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Front Cover: Uronarti: view along 'Middle Street' towards the southern defences in March 2004 (photo Derek A. Welshby)
Reports

Settlement and cemeteries of the Mesolithic and Early Neolithic at el-Barga (Kerma region)¹

Matthieu Honegger

The site of el-Barga, discovered during the winter of 2001, is located on the edge of the alluvial plain, 15km east of the ancient city of Kerma. Near the sandstone plateaux and the desert that extends beyond, it is one of a number of occupation sites dated to the Mesolithic and Early Neolithic periods (Colour plate XVII). The area comprises a Nubian sandstone hill upon which remains of an ancient alluvial Nile terrace survive. The prehistoric remains are found on the summit of this elevation and, in various degrees, were subject to strong wind erosion as well as destruction caused by the passage of vehicles.

Over the last three years, an excavation programme was established in order to preserve the extant remains and document these prehistoric periods, which are not well known in the area. In the north, the first discoveries have revealed habitation remains and a few burials dating to the Mesolithic (Honegger 2003). Further south is a vast cemetery comprised of numerous burials (Figure 1). The excavation of parts of this sector, dated to the beginning of the Neolithic, revealed complex funerary rituals where, for the first time in the Nile Valley, grave goods were regularly placed inside the burial pits.

Settlement and burials of the Mesolithic

In the northern sector of el-Barga, the Mesolithic occupation extends over several hundred square metres. Its presence is indicated on the surface by artefacts while a few human bones indicate the existence of burials. A surface area of approximately 200m² was excavated in the zone richest in artefacts. It revealed the remains of the semi-subterranean floor of a hut, hollowed into the Nubian sandstone. It is a sub-circular cavity slightly less than 5m in diameter, its maximum depth exceeding 50cm (Figure 2). On the east side, the walls are almost vertical, while on the west a kind of intermediate bench interrupts a more gentle slope. In the south, an elongated depression is clearly outlined. Located in the direction opposing the prevailing winds, it probably corresponds to the entrance of the hut. In the north-east, a oval pit, approximately 30cm deep, borders the central cavity. Three burials were discovered near or inside the habitation structure. One was located inside, at the level of the intermediate bench, while the other two were located on the edge.

The removal of several layers were necessary to completely empty the structure. Within the clearance of the first 30cm, the cavity contained numerous artefacts from the occupation of the site: ceramics, grinding tools, flint objects, faunal remains, shells and ostrich egg-shell beads, as well as two bone tools and a mother-of-pearl pendant (Plate 1). These objects were lodged in a slightly ashy and powdery grey sediment, partly windblown in origin. Some objects were burned and charcoal was discovered, leading one to believe that fires were lit inside the hut, despite the fact that no hearth or similar structure was preserved. The last 25cm of the fill was of a compact silt that contained a much smaller quantity of artefacts. This may represent one or more successive floors. At the moment, excavations have not yet revealed the floors of other huts, but the vast spread of artefacts suggests that the settlement was not limited to a single domestic unit. At Mesolithic sites in Central Sudan, habitation structures are infrequent and are limited to hearths and a few pits. To find buildings comparable to that of el-Barga one must turn to the Western Desert of Egypt – to Nafta Playa (Wendorf and Schild 2001, 111-146). Site

¹ Translated from the French by Caroline Rocheleau.
E-75-6, generally contemporaneous with our habitation, revealed a series of floors of huts dug at various depths into the ground. Organised in two parallel rows, these structures contained hearths and were surrounded by storage pits and water wells. The reconstruction of two of these structures resembles huts with conical roofs made of branches covered with skins.

Eleven burials can be dated without a doubt to the Mesolithic. Five others could also be attributed to this period, but their proximity to Neolithic graves prompts caution. The burial pits are generally dug at various depths, directly in the bedrock. Each contains only one individual, whose orientation and position vary from burial to burial.

Nine reasonably preserved skeletons were laid in a foetal position on their right side (five cases), on their left side (three cases) or in a supine position (one case). Most often, the cranium was oriented towards the north-east (four cases), although several other orientations were observed (north-west, south-east, north, south and west). With regards to funerary rituals, the most remarkable fact concerns the position of the limbs of certain adults (Colour plate XVIII).

In three burials, the bones of the legs, and occasionally those of the arms, were positioned in a very unusual manner, as if the bodies had been forced into a very restricted space. The tomb of a man buried at the edge of the hut is most eloquent. His body is laid in a very large pit, yet the bones of his skeleton occupy a very limited and well circumscribed

area. Before the burial, he must have been inserted into a kind of bag, probably of leather, with his legs contracted on his abdomen, in a forced position. The orientation of his tibiae and femurs is so unusual that one wonders if the lower limbs were not intentionally severed.

Data regarding the gender and the age are not always accurate because the preservation of the skeleton is frequently poor. Moreover, the determinations are still provisional and will need to be re-evaluated. Among the 11 individuals, 10 are mature and there are at least three men and two women. A single burial contained the body of a child, approximately two years of age. The majority of the adult skeletons show impressive robustness and height: large muscle attachments, thick cranium, developed mastoid processes and occipital crest, and femurs more than 50 cm long. This physiognomy stands in contrast with that of the individuals of the Neolithic cemetery, who are generally slender and shorter.

Amongst all the burials, only one individual was provided with an offering: a man beside whom a bivalve was placed. The Mesolithic tombs reported in Central Sudan sometimes contain an oyster shell; however, this practice is not frequent and it is exceptional that other objects are found in the graves (Haaland and Magid 1995, 137-146). The ritual consisting of providing the deceased with offerings or personal possessions appears to have developed at a more recent period. At el-Barga, it only appears a thousand years later in the cemetery of the southern area.

Five radiocarbon dates were obtained from samples taken from the Mesolithic occupation (Table 1). Three of them were obtained from charcoal found in the fill of the habitation structure. These provide coherent results between 7500 and 7000 cal. BC. The single shell placed in one of the burials was also analysed. It has revealed a slightly more

Plate 1. Harpoon and double bone point from the fill of the el-Barga hut. Height of the double point: 5.3 cm.
Table 1. The radiocarbon dates from el-Barga.

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Result (BP)</th>
<th>Calibration 1 sigma (BC cal)</th>
<th>Context</th>
<th>Site</th>
<th>Period</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETH 28405</td>
<td>6605 +/- 60</td>
<td>5618-5480</td>
<td>Grave 70</td>
<td>35-S</td>
<td>Early Neolithic</td>
<td>Ostrich eggshell</td>
</tr>
<tr>
<td>ETH 28406</td>
<td>6785 +/- 60</td>
<td>5727-5633</td>
<td>Grave 47b</td>
<td>35-S</td>
<td>Early Neolithic</td>
<td>Freshwater Shell</td>
</tr>
<tr>
<td>ETH 27207</td>
<td>6960 +/- 65</td>
<td>5955-5734</td>
<td>Grave 22</td>
<td>35-S</td>
<td>Early Neolithic</td>
<td>Freshwater Shell</td>
</tr>
<tr>
<td>ETH 27208</td>
<td>7045 +/- 70</td>
<td>5991-5812</td>
<td>Grave 16</td>
<td>35-S</td>
<td>Early Neolithic</td>
<td>Ostrich eggshell</td>
</tr>
<tr>
<td>ETH 27206</td>
<td>8200 +/- 65</td>
<td>7063-6827</td>
<td>Grave 33</td>
<td>35-N</td>
<td>Mesolithic</td>
<td>Freshwater Shell</td>
</tr>
<tr>
<td>ETH 27204</td>
<td>8190 +/- 70</td>
<td>7322-7077</td>
<td>Habitation structure layer 4</td>
<td>35-N</td>
<td>Mesolithic</td>
<td>Charcoal</td>
</tr>
<tr>
<td>ETH 25503</td>
<td>8340 +/- 65</td>
<td>7521-7212</td>
<td>Habitation structure layer 1</td>
<td>35-N</td>
<td>Mesolithic</td>
<td>Charcoal</td>
</tr>
<tr>
<td>ETH 27610</td>
<td>8360 +/- 60</td>
<td>7522-7333</td>
<td>Habitation structure layer 2</td>
<td>35-N</td>
<td>Mesolithic</td>
<td>Charcoal</td>
</tr>
<tr>
<td>ETH 27205</td>
<td>8730 +/- 70</td>
<td>7940-7605</td>
<td>Surface</td>
<td>35-N</td>
<td>Mesolithic</td>
<td>Ostrich eggshell</td>
</tr>
</tbody>
</table>

recent date, between 7000 and 6800 cal BC. The Mesolithic cemetery therefore appears to be slightly later than the habitation phase; however, this hypothesis would need to be confirmed by additional radiometric data. Finally, the last result appears to be much too ancient. Obtained from ostrich eggshell fragments collected on the surface, it is not associated with a well-identified archaeological event (habitation structure, tomb, etc.). It is possible that it corresponds to an earlier occupation of the area or that it is skewed by unknown factors.

The ceramics from the habitation structure bear impressed decorations made with a comb and present little variation. The style is comparable to that of the Khartoum Variant identified in the Second Cataract region (Shiner 1968). However, they are distinguished from the assemblages of Central Sudan by the absence of incised Wavy Line motifs. Orange or pale grey in colour, they are neither slipped nor polished. The temper is primarily crushed quartz pebbles.

The Early Neolithic Cemetery

The southern sector of el-Barga is occupied by a vast cemetery that has been dated to the Early Neolithic, although this is based on indirect arguments. Indeed, no domestic animal bones have been found in the burial pits; however numerous funerary offerings resemble those known in later Neolithic cemeteries in Nubia. Additionally, an axe placed within a burial is reminiscent of examples known from the Neolithic. Finally, a few sites located during the survey have revealed bones of domestic fauna together with ceramics presenting characteristics similar to those of certain pots found in the burials at el-Barga.

Erosion has caused a number of burials to appear on the surface and the excavation of these became a priority. Two areas were systematically excavated; the first sector, in the east, covers an area of 64m², while the western one covers 168m² (Figure 1). These show that the density of burials can be quite high and that the pits are dug at various depths. The lack of clues on the surface does not allow for the identification of the burials that are dug directly into the bedrock. On the other hand, the body laid within is sometimes surrounded by a series of stones or can be covered by sandstone slabs. At the moment, 64 burials can be assigned to the Neolithic cemetery. These comprise a distinct majority of immature individuals (33 cases) and women (17 cases). Only three men have been identified with certainty; however, it must be said that the number of adults whose gender cannot be determined with any degree of certainty is rather high (15 cases), due to poor preservation caused by erosion. It is conceivable that the excavated areas were designated for women and children; the burials of men most likely concentrated in other sectors of the cemetery. The bodies are generally laid in a contracted position, on their right or left side, the orientation varying from case to case (Figure 3). At this point, there is no systematic organisation as is the case in the later cemeteries at Kadruka (Reinold 2001) or in the southern Seilem Basin (Salvatori and Usai 2001). Occasionally, bodies are laid in hyper-con-
tracted positions (Plate 2). These occupy an extremely limited area, as if they had been bound or inserted in a bag or mat. These burials are generally devoid of artefacts. Lastly, intrusive burials are not rare. Generally, the oldest skeleton shows very little evidence of disturbance, as if great care had been taken in the digging of the new pit. In two cases, however, the first burial was greatly disturbed. The first case concerns a newborn whose skeleton was completely scattered and the second that of an adult man whose bones were carefully placed on the edge of the pit in order to give more space for the body of a woman. The outline of the pits being generally difficult to distinguish hints at the possible presence of simultaneous burials. However, it was impossible to prove this conclusively.

Considering its age, one of the remarkable aspects of this Neolithic cemetery resides in the richness of the funerary offerings. Approximately two thirds of adult or child burials contained artefacts (41 out of 64). The majority of the most frequently found objects are jewellery, which comprises ivory bracelets, lip plugs and earrings, as well as beaded necklaces or bracelets made with various materials (stone, ostrich eggshell, bone, shell). Other categories of objects comprise shells, palettes, some rare ceramics and a few exceptional pieces. Lip plugs, earrings and palettes are almost exclusively found in adult burials, while the other categories of artefacts are also present in child burials.

On several occasions lip plugs were found in their original position near the upper and/or lower lip of the individual (Colour plate XIX). Although numerous burials revealed only one lip plug, others contained two, four or even six. These have an elongated shape that thickens at the ends and are carved from ivory or stone (amazonite, carnelian, mesolite). The earrings are thicker and shorter than the lip plugs. Rarely found in their original position, one wonders about the function of these earrings because their shape greatly resembles that of lip plugs. The eight examples discovered were generally carved in mesolite, a single example being carved in amazonite. Beads are frequently discovered in the burials. Rarely isolated, they are more often grouped together forming bracelets or necklaces found near the neck, waist, wrists or ankles of the deceased. When carved from bone, their shape is quite varied, but rather uniform when made from ostrich egg-shells or stone (carnelian, amazonite, obsidian, fluorite, chlorite). Sometimes, small Red Sea shells (Corbis sp.) are perforated in order to be worn as necklaces. Bracelets, discovered in 22 burials, were all carved from the lower canines of hippospam. Generally occurring singly, certain burials contain two, three or even sometimes four bracelets. They are most often worn around the wrist, but can also be placed on the upper arm.

On several occasions, flat pebbles, placed near the abdomen, accompanied the deceased. One of the surfaces of these objects, which are little worked, has a small depression in the centre. Occasionally, a smaller stone, used as a grinder, accompanied them. These flat pebbles can be identified as an archaic form of the cosmetic palette (Figure 4). Their function was confirmed

Plate 2. Examples of two Neolithic burials where the bodies are laid in a hypop-contrasted position. The individuals must have been tied or inserted in a bag before being laid in the pit.

Figure 4. Examples of cosmetic palettes and the small grinders that sometimes accompany them. Scale 1:2. (Drawing M. Bert)
by two examples still covered with red pigment (hematite) found in a burial.

Finally, Nile River shells (Aspiderina sp.) or Red Sea shells (Glycymeris pectunculosa, Cypraea sp.) are frequently found in the burials. Glycymeris are found in pairs and their base is perforated to allow the passage of a string. In fact, they are really little boxes.

The other categories of funerary artefacts are much less frequent. They include four vessels, two chisels (?) carved from a giraffe bone, an axe blade, a serpent-shaped object, a fragment of hematite and a spheroidal pebble of polished carnelian. The ceramic vessels necessitate further comments (Figure 5). These are represented by only four examples fashioned from a clay mixed with a temper of quartz grains, which are finer and less numerous than in the ceramics found in the Mesolithic habitation structure. Two vessels have a well defined, flat base and a pair of double suspension holes drilled through the rim. To our knowledge, these shapes have no equivalent in the Neolithic of the Sudan. If the smaller vessel only presents a polished surface without any decoration, the exterior surface of the second vessel is decorated with successive combed impressions or "dotted wavy line" type motifs. The other two vessels are a small hemispherical bowl decorated with an incised herringbone pattern and a vessel with a more open shape and a narrow base, similar to certain examples of the Khartoum Mesolithic.
The number of these vessels is much too small to establish comparisons, but they nevertheless demonstrate from a cultural point of view the profound originality of the Neolithic of el-Barga. An attempt at classification of the burials based on the richness of the funerary deposits is premature at the moment. The corpus is still too limited considering that numerous burials were partially destroyed by erosion. Moreover, the low number of male burials does not allow a comparison based on gender. Nonetheless, considering the quantity and the variety of objects, it can be pointed out that the most richly furnished ones are female burials. However, taking into account the exceptional character of the offerings, it is the tomb of a six-year-old child that truly stands out. In addition to a Nile River shell and some ostrich eggshell beads, two quartzite palettes were deposited near the body, something rather unusual for a non-adult individual. Yet the most astonishing objects are completely different in nature: two chisels (?) carved from the metacarpal of a giraffe and a long axe blade, of which the cutting edge is not sharpened (Figure 6).

Four radiocarbon dates were obtained from the material found in the burials (Table 1). These indicate the use of the cemetery in the period between 6000 and 5500 cal. BC. Additionally, these demonstrate that the area was occupied for an extensive period, approximately four to five centuries. The period covered by this cemetery is currently unknown elsewhere in Nubia. Indeed, other than el-Barga, there are no archaeological assemblages documenting the passage from the end of the Mesolithic to the beginning of the Neolithic. Therefore it is hoped that future excavations will increase our knowledge of this period and help determine the economic status of these societies.

**Bibliography**


Colour plate I. Amri to Khobekan Survey. Site 4-F-71. Gilded udjat eye from a pit within the enclosure wall to the east of the offering chapel of the pyramid.

Colour plate II. Amri to Khobekan Survey. Site 4-F-71. Metal rings coated in a yellow powder.

Colour plate III. Amri to Khobekan Survey. Site 4-F-71. The eastern end of the enclosure with quarry pits outside and pits of uncertain function within.
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Colour plate V. The Central Amri-Kirbukan Survey. Umm Melyekta. Finds group from Post-Maritime burial (364), including two beer jars, a bowl and an oil bottle. One beer jar has a painted scene of hunting and a cow.

Colour plate VII. The Central Amri-Kirbukan Survey. Murrutu painted sherds from Umm Muri.
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Colour plate X. Ishashi. Percussion stones with extensive percussion marks in differing states of patination (3-J-51).
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Colour plate XVIII. El-Barga. Examples of Mesolithic burials where the body of the individual was inserted into a container made of perishable matter (matting, leather bag). The forced positioning of certain bones, notably those of the legs, confirms that the bodies were inserted into small-size containers.

Colour plate XIX. El-Barga. Examples of jewellery discovered in the Neolithic burials. Left: burial of a child with a hippopotamus ivory bracelet and a necklace with bone and amethystite beads. Right: burial of a woman with ivory lip plugs found in their original position.
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Ripple-wear pot from Grave 33
dated 5860 ± 80 BP (scale 1:4).

Colour plate XXI. Cemetery R12.
Rocker-dotted zigzag decorated
bowl from Grave 136, dating
around 5800 BP (scale 1:4).


Colour plate XXV.
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Colour plate XXVI. Hierakonpolis. Tombs and stone offering platform of Tomb 17, HK27C.

Colour plate XXVII. Hierakonpolis. Elephant shell, beads and polished cow-horn ornament from Tomb 22, HK27C.