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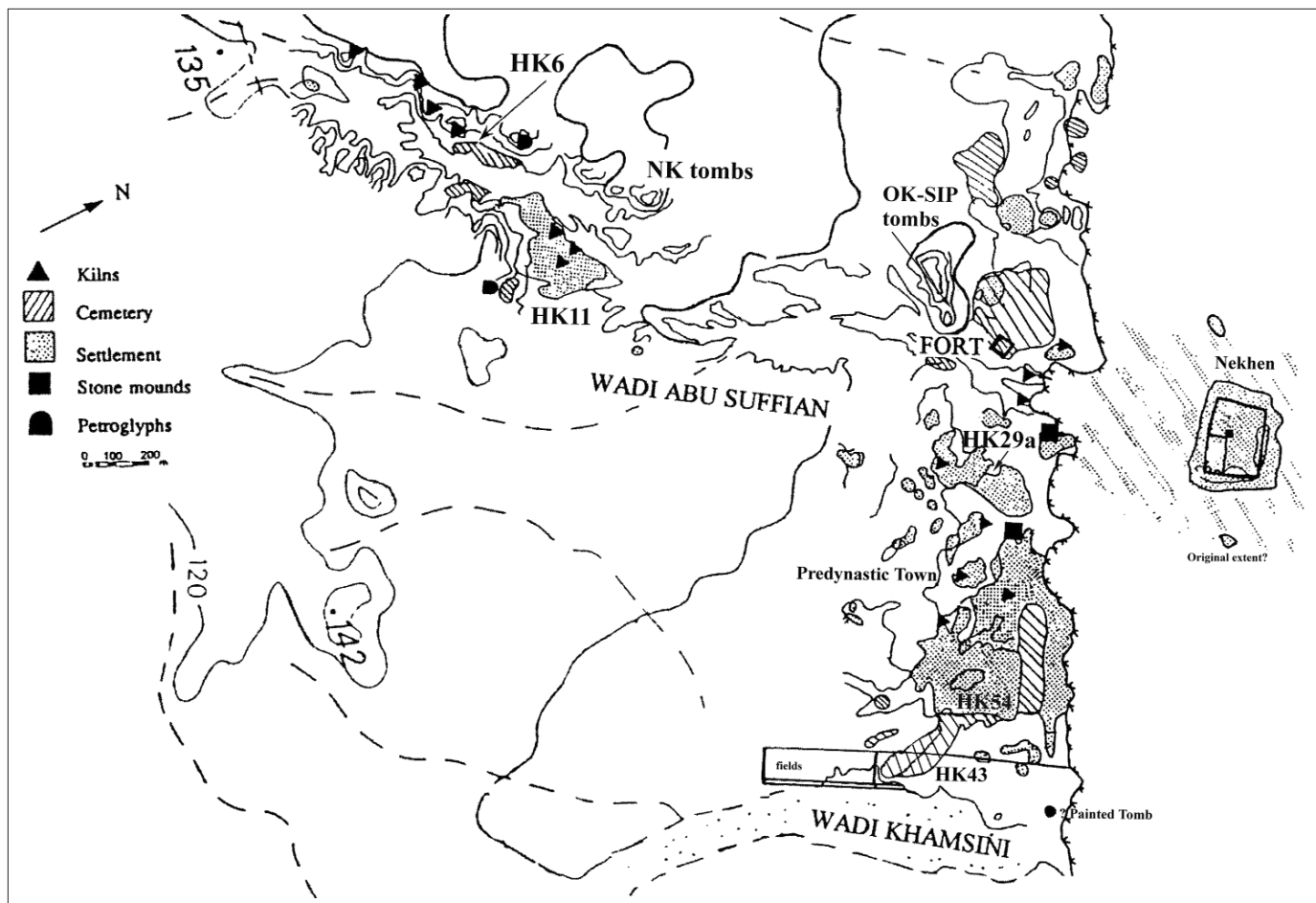
## Excavating an Elephant

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## Hierakonpolis 2002/2003



## In Memoriam: DG Park

May 1, 1935–July 5, 2003

This summer we tragically lost DG Park, graphic designer and editor of the *Nekhen News*, after a short battle with cancer. When we decided to revive the *Nekhen News*, DG was there and its distinctive style is her creation, our color pages entirely due to her encouragement. My next door neighbor for many years in Oakland CA, DG was always fascinated by each year's discoveries and worked hard to make them accessible, grammatical and beautiful in the pages of the *Nekhen News*. This wasn't always easy, but it was always fun, as the e-mails would fly back and forth. DG was a true individual and it was a privilege for me to know her. I will personally miss her more than I can say, but we will do our best to keep the *Nekhen News* just the way she would have liked it. In tribute to this amazing woman, I cannot do better than paraphrase a poem written by her daughter-in-law Jill Park. —RF



She died too soon—  
Flowers yet to plant  
Books yet to read  
Much music yet to savor  
But most of all  
She died too soon for those of us who loved her.  
We are all unfinished—cut short—left hanging.  
They say no one is irreplaceable—  
They clearly didn't know DG



## Questions and Answers

—by Renée Friedman

For over a century, excavations at Hierakonpolis have been pushing back the boundaries of history and revising our view of the Predynastic period and the 2002–2003 season was no exception. The expedition, under the direction of Dr. Renée Friedman, returned to the site for a two-part season from October 2002 to April 2003 to investigate several different areas with specific questions in mind. Those of you who followed our weekly progress at [www.archaeology.org](http://www.archaeology.org) know exactly how exciting the season was, as pieces of various puzzles began to fall into place and continue to do so.

In the autumn we resumed exploration of our unique Predynastic temple at HK29A, hoping to discover more about its appearance and usage in ancient times. Not only were we able to answer longstanding questions such as: is the temple courtyard really oval? (A: yes), but we even made progress on some of those pesky “why” questions. Of course we created several more in their place (as usual!), especially when we encountered “the wall that isn’t there”!



Drawing “the wall that isn’t there” at HK43.

More importantly, our discoveries are providing an unparalleled glimpse into actual temple ritual at this remote time. A campaign in the elite cemetery at HK6 also answered some questions when we unearthed a tomb not of another high-ranking citizen, but of an adolescent African elephant surrounded by luxurious grave goods. This is the second elephant burial found in the cemetery, and together these exotic beasts attest to the wealth and power of the early elite. More intriguing, however, is the possibility that these animals may have served as manifestations of the early rulers of Hierakonpolis; if this is the case, with time we may be able to reconstruct a dynasty of local kings stretching further back in time than we ever imagined.

In the second part of the season we concentrated on the Predynastic cemetery at HK43, where the outstanding organic preservation kept the team’s adrenaline flowing, and allowed us to gather valuable information on basketry, matting, textiles and ancient diet. While several new examples of violent death and gruesome post-mortem manipulation of the body



Amulet from the basket at HK43.

were uncovered, the season’s highlight was quite literally a basket of delights. The basket, discovered in the intact burial of an older woman, contained remarkable objects and exotic substances, and may well be a magic or medical kit.

For making this extensive season possible we are grateful to our many Friends and supporting foundations. The investigation of the temple and the capture of our elephant are thanks to *Archaeology Magazine* (American Institute of Archaeology), Tom and Linda Heagy, the Manchester Ancient Egypt Society, the Thames Valley Ancient Egypt Society and the generosity of the Friends of Nekhen (Barbara’s Fund). A grant from the British Academy, initially to the late Barbara Adams, allowed the

zoo-archaeologists to study the exotic animals from HK6, while the National Science Foundation and the University of Arkansas provided funds for the excavation and study of the material from HK43. We are also grateful to the SCA and its Secretary General Dr. Zahi Hawass for permission to carry out our work and share it promptly with the public at [www.archaeology.org](http://www.archaeology.org), where it is still available for viewing. Special thanks goes to Peter Robinson for updating our web site ([www.hierakonpolis.org](http://www.hierakonpolis.org)), which now includes many back-issues of the *Nekhen News*. Finally, I would like to thank all the members of our hard-working and dedicated team for making this season so enjoyable and so incredibly successful. 🦋



New discoveries in the Predynastic cemetery at HK43.



Questions? Comments? Contact us:  
[friendsofnekhen@yahoo.com](mailto:friendsofnekhen@yahoo.com)



## Return to the Temple: Excavations at HK29A

—by Renée Friedman

In 1985–86, Michael Hoffman made (pre) history when he discovered Egypt's earliest temple on the edge of the desert, at locality HK29A. This was the first project that I had an opportunity to work on at Hierakonpolis, and I have always wanted to return. In autumn 2002 my wish finally came true, and with the assistance of *Archaeology Magazine* we resumed the temple's excavation after a 13-year hiatus, hoping to learn more about its earliest phases, architectural plan, and First Dynasty usage.

Previous work had revealed about half of the large, walled, oval courtyard, and four enormous post-pits that once held the pillars for the façade of the main shrine. The impressive scale of the complex and the nature of the finds indicated that we had found an early ceremonial center with three phases of usage: Naqada IIB–C (c. 3500 BC); Naqada IID (c. 3300 BC); and the early First Dynasty (c. 3000 BC).

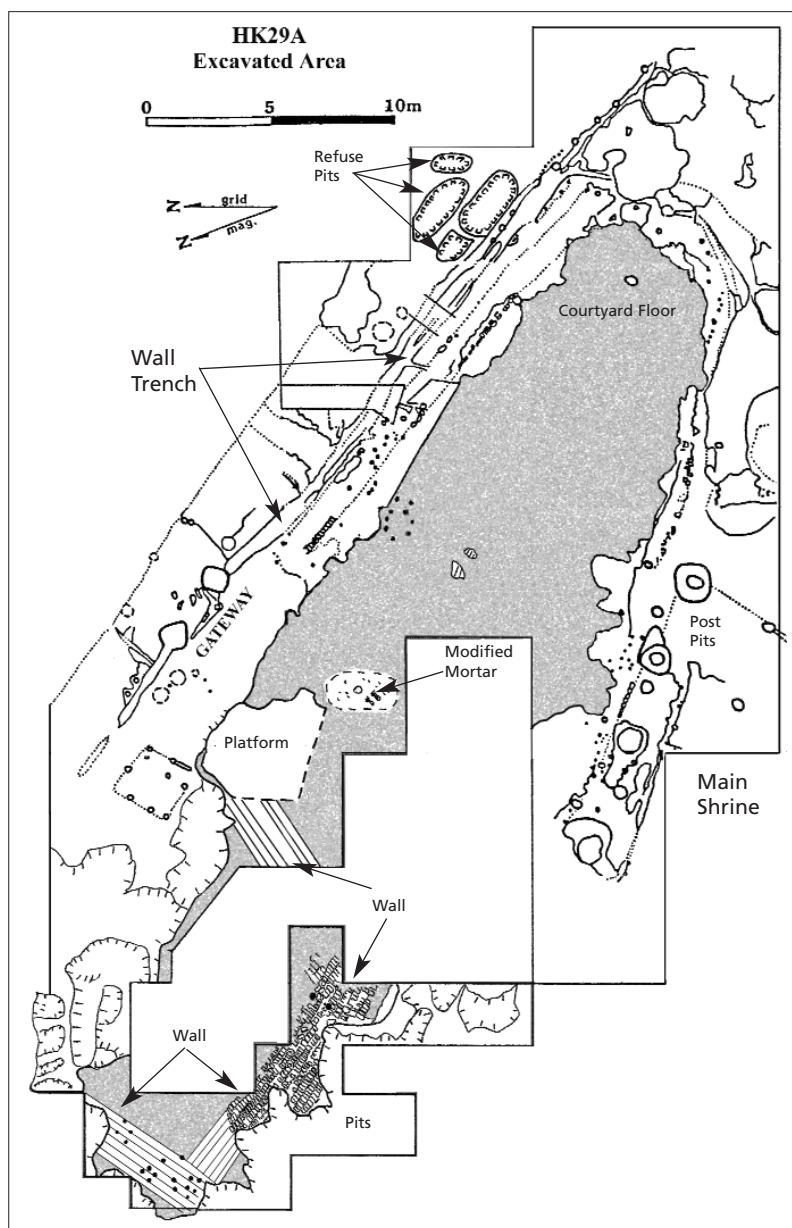
The earliest phase of the temple is best preserved in an area that we call the “wall trench,” as its main feature is a 35 m long, 40 cm deep foundation trench for a wooden fence that surrounded the north side of the courtyard during the Naqada IIB–C period. At this time, trash pits located at intervals outside of the fence were used for dumping the refuse from temple ceremonies. Although these deposits have been disturbed in recent times, they still contain an extremely dense and coherent collection of pottery and faunal material, and

provide the best indication that something very special was going on in the complex at this time.

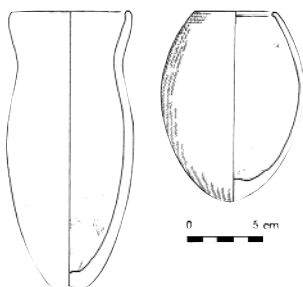
In November we opened up a 5 m<sup>2</sup> excavation along the wall trench to examine the faunal assemblage in detail. A huge amount of animal bone was recovered, and analysis by zoo-archaeologists Veerle Linseele and Wim Van Neer (see below) revealed a higher percentage of wild animals than in any other settlement area at Hierakonpolis, or just about anywhere else in Predynastic Egypt.

The pottery from these refuse deposits is also unique. Over 25,000 sherds were recovered, but the range of shapes is limited to a small number of specific forms. Most common was a unique collared-rim jar of a fine clay, which was covered with a red coating that was never polished: a

practice rare in Predynastic Upper Egypt, where the sheen of polished pottery was highly prized. The second most common shape was a small egg-shaped jar coated with a highly polished black slip, once again a color choice that is extremely rare in Upper Egypt. Together these shapes make up over 45% of the fine ware assemblage, and the lack of wear and scratch marks on these vessels suggests that they were used once and thrown away. Other finds included flakes of imported obsidian, and an intriguing incised potsherd or “ostrakon” (see below). These strikingly distinct faunal and ceramic assemblages confirm the unusual nature of the site at 3500 BC.



A new plan of the Predynastic temple at HK29A.



Pottery from the Wall Trench: matte red jar and shiny black egg.

Pottery embedded in the floor plaster dates this refurbishment to Naqada IID (3300 BC). A series of small postholes found along the curved western end of the courtyard indicates that a wooden structure or wall stood there at the time.

What we didn't expect, however, was evidence for yet another major renovation! Excavations in the western half of the courtyard show that a mud brick wall at least eight courses thick once stood there, yet not one brick remained.



A moment in time emerges.

Mortar lines and compression of the plaster under the weight of the bricks are the only indication of the presence of this massive wall, which was laid mainly in headers. Similar but much fainter impressions of other, presumably adjoining, walls to the west and east indicate that a structure at least 15 m long occupied the western side of the court (see color pages).

Only in the area of the so-called platform are bricks still present. This platform is over 4 m wide and is solidly composed of sandy mud bricks. Now preserved to only one course in height, it must have been quite tall, judging from the amount of fallen and melted brick around it. The purpose of this enigmatic structure is unclear. Only partially cleared in the 1980s, we investigated it further this season. Beneath the melted brick, excavation revealed a puddle of mortar in which were preserved the ancient hand and foot prints perhaps belonging to one of the temple's masons. It was very exciting to see this moment captured in time; however, *when* exactly in time this moment took place remains a bit of a mystery. Evidence for dating is restricted to a frag-

Following this phase, there was a major renovation of the complex. The courtyard floor was re-plastered, and recent excavations at its western edge have shown that the court is in fact oval in shape (as expected) and over 40 m long, with the main shrine and entrance placed centrally on the long sides.

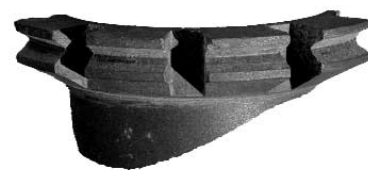
ment of an intricately carved greywacke jar found above the platform. Stone vessels of this type are typical of the First Dynasty royal tombs and the presence of this fragment may suggest an early First Dynasty date for the rebuilding of the temple complex. In 1989, a pit containing First Dynasty cultic vessels was discovered directly to the west of the platform; however, other evidence for this First Dynasty occupation remains elusive.

Determining the function of our newly discovered mud brick walls is certainly not made any easier by the fact that they are no longer there. A probe into the interior of the structure they may describe has yet to be made, but the baulks show only layers of clean sand alternating with lenses of rain-laid silt. This is curious indeed, as the desert sites at Hierakonpolis suffer in general from deflation, therefore a build up of almost 1.3 m of clean sand is quite remarkable. Could this structure be a revetment for a mound of sand? Another plausible theory is that the western structure was a royal or priestly residence, with the platform, commanding the best position beside the main axis of the temple, serving perhaps as a "window of appearances" from which the king viewed the festivities, much like the raised canopy depicted on the Narmer macehead. Only future exploration can tell us more.

Several questions about the temple were answered this season and, although several new ones have replaced them, one thing is clear: the temple still has many more secrets to reveal. Recently received satellite imagery suggests there is more to this complex than initially meets the eye, proving that Egypt's earliest temple is also one of Egypt's most enigmatic. ■



The Narmer macehead depicts the king presiding over an event apparently taking place in the tall building surrounded by a low enclosure wall on the right. Below, a view into the interior of this enclosure shows horned animals cavorting within an oval courtyard. In several details this carving is so strikingly similar to the complex at HK29A that it is tempting to suggest that the events depicted actually took place there.



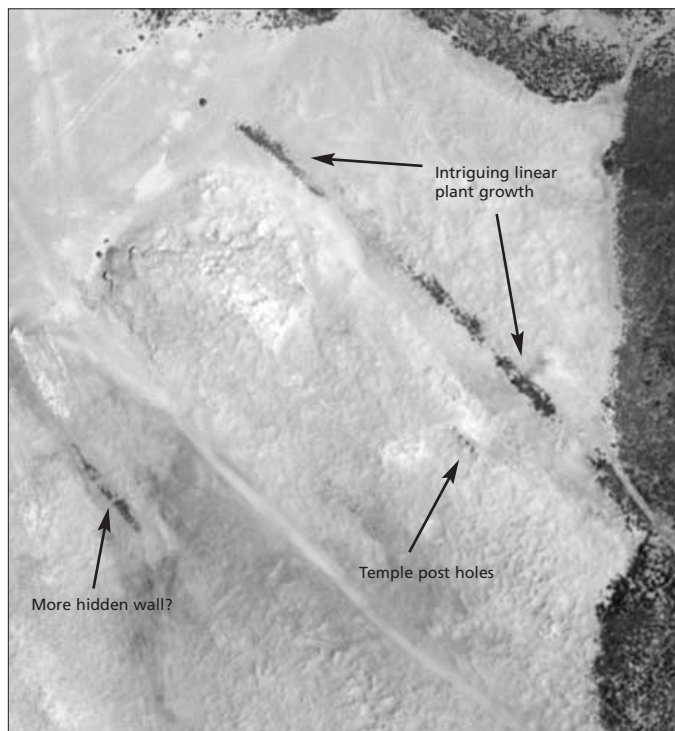
Stone vessel from the platform.



## Surprise from the Sky

—by Joel Paulson, M.A., P.L.S.

As part of the ongoing mapping of the site of Hierakonpolis, and thanks to the generous donations of the Friends of Nekhen, we obtained high-resolution color imagery from Digital Globe, operators of the “Quickbird 2” satellite. Launched in October 2001, the satellite orbits the earth at an altitude of 450 km, yet can provide images with up to 0.6 m



The temple from space (courtesy of Digital Global).

resolution, meaning that each pixel of the image shows 60 cm on the ground. This resolution, as shown in the image of the Fort (see page 31), gives excellent detail and means that even the postholes of the temple are visible from space! Because Digital Globe had not previously photographed Hierakonpolis (it hasn't been a political hot spot for several thousand years!), we had to order a special collection of the region. They routed the satellite and collected the scene on May 1, 2003. The results are impressive; for the first time, we have a base for accurately mapping the entire site and the surrounding region (see back cover).

The survey work in the coming season will concentrate on obtaining more ground control and spot elevations at various points visible in the satellite imagery. These additional points, along with another set of images we hope to obtain with your donations, will provide stereo coverage of the site, allowing us to photogrammetrically map the terrain and add contours at 2 or 3 m intervals. This second set of imagery will also include an infra-red or near infra-red color band that may show additional information not visible to the naked eye.

With this view from the sky we already see intriguing things that we never noticed before. Lines of plant growth surrounding the temple area may reflect buried walls, suggesting that the temple complex may be far larger than we ever imagined. Although it will take work on the ground (planned for Fall 2003) to tell us for certain what these features really are, with this new information we can already begin to consider the temple in an entirely new and even greater light.

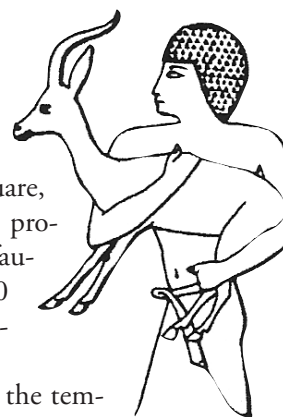
## Gourmets or Priests? Fauna from the Predynastic Temple

—by Veerle Linseele & Wim Van Neer (Royal Museum of Central Africa, Belgium)

Architectural features such as the courtyard and massive post-holes may tell us what the temple looked like, but the large number of animal bones found at the site can suggest what actually took place there. Excavations in the “wall trench” area along the north side of the temple courtyard in the 1980s revealed an impressive array of faunal remains that marked HK29A as distinct from other domestic areas of Hierakonpolis. To verify and expand upon these earlier results, a new investigation of the wall trench was initiated in November 2002 and all the material was sieved through a set of screens with graduated mesh sizes in order to catch the

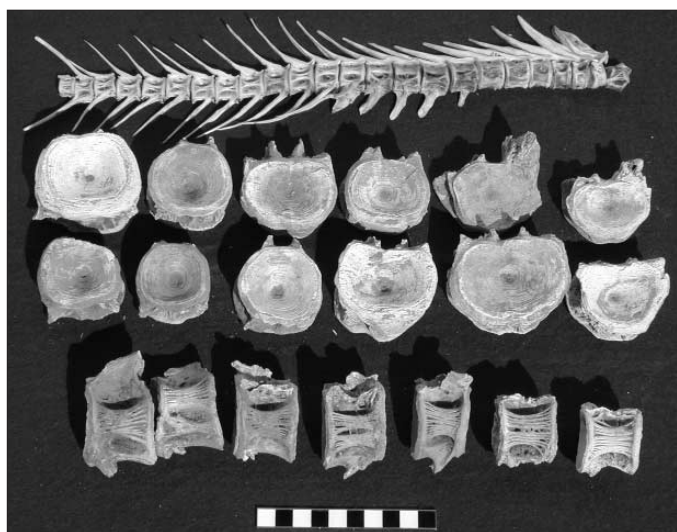
smallest element. This 5x5 m square, with less than 40 cm of deposit, produced an enormous quantity of faunal material—around 25,000 animal bones, of which approximately 10% could be identified.

The faunal assemblage from the temple was compared to fauna from other Predynastic sites in both Lower Egypt (el-Omari, Merimde and Maadi) and Upper Egypt (El Abadiya, Adaima). At all Predynastic sites, domestic livestock (cattle, sheep, goat and

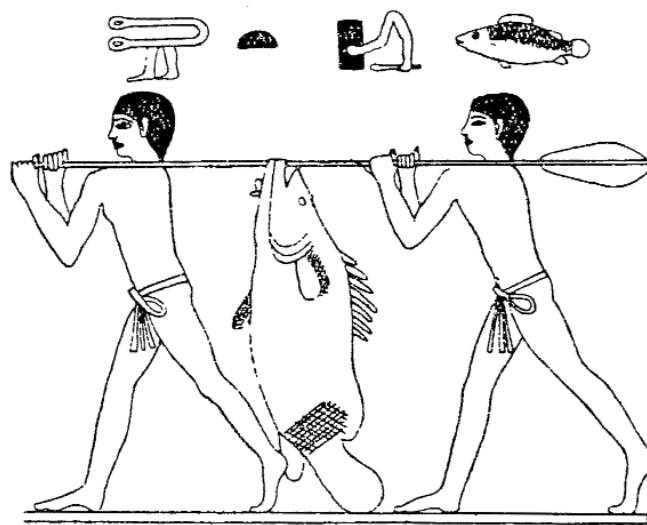


pig) was the most important source of animal proteins, but the proportion of the different species varied. Cattle were always dominant, but the relative importance of pig was low at Hierakonpolis (including HK29A) and other Upper Egyptian sites when compared to those in Lower Egypt, where the ecological conditions for pig keeping were more favourable. In Upper Egypt goats outnumber sheep, while the opposite is true for Lower Egypt, probably because goats are better adapted to harsher circumstances. At all sites the harvesting of molluscs was a minor economic activity, while the importance of fishing was highly variable; however, this may be due to different sampling strategies rather than any real economic differences, since fish remains have the highest chances of being overlooked if the material is not screened, as they are generally small.

The unusual nature of the animal remains from HK29A is apparent from both the quality of the aquatic fauna and the quantity of wild mammals present. The fish fauna are exceptional because of the large size of the Nile perch, some of which were at least 1.5 m long. At other Predynastic sites, specimens of over 1 m in length occur only occasionally, whereas large specimens predominate at HK29A. It would thus appear that for the events happening at the temple, special efforts were made to capture large Nile perch, which can only be found in the deeper parts of the Nile. Compared to other sites, the elements of the body are over-represented at HK29A, while elements from the skull and fins are rare. This pattern, with meat-bearing parts predominating largely over the less palatable sections, suggests that the fish were processed (perhaps not surprisingly) outside the temple; however, no indication of off-site processing was evident for the other animals at HK29A.



The vertebrae of Nile perch from HK29A. The articulated backbone at the top is a modern specimen that was 60 cm long in life. The largest of the ancient vertebrae must have come from a fish over 1.5 m in length.




It's no exaggeration—the perch at the temple were this big!

The number of crocodiles and soft-shelled turtles, both dangerous aquatic reptiles, is unusually high at HK29A; moreover, the percentage of wild mammals (nearly 16% compared to only 1.2% at HK11) suggests this is one of the rare Predynastic sites where hunting was not just a minor economic activity. The species that were hunted are also exceptional. Animals such as hare and Dorcas gazelle are more numerous than at other sites, but also present are Barbary sheep, which have previously only been recorded from Adaima, and Dama gazelle, which have not been found at any other Predynastic site.

Control over wild animals, as a symbol that chaos has been subdued, is a recurrent theme in Predynastic iconography. The temple assemblage as a whole indicates that this control was not just virtual: actual wild animals were captured specifically to be offered at HK29A.

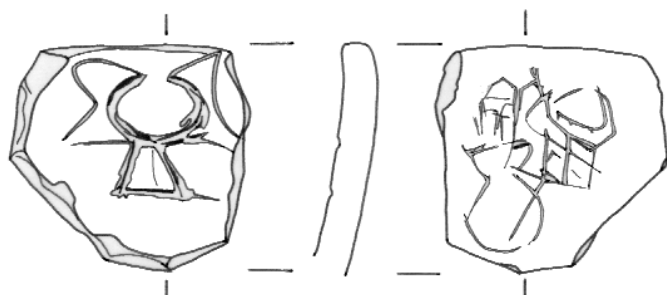
The faunal evidence can also be used to suggest when in the year this offering took place. Large Nile perch are most easily captured when the waters of the Nile are low and less turbulent, as are Nile oysters, also found at HK29A, which live only in the main part of the river. Wild mammals may also have been more plentiful during the low water season when they were driven closer to the river by the summer heat. This may in particular explain the high number of Dorcas gazelle. When all the evidence is considered, it looks like the festivities were related to the anticipated arrival of the Nile flood (and with it the New Year), which took place at the end of June in ancient times.

But of course we might be mistaken. Certainly not everything that differs from the norm should be interpreted as religious. Instead, the hundreds of identical jars and bottles and the mass of bones from large and succulent animals may simply be the refuse from a Predynastic restaurant—gourmet, of course! 

# Chaos and Order: A Predynastic “Ostrakon” from HK29A

—by Stan Hendrickx & Renée Friedman

Among the many interesting finds from this year’s excavation in the temple at HK29A, the most intriguing is an incised sherd that was found in the “wall trench”. The importance of its decoration was quickly realized, and it has already been mentioned in an article discussing, among other things, the relationship between Abydos and Hierakonpolis just before the First Dynasty (see *Göttinger Miszellen* 196, forthcoming).



The HK29A ostrakon, front and back.

The sherd originally came from a red polished Nile silt bowl, but the decoration was incised on both sides only after the vessel had been broken. It was the sherd, not the bowl, that was incised, and it should therefore be considered as an ostrakon. On the interior, one can easily recognize a stylized emblem of the cow goddess Bat, which is very similar to her depiction on the well-known Gerza palette. The horns of the emblem are enclosed by a less deeply incised pattern probably representing a star/flower, as smaller versions of the same motif also appear on the horns and ears of the cow head on the Gerza palette. On the exterior, a more complex decoration can be observed. Although it appears rather chaotic, it is nevertheless possible to identify a stylized human figure on the left (most probably a female) who is armless and may be sitting, like the seated females with very large thighs known from several Predynastic clay figurines. To the right is a bull’s head on a pole, an element known from, among others, inscribed vessels from Tomb U-j (of King Scorpion I) at Abydos and also from an important rock-art scene at Gebel Tjauti, in the desert behind Thebes. A short line connects the lower part of the bull’s head to the woman, which seems to imply she a prisoner; this would explain the absence of arms, as the characteristic attitude of prisoners is with their arms bound behind their backs. The bull’s head in connection with prisoners both here and at

Gebel Tjauti suggests that it is to be understood as a symbol of royal power.

This ostrakon is rather exceptional for the Predynastic period, but of course the place at which it was found is also remarkable. The importance of the religious center at HK29A is becoming increasingly obvious from both its architecture and the finds. There can be no doubt that the unique assemblages of specialized pottery and wild animal remains are related to activities that actually took place there. All the evidence indicates that we are for the very first time being allowed a glimpse at some of the real religious practices of the Predynastic age.

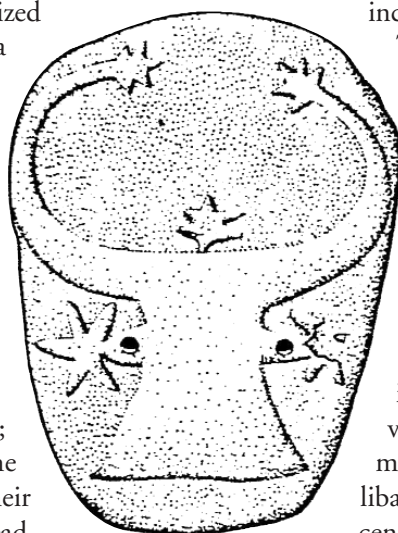
A ritual in which wild animals were slaughtered as elements of the chaos that needed to be controlled is well documented in Dynastic temples, and “order over chaos” is considered to be of the utmost importance in Predynastic religious beliefs. This concept lies behind the decoration on Late Predynastic palettes, many of which have been found at Hierakonpolis, where mainly desert animals represent the chaos to be controlled, but this idea goes back much further, and the hippopotami and crocodiles on White Cross-lined pottery of the Naqada I–IIA period may also be interpreted in the same way.

The rituals performed at HK29A were apparently not limited to the slaughter of animals, but also included the use of specially produced pottery.

The faunal remains suggest that the festivities took place at potentially the most chaotic of times—just before the flood—and the color of the two main pottery types found at the temple may also reflect this. Could the unpolished red surface of the collared jars represent the dry and thirsty red land, while the highly polished all-black egg-shaped jars represent the outcome of the expected inundation: a wet, black land? Could these vessels, with their exceptional surface treatments, be the precursors to the black-topped libation vessels that were used in ritual contexts centuries later? These are all fascinating possibilities that future research may prove.



Detail of Gebel Tjauti inscription.



The Gerza palette.



The ostrakon is an important piece of evidence for early Egyptian beliefs. It clearly demonstrates that the desire to make order was not limited to controlling the world of nature alone, but also included the maintenance of an orderly society. The ruler held the ultimate responsibility for this by engaging in religious and political action, and it is to both of these that the Bat emblem and the prisoner refer.

While a simple ostrakon should perhaps not be compared to a prestigious object like the Narmer palette, the prisoners, Bat emblems and the king (in person or by proxy) on both documents show us that, despite an over 300-year difference in age, the message is the same: order over chaos—it's a royal job.



## Excavating an Elephant

—by Renée Friedman

During her last season of excavation in the HK6 cemetery, Barbara Adams discovered Tomb 23, the largest tomb of the Naqada IIAB (c. 3600 BC) period yet known. It was surrounded by a large rectangular wooden enclosure, which is the earliest example of above-ground funerary architecture in Egypt and clear forerunner of complexes later constructed in stone, such as the Step Pyramid at Saqqara (see *Nekhen News* 13: 4–6). To the east of this tomb, fragments of an unprecedented life-sized limestone statue were recovered, while to the south the distinctive bones of an elephant were found lying on the surface. Barbara thought that the burial of this exotic animal might be associated with this obviously important tomb complex and had intended to explore this herself; tragically, she was unable to do so.

Thus, the question remained: Were these remains part of the same elephant found in 1997 in Tomb 14 (*Nekhen News* 10: 3–4), or did we have two elephants on our hands? In order to answer this question, we had planned to collect the surface

bones at some point during the fall 2002 season, but when distressing reports of disturbances in the elite cemetery were received, we immediately went out to gather this material before it was lost. The surface clearance, however, still did not answer the question, and only exposed even more elephant bone partially embedded in debris. Clearly full-scale excavation was required, so we cut short our work at the temple at HK29A and moved up the wadi.



Elephant excavation.

bones at some point during the fall 2002 season, but when distressing reports of disturbances in the elite cemetery were received, we immediately went out to gather this material before it was lost. The surface clearance, however, still did not answer the question, and only exposed even more elephant bone partially embedded in debris. Clearly full-scale excavation was

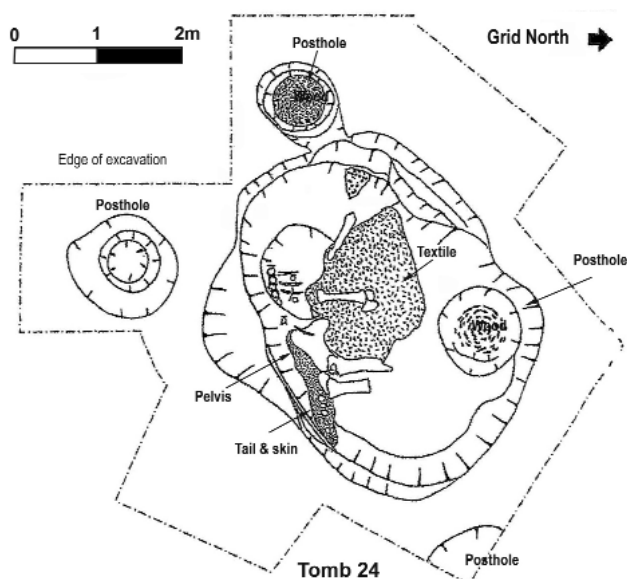
required, so we cut short our work at the temple at HK29A and moved up the wadi.

Now that we had the floor, we soon uncovered the entire extent of the elephant's elaborate tomb (Tomb 24). With sloping and stepped walls, it was roughly oval in shape, and measured approximately



Elephant bone and elephant skin!

3x4 m. Four large postholes were found, one at each corner, two still containing remnants of acacia tree trunks over 50 cm in diameter. While these posts may have supported the roof, their size suggests they formed a superstructure above the grave or had been used to immobilize the animal for sacrifice.



Plan of Tomb 24: the grave of an elephant.

Full clearance of the tomb floor revealed more of the elephant's pelvis with the upper part of the legs still in articulation. Most of the tail, with the outline of the skin, flesh and fabric that once surrounded it, was also still in place. These bones along with the articulated foreleg, vertebrae and ribs, found in correct anatomical order along the southern edge of the burial, show that the elephant had been placed on its left side, facing down wadi towards the river. The thick layer of elephant skin and a strange substance that looked like bone but felt like soap, later identified as elephant fat (adipocere), confirmed that the elephant had gone to its grave fully fleshed. Although elephant bones were found scattered through all levels and over an area about 10 m in diameter, almost every bone of the animal was recovered, from tusks to tail.

Clearly no expense had been spared in the creation of the tomb or its expensive contents. These included a fragment of a painted bowl (Petrie's C ware), several black-topped beakers, and a distinctive jar imported from the Maadi region near Cairo (see color pages). Together this pottery dates the grave to the Naqada IIAB period, contemporary with Tomb 23. But that was not all: there were also pieces of red ochre and green malachite cosmetics; fragments of alabaster jars, slate palettes and maceheads; amethyst and malachite beads; and (perhaps a touch callously) part of an ivory bracelet! A number of transverse arrowheads were also recovered from the tomb fill, but it is difficult to determine whether these were for use in the elephant's afterlife, or were the agents that dispatched him to it! The partial remains of




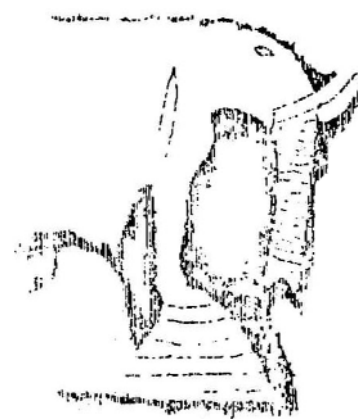
The transverse arrowheads.

a domesticated bull were also collected along the north-western side of the grave, but no elements were found *in situ*; its purpose, as either food offering or companion, is unclear. No human remains were found.

The HK6 cemetery is unique for the number of animal burials found within it. While the burials of smaller animals may provide evidence for "royal menageries" (perhaps as a display of wealth and status), the effort involved in the burial of larger animals indicates a different motivation. Both the elephant found this season and the wild cattle found in Tomb 19 (see *Nekhen News* 12: 8) were buried in a human fashion with grave goods, suggesting that these large and powerful animals were not simply hunting trophies or exotic pets. The evidence indicates that they were considered very special animal, perhaps manifestations of the strength and power of their owners, the early rulers of Hierakonpolis.

The ruler venting his wrath in the guise of powerful creatures is a well-established theme on the documents of the late Predynastic period. All of the earliest kings of Egypt had animal names and derived their spiritual might from the power of their eponymous animal. The famous King Catfish (a.k.a. Narmer) is the best-known example, but there are also earlier kings who, it is argued, wrote their names with bulls, elephants, and other powerful creatures. Although this interpretation of early writing is currently much debated, and some prefer to read the elephant on mountains, for example, as the place name of Elephantine, the new discoveries at Hierakonpolis of such animals in association with early and obviously royal graves now needs to be taken into consideration.

The presence of stone statuary, funerary architecture and animal burials dating to 3700 BC is placing Hierakonpolis at the forefront of traditions that have a long and rich history in Egypt. While it has often been thought that Predynastic kingship did not express itself in grandiose architecture or extravagant displays of power, but simply through the association of the king with the forces of nature, the excavations at HK6 are showing that these attributes of kingship were already in place at Hierakonpolis long before Narmer or his successors. Clearly, the only thing that really changed with the dawn of the Dynastic period was the intensity and monumentality with which they could be expressed. 



Elephant on mountain: an early king's name?



## A Second Elephant at HK6

—by Wim Van Neer & Veerle Linseele

Almost all of the excavated tombs in the HK6 cemetery contained faunal remains, and about half retained substantial remnants of animals that appear to have been buried intact, rather than as butchered food offerings. The total number of animals discovered thus far is 66, and they belong to 7 wild and 5 domestic species. Besides the typical domestic animals (sheep, goat, cattle, dog and an occasional donkey), it is the number of wild species that makes the HK6 cemetery so special. These creatures include wild cat, hippopotamus, wild donkey, aurochs, hartebeest, anubis baboon and African elephant (see *Nekhen News* 14: 7–8). The overall lack of elephant or baboon bones anywhere else in Egypt indicates that these two species did not live in Egypt during this time and must have been imported.

In 1997 Barbara Adams discovered the first elephant in Tomb 14 (*Nekhen News* 10: 3–4), but only part of the skeleton was recovered; the head, lower jaw, neck, anterior part of the thoracic cage and the right foreleg were found widely scattered, suggesting that the primary burial remains to be discovered. However, the elephant in Tomb 24 is more or less complete, and analysis of the skeletal remains can tell us its age and sex—information that is vital for interpreting its significance. Most useful for aging are the teeth; the size of the molars and the number of plates in each of them reveals an animal that had its third molar in use. The fourth molar was almost completely erupted, and about half of the plates were already worn. Although there is individual variation in the eruption dates and wear patterns of elephant teeth, the fourth



Lower fourth molar from the Tomb 24 elephant. The anterior part is already worn and shows the lozenge-shaped lamellae that are typical for the African elephant.

molar is generally considered to be fully in use in animals of 10–11 years of age, suggesting that our elephant belonged to this age class, as did the Tomb 14 elephant. The sex of that elephant could not be established, but the

pelvis from Tomb 24 leaves us in no doubt, as the contour of the well-preserved pubic symphysis is typically male. It is probably no coincidence that the two elephants were the same age, and were, at least in one case, male. The basic social unit of elephants is as a group of related females and their offspring, with the young males gradually separating from the maternal herd. As they reach puberty, bulls first become peripheral, and follow the family unit at a distance before eventually becoming independent between 12–20 years of age.

The age and sex of the Hierakonpolis specimens indicate that the most vulnerable animals were targeted, namely young males that were only loosely associated with the



The pubic bone tells us the elephant is male.

maternal herd. Obtaining such an animal would have been less risky than trying to capture an individual from the protective family unit. Another advantage of capturing young elephants is that they can still be tamed. Only when elephants were sufficiently tamed—a process that takes three to four weeks in the Asian elephant—would it have been possible to transport them easily to Hierakonpolis. A more docile animal would also have been easier to keep in captivity at the site itself, on the condition that measures were taken to confine the elephant when it was not being guarded. Supplying food for the animal must have been an onerous task. An elephant of this age measures 2.50 m (8.2 ft) at the shoulder, weighs about 1,000 kg (2,200 lbs) and requires about 50 kg (110 lbs) of fodder per day.

Microscopic examination by Dr Ahmed Fahmy of the organic matter collected from the elephant's pelvic region shows that during the last days of its life it was fed mainly on rushes of the genus *Juncus* and another marsh plant, *Ceruana pratensis*. Considering its requirements, it is perhaps not surprising that cultivated plants like wheat and barley were not provided, although gathering such a large quantity of marsh plants would not have been an easy task, unless the elephant was



The tail, found in its articulated position, is brushed free. To the left is the pelvis with the articulating femora.



The lower jaw of the elephant compared to that of a mouse (resting on the scale).

large posts around the tomb, 2 m apart N–S, but separated by 5 m E–W, may have served to secure the ropes that immobilized the elephant during the ceremony that preceded its burial. Similar structures are used today to immobilize young Asian elephants just after capture, when the animals are broken or “crushed” prior to the taming process itself. The transverse arrowheads and fine pressure-flaked lances found in the grave debris may then have been used to sacrifice the creature.

While two elephants provide eloquent testimony to the wealth and skill of Hierakonpolis’ early elite, could there have been a third? In the 1980s, John McArdle collected some elephant teeth in the southern part of the HK6 cemetery, but as the map marking the exact location could not be found, we could only assume they were from one of our elephants. Luckily, we were able to join molar pieces from his surface collection with dental fragments found in Tomb 24, so we can answer one question definitely: **Q:** How many elephants were there? **A:** Two—at least for now! 🐘

## What Was the Elephant Wearing?

—by Ron Oldfield & Jana Jones (Macquarie University, Sydney, Australia)

The extraordinary young elephant in Tomb 24 is proving to be special in a number of ways. Not only was he draped in amazing quantities of good quality textile, but our investigations into the identification of the vegetable fibre from which it was woven have produced more surprises.

A fragment of textile from the side of the tomb was selected for examination under a stereomicroscope because it was extremely well-preserved, still pliable, and a beautiful creamy gold colour (see back cover). The yarns are mostly single, s-spun, with a few s2S plied yarns. Thread diameters are fine to medium, ranging from 0.18 mm to 0.3 mm. The warp yarns

allowed to graze by the river, perhaps within his own special precinct.

It is not at all clear how the elephant was kept in life, but it appears that a structure was created at Tomb 24 to hold the animal at death. The four



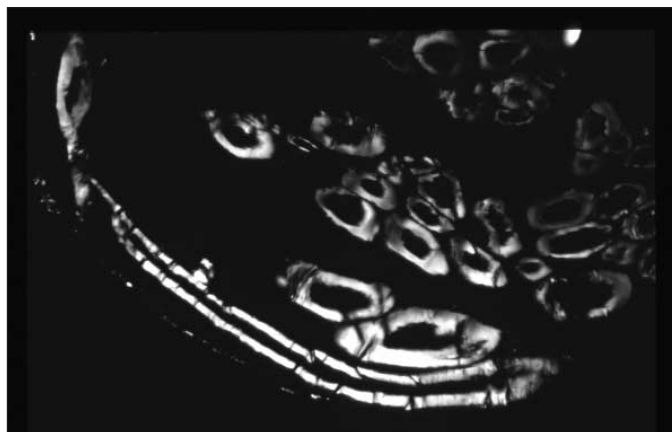
Elephant hunting on a petroglyph in the Eastern Desert.

are more tightly spun than the weft, which were laid at an angle of 60 degrees to the warp. Whether this distortion was caused by tension during burial or is a fault in the weaving process will be determined by examination of other pieces in the next season. This should also establish how many different pieces of textile comprised the covering. The weave is of medium density, with a thread count of 20 x 10 yarns/cm, a ratio of 2:1. This ratio is traditionally associated with textiles of a later date, as most Predynastic textiles have a ratio of 1:1, including those from the burials at HK43 (see *Nekhen News* 13: 13–14).

We have become accustomed to the microscopic appearance of fibres of flax, from which all early Egyptian funerary textiles appear to have been made, so the elephant wrappings sent us rummaging for our textile manuals. Not only was there an unusually wide variation in the thickness of the fibres, but

also the central hole (lumen) running through the centre of each individual fibre (ultimate) was much wider in diameter than in flax. This was confirmed by the preparation of cross-sections of these most un-flax like fibres. Flax and hemp are notoriously difficult to distinguish microscopically, but one distinguishing characteristic is the larger lumen of hemp. Was this the first confirmed use of a plant fibre other than flax for Egyptian textiles?

A test used by textile technologists to distinguish plant fibres is the drying twist. A small piece of yarn is wetted, held over a hot plate and allowed to dry. Holding one end of the yarn firmly and pointing the free end to the observer, flax and ramie twist clockwise on drying (S-direction), hemp, jute and most other fibres twist anti-clockwise (Z-direction). We had to make several attempts before we were satisfied, if somewhat perplexed: it was a definite clockwise (flax) twist! We are now left with some contrary evidence and an interesting challenge: what *was* the elephant wearing? 🧵



Thin cross section showing lumen atypical of Predynastic fibres. HK6, Tomb 24 (660X, in crossed polars). Photo by Ron Oldfield.



# The Diet of Captive Baboons: Results of Dental Microwear Analysis

—by Gildas Merceron (Laboratoire de Géobiologie, Biochronologie et Paléontologie Humaine, Université de Poitiers, France)

Were the Predynastic elite of Hierakonpolis keeping zoos? Or were the many animals whose remains have been discovered captured specifically for sacrifice? The analysis of the fauna in HK6 Tomb 12, which included a young wild cat and seven anubis baboons, suggests the former (*Nekhen News* 14: 7–8). The baboon skeletons display numerous healed fractures, but it is unclear whether these fractures occurred when the animals were captured or during their stay in captivity. The fact that it takes 4–6 weeks for a fracture to heal gives us the minimum period in which the baboons must have been held in captivity before their sacrifice. But could we learn more?

The dentition of the baboons provides us with a great deal of additional information. First, we can determine the age at death of the animal. The teeth and their degree of wear prove that all were between 8 and 12 years of age when they died. Microscopic analysis of the teeth can also provide information on the diet, and from microscopic traces on mammalian teeth it is possible to characterize the last foods eaten because different food particles produce distinct traces. This field of research is called microwear analysis, and since September 2000 I have been preparing my doctoral thesis on the dental microwear in a number of fossil primates. In order to reconstruct their diet, it was necessary to build up a database of microwear patterns in extant apes and monkeys with known diet, therefore I visited numerous museums in Europe to make moulds of the teeth of several primate species. While visiting the Africa Museum in Tervuren (Belgium) I met Wim Van Neer and Veerle Linseele just days before they were to leave for Hierakonpolis, and we agreed that I would take a look at the dental microwear patterns of the anubis baboons from Tomb 12. I provided Wim and Veerle with detailed instructions, and after some practice runs with the dental alginate or “blue goo”, Veerle carefully moulded the *in situ* teeth of the HK6 baboons (for details, see “Weird Animals” at [www.archaeology.org](http://www.archaeology.org)).

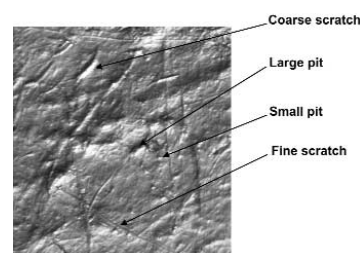


Veerle casts the baboon teeth.

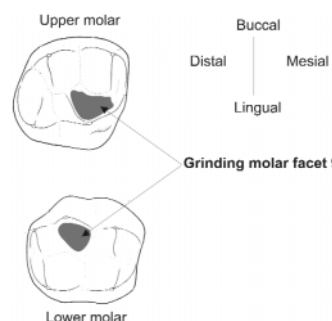
In the lab I used the moulds to produce a positive copy from transparent epoxy resin and then scanned the surfaces of these into a computer. An area of 0.09 mm<sup>2</sup> on a standard dental facet was examined at 120X magnification, and all of the pits and scratches were measured and inventoried.

When the data gathered from the moulds were compared to the patterns seen on the teeth of modern primates, it became clear that the Tomb 12 baboon teeth had a higher number of scratches and pits, but also shared certain similarities with my modern data set on extant olive baboon and yellow baboons. Both of these species feed on various fruits and leaves and augment their diet regularly with seeds, leaves of sedges and grasses (with high concentrations of silica phytoliths that produce scratches) and roots. Based on the number of pits, the baboons from HK6 probably chewed harder food than their modern wild relatives, and the higher number of scratches indicates a more significant intake of abrasive food items.

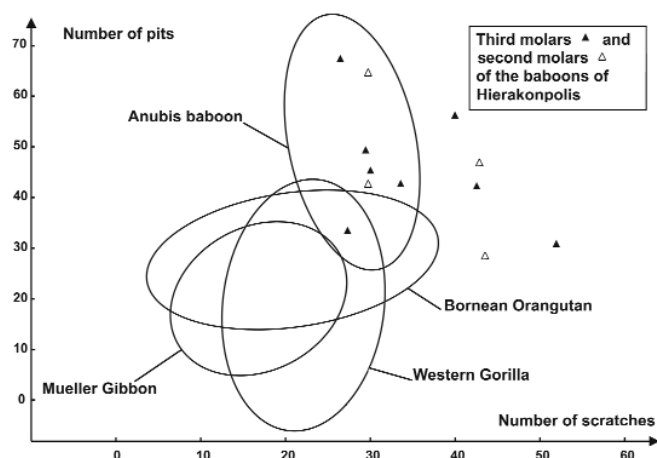
The results show that the baboons at Hierakonpolis must have been hand fed, and were not allowed to roam freely. They were apparently given food that was harder than the tree leaves or fruit they prefer. Sand particles and residue from



Dental microwear consists of microscopic subcircular marks (pits) or elongated marks (scratches) on the enamel surface.



To produce comparable results, examination is limited to grinding facet 9, on upper and lower second and third molars.



Distribution of the number of scratches and pits on grinding facet 9 on the Hierakonpolis baboon molars (triangles). The range ellipses (80%) of extant species enable the comparison.

human foods (e.g., fruit pips and crusts of coarse bread?) may be responsible for the pitting of the enamel facets. Leaves, stems and roots of abrasives plants (e.g., papyrus?) are certainly responsible for the intensive scratching.

The dental microwear results are encouraging. Used in conjunction with the archaeological, zoological and botanical data they may in future allow a more detailed reconstruction of the life and diet of the captive baboons of Hierakonpolis. Were the baboons pampered pets or sacrificial victims? It is still too early to tell... but watch this space!



Learn more at [www.archaeology.org](http://www.archaeology.org)



Eating what they like: baboons enjoying figs at Beni Hassan.

## Hunting the Elusive Nubian A-Group

—by Maria Carmela Gatto

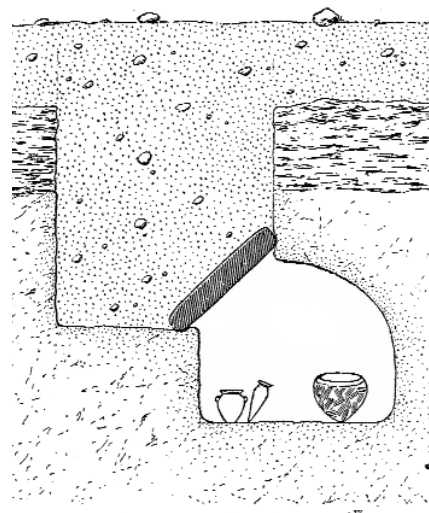
One of this season's projects was to gather evidence for the interaction between the Nubian A-Group culture and Predynastic Egypt, especially Hierakonpolis. The southernmost major town of Predynastic Egypt, Hierakonpolis was probably an early capital of an Upper Egyptian kingdom, but how far south did its power extend? The site can be reached from Nubia following both valley and desert routes. To the west, many tracks go straight to Kharga Oasis and south from there, while to the east the Wadi Barramiya connects the Hierakonpolis area to the Red Sea, and then southward to the gold-rich regions of Atbai-Wadi Allaqi.

The project was organized in two parts. The first was devoted to the study of Nubian sherds from earlier excavations to determine if they belonged to the A-Group, and if so, to which particular phase. The second part included a survey of localities where Nubian sherds had been found, or where it was suspected they might be. Each morning for two weeks in November, I walked over the site with my long-suffering companion and guardian, Gamal; it was very hot, and poor Gamal was fasting for Ramadan! Together we would search the pottery-covered surface for clues of Nubian presence. Our main goal was to find an A-Group cemetery (as we already have for the later Nubian C-Group), or a campsite. Unfortunately, it seems that neither are present at Hierakonpolis, but in retrospect, perhaps we were looking for the wrong thing.

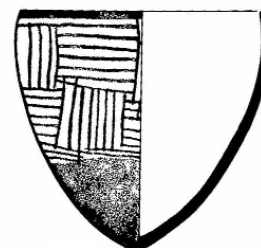
A-Group pottery has been found at various locations on the site. A distinctive "Egg-shell Painted" vessel was recovered from a strange grave near the Fort nearly a century ago by the French archaeologist Henri de Morgan. Nubian pottery has also been found at the town mound of Nekhen, the Predynastic temple at HK29A, and in deep layers of the pet-

roglyph site at HK64. During this year's survey, more A-Group sherds were recovered from both the southern part of the site (HK54) and the cemetery at HK6, and two vessels were found in graves at HK43. Study of the material has revealed different phases of A-Group interaction spanning several centuries.

While many sherds can be attributed to the Middle and Terminal A-Group phases on the basis of fabric, shape and surface treatment (see "Nubian Pottery" at [www.archaeology.org](http://www.archaeology.org)), those apparently belonging to the Early A-Group are more problematic. The Early A-Group dates from 3800–3500 BC and corresponds to the Naqada IC–IIC periods, making it contemporary with most of the desert sites at Hierakonpolis. It is, however, the most poorly understood of all the Nubian cultural phases, especially with regard to its pottery. Early



The tomb de Morgan found near the Fort.



Nubian egg-shell ware pot from grave near the Fort.





animal burials (previously assumed to be solely a Nubian trait), however, suggests a mixed population. It is for this reason the cultural and political border between Predynastic Egypt and Nubia has long been placed in the area of Kubaniya, just north of Aswan, but the new research at Hierakonpolis raises questions about the location (and validity) of this border, as well as who exactly was influencing whom.



Nubian jar from HK43.

A-Group sites were excavated a century ago, but the material has never been revisited for a number of reasons. Nevertheless, it is possible to detect two different geographical groups at this time: one located in the Dakka area in the south, on which most of our information is based; and another centered on the First Cataract. In the graves of the southern group, Nubian pottery makes up the majority of grave goods, though Egyptian pottery is present in different percentages. Yet in the cemeteries of the northern group, Egyptian pottery so outnumbers vessels of the Nubian tradition that many have thought these to be cemeteries of early Egyptian colonists. The additional presence of ani-

mal burials (previously assumed to be solely a Nubian trait), however, suggests a mixed population. It is for this reason the cultural and political border between Predynastic Egypt and Nubia has long been placed in the area of Kubaniya, just north of Aswan, but the new research at Hierakonpolis raises questions about the location (and validity) of this border, as well as who exactly was influencing whom.

Despite our limited knowledge of Early A-Group pottery fabrics, the sherds collected at Hierakonpolis show some interesting similarities, but also differences, with what has been documented in Nubia. The two vessels found at HK43 have clear counterparts in the northern Early A-Group cemeteries, and an exact parallel for the Egyptian shape and the horizontal rippling of the black-topped jar is known

from Khor Bahan, located to the south of Aswan. On the other hand, a sherd of a hole-mouth jar found at HK54 with typically Nubian zigzag decoration has a crushed quartz-tempered fabric that has never been recorded in Nubia. At several locations, sherds of a fine sand and ash-tempered fabric, often with rippled surfaces, were also collected. No exact parallels to these can be found in A-Group or Badarian assemblages, but similar decoration and fabric were observed on a sherd found by Fred Wendorf near Bir Nakhelai in the Western Desert, illustrating the importance of the desert routes for understanding Nubian interaction with Egypt.

Distinctive types of A-Group pottery are present in many of the settlements and cemeteries at Hierakonpolis. This suggests that they were not exotic goods imported by the elite, but pots used in daily life, perhaps by Nubians living in the area. However, it is not just pottery that links Hierakonpolis and the northern Early A-Group sites. More intriguing are the animal burials, found commonly only in these northern sites and the elite cemetery at HK6. This funerary practice, while known in the Badarian and Maadi cultures to the north, and in the Sudanese Neolithic far to the south, is neither truly Nubian nor typical of the Naqada culture of Upper Egypt. That it is an elite practice suggests that it may not be a matter of one culture influencing another, but related to a commonly held belief. Later still, further similarities between the two areas can be seen in burials with side chambers (e.g., de Morgan's tomb and Tomb 2 at HK6) and the use of stone slab roofing over the richest graves at Elkab and other southern Egyptian sites.

As a result of the observations made at Hierakonpolis, I would like to propose an exciting new theory: perhaps the northern Early A-Group sites should not be considered a reflection of a mixed population. Instead these sites may provide evidence of a distinct regional variation of a culture that surrounded the First Cataract and stretched northward up to Hierakonpolis and even Armant. This means that the cultural border of Egypt and Nubia should not be placed near Aswan, but much further to the north. The fact that the main desert routes from the south reach the Nile Valley exactly at Hierakonpolis and Armant is no doubt an important factor. As a result, the position of Hierakonpolis in the history of the region can easily be understood—it was the region's political and social center from the beginning. No wonder the search for a distinct enclave of Nubians at the site was unsuccessful; they were already home. ~



Nubian sherd from HK54 with zigzag decoration on rim.





Mortar lines and compressed plaster: remnants of the wall that isn't there in the west half of HK29A.



The special pottery used in the temple. Black egg at top right; collared jar bottom left.



Tomb 24 at HK6: the grave of an elephant with one of the postholes in the foreground.



Ostracon from the Predynastic temple at HK29A.



Examining the wall trench on the north side of the temple at HK29A.



Pottery from the elephant's tomb: imported Maadi jar, C ware bowl and Black-topped beaker.



Elephant grave goods: ochre, malachite, beads and an ivory bracelet!



Fragments of macehead, palette and stone vessel from Tomb 24.



6000 year old elephant skin close up!



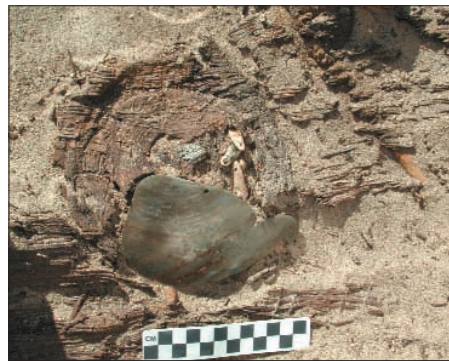
See [www.archaeology.org](http://www.archaeology.org)







HK4: Burial 333 of an important lady and her basket.



Lifting the lid on the basket of delights: our first view of the pendants.



Basket of delights part 2: a rubbing pebble and bone tools.



Amulet and pendants from the basket in B333.



Matty's Black-topped pot (B362).



The palette and contents of the basket from B333 at HK43: is this a medical or magical kit?



HK43: Uncovering Matty (B362). See page 22.



More of Matty's marvelous mats.



# A Basket of Delights: The 2003 Excavations at HK43

—by Renée Friedman

On the far southern edge of the site, at the Predynastic cemetery at HK43, the bone-strewn surface gives no indication of the remarkable organic preservation hidden within the hot dry sand. As the cultivated land creeps closer with every passing year, it is a constant worry that we might be too late to recover these precious remains; this year, however, the discovery of mats, baskets, bone and foodstuffs provided unparalleled information on diet, health, lifestyle and much more. In the heyday of Predynastic research at the turn of the 20th century, over 65 cemeteries and an estimated 20,000 graves were excavated in Egypt, but due to the interests and abilities of the time, the organic materials were often ignored and the skeletal remains were not adequately studied. Our work at HK43, probably one of the last cemeteries to exhibit this level of preservation, is allowing us to set the record straight on many topics.

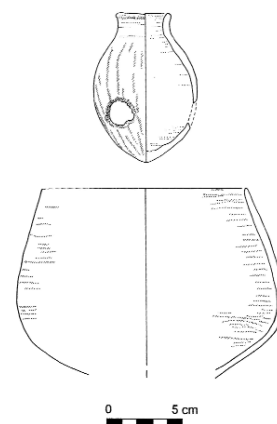
This winter we concentrated in the western sector of HK43, where the majority of burials date to the Naqada IIBC (c. 3500 BC) period, in contrast to the Naqada IIAB (c. 3600 BC) graves excavated in earlier seasons. As a result, we are beginning to observe the changes that took place over time in burial practices and other facets of life.

As at other Predynastic cemeteries in Upper Egypt, the bodies were usually placed in a crouched position on their left side, head to the south, facing west. Yet this season, we observed increasing variation from this canonical position, with a notable number of burials (8 out of 61 in which the orientation could be conclusively determined) placed on their right side facing east, a burial position that became more popular later. The bodies were then covered with matting, and in one grave there were over 9 different mats, each so well preserved that we were able to study the manufacturing techniques and distinguish two basic types that came in two standard sizes (see *Meeting Matty*, below).

Pottery, the most common grave gift, was present in a limited range of basic shapes, but vessels from Nubia and a peculiar pot from the Delta were also found. Many of the vessels

retained their original contents, especially those that were found still covered by lids made of potsherds or inverted bowls. During his analysis of the content, our archaeobotanist Dr. Ahmed Gamal Fahmy observed that, as a rule, desiccated bread appears mainly within the bowls and baskets, a porridge of boiled wheat within the Black-topped jars, beer in the Rough ware bottles and a mixture of foodstuffs within a gray-ashy matter (remnants of the funerary feast?) filled the Rough conical jars. However, not all food items were placed in pots. It took us some time to figure out what the fabric wrapped item might be that we found pressed to the nose and mouth of a sickly old woman. After a few days of hydrating in the modern air, the smell revealed that it was unmistakably a garlic!

Other types of grave goods were generally rare, but by no means absent and this year we were fortunate to uncover one of the richest and most intriguing burials found to date: Burial 333, the grave of a 40–50 year old woman (see color page). As the four complete pots around her head emerged from the sand, we knew this burial would be a good one, but just how important we could never have guessed. Our first indication was the bird-shaped greywacke palette nestled by her elbows. Only three palettes had been found previously in this cemetery, and this one was the most elaborate, although perhaps it didn't receive the initial admiration it deserved, as our attention was riveted to the basket against which it rested. This basket was crammed full of remarkable objects, unlike anything we had ever encountered. Just below the lid was a set of stone pendants still with remnants of string, including one engaging little amulet carved with the face of a bearded man. Next we came down on chunks of red ochre and galena (lead ore) as well as the



Nubian bowl and the peculiar Delta pot with two intentionally made holes in the belly.



The fabric-wrapped garlic.



Keeping a lid on it! Typical pottery from HK43 (see back cover).



Excavating B333, uncovering the leather bag in her hand and the pillow behind her head.

pebble for grinding these cosmetics on the palette. Surrounding them was a set of tools made of polished animal bone and below these an ivory hair comb. The basket also contained four gaming pieces (?) made of polished stone or clay inlaid with shell, three flint bladelets, and a hook-shaped object of shell that may be a forehead pendant. At the bottom of the basket was a leather bag that contained chunks of resin, small cones of clay, and a mixture of plant remains and wood chips that has been preliminarily identified as an incense mixture or pot-pourri! More of these curious cones were found in another leather bag held in her right hand (see *Curious Cones* on page 21), while a huge chunk of resin was found in her left. This burial is also unique in this cemetery for the thick fabric pillow that cushioned the head.



The special Mohawk hair style of B333.

coherence at all, it is possible that it represents a magic or medical kit and that this woman was a witch doctor or wise woman (or alternatively hairdresser and aromatherapist). Whatever the case, the number of children that were interred

The care and effort taken over this particular burial indicates that the deceased was a very important woman, and this may also be reflected by her special "moussed-up" Mohawk hair style. While none of the objects in the basket are without parallel, the purpose and function of some of them has long been a matter of speculation. If the collection has any

around her suggests that she was considered a strong protective presence for some time after her death.

Protection may well have been a high priority. The team of physical anthropologists led by Dr Jerome C. Rose (University of Arkansas) observed a number of broken bones among the inhabitants of HK43 as well as evidence of some nasty thumps on the head, which in some cases proved fatal. Five new cases of cut marks on neck vertebrae bring the cemetery total to thirteen different men and women with these strange lacerations. The standard location of the marks, high up on the neck, suggests that the cuts were not the actual cause of death, as frankly there are easier ways to kill someone. While in some cases the severity of the cuts indicates complete decapitation, where the burial is intact, the head is curiously always found in place on the body. It would thus appear that this treatment is part of a funerary ritual of real or ritual dismemberment followed by the re-articulation or "re-creation" of the body. Further discoveries indicate that post-mortem manipulation of the body also included removal and wrapping of internal organs as well as, in one case, scalping (see below)!

All together, our discoveries suggest that the answers to many questions—ranging from the existence of a mat making industry to the beginnings of artificial mummification—are just waiting to be found at HK43. With one more season before the cemetery excavations are completed, we are keeping our fingers crossed—who knows what else we might find!



A round loaf of bread in a conical pot.



Get a basket-ful of details about the Hierakonpolis Expedition: log on to [www.archaeology.org/interactive/hierakonpolis](http://www.archaeology.org/interactive/hierakonpolis)



# A Fragrant Mixture: Botanicals from the Basket in B333

—by Dr. Ahmed Gamal Fahmy (Helwan University, Egypt)

Since 1998, I have been working together with the Hierakonpolis Expedition to develop a methodology for extracting plant remains in the field. It has been of primary concern at all times to collect as much of this valuable information as possible; as the jars, bowls, matting and human gut contents from HK43 are major sources of paleo-ethnobotanical evidence, and have been producing exciting results.

This year we had the opportunity to really test our experience during the excavation of Burial 333. The discovery of an intact basket complete with its original contents is of particular importance, and the unique assemblage of plant remains within it are a significant new resource for paleo-ethnobotanical study.

Analysis of the basket contents reveals the presence of the following plant remains:

- Desiccated seeds of dill (*Anethum graveolens*), recovered in relatively high quantities
- Desiccated leaflets of *Tamarix* sp.
- Desiccated tubers of *Cyperus esculentus* (tiger nuts\* or earth almonds)
- Desiccated and partially burned tubers of *Cyperus rotundus* (nut grass)
- Desiccated fruits of *Rumex dentatus* (dented dock, a sorrel herb)
- Desiccated nutlets of *Labiatae* (mint family)
- Desiccated fruit of *Prunus* sp. (almond, plum, etc. family)
- Partially carbonized coniferous wood fragments
- Bread remains

Preliminary interpretation of the assemblage suggests that the basket was used to keep selected and appreciated plants. The seeds of dill (*Anethum graveolens*) are very exciting, as this is their earliest published attestation. This plant is a common herb still found in kitchens, and in ancient times it was also recognized for its medicinal applications, as a sedative, to aid digestion, and to cure headaches. Also



Ahmed examining the botanicals.

of medicinal or nutritional significance are *Cyperus esculentus*, tubers known today as tiger nuts, which are enjoyed for their sweet nutty flavour. In ancient

times they were also valued for their medical properties, which included increasing lactation.

The recovery of partially burned *Cyperus rotundus* tubers and conifer wood from within the leather bag in the basket is of greater significance. This combination suggests that the tubers and the wood may have been used as incense material. In ethnographic parallels from Saudi Arabia, *Cyperus rotundus* tubers are used as basic ingredients of incense, and in ancient times their oil was used to repel insects and in perfumes.

The chips and fragments of wood found in the leather bag have been preliminarily identified (with the assistance of Rowena Gale) as juniper (*Juniperus* sp.) in one sample and either cedar (*Cedrus* sp.), fir (*Abies* sp.) or cypress (*Cupressus* sp.) in another. None of these trees are native to Egypt, and at present the closest source of pine trees is in the Sinai (Jebel Maghara), Lebanon, Palestine and western Jordan. Juniper could have come from the Sinai,

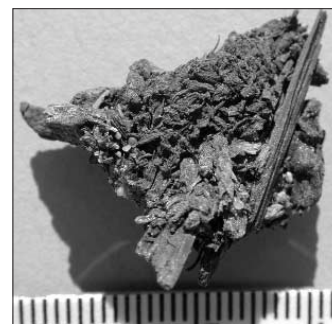
Levant, East Africa or Arabia, where species of this genus are still growing. Cedar (*Cedrus libani* A. Rich) was once widespread in the mountains of Lebanon, western Syria, and southern Turkey, and other evidence of this wood has been found at Hierakonpolis, although none from such a good context.

The intact record from this basket is an important piece of evidence for international contacts during the Predynastic period. It also provides insights into medical knowledge at that time as well as a whiff of an ancient scent. Together with its other contents, this truly is a basket of delights! 🌿

\*Common names compiled from C. de Vartavan and V. A. Amoros, *Codex of Ancient Egyptian Plant Remains*. London, 1997.



The *Cyperus esculentus* plant.



Seeds and wood from the basket.

# The Case of the Curious Cones

—by Renée Friedman

The mysterious clay cones from the delightful basket in B333 were not alone. Two were also discovered in a leather bag held in the lady's left hand and two more tiny examples were recovered from a bag in the right hand of the nearly intact woman in B323. Another pair was later found loose in the much disturbed Burial 367, also of a woman.



Cones and seeds from the basket in B333.

Regardless of their size, they are always the same: incised around the bottom edge and up along one side to the tip; the base is slightly concave. What are these curious cones?

We aren't the first to ask this question. Similar and practically identical objects of this type have been found in several cemeteries in Upper Egypt. At Mahasna they were found in conjunction with what is clearly a game board, and the excavators tentatively suggested that the 11 cones (of two different sizes) found scattered between two bodies in the very rich grave (H41) might be gaming pieces. They were not certain of this association and wondered about the strange incisions and how these fragile items could have been used. Nevertheless, they photographed the cones on the game table, and this was to become the general explanation of these objects and any other small items one couldn't explain.


The number of examples covered with fragments of leather from other cemeteries led the British Egyptologist T.E. Peet to suggest they were plugs for leather bottles. However, aside from their fragility (although some are baked), the high number found in some graves (often 4, but occasionally up



Two views of a cone from B333 with bits of leather still adhering.

to 8) would suggest either many leather bottles or one with many holes!

More recently, Ulrich Hartung has put forth an entirely new explanation. He suggests that the cones are models of the seed cases of poppies. This is not the exotic opium poppy, which has a rounded seed case, but a local variety, whose milk might have or been assumed to have medicinal value. If this is the case, these cones would be the earliest evidence for the use of poppies in Egypt. It is an intriguing theory, especially with regard to the quantity and diversity of plant remains in the B333 basket. Although Hartung suggests the cones were mounted on a stick at their pointed end, we found no evidence for this in our discoveries. In B333 and B323, the cones were found embedded broad side down in organic matter. In the basket, the cones appeared within the botanical mixture inside the leather bag, while in the bags held in the hand, they were found with cakes of organic material, not yet analyzed. Whether the cones are model seed cases or not, they appear to be connected with plant remains that were kept in leather bags.

Although this case cannot yet be closed, there is one more curious clue to consider. In the vast majority of graves (throughout Upper Egypt) where the sex of the occupant can be determined, the cones are found only with women and girls. A red herring or the vital lead? We'll have to wait and see. 



*Papaver rhoeas*, a local poppy species and model for the cones?



Cones from B323 embedded in organic matter.



# Meeting Matty

—by Chris Marshall

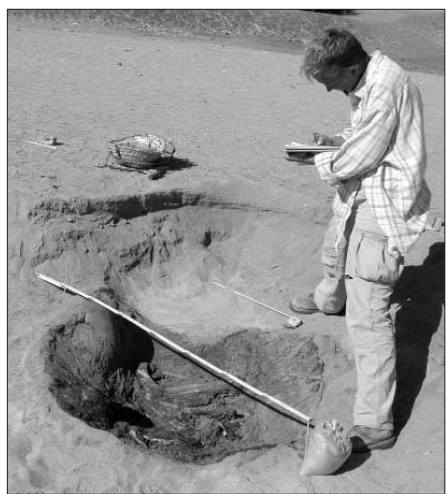
It was an exciting season at HK43, but the truth of it is that some parts were definitely more exciting than others. It was the final week of the excavation; Fathy, Mustafa, Memdua and I had spent the previous one exposing and lifting jumbles of disarticulated bone and previously occupied, but now empty mats: the remnants of graves lost to plundering and erosion. Although disturbed, these less than perfect remains do provide important information, but to be honest, like most archaeologists, we didn't want to end the season with scraps of a mat—we wanted the spectacular!



Fathy and Mustafa lifting the mats.

our final excavation square nearly completed and roughly a week to go, the men exposed a perfectly oval feature at a depth of about 60 cm below the surface. The clean dark sand held the promise of the perfect conclusion to what had already been an extraordinary season. With the feature plotted on the site map and depth noted, Mustafa and Fathy began the meticulous process of removing the soil to expose the burial (B362).

Within hours, a complex mass of finely woven mats was uncovered. Measuring over a meter in diameter, this initial



Chris maps Matty.

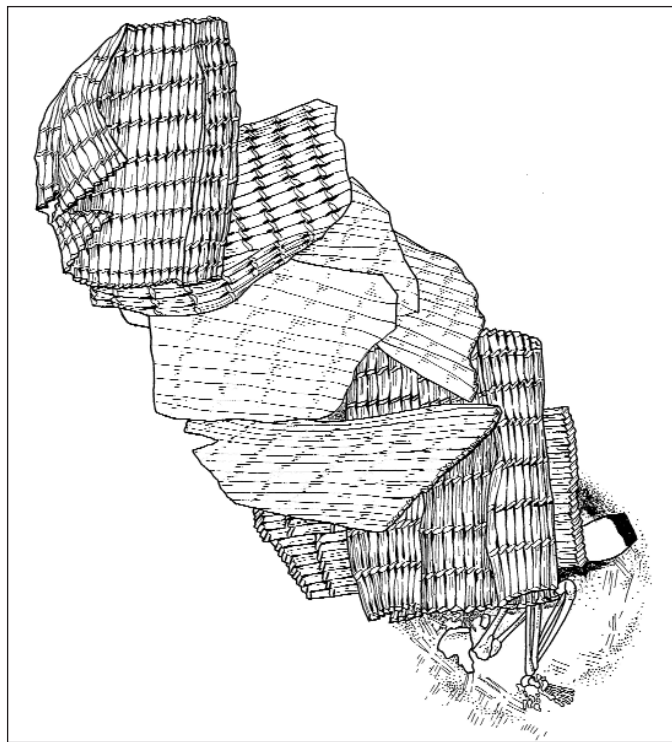
Egypt, and Hierakonpolis in particular, is a place that ruins other sites for an archaeologist. It is incredible to think that less than a meter beneath you is an individual who has been waiting for over 5000 years. With

layer was composed of no less than five distinct mats. It was an incredible sight—each fold and ripple of these nearly 6000 year old artifacts were still perfectly preserved (see color pages), and peeking out from the southern edge, the rim of a complete Black-topped jar!

For once the weather was kind, and the howling 10:30 AM wind (always on time, except when it's early) held off for the three days necessary to record, sketch, photograph, lift and collect each mat. This is when Fran Cole's study of mat manufacture (see next article) really came in handy. But what made this burial so extra-special was the fact that all four edges of each mat were intact, and because of this we were able to determine that the two standard mat types also came in two standard sizes. The twined mats of Type 2 were made to a more or less standard size of 110 x 65 cm, while the sewn mats of Type 1 were approximately 85 x 85 cm and so fragile that, in all likelihood, they had been specifically made for mortuary use. However, a patch of a dark felt-like material adhering to one fold of a Type 2 mat, subsequently identified (thanks to Ron Oldfield) as "a filamentous, branching green alga of fresh-water origin, possibly *Cladophora*" (a.k.a. pond scum) suggests that some of the mats originated from a river-side home.

As the work continued, layer after layer was removed, revealing the vague silhouette of the individual beneath. A total of nine mats were lifted before Burial 362 was fully uncovered. With the removal of the much-anticipated ninth and final layer, the body of a beautifully preserved middle-aged female was revealed.

In keeping with normal practice, she had been placed on her left side in a tight fetal position, her face turned west to



The many mats of Matty (B362). Illustration by Claire Thorne.



the desert mountains, with the large black-topped pot placed by her arms. Covering the body were traces of a burial shroud composed of three layers of finely woven cloth, and at her right shoulder beneath the shroud was a small fragment of bread. Perhaps most striking of all was the mass of grayish-black hair in ringlet curls, which had been combed from the back to cover her face. Although her grave goods were limited, the large number and the nearly equal proportion of Type 1 and Type 2 matting suggests that the grave owner, if not of high status, was at least well respected in life. Below her, two final mats had been placed to provide a foundation for the burial, as well as the final memory of the 2003 season. ✧

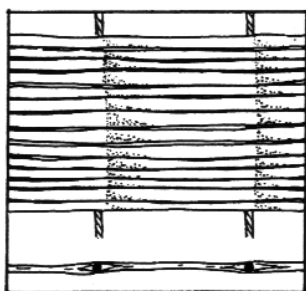
## It's Just Mat-tastic

—by Fran Cole

Next to bones, the most common find at HK43 is matting; however, very little is known about this material, as few people study it and even fewer have saved it. At Hierakonpolis though, we keep it all, and my job was to conserve our fine collection and try to make some sense out of it. Matting is found in just about every burial, sometimes as only a weak brown stain, but occasionally spectacularly well-preserved (as in the case of Matty described above). In all cases, it is clear that matting was an important part of the burial process, and that mats of different styles were being made.

At HK43 mats lined the burial pits and covered the bodies. Sometimes the body was enveloped in a mat, or even tied into one, but more frequently the mats were layered over the body perpendicular to one another, apparently to increase their strength. According to our archaeo-botanist Ahmed Fahmy, the mats are all made from the same species: *Juncus*, a rush plant common to the marshlands of Predynastic Egypt. Possibly because the culms or stems of this plant are rather rigid, the vast majority of mats were constructed in only two different ways.

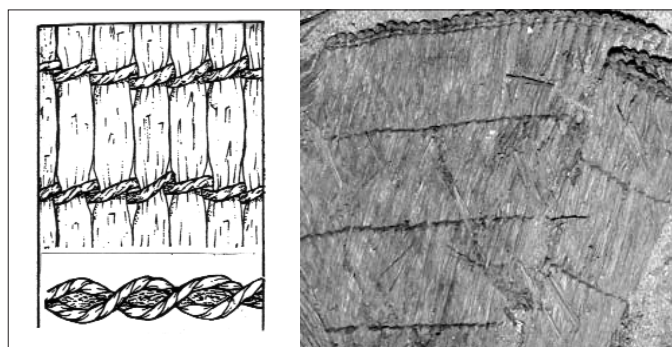
Type 1 matting is very fine: individual culms were sewn together by passing a very fine 2-ply thread through holes placed at intervals in the stems. When the thread is pulled tight and the stems come together it is almost impossible to see the threads. This type of mat is usually found just above the burial, often closely fitting the form of the body or grave goods below. The reeds show no signs of wear and seem to have been put into the graves while still flexible, allowing the mats to compress and conform without breaking. In some burials several of these mats



Type 1 matting, top and side view.

can be found, laid across each other at right angles, which would help to strengthen their inherently weak structure.

Type 2 matting is much coarser, more durable, and exhibits much more variation in construction. Bundles of reeds are held together with either the same 2-ply thread seen in Type 1 mats, or with split stems of *Juncus* plied or twisted. In all cases a pair of strands are twisted or “twined” around the outside of each bundle, rather than sewn through the middle. The reeds of the Type 2 mats are often flattened and worn, with their epidermis either lost or only visible at the binding, no doubt due to household wear and tear.



Type 2 matting.

Looking more closely at the Type 2 matting, there is a great deal of variation. While in the majority the twining threads run parallel and are 4–8 cm apart, in some examples decorative patterns of multiple or dyed threads (which produce a colour contrast) can be seen. The methods used to finish off the edges also vary, from a simple folding over of the end, which was then tacked down by twining, to elaborate plaited and sometimes double plaited edging. These decorative flourishes suggest that at least some of the mats were not simply domestic items chosen at random for the grave.

A comparison of the mat types suggests that Type 1 mats may have been made specifically for funerary use, and their almost identical construction points to a limited number of makers, all adhering to a set pattern. Type 2 mats, on the other hand, may have been made originally for domestic use, as their damaged and worn surfaces indicate. The different styles and techniques used to create these mats suggest that they could have been made by a wider group of people than the mats of Type 1, although the evenness of construction and bundle size demonstrate a knowledge and experience of the material, which might point to workshop production.

The excavation of matting is a time consuming activity, but even a preliminary study like this shows the breadth of information that can be gathered. The rising ground water at Hierakonpolis and other sites means that the mats of the past may not be with us much longer, and we are therefore fortunate to have this wide corpus of mats from HK43, from which we can learn about the people who made and used them. ✧

# The Lost Tombs of F.W. Green

—by Sean P. Dougherty (Indiana University, Bloomington)

Bleached long bones, a weathered mandible, a few scraps of matting—nothing out of the ordinary from the upper layers of the cemetery at HK43... or so we thought. Although a daunting prospect, at the lab we examine all the bones and bone fragments we recover. These particular pieces seemed especially unpromising, but while brushing off the sand something distinct caught my eye. At first glance, it appeared to be marks left by an old, dirty trowel, yet closer inspection revealed shapes that looked suspiciously familiar: the number 105. An examination of the mandible confirmed it—these bones had been labeled before!

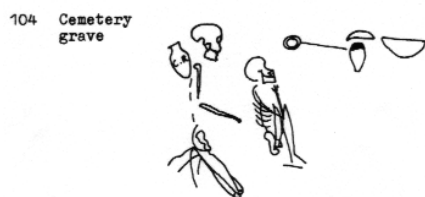


Labeled mandible from Tomb 105.

From his diaries now held in the British Museum, Renée quickly recognized the handwriting of F. W. Green, the British Egyptologist who excavated at Hierakonpolis in 1899. Although concentrating his work at the town-mound in the cultivation, when one of the workmen told him about a tomb with painted walls at the extreme south-east of the site, Green took time out to investigate it. This was to become his Tomb 100, the famous Painted Tomb (see *Nekhen News* 11: 23–25). This remarkable discovery encouraged Green to search the area for other tombs, and in his notes he mentions about 150 graves, some in great detail, but most just by number and a list of objects. Like the Painted Tomb itself, the exact location of these graves has remained a great mystery, so with the discovery of bones from Green's Tomb 105 we hoped to shed more light on their whereabouts.

Green's sketch of Tomb 105 shows a single adult skeleton buried with a palette and rubbing pebble as well as five pots (now in Dublin): the little bottles and the conical jars so familiar to us at HK43. Our excavations, however, turned up only the paired upper limb bones, left clavicle and mandible, unarticulated and scattered. The skull was not present and it is reasonable to think that Green kept it and sent it to Cambridge, where a collection of skulls from Hierakonpolis is housed.

In his notes for Tomb 107, for example, Green wrote: "Skull in fragments, too brittle to remove." In an era of skull collecting influenced



Green's sketch of Tomb 104.

by the "science" of race popular at this time, a complete and intact skull was an object of scientific value, but a broken one was not of much use. Whether Green is responsible for the general "headlessness" in the HK43 cemetery, however, remains to be seen.

The weathered appearance of the material we found suggests that the bones had been removed from their original position, and subsequently exposed to the sun and sand-laden wind. Perhaps Green numbered the bones with the intention of shipping off these elements too, but ultimately decided to rebury them. Whether he returned them to their proper place of origin remained a tantalizing question.

Two weeks after the discovery of the Tomb 105 skeletal material, we got lucky again. Directly north and less than 2 m away, a fragment of a right adult tibia bearing the number "104" was discovered within a cluster of whitened bones. In a second cluster nearby there was another tibia shaft labeled "104b." This was the bone of an immature individual and could not be paired with the other. Perhaps not surprisingly, Tomb 104 is sketched as a grave containing two individuals, with one of a smaller size, suggesting a child.



Burial 360 and 361, Green's tombs 104 and 104b.

Excavating down immediately below these bone scatters, portions of two *in situ* skeletons were discovered. One (our B360) was an adult male with only his spine visibly in articulation resting on matting. The other (our B361) belonged to a 15–20 year old female whose upper limbs were still in their proper place. Despite the disturbance, the burials were remarkably similar to Green's description of Tomb 104 and further examination of the skeletal material revealed that the labeled tibiae could be paired with those found in the graves. Remarkably, it appears that in contrast to his work in Tomb 105, Green removed only the pottery and selected bones for labeling, and left the rest of Tomb 104 more or less in place.

As the excavations continued it became clear that Tomb 104 was not a double burial, as Green had recorded, but rather a situation in which one burial had intruded very closely upon another. The adult was buried first, followed sometime later by the younger woman. The latter burial disturbed the former, and when the upper arm of the adult was found beneath the burial mat of the girl, it became clear that Tomb 104 was actually composed of two distinct burials.

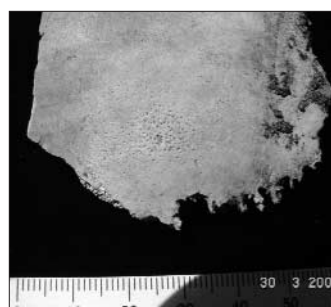
The rediscovery of Tombs 104 and 105 presents a rare occasion in which previously excavated tombs can be re-analyzed to recover information once thought lost. While Green's notes stand out for their great detail in places, they reflect only his particular interests. Consequently, skeletal information was limited to simple sketches. As a result of our work, we can now add to the record that Tomb 105 contained an adult male, and Tomb 104 is actually two separate graves, one containing a middle-aged male and the other a young female. These tombs, however, are but two in a long list of those whose location remains unknown and it is hoped that future work will reveal the other lost tombs of F.W. Green.

## Health and Life at HK43

—by Jerry Rose (University of Arkansas) & Amy Maish (University of Toronto)

This year 135 more individuals were added to the ever-unfolding story of life and death in the Predynastic working-class cemetery at HK43. Of the 108 adult skeletons, 42 were female, 26 male and 40 of undetermined sex. Although the sex ratio favors females, the large number of skeletons whose sex cannot yet be determined suggests this is more apparent than real. However, the distribution of ages at death does show important irregularities. Children under the age of five make-up only 6.7% of the population, whereas in a normal population we would expect 20–40% of the skeletons to be from this age group. The low percentage indicates that only a small portion of the infants who died were buried in this cemetery. Another abnormality in the demographic profile is the large number of adults in the 20–35 year age category. This prevalence means that overall there was a relatively low adult life expectancy, with only a few (5.2%) who lived beyond the age of 50, almost all of whom appear to be female (where the sex can be determined).

Anemia is commonly found in ancient populations. This can either be the result of inherited disorders such as sickle cell anemia, or metabolic problems caused by an iron poor diet of wheat, aggravated by parasites and infectious diseases. Anemia is indicated when expanded bone thickness and perforations of the outer bone surfaces are seen in the eye orbits (cribra orbitalia) and cranial bones (porotic hyperostosis). There



Pitting of the skull indicating anemia (porotic hyperostosis).


are 35 cases of anemia, but all are minor and healed. Twenty percent of the cases are in children under 15 years of age, and 40% are in adults aged 20–35. The age distribution of anemia establishes that the cause is not genetic and is most likely due to diet,

parasites and disease. These infrequent and minor lesions inform us that the diet might have been slightly below optimal, but that the parasite loads were not abnormally high.

Evidence for infections is most frequently found on the tibia (lower leg), because it is largely unprotected by muscle. However, of the 126 tibia studied only 9.5% show some evidence of healed infection, which is a comparatively low rate that indicates little stress from chronic infections. The incidences of infection are evenly distributed among all age categories and both sexes, showing that there was no single dominant infectious disease.

The large, thick, long bones indicate that the population was robust with well-developed muscle attachments that are associated with people who work reasonably hard. The joints of the skeleton deteriorate (arthritis) with hard work and time, and with heavier workloads the arthritic damage will occur at younger ages. Minor arthritis is found on 22% of the observable shoulder joints, 18% of the elbows and 11% of the wrists. Frequencies were similar in the lower body: 15% of the hips, 26% of the knees and 14% of the ankles. Deterioration of the spine is more common in the lower (lumbar) region and least common in the neck (cervical). This is a normal distribution, and there is no pattern by joint or sex that hints at the presence of one particular strenuous occupation. The fact that most of the arthritis is mild tells us that although these people appear to have worked hard, this work was not excessively demanding on their joints.

The rates and extent of arthritis can be examined in conjunction with the various kinds of healed and broken bones to help reconstruct the rigors of Predynastic life. There were eight fractures of the hands, two healed fractures of the lower arm (ulna), four cases of fractured ribs, and a single case of hip dislocation. None of these would have resulted in impaired movement, and taken together with the arthritis data there is no evidence to suggest excessive or hazardous working conditions.

Overall we can conclude that the population was receiving adequate nutrition, that occupational stress was moderate, and that rates of infections were low. However, the low average age at death indicates that the population was under some strain, but we have yet to determine its sources. With further study, the non-elite inhabitants at HK43 will continue to tell us more about their everyday life and some of the extraordinary elements within it. 



A spinal vertebra showing extensive marginal bone development associated with arthritis.



# Not Just Another Cut Throat

—by Amy Maish

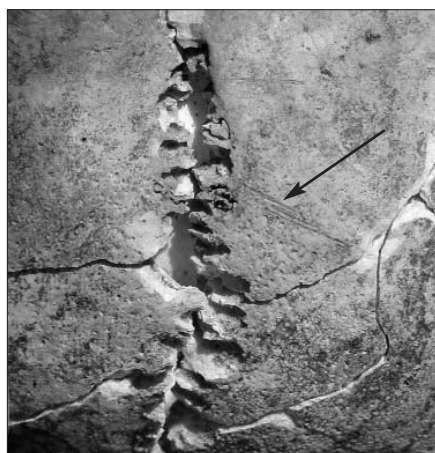
Cut marks on the cervical vertebrae of some HK43 burials are now well-known, but this year there was an unexpected twist: the marks on Burial 350 appear not only on the neck, but also on the skull. In appearance and location they are consistent with a scalping, or removal of the skin and hair, which is a practice both unexpected and unprecedented in ancient Egypt.



Cut marks on cervical vertebrae of B350.

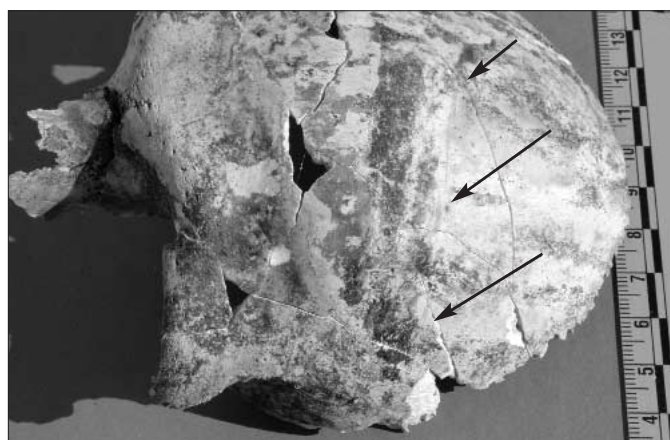
When such lacerations are found on the vertebrae, the entire body is searched carefully for other marks and clues as to why they occurred. In all previous searches nothing else has ever turned up, but on Burial 350 we found additional cut marks on both his mandible (lower jaw) and skull.

There are two deep cut marks on the lower right side of the mandible, and two vertically oriented cut marks on the left mastoid process, the area just below the left ear. Marks on the forehead are the most extensive and extend for 80.69 mm. There are six groups of cuts, each with a number of fine hash marks indicating multiple contact of the blade with the outer cortex of the frontal bone.




The top of the skull shows deep cut marks.

Another six groups of cut marks are found on the superior margins of the right and left parietal bones (at the top of the head). Again, each group consists of multiple hash marks and indicates that the blade made contact with the outer cortex of the bone several times. The other large grouping of marks is on the left side of the skull at the most posterior margin of the parietal bone. There are four groups of cut marks here, each with multiple hash marks.



The cut marks along the top and side of the head.

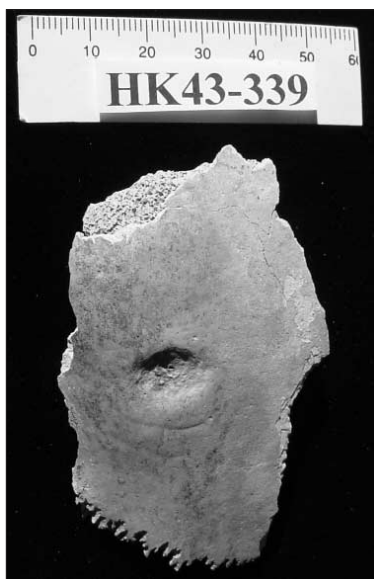
Overall, the person has just over sixty lacerations on his skull. Their pattern is consistent with that of North American scalplings and strongly suggests that this individual was also scalped. The earliest archaeological evidence of the practice comes from the Woodland and Mississippian cultural periods (600 AD) in North America. Scalps are commonly considered battle trophies, however, scalping is not always associated with violence and some have suggested a supernatural or religious significance for the practice. Although commonly recorded in the New World, Herodotus did describe the practice among the Scythians in the 5th century BC. The purpose of this gruesome act at HK43 remains a new mystery for us to solve. 

## Big Headaches in the Predynastic: Cranial Trauma at HK43

—by Wendy E. Potter & Joseph F. Powell (University of Arizona, Tucson)

It appears that Predynastic Hierakonpolis was not always a peaceful place. While excavations in the cemetery at HK43 revealed many surprises this season, one of the most notable was evidence of serious head injuries suffered by several individuals. Considering that most skulls are missing, poorly preserved, or extremely fragmentary, it was remarkable to find six cases of blunt force trauma to the head, and one case where this happened twice! Despite being on the receiving end of a fearsome blow, four individuals showed evidence of healing, and then lived to succumb later from other causes.

Burial 339, although badly disturbed, contained the fragmentary cranial elements of a 12–15 year old. A small depression fracture was observed on the frontal bone of the skull (forehead) above the left orbit (eye socket), with the fracture likely piercing through the outer table and a portion of the

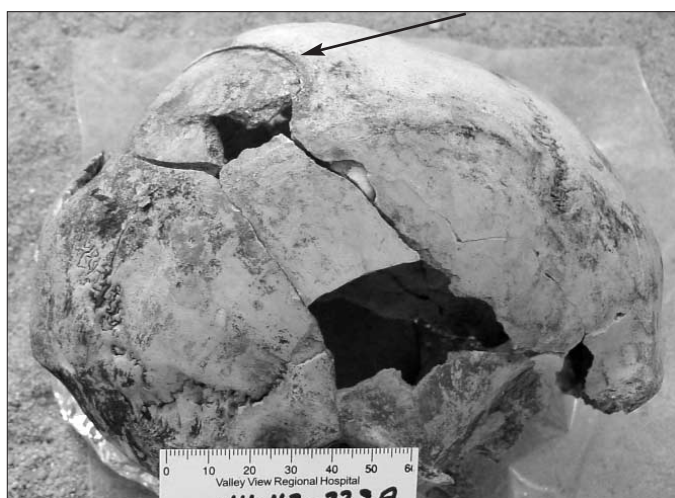


A depression fracture on the cranium of B339 at HK43.

inner table of the bone. The characteristics of the wound are consistent with one caused by a blunt, round object. The evidence of remodeling, with smooth sclerotic edges surrounding the defect, indicates that the wound was well healed, and the child survived the trauma for some time prior to death. A similar injury was found in Burial 358, a 9–12 year-old child, who also survived a blow to the back of the head.

As a youth, the 25–30 year old female in B375 also suffered a blow to the front right side of the head, but showed the most significant amount of healing of all the cases we observed, and clearly survived for many years after this traumatic event.

Three other individuals, however, were not so fortunate. They exhibit fractures of the braincase characteristic of massive perimortem injuries, which almost certainly killed them. The skull of one of the individuals in double burial B229, a 30–35 year old male, displayed evidence of massive blunt force trauma to the head; the injury was a high-loading impact to the posterior and medial aspect of the right parietal that produced a large semi-circular fracture and several irregular radiating fracture lines. Although it is difficult to speculate, the shape of the defect suggests that the weapon may have been oblong in form, possibly a mace head.



Semi-circular beveled fracture line are evidence of high-loading impact site—the result of massive blunt force trauma.

Massive blunt force trauma to the back of the head also killed the 35–45 year old female in B262, who was already nursing a fractured ulna (lower arm). The slow loading impact site was surrounded by concentric fracture lines marked by internally beveled edges. This is consistent with a blow to the head delivered from behind with a blunt object, possibly by a right-handed assailant.

Completing this catalogue of murder and mayhem, one individual exhibited two distinct episodes of head trauma. The 25–35 year old male found intact in B310 not only had old and healed fractures of a rib and wrist bone, but also a depression fracture on the left parietal, which was well-healed before he suffered another massive blow to the head, which this time was fatal. This second incident was a forceful impact centered on the right parietal, which was so strong that the skull shattered into pieces, and fragments were even found embedded in the individual's desiccated brain tissue. Again, it appears that he suffered a blow from a blunt weapon to the back of the head, possibly by a right-handed assailant.

So what has this cranial trauma told us about life in Predynastic Hierakonpolis? The cemetery represents a time period just prior to the beginning of unification. The Late Predynastic was a period of political and social unrest as several regional centers in Upper and Lower Egypt vied for political power. Hierakonpolis was one such center intimately associated with regional power struggles, and some of the individuals buried at HK43 may have received their injuries during skirmishes over territorial control. Evidence for defensive fractures in the forearm of some individuals at HK43 supports this hypothesis.

Some scholars have argued for a peaceful, diplomatic transition to statehood, based in part on the lack of head injuries observed on Predynastic skulls curated in museums; however, the former practice of collecting only intact skulls (see *Lost Tombs* above) has apparently skewed our picture of developments. While this is causing definite headaches for us today, with further research at HK43 we hope to find a cure. Nevertheless, our headaches can't compare to those suffered by some of the unfortunate inhabitants of Hierakonpolis at this fundamental, if dangerous, time in history. 🔪 🔪 🔪



Join the Friends of Nekhen and  
help us continue to make these  
exciting discoveries.  
See page 31 for details.





## Lifting a Basket

—by Fran Cole

The “basket of delights” was only one of many baskets found this season at HK43. Initially only fragments of coiled baskets were observed, but as the season progressed more complete vessels were found. Although they looked good in the ground, the baskets were more fragile than we anticipated, so when an elegant pedestal-based basket appeared upended in the corner of B345, we decided to try to lift it using a facing to hold the delicate fibres together.



The elegant pedestal-based basket emerges from the sand.

It was shortly after lunch when I was relieved from my mat mending duties and driven off to the cemetery to lift the basket. A close look showed that the fibres were extremely worn on the outside. To preserve these and their position they were consolidated with 5% B-48 in acetone, applied with a fine brush. When this had dried, strips of Japanese tissue (a long fibre paper made from mulberry leaves) were dipped into the consolidant and slowly laid across the basket and gently



Fran applying strips of tissue to consolidate the basket.

Lifting and applying facings to objects in the field can be slow and may damage the archaeology immediately surrounding the object. Luckily the basket had been tossed to one side of the burial in antiquity. This meant that the archaeologists were able to record and excavate the rest of the grave safely, leaving the removal of the basket till last.

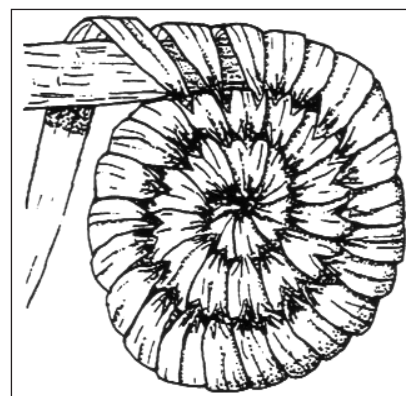
tamped into position. The paper strips were laid one over the next until the basket was completely covered, and while we waited for the consolidant to dry, the sand beneath the basket's rim was cut away. As the sun approached the western horizon, we knew we could wait no longer. Gently, we lifted the basket, held our breaths, and waited to learn which would win: gravity or the consolidant.

The hardened casing of paper worked like a charm and we were able to take the basket whole (more or less) back to the house safely for further study. Back at the lab, my first task was to remove the sand and soil from the interior to enable us to see the basket properly. This was an extremely slow process, because as each tiny area was exposed, it had to be consolidated in order to make it as strong as the exterior consolidation, otherwise it could split apart. Eventually this was accomplished and its construction could be observed.

The basket was made from a coil of thick reed, which was wrapped or “wound” with split grass-like fibres. Judging from the breakage pattern, most winds were interwoven with the top of the loop in the previous row to hold the vessel together, but the main strength was provided by strands of the same fibre that were sewn through each of the coils in a V shape pattern radiating from the base. Over the years these wrapping fibres have deteriorated much more than the coils, which explains why the basket was much more fragile than it looked. Without its paper casing it would not have survived, but it is now safely conserved, and we hope to learn more about this little-known facet of Predynastic material culture. 🍷 🍷 🍷



On the interior we could see that strands sewn in a V-shaped pattern held the basket together.



Coiled basket construction.


# THE HIERAKONPOLIS HOME PAGE

## Ali's Hierakonpolis Shurbit Ads (Lentil Soup)

Coming to the Hoffman House for lunch after a long morning of work in the field, nothing is more satisfying than Chef Ali's famous red lentil soup! The recipe has been a carefully guarded secret for years, but super-sleuth Art Muir managed to capture the information at long last after shadowing Ali around the kitchen for 3 hours! Ali and Art have kindly agreed to share it with us. Everyone in the Hierakonpolis Expedition gives it a spoon's up and I am sure you will too. *Makes 8 to 10 servings.*

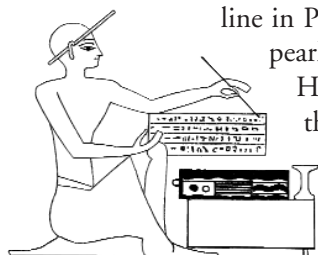


Chef Ali.

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>2 <sup>1</sup>/<sub>4</sub> cup small red lentils<br/>         3 tomatoes, diced<br/>         2 medium red onions, diced<br/>         3 small carrots, peeled and diced<br/>         3 quarts boiling water (approximately)<br/>         1 Tbs tomato paste (rounded)<br/>         2 Tbs pressed garlic (scant measure)<br/>         Cooking oil or olive oil (small amount)<br/>         2 large cubes chicken stock<br/>         1 tsp ground cumin (rounded)<br/>         1 tsp salt (rounded)<br/> <sup>3</sup>/<sub>4</sub> tsp ground black pepper<br/> <sup>1</sup>/<sub>3</sub> cup finely broken extra thin vermicelli/angel hair pasta. This very fine pasta usually comes wound in "nests" and is 1 mm (~<sup>1</sup>/<sub>16</sub>" ) in diameter.</p> | <ol style="list-style-type: none"> <li>1. Wash lentils in a pan of water three times, pouring off any debris.</li> <li>2. Add 2 quarts boiling water and the diced vegetables to lentils. Cook over low heat for ~1 hour, stirring occasionally. Add water as necessary to maintain desired soup thickness.</li> <li>3. Drain soup through a colander into another pan and press the pulp through with a spoon until ~<sup>1</sup>/<sub>2</sub> cup fibrous matter remains. Discard fiber. (This is Ali's method—alternatively, puree soup in a blender.)</li> <li>4. Mix tomato paste with 1 cup boiling water.</li> <li>5. Cook pressed garlic in a small pan with a bit of oil until lightly browned.</li> <li>6. Add tomato paste solution to garlic, boil for 3 minutes, then add to soup.</li> <li>7. Add crumbled chicken stock cubes, cumin, salt and pepper to soup, then simmer a few minutes.</li> <li>8. Add finely broken pasta and simmer for another 20 minutes or so. </li> </ol> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Praise for [www.hierakonpolis.org](http://www.hierakonpolis.org)

HIERAKONPOLIS ONLINE is dedicated to one of the most important Predynastic Egyptian sites. There are many interesting pages with information on the most important "localities" of the site, such as the HK29A temple, ... the elite cemetery at HK6, ... the mud brick "Fort" of Khasekhemwy, rock art, flint mines, kilns, ... and a bibliography of the site... But the most precious improvement has been the decision to put four issues of *Nekhen News* (nos. 9–12, 1997–2000) on



line in PDF format: the journal is a small pearl full of interesting articles on the HK sites, cemeteries and finds... therefore, to quote a playful motto in NN, "don't be a missing member", join the Friends of Nekhen.

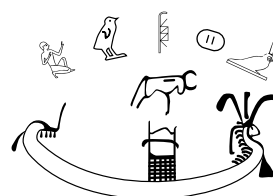
—Francesco Raffaele—*Egyptology News*

NEW *Nekhen News* volumes 1–3 (1985–1987) now online!



### NEKHEN NEWS

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**Renée Friedman**  
 Director, Hierakonpolis Expedition  
 Editor of the  
 NEKHEN NEWS  
 Email: [renee.f@virgin.net](mailto:renee.f@virgin.net)  
 Dept. of Ancient Egypt & Sudan  
 The British Museum  
 London, WC1B 3DG, UK

**David Sharp**  
 Associate Editor

**Friends of Nekhen**  
 Middle East Studies  
 University of Arkansas  
 202 Old Main  
 Fayetteville, AR 72701 USA

**Tori Muir**  
 Whistling Cat Creative Co.  
 Design/Layout  
 Email: [tori@whistlingcat.com](mailto:tori@whistlingcat.com)

[www.hierakonpolis.org](http://www.hierakonpolis.org)



# Thanksgiving Hierakonpolis Style

—by Renée Friedman

As I usually run the winter-spring part of the season, November 2002 saw my first Thanksgiving at Hierakonpolis. To provide a sense of occasion, we embarked on a Thanksgiving Day feast. I mentioned to our driver Khalid that we would be shopping early because on Thursday there would be a holiday and we needed a turkey (Arabic: *dik-rhumi*), as everyone in America would be having one.

As a surprise gift, on Wednesday morning he rolled up with a turkey for us, but it was a little more than I expected, with feathers, head and ferocious gobble still intact. It was a very fine bird, but I was a bit puzzled how we would cook it, as my experience of turkey preparation only goes as far as defrosting one. I expressed my concern to our chief guardian Sidain, who told me that Khalid actually hadn't understood what I wanted, as turkeys can be obtained from the butcher already prepared, even in a town like Edfu. Khalid had appar-



Sidain meets the turkey.

ently thought that we wanted to eat *with* a turkey... as who can guess what strange customs we foreigners have! Nevertheless, Sidain was willing to prepare the bird for us, and under the cover of darkness whisked it away, I think mainly because he was afraid I would bond with it and add it to the already extensive Hierakonpolis menagerie (see below)!

Next morning an oven-ready turkey arrived, but I sincerely doubt it was our Tom,

having shrunk in size to feed four very nicely, and now mysteriously breastless (never much cared for white meat anyway). The preparations then began. Ali the cook, much agitated by this change in his regime, carved the turkey down to our oven's size, and then boiled it to tenderize. Although this made stuffing it a little difficult, it did cut down cooking time and considering it was well-matured and *very* free range, the turkey turned out very succulent indeed.

Fran made bread crumb stuffing (left over bread, mashed bread sticks, some old Ritz crackers, half a danish pastry, onion, butter, basil, pepper, parsley, and almonds). Then she embarked on an apple pie, which was excellent, all the while being scrutinized by Ali. Of all the strange things we did, apple pie was apparently the most peculiar. Apples are now grown in Sinai and the price has come down considerably, but they are still an expensive fruit and quite a delicacy. To cut them up and cook them in a pastry was just too hard to believe. It certainly merited another chapter in the great situation comedy "Khowagas (foreigners) in Paradise" that we provide for them each season. This was even better than the episode in which we make the men brush the dirt, and then berate them for not making the dirt clean enough, before ordering them to put dirt back on the dirt, finally berating them for not putting enough dirt back. Cooking apples took the cake!



Fran's pie.

In the evening we feasted on oven-roasted turkey with most of the trimmings: stuffing, sweet potatoes, green beans sautéed in olive oil and garlic, and apple pie, all washed down with a nice bottle of red wine. It was a great success, and feeling a bit like pioneers ourselves, we proved that Thanksgiving traditions can be upheld, even at the edge of the Sahara desert. 🦃



## The Mouse Patrol

As that most excellent of cats, Major Tom, declined to join us for another tour of duty (being in great demand in the village), we had to draft in new recruits, who we are happy to report, took to their duties quite well. Meet The Belly-boy (a.k.a. Spoiled Rotten) and The White One (a.k.a. Noisy).



The Belly-boy.



The White One.

## 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 is continually providing exciting new glimpses into this formative—and surprisingly sophisticated—age, and more.

As a Friend of Nekhen you will receive the annual newsletter, the *Nekhen News*, produced exclusively for the Friends. Lavishly illustrated, the *Nekhen News* will keep you up-to-date on all of the Expedition's latest discoveries. Membership in the Friends of Nekhen also entitles you to special rates on Egyptian Studies Association publications.

Help the Hierakonpolis Expedition to continue its important work. Your contribution (tax-deductible in the US) will support important 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.

### Membership Application

I would like to help the Hierakonpolis Expedition by joining the Friends of Nekhen. In return for my contribution (tax deductible in the USA), I understand that I will receive the annual newsletter and qualify for reduced rates on expedition publications.

The membership category I prefer is:

- ☐ Regular (\$25/£17/€25\*)  
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☐ This is a renewal for the 2003–2004 season.

(If you have already renewed, thank you!)

Make your check payable to

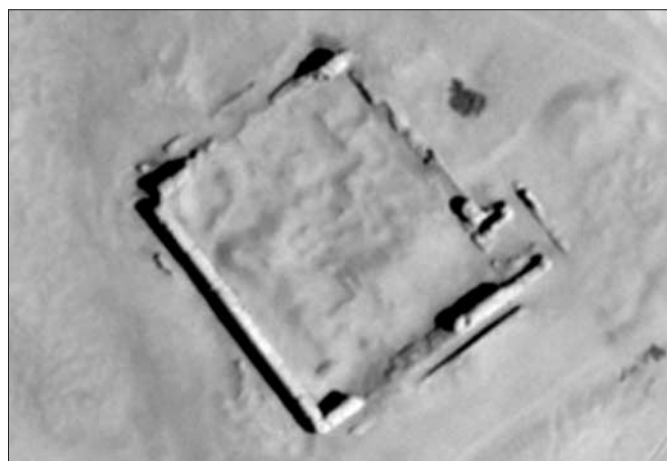
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 c/o Hierakonpolis Expedition  
 Dept. of Ancient Egypt & Sudan  
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USA—

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 Middle East Studies  
 University of Arkansas  
 202 Old Main  
 Fayetteville, AR 72701  
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\*If you wish to pay by European bank transfer, please contact  
 friendsofnekhen@yahoo.com





The Fort from space (courtesy of Digital Global).

Want a closer view? Join the Friends of Nekhen!



### Let's make a Map!

The new technology that allows us to obtain such stunning satellite imagery (see back page) can provide more than just pretty pictures. We can now observe, monitor and map the vast site of Hierakonpolis more rapidly and accurately than ever before, but to do this we must collect another set of images for a true stereoscopic view that will make it possible to photogrammetrically map the site with a veracity previously undreamed of. Unfortunately this doesn't come cheaply. We need to raise \$1500 to purchase the next set of images and we are counting on your help. We are extremely grateful for all of your generous assistance in the past and ask one more time for your extra help in making the past come alive.

  
*Special contribution for the*  
**Map Fund**  
 \$/£/€ \_\_\_\_\_  


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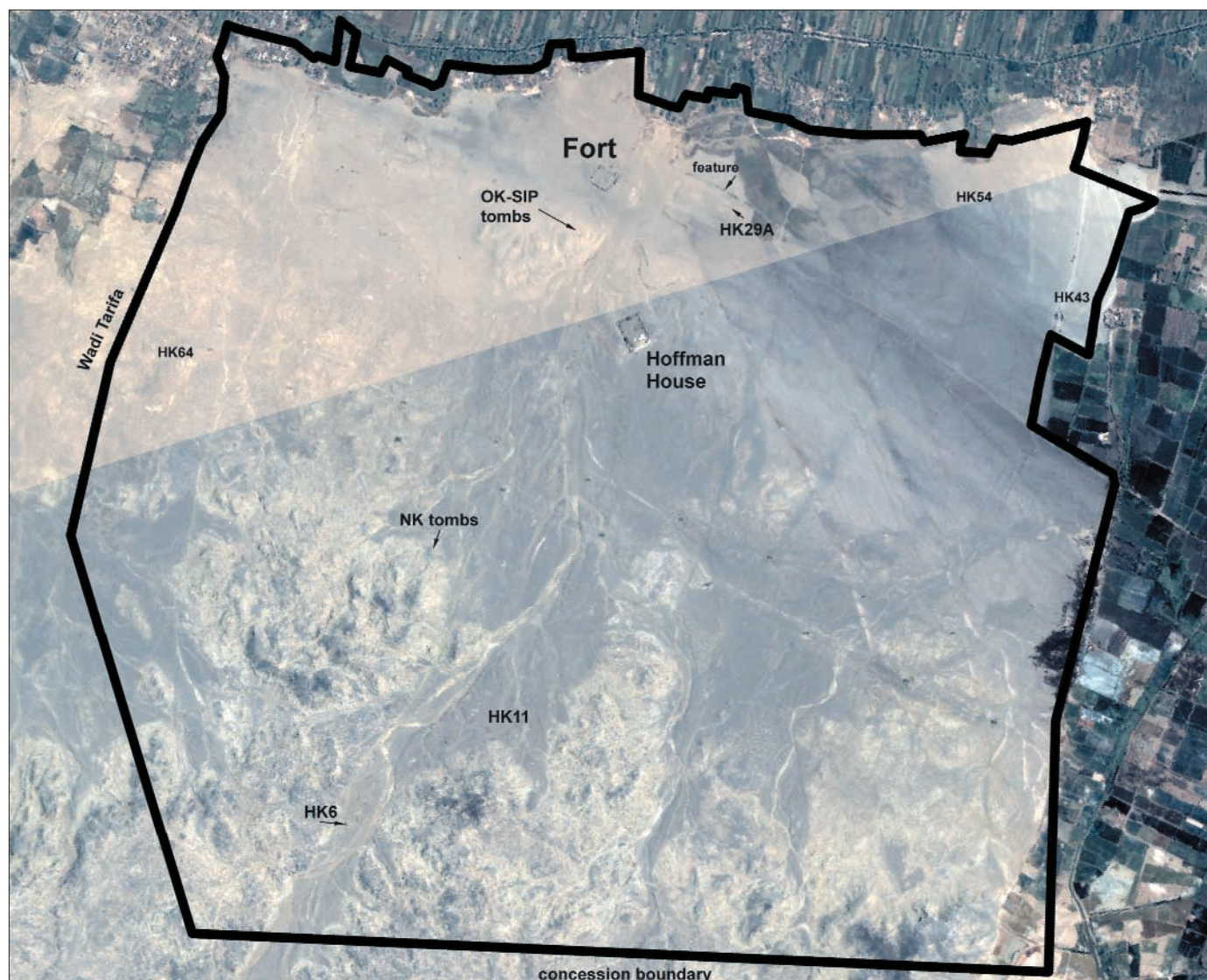
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Country: \_\_\_\_\_



# Hierakonpolis from Space



Satellite imagery of Hierakonpolis (courtesy of Digital Global).



## Revelations from Hierakonpolis