

SUDAN & NUBIA

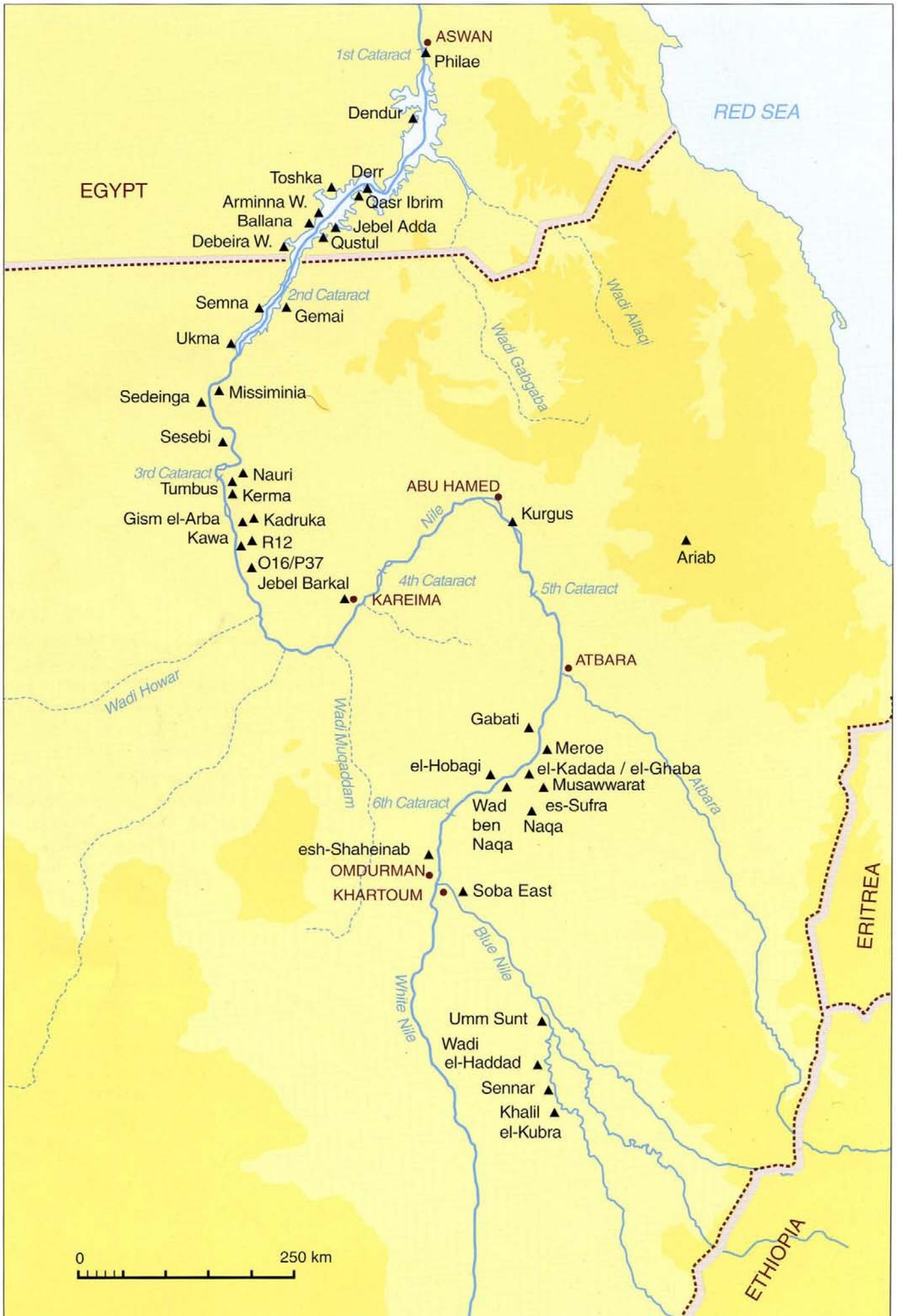
The Sudan Archaeological Research Society



Bulletin No. 5

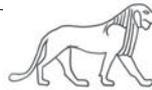
2001





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Front Cover: Beaker for funerary libation from el-Kadada, chalice shape, with incised geometric decoration, fired clay. Excavation n° KDD 76/3/59.

Introduction

Vivian Davies

The appearance of this, the fifth, issue of the Bulletin coincides with the tenth anniversary of our Society's founding. It has been an extraordinary first decade, remarkably productive in terms both of fieldwork and publication - one in which we have worked closely with our colleagues in the National Corporation for Antiquities and Museums of the Sudan to fill gaps in the archaeological record and meet, wherever possible, the threats posed to archaeological sites by modern development. We have organized and supported eight major field-projects (in Soba East, the Northern Dongola Reach, Kawa, the Shendi-Atbara Reach, Gabati, the Bayuda Desert, the Fourth Cataract, and Kurgus) and published five memoirs (two others are in press at the time of writing), as well as *Sudan & Nubia*, an annual bulletin of reports 'fresh from the field'. Furthermore, we have held each year an international colloquium on current fieldwork and research, and we now additionally host the annual 'Kirwan Memorial Lecture', in memory of our distinguished first President.

The considerable funds needed to carry out this extensive programme have been forthcoming most substantially from the Bioanthropology Foundation and the British Museum, upon whose generosity we continue to rely, as we do also on that of the Society's individual Patrons. We intend to mark the Society's achievements with a special publication to be issued in the coming year. As to the future, the reports in this volume, on sites ranging in date from the Neolithic to the Mediaeval Period, amply demonstrate the huge potential for important new discoveries and scholarly progress in our area of interest, both in Sudan and Egypt, promising a second decade as exciting and rewarding as the first.

Nubians at Hierakonpolis

Excavations in the Nubian Cemeteries

Renée Friedman

Hierakonpolis, located about 113km north of Aswan, is a site best known for its Predynastic and Early Dynastic remains. However, it also contains a number of important and unique features dating to Dynastic times. Amongst them are three discrete cemeteries with Nubian cultural traits, which were noted during surface surveys undertaken by Michael Hoffman in 1978 and Fred Harlan in 1983. In the winter of 2001, the Hierakonpolis Expedition made preliminary investigations into this Nubian presence in order to understand its significance for the history of the site and this region of the Nile Valley as a whole.

The three cemeteries are widely spaced across the site, being approximately 1km distant from one another (Fig. 1). The cemeteries at localities HK47 and HK21A, both of which belong to the Pan Grave culture, are located on opposite sides of the Hierakonpolis archaeological zone. HK47 is located on a sandy rise near the Wadi Khamsini on the south-western border, while HK21A is located to the far northeast near the Wadi Tarifa. Originally thought to be yet another Pan Grave cemetery, locality HK27 proved upon

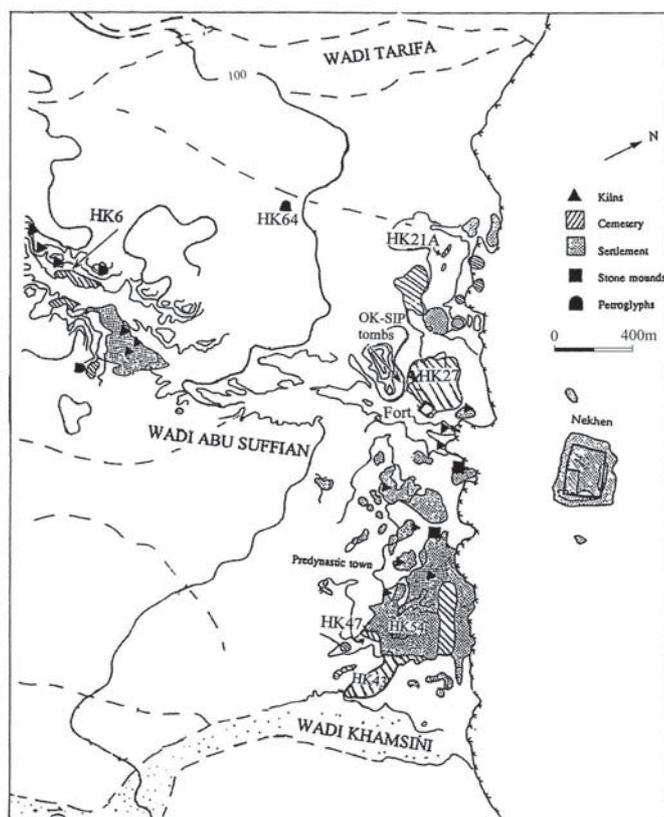


Figure 1. Map of Hierakonpolis with localities mentioned in the text.

excavation to belong to the Nubian C-Group. This cemetery is located in the centre of the site, about 100m north west of the Second Dynasty Enclosure (Fort) of Khasekhemwy (Colour Plate XX).

All three cemeteries are located on high ground and appear to be separated from other cemeteries of various date in adjacent areas. Although each has been heavily plundered probably in ancient, and certainly in modern, times, the quality and quantity of material on the surface originating from these little studied cultures within Egypt justified preliminary archaeological investigation. Owing to time constraints, only a single 10 x 10m test square was excavated at each location. These excavations were conducted under the direction of Renée Friedman with the assistance of Serena Giuliani, Andrew Bednarski, Gillian Pyke, Ethan Watrall and Osama Ismael Ahmed.

HK27: The C-Group Cemetery

The C-Group cemetery at HK27 is located on a low, but prominent, rise on the gradual slope leading up to the sandstone ridge that houses the Old-Kingdom - Second Intermediate Period rock cut tombs. Between the ridge and the cultivation spreads an extensive cemetery that served the site from late Predynastic into Early Dynastic times. After the construction of the Enclosure of Khasekhemwy, the area continued to be used possibly until the early New Kingdom. Surface ceramics to the southwest of the Enclosure indicate the presence of late Middle Kingdom, according to Quibell and Green (1902, 26), and Second Intermediate Period burials, but these appear to be separated from the C-Group cemetery by shallow gullies, which surround it on three sides. The C-Group cemetery is evidently in an area of some prominence, bordering on, if not intermixed with, contemporary Egyptian burials.

At first glance the site looks badly disturbed. Naturally exfoliated sandstone blocks cover the area and cluster around depressions that contain weathered human bone and Nubian pottery. An area that appeared the least disturbed was chosen for the test excavation. This later proved to be on the northern edge of the cemetery. Depressions in the surface were mapped and numbered; most, but not all, marked the position of graves. In total, seven graves were excavated; two others, on the edge of the test square, were located but not fully examined (Fig. 2).

The burials were of two types. The majority of graves were rectangular with one rounded end, approximately 1.4-1.6m long, and 60-80cm wide (Fig. 3b). The depth to which these graves were cut into the compact sandy red soil varies from 50 to 70cm. A smaller, narrower oval grave (Burial 7) was that of children. The long walls were well cut and vertical; the floors were smoothed or left rough and irregular. Tool marks are clearly visible on both walls and floors.

In this type of grave the owner was buried in the traditional contracted position on their right side, with head pointing northwest, facing westward. The river at

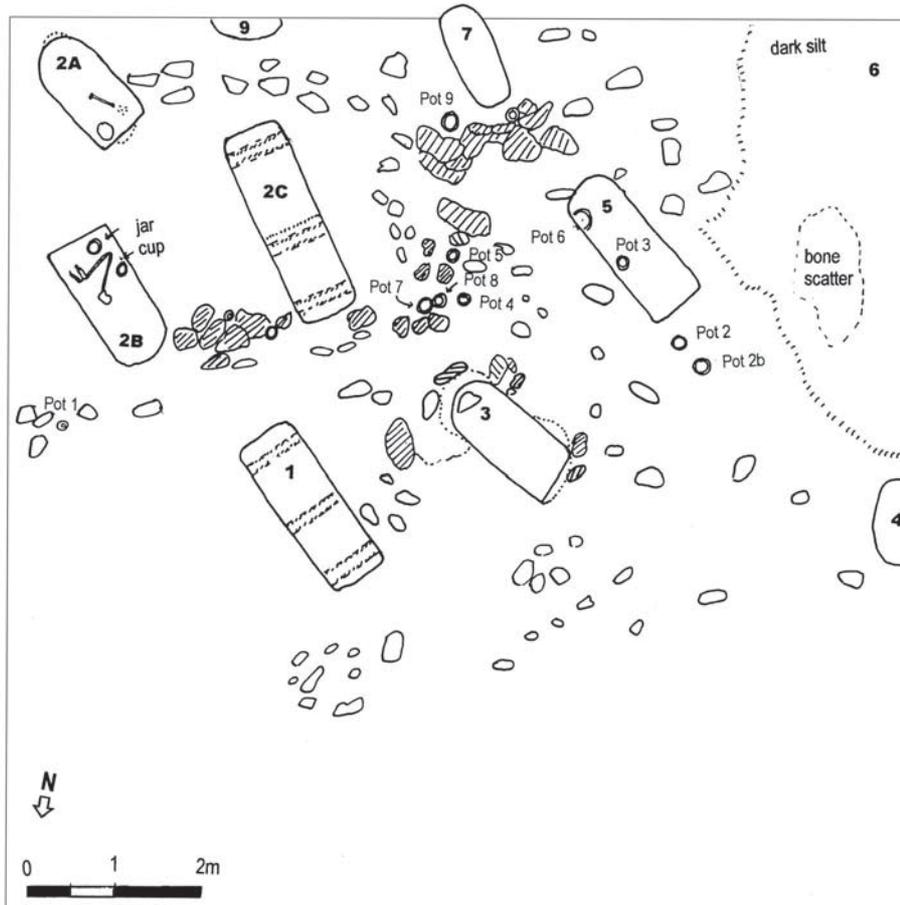


Figure 2. Plan of excavated area of the C-Group cemetery at HK27.

Hierakonpolis flows almost westward. The grave cuts are not aligned to the current course of the river, but instead appear to align exactly with the Khasekhemwy Enclosure, which was probably oriented to the local course of the river at the time that it was built (c. 2700 BC). The burials are thus meant to be orientated with the head toward river north (Colour Plate XX).

Clear evidence for this body orientation comes from Burial 2A, in which the head and upper body, although badly disturbed, were still in relative position, and Burial 2B, apparently a double burial, in which the lower body from the pelvis down was found in articulation with two Egyptian pottery vessels still *in situ* to either side of the bent knees. In this particular grave remnants of leather were found above and below the lower body, either as part of a skirt or a shroud. However, in Burials 2A and 7 matting covered the floor.

Intermixed amongst the burials of this traditional type were two long rectangular graves (Fig. 3a; Plate 1) in which the owners were buried within wooden coffins (Burials 1 and 2C). Fragments of degraded wood, some still covered with white plaster, were found within these graves and in the three furrows made into the floors to accommodate the external wooden cross planks of the coffins. These graves are approximately 2.1m long, 70-80cm wide and 60cm deep. In Burial 1 remnants of the white plaster from the coffin

adhere to the north end wall to a height of 40cm above the floor, providing both the height of the coffin and proof that this is not a bed burial. Both graves were completely plundered and, therefore, there is no evidence to determine whether the adoption of Egyptian coffins also involved a change in body position, i.e. whether the body was interred in the extended Egyptian fashion or in the traditional contracted position.

There was no clear evidence for the form of the superstructure over the graves, although some originally had one. The stone strewn throughout the area is not natural to the location and had to be transported, albeit only a short distance from the nearby sandstone inselberg. Very little of the stone was still in its original position. The stones still embedded in, or sitting upon, the original surface are shown hatched on the plan (Fig. 2); those only outlined were found loose on and in debris, though probably not far from their original location. From the plan it appears that at least Burials 2C, 3 and 5 were surrounded by a stone ring or possibly covered by a mound. Quarrying of the stone to build the numerous small cairns and piles that dot the desert surface to the northwest may be responsible for the loss of stone from this location. Two of these stone piles were tested by excavation and found to be simply stone piles, apparently created in modern times. Stone was occasionally found within the graves and

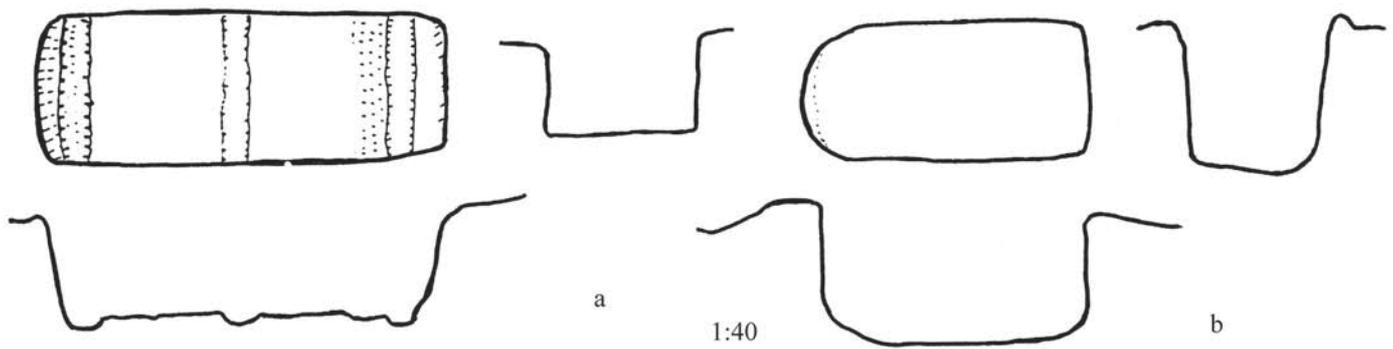


Figure 3. C-Group Graves. a: Plan and section of coffin Burial 1; b: Plan and section of traditional Burial 3.

along the walls, but not enough was in place to determine if any of the graves were stone lined or roofed with slabs. Small amounts of melted brown mud were found around the upper edges of some of the graves, but there was no evidence for the presence of mud brick over or within the graves. Until further excavation is undertaken, the original above-ground appearance of the burials will remain unclear.

Although all of the graves were plundered, several of the above-ground offering places were found remarkably intact. Egyptian vessels and C-Group hand-made bowls were dis-

covered either placed on the ground, often rim down, with no clear evidence of a deposit hole, or nestled amongst the stones that once formed the outer edges of the superstructure. Unfortunately, it is not always possible to determine to which graves these offerings belonged, or if they were intended to be offerings for one grave only. The majority of vessels cluster among the stones between Burials 2C and 3. Offerings associated with Burials 5 and 7 were found at ground level at the head end of the graves (Fig. 2). Erosion of the slope along the northern edge of the excavation square may have destroyed other deposits in this area.

Amongst the pottery from the offering places, of note is a wheel-made Egyptian bowl, which had been painted black and red to imitate a C-Group black-topped vessel (Plate 2, Fig. 9a). Evidently the presence of pottery of the Nubian tradition, and perhaps especially black-topped bowls, was of great importance in C-Group funerary ritual in this cemetery. Although the majority of vessels in the offering places are of Egyptian manufacture, at least one Nubian pot was found in each assemblage, with the one notable exception of the imitation bowl. Serena Giuliani provides further discussion of the pottery from the Nubian cemeteries below.

Pottery was found *in situ* within only one burial (Burial 2B lower), placed to either side of the legs. Both vessels were of Egyptian manufacture: a spouted jar of Nile silt C and a drinking cup with a potmark of a turtle(?) applied with black pigment (Fig. 9b and k). Pottery found within the heavily



Plate 1. Grave cut to fit a wooden coffin in C-Group cemetery HK27, Burial 2C. (Photo by Jim Rossiter).



Plate 2. Egyptian bowl painted to resemble a Nubian black-topped bowl, HK27, pot 7. (Photo by Jim Rossiter).



disturbed Burial 5 included a fragment of the characteristic C-Group black-polished bowl incised with triangles (Fig. 8g). There were also several pieces of a chaff-tempered necked jar decorated with incised cows and calves (Fig. 4, Plate 3). Although perhaps intrusive in the grave from an offering place, these vessels provide indisputable evidence of C-Group affiliation and a date probably within the latter part of Bietak's (1968) Stufe IIa into the early Stufe IIb.

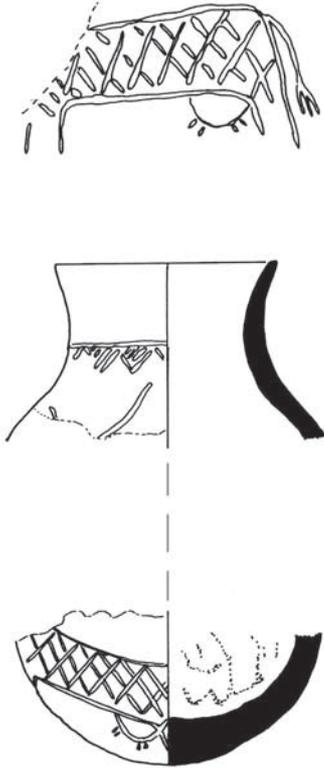


Figure 4. Straw-tempered jar with incised cows from the C-Group cemetery.

The Egyptian pottery also suggests a date within the first part of the Second Intermediate period (later Thirteenth Dynasty). This date corresponds well with that proposed for the glazed steatite scarab inscribed with 'coiled' design found in Burial 2A (Fig. 5b, Colour Plate XXI). A close parallel for the design on the scarab is known from the Uronarti fort (Tufnell 1975, fig. 8, no. 365) and Tell el Ajjul (Tufnell 1984, pl. xxv. 2117). The convoluted coiled and woven cord pattern (Tufnell 1984, type 6B2b) is relatively common at both sites but few are as elaborate, with central knot and hieroglyphic signs. The back type offers little in the way of dating criteria (Ward and Dever 1994, type LN-Lined Naturalistic); however, the side, with its scored only details (Ward and Dever 1994, 121, 164-5 type e5), may be slightly more useful, although still controversial (O'Connor 1985). This scarab was found in conjunction with a bracelet of ostrich eggshell and faience beads still on the original fibre string (Colour Plate XXI).

Beads were found in all of the graves. Most were of faience (no distinction between glassy or fused faience and



Plate 3. C-Group jar incised with cows, HK27, Burial 5, pot 3. (Photo by Jim Rossiter).

faience with visible core is made in this paper), varying in shade from deep blue to green, formed most commonly into small (diameter <2-3mm) irregular circular rings of variable thickness (cf. Bietak 1966, 58, pl. 33 types Id). Flat disk beads with a diameter of c. 4mm were also present. Two carnelian beads and a small faience amulet of uncertain shape (possibly a double plume, or pesesh-kaf, cf. Säve-Söderbergh and Troy 1991, 126, fig 33.B9) were found in Burial 7 (Fig. 5a). Beads of ostrich eggshell, strung with blue faience disk beads, were found only in Burial 2A.

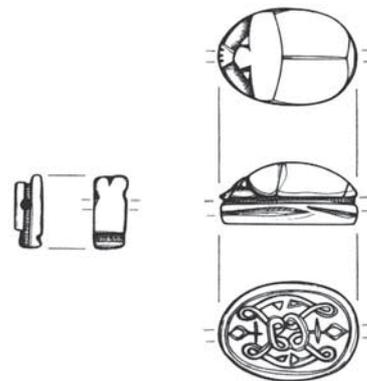


Figure 5. a: Amulet from HK27, Burial 7; b: scarab from HK27, Burial 2A. (Drawn by Will Schenck).

Ostrich eggshell beads are far more common in the Pan Grave cemetery at HK47, but whether their presence in the C-Group cemetery should be viewed as interaction with that quarter remains to be seen (possibly as suppliers? cf. discussion in Williams 1983, 77). Some influence from the Pan Grave people is suggested by a single *Nerita* shell collected as a surface find at HK27 (however, see Williams 1983, 59 for such shells without Pan Grave association), but no other Pan Grave traits have so far been detected within this cemetery.

Other finds from the C-Group cemetery include a fragment of a bone(?) ring decorated with an incised zig-zag pattern (Burial 2A), small fragments of fine cloth (Burials 2A, 2B, 5), and malachite (Burial 2B). Pieces of leather with and without stitching were found in all graves.

Because of the extensive plundering, we can only assume that all seven excavated graves are at least roughly contemporary. The excavated area and the surface indications suggest that the graves were arranged in relatively orderly rows running east-west. However, it is possible that the two coffin burials may have been inserted later along what appears to be the north-eastern edge of the cemetery. Therefore it is too early to discuss the Egyptianisation of the Nubian population. Nevertheless, it would appear that like their counterparts at Kubbania, some members of the C-Group population adopted Egyptian-style coffin burials at a fairly early stage, as might be expected for those living in Egypt (Junker 1920, 59-60; Bietak 1968, 37).

The size of the cemetery and the orderly east-west arrangement of the graves indicate that there might be over 100 graves here. This suggests that there was a sizeable population of C-Group Nubians at Hierakonpolis in the Second Intermediate Period and possibly earlier. This population included men, women and children. The excavated burials contained three females (Burials 1, 2B, 5), one of whom was in her late forties or more at the time of her death, two possible males (Burials 2C, 3), two sub-adults (Burials 2A, 7) and one child (Burial 7).

While the skeletal remains were fragmentary, a notable distinction in muscle attachments on the lower arm (ulna) of a man and woman was observed by physical anthropologist Nora Denton (University of Alaska, Fairbanks). On the female ulna there were sharp ridges at the muscle attachment sites which were gracile in nature. The male ulna lacked the sharp edges, but rather had a build up of cortical bone around the attachment sites. This suggests that the female used these muscles for light repetitive tasks, and the male for less frequent, but much heavier ones. The sample size is far too small to make any generalizations about activities on the level of the general population; however, it is suggestive of gender specific activities, and calls for further investigation. In addition, there is notable muscle attachment remodelling of the lateral posterior ribs on most individuals. What activity might have caused this is not clear. These types of muscle attachments have not been observed among the Pan Grave

or Predynastic populations at Hierakonpolis.

The cemetery at HK27 is the northernmost confirmed location of a C-Group cemetery in Egypt. Despite isolated reports of C-Group pottery and graves in Egypt, the northern limit of the C-Group culture has long been considered to be Kubbania, a scant 20km north of Aswan (Meurer 1996, 90, fig. 7). This is clearly no longer the case and other evidence for C-Group activities at Hierakonpolis includes the petroglyph site and camp with its votive deposit of ostrich feathers at HK64 (Friedman 1992; 1999; 2000). However, the function and nature of this site will need to be reviewed in light of the new discoveries at HK27. It is also worth noting that A-Group graves are known from Hierakonpolis and the surrounding region (Needler 1984, 224-231) and A-Group pottery is not rare in the settlements (Friedman 1994, fig. 9.75). Thus there are many reasons to believe that a border at Kubbania is only a relic of exploration and that the Hierakonpolis region had a long and active relationship with its neighbour to the south.

The Pan Grave Cemeteries: HK21A and HK47

The Pan Grave cemetery at HK21A is located on an ancient Nile levy at the edge of a branch of the Wadi Tarifa where it meets the current cultivation (Fig. 1). The levy is composed of two peaks; at the top of each is a dense accumulation of naturally exfoliated sandstone that has been transported there. Mixed in with this stone are sherds of Pan Grave pottery. These areas are now heavily pitted and plundered and it was therefore decided to conduct test excavations on lower and hopefully less disturbed ground. A 10 x 10m square was laid out on the saddle between the two peaks. Here there were only a few depressions and a small amount of stone. Excavations revealed six small, round graves (40-80cm in diameter), possibly arranged in a circular pattern, although the area cleared was insufficient to verify this. The graves were dug into very hard Nile silt and were extremely shallow, being less than 30cm deep (Plate 4), and look very much like the pans from which the name of the culture is derived (Petrie 1901, 45).

All were found to be essentially empty. Almost no human bone was found within the graves themselves and all of the pottery, which was quite fine, was found scattered on the surface. Egyptian pottery was infrequent, and limited mainly to fragments of jar stands. A number of small 'brilliant' blue faience beads were found in one grave and probably originate from beads sewn onto garments (see Wainwright 1920, 21, type 3). Only one rectangular shell bead, a hallmark of the Pan Grave people, was found. In addition, the upper portions of an Egyptian alabaster jar were recovered.

Careful excavation revealed matting on the floor of some of the graves and in one case the outline of the body indicating a contracted position, oriented with head north, facing west (Bietak 1968, P3). Other depressions in the mud at the base of this same grave indicate that the owner was buried with long objects, probably weapons.



Plate 4. Excavating a shallow Pan Grave at cemetery HK21A. Workman Kamal Sidain holds the only rectangular shell bead found in this cemetery.

Minor depressions in the soil around some of the graves suggest the location of offering deposits, although nothing was found *in situ*. There is no evidence of superstructure over these burials, but, given their shallow depth, some form of above-ground covering must have been built. The amount of fist- and larger-sized stones elsewhere on this ridge suggests the construction of stone rings or tumuli as known in Nubia, but not so far demonstrated in Pan Grave cemeteries within Egypt (however, see Effland 1999, 31).

Clearly this cemetery has been extensively plundered. The almost complete weathering of the human and animal bones suggests that this disturbance took place some time ago. Although little remains to tell us about the people who were buried here, comparison with the apparently richer and far better preserved Pan Grave cemetery at HK47 is informative.

The Pan Grave cemetery at HK47 was placed along and around a low sandy rise about 1km from the edge of the cultivation near the Wadi Khamsini on the southern edge of the site (Fig. 1). It skirts the south-eastern edge of the large Predynastic settlement locality HK54, but does not intrude

onto it. It appears that the Pan Grave people were also careful to avoid the Predynastic cemetery of HK43, which is located approximately 200m to the east. The Pan Grave cemetery is extensive. It stretches at least 100m north-south and about 50m east-west. The original wealth of the burials is apparent from the surface, which is strewn with distinctive pottery and beads mixed with large quantities of Predynastic settlement pottery. Stone is not frequent. The area for test excavation was chosen within a dense accumulation of distinctive Pan Grave pottery. No doubt plundered in ancient times, this cemetery was most recently disturbed not more than 50 years ago. Nevertheless, our excavations were extremely successful and the amount of material recovered was so great that the full 10 x 10m square could not be completed in the time allotted for this activity (Fig. 6).

The graves were dug into dry white sand and therefore organic preservation was good. This sand deposit was covered with a layer of Nile silt about 20cm thick, which served as a pavement around the graves. This silt surface, although natural, was culturally modified by the Pan Grave people (Plate 5). Not only did they cut into it for their graves and offering places, they also left their fingerprints in it, as well as the impressions of baskets and other funerary offerings (Fig. 6, features A, B, E, F).

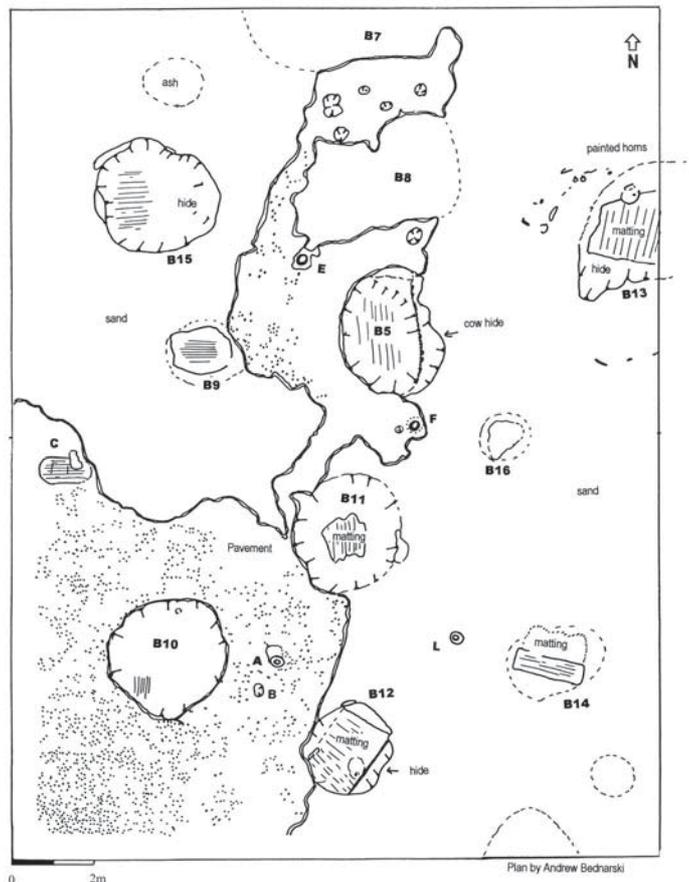


Figure 6. Plan of excavated area of Pan Grave cemetery at HK47. (Mapped by Andrew Bednarski).

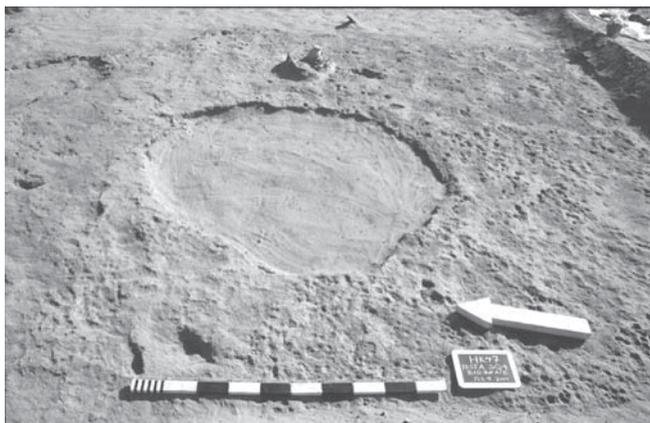


Plate 5. The culturally modified pavement around Burial 10 in the Pan Grave cemetery HK47. Feature A is in the background. (Photo by Jim Rossiter).

A number of intact pottery vessels, mainly of Egyptian manufacture, were found in holes sunk into the pavement (Fig. 6, Plate 7, features E, F). One jar was found nestled within a deposit of fine ash mixed with charred goat dung, which had been placed within a leather platter that had been left on top of the pavement (feature A, Plates 5-6). With this small marl jar was a leather bag containing a collection of stones for making carnelian beads. This kit included a flint core, three smooth pebble polishing stones, two stone palettes or grinding stones, a potsherd of marl clay ground to an oval, irregular pieces of greywacke, and five chipped carnelian cobbles. The leather of the gourd-shaped bag itself had deteriorated badly; however, it was possible to recover the band of woven beads that once decorated the shoulder or the neck of the bag (Colour Plate XXII). White, blue and dark blue faience beads were used to create a diamond pattern of a type that was popular in Nubia, especially for beaded sashes or loinclothes (e.g. Säve-Söderbergh 1989, pl.120.4; Williams 1983, 93, table 2; 1993, 114-5; Steindorff 1935, pl. 24-25). With the help of Inspector of Antiquities,



Plate 6. A Pan Grave offering deposit including a jar and bead-making kit once contained in a leather bag. HK47, feature A. (Photo by Jim Rossiter).

Osama Ismael Ahmed, the entire band of beads was lifted in position after consolidation with several coatings of a 5% solution of Paraloid B72 in acetone.

Other offering places consisted of holes in and through the pavement containing a single pot (feature F) or grain (feature B). In the areas without pavement, the loose sand was first treated with some sort of liquid or resin that made it brown and hard. Fine grey ash with charred goat dung was then added before the pot was deposited (feature L). The majority of burials were found to have been prepared in the same manner. The sand was consolidated to form a hard brown sloping floor onto which was placed, in most cases, a thin layer of ash and dung before the animal skin or mat was laid down, on which the body was deposited (see below). This liquid was also poured over an oval basket (feature C) that contained desiccated remains of a baby, cementing it to the pavement below.

The horns and frontal bones, so characteristic of Pan Grave cemeteries, were found associated with three burials (Burials 7, 11 and 13; Colour Plate XXVI); however, none were found *in situ* and the nature of their deposition is not entirely clear. An arc-shaped scatter of painted horns and Pan Grave pottery was found to the northwest of Burial 13 (Fig. 6), but was much disturbed. Dr. Salima Ikram provides a report on her initial examination of the faunal material from this cemetery below.

As stone was not easily available at this location for the construction of the tomb superstructures, it appears that the Pan Grave people instead made use of the local abundance of Predynastic potsherds and collected the surface sherds from large areas of the nearby settlements (Plate 7). All of this pottery is heavily worn and sand-blasted from lengthy exposure at the surface. The lack of fresher sherds and midden material shows that the Pan Grave cemetery has not disturbed an earlier settlement as was originally thought. Instead, they picked up the pottery from the surrounding areas, thus explaining the swept appearance of the settlement surface to the immediate west of the cemetery. It is



Plate 7. Tumulus of Predynastic potsherds over Burial 5 at Pan Grave cemetery HK47. Offering deposits features E and F are visible to the left and right respectively.



possible that similar methods were used in other Pan Grave cemeteries, such as that at Mostagedda (3100/3200), where it is reported that the ground had previously been used for Tasian - Predynastic settlement, but no settlement features were reported (Brunton 1937, 114).

The Predynastic sherds collected by the Pan Grave people reveal a cross section of time periods ranging from Nagada IIA-III. However, the early Predynastic material does not show the full range of forms one would expect from a random sampling of the surface. Instead it appears that the Pan Grave people were rather selective. They specifically avoided Predynastic black-topped pottery, perhaps as it appeared to be too similar to their own ceramic tradition. A certain appreciation of Predynastic artefacts is evinced by their reuse at other Pan Grave sites (cf. Wainwright 1920, 41, pl. XIV). In addition to pottery, flints and ground stone were collected both for the grave mounds and reuse.

The burials themselves have been severely and repeatedly plundered. Nine graves were discovered within the 10 x 7.5m area excavated. Of these, seven were fully excavated. The burials were between 0.5 and 1.5m below the surface of the pavement where present. The graves were round or oval, the majority about 1m in diameter at the base and lined with two pieces of carefully cut cowhide with the hair side inward (Plate 8). A reed mat was laid over the hide, and the body, which must have been tightly contracted, was placed upon the mat. The matting displayed a wide variety of weaving patterns (for examples see Petrie 1907, pl. XF; Säve-Söderbergh 1989, pl. 59.1), and all had been edged with leather. Either below the hide or below the matting a layer of ash from the burning of goat dung was deposited, perhaps as part of a purification ritual. In most cases, unguent had been poured onto



Plate 8. Pan Grave HK 47 Burial 12 with a lining of cow hide and matting

the sand beneath the hide to consolidate it and in some cases the sand that covered the bodies was similarly impregnated making it very sticky, and later, very hard. Because of the extensive disturbance, it is unclear whether the burials were

also covered with skins or mats (cf. Brunton 1937, 116; Wainwright 1920).

Despite the general disturbance of the graves' contents, a great deal of leather was found in and around the graves. Fragments of fine chamois-like leather, often dyed red with well-stitched seams, were recovered. This was occasionally decorated with blue faience beads or, in the case of the child buried in Burial 9, tassels of twisted leather thong (similar to, but unlikely to be, a belt like that illustrated in Wainwright 1920, pl. X.1). Thicker, brown leather was often found in folded clumps. Fragments of sandals were also recovered.

Cloth was found with frequency and was examined by Jana Jones (Macquarie University, Australia). She provides a brief report on her interesting findings below.

Weapons were also recovered. What is almost certainly a leather grip for a bow, and several arrow-shafts, some fletched with three trimmed black feathers, were found in Burial 5 (Plate 9). The arrow shafts were made of wood, 7 to 10mm in diameter (not reed as in Petrie 1907, pl. XF). Badly decomposed fragments of wood some 22mm in diameter may originate from the bow. Further arrow shafts were also found in Burials 12 and 15. One small fragment of dark hard wood (ebony?) with a rivet may possibly be from a dagger handle (cf. Brunton 1937, pl. lxxvii 2), suggesting that these burials were once richly endowed with metal weapons and tools as found in other Pan Grave cemeteries.

For the most part, only pottery (discussed below by Serena Giuliani) and items of personal adornment remain to attest to the wealth of the occupants. In addition to two penannular bone or shell earrings, several lengths of beads still on their original string or thong were recovered, providing a view of the original stringing pattern and knotting technique. Beads were prevalent and varied (Colour Plate XXV). Most common were ostrich eggshell disk beads mainly 4-5mm in diameter and on the whole larger than the examples from the C-Group cemetery. Blue faience ring beads generally 2-3mm in diameter were frequent and often found on multiple fiber strings alternating with the ostrich eggshell beads. Faience beads of a smaller size range, like those at the C-Group cemetery, were rare at HK47 and generally limited to beads used for leather decoration. The characteristic Pan Grave rectangular shell plaque beads were found in almost every grave, strung in the usual manner with leather thong. Pierced and reworked shells of *Nerita* and *Conus* sp. were also present, but infrequent. Spheroid beads of a black or deep blue colour (diameter 5mm) strung together or between lengths of ostrich eggshell disks, blue faience (diameter 9mm), carnelian (diameter 5mm) and green stone (diameter 7mm) were also found in descending order of frequency. A bracelet of garnet beads found in Burial 10 was still on the original string. Of note is the lack of cylindrical and biconical beads or the more elaborate so-called 'melon' beads (cf. Bietak 1966, pl. 33, Ia, Ib). No amulets were found.

Preservation of human material ranged from severely fragmented due to exposure to well preserved with extensive

amounts of skin and muscle remaining. However no human elements were found *in situ* within the graves. The torsos and limbs of two babies, one from the basket (feature C) and one found in the fill of Burial 11 were extremely well preserved. The hand of the child in Burial 9 and a foot in Burial 12 were similarly well preserved and covered with skin. These appear to have been naturally desiccated. As most graves were round and mats tended to be square there are very few clues as to the orientation of the bodies, although many had to have been very tightly contracted. The garnet bracelet in



Plate 9. Bow grip and possible fragments of the bow, arrow shafts and feather fletching recovered from Pan Grave HK47 Burial 5.

Burial 10 was found in the north edge of the grave close to partially articulated hand bones suggesting that the head may have been placed to the north; however, the preserved matting in Burials 13 and 14 suggest an eastward orientation.

Examination by physical anthropologists Gabriel Wrobel (Indiana University) and Jeanette Matovich (University of Alaska, Fairbanks) has shown that the people interred here were young (17-25 years of age at time of death), and mostly men of over average stature (average 178cm) with strong

muscle attachments in their legs as one might expect of military bowmen. Their relationship to the site remains to be examined - whether they were mobile troops, resident guardians, or even visiting herdsmen. The number of children interred in discrete graves (Burials 9, 14 and 16) suggests that the population included family groups living here on at least a semi-permanent basis. Despite clear evidence of animal husbandry (see Ikram below), the strong plaque deposits on the teeth indicate a diet high in soft carbohydrates, perhaps something like a porridge.

The two Pan Grave cemeteries on opposite sides of the site show interesting differences. The severe deflation and plundering of HK21A make it difficult to discuss differences in status, although the level of wealth at HK47 is hard to deny. Nevertheless the pottery at HK21A is amongst the finest known anywhere with regard to the quality of its manufacture. Very little Egyptian pottery was found at HK21A making it hard to date. Whether the apparent differences are due to time, wealth or family/tribal practices will remain unclear until further excavation is undertaken. The location of the cemeteries is also of significance. The Pan Grave

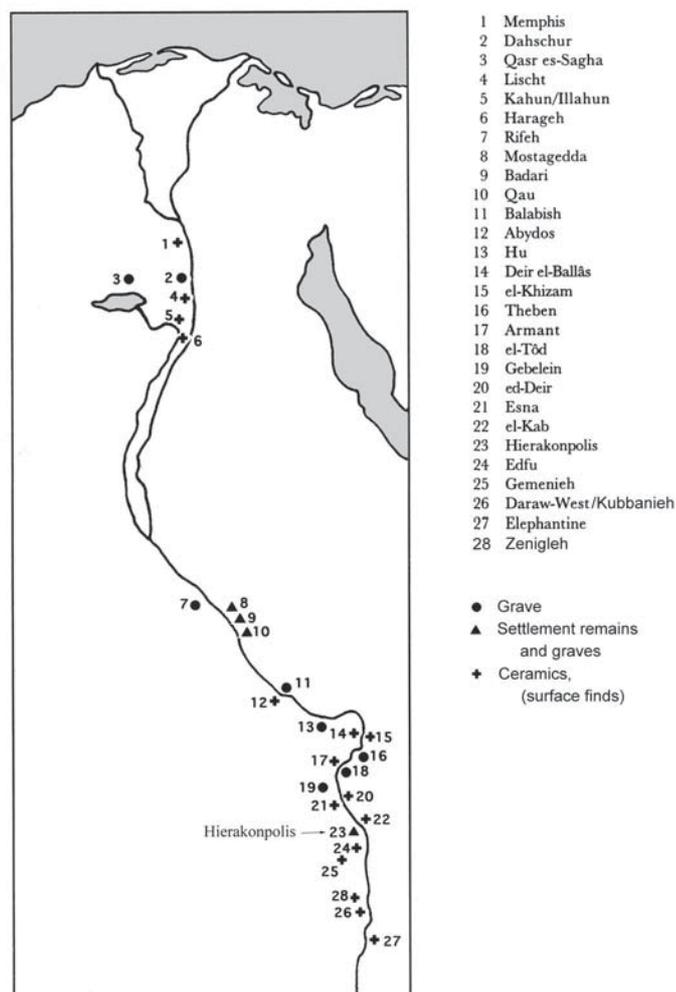


Figure 7. Findspots of the Pan Grave culture in Egypt (adapted and corrected from Meurer 1996, plan 15).



cemeteries, flanking the wadis that formed the ancient boundaries of the site, are isolated from other contemporary burial grounds. The C-Group, on the other hand, appears within or at the edges of the main burial area for the general population at that time. To date, there is little evidence that the two Nubian populations interacted with each other at least with regard to their funerary rituals.

The comparison of the Pan Grave and C-Group cemeteries shows many differences in burial practices, grave goods, and physical anthropology. The muscle attachments found amongst the C-Group were not observed on the admittedly small sample of Pan Grave bodies. Corresponding to other osteological studies (e.g. Strouhal and Jungwirth 1984) the Hierakonpolis sample shows that the Pan Grave people were taller than their C-Group neighbours and probably racially distinct. Differences in diet can also be observed from a study of the teeth.

Evidence of Pan Grave presence has been found throughout the Egyptian Nile Valley from Memphis to Aswan (Meurer 1996, 83-6), but even before the recent discoveries, a particularly high concentration could be observed in the Hierakonpolis-El Kab-Edfu region. Weigall (1907, 25-26, pl. lxxvi-lxxix; 1910, 348-9), among others, reported a great deal of Pan Grave material at El Kab and extensive cemeteries at Gemenieh and Zenigleh, to the south-west of Edfu, and sherds at Tel Edfu and the town site of Hierakonpolis (Fig. 7). The discovery at HK27 now proves the presence of a C-Group population in the area as had already been suggested by the earlier funerary stelae at Gebelein to the north (Fischer 1961) and various petroglyphs in the region to the south (eg., Cervícek 1974, 182-3; Friedman 1992). If, in addition, one adds the evidence of the ephemeral Saharan sites surveyed by Myers (Kemp 1983, 118), then a picture emerges of a fairly large, if varied, Nubian population.

In the New Kingdom, the region from Hierakonpolis to Gebel Barkal was placed under the control of the Viceroy of Kush (Säve-Söderbergh and Troy 1991, 6). While it has been argued that one of the reasons for this arrangement was to consolidate the administration of gold mines in Upper Egypt and Nubia, a sizeable (and powerful cf. Kemp 1983, 171) Nubian population as far north as Hierakonpolis may also have been a major consideration.

The Textiles from the Pan Grave Cemetery

Jana Jones

The textiles from the Pan Graves in locality HK47 consisted of fragments of medium to coarse, firmly woven plain weave linen. The component yarns were mostly single and s-spun, with occasional 2-ply, s-spun and S-twisted threads. (Plate 10). Thinning of the fabric caused by wear, and fragments of fringing and pleated linen, suggest that these were probably re-used household linens and clothing. Many were heavily impregnated with substances from the funerary ritual that made them brown and brittle.



Plate 10. Detail of warp and weft flax threads, s-spun and S-ply from HK47, Burial 5. Micrograph, in darkfield (33x).

Amongst these examples is a self-patterned cloth with a design formed by rows of raised and twisted knots, which was found attached to leather in two burials (Burials 5 and 12). The pattern was formed by rows of parallel, 2-ply weft threads laid together, then pulled out at regular intervals on the right side to form the knots (Colour Plate XXIII). It is difficult to establish whether the textile provided a 'lining'

to a leather garment, or whether it was a decorative feature worn on the outside. A similar textile, at present in the Metropolitan Museum of Art (MMA 27.3.616), was found amongst the wrappings of the 60 slain soldiers of King Mentuhotep II Nebhepetre of the Eleventh Dynasty. It was described as a Turkish-type 'bath towel' by the excavator, H. E. Winlock (1945, 31-2, pl. XXb). Although separated in time, the association of this unusual textile with warriors may not be entirely co-incidental.

The fibre in the textiles so far examined was identified as flax by microscopical examination in polarised light, at a magnification of 100-200x. An even central lumen (or canal) and 'X' shaped transverse dislocations (or nodes) characteristic of flax were observed along the length of the fibre (Manchester 1985, 16, fig. 55). However, the coarser yarns were spun from flax that had been processed so that the individual ultimates (filaments) had not been completely separated, and remained glued together in bundles as they had grown in the flax stalk (Colour Plate XXIV). This preparation is unlike that of earlier (Pre- and Early Dynastic) Egyptian flax examined by the author. Multiples of two or even three ultimates can occasionally be seen, but do not appear in such large bundles and so consistently within one textile as they do in these examples.

The tantalising question arises whether these peoples were spinning and weaving their own cloth, without the benefit of the long Egyptian tradition of linen production.

Pan Grave textiles from Mostagedda were examined during the 1920-30's by the textile specialist Thomas Midgley (1937, 132-3, 145), who could not determine whether the component fibre was flax or hemp, but suggested the latter identification. The drying-twist test, when applied to the Hierakonpolis examples, confirmed the microscopical identification of flax. As defined by Newman and Riddell (1954), when a yarn of flax is wetted and dried, the fibres twist in a clockwise direction when held upright. Hemp has an anti-clockwise drying twist.

In a letter to the excavator on the difficulties that he had encountered with the Mostagedda textiles, Midgley concluded, 'It is very puzzling'. The marvellous preservation of the textiles from Hierakonpolis combined with analysis by modern microscopical and analytical techniques will surely solve this and other 'puzzles' in coming seasons.

The Zooarchaeological Report

Salima Ikram

A preliminary examination of the animal bones, hide and dung deposits from the three different Nubian localities at Hierakonpolis was carried out in March 2001. The aims of the study were to assess species types of animals, ages at death, and the anatomical portions found.

The study had to be undertaken in a limited amount of time and therefore all results are preliminary. The cemetery at HK27 contained very little animal bone, and HK21A only a selection of limb bone shaft fragments from medium-sized mammals. At HK47, the majority of remains were horn cores of goat, *Capra hircus*. Some with attached cranial bones were decorated with red paint (Colour Plate XXVI). Most of the examples originated from juvenile animals, with some of the cores measuring as little as 39mm. The largest core measured 78mm. One of the cranial pieces to which a horn core was attached bore small knife cuts. These marks were probably made when the animal was being skinned. A gazelle (*Gazella* sp.) horn core was also recovered from HK47 Burial 7. In addition to horn cores, a few postcranial bones were also recovered including rib fragments from medium to large mammals. Other remains from medium-sized mammals (probably sheep or goat, although gazelle is also a possible component of the assemblage) include a small number of long bone shaft fragments, longitudinally broken, ribs, and vertebrae. These may have been deposited as food offerings. In addition to these, the pelvis of a male sheep/goat (probably a goat), and the distal unfused epiphysis of an ovicaprid femur were also recovered. The femur's fusion suggests that the animal was well under three years of age when it died (Silver 1963).

The majority of the hide from the lining of tombs in HK47 (Plate 8) appears to have come from black and white cattle (*Bos taurus*). The white hair has changed to a yellow on many of the samples. Some goatskin with similar colouration was also found from the area, perhaps used as bags, or for the burial of younger individuals. No sheepskin was identified. Certainly cow and goat hide is much stronger and more resilient than that of sheep, and would have been more practical as grave liners.

The faunal remains from the Pan Grave cemetery at HK47, although not as prevalent, are not notably different from those found in other, similar necropoleis. Further excavation and a more detailed examination of the zooarchaeological remains from Hierakonpolis will certainly elucidate the role of animals and their by-products in this and other Pan Grave cemeteries.



Pottery from the Nubian Cemeteries

Serena Giuliani

Cemetery HK 27

C-Group pottery

The pottery types found during the excavations at HK27 allow us to associate, without doubt, this cemetery with the C-Group Culture. Many black-topped, red slipped ware bowls typical of this culture were found in the graves and in the offering places, where they were often positioned upside down (Fig. 8e-f). The shapes of these bowls not only place them in the C-Group but show distinctive and particular details. The rim has (sometimes) been pinched and pushed slightly inward so as to create a turning point on the contour at the maximum diameter, and the black rim-band descends irregularly from the mouth of the vessel to this turning point.

The discovery of a small so-called 'milk-jar' with an incised motif depicting a cow and a calf (Fig. 4, Plate 3), well known in the C-Group pottery repertory, is particularly interesting. The fabric is full of plant and other organic inclusions, and the firing temperature seems to have been very low. This type of roughly-made jar is common in the C-Group (see, for example, Säve-Söderbergh 1989, pls 14-15, Types C1e1 and C1h; Bietak 1968, pl.7, IIa 23γ, β). From the same grave (Burial 5) is a rim sherd from a medium sized bowl of black-ware decorated with incised triangles filled with white paste. It was roughly made of an extremely friable fabric (Fig. 8g).

Egyptian pottery

The quantity of Egyptian-made pottery found in the excavation of the cemetery was much larger than the amount of Nubian-made pottery. Four hemispherical cups were found (Fig. 9b-d), made of Nile B1 and Nile B2 fabrics, following the Vienna System (Nordström and Bourriau 1993, 171-3). They have an uncoated surface, with the exception of one, which carries a rough drawing of a turtle in black pigment. The base has been cut and scraped (Fig. 9b). The cups were too few and incomplete to apply with confidence Dorothea Arnold's dating criteria, based upon the vessel index (Arnold 1988, 140-1). We may, however, suggest a date ranging from the end of the Twelfth to the middle of the Thirteenth Dynasty based upon all of the Egyptian pottery found. Further discoveries may confirm this hypothesis.

A large wheel-made bowl (Fig. 9a, Plate 2), from an offering deposit, is particularly interesting because of its surface treatment. It is painted black and red in order to copy a C-Group black-topped vessel. It is evident that the presence of black-topped bowls in funerary contexts was essential to support both cultural and religious traditions.

Several medium to large carinated bowls (Fig. 9e-h), in Nile B1 and Nile B2 fabrics, were found during the excava-

tions. They are, numerically, the most common pottery type so far excavated. The bowls have been scraped with a knife around the base. The pinched ring foot (Fig. 9g) may be compared with a late Twelfth Dynasty example from Dahshur (Arnold 1993, fig. 65B). The bowls are red slipped outside and decorated with a band of incised lines above the carination.

Several small to medium jars (Fig. 9i-j), of Marl A3 fabric (Nordström and Bourriau 1993, 177), were found in a fragmentary state in the offering places. They have a characteristic globular or bag-shaped body and are typical of Middle Kingdom pottery from Upper Egypt (cf. Petrie 1909, pls. XVII-XIX).

Fragments of large jars of Marl A3 fabric used for the storage of liquids and cereals show several techniques used in their manufacture: the rim and neck are wheel-made; the body hand-made, probably coil built with clear marks of finger smoothing on the inside; and the base is pinched. At least four of these jars have been identified, but the sherds were found so scattered over the entire area that it was extremely difficult to establish their original position. Grave 2B, however, produced a large storage jar of Nile C fabric (Nordström and Bourriau 1993, 173-4) with a spout (Fig. 9k), together with one hemispherical drinking cup (Fig. 9b). This suggests that the other large jars might originally have been laid inside the grave or upon the coffins. In addition, a very few rims of offering stands were found.

Cemetery HK 47

Pan Grave pottery

Cemetery 47 was severely plundered, but nevertheless it revealed an extraordinary richness, producing a large quantity of Nubian and Egyptian pottery found in the graves and on the surface.

The Nubian pottery can be associated, beyond any doubt, with the Pan Grave Culture, to judge from shapes, surface treatment and decoration. The character of the burials and the artefacts, other than pottery, confirms this.

We found more than 150 rims and body sherds of Nubian vessels, most of which could be reconstructed. The pottery corpus, after recording and study, was divided into preliminary classes, based upon surface treatment and technique, as well as decorative design and motifs.

The first group consists of Uncoated Ware. To this group belongs one of the most interesting vessels found during the excavation. It is a medium-sized bowl with an incised crossing pattern covering the entire external surface. The rim, however, is decorated with a pattern of vertical incised lines. The shape, with a bag-like contour, round base and direct rim, is well-known in the Pan Grave repertory. Examples of this type, though rare, are present in many cemeteries belonging to this culture (Plate 11).

The second group, Black-Topped Ware, represents the major part of the pottery from cemetery HK 47. Bowls are

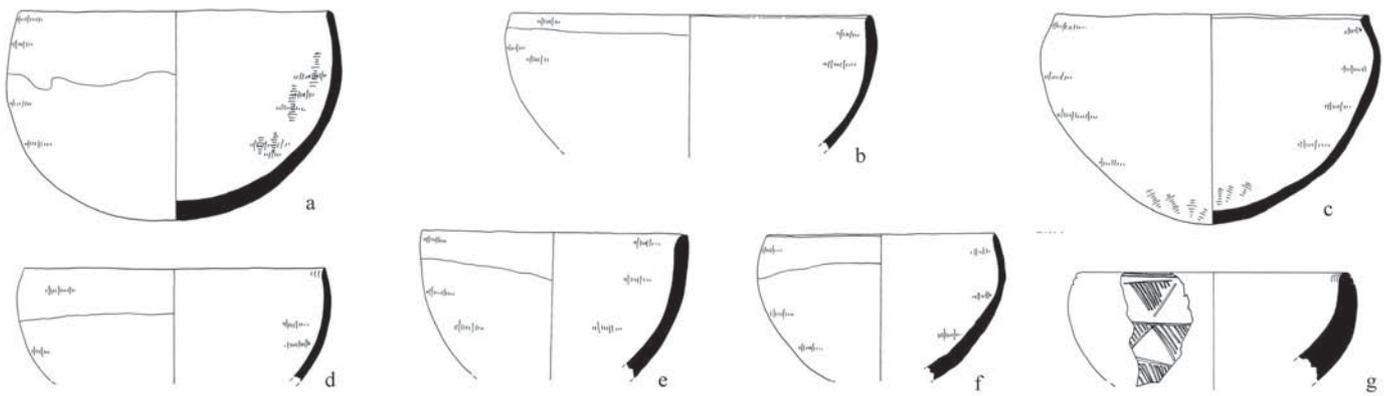


Figure 8. Nubian pottery from the C-Group cemetery HK27 (scale 1:4).

small to medium size and are characterised by an emphasis on the rim which may be offset by an incised line or by modelling of the rim itself. The bowls are burnished inside and out and almost always red slipped on the exterior (Fig. 10a-h).

A sub-division has been made within this group for those decorated with incised motifs. The decorations are concentrated in the area between the rim and the maximum diameter. Geometric motifs on the base of the bowls are much rarer. The corpus shows a large number of variations on the basic decorative motifs (herring-bone, chevron and criss-cross

patterns) (Fig. 11). Large black-topped bowls simply decorated with incised criss-cross patterns may be considered as cooking-pots (Fig. 11h-i). The fabric is quite coarse and burnt patches are present on the base. Moreover, the residue of organic material, possibly animal fat, was found on the inside wall of these bowls.

It is interesting to note the presence of a decorative design utilising the techniques of both incision and impression. In particular, the criss-cross design, which usually decorates the upper part of the vessel and is made with a comb or with a stylus, may be delimited by one or two rows of

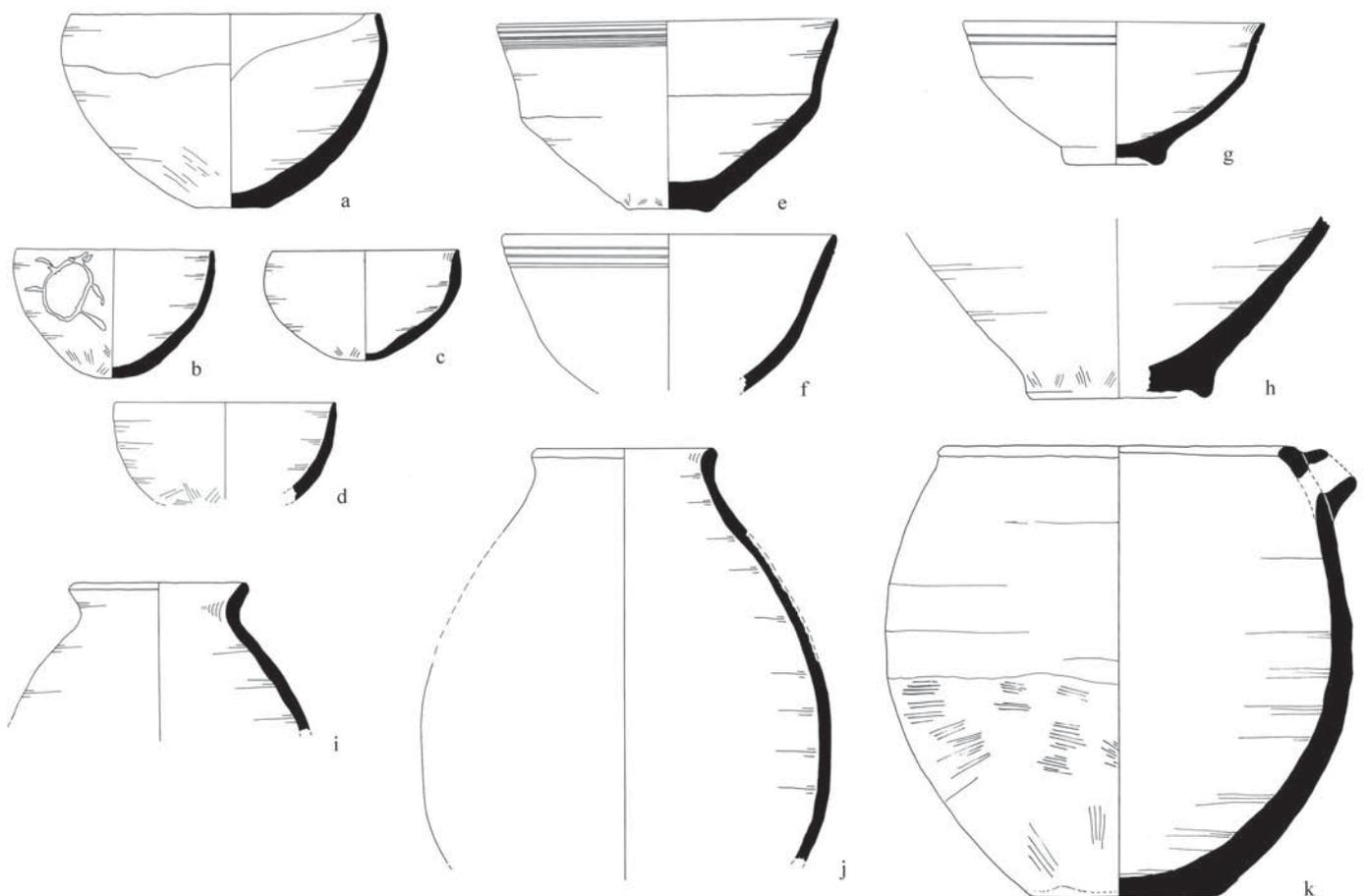


Figure 9. Egyptian-made bowls (a-h) and jars (i-k) from the C-Group cemetery HK27 (scale 1:4).

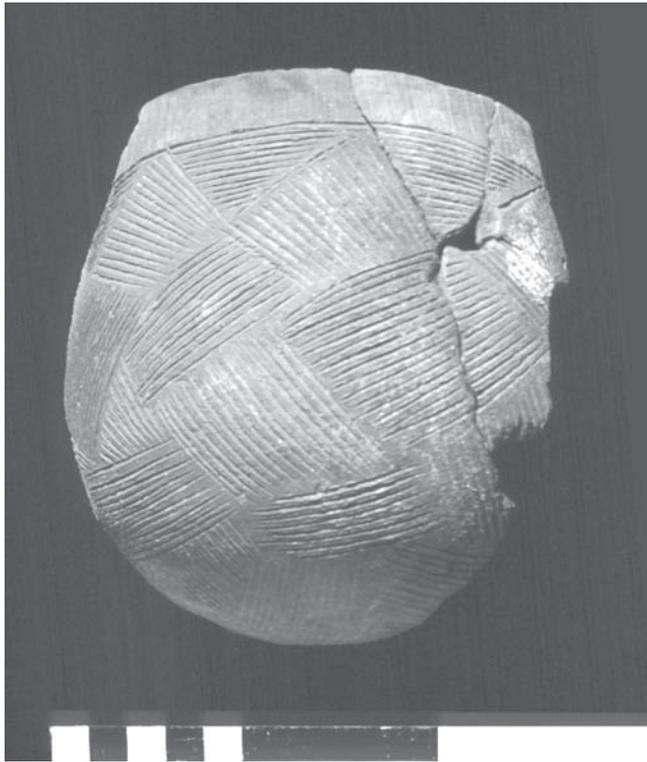


Plate 11. Uncoated bowl with incised crossing pattern, from HK47, surface (Photo by Jim Rossiter).

impressions made with a single-pointed instrument (Fig. 12a-c). This type of decoration, although rare in other Pan Grave cemeteries, is frequent in the Hierakonpolis area. This design is of great interest and will be the subject of further study.

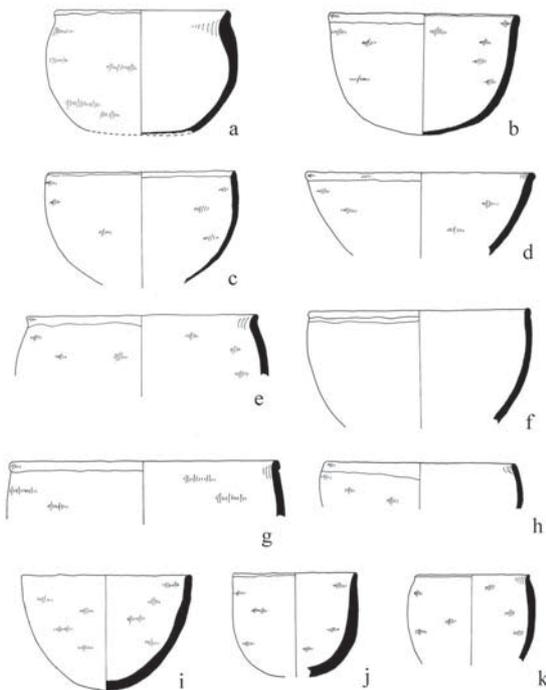


Figure 10. Black-topped and red-burnished bowls from the Pan Grave cemeteries (scale 1:4).

There are also several specimens of the ‘four-horns plate’ (Fig. 13). These are small plates for offerings, which were generally placed outside of the grave, around the tumulus. These plates are decorated with incision or impression on the external surface, with the exception of an interesting example of uncoated ware with incised motifs on both surfaces. Motifs such as the herring-bone pattern occur both outside and inside, with incised chevron patterns occurring only on the interior. Amongst these plates, one in particular exhibits a decoration made up of rows of impressed dots (Fig. 13a). The rims are usually decorated with a series of regular impressions and may be described as notched.

Two complete small bowls found *in situ* belong to a group of Red-Burnished Ware vessels (Fig. 10i-j).

A single specimen belongs to the last group, Black-Burnished Ware. It is a medium sized bowl with thin walls beautifully burnished both inside and out with a decoration incised on the rim (Fig. 12e). Even if decidedly rare, black-burnished ware is consistently present in Pan Grave assemblages.

Egyptian pottery

Egyptian pottery is present, but in a smaller quantity than the Nubian pottery. Several very fragmentary rims of small plates and hemispherical cups were found. Some fragments of pot-stands were also recovered.

We found a number of small and medium jars in both marl and Nile silt fabrics, many of which were still *in situ* in holes dug around the graves as offering deposits. In the Pan Grave repertory there are no closed shapes such as jars, so these vessels were supplied by Egyptian potters. In particular, two jars, red slipped outside (Fig. 14b-c), were found *in situ*, buried to the rim in small depressions in the ground around the main tumulus of Burial 5 (see Fig. 6, Plate 7). Dregs of beer inside a cloth straining bag were found within the taller jar, which was deposited together with a decorated leather bag filled with strips of tree bark, perhaps meant to be a pillow (feature E). A small jar, in Marl A3 fabric (Fig. 14a), was found with a leather bag containing instruments for working carnelian (feature A) probably as an offering for Burial 10.

The presence of a few Egyptian jars made of Marl C fabric (according to the Vienna System, see Nordström and Bourriau 1993, 179-180) is noteworthy. The most interesting specimen is a globular jar with a pot-mark incised on the vessel wall (Fig. 14d). Parallels are discussed by Bader (2001, 108-118) and the general type has a long history throughout the Twelfth and Thirteenth Dynasties in Lower Egypt. Vessels of this type and fabric are completely absent from the C-Group cemetery at HK 27. Further excavation is required before we can determine whether these vessels indicate that the Pan Grave people had special contact with the northern part of the country (Bourriau 1981; 1999) or whether the lack of such vessels in the C-Group cemetery is of chronological significance.

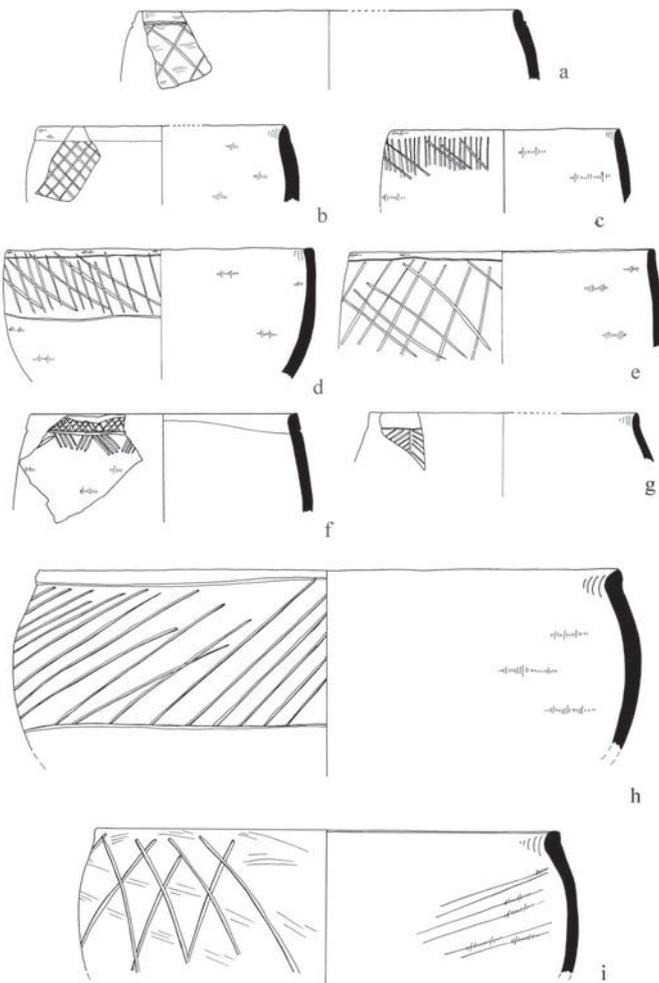


Figure 11. Vessels with incised designs from the Pan Grave cemeteries (scale 1:4).

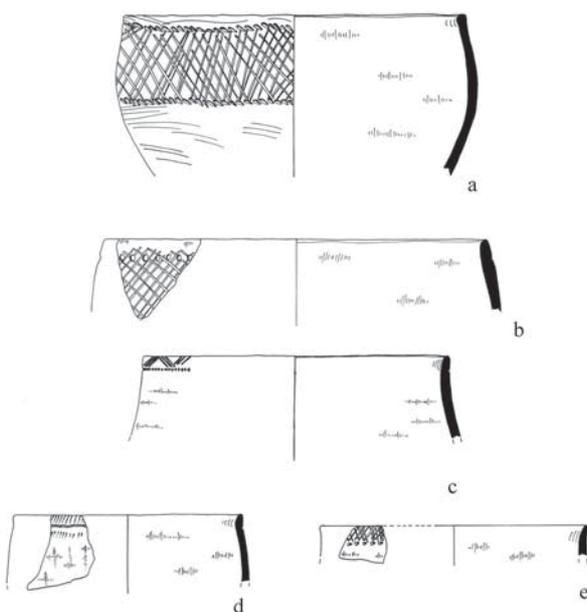


Figure 12. Vessels with incised and impressed designs from the Pan Grave cemeteries (scale 1:4).

The pottery discussed here, according to shape, surface treatment and technology, seems to belong to the very beginning of the Second Intermediate Period, if this period is considered to include the Thirteenth Dynasty, and if not, to the late Middle Kingdom.

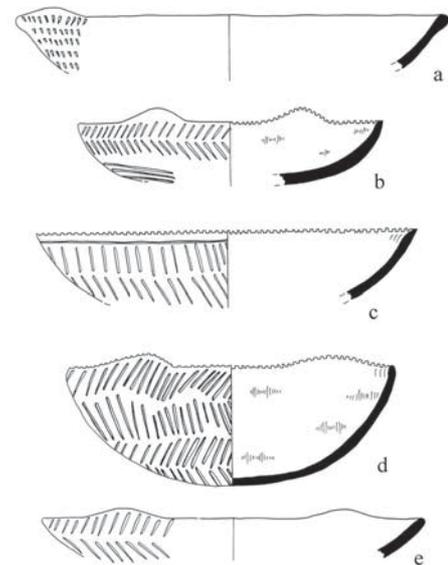


Figure 13. Four-horned plates from Pan Grave cemetery HK47 (scale 1:4).

Cemetery HK 21A

Excavations at cemetery HK 21A produced a limited quantity of pottery, all of which originated from surface layers. Egyptian pottery was hardly present at all. The very fragmentary hand-made Nubian ware was identified as belonging to the Pan Grave culture.

Pan Grave black-topped ware bowls decorated with criss-cross incised patterns were commonly found and, in a few cases, the surface treatment was so carefully carried out as to suggest the existence of a fine ware class in Pan Grave pottery.

The absence of diagnostic sherds of Egyptian pottery does not allow us to assign, even tentatively, a precise date for this cemetery, but in our present state of knowledge about Pan Grave material, the site may be dated within the Second Intermediate Period.

The presence of two rim sherds from the surface collection decorated using a 'rocker' stamp is significant, since this technique is very rare in the C-Group or Pan Grave repertoire, while it is quite frequent in the pottery of the Kerma Culture (Fig. 12d).

Conclusions

The remains at Hierakonpolis provide an opportunity to study simultaneously cemeteries of two similar yet distinct Nubian cultures. The characteristics of the cultures of the C-Group and Pan Grave peoples are well known but several new

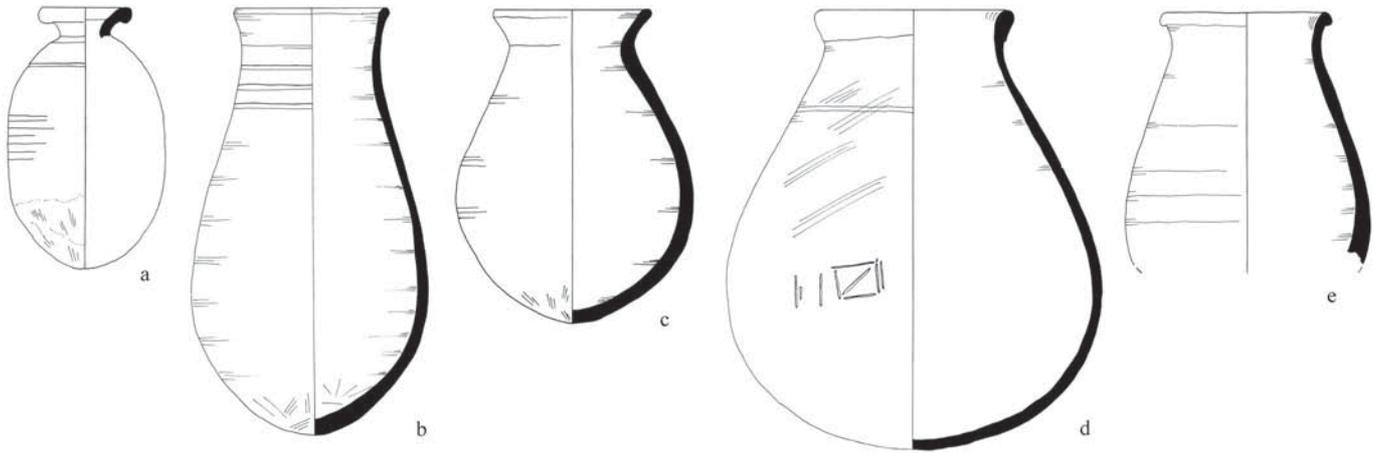


Figure 14. Egyptian-made jars from Pan Grave cemetery HK47 (scale 1:4).

observations can be made which are the preliminary results of these excavations. This material will be the subject of further study and all will be compared in more detail with finds from other Nubian cemeteries and sites.

In particular, it is worth noting that the percentages of Egyptian and Nubian pottery vary in the two most important cemeteries and that the pottery of both traditions differ between sites with regard to both technological and functional aspects. In cemetery HK 27 (C-Group) Egyptian pottery represents 80% of the total pottery production, whereas in cemetery HK 47 of the Pan Grave culture Egyptian production represents less than a third of all pottery found. It is also interesting to note that the large Egyptian storage jars found in the C-Group graves do not seem to be present in the Pan Grave cemetery, where medium to small jars were preferred, perhaps because they were easier to transport.

Last but not least, the presence of jars in Marl C in the Pan Grave burials is extremely interesting; they are of northern origin, of different shapes and fabrics from Upper Egyptian pottery, and they are completely absent from the graves in the C-Group cemetery.

All of this leads us to suggest different socio-economic models for the two Nubian communities present in the Hierakonpolis area or that there may possibly be a chronological difference of several years between the two cemeteries. It seems likely also that different socio-political relations linked the two Nubian groups to the powerful Pharaonic state.

In conclusion, the presence of a wheel-thrown bowl painted so as to resemble a black-topped Nubian bowl, found upside down in an offering place in the HK 27 cemetery of the C-Group, suggests a different use of the traditional hand-made ware and the value in which it was held. At present it is only a working hypothesis, but it suggests a function for Nubian pottery more linked to cult than to the necessities of domestic life.

Acknowledgements

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Plate XX. Hierakonpolis; the C-Group cemetery at HK27 (photo by Jim Rossiter)



*Plate XXI.
Hierakonpolis; scarab and
beads from HK27, Burial
2A (Photo by Jim Rossiter).*

*Plate XXII. Hierakonpolis;
beadwork decorating a leather
bag, from Pan Grave offering
Deposit feature A at HK47
(Photo by Jim Rossiter).*



Plate XXIII.
Hierakonpolis; self-
patterned cloth from Pan
Grave HK47 Burial 5.

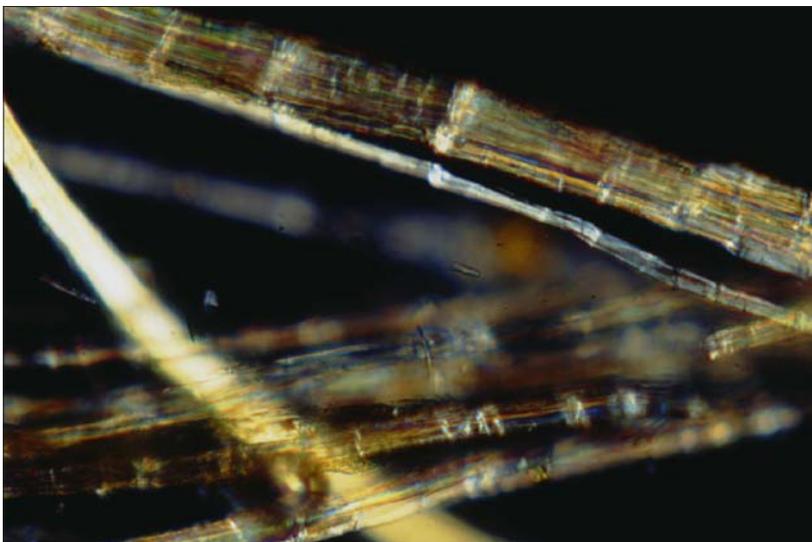


Plate XXIV. Hierakonpolis;
incompletely separated flax bundles,
with one ultimate fibre in the
process of separating, from HK47
Burial 5. Note the X-shaped
transverse dislocations as they
appear across the neighbouring
fibres. Micrograph, in polarised
light (252x).



Plate XXV. Hierakonpolis; beads from Pan Grave cemetery HK47
restrung based on the original patterns.



Plate XXVI. Hierakonpolis; horns from Pan Grave cemetery HK47.