Archaeological Survey on the Right Bank of the Nile between Kareima and Abu Hamed: a brief overview

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At the beginning of 1996, the Gdańsk Archaeological Museum Expedition (GAME), was asked by the Sudanese Antiquities Service to join a combined effort aimed at rescuing archaeological sites within the endangered Fourth Cataract zone (see Salah Mohamed Ahmed, this volume). Sites in this area are threatened by the proposed construction of a dam on the Nile, situated approximately 35km upstream from the town of Merowe. This major engineering work will result in the creation of an artificial reservoir extending 170km upstream from the dam as far as Ras el-Gezira on Mograt Island. The reservoir will cover a total area of 724km².

Realising the importance of the salvage task, GAME decided to postpone its plans for excavating the Meroitic temple complex at Awalib, near Shendi (Paner 1997; Borcowski, this volume), and concentrate on the dam project (Figure 1).

The mission was led by Henryk Paner, Director of the Gdańsk Archaeological Museum. The remaining team members were Zbigniew Borcowski, Elżbieta Kołosowska and Mahmoud el-Tayeb (archaeologists), Aleksandra Pudło (anthropologist), Adam Kamrowski and Marcin Szmit (geomaticians) and Andrzej Błażyński (ethnographer).

The area we originally intended to survey spans the right bank of the Nile, between the towns of Kareima and Abu Hamed — a distance of about 250km. In 2002, because engineering works in the dam region were about to start, following discussions with the Sudanese authorities we decided to limit our survey to a 130-km-long section, from Kareima to the recently discovered fortress at Redab. Nevertheless, a preliminary reconnaissance was carried out across the remaining area, up to Abu Hamed, and 23 new sites were added to our database. These included fortresses at el-Kueb (Meroitic/Christian period), el-Kab (Christian period), and the previously unrecorded fortress at Redab, whose walls survive up to a height of 4–5m. Tumulus cemeteries ranging in date from the late Neolithic to the post-Meroitic period were registered at el-Baras, Abu Teen, Galabra, Gennefab, Asaliya, At-Tibna, Kir, Dawagiya, Gerif and Salmiya. Several open-plan settlements and rock art sites were also recorded. In addition, the whole of GAME’s original concession was photographed from the air.

This section of the Nile’s right bank has never previously been systematically surveyed and the archaeology of the area remains largely unknown, although a brief summary of research in the Fourth Cataract region, up to 1990, had been compiled by Krzysztof Grzymski (1990).

To this day very few detailed maps of this territory are available. As a result GPS technology was very important for accurately registering the location of any sites we discovered. Thanks to the use of a reference station, giving readings accurate to within a few centimetres, we were also able to use our GPS equipment to make site plans, quickly calculate the surface area of sites and record the positions and size of individual features.

At the same time we also documented many local names of villages, hamlets, and topographical features not marked on any maps, and which probably will soon be forgotten.

The area we examined is very diverse. The first section comprises a broad strip of arable land (about 500–800m wide) stretching along the edge of the Nile, beyond which most of the hamlets and villages are situated. This terrain is mainly flat with occasional rocky hills that start to appear at the northern edge of Kassinger village. Archaeological observation in this tract is made difficult by vegetation and a dense network of dikes. In addition, although the bank itself is quite high in most places, the area still suffers from periodic flooding which results in the accumulation of silt layers covering traces of previous habitation. Further from the river, immediately behind the modern houses, extends the desert or semi-desert, covered sporadically with clusters of wild shrubs.

Proceeding upstream from Kareima, the terrain is sandy, slightly undulating, giving way further north to gravel terraces, with isolated, flat-topped jebels. The wadis which cut across this area are mostly flat-bottomed and wide. The

1 Up until 2002 this operation was known as the Hamdab Project, hence all of the sites recorded by GAME in the Fourth Cataract region have numbers preceded by the abbreviation HP.

2 Information relating to all sites, features and artefacts is entered into the Oracle-based database management system Fibula developed by the Gdańsk Archaeological Museum.
topography changes further upstream. The land there is rocky with a maze of deep khors separating groups of boulder hills and occasional valleys (Plate 1).

We started our survey from the eastern edge of Kareima and continued upstream, working within an area extending some 1.5–3km inland from the Nile. Special attention was paid to distinctive topographical features — jebels, outcrops, isolated boulder hills, banks of wadis and khors, caves, etc. Where possible, each section of the survey was preceded by interviews with the local inhabitants.

A catalogue of sites was created by recording not only easily noticeable features but also any significant scatters of pottery and stone artefacts. All of the information about these sites was recorded on pre-printed forms. Site finds were mostly photographed in situ. Only the most diagnostic material, as well as artefacts not immediately identifiable, were collected for further processing at our base camp and stored for later study.

 Altogether, from 1996 to 2003 GAME carried out survey work over five seasons, with the most recent two seasons of the last seven years being devoted to sondages and larger excavations, as well as detailed topographical recording of selected sites. Excavations were conducted at 18 locations, including 13 burial sites and five settlements. The area surveyed is rich in traces of human occupation dating from all periods. A total of 711 sites were recorded, ranging in chronology from the Palaeolithic to the Islamic period.

Evidence of Palaeolithic occupation was found at nearly 30 sites (larger concentrations being noted near Kassinger, el-Ghanawab, el-Argub, el-Suegi and Abu Heragile). Most lie between several hundred metres and 2km away from the Nile, often at the foot of a rocky plateau. Some of these sites are located in striking landscapes where natural shelters occur amongst eroded rock formations (Plate 2). Most of the finds from our Palaeolithic sites were Levallois-type tools made from chert, quartz and sandstone.

Thirty sites were simply registered as Stone Age, because there was very little diagnostic material on which to base more detailed dating.

Only seven Mesolithic sites were noted. The presence at many sites of single fragments of wavy line and dotted wavy line type pottery could simply reflect the continuation of older technological and decorative traditions, thus these sites were attributed to the early Neolithic period.

The Neolithic witnessed a boom in settlement evidence. Of the total number of 711 sites recorded over 240 yielded ceramic, stone and flint artefacts dating from this period. Some Neolithic settlements tended to be located on higher terrain within natural hollows. Oval and circular stone structures up to 1.5m in diameter probably represent hearths. Larger concentrations of stones (also circular in plan but with larger diameters) may possibly mark the remains of dwellings which were made from organic materials.

Querns and grinders were also found at these sites. Agate was among the raw materials used for making tools, with white quartz becoming increasingly popular on late Neolithic sites. Levallois or similar techniques still appear to have been the most common. The pottery of this period is hard, richly decorated and well-fired with large pieces of mica easily visible to the naked eye. This indicates that the raw materials used for making this pottery originate from the Precambrian basement complex, which was never covered by Nile alluvium in the Fourth Cataract region. Laboratory analyses showed that wavy line and dotted wavy lines sherds are similar in composition to the Neolithic pottery of Group 1 from Kadada (Daszkiewicz et al. 2002).

No recognisable Neolithic forms of burial were noted in our survey region.

One of the most valuable results of our survey work was the discovery of over 90 sites with Kerma culture material, including nearly 30 cemeteries (Figure 2). The majority of settlement sites lie between the villages of Argub and Khosh el-Guruf, mostly in or near the Nile floodplain. Site HP221, near el-Argub, in the valley of the Wadi Umm Rahau, is especially interesting (Colour plate X). This is a large settlement occupying several dozen hectares. A number of stone structures visible on its surface represent the remains of dwellings (Colour plate XI). Sondages indicate that these were dug about 600mm into the ground and were equipped with
posts which probably held up a roof. This site was rich in finds — mostly pottery dating from the Classic Kerma period. Egyptian imports were also noted. The middle of the site was covered in quern and grinder fragments, numbering 69 to over 100 pieces per 100m². flakes of white quartz were also very common. Other finds included one fragment of a bronze object and part of a clay bovid figurine. Cosmetic palettes, pottery smoothing tools and axe-heads were among the other stone artefacts discovered at this site.

Not far from site HP221, on the edge of a rocky plateau, we recorded two partially robbed cemeteries (HP239 and HP261), which also had Kerma culture materials. Site HP239 (Plate 3) included a Middle Kerma burial containing six pottery vessels, a faience-bead-necklace and a sacrificed ram (Plate 4). This grave was marked by a ring of stones (about 4m in diameter), which was not immediately noticeable among the large quantity of stone scattered across the site’s surface. The burial pit itself was also lined with large, irregularly laid stones.

At site HP261 we excavated five of the 40 graves which we recorded (Plate 5). Their circular or oval superstructures were made of sand and gravel, and measured 3–4m in diameter. The burial pits were rectangular and often stone-lined. Most bodies lay in a strongly flexed position on their right side, with the head pointing east and the face looking north, though not all adhered strictly to this orientation. Pottery found in these graves dates from the Classic Kerma period. One imported Egyptian vessel was noted among the grave goods, as was the remains of a wooden bed or stretcher.

Thus, in our survey region we found Kerma cultural material dating from the Middle, Classic and Terminal Kerma periods. Laboratory analysis results indicate that at least some of the Kerma-type pottery was produced locally in the Fourth Cataract region. However, much of the ceramic assemblage represents imports from the Kerma region or is similar to vessels from the C-Group and Pan Grave Cultures (Daszkiewicz et al. 2002). Therefore, we have to consider whether the Fourth Cataract sites where we found Kerma materials really belong to this culture or whether they represent a different local culture which had some contact with Kerma and other societies. At present it is difficult to establish one clear answer to this question. As current research results have enabled only some aspects of the culture present
in the Fourth Cataract region to be identified, it might be worth considering the introduction of a new term to refer to these local cultural assemblages.

Over 50 sites, mainly cemeteries, were dated between the late Kerma and Napatan periods (Figure 3). We noted a grave type not previously seen during this period in this particular region and decided to call these tombs ‘dome graves’ (Plate 6). This name was first suggested three years ago at the Nubiological Conference organised annually in Poland by the Gdański Archaeological Museum. The graves in question are circular in plan. The diameter of the base measures from 2.5 to 6m. The walls of the superstructure are built up concentrically, rather like an igloo, with the top of the tomb sealed with a layer of large stone slabs (Plate 7).

The height of these structures ranges from 1.6 to 2.5m, and their internal diameters measure 1.3–1.8m. The body was laid in a very shallow pit or on the natural ground surface, which is easy to understand given the fact that these tombs were usually situated on high, rocky terrain. Because these graves are so striking in form and located on the tops of hills where they are easily noticeable, they were already heavily robbed in antiquity. The only in situ artefacts which we found in any of the dome graves that we examined were a few carnelian beads, analogous to ones dating from the late Kerma period. Quite often the tombs had been dismantled to the point where they resembled ring tumuli. Pottery sherds occurred both in and around these structures.

Dome graves first appear about 50km north-east of Kareima, near Hosh el-Turuk and el-Argub. From then on they occur throughout the 130-km-long stretch of terrain examined by us — fewer examples of these tombs being noted in the area between el-Suegi and Khosh el-Guruf up to el-Jebel, where larger concentrations appear again. To date we have recorded around 260 dome graves at 40 cemeteries. On average each cemetery contains six to 20 graves, the largest burial site numbering 60 graves.

Very few traces of occupation dating from the Napatan (34) and Meroitic (37) periods were observed in our concession area. An unusual example of a Meroitic grave was found near Jebel el-Fiaal. It had two stone stelae at its head, and the burial pit was covered by stone slabs (Plate 8). We came across some even more unusual Meroitic features in a neighbouring area. These consisted of a number of clearly defined, rectangular superstructures, which when excavated revealed absolutely nothing (Plate 9).

One of the most interesting discoveries among the post-
Meroitic sites recorded during our fieldwork were the double-chambered graves at sites HP45 and HP47, near Kassinger Bahri (Paner 1998). At site HP45, the larger of the two chambers contained a skeleton concealed beneath a coloured blanket and accompanied by eight ceramic vessels and an animal offering (Plate 10). The body had been placed on a raised platform that was covered with a goatskin. Laboratory analysis revealed that the red-blue-and-yellow-striped blanket was made of camelhair. The individual was wrapped in a yellow, woollen shroud. A leather skirt or apron was found around the pelvis. The head was adorned with a diadem made of faience and ostrich eggshell beads. Other double-chambered graves have been noted in Khosh el-Guruf and in el-Haraz on the left bank of the Nile. Despite the characteristic post-Meroitic form of these burials, laboratory analysis of the pottery from sites 45 and 47 suggests that they date from the early Christian period.

The most common Christian period sites noted in our region were settlements (153) and box grave cemeteries (33). We also recorded five fortresses, two of which (Redab and Haraz) were previously unreported (Colour plate XII, Plate 11). The other fortresses were at el-Suegi, el-Kuweb and el-Kab.

Later sites included interesting examples of Islamic dwellings and fortified residences (Ab-Gahoia and Hosh el-Turuk).

Over 50 sites with various types of rock-art were discovered during our fieldwork. Mostly these represent numerous animals, both wild and domesticate (Plate 12), although occasionally narrative scenes and human figures occur. Particularly large concentrations of rock-drawings were found near the villages of Kujra, Simit Sheriq and Ab-Sayal.

GAME’s survey work in the Fourth Cataract region has brought to light a large number of interesting new pottery finds. Identifying these ceramics and attributing them to specific chronologies and technologies is, however, fraught with difficulties, as no comparative material is available. In response to this problem the Gdañsk mission is working on the creation of a Nubian pottery reference collection based both on typological and laboratory analyses (Daszkiewicz and Bobryk 2003; Kołosowska and el-Tayeb 2003; Daszkiewicz et al. 2002).

Pottery selected for laboratory studies is examined using MGR analysis (Matrix Group by Refiring). This involves the refiring of samples from ceramic vessels at a series of different temperatures until the temperature at which the pottery was originally fired is exceeded. This enables raw material groups to be established for the analysed materials. The next phase of laboratory research is chemical analysis, which reveals the chemical composition of sherds and is of great significance in ascertaining their provenance. Samples of pottery were also examined in thin-section to identify the non-plastic components of any tempering materials.

3 Laboratory analysis of dyestuffs was carried out by Christian-Herbert Fischer of the Hahn-Meitner Institute, Berlin.
The final phase of laboratory studies involves technological analysis (using the K-H method), which indicates how the ceramic body from which vessels were made was prepared and at what temperature the pottery was fired. An assessment is also made of the permeability and resistance to thermal shock of pottery samples, which helps determine the function of the vessels analysed.

The results of these analyses show which wares were locally produced and which were imported, and also allow the techniques used in their manufacture to be identified. Naturally, this is very useful in the study of cultural exchange and changes in production technology during different periods.

Most of the ceramological laboratory analyses conducted to date have been carried out by Małgorzata Daszkiewicz of ARCHEA Warsaw, in co-operation with Gerwulf Schneider from the Laboratory of the Arbeitsgruppe Archaeometric FU-Berlin, and Ewa Bobryk from the Technical University of Warsaw. Selected samples have also undergone thermoluminescence dating, carried out by Christian Goedicke of the Rathgen Forschungslabor Berlin.

A number of other topics also deserve further, more detailed research: separate projects relating to Stone Age settlement, the Kerma Horizon, the development of fortifications and the rock-art in the Fourth Cataract would all be of great value in gaining a better understanding of this region’s rich and varied past.

### Bibliography


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Colour plate X. Gdańsk Archaeological Museum Expedition. Aerial view of site HP221.

Colour plate XI. GAME. Stone feature representing the remains of a dwelling at site HP221.

Colour plate XII. GAME. Reda fort.