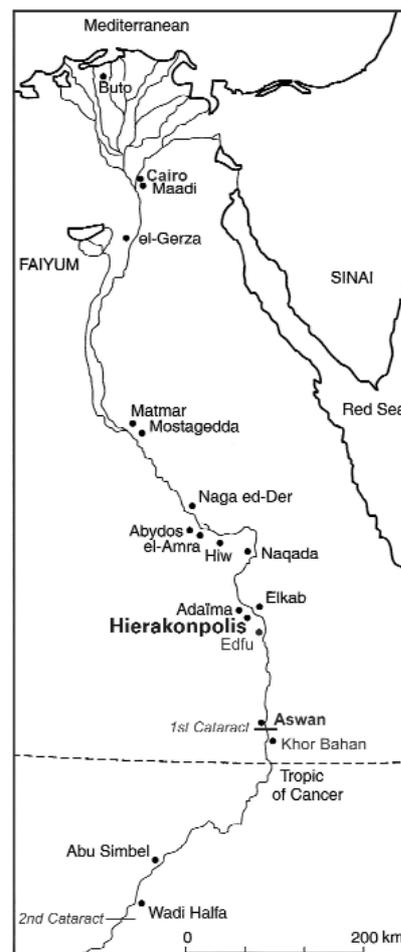
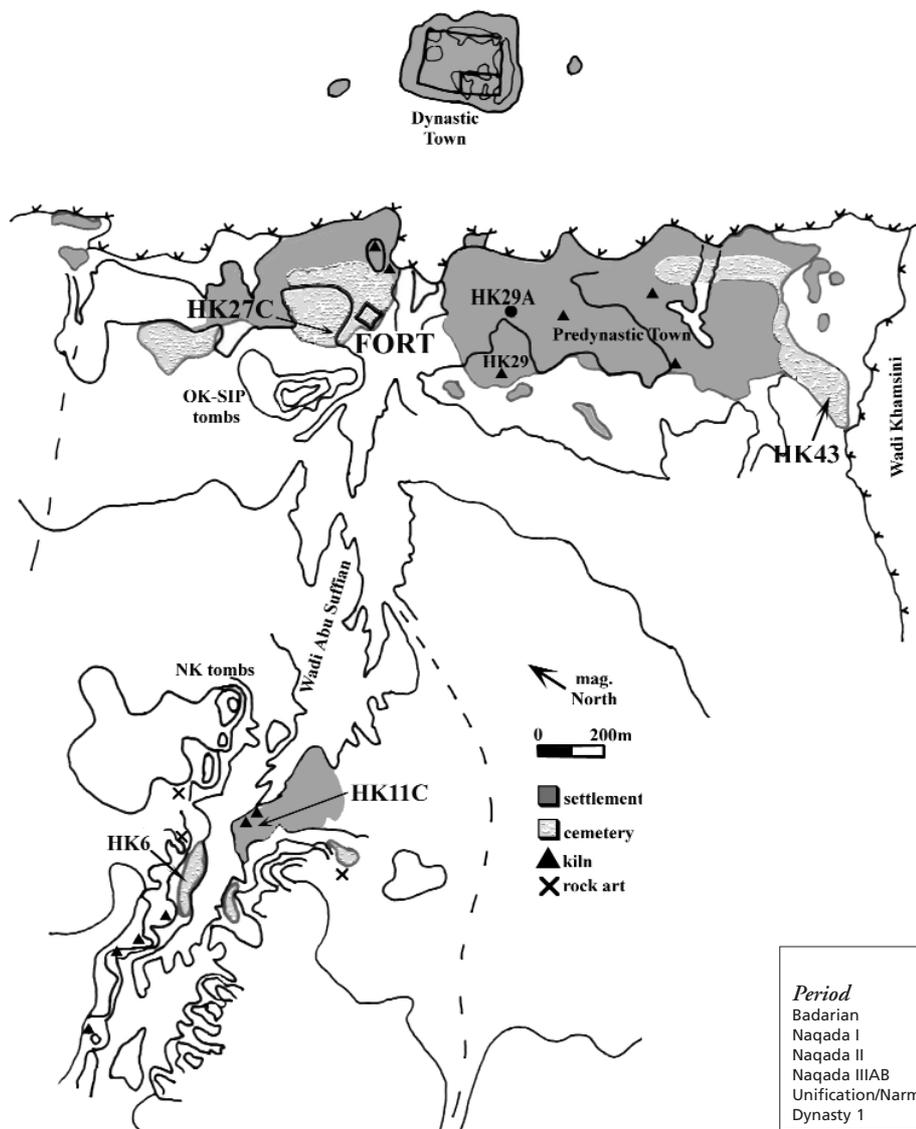


Hierakonpolis 2003/2004



Egypt: sites mentioned in text.

Time Line			
Period	Date BC	Period	Date BC
Badarian	4400-4000	Dynasty 2	2890-2686
Naqada I	4000-3700	Old Kingdom	2686-2160
Naqada II	3700-3300	First Intermediate	2160-2055
Naqada IIIAB	3300-3050	Middle Kingdom	2055-1650
Unification/Narmer	3050	Second Intermediate	1650-1550
Dynasty 1	3000-2890	New Kingdom	1550-1069



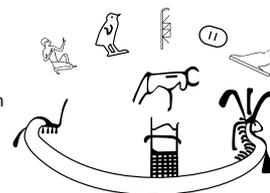
This edition of the Nekhen News is dedicated in loving memory to Carolyn Friedman (June 18, 1934–March 2, 2004), Hierakonpolis' greatest supporter. Her passing has created a hole we shall never be able to back-fill.

NEKHEN NEWS is published for The Friends of Nekhen

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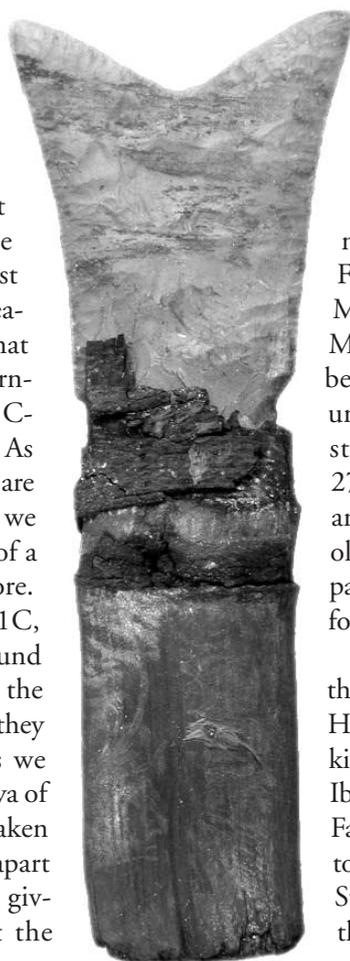
Cutting Edge Excavations

— by Renée Friedman

The Hierakonpolis Expedition took to the field from November 6, 2003 to April 5, 2004 for another amazing season of cutting edge discoveries and significant accomplishments. With so much to tell, it is hard to know where to begin, since the beginning actually came at the end; this season we worked in reverse chronological order, starting with the youngest and moving back in time. We kicked off the season with another look at HK27C, a locality that surprised us in 2001 by producing the northernmost archaeological evidence of the Nubian C-Group culture in Egypt (Middle Kingdom). As followers of our updates at www.archaeology.org are well aware, the sixteen new Nubian graves we uncovered constantly surprised us with tales of a tattooed lady, lessons in leather and much more.

Next we turned our attention to HK11C, located back in the main wadi, in order to 'ground truth' the mysterious anomalies detected by the magnetometer survey of 1999. As anticipated, they turned out to be pottery kilns, but not as we expected. In collaboration with Izumi Takamiya of Kinki University in Japan, excavations undertaken in December 2004 at two areas less than 20m apart revealed two different types of kiln structure, giving us much new food for thought about the method, organization and importance of pottery production in Predynastic Egypt.

The third part of the season (February–March 2004) took us to HK43 for the eighth and final campaign in the Predynastic cemetery of the working class. For its swan song, the cemetery put on a vir-



Farewell gift from HK43. Fishtail knife with handle. It's unique!

tuoso performance, producing discoveries both glorious and gruesome. We are proud to report that at long last the salvage of this important cemetery is complete, but now the hard work begins!

With our final farewell to HK43, we can now turn our attention to even bigger things: Fixing the Fort. A grant from the World Monument Watch®, a program of the World Monuments Fund®, will make it possible to begin the conservation of this magnificent monument — the oldest freestanding mud-brick structure in the world. Dating back to c. 2700 BC, after 5000 years of wind, rain, and mistreatment at the hands of early archaeologists, the Fort needs a lot of fixing. Turn to page 30 for details of the first campaign, planned for November 2004, and how you can help.

For making our work possible we wish to thank the Director General of the SCA, Dr Zahi Hawass, and the Permanent Committee for their kind permissions. For their assistance we thank Ibrahim el-Seedy, Director of Aswan Antiquities, Fathy Abu Zeid of Edfu and our on-site inspectors Ahmed Sayed Ahmed and Suzi Samir Labib. Support for this superb season was provided by the Michela Schiff Giorgini Foundation, the National Science Foundation, Tom and Linda Heagy, the LaSalle Bank, the American Institute of Archaeology and of

course our many Friends of Nekhen, to all of whom we are extremely grateful. In particular, we thank Peter Negus for his generous contribution in the memory of his wife, Diana, a devoted supporter of our work. Finally, the excellent team of dedicated excavators and researchers, who met the various challenges of the year with great professionalism and good cheer, deserves all of our gratitude.

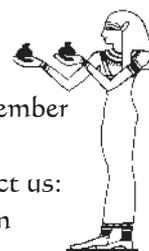


Photo: Manuel Ribeiro/ERA

Finishing up at HK43.



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Questions? Comments? Contact us:
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Farewell to HK43

— by Renée Friedman

After many seasons of excavation in the Predynastic cemetery at HK43, winter 2004 saw the end of our rescue work there. All the burials in the zone endangered by agricultural activities have now been salvaged, producing a vast body of new information that will keep us busy for years to come.

A planned TV documentary had promised to show the many new aspects of Predynastic life and death that HK43 has revealed, and extensive arrangements had been made. However, just days before the film crew was scheduled to arrive, filming was unfortunately cancelled due to budget cuts. Deeply disappointed, I quickly informed all those involved that they needn't worry about their wardrobe choices any longer (dig fashion is rarely elegant), and without further ado we got down to work. Although I thought I had contacted everyone about the change of plans, apparently I forgot to tell the cemetery itself, as it put on a performance that would have been impossible to stage. Excavations during the first three weeks (the scheduled time of filming) produced the longest string of intact burials we have ever encountered. Even those that were disturbed were still incredibly interesting with unprecedented levels of organic preservation at a site already noted for the remarkable condition of its burials.

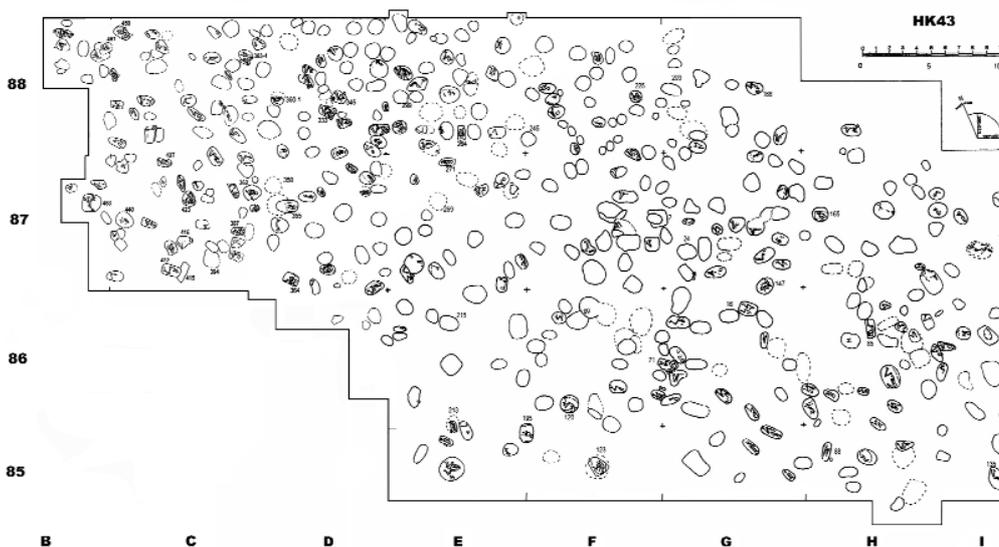
It all began with Burials 383 and 384, the grave of a 12-year-old child that had been reopened to include the body of an infant, presumably a sibling, poignantly placed in his lap. Such clear evidence for the sequential nature of events is rare. This was soon followed by the discovery of the darling of the season, 'Marley' in Burial 387, with her lovely long tresses, pretty pots and fantastic baskets, described in more



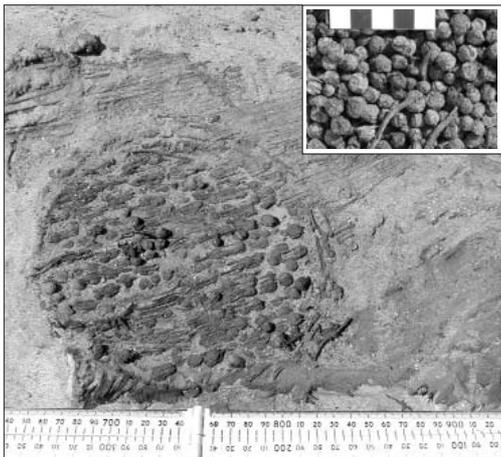
B450: An older woman with her nine pots.

detail below. Her neighbor in B386, although no longer intact, was not without interest. Flanking the tightly contracted body, with its extremely well preserved feet (the first of many feet that could be lifted whole), were planks of wood, which, despite having been attacked by termites, provide clear evidence for the revetment of the sides of the grave and ultimately the origin of the wooden coffin. His neighbors in turn were also not satisfied with the same reed mats common to almost every other burial in the cemetery. One (B396) had matting that had been woven into a type of hamper with

wood sticks inserted at specific points to provide strength and support to its curving vertical walls. Beside it, in B394, we finally found the exception that proves the rule: a mat that was not made of *Juncus* reed, but papyrus stalks, easily identifiable from their triangular cross section. This burial was also remarkable for the adipocere (fat) still visible within the desiccated flesh over the ribs, a grim indicator that even after nearly 6000 years of dieting some pounds will simply not go away. That was just the first week of work.



Map of excavated area at HK43. Final version.



A basket of fruit from B391. Inset: the fruit pips.

despite the near complete destruction of Burial 391, at its base was a basket filled to the brim with the desiccated fruit of the Egyptian plum (*Cordia*) and the crab-apple sized product of the *Ziziphus spina-christi* (Christ's Thorn bush) that are still enjoyed today.

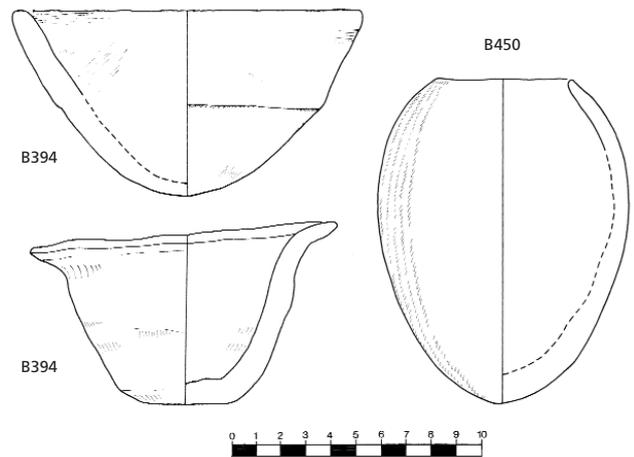
For the most part, the burials in the last remaining section of the cemetery (along the western edge) were very deep, some being up to 1.20m below the surface. This left enough space for an upper layer of burials to be added later. Such overlapping burials were only rarely encountered in previous seasons, and this practice seems restricted to the northwest segment of the cemetery. These two levels made for real tests of strategy, as the excavation of one burial would partly reveal portions of another that needed to be excavated before the original work could continue. This also meant that some of our most intriguing finds, such as the scalped heads in a subsurface cluster in square C880 (discussed below) are difficult to place or date. They may have originally been buried together in one high-lying group grave as other examples of multiple burials were uncovered this season. Two contained pairs that had been interred simultaneously (B423, B461), and one contained three individuals (B453), at least two of whom had been placed in the grave together, with the third occupant being added later. Unfortunately, because the grave was disturbed, we were unable to determine if the grave had been reopened for this purpose. In all three cases, the occupants were female.

While the depth was not always sufficient to deter grave robbers, it did promote excellent organic preservation. The most remarkable example of this is the intact Burial 432, a 30–35 year old woman, who was so well preserved that we could tell her sex just by looking at her (see page 16). Bundled between two perfectly preserved mats, she had no grave goods.

Despite the obvious effort put into digging the burial pits, the grave goods were for the most part undistinguished. Where present, they were composed of the same range of black-topped jars, straw-tempered bottles and red polished

Food was also well preserved in many burials. A small loaf of bread on a potsherd was found lovingly placed before the mouth of an intact small child (B401), and despite the near complete

bowls that we have come to expect; however, there were a few notable exceptions, like the amazing Burial 412, which is a story in itself (see below). Burial 450 contained a middle-aged female surrounded by nine pots of different types, including a brown polished egg-shaped jar similar to those found in great quantities in the temple complex at HK29A (see *Nekhen News* 15: 4–5). Burial 394 also contained pots that are only paralleled at the temple complex, and this may indicate a changing view of the afterlife or how to get there, which put more stress on ritual activity over provisioning. Together the pottery recovered from the cemetery dates the final sector to Naqada IIB–C (c. 3600–3400BC).



Pots paralleled at the HK29A temple suggest more emphasis on ritual.

Excavations at HK43 have now been completed. A total of 91 individuals (25 males, 36 females and 30 of indeterminate sex) were recovered from the 87 burials excavated this season, bringing the grand total to 469 graves and over 500 individuals. After investigating several different areas throughout the locality, we feel that no further burials with sufficiently preserved information remain to be discovered in the zone threatened by agriculture. Disturbances, bulldozer furrows and wind deflation have destroyed any other graves and their contents. We know that the cemetery continues on the other side of the now-defunct canal that drew our attention to the site in the first place, but tantalizing as it might be, this area is safe for the time being, while other areas across the site are not. Now, after eight seasons of work, it is time to start processing the large corpus of information we have collected about the common people of Predynastic Hierakonpolis and the new evidence for various aspects of society and industries buried with them, in order to achieve a better understanding of Egyptian civilization at its very beginnings. 🐾



Learn more at www.hierakonpolis.org



Marley: The One Everyone Hopes to Find

— by Tom Flanigan, U.S. Forest Service, Humboldt-Toiyabe National Forest, Nevada

The first week of the 2004 excavations at HK43 was excellent by anyone's standards, and was made better still by the discovery of 'Marley' (B387). Named for her long dreadlocks that evoked a certain deceased Rastafarian from Jamaica, she was discovered intact with all of her grave goods neatly placed around her flexed body. The find was especially exciting for me as her discovery came on the heels of two solid days of sifting through culturally sterile sand in a more southerly location, which had earned me the unlucky moniker of 'nothing-man' from the local workmen.

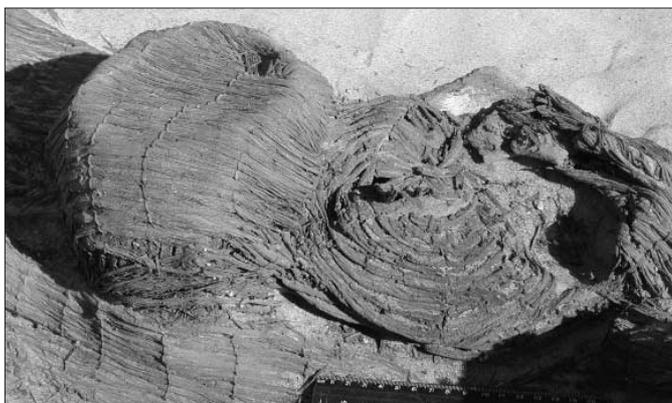
One person's luck is often another person's misfortune. I was shifted to this more promising area after the original excavator had been landed horizontal for an entire week by a bowl of bad guacamole in Cairo. Soon after my lucky move, I was delighted to be able to write in my field notes: "There may be a burial on the south side of C870NE... there appears to be an intact jar draped in Type II matting... quite nice too". So nice, in fact, that Salah Mohammed El-Amir, a man superbly adept at delicate work, was quickly assigned to assist in the burial's excavation. We knew we were on to something special.

Once the overburden was carefully swept away, a striking layer of intact matting was exposed. Outlined under the mat were the circular rims of pottery vessels and the telltale shape of an intact head. Since the head area was often the location of the best grave goods, this is where plunderers commonly focused their activities. As a rule of thumb, when the head is still intact beneath the over-mat, you know you've found one that the plunderers missed. Special burials like this cannot be rushed. Over the course of the next seven days the grave was completely excavated, revealing exceptional examples of Predynastic matting, textiles, and the natural preservation pro-



Tom on the job mapping Marley.

vided by the sands of Hierakonpolis. The latter was amply demonstrated by Marley's full head of hair, with locks that flowed down over her shoulders.

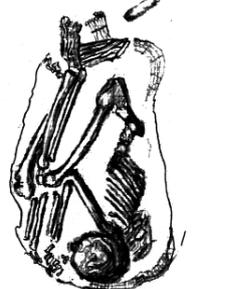
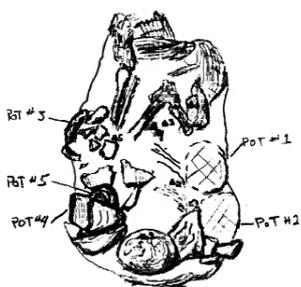
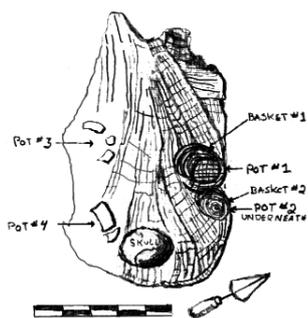


Beneath the matting, a basketry lid!



As the matting appeared, we knew we were onto something special.

Marley's grave contained her body, found tightly flexed and oriented east/west, four layers of matting laid down in a criss-cross pattern (two above and two below her body), two layers of cloth (one above and one below the body), and five ceramic vessels arranged along the sides of the grave. The pottery assemblage consisted of three straw-tempered conical jars and one bottle, all of types with which we are more than familiar, but the fifth vessel was unique. A large elliptical black-topped bowl with a lustrous black interior, it may have been her prized possession; it is certainly one of ours. However, it was not only pottery that accompanied her. The jar that had initially tipped us off to the presence of the burial revealed yet more treasures when the over-mat had been



Documentation drawings by Tom Flanigan.

painstakingly lifted from around it and an accompanying vessel. One jar had collapsed under the weight of the sand, but sitting above it was a wonderfully preserved basketry lid. Bits and pieces of basketry have been found throughout the cemetery, but as Fran Cole described in *Nekhen News* 15, the delicate nature of the ancient coiling technique does not usually promote long-term preservation. And as if one basket were not enough, further investigation of the other jar revealed that it too had been capped with a basketry lid, which over time had gently slid down the side of the container, and molded itself to the shape of the pot. As it was held in place by the over-mat, we were perplexed as to how we might lift this fragile find. In the end, we simply took the whole thing: the jar, its contents, the basket lid and over-mat.

Uncovering these fragile remains is delicate work. While my brushing skills were no match for those of Salah and

his assistants, I was allowed a swipe or two. My real function was to record, describe and draw the burial as it emerged. With so many levels of detail, this proved to be a challenge, but an enjoyable one. Although I never gave him a chance, I like to think that it is the one thing I am better at than Salah!



Marley's lovely locks flowing over her shoulders.

Just What Can We Learn From Hair?

— Dr Andrew Wilson, Wellcome Trust Research Fellow in Bioarchaeology, Departments of Archaeological Sciences & Biomedical Sciences, University of Bradford

This spring I made a flying visit to Hierakonpolis to assess the potential information that may be unlocked from the well-preserved hair at HK43.

My background in archaeological conservation is what has brought me to the study of archaeological hair. In conservation we are particularly concerned with understanding how and why materials degrade in the ground and how they may also change once they've been excavated. We also have to consider the value of the information derived from biomaterials in the context of their state of preservation and taphonomic processes (taphonomy means literally the 'laws of burial', but can be understood as the study of decay processes).

Whilst hair can undergo severe changes in the burial environment, where it does survive it can yield an enormous amount of information. Since we know that hair grows at a relatively constant rate of about 1cm per month, we can derive very detailed information on diet along the length of individual fibres. The lovely long hair of Marley, for example, can offer us insight into seasonal variation in diet, disease, storage strategies, the impact of drought episodes and potentially even the season in which she died. Using stable isotope analysis, which examines the types and amounts of different isotopes ingested from certain foods, 'high resolution' dietary information from hair can also be contrasted with more long-term dietary signals recorded in bone, which may reflect the last 10–20 years of life. Thus it may soon be possible to derive isotopic information from the samples from Hierakonpolis to reveal a wide variety of information about life at this remote time.

Occasionally there is also the opportunity to investigate a more ephemeral, but no less important, aspect of hair — its appearance. Several of the burials at HK43 preserve evidence for hairstyles, hygiene and hair management, and allow us a glimpse at some very familiar concerns that span the millennia. ☸



It turns out that Marley aged gracefully. Although there were many opinions as to her age while she was being excavated (many of us — including Salah, who was correct in his age assignments for the rest of season — thought she was probably in her teens), analysis by our physical anthropologists (once recovered from guacamole poisoning) determined she was 31–35 years of age at the time of her death with a tad of arthritis in her back and some degenerative joint disease in her pelvis. Future in-depth analysis of all the finds from this exceptional burial will no doubt tell us more about Marley and the fascinating times in which she lived. I'll never forget the week spent together; what a way to start! ☸

I sincerely thank Barbara Walker for approving my request to participate in the excavations and for granting me a two-month leave of absence from my position in an already under-staffed and under-funded endeavor.

He's Got a Knife! Burial 412 at HK43

— by Renée Friedman

Excavation can be an excruciatingly slow process, but there are times when I wish I had it all on tape so that I could watch the playback in slow motion. The discovery of Burial 412 was one of those occasions. I'd start the tape just as the sadly disturbed jumble of bones was beginning to appear, about 20 cm below the surface. The bones and one bottle were piled up over a displaced head, which was accompanied by a rather splendid brain on one side and a quantity of hair and scalp on the other. The extraction of this fragile organic material is a tricky business, as in many cases the only thing holding it together is the sand that surrounds it.

After many years of practice, our workmen have developed a technique in which thin pieces of cardboard are gradually inserted below the object in order to lift it while retaining the support of the surrounding matrix. Having collected the brain successfully, it was



It all began with a cluster of bone...

while the scalp was being readied for lifting that I turned away to deal with other matters, only to be called to attention by the piercing cry: "He's got a knife!" My heart skipped a beat as I took a split second to assimilate what I had just heard — was this my deepest fear realized? Were we under attack? As the adrenalin pumped, I spun around to confront the perpetrator... but everyone was completely still... until Hamdy came running up to me with one of the most remarkable things I have ever seen: a beautiful flint knife peeking out from



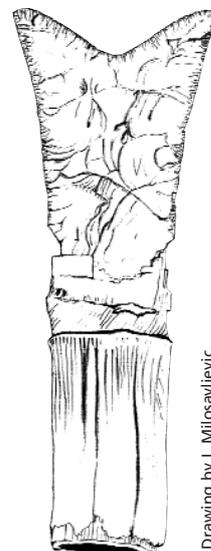
Then came the scalp, skull and brain....

a protective bundle of animal hide, enmeshed in a tangle of curly brown hair. My relief and amazement must have been palpable. Soon everyone was laughing and crowding around to see the new treasure (see back cover).

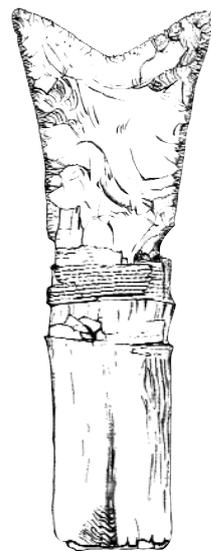
Back at the lab, when we were able to examine the find more closely, the details revealed themselves. Placed beneath the head of the deceased, the animal hide wrapper had tightly adhered itself to the hair of the head, so tightly that when the burial was plundered and the head tossed to the surface, the knife went with it. Carefully removing the hairy hide, we could see the flint fishtail, or forked, blade still partly covered with a separate sheath to protect the delicately retouched cutting edge. But the most remarkable sight was the bamboo-like handle still in position. This is the only fishtail knife ever found still hafted.

The entire knife with handle is 13.6 cm long. It is slightly bowed, but this is probably a result of the head pressing against it over the millennia. The blade is made of a fine gray flint, typical of knives of this type, which are dated to Naqada IIAB and earlier, as discussed below. The expertly knapped blade, with its concave cutting edge, narrows abruptly at the lower end to create the tang that was fitted into the handle and held in place with a 1 cm-wide band of leather, wrapped around at least three times. The hollow handle has been preliminarily identified as a stout stem of the common reed, *phragmites*. Unfortunately, the leather sheath surrounding the blade did not hold up as well; however, a blade now in the beautiful new display of Predynastic objects in the Metropolitan Museum of Art in New York is wrapped in an identical manner. The authenticity of the sheath on the New York piece had been in question, but we can now confirm that it is genuine and use it to reconstruct the original appearance of the sheathing from B412.

Handles for fishtail knives have only been observed in two other cases. One knife, from Naqada grave 1388 (now in Oxford), has a length of cord wound around the tapering end



Drawing by I. Milosavljevic



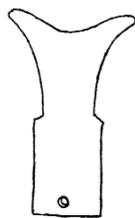
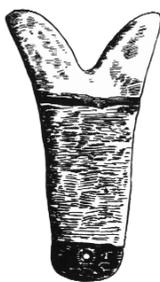
Drawing of fishtail knife from B412.

of the blade, and thin pieces of wood still adhering to one face may be the remnants of a handle. Interestingly, this knife was also found wrapped in animal hide. The other example was found in Naga ed Deir grave N7625 lying beside the arms of an adult male in a multiple burial. The handle has not survived, but it was reported to have a fibrous quality resembling bamboo, suggesting that it was made of the same material as ours.

Further evidence for handles comes from model knives made of mud, pottery or, occasionally, more precious materials. Two clay models of fishtail knives excavated by Quibell at Hierakonpolis are painted to suggest that linen was wrapped around the butt end and secured by dark colored bands to serve as a handle; however, other models indicate that rectangular wood-type handles were also common. Considering that over 150 examples of fishtail knives are known, it is surprising that so few have actually been found with handles. It is therefore possible to suggest that the handles were removed before burial to render these dangerous weapons harmless, or to ritually kill them. Those that were interred whole may have been wrapped in animal hide for this same reason — to prevent them from harming their owner.

The purpose of these obviously highly prized implements is still debated. They are most often found in the graves of men, sometimes in multiples. Fragments of another reed handle in Burial 412 suggest that at least one more knife of some type was originally present amongst the grave goods which, despite the high degree of plundering, were still quite rich.

When Sarah Wille and her workmen Hamdy Mahallal and Gamal Sidain finally reached the body, another meter down, they found a fabric bag containing crushed malachite, another



Model knives with handles.

bag of sewn leather containing food and a large piece of resin wrapped in animal hide. Preservation was such that melon seeds could still be observed in the stomach contents. The plunderers, who knew exactly what they were after, targeted the head and pelvis areas of this large middle-aged male (35–50 years of age) with precision. The rest of the body was mainly intact and covered with large quantities of textiles. Some are possibly the remains of garments, but others, thick wads of resin-soaked textiles up to 10cm thick, recall the pads found around the neck of Paddy (Burial 85) and our other proto-mummies (see *Nekhen News* 14). In addition, the fingers of one hand were found wrapped individually in strips of fabric, although it is unclear if this is evidence for an early form of mummification or relates to the treatment of an injury. If textiles were used to ‘wrap’ or protect certain body parts, then this is the first example of a male treated in this fashion. We hope that detailed microscopic examination will reveal more about these mysterious textiles, but in the meantime, there is no question that Burial 412 will long be remembered for many different reasons. 🐉

Prestige and Skill — Fishtail Knives in Predynastic Egypt

— by Thomas Hikade, University of British Columbia/Vancouver

The so-called fishtail knife is a well-documented tool of the Naqada I–II period and continued to be used into early Naqada III (c. 3800–3200 BC). It is usually made on a flint core, seldom on a large flake, which has been brought into a shape that resembles the letter Y. There are two major variants: an early type that dates from Naqada I until the transitional Naqada IIA phase, and a later type that is known from Naqada IIB until early Naqada III. The older fishtail knives have a broad fork with a wide notch (A). The blade tapers slightly to the lower end where it was once most likely simply wrapped with cloth for use. Some, however, were retouched at the narrow end to allow for the fitting of a handle (B). The shape of the fishtail knife changed during mid Naqada II into a type with a tipped fork end and a steep notch in the middle (C). The sides of the blade run almost parallel and end, as the older specimens, in a rounded or pointed butt.

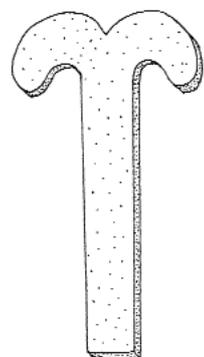
Both types were completely retouched on the dorsal and ventral aspects, and in some cases traces of grinding from an earlier stage of manufacture are still visible. Along the forked end there is often very fine denticulation, which terminates at the point where the handle section starts. Although studies of the raw material have not been carried out, it appears that most Naqada I fishtail knives were made on a dark brownish grey flint (also known from the contemporaneous rhomboid flint knives), whereas caramel to light brown flint dominates in the younger group.



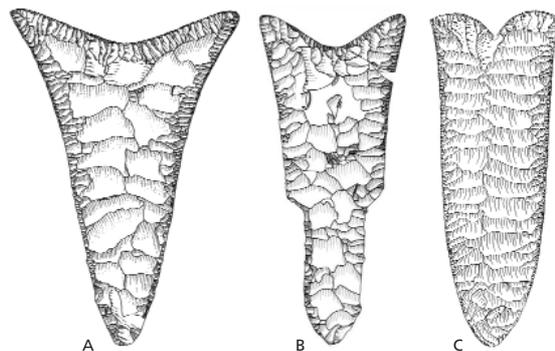
Band-aid or bandage? Textile wrapping around the fingers of B412.

The distribution of both major types shows a concentration in Upper Egypt, perhaps partly due to the history of archaeology, since few Lower Egyptian sites have been excavated. Although known from Maadi in the north to Khor Bahan located south of Aswan, the Naqada I–IIA fishtail knives tend to cluster in middle and southern Upper Egypt. Major sites are Naqada with 17 specimens and Hu (Diospolis Parva) with 11, including seven knives from one tomb alone (tomb B86). This tomb also contained disk maces, some with their original horn and ivory handles. For the younger fishtail knives, the core area is in the general region of Abydos. Of special note is el-Amrah tomb a96, where five knives were found lying in a row beside the thighs of the contracted body. Another important site is Abydos Cemetery U, where eight knives and fragments thereof have been recovered during recent excavations by the German Institute. Notable are tomb U-141, where 55 projectile points made on flint were found along with a fishtail knife, and tomb U-127, which also contained several fragments of ivory handles depicting prisoners, although these cannot be directly connected with the fishtail blade itself.

Today we know of approximately 160 examples of fishtail knives from publications. Some have come to museum collections without clear provenance, and only a few have been discovered during modern excavations. This makes it difficult to establish their purpose, and there are various interpretations. W.M.F. Petrie, the first to establish their typological development (based on the morphological changes of the bifurcated tip), considered them forked lances for hunting at short distance. Other scholars interpreted them simply as table knives, while some linked them to circumcision rituals. Because of their resemblance to a special tool called a *pesesh-kef*, used in the later Opening of the Mouth ritual to magically revive the deceased and confer the power of speech and eating, fishtail knives are also believed to have been employed in Predynastic funerary rituals. An offshoot of this idea led A.M. Roth to suggest that the knives were used in childbirth to cut the umbilical cord, and their presence in graves was to assist in rebirth after death. These last two interpretations, however, approach the subject with information from periods hundreds of years later,



Pesesh-kef
implement.



A: early fishtail knife. B: early shape with distinct handle section. C: late fishtail knife type. (Examples from Cemetery U at Abydos.)

and there is no continuous archaeological sequence to link Predynastic fishtail knives with the Old Kingdom *pesesh-kef* implements of similar shape.

In order to begin to understand fishtail knives, we need to place them within the situation of the 4th millennium BC. Let us briefly outline the social and political developments. During the first half of this period, the subsistence economy was based on agriculture and animal breeding, with burgeoning interregional trade throughout Egypt that even linked the Nile Delta with the Levant. Later on, subsistence remained the same, but now trade contacts reached even further to Mesopotamia and Elam. Trade was apparently in the hands of several competing kingdoms that struggled ambitiously for power and hegemony. It is generally believed that this led to the development of three kingdoms in Upper Egypt, based at Hierakonpolis, Naqada and Abydos respectively.

Control over the procurement and allocation of raw materials enabled the elite to acquire, process and (re-) distribute commodities in order to satisfy their own needs and those of their subjects. It is almost self-evident that the emerging ruling elite would seek status symbols that not only demonstrated their separation from the rest of the community, but were also adequate to their self-esteem, praising their ideals and understanding of the world. In terms of funerary rituals, this resulted in tomb equipment that was more exclusive, along with the introduction of weapons used to demonstrate power, such as maces and high-quality flint knives as known from the elite cemeteries at HK6, Abydos and Naqada. It is into this context that fishtail knives must be placed, as tools of the highest quality manufacture and clear symbols of outstanding position within the community. The archaeological evidence shows that fishtail knives were quite often associated with other finds indicating warfare and violence. Where the gender and age of the tomb owner has been determined, it is almost exclusively an adult male. This is also the case in Burial 412 at HK43, where the deceased was a middle-aged man of large stature.

Unfortunately the practical function of the fishtail knife has yet to be determined. So far no detailed microscopic analysis of fishtail knives has been conducted to shed light on their use. From my own experience and observation, almost all of the knives still have very delicate denticulation around the fork and sides suggesting that they were never used. Hence, it would not be surprising if their major function were display and the expression of power and prestige. ◀

A Little More Off the Top

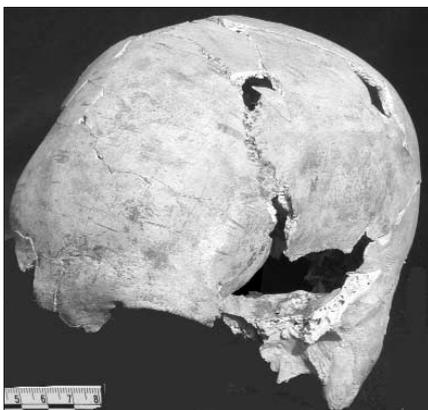
— by Sean P. Dougherty, University of Indiana, Bloomington

The case of scalping discovered last year at HK43 (*Nekhen News* 15: 26) was surprisingly new and different. So singular and unexpected, it was considered an isolated and unusual incident until four skulls showing evidence consistent with scalping were found this season, adding a shocking new twist to Predynastic mortuary customs.

As is often observed in the practice of paleopathology (from the Greek *palaios*, meaning ancient, and *pathos*, suffering), there is an inverse relationship between the interest level of the pathology and the condition of the skeleton on which it is found. This extension of Murphy's Law applies to the four new cases of scalping. All four were found in highly disturbed contexts containing multiple elements from several individuals and could not be directly related to any particular burial. Each individual is represented only by its fragmentary skull; however, eight cervical vertebrae belonging to at least three different people from the same disturbed context, several with severe cut marks, suggest that scalping wasn't the only apparent misfortune to befall these individuals. Only two of these vertebrae could be assigned to the same individual. This was clear not only from the proper articulation, but also from the deep cut affecting the opposing articular surfaces of both bones. By lining up the cut marks it appears that the head was turned slightly to the right (by about 10 degrees) when the cut was made with a violently deep and upward motion, cutting right through the inferior two-thirds of the body of the second cervical vertebra. In addition, this vertebra exhibits over ten other cut marks. The eventual outcome of these multiple incisions was undeniably complete decapitation.

For those who like all the gory details, the individual statistics on each of the heads are provided in the box below. The four fragmentary skulls all belong to adults, probably young men, 18–30 years of age, and exhibit cut marks that range in number from 53 to over 193. While certain features of the cut

marks, such as number, length and depth differ between each skull, there are a few observable patterns. First, the cut marks begin in the mid-frontal region (the forehead) and become less frequent as they move toward the back of the head. Second,



Over 190 cut marks appear on Skull 3.



Twist and cut. By lining up the cut marks we can see the head was rotated slightly to the left when a nasty injury was inflicted, which completely severed the lower part of the second cervical vertebra.

the left parietal bone (side of head) in each case was found to have more cut marks than the right, and in all cases multiple clusters of four or more small, parallel incisions, often very fine, were observed on the bone surfaces.

Compared to the expected method of scalping, these examples from HK43 are unusual. To scalp someone is an easy thing, mainly due to the anatomy of the human head. The hair and skin of the head sit upon a layer of tendons that is, for the most part, only loosely connected to the skull itself. At the front and back, this tendinous sheet adheres to the frontalis and occipitalis muscles, which serve to anchor it to bone. However, between these two muscles, it sits loosely across the skull, and is attached only by loose areolar connective tissue. It is for this reason that we can so easily wiggle our hair to imitate the movement of a wig.

Because of this anatomical design, the taking of a scalp requires very little effort. One need only make an incision around the skull, most commonly at the hatband level, making sure to sever both the skin and the slightly tougher muscle at the front and the back. After that, the fingers can be inserted into the forehead incision to pull the skin slowly away from the skull. In this manner, the scalp is gradually peeled away from the bone as one would remove the rind of an orange.

Historical accounts often describe a more hurried approach. Herodotus (Book 4.64) writes that a Scythian warrior, having made his cut just above the ears, grabs hold of the hair and shakes the skull away. The anthropologist and adventurer Richard Burton described similar methods among Native Americans in 1864 and added that this particular method creates a 'flopping' sound.

The method apparently used at Hierakonpolis differs greatly from those described above. While each skull shows cuts across the forehead, there are no further cuts circumferentially around the skull as would be expected. In addition, the multiple clusters of parallel cuts found on the parietals, as well as the general decrease in incisive activity at the back, suggest a more methodical approach to the removal of the skin. One gets the impression of a gradual releasing of the flesh from the bone, using the blade slowly and precisely to sever the loose connective tissue. Around the sides, the absence of a helpful circumferential cut could be remedied by cutting the tissue away from the skull as it is lifted from the bone by the fingers.

Of course, this all assumes that the point of the exercise was to remove the scalp. It is one of the great laments in archaeology that while we can discover some of the events that have taken place in the past, we can seldom discern the motivation behind them. For many, the thought of scalping brings to mind acts of warfare and trophy taking. This is quite often the case, as described by Herodotus and countless historians of Native American culture. However, scalping often served other purposes, such as punishment and torture. In 2 Maccabees 7, an account of the Jewish revolt (168–4 BC), scalping is just one of many methods used to painfully coerce seven brothers to give up their Jewish traditions. In this example, although the product of the act is the removal of the scalp, the purpose is to inflict pain. Scalping was also practiced by a variety of cultures including China and other civilizations of the Middle East, but the motivation is not always understood.

For ancient Egypt, it may be reasonable to consider these acts in relation to mortuary custom and experimentation. Body mutilation has been observed in Predynastic cemetery contexts throughout Egypt. At HK43 there is now a cemetery total of 18 individuals with lacerated neck vertebrae, many evidently decapitated. Similar injuries have been

Pictorial Evidence?

Labels dating to the reigns of the early First Dynasty kings Aha and especially Djer depict what may be human sacrifice in the ritual context of creating or empowering a sacred image. In one scene, a kneeling man plunges a sharp weapon into the chest of a bound victim. A bowl is present to catch the blood. In the second register, cloaked figures are seated on plinths. Although hair appears around their shoulders, a receding hairline has been clearly indicated, and from this bare area issues forth a line that widens as it arcs down before the face. This work is on a minute scale, precluding the inclusion of many details we would so dearly like to see; thus interpretation of this scene varies.

Some suggest these are mourning women with disheveled hair, but in light of the new evidence from HK43, is it possible that this is a depiction of blood letting from head wounds created by carefully peeling back the scalp?



Wooden label of Djer from Saqqara. Before the development of numbered regnal years, the date of a commodity shipment, in this case oil, was recorded on these tiny docketts by depicting the most memorable events of that year. The exact nature of this year's event is hotly debated.

observed in the contemporary cemetery at Adaima, only 30 km to the north. In the early 20th century, evidence of ritual dismemberment was found within the Predynastic cemetery at Gerzeh, and similar examples of dismemberment were observed at Naqada by Petrie in 1886. The contents of one tomb (T5) even led the archaeologist to ignore Victorian propriety and conclude acts of cannibalism!

Clearly, mutilation played some part in the mortuary behavior of the Predynastic Egyptians, but the size of this role is uncertain. The relatively low percentages of affected skeletons within the various cemeteries suggest that only certain individuals were subjected to this ritual, for whatever reason. Was dismemberment and defleshing one of the ways to prevent the corruption of the body — an alternative to costly resins and wrappings? Were they special members of society? Or were they social deviants who deserved nothing more than to (non-)exist in the afterlife defleshed and dismembered? Unfortunately, the truths behind these events may be forever lost, flayed by sand and time. Yet, as we continue our work at Hierakonpolis, it is our hope that these mysteries will soon be fleshed out. 🐛

Head Cases

Case 1: Male, 21–30 years. Approximately 127 cut marks on the skull; 57 on the left parietal. The incisions begin 38.25mm above the orbits and are generally arranged along a coronal plane, left to right, proceeding back across the superior surface of the skull.

Case 2: Adult with 107 incisions. The cuts are most numerous on the frontal (52 total), run along the coronal plane and become shallow and less frequent posteriorly. The incisions begin 62.95mm above the orbits on the frontal bone.

Case 3: Young adult, 18–21 years. 193 separate cut marks; 79 on the frontal bone, beginning just 22.2mm above the orbits. Like the others, the cuts on the frontal bone are the most severe.

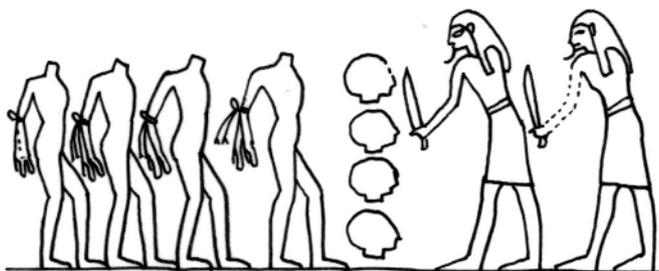
Case 4: Young adult with 53 cut marks; 28 on the frontal bone. The right parietal exhibits only six cut marks, but nearly half of the bone is missing. Only example to show cut marks on the occipital bone (lower back of the head).

Dealing with Decapitation Diachronically

— by Nicholas S. Picardo, University of Pennsylvania

Predynastic evidence of decapitation at Hierakonpolis is notable not just for its early date, but also because the practices apparently did not persist past the emergence of a unified Egyptian state. Yet, the theme of decapitation is evident in Egyptian funerary religion throughout pharaonic times. In contrast to the Predynastic bioarchaeological record, later references are almost exclusively textual and pictorial, addressing fears not of real-world violence, but of anticipated, post-mortem injuries that could befall the dead en route to the afterlife. On earth, only non-Egyptian enemies in times of warfare deserved beheading. Funerary literature indicates that decapitation *after* death was a punishment for enemies of the gods, but deceased Egyptians judged unfit to enter into the company of the gods effectively became enemies and could be treated accordingly.

For an ancient Egyptian, decapitation was a fate worse than death. Mortuary texts, meant to assist in a successful passage into the afterlife, are unambiguously negative: the loss of one's head brought extremely dire consequences. The result was a 'second death' that terminated afterlife prospects and condemned the deceased to oblivion. Efforts to avoid this fate



Decapitated enemies in the underworld. Scene from the Second Division of the *Book of Caverns*.

prompted various requests, for example (*Coffin Text 229*): "May you rescue me from the fishers/fowlers of Osiris who cut off heads, who sever necks, and who carry off *bas* and *akhs* (i.e., spirits) to the slaughterhouse of the eaters of raw flesh. The head will not be cut off; the neck will not be severed; my name will not be unknown among the blessed spirits." To similar ends, the goddess Nephthys reassures the deceased in the *Book of the Dead* (151): "Your head cannot be taken from you forever."

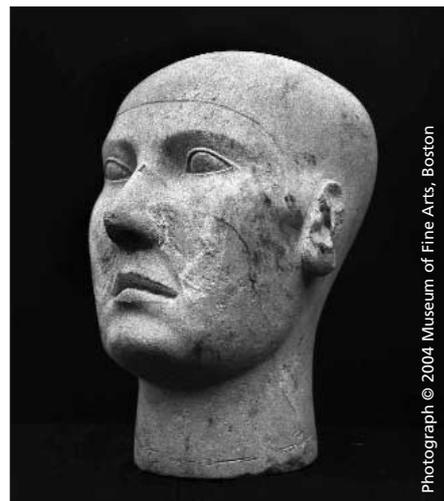
The earliest written concerns about keeping one's head appear in the royal Pyramid Texts of the late Old Kingdom. Inscriptions in contemporary private tombs lack such references entirely, but apprehensions about decapitation may have been expressed in a much different way even earlier in the so-called 'Reserve Heads'.

Just over thirty Reserve Heads are known, most sculpted of limestone and shaped to depict individual human heads. Their use was limited both chronologically and geographically. Most date to the reigns of Khufu and Khafre of the Fourth Dynasty, and are a distinctly Memphite phenomenon, with the majority of the examples coming from Giza. Reserve Heads were set in tombs, apparently as a prerogative of very high status private individuals. All come from disturbed contexts, but find spots suggest strongly that they were originally situated at the base of the tomb shaft or just inside the entrance to the burial chamber (or perhaps both).

Reserve Heads are emblematic of the great artistic achievements of Old Kingdom statuary. However, they also present a baffling paradox. Most examples exhibit minimally one, and often several types of deliberate damage. Almost one third have incised lines circling the neck just above the base, resembling throat slashes; half have lines or grooves running from the crown of the skull down the back to the nape of the neck, reminiscent of head wounds. About half also have hacked or entirely omitted ears.

Interpretations of the Reserve Heads vary considerably. Early assessments defined them as replacements (i.e., reserves)

*Reserve heads: front view: C-5359-New Series; photographer: Mohammed Shadduf, Nov. 23, 1913. Rear view: D-65-New Series; photographer: Mohammedani Ibrahim, Nov. 20, 1915. Harvard University, Boston Museum of Fine Arts Expedition.



Limestone Reserve Head from Giza 4440 A (13-11-90=MFA.14718).*



Rear view, limestone Reserve Head from Giza 4940 (15-1-8=MFA 21.329).*

for the physical head should it be damaged or lost. Subsequent treatments have focused more on their damaged condition, seeking to reconcile the contradiction that these superbly crafted and personalized statues were apparently intentionally marred. The Heads have been described as sculptors' models for shaping casts (the removal causing the damage), while another theory sees the cuts as sculptors' guidelines that would have been covered by plaster and paint. Yet, a recent theory proposed by Roland Tefnin (*Art et Magie au temps des Pyramides: L'énigme des Têtes Dites "de Remplacement"*, Monumenta Aegyptiaca 5, Bruxelles, 1991) suggests that the damage reflects a conscious process of ritual mutilation. Although intriguing, whether a connection can be made between this proposed ritual and Predynastic practices remains to be determined.

Ritual mutilation was clearly being practiced by the late Fifth Dynasty, but this time, the victims were hieroglyphs inscribed in the tomb's burial chambers. The act usually involved cutting out a portion of the sign during carving, though some later examples rendered knives to stab the glyph. This 'killing' was undertaken because, in addition to being written characters, hieroglyphs were also images of actual, real-world entities. In the ritually charged arena of the burial chamber, some hieroglyphs — usually animal and human forms — were considered dangerous, since they could potentially reanimate along with the deceased, and cause harm. The symbolic but effective killing of an image as a preemptive measure is a common procedure in Egyptian magic and religion. It is important to note, though, that mutilation did not hamper the glyph's main purpose; they could (and can) still be read as meaningful writing. However, something simply had to be done to cancel the harmful potency evoked by their shapes.

If the Reserve Heads were subjected to the same process of ritual mutilation, then some perceived threat was evidently being addressed: a threat perhaps prompted by their appearance. Reserve Heads captured the likeness of the tomb occupant, and although it seems most unlikely that such a portrait would be regarded as dangerous to its owner, the source of danger may have rested in the manner of depiction. Formally speaking, the Reserve Heads are disembodied heads, a form almost completely unparalleled in any period of Egyptian art.

As detached heads they likely carried connotations of the dreaded decapitated condition. Later sources suggest that this concept would be anathema in the tomb in general, much less near the body in the burial chamber.

Serving a primary purpose as funerary statues, these secondary implications simply had to be addressed. So, whereas hieroglyphs were usually cut or stabbed, the three-dimensional Heads were altered as appropriate with neck slashes, head wounds and hacked ears. Much like hieroglyphs, they appear never to have been defaced beyond recognition, so they were still viable sculptures.

Why, then, did the Egyptians allow such statuary in the tomb in the first place? It is possible that the earliest conception of this statue type did not factor in the problems that might arise and that their importance, as deduced from their placement in the tomb shaft, superseded any initial qualms. Within the ritualized space of the tomb, the shaft was a transitional zone, sandwiched between the semi-public above-ground portion and the sealed, sacred environment of the burial chamber. The later association of a person's *ba* with the tomb shaft confirms its transitional quality. In the Egyptian belief system, the *ba* was a spiritual component of a person's being, actualized upon death and proper burial. Able to regularly cross the divide between the realms of the living and the dead, the *ba* returned to the tomb and corpse at night. It was envisioned as a human-headed bird, so conceptually the most integral human component was the head. The loss of one's head could potentially prevent the *ba* from taking complete, viable form, so having a spare, or reserve head would have been an important safety feature.

As *ba*-statues of a sort, the Reserve Heads served the ideal of promoting the deceased to the afterlife, but could also invoke the opposing outcome of utter destruction. Is this a contradiction, or were the two ideas connected? Perhaps the retaliation against fears of decapitation

transformed sculptures of detached heads into significant protective devices. Physically the Heads preserve enough to be 'reserves', while at the same time their ritual mutilations magically worked against one of the worst possible fates when it counted the most. Would a preemptive strike have worked the same way in the Predynastic? 



Intact hieroglyphs and their mutilated counterparts.

Searching for Temple Walls

— by David Sharp, Institute of Archaeology, University College London

As reported in *Nekhen News* 15, the recently acquired high-resolution satellite imagery of Hierakonpolis revealed some intriguing features not previously noticed from the ground. Most prominent were the two parallel lines of plant growth framing the temple complex at HK29A. These features are substantial: one line is about 150m long and 5m wide; the other is about 40m long and 3m wide. They are, however, fairly recent additions to the landscape and were not present in 1985 when the first excavations at the cult complex took place.

What could these lines be? The water table below the site (and indeed all of Egypt) has slowly risen since the building of the Aswan High Dam, and the hydroelectric barrages at Esna have also raised the water level in the Nile in the southern regions. It seemed plausible that these growth lines reflect a 'wicking up' of ground water by a material different from the surrounding silts. Could this material be mud-brick from the foundations of a temple enclosure wall?

To learn more about these curious features, a resistivity survey was carried out, using equipment kindly lent by the Institute of Archaeology, UCL. Resistivity is a geophysical technique that measures the resistance of the ground to an electrical current, which is sent and measured through a set of metal probes. Different types of buried features offer differing amounts of resistance to the current, and by plotting the locations of various readings, hidden features can be detected. This technique is particularly suited to features with water content that is distinct from the surrounding soil matrix. As this seemed to be the case with the HK29A linear features, the technique seemed ideal.

A test of the equipment in the garden of Hoffman House brought Chef Ali running to protect his onion patch from electrocution. Nevertheless, the test proved successful and a bumper crop was harvested. Now confident of the methods, a 20m test traverse was performed, running SW-NE across the feature at a point of particularly dense vegetation to the

north of the temple. The moist soil under the scrub was clearly discerned from the apparatus' readings. The next day, a 10m square was surveyed directly in front of the temple. This provided consistently low resistivity readings, confirming the presence of moisture to a depth of around 1.5m, which extended out from the growth line by about 1m on either side. Beyond this, the readings dramatically changed to high values, corresponding to low water content.

These sharply defined boundaries were very exciting, but resistivity, like all remote sensing techniques, only detects differences; it cannot tell you what is causing them. For this only seeing is believing, and so a 10 x 2m area within the resistivity survey area was cleared of vegetation (and yummy insects, much to the dismay of the local birdlife, which scrutinized us for several hours). Then, the topsoil was removed, revealing a raised hump of silt running along the center of the scrub line. No signs of mud-brick or any man-made structure were observed. We excavated some more, but our hearts fell when we saw the fissure running along its length — our wall was not a wall after all, but a crack in the geology, which allowed water to rise to the surface.

Although the results were disappointing, the recent appearance of these cracks should not be ignored. They demonstrate the fragility of a site that has been dry for thousands of years. Why and how these fissures have formed is now the next mystery we must seek to solve. □



When a wall is not a wall: excavations revealed only a geological fissure beneath the vegetation line.

Hierakonpolis on TV

Hierakonpolis features in two Egypt-based series coming your way soon. See us at work in the first episode of *The Egypt Detectives*, as the late Egyptologist Dominic Montserrat and archaeologist Miriam Cooke go in search of the First Egyptians. Although the televised excavations are actually in the C-Group cemetery (never mind!), we had the opportunity to show off some of our remarkable Predynastic finds and make a quick visit to the rarely filmed town-mound of Nekhen in the cultivation to view the remains of the important sondage below the water table made by Michael Hoffman in 1984. This show will be broadcast on the National Geographic Channel in the USA and in November on Channel 5 in the UK.



Scheduled for spring 2005, a National Geographic series called *Tales of the Tomb* gets up close and personal with some of our more disturbing finds: the scalped and decapitated folks from HK43. The episode called 'Blood Sacrifice' explores the evidence for human sacrifice in Egypt at a variety of sites. Not for the squeamish, but it should be very interesting. Be sure to tune in.

Highlights of HK43



Marley (B387) emerging.



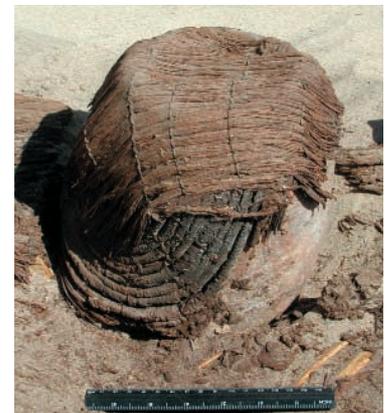
Alabaster drop pendant: surface find.



Remarkable preservation in Burial 432.



Marley's pots.



The basket-lid still in place (B387).



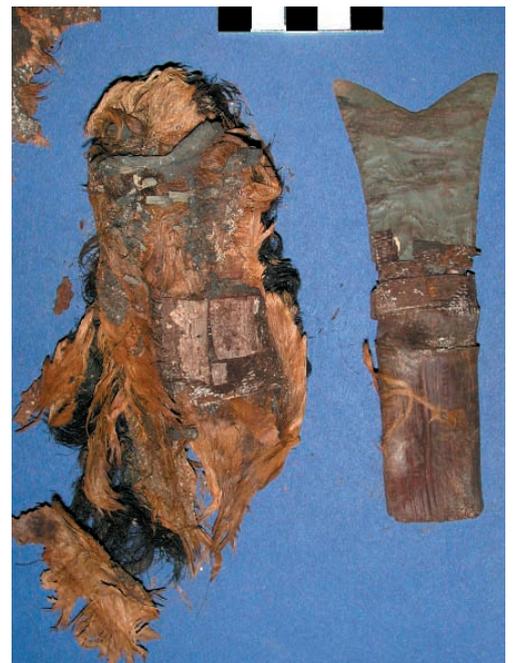
Double burial of two young women.



Bag of malachite, B412.



Ouch! Scalped head.



Remnants of the sheath appeared when we lifted the knife from its hide wrapper (B412).



The Kilns



Platform kilns and workshop at HKIIC, Square B4.



Tools of the trade: worked sherd shaping tools.



Kiln structure of a completely different type in Square A6.

C-Group Cemetery



The shell pendant emerging.



Tumulus and offering platform of Tomb 17.



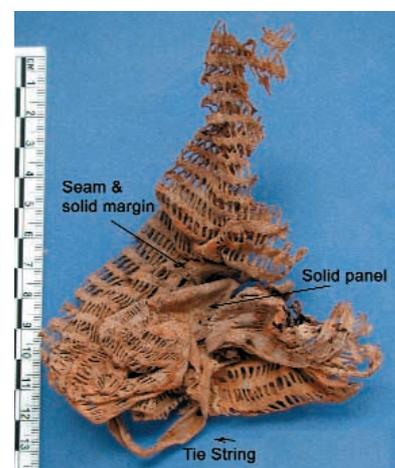
Fragment of torque of polished horn, Tomb 22.



Impressions of fine cut-work leather (inset) on her chin suggest the lady in Tomb 9 was wearing a hairnet.



Tattoos from the abdomen of the tattooed lady in Tomb 9.

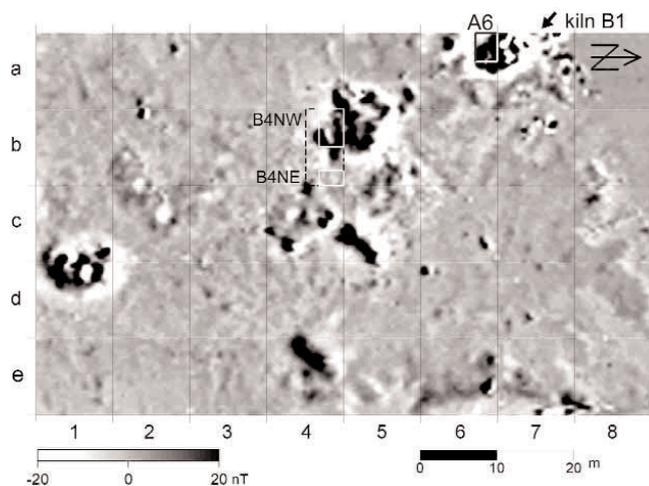


Anatomy of a loincloth from Tomb 9.

Predynastic Kilns at HK1 1C: One Side of the Story

— by Renée Friedman

The most common find at most Egyptian sites is pottery, but for sheer quantity, it is hard to match the sea of potsherds that covers the settlement areas of Hierakonpolis. With so much of the stuff around, it is little wonder that we are interested to know how it was made and what role pottery production played in the Predynastic economy. Although several kilns have been identified and excavated throughout the site, many questions still remain, and it was hoped that fresh excavations would help to answer them. We knew exactly where to look: Locality HK11C, a large area of mostly undisturbed remains along the south side of the Wadi Abu Sufian. Excavations here in 1979 had already revealed one kiln (B1), while a magnetometer survey of the locality conducted by Tomasz Herbich in 1999 detected a number of high amplitude anomalies suggestive of others, not visible from the surface (*Nekhen News* 11: 17). Although we had little doubt that the magnetometer had detected kilns, it was important to verify this, and two areas over high intensity anomalies were chosen for ‘ground-truthing’ by excavation.



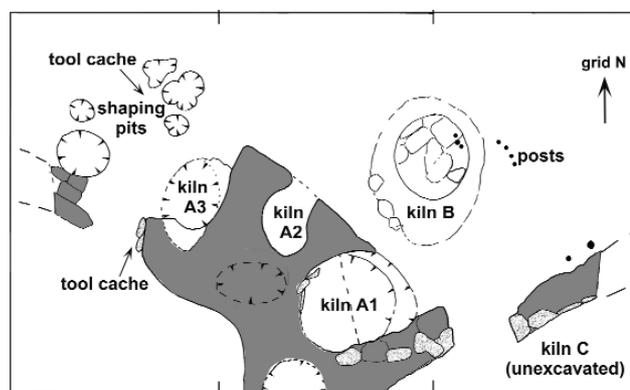
HK11C magnetic anomalies and excavation areas.

The northern half of Square B4 was chosen for excavation to test two different magnetic readings: part of a large, roughly circular high amplitude anomaly in the west; and one of a rectangular cluster in the east. The large quantities of pottery collected from just the first 10cm rapidly forced us to restrict the excavated area to two smaller units. The eastern unit was excavated to sterile soil, revealing more than 1.2m of stratified debris and evidence for at least two distinct phases of occupation. The earliest occupation, dating to late Naqada I, included postholes and a large fireplace. The later occupation was associated with the industrial activities that cover the locality and have radically changed its appearance. It soon became clear to us that the current topography of the

area is entirely man-made, and that the slopes and hills are actually mounds of occupation debris containing a daunting amount of material waiting to be discovered.

In the western unit (B4NW) excavations quickly revealed an array of pit kilns, which had not been dug into the ground as pits, but instead were built into a man-made platform of burnt mud c. 30cm high. Three roughly horse-shoe shaped pits about 1m in diameter occur along the edge of the platform, each lined with potsherds and burnt earth. From the debris and ash found around and within these kilns, it appears that the pots were placed at the back of the pit while the fire was prepared at the open front to catch the prevailing northerly winds. The airflow was controlled by temporary walls of debris or matting, as suggested by the wooden posts that run in front of the mouth of one kiln (A). When the fire had reached the correct level, the coals were heaped up into the kiln and the structure was closed with mud, potsherds and general debris to retain the heat. Large quantities of highly fired sherds with burnt mud adhering to them are the remnants of this kiln closure, which was simply broken away when the firing was complete.

For subsequent firings, the pits were relined with potsherds and mud until they filled up. No attempt was made to clean out the pits or to remove debris from the immediate area, and as a result the ground level rose quickly. Soon the potters found it necessary to build new kilns at higher levels to maintain access to the wind. Our excavations revealed at least three levels of kilns: an earlier one at a lower level (kiln B); the platform kiln we excavated (kiln A); and a portion of a later one at a higher level (kiln C), not yet excavated. Judging from the vast amount of potsherds, the product of this kiln was straw-tempered jars dating to the early Naqada II period. On the south side was the workshop for making them, where we uncovered several holes for holding the pots during forming. Serendipitous discoveries here were two caches of potsherd tools used when shaping the pots. Found more or less just as they have been left, these



Plan of excavated portion of Square B4NW.



Detail of Kiln A1.

tools allow us to step into the shoes (sandals?) of the potter in ways never before possible (see below).

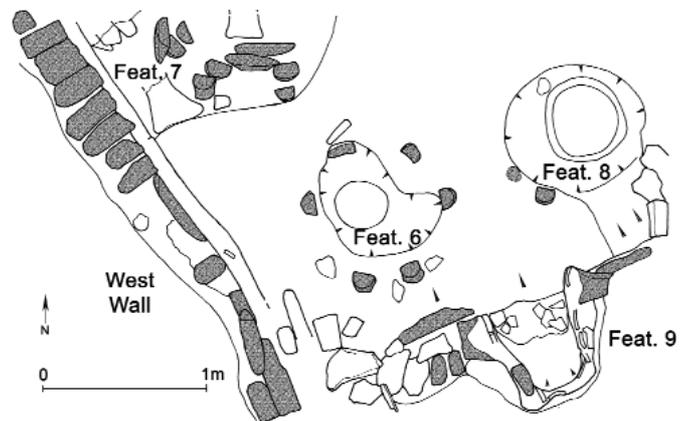
The remains of kilns both below and above the kiln platform suggest that pottery production was a low intensity seasonal activity, and that these simple and easy to make kilns were rebuilt frequently — perhaps on an annual basis. Evidence for cattle herding in the immediate vicinity suggests that potting was something done on the side, perhaps during the flood season, when the inundation forced the herds and people away from the cultivated plain. But, as they say, small holes make for simple answers. The situation was actually far more dynamic and complex, as excavations in Square A6 were soon to prove.

Kilns in Square A6: The Other Side of the Story

— by Izumi H Takamiya, Kinki University, and Masahiro Baba, Waseda University, Japan

The unit excavated in Square A6 was selected for a number of reasons: it was located about 1m south of the area explored in 1979 by Harlan, in which he uncovered the remnants of a shallow pit-updraught kiln (B1), now almost completely destroyed; it was above a strong magnetometer anomaly; and portions of an eroding kiln structure were already visible on the surface. Only a small area was explored, but it revealed a kiln technology distinct from that found in Square B4 and pottery production of an entirely different magnitude.

At the lowest level of the 2x3m excavation we discovered three circular ‘kiln features’ composed of shallow circular depressions in the natural soil, about 1m in diameter, which had been burnt hard to a bright red (features 6–8). Around these depressions, several fire-bars (rods of clay) were found *in situ* in an upright position. These bars perhaps supported the pots above the flames, but their exact function is still debated. The fire-bars were strongly burnt to a purple color, often with a pale-green vitrified skin on their surfaces, evidence of repeated exposure to high temperatures. The large amount of white ash and charcoal surrounding each depression, residue of fuel cleared out of the firing chamber, also indicates that the features were maintained and used repeatedly.



Plan of kiln structure in Square A6.

Walls made of kiln debris (fire-bars, clay slabs and potsherds cemented together with mud) along the west and south define a rectilinear semi-subterranean chamber that encompassed these kilns and perhaps others. The eastern and northern walls have not yet been revealed, but no doubt somewhere along the north was an opening for access to the prevailing wind. On the south, a U-shaped structure constructed of deliberately arranged potsherds and burnt mud (Feature 9) was visible on the surface before excavation. It may be a vent for the smoke, or entirely unrelated to the kiln. It remains one of the many questions posed by the excavations.

In addition to the fragments of fire-bars found *in situ* around each depression, further pieces were found throughout the excavations. They were hand-fashioned of Nile silt mixed with coarse straw. Only one complete example was found: a simple bar with rounded ends, D-shaped in cross-section, approximately 36cm long and 14cm wide; however, many others have a triangular wedge-shaped end 23–33cm wide. The length of the best-preserved example of this type



Kiln structure at HK11C Square A6.

exceeded 50cm. How these bars were used is a major question, and we have somewhat contradictory evidence.

Several fragments of large flat clay slabs were also found, either in the debris or reused in the surrounding kiln wall. The largest fragment was over 70cm long, 12cm thick and rectangular in shape with rounded edges. It seems logical to suggest that these slabs were originally supported by the fire-bars to create a flat surface on which the pots were placed during firing, keeping them above and away from the fuel. On the other hand, a large number of potsherds coated on the exterior with burnt mud suggests an alternative type of firing installation.

In the best-preserved examples, a consistent composition of mud, potsherds, rope and then another layer of mud was observed. The mud on the 'exterior' of this sandwich may have been part of the outer surface of a kiln oven, because its rough surface is burnt bright red. The mud on the 'interior' is black, suggesting incomplete firing or insufficient access to oxygen.



Clay plate.

The surface of this black mud is flat or slightly concave and it may be inferred that the mud and sherds were attached to a larger object, such as a big jar, which formed an inner wall of the kiln, though no fragments of such jars were clearly identified in the kiln debris. Impressions of rope, about 5mm in diameter, were consistently observed at approximately 5cm intervals on the exterior surface of the well-preserved mud-coated sherds, suggesting that rope bound the potsherds to keep them in position. Thus, the original (super)structure above or between the fire-bars may have been constructed using a large jar, or fragments thereof, coated with mud and potsherds, all bound together by rope. How, or even if, this construction worked with the clay slabs is unclear. More research is needed before we can fully understand just how these kilns operated.

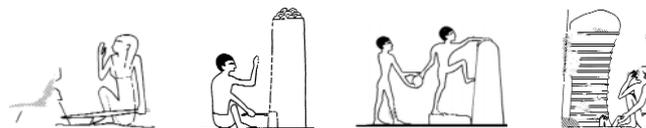
Despite our many queries, the reddish color of the floor, wall surfaces and standing fire-bars clearly indicates repeated burning at high temperature. Thus, unlike the platform kilns in Square B4, this extensive installation with its specialized features was used and maintained for a long period of time. The investment suggests that pottery production may have been a full time occupation, with pottery produced on an industrial scale. The product of this kiln appears to be straw-tempered pottery of the mid Naqada II period, but some red polished wares may also have been fired here, as well as other products requiring heat, for example beer, grain parching or even faience. The middle of the Naqada II period

(c. 3500 BC) is known to be a time of increased social complexity, growing industrial production, and developing specialization. The discovery of the two types of kiln at HK11C, one that incorporates a short-term, simple technology in Square B4 and another in Square A6



Fire-bars.

that is more technologically advanced with evidence of long-term investment and maintenance, clearly illustrates the changes taking place during this formative time and provides valuable new, if still somewhat puzzling, information on industrial production in the Predynastic period.

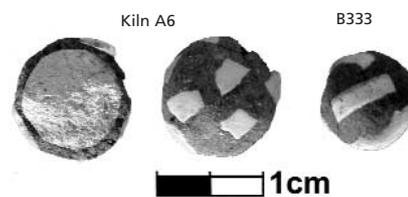


Pottery firing in ancient Egypt.

More Mysteries...

After the kilns fell into disuse, the area was used for the disposal of general debris, and as archaeologist, we are always fascinated by what gets put out with the trash.

The last thing we expected to find was part of a little gray ball with white inlays, almost identical to the example found last season within the amazing basket of delights in Burial 333 at HK43 (*Nekhen News* 15). Unfortunately, having two of them gets us no closer to understanding what they are. When we found the ball in the basket, we assumed it was made entirely of gray clay into which fragments of shell (?) were decoratively set. The ball from kiln area A6 was broken in half, enabling us to see the interior and, frankly, we are more confused than before! More went into the creation of these little balls than it first appeared. At the core is a sphere of white, slightly chalky material surrounded by a gray gritty paste with strong adhering properties; there is no chipping, and the carefully applied white inlays have not come loose. So, what are they and what are they made of?



The mysterious clay balls.

At this point, we are willing to entertain any suggestions, but we are confident that further discoveries will hold the answer. ☹

Close Encounter with HK Potters

— by Masahiro Baba, Waseda University

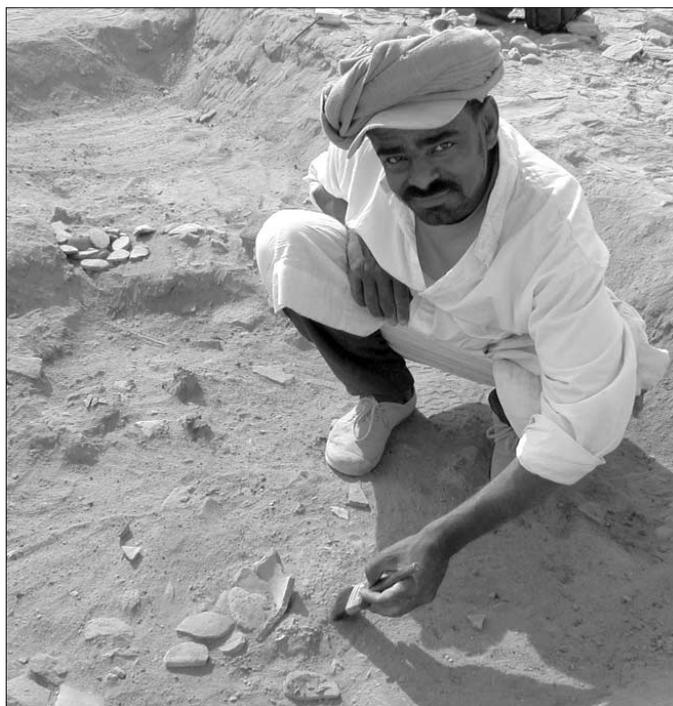
The discovery of the kilns at HK11C has given us new insights into pottery making in the Predynastic period. However, a much more personal encounter with the potters of Ancient Hierakonpolis is provided by the tools of the trade which the excavations revealed. The trench opened in Square B4 yielded over 500 tools in the form of potsherds that had been worked into specific shapes. In addition, two tool caches were found *in situ* in the work area beside the kiln platform. One was a concentration of 13 worked sherds and four smoothed stones that had been stowed within a hollow in a wall, and the other was a jar base into which had been stuffed nine worked sherds and a bifacial flint knife.

Almost all of the examples were made from sherds of straw-tempered Nile silt pottery, modified to create tools of various shapes and sizes. The most common type, making up 56% of the total amount, is oval with a mean size of 7.2 x 5.7 x 0.9 cm, which fits quite comfortably in the hand. Worked sherds are common on settlement sites and were created for various purposes: spindle whorls, trowels and carding tools. The oval shape common to the kilns can be identified as a pottery-making tool based on morphological analogy to a modern potter's kit as well as the circumstances of their discovery.

The oval tools were used for smoothing and scraping the surfaces of a pot soon after shaping. In general, when a pot is handmade using the coil method (whereby coils or rolls of clay are stacked one above the other and pinched together to make the vessel walls), scraping is required to smooth the joins and later to make the walls uniform. This is usually done when the clay is half-dried, but the horizontal traces of smoothing on the interior surfaces of pottery from HK11C show these treatments were undertaken while the clay was still wet. The strong properties of the straw-tempered clay probably made it possible for scraping and smoothing to take place simultaneously soon after the primary formation of the vessel.

Some of the worked sherds still have rough edges, while others have become smoothed, indicating extensive usage. Detailed

observation of the tools can tell us how they were made and used. To create such a tool, the potter simply chipped a potsherd to the desired size, leaving the edges uneven to become smoothed during use. Clearly the potters did not put a great

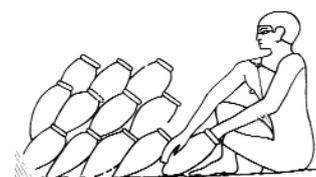


Stashed in a jar, Fathi uncovers another cache of sherd tools.

deal of effort into modifying the working edges. These tools were made in a very expedient manner and were probably abandoned easily. Nevertheless, the two caches suggest that once they had attained just the right shape, some effort was made to retain them.

The wear on the edges also indicates how the tool was used, and what that optimal shape was. Fundamental components included a rounded, straight, and pointed or angular face, preferably (but not necessarily) all on the same tool. The rounded face was probably used for scraping vertically in order to make an uneven surface uniform and remove the excess of clay; the straight face was for smoothing horizontally during the final treatment; and the pointed or angular face was for producing and trimming the edges and corners, such as those at the interior base or around the rim.

The existence of sherd tools has been long known, but tools specifically for pottery making have not been researched in as much detail in Egypt as they have in other parts of the Near East. The tools from Square B4 are very important artifacts for understanding the technique and process of pottery manufacture in Predynastic Egypt. In the coming season we hope to be able to demonstrate with experiments how both the tools and the kilns did their job, and have yet more close encounters with the potters of Hierakonpolis! 🏺



Cache of sherd tools by wall.

The Modern Potters of Hierakonpolis

— by Gillian Pyke

The kilns at HK11C are not the only ones at Hierakonpolis. Others include the famous burnt house and workshop of the potter at HK29 and the production sites for fine polished wares situated in the wadi cliffs above the elite cemetery at HK6. Although they all have pottery production in common, each one is different with regard to organization, complexity and scope. As the work progressed at HK11C, we became increasingly interested in the layout and components of such a manufacturing site, and with so many archaeologists present with an interest in pottery, it wasn't long before a special fact-finding mission to a local pottery workshop was organized.

This workshop is located beside the main west bank road, essentially across the street from the Dynastic town of Nekhen and the local village. We pass it every time we leave the site, and one afternoon, Sidain, our chief guardian, arranged for us to pay a visit. It is run by two brothers who followed their father in the trade, and their main product is the *zir*, a large biconical vessel used for storing and cooling water. Their workshop is located next to their house and consists of four areas dedicated to the successive stages of the production process. The first of these is a clay pit surrounded by heaps of materials such as chaff and ash, which are added to the clay to make it manageable. Next to the pit is a bowl containing watered down clay without inclusions, which is used to coat (slip) the exterior of the vessels. Within easy reach is the small structure in which the potter sits at his kick wheel making between 15 and 20 pots per day. The rear wall and wheel emplacement of this structure are made of mud and brick, the



The kiln.

roof of palm logs and palm leaves; in an archaeological setting, this would be hard to identify. This roof serves to protect the potter from the fierce sun, while it also prevents the clay from drying out too quickly. The potter's wheel is in two parts, and is held in place by a crossbeam embedded in the back wall. The lower part of the wheel

consists of a large wooden disc, which drives the wheel when operated by the potter's feet. It is connected to the upper part of the wheel by a metal spindle that runs through the crossbeam. The upper part of the wheel is composed of a mud cylinder with a hollow top, into which the clay lump that becomes the pointed base of the *zir* is placed and worked into shape. A clay disc is placed on top of this cylinder if a flat-based vessel is being made.

The most impressive structure in the compound is the three-story kiln, approximately 1.5m square. The lower part of the kiln, with reinforced corners, is for the fire, which is fed through a stoke-hole at the base of the windward side. Palm leaves and sugar cane are the main fuel. The slightly smaller middle part of the kiln, an open space in which the pots are stacked, is accessed via a doorway that is bricked up before each firing. Separating these two sections is a brick floor pierced with many holes to allow the heat to reach the pots. The smaller upper story, partly composed of sherds, acts as a smoke stack, helping to draw the heat up through the kiln. The kiln is about 50 years old, and maintenance includes an occasional coating of mud plaster to seal the exterior. It was interesting to see that the bricks on the outside of the kiln were still unfired, even after this long period, as the heat never penetrates through the thick walls.

The potters told us that they gather their clay from a source half way between the river and the desert. The raw material is left to soak in the clay pit and then paddled by foot, a process that appears to have remained much the same since ancient times. A mixture of 20% ash, 10% chaff and 20% dung (which must be from an herbivore) is added to the clay. These inclusions, known as filler to potters and temper to archaeologists, aid the plasticity of the clay. They are all available in the immediate area: the ash from the kiln, the chaff from their fields, and the dung from their cows and donkeys.



Making a *zir*.



Carrying the *zir* to the drying area.

produce two vessels, a *zir* and a milk bowl. The lower half of the *zir* is made first as a solid conical shape, with string around its widest circumference for support. The next day, the potter draws up the sides from the clay mass and hollows out the vessel. The rim is added last as a separate coil. The finished vessel is set into the ground behind the potter's workshop to dry in the sun for 14 days. The string is removed after two days as the clay starts to dry out and shrink. Once the *zirs* are dry, they are packed into the kiln, which holds about 60 vessels per firing. In summer, they fire twice a week but in winter only once, as the pots dry more slowly in cooler temperatures. The potter, after first denying any loss, later admitted that he expected to lose perhaps one or two vessels per firing.

The milk bowl, a simple shape with a flat base and flaring sides, was made in a single episode, on a flat disc atop the



A row of *zirs*, drying.

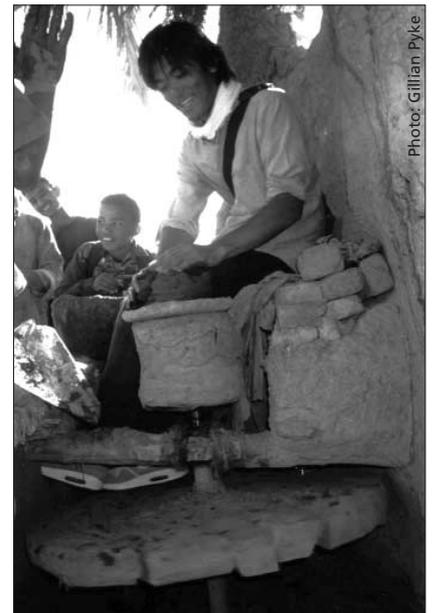
The pottery workshop now mainly produces *zirs*. These water jars can often be seen in stands outside houses or by the side of the road where they supply public drinking water, part of a long Muslim tradition of providing water to the thirsty. In the past the potters made a wide range of pots for everyday use, but today the wide variety of plastic and metal vessels and cheap imports has replaced pottery vessels as household containers and tableware.

During our visit to the workshop, we watched the potter

potter's wheel. The potter drew this vessel from a single lump of clay. As with the *zir*, string was used to support the walls, and was left in place for several days during drying. Traditionally, the bowl is finished with the addition of a wavy line that the potter adds using his fingertips while the wheel is turning. The potters told us that this type of vessel would be left to dry in the sun for 25 days before firing.

The milk bowl was made in a matter of a few minutes. Noticing our interest, the potter invited one of us to make a similar vessel. Team member Masahiro Baba, who studies ceramic firing technology, stepped up

only to find that making a vessel using a slow kick wheel was much harder than it looked. He found it very difficult to maintain the speed of the wheel and shape the pot at the same time, and gave up with grace when his pot collapsed. Despite this failure, the potters were impressed by the attempt, and conceded that learning



Masahiro tries his luck!

to combine both hand and foot dexterity at the same time took many years of practice. Everyone was entertained.

Our visit completed, of course we couldn't leave empty handed. We piled into the pickup truck for our short journey back to the dig house, the proud owners of a new *zir* and many fine memories of our visit. 🍵

All fired up to learn more about the Hierakonpolis Expedition?
 Log on for new updates from December 2004.
www.archaeology.org/interactive/hierakonpolis

Seeking the C-Group: Excavations in the Nubian Cemetery, 2003

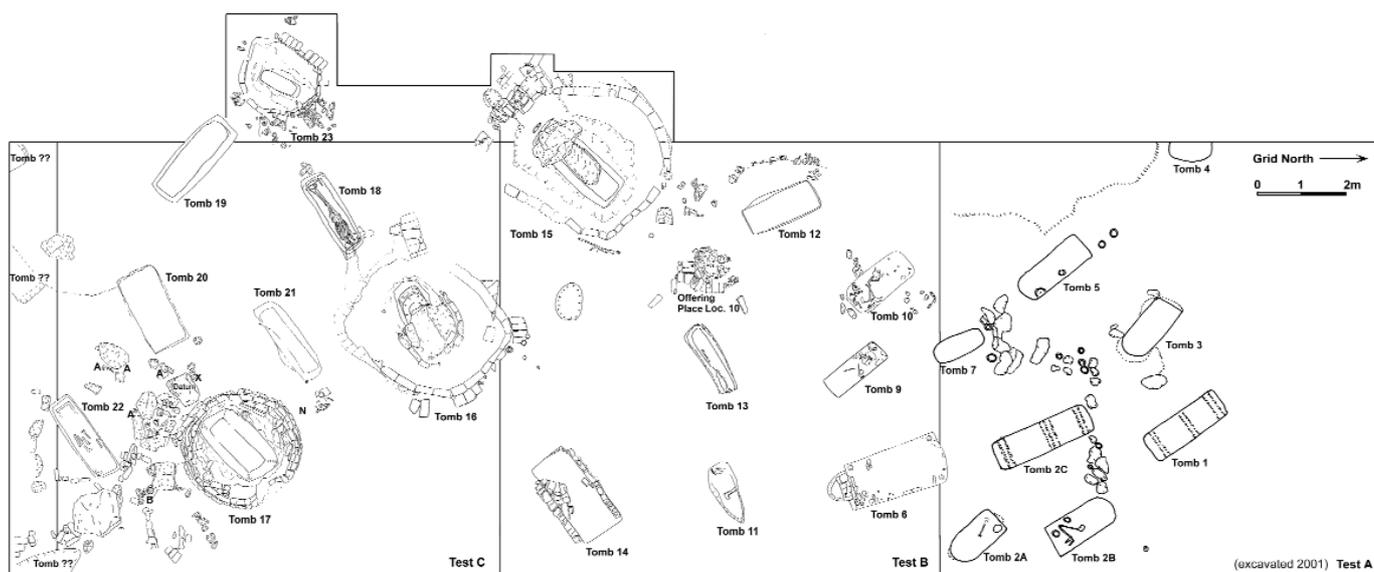
— by Renée Friedman

In 2001, we uncovered an important cemetery (HK27C) of the Nubian C-Group, a culture that flourished between the First and Second cataracts of the Nile (an area now covered by the waters of Lake Nasser), in late Old Kingdom to early New Kingdom times. The cemetery at HK27C is significant as it provides the northernmost archaeological evidence for the C-Group ever found. The brief excavation of one square (Test A) in 2001 (*Nekhen News* 13:22-27) revealed seven graves of Nubian tradition, which could be dated by pottery and a lovely scarab to the late Middle Kingdom. These discoveries left us anxious to find out more about these people, and what they were doing at Hierakonpolis. With a grant from the Michela Schiff Giorgini Foundation we were able to resume exploration in November 2003, and expected to make rapid progress; however, as those of you who followed our progress at www.archaeology.org know, the work quickly became much more complex and far more interesting than envisioned. A further 16 graves were uncovered, all of which had features confirming the Nubian identity of the owners, such as distinctive grave architecture, pottery, jewellery, some remarkable leather garments, and even tattoos!

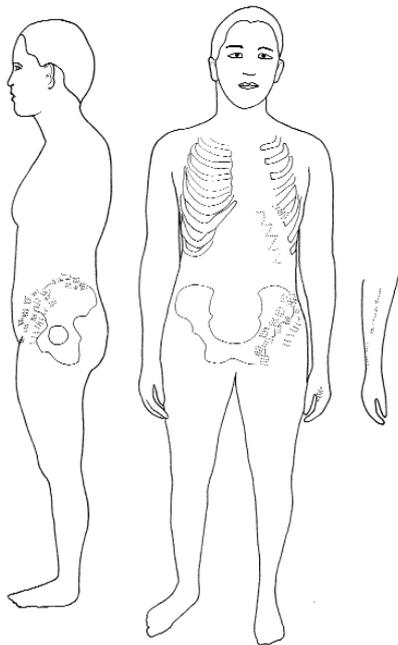


Salah excavating Tomb 9.

Although all of the graves had been plundered, some quite seriously, organic preservation in a select few was so fine that even the stubble on the chin of the older male in Tomb 18 could be detected, in addition to the nasty abscess in his upper jaw that may have killed him. In Tomb 9, the preservation of the skin of an older female (35–50 years of age) was such that we were able to reconstruct the pattern of her elaborate tattoos. These included a diamond of short dashed lines on her left hand and a pattern of dots and dashes running down the back of her left arm. Skin adhering to the ribs preserved a dotted zigzag line along the front of the torso, with a more elaborate lattice pattern of dotted squares running down along the abdomen, up over the hip and onto her back. The skin on the right side of the body was not well preserved, and we can only assume that the tattoos were symmetrical as seen on contemporary Egyptian and Nubian figurines; however, the evidence from the tattooed bodies of the early Middle Kingdom priestess Amunet and the dancing girls found in Egypt (but considered to have Nubian affiliations) indicates that this was not always strictly the case. The practice of tattooing is considered typical of Nubian cultures, and it is believed the Egyptians adopted the



Excavated area of the C-Group Cemetery, HK27C.



Distribution of tattoos on the lady in Tomb 9.

beneath a rock in the corner of the grave. It looked so incredibly fragile, yet turned out to be sufficiently supple for conservator Franca Cole to examine the construction of the garment from which it originated. Composed of a waistband decorated with very fine slashes, a solid leather tie string, and a patchwork of pre-cut panels with a specific number of cut-out rectangles per row, it appears to be a garment requiring gathers and folds — perhaps a skirt.



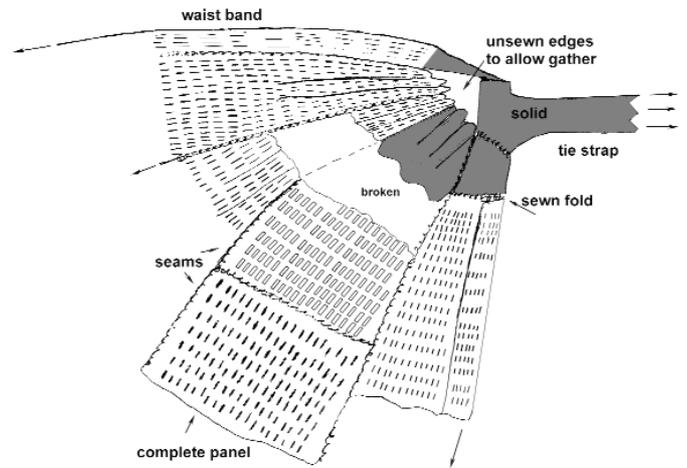
Did she look like this in her youth? Ostracon of a tattooed dancer.

again a fashion which the Egyptians adopted from Nubia. Although at first it appears to be an article of clothing restricted to the male wardrobe, there are some exceptions. An ostracon from about 1200 BC depicts a dancing girl wearing a cut-work loincloth, apparently as her special (and only) performance costume. The similarities among the tattoos that adorn this dancer and those found on the Tomb 9 lady are certainly intriguing, and despite the time difference this combination of loincloth and tattoos may be more than

custom from Nubia. Who would have imagined we would have a cemetery of such trend-setters!

Tomb 9 also contained copious amounts of leather. Unique to this burial were delicate fragments of cut-work leather of differing quality, each appearing to derive from a different garment. There was a collective gasp when the large mass of leather perforated with a pattern of narrow parallel rectangles (c. 5mm x 2mm) first appeared

On the other hand, leatherwork of this type is commonly assumed to be used for loincloths, which were a light but hard-wearing garment worn by soldiers, sailors and workmen to protect their linen kilts, and



Schematic diagram of the pierced leather garment.

coincidence. Although our lady was well into her 40s and had lost all of her upper teeth, a localized injury to the vertebrae of her lower back suggests that in her youth she may well have done a back flip or two.

Age apparently also brings modesty, as our lady was buried with far more clothing than the girl on the ostracon. Impressions on the skin of the ear and chin suggest that a finer quality leather, with perforations less than 4mm in length, making for an astonishing 42 cut-outs per square cm, may be the remnant of a leather hair net that was tied under the chin. Her other garments include what Fran has reconstructed as a brown and white, horizontally striped, flaring sleeve composed of small pieces of leather sewn together, which may have been connected to a bodice of pink leather with yellow appliqué. Garments made of a patchwork of brown, beige, pink, red and yellow leather panels were found in several graves, but almost exclusively those of women. Leather kilts with blue faience beads sewn at the seams and edges were found in the graves of men.



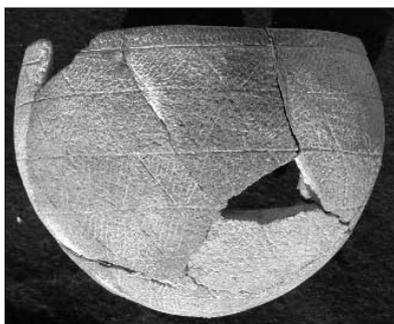
Leather samples from Tomb 9. Left: the 'loincloth'. Right: Jaw with impressions from the fine cut-work leather hair net — compare with the pieces shown in top right.



Tomb 15 with remains of low brick ring, or tumulus.

As the excavations moved further to the south and thus earlier in time, we observed an increase in decorated ceramics to augment the numerous Nubian black-topped bowls found throughout the cemetery. And just to confuse us, there was also a marked change in burial orientation and a notable elaboration of the above-ground architecture.

Four graves were surrounded by rings of loosely arranged mud bricks, now only one or two courses high. Built onto these rings, or tumuli, were square offering chapels and plat-



Distinctively Nubian: a black incised bowl.

forms of brick and stone on which pottery, food and burnt offerings was deposited, some found *in situ*. The most elaborate of these constructions was the well-built ring of mud brick, four courses high, around the shaft of Tomb 17 (see cover). After its construction, several large boulders were rolled in, and between them a platform or offering chapel of specially selected bright yellow fieldstones was erected. As was the Nubian custom, numerous offerings of pottery were left above ground on all sides of the tumulus. We found pots, both Egyptians and Nubian, under almost every rock (A on plan), nestled in brick cists (B and X), or simply left up against the side of the brick ring (N). The final appearance must have been a dazzling tribute to the young man, 20–30 years of age, buried within.

An even more impressive grave gift was soon to appear. A short string of beads just below the surface had attracted our attention, but when further brushing revealed the full story, a runner was sent to the dig house to fetch the entire crew to see

it: an iridescent shell pendant wrapped round with a string of over 1600 light blue faience beads. One uninvited guest was the wind., and as if on cue, a gust threatened our delicate treasure. A human wind-screen was rapidly erected, and slowly the beads were collected in small clusters and numbered for restringing in their original order back in the lab. The result is an elegant addition to any outfit (see back cover)!

Despite being so far north in what we consider to be Egyptian territory, the occupants of the cemetery appear to have made few concessions to Egyptian influence other than a general use of Egyptian

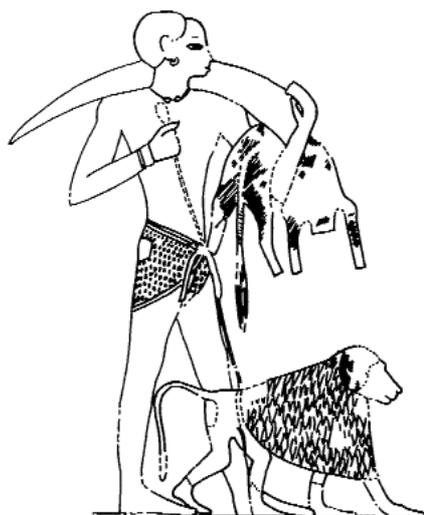
pottery, mud brick instead of stone for their tumuli, and in some cases simple wooden coffins. In death, at least, they dressed like Nubians, constructed Nubian funerary architecture, and deposited Nubian grave goods above ground in traditional Nubian fashion. The population of the cemetery, which includes an even spread of men, women and children, was obviously



Man from Tomb 18: chin stubble and an abscess.

a wealthy one, with most of the inhabitants living into their 40s and beyond in relatively good health. Caries and abscesses with relatively minor arthritis are the most common pathologies. The Egyptian pottery indicates a date

ranging from the Eleventh Dynasty into the Second Intermediate period, suggesting a long-term presence of Nubians at the site; however, their reasons for being here remain a mystery. With less than one quarter of the cemetery excavated, many more amazing discoveries are sure to be waiting. 🐾



Nubian bearing tribute.

For more details see www.archaeology.org/interactive/hierakonpolis/nubians.html

Nobody Can Eat 30 Eggs

— by Tom Flanigan (ringleader), U.S. Forest Service, Humboldt-Toiyabe National Forest, Nevada
with (partner in crime) Jody Patterson, Montgomery Archaeological Associates, Utah

The day was not an unusual one at Hierakonpolis. Calls to prayer echoed from the mosques, there was good-natured ribbing between myself and the workmen, and Belly (the cat) sprayed urine on my mosquito netting. Blissfully ignorant, I had no idea that this fateful day would bear witness to the Great Egg Debacle of Upper Egypt.

Later that afternoon, Sarah Wille, team member in the HK43 excavations, decided she wanted to make brownies that evening. Now let's get one thing straight — brownies are good, and after a month or so at Hierakonpolis they sounded very good, even to those strange anti-brownie types. Yet one ingredient was missing — eggs. This was not a minor issue, as Hoffman House is an egg-free zone, the *mudira* (directress) having determined them to be the root of all illness (and quite rightly so! —*ed.*). Nevertheless she relented (brownies are awfully good), and it was decided that myself and Mr. Jody Patterson would pick up 4 to 6 eggs on a little supply run we had scheduled for that afternoon. The operative number here is 4 to 6 eggs.

As even the word egg can induce a cold sweat in the *mudira*, Renée delegated Gillian, who can speak a pinch more Arabic than the guys from Nevada and Utah, to have a conversation with Hagg Sidain about the importance of obtaining eggs during our safari. Well aware of the egg embargo, the Hagg listened closely, and it was obvious that the magnitude of the egg mission had made a great impression on him.

After all the pertinent information had been passed on, we swung ourselves into the back of Hagg Sidain's Toyota pickup, where we were joined by our policeman escort. The *mudira* thought that we were just making a quick run to Fahti's store in the village, just a couple of km away... and so did we. We soon realized that Sidain had other errands to run and we were now at his mercy.

The Hagg drove us about 6 km away to a couple of different little shops. He laughed and joked with the proprietors while Jody and I drank our complimentary Cokes, acted

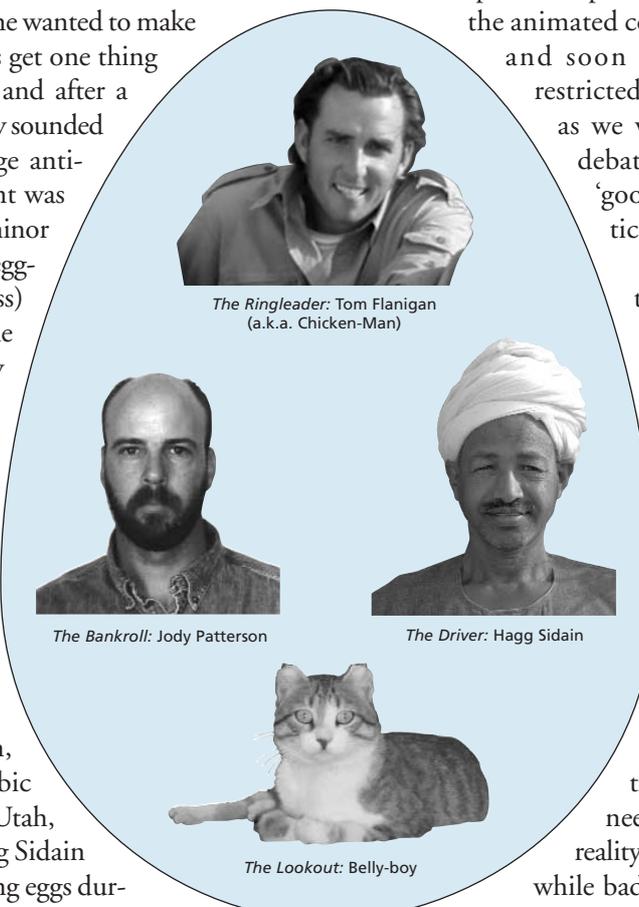
obediently, and were the subject of much curiosity from local patrons. His business complete, we were heading back to the village when Hagg Sidain spotted a friend and stopped in the middle of the train tracks to have a chat. The distant train whistle filled us with dread, and prompted flashbacks to grainy 8mm driving education movies about why this is not a preferred parking space. We nervously watched

the animated conversation between the two men and soon realized that our Arabic was restricted to archaeological terms in so far as we were sure this was not a heated debate about who was going to use the 'good brush', or the merits of a particular trowel or bucket.

In the nick of time and without the slightest concern, the Hagg climbed back into the driver's seat and we were once again on the road. So relieved to be off the tracks, it took a moment to clock, as we whizzed past Fahti's little store, that we were on our way back home. I cast a concerned look at Jody and said "What about the eggs?!" Jody quickly agreed: we were about to do the unthinkable — return to the house without the key brownie ingredient. I turned to the policeman and said "Eggs! We need to get Eggs!" This is when the reality that speaking frantically in English while badly mimicking an Egyptian accent wasn't going to cut the mustard. So I did the only thing I could think of... I began to cluck... then I began to scratch at the

bed of the truck with my foot... and before I knew it my elbows were flapping. The policeman was catching on, and we were all in agreement that I was a chicken. Now for the crucial element: I laid an egg. One must keep in mind that this is all taking place at approximately 30 miles per hour as we sped through the local village. It wasn't Shakespeare in the Park, but some pedestrians certainly got their evening's entertainment.

At this point the policeman understood... I had an imaginary egg in my hand. The cultural chasm had finally been bridged, and we all knew that the subject in question was eggs. However, I had failed to impress upon him that we needed



MISSION SQUAD: Operation Egg.



Hagg Sidain prepares for the mission.

some. Jody was growing pale with the thought that we would arrive at our destination and face the wrath of all those sun-burned, sand encrusted faces that would be without chocolate goodness oozing down the corners of their lips.

Jody leaned over the cab of the truck and took Sidain by the shoulder: "Eggs!... We forgot eggs!" The Hagg reacted immediately as the conversation with Gillian washed over him like a tidal wave. The truck screeched to a halt, and all three passengers in the truck bed were smashed against the cab. In the gathering dusk, the reversing lights on the Toyota lit up the road behind us as we backed up to the village. Sidain spoke to a couple of men who were walking by the side of the road. The conversation was serious, and both men solemnly shook their heads indicating that they were not in possession of the precious commodity.

Not to be deterred, the Hagg began stopping at every residence in the village. He talked with them in their dimly lit doorways as they peered over his shoulder at the two smiling morons in the back of his truck. Many doorways later, we arrived at our objective. Sidain rapped on the door and spoke softly to the woman who answered. She retreated back into the darkness, then nail-biting moments later she returned with our Holy Grail — a whole carton of eggs, which upon later inspection contained 30. As the time for negotiation had passed, we took the whole lot. Not having a clue as to how much eggs cost, Jody produced a 10 pound note and passed it on to Sidain. It appeared to be an acceptable price, and no change was asked for nor offered (our bemused colleagues later told us that we were overcharged by about 600%).

With eggs in hand, we thought that our ordeal had ended. However, we had failed to take into account the 2 km of rough terrain to be traversed before we reached our true goal. With one hand under the cardboard palette containing our precious cargo, and one hand on the truck bed wall, legs splayed for



The perilous journey home.

support, we started off. The balancing act was epic. The truck bounced over every pothole and hump that covered the length of our final run to freedom. Jody's gaze never left that fragile crate of eggs, wincing as they leapt free of their cradles with every jolt of the axle.

In the distance we saw the warm glow of electricity from the compound, the low-wattage bulbs shining like a beacon in the desert wastes. The journey was soon over, and the spent old truck chugged into the compound and sputtered to a stop. Pale with exhaustion, I took the last few tentative steps towards the kitchen. Sarah was busily stirring the contents of a pot on the stove. "Did you get the eggs?" she asked. I could only reply, "Yeah, we got a couple, how many do you need?"

Although the journey was treacherous and wrought with peril, as the mosquitoes sung me to sleep that night, I knew that brownies were plentiful in Hoffman House, and that days of omelets would follow. ● ● ● ● ● ● ● ● ● ●



There's no place like home. Courtyard of Hoffman House.

THE HIERAKONPOLIS HOME PAGE

Egyptian Tex-Mex Salsa

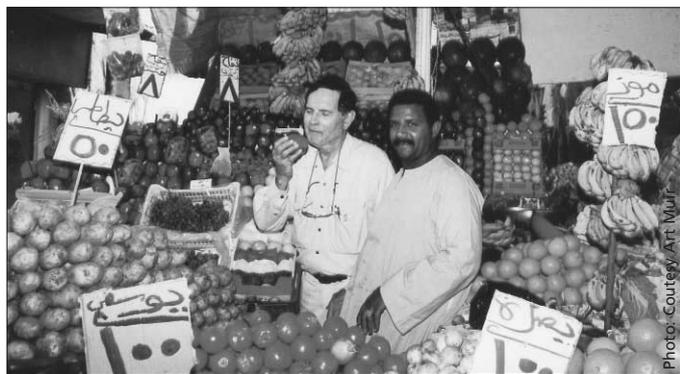
Chef Ali is a great cook. He keeps us well nourished with excellent examples of Egypt's traditional fare. However, every so often we like to change the palate and make something ourselves, which given the limited and seasonal availability of certain raw materials can be a bit of a challenge. The most successful of our endeavors in this realm is Mexican Night, when a packet of taco mix can transform Egypt's ubiquitous *fool* (fava beans) wrapped in a makeshift tortilla (i.e., the local flat bread) into a mouth-watering burrito. Although the pitcher of margaritas certainly helps, what really gives it that authentic south-of-the-border taste is Art Muir's Salsa. So easy and so good, you'll never want to eat store-bought again. ♪

Egyptian Tex-Mex Salsa — Art Muir

- 2 cups finely diced tomatoes
- 1 cup finely minced green onion (white & green parts)
- 1 cup finely chopped mixed green peppers
(bell & long green chilis)*
- 1/4 cup finely chopped small red peppers (*shata*)*
- 4 Tbsp minced cilantro
- 1 Tbsp each pressed garlic and salt
- 8 Tbsp olive oil
- 4 Tbsp lemon/lime juice
- 1 tsp (heaping) ground cumin

Mix together and serve fresh. Makes 10 generous servings. Will keep several days refrigerated (we assume, but we never have any leftovers).

*The 'heat' of the salsa comes from the pepper membrane and seeds, especially for the chilis and *shata*. For medium hot salsa, leave in only 10–20% membrane & seeds.



Shopping in the *suq* (bazaar), Art searches for the freshest ingredients.

Virtual Digging: the Nekhen News Archive

As you know, the *Nekhen News* is the best way to keep up to date with the latest discoveries at Hierakonpolis. It is an important publication both for the site and the study of Egypt. The first volume was published nearly 20 years ago, and over the years it has grown from an eight page typed document to the current glossy record of the year's activities, jam-packed with news, information and contributions from excavation team members and other scholars.

The *Nekhen News* also serves as an important archive, providing rare insight into work and life on an archaeological excavation in Egypt. With this in mind, the early back issues have recently been scanned and uploaded by web volunteer Peter Robinson onto the official web site (www.hierakonpolis.org). Volumes 1–13 (1985–2001) are now available to download or read online.

The files are in Adobe Acrobat PDF format, which is widely used to distribute documents that look virtually identical to the originals. The digitized documents can be read using Adobe Acrobat Reader, a program that is preinstalled on most computers; if not installed, it can be downloaded free from the internet. Now you can browse the back issues of the *Nekhen News* from the comfort of your computer screen and, if you like, print out high-quality copies.

Browsing through past articles is a fascinating experience. You can read about discoveries ranging from ostrich feathers to elephants, and follow the building of our dig house from when it was a twinkle in Michael Hoffman's eye, through the planning and construction, to the reality of life on site and the on-going home improvements.

Our knowledge of the site is constantly evolving, and each year there are new surprises and new answers to older questions. Catch up on current controversies or look back and see how new discoveries at Hierakonpolis have changed our ideas and interpretations over time. As well as the scholarly contributions on such things as burial methods, hair and artifacts, the *Nekhen News* online also gives readers the chance to sample life on the dig with records of Thanksgiving, the team's favorite recipes, and even of the contents of the Hierakonpolis cocktail cabinet for all those post-excavation sun-downers!

So, once you have read this volume of the *Nekhen News*, go online to www.hierakonpolis.org and follow the link to the Resources page, which will lead you to the archived *Nekhen News*. You might be surprised by what you find there! ♪ ♪ ♪

—Peter Robinson

Fixing the Fort

— by Renée Friedman

Conservation: it isn't just a buzz word, but a responsibility for all of us who value Egypt's ancient heritage. In autumn 2004, we intend to translate this word into action, but we need your help. A grant from the World Monuments Fund® will make it possible to begin the stabilization and repair of the imposing structure that we call the Fort, the oldest freestanding mud-brick edifice in the world. It's a big job. Approximately 67 x 57m in dimensions, with walls 5m thick and 9m high, the structure is a rare example of a ceremonial enclosure that may have been built to celebrate the success of its builder, King Khasekhemwy, the last king of Egypt's Second Dynasty (c. 2686 BC), in reuniting Egypt after a period of unrest. In form and monumentality, it is the direct ancestor of the great stone pyramid complexes of Egypt.

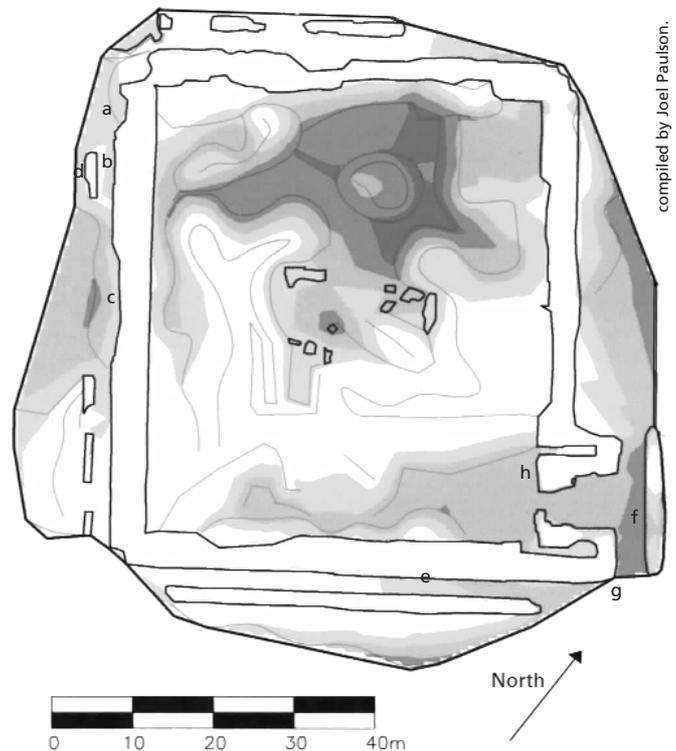
After nearly 5000 years of wind and rain, the continued existence of the enclosure is a testament to the ability of its builders; however, the Fort is now rapidly deteriorating for reasons that the original contractors could never have foreseen. The problems are mainly due to where they built it: on top of a Predynastic cemetery.

Excavation of the earlier graves in 1906 and 1934 resulted in the lowering of the ground level in and around the structure by more than 2 m, exposing the foundations and destabilizing the walls. Adding to its misery, the work of treasure hunters, brick miners and burrowing animals have all left holes, which grow larger each year due to erosion and gravity. These holes have created dangerously unprotected overhanging, or 'corbelled', segments of wall, as the bricks continue to fall away.



Photo: Connor Power

Corbelled wall and falling bricks at the Fort, west side.



compiled by Joel Paulson.

Satellite images (provided by the Friends of Nekhen) have allowed us to calculate the size of the job. Shaded areas show where the ground surface is now below the foundation of the walls, in some places by more than 2m. With your help we intend to raise the floor level and implement repairs at the areas designated by letters.

In 2002 the structure was examined, and more than two-dozen points of weakness were identified. Areas of particular danger exist along the still intact west wall, the entrance and at each of the corners. This coming season we would like to fix as many of the weakened areas as we can — and this is where your help is needed.

Plans for stabilizing the monument include the incremental repair of dangerously undercut foundations with compacted soil, the rebuilding of corbelled areas of wall, and the raising and grading of the floor level to prevent further erosion and deterioration. It isn't experimental, and it's not high-tech, but it is expensive. The amount of labor and materials required will be considerable. Escalating costs and accelerating deterioration mean that the funds currently available will not be sufficient to do everything we must to preserve this unique structure.

We are extremely grateful for your past donations to this project, and these resources are ready and waiting to be used. Yet more funds are needed to attain our goals. The Fort can't wait much longer for the care and attention it so richly deserves. Please help us to save it. 

The Friends of Nekhen

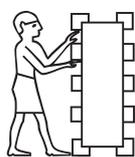
Nekhen is the ancient Egyptian name for the site of Hierakonpolis, the city of the hawk, and one of Egypt's first capitals. The Friends of Nekhen is a group of concerned individuals, scholars and organizations that is helping the Hierakonpolis Expedition to explore, conserve, protect and publish all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

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

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



The Fort needs fixing: Please help!



Special contribution for the
Fort Fund
(see article on page 30)

\$/£/€ _____

*Your contribution makes the difference.
 Thank you!*



Photo: Helena Jaeschke

Don't be caught napping: Join or Renew Today!

Membership Application

I would like to help the Hierakonpolis Expedition by joining (renewing my membership in) 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*)
 Sponsor (\$250/£150/€250*)
 Patron (\$500/£250/€500*)
 Sustaining (\$1000/£500/€1000*)
 Student[†] (\$20/£12/€20*) [†]enclose copy of current student ID
 This is a renewal for the 2004–2005 season.

(If you have already renewed, thank you!)

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Hierakonpolis Highlights 2003/4



Photo: Andy Wilson

Fort at Sunset....see page 30.



Nubian necklace...see page 24.



Faience beads....see page 24.



Fabulous fishtail knife...see page 8.

