for 'intelligent' maps with embedded data and for mapping in three dimensions. Recently, one GIS software, ArcMap from Environmental Systems Research, Inc. (ESRI), has added a new element to GIS capabilities, that of the fourth dimension: time.

Chronology is, of course, critical to archaeology, yet, historically it has been difficult to incorporate the fourth dimension into a two-dimensional spatial layout, i.e., a map. Time-series maps have been used for many years, but are static; each time new information is recovered, the maps are out of date. Since GIS incorporates time as just another piece of data, as chronology changes or is refined, the maps are updated in the computer system. One of the powers of GIS software is that the archaeological team can create and update the system directly without relying on outside parties to translate the data. Also, the GIS software can create various ways of viewing the data, including maps, 3D

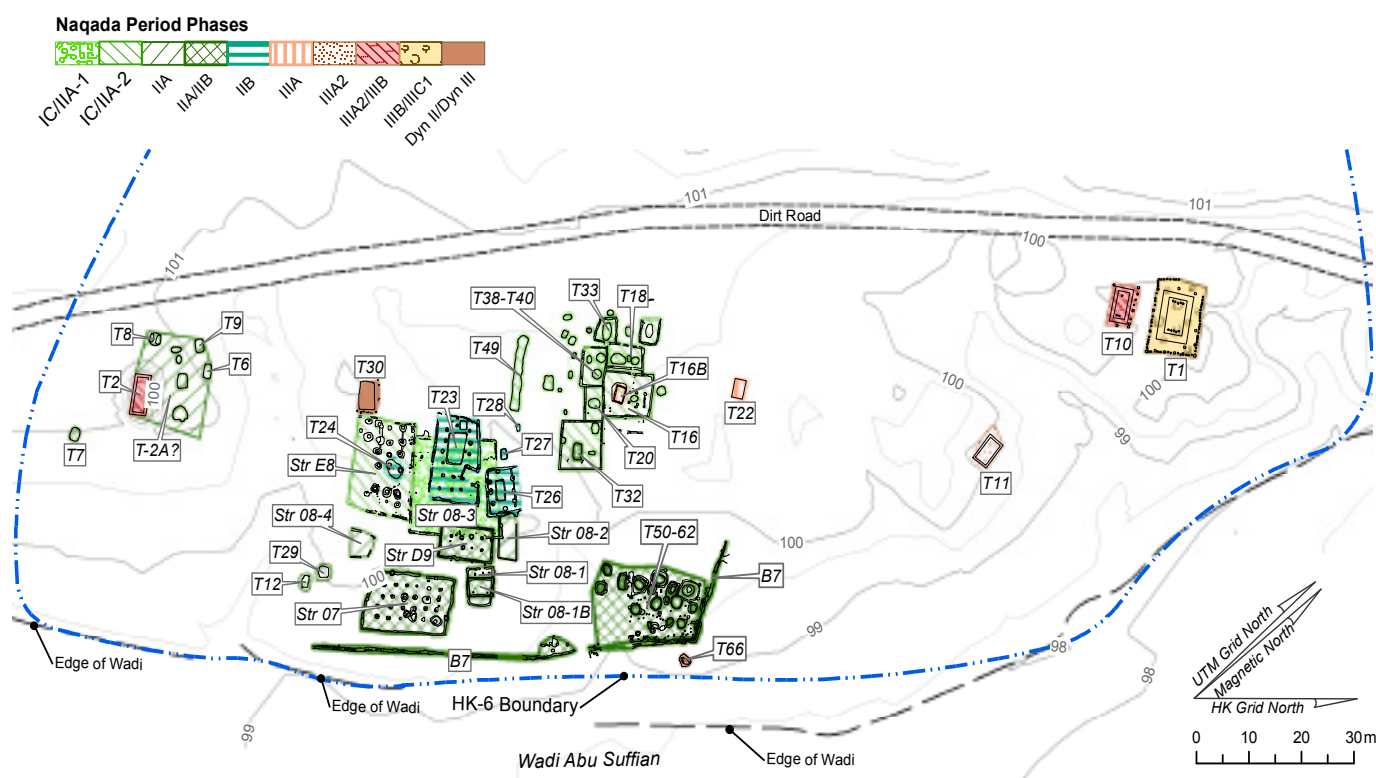
models, and animations. As part of the on-going GIS study of the HK6 excavations, we have created a four-dimensional animation showing the development of the elite cemetery as far as we can determine it at this moment in time.

The chronology of the HK6 cemetery is incredibly complex: structures could be built, removed, replaced, renovated, usurped, revisited, destroyed or forgotten. In addition, the cemetery has also been plundered multiple times, further complicating interpretations. To create a clean animation, we had to make certain assumptions and simplify some of the more problematic areas. Naturally, this study requires thorough and continuing excavation since the chronological data is only as good as the archaeology that underpins it.

Considering that new discoveries are made every season at HK6, GIS is a powerful tool that will help us keep track of where we are, or at least where we think we are. As the excavations and studies at HK6 continue, we will update and refine the timeline as we strive to visualize the use and development of this fascinating cemetery in ever greater detail. ☹

The timeline animation can be viewed at:

www.hierakonpolis-online.org, under menu heading Explore the Predynastic Cemeteries > HK6 > Rendering Time.



The elite predynastic cemetery HK6 and its development over time in two dimensions.

Offering Up the Very Young at HK6

—Wim Van Neer & Bea De Cupere, Royal Belgian Institute of Natural Sciences, Brussels

Each season of excavation at HK6 produces more of the buried animals for which the cemetery is famous. The aim of our faunal analysis is to identify the species buried and establish their age at death and—if possible—their sex. Moreover, we look for deformations or pathologies that may be indicative of the way the animals were kept prior to their sacrifice. Thus far about 180 individuals have been counted from the various burials and features. The majority of the animals are cattle, sheep, goat and dogs, as have been found at other predynastic cemeteries in Egypt, but never in such numbers. Even more exceptional, about 20% of the animals at HK6 are wild. Some of them, such as the hippos, crocodiles and wild cats, were probably captured locally, but others, such as the aurochs and hartebeest, were already rare in Upper Egypt during predynastic times. Furthermore, at least two species must have been brought in from far away: the anubis baboons and the elephants, which probably came from present-day Sudan.

While sorting the faunal remains, we often find material that is clearly different. Typical examples are the less-fossilized bones of small rodents of a more recent date, which can be considered as animals that decided to bury themselves in the cemetery. Yet, from the start of our faunal analysis in 2002, we encountered whitish, often heavily weathered bones of very young animals. Most were tiny ribs, isolated or sometimes in clusters, and only occasionally were there long bones. Identifying these remains is not straightforward owing both to the poor state of preservation and the young age of the animals they came from. Strictly speaking, many can only be identified as ‘small bovids’, meaning that they could be either sheep, goat or gazelle. However, since gazelle is almost completely absent in this cemetery, it is most likely that we are dealing with sheep and goat.

The small sizes of the ribs indicate that the animals must have been very young when they died; however, precise age estimates are not possible using such elements. In contrast,

the lengths of the rare long bones allow more precision: some indicate kids only a few months old, others are from newborns, while many are clearly from foetuses.

Initially we considered these bones as stray finds, but as their numbers have increased over the years, we decided to investigate further. Mapping their distribution, some interesting patterns emerge.



Long bones of young sheep or goats from HK6.

on both this distribution and their weathered condition, it is clear that these young remains do not belong to animals that were buried. Rather, they were offered, probably as part of the funerary rituals for the people buried in this cemetery.



Ribs of the young ones.

Rarely found in actual tombs (and there probably accidentally), their remains cluster in the open zones on the peripheries of the above-ground architecture. For example, several specimens were found this year in the ‘courtyard’ to the west of the facades of Tombs 61–62 as well as along Wall F. Further concentrations appear along the line of postholes running down the center of this eastern complex of tombs. In the Tomb 16 complex, they appear mainly around the fences of the human burials, but a notable number were also collected near the Tomb 33 elephant and the aurochs in Tomb 19. Based

Since sheep and goats in North Africa have different reproductive cycles and both can have up to three litters in two years, it is not possible to establish the time of year for these offerings and rituals. Nevertheless, the young and new born animals may have been considered first fruits of the season, the foetuses signifying wishes for eternal rebirth. Yet their presence also means that gravid females were being killed, and this is a sacrifice of valuable resources. These females could have been eaten, perhaps as part of some feast, but consumption did not take place in the cemetery, so we can only guess.

It may all sound rather grizzly, but these foetuses and young animals are yet another indication of the special status of the humans buried at HK6, and the rituals and sacrifices undertaken on their behalf. 🐕

Through the Microscope: Messages from the Grave

—Elena Marinova, Center for Archaeological Sciences, KU Leuven, Belgium, and Wouter Dekoninck, Royal Belgian Institute of Natural Sciences, Brussels

Almost all of the graves excavated thus far at HK6 show evidence of plundering which probably began in Early Dynastic times, while the coins, pipes and tobacco papers found in and around some of the tombs testify further activity in the late 19th century AD. Observations made during the microscopic analysis of the gut contents retrieved from the burials of the elephants in Tomb 24 and Tomb 33, the aurochs in Tomb 19 and the domestic cow in Tomb 36 (see *Nekhen News* 12:8; 15:9–12; 21:4–9) can in part be attributed to these past disturbances, but they also provide insights into aspects of the burial practices and hint at the funerary rituals surrounding these large animals.

In three instances remains have been found of organisms that appear to have infested the animals as they had just begun to decompose. Analysis of pollen samples from the dung of the elephant in Tomb 33 revealed spores of fungi that typically develop on excrements. This infestation could have occurred when the elephant's remains were exposed during grave robbing, but only if this took place soon after its burial, since once it was covered by 2m of soil, this would have been impossible. Alternatively, these findings indicate that the animals were not interred immediately upon death.

Considering the difficulty of transporting a whole and unbutchered carcass, it is presumed that the animals were brought to the cemetery alive and sacrificed during the burial rites for their elite owner near their ultimate tombs. However, this does not necessarily mean they were placed in their graves or covered with sediment immediately thereafter. It is certainly likely that the display of the sacrificed animals played a significant role in the funerary ritual, especially when one considers the effort expended to obtain some of them. In addition, the sheer number of animals involved—39 individuals in 14 different tombs can with good confidence be associated with the Tomb 16 complex—suggests it would have taken some time to prepare them with wrappings of linen and matting and position them in their graves before covering them over. While it is impossible to determine whether all of the animals were killed at the same time, the contiguous architecture above the tombs of the human occupants and those of the elephant, hartebeest and aurochs (Tombs 33, 46 and 19) strongly suggests that their deaths occurred as part of a single event. Thus, it is quite possible that the sacrificed animals could easily have been exposed to fungal infestations prior to full burial.

Such a scenario is also suggested by the skin of a fly larva found in the sample from the elephant buried in Tomb 24, adjacent to his master in the large and impressive Tomb 23, with

another example coming from the cow in Tomb 36. Since flies do not lay their eggs on dry animal tissue, these microscopic discoveries indicate that the decomposing corpses were exposed because full burial had not yet taken place. Again, while flies could

have had access had the tomb been disturbed very shortly after burial, this seems highly unlikely.

On the other hand, the gut sample from the aurochs in Tomb 19 produced an exuvium of a larva strongly resembling that seen in *Anthrenus*, a genus of dermestid beetles made up of species that typically feed on dry animal matter such as skin and hide. This infestation may well have occurred as a result of exposure following plundering activities over the millennia that left the bones and dung of the aurochs widely scattered around its tomb.

In previous volumes (*Nekhen News* 21:10, 22:10), the analyses of the botanic remains in the gut contents of the wild animals were discussed. Notable was the presence of the chaff and grains of emmer wheat, possibly given to them as a special treat for their final meal.

Another plant that just might have been part of a special practice in preparation for the grave is *Hyo-scymus* cf. *muticus*, also known as Egyptian henbane. Two seeds of this plant were identified in the gut content of the Tomb 19 aurochs. Plants from this genus contain hallucinogenic alkaloids and were used in ancient funerary rituals in the Eastern Mediterranean and Europe. While it is tempting to propose similar usage at HK6, the small number of seeds in




Fly larva from the cow in Tomb 36.



Cast-off shell of dermestid beetle larva from the Tomb 19 aurochs.

the studied sample does not allow us to be conclusive. Alternatively, as this plant is present in the natural vegetation, it could have been ingested by the aurochs through grazing. On the other hand, Bedouins today collect this plant to feed to their goats owing to its high nutritive value, especially during the winter. Thus it is possible that it was intentionally given to the aurochs as part of its fodder. Whether it was for the expressed purpose of helping to ease its way to the afterlife or to keep it more docile in captivity requires further finds and further analyses.

All told, the funerals of the Predynastic elite at Hierakonpolis must have been remarkable, if gory, spectacles. In addition to insuring a suitable afterlife for the illustrious deceased, their main purpose was to convey potent messages about power in life and power after death. Thanks to detailed microscopic analyses we can now read these messages from unlikely sources with increasing clarity. 



Egyptian henbane, *Hyoscyamus cf muticus*.



Big Pink Pot Gets Bigger


—Renée Friedman and Helena Jaeschke

As more pieces of the big pink pot appeared at HK6, more joins could be made to last year's harvest. It was a giant jigsaw puzzle no one could resist. But when we eventually got down to just a few large ensembles, we realized there was a problem. We had too much. Too much, this is, for the size estimate made last season (see *Nekhen News* 24:6–7).



F.W. Green's big pot.

Further puzzling by Helena Jaeschke revealed that Big Pink was not 73cm tall and made up of two coils, but actually composed of three coils and about 40cm taller. Standing an impressive 1.14m high, with a diameter of 1.24m, it now turns out we

don't have too much, in fact, we still need to find another three-quarters of it! While we were inclined to view F.W. Green's drawing of the big pot he found in 1899 as a bit of an exaggeration, the proof is now in the very big pink pot. It really is a vessel worthy of Ali Baba. 



Xavier and Helena with the big(ger) pink pot.

Fishy Business? Excavation at HK11C in 2013

—Masahiro Baba, Waseda University, Japan

A full decade of excavations (yes, we began in 2003!) has proved HK11C to be one of the best-preserved predynastic settlement areas at Hierakonpolis, if not all of Egypt, and a rich mine of exciting information on industrial activities during the formative stages of Egyptian civilization. This season, work in Square C3-4 has once again provided us with surprising new discoveries.

Situated atop the mound of debris created by the Operation B brewery installation and pottery kilns, Square C3-4 has always produced the unexpected. Initial exploration in 2011 revealed part of a mud-brick structure containing the earliest *in situ* bricks at Hierakonpolis (see *Nekhen News* 23:22–24). The following year, further excavations along the east side of the structure presented us with a harvest of curious stone ‘potatoes’ (see *Nekhen News* 24:10–11). Returning this season with the aim of uncovering the building’s full plan, it again demonstrated its ability to intrigue.

Having already exposed three sides of this structure, we moved to the unexcavated west to find closure. The west wall quickly emerged, running straight for 6m. It joins the walls previously uncovered, although no bricks were present at the north corner, probably due to later disturbance. Like most of the other walls, it was built of three rows of mud-bricks laid mostly in stretchers. Compared to the others it seems less well constructed and there is no plaster coating on the exterior face. Two breaks in the wall, both with floors of hard white plaster, appear to be entrances.

Just outside the south entrance a low curving wall, about 15cm high, was built of stone and sherds. Its relationship to the mud-brick structure remains unclear. Apart from this *ad hoc* wall, the western area was devoid of any evidence of activity and stands in contrast to the east side with its numerous caches of sandstone pieces.

The exterior defined, it was now time to look within. Brushing the surface, we could see layers of burnt debris



Plan of HK11C Square C3-4 in 2013 with inset of test trench showing hearths.



View of the structure in Square C3-4.



Test trench, revealing the floor of the structure and several hearths.

filling the interior. Concentrations of pottery sherds and stones covered the east and center, while accumulations of the brown soil mixed with straw, animal hair and dung filled the west.

In order to examine the floor, we made a trench, 1m wide and 8m long, down the center of the structure. Below a debris layer, 11–20cm thick, we found the original floor and within it at least six cooking hearths filled with charcoal and sherds. More intriguing, however, were the abundant bones and scales of large fish that surrounded them.

Faunal analysis by Wim Van Neer and Bea De Cupere (Royal Belgian Institute of Natural Sciences, Brussels) revealed a dominance of large Nile perch among the fish bones and scales. The skeletal distribution was characterised by a low number of vertebrae, suggesting that after scaling and cooking, the bodies had been taken away to be eaten elsewhere. This contrasts markedly with the ceremonial center and feasting site at HK29A, where the majority of fish remains were vertebrae and other parts were notably rare.

The other remains belonged mainly to cattle, most being elements from the head and the lower legs. These are probably butchery left-overs. The bones carrying the meatier parts of the cattle were poorly represented, indicating that they too had been taken to another place for consumption.


The evidence so far suggests that the function of the structure was for food preparation on an industrial scale. It now seems that the more than 1000 intentionally modified

pieces of sandstone (i.e., the potatoes) found beside the eastern wall must be related to this production activity. As we proposed in the last report, these stones may have been used to record deliveries of raw materials to the structure, which we may now presume to include fish and fuel, or dispatches of the final product (i.e., dinner). Thus, these pieces could be the counters or tokens for recording work rates.

Such recording practices are also suggested by an incised potsherd discovered this year in the test trench. On both sides are symbols which are very similar but not identical. Other incised sherds or 'ostraca' of this type have been found at various localities at Hierakonpolis (see below) and seem to record a transaction 'signed' or witnessed by two parties, perhaps like a contract or a receipt of delivery. The growing social and industrial complexity that HK11C is revealing would certainly have made such records, and some form of visual communication, more and more important.

The other finds from Square C3–4 were mainly pottery sherds and lithics, including a significant number of scrapers which are the subject of the next article. Overall, the pottery was nothing special, but fragments of large low-necked jars, characteristic of the Naqada IIC–D period at Hierakonpolis, provide a possible date for the structure. It is certainly later than the brewing and potting activities undertaken at Operation B (dated to Naqada IC–IIB) since the structure was built on top of the mound of debris created by them. In addition, the animal bones and fish scales found covering the pottery kilns in 2003 now clearly originated from the Square C3–4 structure, showing that Operation B had already been abandoned by this time and replaced by the more complex brewery installation at Operation A.

It is now obvious that HK11C was a specialized area for industrial food production in the Naqada II period. Given its proximity to the elite cemetery at HK6, we can assume that it emerged to service the needs of the elite and sustain their mortuary cults and status.

In the coming season, we plan to explore more of the floor. We will be searching for more industrial information as well as more fish! 




Scales of big fish from the test trench.



The double incised potsherd from the test trench.

The Hierakonpolis Ostrakon Collection

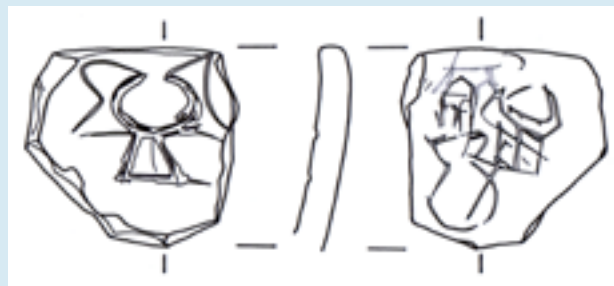
Potsherds, or ostraca, with incised designs involving animals or geometric symbols on one side and repeated on the back in a different hand are known from a number of locations across the site. The most beautiful is incised with a hunted gazelle and a fish on one side and countersigned with a gazelle on the other. It is a surface find, so sadly we can say no more about its function, although the fish on the front is certainly thought-provoking. Others, from the ceremonial center at HK29A show the repetition of geometric signs on opposing sides and seem to indicate a transaction of some type, as at HK11C. Whether the most fascinating of them all—the ostrakon with the goddess Bat on the front and bull's head with possible prisoner on the back, also from HK29A—denotes the same thing or something more spiritual we may never know. These small tokens are significant evidence of visual communication above and beyond just marks on pots. They attest to a growing complexity that ultimately led to the creation of writing in the early Naqada III period, if not earlier. 



Ostraca from HK29A.



The ostrakon with gazelle and fish.



Ostrakon from HK29A showing the goddess Bat.



Fish and (Flint) Chips: An Experimental Approach

—Kazuyoshi Nagaya, Waseda University, Japan



Fish scrapers old...



Fish scrapers new.

The 2013 excavation of the mud-brick structure in Square C3–4 at HK11C yielded a large amount of fish bones and fish scales. This discovery is intriguing not only because these fish remains are at a site currently 4km from the Nile, but also because of the particular types of flint tools found with them. While it is often difficult in lithic studies to judge the actual purpose of flint tools and the human behavior associated with them, the material from HK11C allows us scope to imagine how the site's Predynastic workmen used their tools.

The flint tool assemblage from the 2013 excavation, although still small ($n=48$), is special in two ways. First, the proportion of scrapers, including end scraper, side scraper and round scraper, is unusually high. They make up more than 20% of the collection, while at other localities, such as the adjacent brewery complex of Operation B and the Burnt House at HK29, scrapers represent roughly 10% or less. Second, the range of tool types from Square C3–4 is much more restricted than elsewhere. In fact, there are only five types: scrapers, burins, denticulates, bifacial tools and retouched pieces.

With flinty resolve, preparing a fish!



Scaling



Gutting



Dinner!

Given the dominance of scrapers and the number of fish bones and scales, it is not unreasonable to suggest that they are related, and that fish processing was one of the main activities in the mud-brick structure. But how well do the flint tools and fish actually interact?

In order to find out, we carried out an experiment at Hoffman House. I replicated six flint scrapers based on ancient examples discovered this year. Meanwhile, our guard Feisel Sidain went to the fish market in Edfu to fetch us a large bag of fresh tilapia. Suspecting this was going to be a messy job (and it was), I availed myself of the infamous green suitcase—the repository of more than 40 years of abandoned dig clothing. Choosing carefully, once suitably attired (see back page), I got to work.

I had never scaled a fish before, but the flint scrapers made it easy. They were comfortable to handle, and their working edge had just the right size and bevel for removing scales in no time. The long sides of rectangular examples were suitable for gutting as well. Thus, the experiment was successful in proving the utility of scrapers in fish preparation and as an added bonus provided us with a quantity of well-cleaned fish.

It was at this point that we decided to stop experimenting. Instead, we called in the modern experts, Anna Pieri and Grazia DiPietro, who cooked for us a fabulous fish dinner (Italian style), which we enjoyed *al fresco* in the house courtyard.

Further analyses (and fish dinners) are needed, yet the comparative data from the lithics, faunal remains and experimental work have given us important insights into the actual purpose of the flint tools within a predynastic production context at HK11C. 🐟



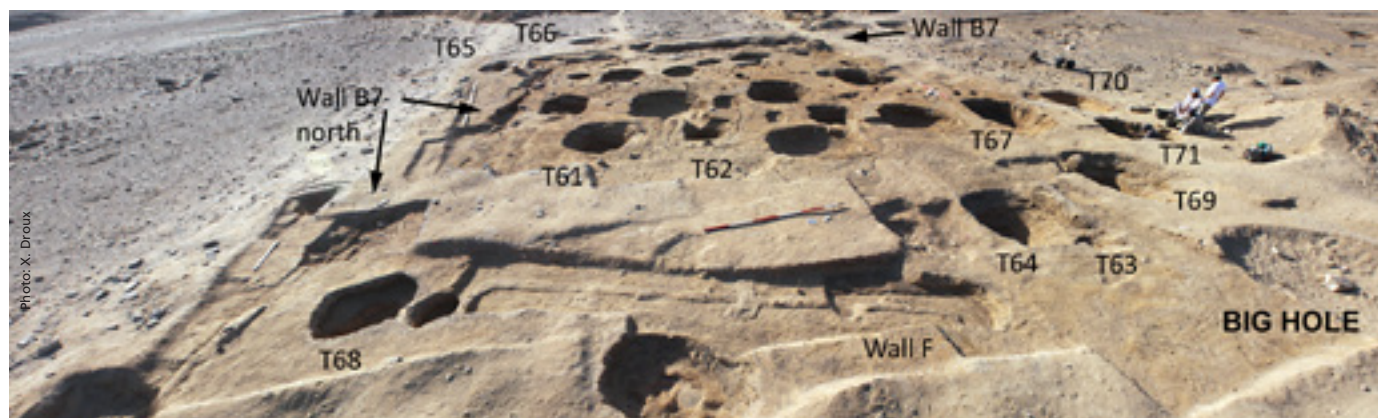
Miss(ed) Kitty

The fish dinner was a great success, but the one who would have enjoyed it the most is Dusty, had she been there. Owing to all the changes in Egypt and uncertainty surrounding security and petrol availability, we made the difficult decision to leave her in luxurious surrounding at Chicago House, Luxor. Like all young ladies, she would much rather hang out with her friends anyway. We are hoping that the promise of more fish dinners might convince her (and maybe a friend) to join us in 2014. Don't know if it will work, but it's worth a try, because she was much missed! 🐱



Dusty and friends dining at Chicago House. Photo courtesy of Tina DiCerbo.

Hierakonpolis 2013



HK6 Panorama: Excavations in 2013.



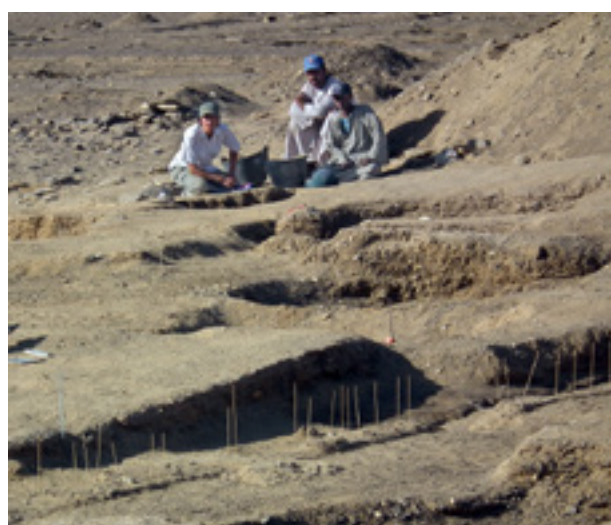
Crocodile in a crocodile shaped hole.



The crocodile hunters.



Fathy's wall (Wall F).

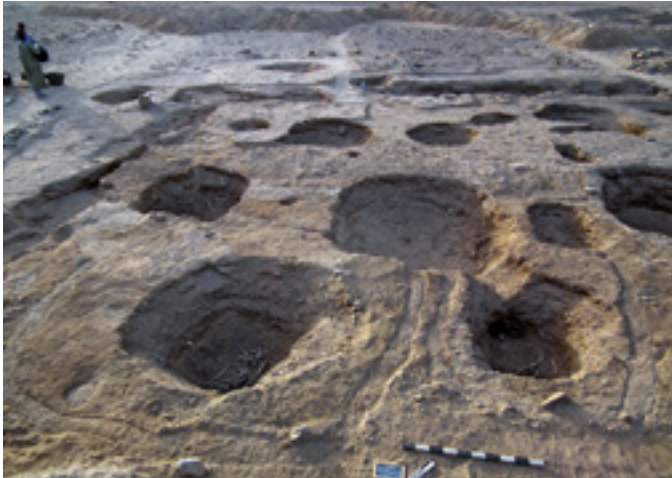


Wow! Bamboo skewers mark the posts in Wall F.



Lithic lovelies from near Wall F.

Hierakonpolis 2013



Traces of circular architecture around HK6 Tombs 61–62.



The oryx from Wadi Sharafa.



Looters' holes near a rock art site. Why?



Lamia pieces together the pink pot.



Very big pink pot to scale.



Bea and Wim hitch a ride to HK6.



Anna sorting a bounty of bones from HK6 Tomb 67.

It's Oryx Season: Rock Art 2013

—Fred Hardtke, Macquarie University, Sydney, Australia

The 2013 season of the Hierakonpolis Rock Art Survey (HRAS) got off to a rocky start with an unsettling discovery: a pair of looters busily digging two large pits. What they were searching for eludes us; however, their activities were being carried out only 20m away from an important rock art site. While we have been lucky at Hierakonpolis compared to many other sites that have been so badly pillaged, this incident serves to highlight how important it is for us to be on site and record as much as we can. In this event, the startled looters ran away before any damage was done, but it was also a warning that we were not alone in the desert and that extra vigilance was necessary.

As the plan was to roam further afield and scope out selected regions in the northwestern part of the site, we decided to make life easier and safer by renting our guard Abdel Bassett and his shiny new motorcycle. It took some convincing, but he eventually allowed me to drive it, as we blazed trails into unsurveyed territory. In this way, together we identified four rock art localities along Wadi Sharafa (see page 2 map). All



Oryx from Wadi Sharafa.

had a notable number of foot/sandal depictions, but one provided us with a delightful new addition to our faunal repertoire. Drawn on smooth flat sandstone and surrounded by higher outcrops offering shelter from the elements was an oryx. The shaft embedded in its back is possibly symbolic of its role as prey in the hunt. The only slightly curved horns suggest this is a Beisa oryx (*oryx beisa*), a type which also appears on the Hierakonpolis Two Dog palette, as opposed to the Scimitar oryx (*oryx dammah*), so beautifully depicted in the Painted Tomb (see page 20). Both species are also common in Eastern Desert rock art. In addition, the locality supplied another example of a notch row and a number of footprints or sandal representations, one of which is superimposed upon the oryx.

These discoveries show that more rock art can be expected in this area and further work will be needed. But for now, it seemed best not to draw too much attention to new places. Instead we returned to Wadi el Pheel, the track parallel to the Wadi Abu Suffian and the site of many impressive discoveries in 2012 (*Nekhen News* 24:18–19).

Expanding the survey, we continued for another 1.2 km up the Wadi el Pheel, halting at a new spot called Giraffe Flats. Pottery was observed at various points along the way attesting to usage of the track from at least predynastic to Roman times, and indeed it is still in use today.



Fred and Abdel Bassett Sidain prepare to explore the unknown.

Giraffe Flats incorporates a number of separately registered localities spanning an area between several low hills. Most display a plethora of feet and sandal depictions, some simple and others with elaborate infilling. One of these is superimposed on the namesake of the area: a drawing of a headless giraffe. Pecked in outline, the giraffe was found with its body on a separate block to the rest of its neck, which is pecked along a different alignment. The neck portion has no head, and it seems to have been intentionally omitted rather than lost. This deliberate deformation of the giraffe may have ritual significance. Headless giraffes are known from many sites including other localities at Hierakonpolis, but all remain enigmatic.

On the summit of a low hill south of Giraffe Flats another great discovery was waiting: a large, perfectly formed spiral composed of small peckmarks. Although it bears similarities to the notch rows found across the site, this is our first true spiral. A similar design was recorded by Winkler in the Wadi Abu Wasil in the Eastern Desert, but it doesn't match the beauty of ours.

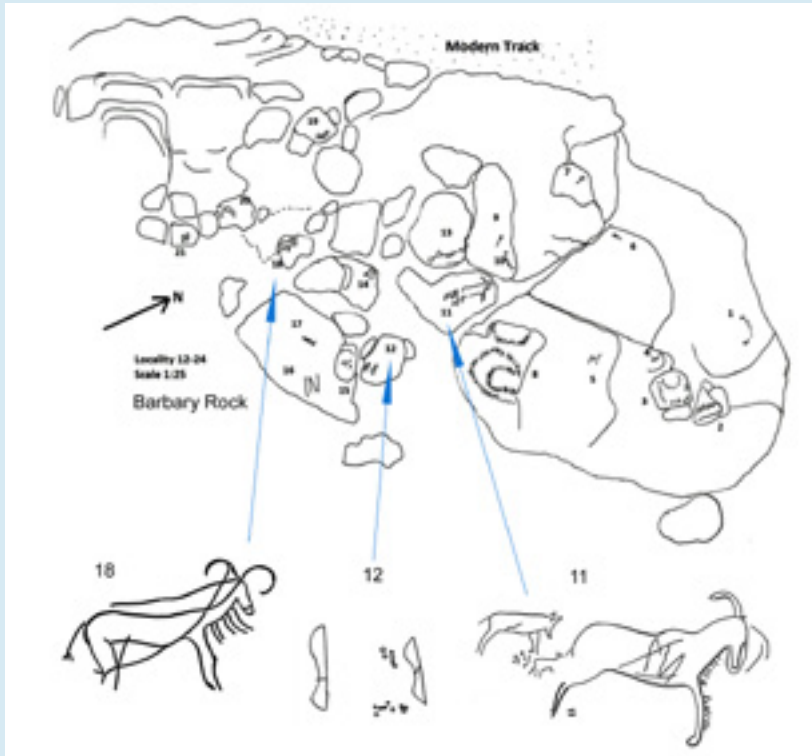


Drawing the headless giraffe at Giraffe Flats.



The perfect spiral.

Rock Art Recordings Around HK



Map of Barbary Rock and key depictions.



Fancy feet at Giraffe Flats.



Hippos in the desert.

Overall, 4 km² was surveyed in the northwest area, while 0.48 km² was covered in and around Wadi el Pheel. As a result 23 new localities were added to the register in 2013, but reinvestigation of 2012 localities also led to new discoveries. At one flat sandstone outcrop with a number of curling notch rows, a bit of cleaning revealed faint drawings of two hippopotami. One has a prominent harpoon in its head and slight remains of body decoration. The shifting of a little sand at a locality lying within the modern track revealed another lightly incised hippopotamus with a series of peck marks set in circular pattern near its head. Together they more than double the number of hippos we have in our desert.

The impressive tableau at Barbary Rock was also revisited. Discovered only on the last day of the 2012 season, we returned to record it in full as soon as we felt it was safe. Giving their name to this locality are depictions of Barbary sheep surrounded by a number of abstract compositions and elaborate notched rows. This season, all motifs were traced and the entire rock outcrop was mapped. In all, 21 individual elements were registered. Careful tracing of the scene featuring the largest Barbary sheep with a dog in pursuit revealed that the animal is actually being tailed by two dogs, the second one much smaller. Between the two dogs are peck marks similar

to those observed between the two bows drawn nearby. That these seemingly random pecks occur between the two main agents of the hunt—the dogs and the bows—is intriguing and suggests these pecks were executed as part of some ritual activity, perhaps to aid the hunter. Whatever the reason, they were clearly not made by accident, and however inconspicuous such marks may seem, we overlook them at our peril if we want to try to understand the motivation for rock art at Hierakonpolis and across Egypt. 🐘



Drawing the hunt scene at Barbary Rock.

The Horned Quadruped Conundrum

—Xavier Droux, Lincoln College, Oxford

The list of wild animals attested at Hierakonpolis is now quite impressive when one puts together those buried at HK6 with the new additions made each year by the Hierakonpolis rock art survey. Between them, these two archaeological records share some notable similarities. For example, the elephants and hartebeest were both buried and drawn. Hippos are also present in both—three were buried in the cemetery, while an increasing number of rock art depictions are being discovered some 4–5km away from the river. These additions to the rock art record further highlights the obvious resonance the hippo had in the early Predynastic period. It is known from a record-breaking 166 pieces of mobile material culture from across Egypt, appearing on C-ware vessels, as cosmetic palettes, and as figurines, including the remarkable steatite example and unique ivory wand from HK6 Structure 07 (see *Nekhen News* 19:7–9).

From the similarities between the faunal, the figural and artifactual records, it is tempting to generalise that species that had widely understood representational value were necessary components of the funerary entourage of the rulers of Hierakonpolis, and vice versa. However, more intriguing are the still unexplained differences between these bodies of evidence. Aside from the giraffe, which is now well-attested in the site's rock art, but continues to be frustratingly elusive in the cemetery (though we remain hopeful), the most significant difference involves what are collectively known as horned quadrupeds. These include gazelle, ibex, oryx and other less easily identified four-legged antelope-like creatures with horns, which occur frequently in the iconography of the predynastic period. Beautifully depicted in the Painted Tomb and on other elite objects from the site, predominant on Decorated ware of

the Naqada IIC–D period and widely attested in the rock art of the Hierakonpolis region and elsewhere, they are prominently absent from the buried fauna at HK6. Why is this?

Granting that the actual bones of ibex and the larger of the antelopes, such as oryx and addax, are missing or exceedingly rare anywhere in Egypt, had the rulers at HK6 wanted these species buried with them, we cannot doubt they would have been able to do so. The situation becomes even more curious when it comes to the gazelle. The excavations at the ceremonial centre at HK29A yielded numerous bones of dorcas and the rarer damas gazelle, which supplemented by the iconographic record, suggest that they played a significant role in the rituals undertaken there. Their bones were found together with those of other wild animals, like hippo and crocodile, representatives of which were also buried at HK6. So what is the difference between them? If gazelles were hunted and gathered for rituals at HK29A, how come they weren't selected for burial? Did they have an altogether different symbolic value from other animals at the temple? Were they too common or too weak to be included with the more powerful in the cemetery? As for the other members of the horned quadruped collective, can we explain their absence by assuming they were so sacred that it was a matter of look (and depict) but don't touch? We simply don't know, and it all remains a conundrum.

Clearly, one explanation will not fit all of our four-legged friends, and the perceptions of kings and commoners need not to be the same and probably weren't. But as new discoveries are made across the site—in the rock art, cemeteries and settlements—we will be in a better position to theorize on the matter, and maybe even find the solution! 🐐



Horned quadrupeds in the Painted Tomb.

In the Footsteps of Petrie? The HK25 Deposit Revisited

—Renée Friedman and Kazuyoshi Nagaya

In 1887, a young(ish) Flinders Petrie sailed up the Nile in the company of Francis (Frank) Ll. Griffith (later of Griffith Institute fame). It was the first visit to Upper Egypt for Griffith and only the second for Petrie, so they stopped at many sites along their way southward. One of those sites was Hierakonpolis, where they spent some time examining the as yet unexplored remains. Petrie quickly realized it was a site of major importance, but the pottery and stone fragments he saw were completely strange to him. It would be another nine years before he could identify them as pre-dynastic. In his journal he records his amazement at the quality of the flint work and that he filled his pockets with lithic treasure, only to lose his favourite—a perfect lance-head—on his way back to the boat, and could not find it again despite careful searching.

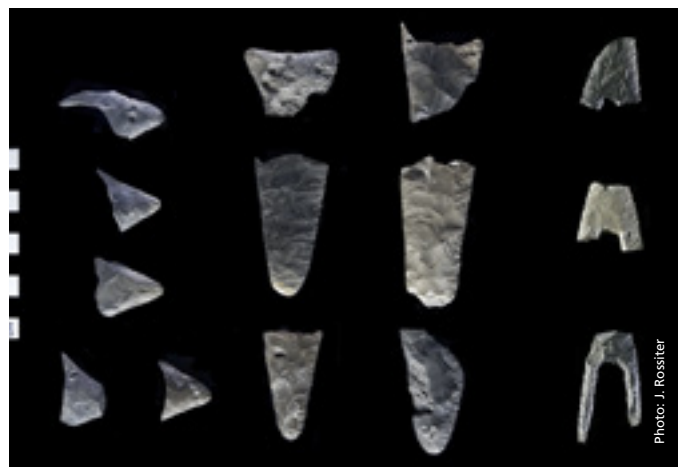
In the basement of the British Museum is a box filled with flints that just might be the ones gathered on that day. Originally donated to the Prehistoric Department, the note with them says only ‘Collected by Petrie at Hierakonpolis near Fort’, a rather vague locator since the Fort was the only standing monument by which to navigate back then. While it is nice to find the actual pieces that took Petrie’s fancy, what is even more exciting is that one group amongst them leaves no doubt about what part of the site he was exploring. By virtue of their shape—fishtail knife fragments, lances and winged arrowheads—and the distinctive marks of burning on them, they can only have come from HK25, where a deposit of identical implements was excavated by Thomas Hikade in 2005–2006 (see *Nekhen News* 18:4–5, 20:4–5). Located just to the northeast of the ceremonial center at HK29A, HK25 featured a pillared hall, around which a significant amount—in fact the largest number known from any one place at Hierakonpolis—of beautifully worked



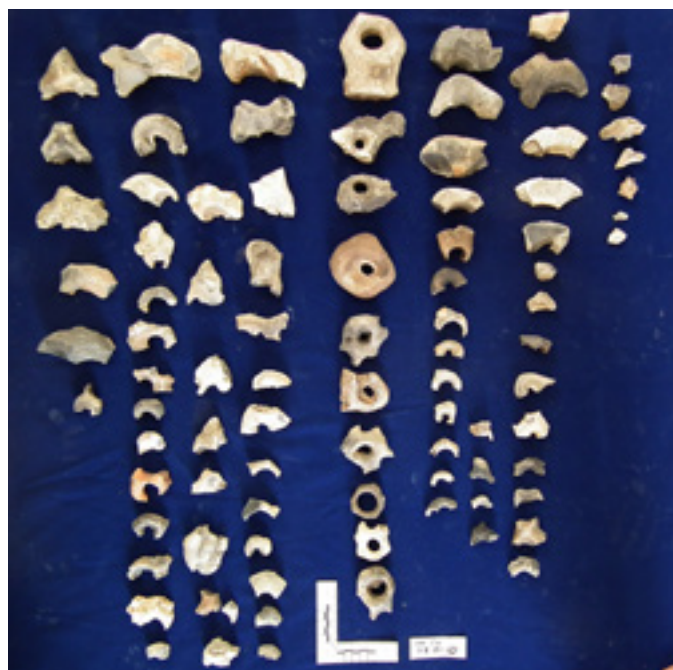
Burnt fishtail knives from HK25.

bifacial fishtail knives, lances and arrowheads had been subjected to burning, apparently as part of a ritual. This practice is not known from any other part of the site, so Petrie’s treasures are unlikely to come from any other place. Thus, it seems we are truly walking in his august footsteps.

In 2012 we took the opportunity to re-examine the material from the HK25. According to Hikade, around 14% of the lithic artifacts had been burnt, all of them being well-crafted bifacial tools. Also subjected to fire were discoid stone mace heads and naturally formed flint rings. Unfortunately, Hikade



Petrie’s flints in the British Museum.



Enigmatic flint rings from HK25.



What fire does to flint: part of the burnt deposit from HK25.



Mace heads from HK25.

Table 1: Distribution of burnt artifacts at HK25.

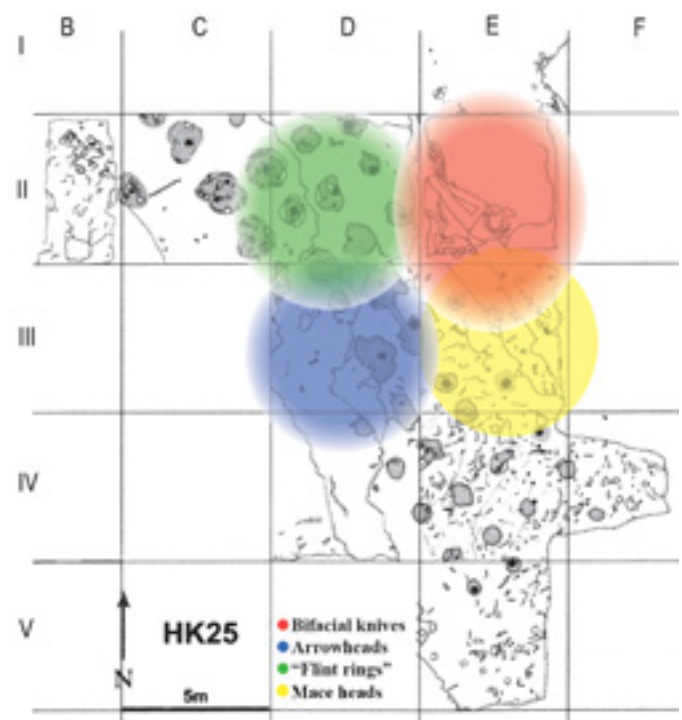
Area	Knives (Fishtail, Rhomboid & Unidentified Piece)						Arrowheads						"Flint Rings"					
	B	C	D	E	F	Subtotal	B	C	D	E	F	Subtotal	B	C	D	E	F	Subtotal
I	–	–	–	3	–	3	–	–	–	–	–	–	–	–	–	3	–	3
II	15	21	120	212	–	368	2	6	9	–	–	17	2	22	107	9	–	140
III	1	–	64	230	11	306	–	–	14	2	–	16	–	–	41	16	4	61
IV	–	–	24	12	8	44	–	–	2	1	1	4	–	–	2	1	4	7
V	–	–	–	14	4	18	–	–	–	–	–	–	–	–	–	3	–	3
VI	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Total	16	21	208	471	23	739	2	6	25	3	1	37	2	22	150	32	9	215

did not have time to study the deposit in detail and left the actual numbers vague. As a result of our re-examination and refitting work, this information can now be provided, making the deposit even more impressive and unique.

Not counting what Petrie collected, it is composed of 776 burnt bifacial flint pieces and includes at least three rhomboid lances, 17 bifacial knives, 24 fishtail knives and 15 hollow based arrowheads with the long wings typical at Hierakonpolis. Of the enigmatic flint rings, there are 215 pieces, some of substantial size, and at least ten discoid mace heads now shattered into many pieces.

Even more interesting is the distribution. The ritual burning does not seem to have occurred all at one place. The find spots of the bifacial knives, arrowheads, flint rings and mace heads all show different centers of concentration. It is therefore likely that not one, but several rituals were carried out here, each involving a specific artefact type at a specific place.

In the end, we may never understand why they felt the need to burn their beautiful flint tools, but even in their now ruined state, it is easy to see why Petrie was so impressed. 🏹



Location of burnt artefacts by type at HK25.

Administration Without Writing

—Richard Bussmann, University College London, UK

Hierakonpolis is a hot spot for the study of Egypt's development from prehistory to early civilization. The invention of writing played a major role in this process, but it is not well understood. It is often assumed that writing facilitated the emergence of the bureaucracy necessary to run a large territorial state. The primary evidence for writing in the early stages of Pharaonic history is seal inscriptions. Until a few decades ago, the royal tombs of Abydos and the great mastabas at Saqqara provided the most substantial body of material. Excavations over the past thirty years have increased the evidence available for administrative activities in settlements and these finds display a greater diversity. At Hierakonpolis, Quibell and Green discovered several clay sealings in the Early Dynastic temple and town area at Nekhen in 1897–99. Among the unpublished items now housed in the Museum of Archaeology and Anthropology, Cambridge, are a few whose 'inscriptions' are, in fact, mere pictorial patterns, which challenge simple notions of administration as a ruling machine based entirely on writing.

The clay sealings from Nekhen are pieces of mud originally attached to door bolts, vessels, knots, and other objects. The inscriptions were produced by rolling a cylinder



Z 46133.3: clay bulla of man between lines.



Z 46133.2: clay sealing of seated man.

seal over the surface of the still moist clay before it dried. The first example, oval in shape, is a completely preserved bulla, probably enclosing a knot of the string whose impressions can be seen at the sides. What kind of object the string was attached to is not clear. The seal was rolled five times over the surface resulting in overlapping 'inscriptions' involving a human figure flanked by wavy lines on all faces of the bulla.

On another sealing, a seated man is depicted probably facing a pile of offerings. This interpretation is based on the prevalence of offering table scenes on Early Dynastic cylinder seals and it is backed up by two further sealings from the site. One shows a walking man with what looks like a number of pots arranged between jagged lines. The other, much more fragmentary, shows a seated man and woman in poses that resemble offering table scenes in later periods.

It remains to be explored how the iconography of these seals fits into wider visual developments of the period. What is striking, however, is that these 'inscriptions' do not represent phonetic writing. They do not provide names and titles of officials or refer to specific institutions, which one might expect in an administrative context. Instead,



Z 46132.2: clay sealing of man with pots.

they demonstrate that sealing and writing are two different things. Certainly, rolling a seal over a piece of mud does not require any writing skills. Further, it should also be noted that in later periods of Egyptian history, the use of writing on seals is actually an exception rather than the rule. In many ways, sealing patterns are much closer to visual than to written culture. This raises the question of whether other Early Dynastic seal inscriptions, which are perfectly readable like their Old Kingdom successors, are in reality a reflection of the more important power of hieroglyphs as a visual tool rather than only as a system for recording the spoken word. As a consequence, one should perhaps view cylinder seals as objects of visual display rather than an attempt by royal bureaucrats to implement an administrative master plan.

Re-examination of older material in various museum collections still yields exciting food for thought. This does not come as a surprise to *Nekhen News* readers. Articles in this and previous volumes amply demonstrate the wealth

of unpublished objects in collections throughout the world. Their full potential, however, can only be revealed as fresh fieldwork illuminates the archaeological contexts so poorly recorded during earlier excavations. Clearly, there is plenty of work still to be done both in and out of Egypt. 🏠

Photos by Richard Bussmann, courtesy Museum of Archaeology and Anthropology, Cambridge. Drawings by Richard Bussmann and Christina von Elm.



Z 46135.6: clay sealing of man and woman.



HK in Maidstone: Not Quite the Painted Tomb

—Renée Friedman

After the end of the exhausting 1899 season that F.W. Green spent alone excavating at Hierakonpolis, he selected objects from the dig to send to the subscribers who had funded the work. To the Maidstone Museum, Kent, UK, he sent a selection of 43 items from his excavations at Nekhen and in the prehistoric cemeteries. Among them, perhaps because the museum was close to his family home in Tunbridge Wells, he included some things that were rather special by virtue of their find-spots: the tombs right next to the famous Painted Tomb.

Tomb 101, the one explored after the discovery of the Painted Tomb (Tomb 100), was another large tomb with a wooden roof and walls covered with white plaster, but sadly without painted decoration. The headless body of the tomb owner was still *in situ* on matting, and by the feet were a large number of pots. One of them, a little round-bodied jar, was sent to Maidstone (EA 4) and is typical of the Naqada IIC period. Some of the other pots from this tomb are now in Dublin, but the whereabouts of many are still unknown.



Pot from Tomb 101, Maidstone EA 4.

Tomb 102 was next. It also preserved signs of roofing joists, but had been pretty thoroughly robbed, much to Green's frustration. Aside from the owner's head, the



Palette from Tomb 102, Maidstone EA 1 and 317.

rest was a mixture of cow bones and pottery. However, at the north end, with a collection of small bowls, was a fish-shaped palette (EA 1) and rubbing pebble (EA 317), which now make their home in Maidstone. Although palettes shaped like fish are among the most common, this one is rather splendid. With a length of just over 25cm, it is of notable size. How it managed to escape the pillage of the tomb, especially as palettes were sought after by robbers both ancient and modern, is unclear, but it is more than just nice that it did.

While these objects don't quite have the impact of the Painted Tomb itself, as the dispersed material from the cemetery surrounding it can be identified and re-examined, we can gradually put in context and perhaps one day explain the presence of this still unique example of a decorated predynastic tomb. 🏠

Looking Inside the Bones: X-ray Analysis at Hierakonpolis

—Daniel Antoine and Anna Pieri, British Museum, London

The analysis of human remains from archaeological sites offers a unique window into past human biology, but the interpretation of pathological and developmental changes in bones and teeth can be difficult, particularly if based only on surface indications. With x-rays one can investigate the changes that have occurred on the inside. They make it possible to visualise hidden structures, like the developing teeth inside an infant jaw or bone densities around lesion, leading to better aging and diagnoses.

Thanks to a grant from the Thames Valley Ancient Egypt Society, UK, we were able to x-ray the selected skeletal elements of more than 30 individuals from cemeteries across Hierakonpolis. At the top of the list were the two dwarfs from HK6 (see *Nekhen News* 23:7–8; 24:7–8), found in Tombs 47 and 51 respectively, as well as the adult and juvenile also recovered from Tomb 51, in hopes of detecting features that might reflect their relationships. We also x-rayed several individuals from HK27C, the Nubian C-Group cemetery, which we are currently preparing for final publication. Fortunately,



Roxie Walker, Anna Pieri and Daniel Antoine laying out bones for x-ray.



X-ray of the bones of the dwarf from HK6 Tomb 51.

there was also just enough time and x-ray film to include the child from Burial 213 in the HK43 cemetery. Buried with evident tenderness (see *Nekhen News* 14:11–12), he/she seems to have suffered from a variety of maladies.

Thanks to the assistance of the Institute for Bioarchaeology, a portable x-ray machine was brought to the site and set up in the workroom, where the thick walls and pillars could block the dispersal of harmful rays. The bones were positioned on special film trays, just below the machine, and exposure time was adjusted according to bone density. A thick bone, such as a femur, requires a longer exposure than thinner and more delicate bones, particularly those of infants.

Analysis of the films is on-going, but already it has confirmed the interpretation of several pathologies, including large dental abscesses and healed fractures. It has also allowed more accurate aging of several children from the state of their otherwise hidden teeth. Rarer conditions were examined as well. One individual, for example, showed numerous small erosive lesions around several of the joints in the hands and feet. The relatively discrete nature of the changes and the high number of symmetrical lesions in the same location of the left and right sides suggest the cause was rheumatoid arthritis, a joint disease rarely described in the archaeological literature. The x-rays

revealed a denser layer of bone around the lesions, known as a sclerotic margin, indicating that the bone had reacted while the person was alive and this is helping us to determine the root cause behind these lesions.

Examination of the x-ray images of the two HK6 dwarfs by experts in modern growth disorders also confirmed our initial suspicions that we had something special, since the shaft diameters of the long bones did not match expectations for achondroplasia, the most common cause of dwarfism. Further analyses (and more x-rays) are needed to pin down the exact growth disorder, but that both of the dwarfs exhibit evidence of the same and much rarer condition strongly suggests they are biologically related.

This is just a sample of what can be observed. As the research continues there is no doubt that other facets of these ancient lives will emerge from inside the bones. 🦴



Bones of the dwarf ready for x-ray.



More Tattoos!

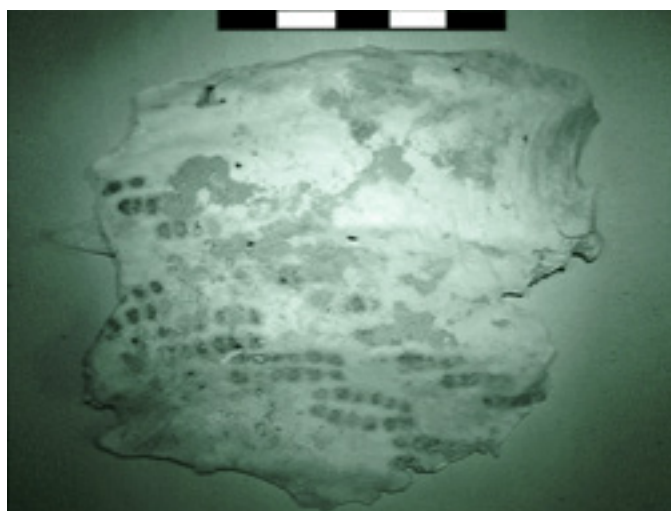
—Renée Friedman and Joel Paulson

So excited about the ability of infra-red photography to clarify the tattoos we knew about on the lady from Tomb 9 in the Nubian C-Group cemetery at HK27C, we decided to have another go and look for tattoos we didn't know about. With IR one can see many things, but only if they are there. Our search for new tattoos was limited to those bodies where the skin was still present for examination, which at HK27C meant not very many. Our collection included two men: the nearly perfectly preserved natural mummy from Tomb 18 (aka Mr. Stiffy) (see *Nekhen News* 16:24–26) and the skin of the back and on the lower legs of the man buried in Tomb 54 (*Nekhen News* 19:20–22). Unfortunately, a thorough look at them through the camera came up blank on both accounts.

However, when we fixed the lens on the skin of the woman from Tomb 10, we had much more luck. This lady was found with her rib cage displaced up against the tomb wall, but held in articulation by the skin and tendons. The skin fractured when removed from the tomb in 2003, but all the pieces were collected. They looked completely plain to the naked eye, but with IR, their hidden adornment just popped out. On one piece from the chest, double rows of dots, clearly made with a sharp toothed comb, were arranged in a stepped pattern, while a single row of dots made up a parallel stepped line. Other pieces had networks of dotted lozenges, similar to those on her neighbour in Tomb 9, but more robustly achieved. In addition, we detected a series of diagonal lines composed of small slash-like marks along the upper arm. Originally, this lady had some serious tattoos!

The presence of two tattooed ladies in adjacent tombs seems remarkable, but is it significant or just an accident of preservation? Were they related by blood or profession? Were tattoos reserved for women only? We may never know for sure, but the new tattoos revealed with infra-red photography are a great addition to the limited corpus from this fascinating Nubian culture. ☀️

Thanks to a grant from the Shelby White and Leon Levy Program for Archaeological Publications, preparations for the comprehensive publication of the Nubian cemeteries at Hierakonpolis are now underway. We look forward to bringing you other new discoveries and insights as the final analyses continue.



New tattoos from HK27C Tomb 10.

Hierakonpolis in Kerma

—Ikhlass Abdel Latief, Sudan National Museum, Khartoum, Sudan

During the late Second Intermediate Period, the powerful Kingdom of Kush launched raids into Egypt, carrying off booty that included statues, stelae and other fine objects from various temples and shrines. These objects were trophies destined to be buried in the great tumulus-tombs of the Kushite kings at their capital Kerma (now in the northern Sudan). That the Hierakonpolis-Elkab area was the focus of at least some of these raids is known from an inscription recently uncovered in the tomb of Sobeknakht, the governor of Elkab. Other evidence for these Nubian raids is in the booty itself.

One fine little statue now in the Sudan National Museum (no. 1132) was discovered by American archaeologist George Reisner in Kerma Tumulus KXV. Remarkably the

unknown, but his title, 'elder of the portal', is well-known and indicates that he was a man of standing and possibly received commissions from the royal palace.

Mentjuhotep originally placed his statuette in the temple of Horus to help secure eternal life through the intervention of the god. He can hardly have imagined that not too far into the future it would be forcibly taken away to a foreign land, there to be used as a symbol of Egypt's humiliation. And this statue was not the only thing taken from Nekhen. Two other objects originally belonging to people from the site were also discovered in the Kerma tumuli. One is an alabaster jar, now also in the Sudan National Museum (no. 1087), which bears an inscription mentioning perfumed oil for the *ka* of the mayor of



Statue of Mentjuhotep (Sudan National Museum 1132).



Stone vessel of Sobeknakht (SNM 1087) and detail of inscription.

only unbroken figure he found at the site, it can be connected by its inscription to the site of Nekhen. Carved from dark stone, it is 17cm high and portrays a man with a curled wig, large eyes, thin nose and thick lips. He wears a short skirt, his hands placed flat upon its broad triangular front. On grounds of statue type and its distinctive style it can be dated to the Thirteenth Dynasty. A rather rough hieroglyphic inscription is present on the back-pillar and on top of the pedestal by the large feet. It consists of an offering-formula invoking Horus of Nekhen: *An offering which the king gives and Horus of Nekhen for the ka of the elder of the portal, Mentjuhotep, born to the lady of the house, Rense(n)eb*. Mentjuhotep and his mother are otherwise

Nekhen, Sobeknakht. The care with which the vessel has been carved to take advantage of the veins in the stone is noteworthy. The same care can also be seen on the other Nekhen vessel found at Kerma and now in Boston. Both may originally have come from the same workshop.

As previously mentioned in the *Nekhen News* (18:29), these Nubian raids, or fear of them, may have been the reason for burying the famous gold falcon statue of Horus and other precious or portable objects at the temple of Nekhen. So carefully did the priests hide these items that they were not rediscovered until 1898. Mentjuhotep and Sobeknakht, however, were not quite so lucky, but their names live on in the Sudan National Museum. 🏺

The Tale of a Mysterious Photo Album

—Lee Young, Griffith Institute, University of Oxford, UK

Happy Birthday Hilda.....

So read the tag line on a Facebook posting by the Griffith Institute to celebrate the birthday of Hilda Petrie, born 8 June 1871. Accompanying the text was a vintage photograph of a woman standing in front of a tomb. Scrutinizing the image, I quickly realized it is not Hilda Petrie, but rather Kate Quibell, the sister of J.E. Quibell, famed for his work at Hierakonpolis, amongst other places.



Not Hilda, but Kate! (Petrie photograph 5.1.26, copyright Griffith Institute, University of Oxford).

mystery!

The Griffith Institute is part of the faculty of Oriental Studies at the University of Oxford and its archive houses the papers, drawings and life work of some of Egyptology's greatest scholars. It is probably best known for the archive of Howard Carter, but contains a great deal more.

Retracing the steps of the picture in question, we discovered that in 1969 journals and some photo albums of William Matthew Flinders Petrie had been donated to the Griffith Institute. The majority of the albums were annotated with comments and information about the locations

in Petrie's precise, tiny handwriting. Petrie took most of the photos himself, being a keen photographer, and they consist of both archaeological sites and scenes of daily life. Included amongst them is the famous photo of Petrie leaning against the tomb entrance he was to call home whilst working at Giza.



Annie's painting of a hieroglyph in Paheri's tomb (Griffith Institute Watercolours & Drawings 57, copyright Griffith Institute, University of Oxford).

Yet, there was one album of 31 photos, but with no details. They showed various views of an archaeological site, some with two Victorian ladies in attendance. Marked as 'unidentified', it was just assumed one of the women was Petrie's wife Hilda, and left at that. So when it came time to find something to mark her birthday, a photo from this album seemed ideal.

Once the error was revealed, further investigations led to the site being identified as Elkab, a place where Petrie never worked. Having established the location and the proper identity of Kate Quibell, it was easy to name her companion — her future sister-in-law, Annie Pirie.



Flinders Petrie by his 'dwelling tomb' at Giza (Petrie photograph 5.5.23.459, copyright Griffith Institute, University of Oxford).



Annie and Kate at Elkab (Petrie photograph 5.1.09, copyright Griffith Institute, University of Oxford).

For several years I have been researching two women artists, one of them being Annie Quibell (née Pirie). Now, it is almost as if I know her personally and consider her a friend; one I would recognise anywhere, even under a large Victorian hat.

Annie went out to Egypt initially with Petrie to record the tombs and temples of antiquity. She went on to marry J.E. Quibell in 1900, spending the rest of her life working in Egypt alongside him. As readers of the *Nekhen News* will know, Annie was at Hierakonpolis in 1898 with her future husband Edward (he did not use the name James) and had much to say about her time there (see *Nekhen News* 9:12–13). However, the year before that they were working across the river at Elkab.

Edward arrived there on 1 December 1897 and immediately set about finding a nice rock tomb to live in for the duration of the dig season. Within four days the selected undecorated tombs had been cleared and transformed into a ‘comfortable home’ in Quibell’s own words. He further relates:

“Nothing in Egypt makes so pleasant a dwelling as a rock-tomb. In a house in which window and door are one, and three sides and the roof are of solid rock, there can be no draughts, and the range of temperature night and day is very small.”

He managed to pack 40 workmen in one tomb, while the rest of them had a ‘room’ each, with one tomb for dining.

After a delay in getting the necessary permission, they began work in the Twelfth Dynasty cemetery. Quibell thought Elkab a very pleasant site to work at, with no dealers or robbers. He comments that they were able to leave the surveying poles out for weeks at a time, anywhere else they would have been firewood the first night.



Annie's painting of the finds from the tomb of Kamena.

Annie Pirie arrived a third of the way into the season and set to painting hieroglyphs in the tomb of Paheri (originals now in the Griffith Institute) and displays of the many items they had found, including a lovely group of stone and metal vessels from the tomb of Kamena.

According to Edward, she and sister Kate were a “constant aid in the varied daily occupations of the



Pots and the place they called home at Elkab (Petrie photograph 5.1.19, copyright Griffith Institute, University of Oxford).

digger, tasks in which their experience makes them valuable helpers, and which they cheerfully added to the labours of desert housekeeping.” One can sense the romance was already in full bloom.

Around the middle of March the digging gradually ended and map-making and packing took over. They left the site at the beginning of April with 54 boxes of pottery and other objects. These were exhibited at University College London during July 1898 and then dispersed to various museums around the world, with Oxford, Philadelphia, Chicago and Manchester receiving the bulk.

The identity of the photo album now resolved, it has proved to be an important document for the original appearance of the Elkab tomb hill. Yet, how the album came to be amongst the Petrie albums will probably never be uncovered. As is prone to happen, items and records get misplaced. Some are lost forever, but thanks to dedicated repositories like the Griffith Institute, it is possible to re-discover others, providing important snapshots of both the near and distant past. How much more information is out there waiting to be re-found? That still remains a mystery. 🕵️

Griffith Institute 75th Anniversary

The Griffith Institute is celebrating its 75th anniversary in 2014, and one of the events will be a major exhibition in Oxford’s Ashmolean Museum featuring material from the Griffith Institute Archive to tell the story of Howard Carter’s discovery of the tomb of Tutankhamun, its popular appeal, and how modern Egyptologists are reinterpreting the evidence. “Discovering Tutankhamun” 24 July to 26 Oct 2014 📅

See: www.ashmolean.org/exhibitions/details/?exh=90

Farewell Old Friend Hagg Sidain Abdel-Razzik Said Sidain

3 July 1945 – 17 December 2012

Shortly before the beginning of the 2013 season we lost the longest serving member of the Hierakonpolis expedition and in many ways the most important, Hagg Sidain Abdel Razzik, who passed away after a brief illness in December 2012. As reis, guard, house manager and driver, Sidain took good care of us for more than 30 years, attending to all of our (sometimes pretty strange) needs. A man of great dignity, wisdom, humour and generosity, there is no one who knew and loved the site better and worked harder to keep it safe. For me, it is like the end of an era, having known him since my very first field season in 1983 when I stayed as a guest in the extensive family home.

Further reminiscences about Sidain can be found on our website (www.hierakonpolis-online.org), but we are fortunate to have a video of Sidain reminiscing about his own life in 2010. Lamia El-Hadidy has kindly translated this interview, so we can share some of the highlights.

Sidain was named after his great grandfather, who lived in nearby Mouisat, down by the river. It was his grandfather Said who decided to move the family to a site 2km away in order to tend land-holdings closer to the desert. There he built the first house in the village now known as Ezbet el Gemawia that surrounds the town mound of Nekhen. Whether by fluke or some higher design, this house was placed almost exactly over the spot where the Narmer palette had been found. It still lies at the core of the now much expanded family home, which in 2010 housed 67 persons of different generations, including most of our workmen and guards. When it was built, the main crops were cereals and cotton. Sugar cane was not grown until 1959 and became the prevalent crop only after the construction of the sugar factory in 1962.

Sidain's father, Abdel-Razzik, was the first to try archaeology, working for Ambrose Lansing at the Fort Cemetery in 1934. Sidain's own introduction to the field came in 1967, when he clearly remembered being asked at about 10AM whether he wanted work for the expedition of Walter Fairervis. The rate was 17 piasters a day. A few minutes

later, he was on the job. It was a momentous decision. His first task was to assist the Indian surveyor mapping the Kom, by setting markers and laying out squares. The digging at this time was done by Guftis from Luxor, but under the direction of Michael Hoffman gradually all were trained in the art of wielding a trowel.




Hagg Sidain Abdel-Razzik Said Sidain

Sidain worked closely with Hoffman, accompanying him during his desert surveys and helping him select the sites to investigate. Blessed almost until the end with incredibly keen eye sight, he was always finding interesting things in the desert sands. And Mike was quick to exploit this gift when it came time for excavations, putting Sidain on sieve duty. The 1000s of tiny microdrills from the 1985–89 excavations of the ceremonial center at HK29A owe much to his meticulous attention at the screens, while one of the nicest bits of carved stone from the 2002 work there was only picked out thanks to his eagle eyes.

Sidain was also closely involved with the building of Hoffman House. After it was determined that no archaeological material would be disturbed and building permission was granted, Sidain was

charged with finding the best deal on the stone and organizing the delivery of 540m of it. Construction commenced in 1989 and continued to 1992. Despite the expedition's hiatus between 1992 and 1996, Sidain kept watch over the still unfinished house and even planted trees. He was delighted when we returned in 1996 to complete the job and was especially proud of the solar power system installed in 1998: "The idea of having electricity and hot water from the sun—people were amazed." Even in the last days of his life, he was still anxious to oversee improvements to the house he had guarded so well and for the expedition he had made so very comfortable in it.

No words can adequately express our gratitude to this wonderful man, and just how much he will be missed. We will no longer have the pleasure of his company, but his gentle spirit will remain with us always and proudly lives on in his sons.  *Renée Friedman*

The Friends of Nekhen

Nekhen is the ancient Egyptian name for the site of Hierakonpolis, the city of the hawk, and one of Egypt's first capitals. The Friends of Nekhen is a group of concerned individuals, scholars and organizations that is helping the Hierakonpolis Expedition to explore, conserve, protect and publish all aspects of this remarkable site. The largest Predynastic site still extant and accessible anywhere in Egypt, Hierakonpolis continually provides exciting new glimpses into this formative — and surprisingly sophisticated — age, and more.

In return for your contribution you will receive the annual newsletter, the *Nekhen News*, produced exclusively for the Friends. Lavishly illustrated, the *Nekhen News* keeps you up-to-date on all of the Expedition's latest discoveries.

Help the Hierakonpolis Expedition to continue its important work. Your contribution (tax-deductible in the USA) will support vital research that might not otherwise be possible. Share in the excitement and the sense of commitment by making a genuine contribution to the search for understanding. Join the Friends of Nekhen.

Ways to Contribute

I would like to help the Hierakonpolis Expedition to explore and conserve the site of Hierakonpolis, ancient Nekhen. In return for my contribution (tax-deductible in the USA), I will receive the annual newsletter, the *Nekhen News*.

The contribution category I prefer is:

- ☐ Regular (\$25/£17/€25)
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- ☐ Patron (\$500/£250/€500)
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- ☐ This is a renewal for the 2013–2014 season.
(If you have already renewed, thank you!)

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Water in the Wadi

It may look romantic, but water in the wadi just means trouble. It endangers the spectacular organic preservation—from tattooed skin to hair on a dog—for which Hierakonpolis is famous. It also has the potential to destabilize the Fort in ways we will never be able to fix. This season's events show that the vectors of destruction can come from any direction. We need to be there to protect the site and all the information it still holds for understanding Egypt at its origins and beyond. Your backing helps to maintain our presence in person and through our guards. With several lifetimes of work still to do, we can't afford to miss a single season, especially in these difficult times. Your support makes the difference. Thank you so much.

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Let us know at: friendsofnekhen@yahoo.com

Hierakonpolis 2013 Highlights



Fishing for finds at HK11C (page 12).



Coming round the corner at HK6 (page 4).



Adventures in Experimental Archaeology (page 14).



Farewell Sidain (page 30).



A perfect spiral at Giraffe Flats (page 18).



Very big pink pot party (page 11).



Pages from a mysterious photo album (page 28).