The Printing of this Volume is Financed by
The Middle Eastern Culture Centre in JAPAN

All Correspondence to be addressed to:
Editor, KUSH, National Corporation for Antiquities and Museums,
P.O.Box 178.
Khartoum - Sudan

All rights reserved to the Editor
VOLUME XVII. 1997

Editorial Notes .............................................................................................................7

Hassan Hussein Idress

Articles:

EXCAVATING THE PALACE OF NATAKAMANI AT .............................................12

NAPTA: THE ENTRANCES

Alessandro Roccati

RESULTS OF THE PRELIMINARY STUDIES OF STONE

MONUMENTS OF THE SOUTHERN RED SEA HILLS, SUDAN .................19

Anwar A. Magid, Kmit Krzywinski and Richard H. Pierce

PREHISTORIC INVESTIGATION IN THE WADI HOWAR REGION:

A PRELIMINARY REPORT ON THE 1995-1996 SEASON .............................33

Brigit Keding

HABITAT A GRICOLE KERMA DE GISME L ARBA, CAMPAIGN ..................47

B. Gratien

ARCHAEOLOGICAL MISSION OF THE UNIVERSITY OF GENEVA

TO KERMA (SUDAN) REPORT ON THE 1994-1995 CAMPAIGN ................... 59

C. Bonne

APRELIMINARY REPORT ON THE EXCAVATIONS OF 1994-1995 .............69

D.N Edwards and P.J Rose

THE SARS SURVEY IN THE NORTHERN DONGOLLA REACH:

PRELIMINARY REPORT ON THE THIRD SEASON 1994-1995 ...................85

Derek A. Welsby

TWO SEASONS IN SAI ISLAND (1993-1995)

APRELIMINARY REPORT .............................................................................95

Francis Geus
ARCHAEOLOGICAL SUDAN MISSION FUNDACIO
ARQUEOLOGICA CLOS, BARCELONA (SPAIN).................................108
FRANCESCA BERENGUER
KHARTOUM - ATBARA ROAD RESCUE PROJECT
SHENDI - BEGRAWIYA SECTION FIELD REPORT..........................137
Henryk Paner
APROGRAMME OF EXTENSIVE
EXCVATION IN THE GEILI REGION.............................................156
Isabella Caneva
Two FIELD SEASONS IN THE NAPATA REGION..............................162
I. Livererani
FOUILLLES A SADEINGA 1965-1995 PUBLICATIONS..........................186
Jean Leclant et C. Berger
B. S. F.D. A.S un quart de siècle de coopération archéologique..........197
Jaques Reinold
CANADIAN EXPEDITION TO NUBIA, THE 1994
SEASON AT HAMBUKOL IN THE LETTI BASIN.................................231
Krzystof Grzymski
CANADIA EXCAVATIONS AT HAMBUKOL,
OCTOBER -DECEMBER 1993 ..................................................236
Krzystof Grzymski
CERAMIC FROM THE SUDAN ARCHAEOLOGICAL RESEARCH SOCIETY
SURVEY BEGRAWIYA TO ATBARA 1993-1994 ................................244
L. Smith
INTERIM REPORT MEROE ....................................................267
Michael Millinson
FROM PYRAMIDS AT MEROE TO TUMULUS AT EL HOBAGI
IMPERIAL GRAVES OF THE LATE MEROITIC CULTURE ........................................... 289
Patrice Lenoble
THE "TIRKEEN" WAS IT ANAPATAN DISH ................................................................. 309
Salah Mohamed Ahmed
PRELIMINARY NOTE ON THE EXCAVATION AT EL USHARA
: SITE NUMBER NE. 36-0/1-1..................................................................................... 313
Salah Omer Al Sadig
EXCVATIONS AT GEBEL BARKAL, 1996. REPORT ON
THE MUSEUM OF FINE ARTS, BOSTON, SUDAN MISSION................................... 320
Timothy Kendall
THE SPANISH ARCHAEOLOGICAL WORK AT
THE BLUE NILE (KHARTOUM PROVINCE ).......................................................... 355
Victor Fernandez, Alfredo Jimeno, Mario Meneno
OBITUARY:
Nigm El Din Mohammed Sherif, Ahmed Mohammed
Ali Hakem, Thabit Hassan Thabit .............................................................................. 379
Hassan Hussein Idress
EDITORIAL NOTES

The National Corporation for Antiquities and Museum (NCAM) has the pleasure to present Kush Volume XVII. This volume covers 1994 - 1996 and includes activities of the NCAM and the foreign missions working in Sudan according to the Antiquities Ordinance, during this period. We apologize for the delay in the publication of this issue.

Articles in English, French and Arabic are incorporated in this volume and cover work conducted in the areas of archaeological survey, excavation, internal and external exhibitions, and reconstruction and conservation projects for the protection of antiquities.

We would like to express our gratitude to H.I.H. Prince Takahito Mikasa of Japan and to the other members of the Middle Eastern Cultural Centre in Japan for their generous financial assistance with the printing of this volume. Unlimited thanks to all who participated in this issue.

We hope that our authors will be generous with their responses and in providing us with future contributions.

The NCAM witnessed intensive activity in the fields of archaeological survey and excavation; many cultural agreements were signed with friendly foreign missions to encourage scientific research and to facilitate the rescue, preservation, and the rehabilitation for tourism of many archaeological sites, in order to cast light upon Sudanese history and culture and to introduce it to both the citizen and foreign. The NCAM began an annual exhibition of recently discovered archaeological artefacts in Professor Nigm Ed Din Mohammed Sherif Hall in the Sudan National Museum. The first exhibition was held in 1995 and the second in 1996. The third is currently under preparation. Moreover, an exhibition of Sudanese culture and history entitled "The Sudan, Ancient Kingdoms On The Nile", was exhibited in Munich, Germany, from October 1996 to January 1997. It was transferred to Paris, France and opened in the Arab World Institute in February 1997. This exhibition will tour several European cities including Amsterdam, Netherlands (Sept.
1997), Toulouse, France, and Manheim, Germany (Sept. 1998). A
catalogue of the exhibition has been prepared in German, French, English,
Arabic and Dutch.

According to state government polices, the NCAM has created a
strategy to establish a museum in every state and at many archaeological
sites. Examples include the Barkal museum at Karima, Kerma museum
at Kerma, and the Trapel museum at Al Begrawiya. Antiquities offices
will be opened in the northern, southern, western, and eastern sectors of
Sudan. These offices will assist in executing archaeological and
ethnographic survey projects, enabling additions to be made to the
archaeological map of the Sudan, and facilitate rehabilitation and salvage
programs.

Archaeological work is covered in the Sudan by foreign missions,
Sudanese universities and NCAM. Currently, twenty two missions are
engaged in field work. These archaeological missions include:

1. The French mission of the university of Lille.
   Director: F. Geus
   Site: Sai Island, Northern State

2. The French mission the University of lille
   Director: B. Gratien
   Site: Qism el Arba, Northern State.

   Directors: J. Leclant and C. Berger
   Site: Sedeinga, Northern State

4. The Swiss mission of the University of Geneva.
   Director: C. Bonnet
   Site: Kerma, Northern State

5. The British mission of the Sudan Archaeological Research Society
   (SARS) and the British Museum.
   Director: D. Welsby
   Site: Wadi el Khowi, Northern State

6. The French Unit in Sudan of the National Corporation for
   Antiquities and Museums (NCAM).
   Director: J. Reinold
   Site: Kadruka, Northern State.
7. The American mission of the University of California, Los Angeles.
   Director: S. Smith
   Site: El Khandag to Hannek, Northern State.

8. The Polish mission of the Polish Academy of Science.
   Director: S. Jakobielski
   Site: Old Dongola, Northern State

   Director: K. Grzymski
   Site: Hambukol and Letti, Basin, Northern State.

10. The Italian mission of the University of Rome.
    Directors: S. Donadoni and A. Roccati
    Site: Jebel Barkal, Northern State.

11. The Spanish mission of the Clos Foundation.
    Director: A. Luna
    Site: Jebel Barkal, Northern State

    Director: Timothy Kindal
    Site: Jebel Barkal, Northern State

13. The Sudanese and Italian Joint mission of NCAM and the University di Cassino.
    Directors: I. Liverani and NCAM Antiquities Inspector.
    Site: El Arab, Northern State.

    Director: H. Paner
    Site: Merowe Dam, Northern State

15. The Sudanese mission of NCAM and the University of Dongola
    Site: Merowe Dam, Northern State

    Director: D. Edwards
    Site: Challenge Road. Geili to Atbara, Nile State

17. The German mission of the University of Humboldt.
    Director: S. Wenig
    Site: Musawwarat Es Sufra Nile State

18. The German mission of the Berlin Egyptian Museum.
    Director: D. Wildung
    Site: Naga Nile State

19. The Italian mission of the University of Rome.
    Director: I. Caneva
Site: Geili, Nile State
   Director: L. Krzyzaniak
   Site: Kadero, Khartoum State
21. The Spanish mission of the University of Madrid
   Director: V.Fernandez
   Site: Haj Yousef, Khartoum State
22. The Sudanese mission of the University of Khartoum.
   Site: Ushara, Khartoum State; Meroe, Nile State; Al Mahas, Northern State
23. The Italian mission of the University of Napoli.
   Director: R. Fattovich
   Site: Kassala Mahal Teglinos, Kassala State
24. The Japanese mission of the Middle Eastern Cultural Centre in Japan.
   Director: M.Kawatoko-
   Site: Aidhab, Red Sea State
25. The Norwegian mission of Bergin University.
   Director: A. Abdel Magid
   Site: Southern Red Sea Hills, Red Sea State.
26. The German mission of the University of Koln.
   Director: R. Kuper
   Site: Wadi Howar, Northern Darfur State

On going projects and future work planned by the National Corporation for Antiquities and Museums:

I. Rescue of Antiquities in the Kajbar Dam region in cooperation with the University of Khartoum.
II. Reconstruction and conservation of Al Kurru cemetery.
III. Completion of Al Barkal Museum in Karima in cooperation with the Clos foundation.
IV. Rescue of antiquities in the Merowe Dam region.
V. Reconstruction and conservation of Begrawiya pyramids under the supervision of F. Hinkel.
VII. Creation of An Islamic Hall in the Sudan National Museum,
VIII. Preparation and execution of the archaeological exhibition "Sudan, Ancient Kingdoms on the Nile", touring Europe from October

IX. Rehabilitation and conservation of the historic town of Suakin in cooperation with the Red Sea State and Suakin rehabilitation Committee.

In conclusion, I would like to thank those persons who have contributed towards the rescue, preservation, and conservation of archaeological sites in Sudan, towards the preparation of exhibition and to the compilation and editing of this issue of KUSH. I wish in particular to gratefully acknowledge the guidance, assistance and financial support provided by the Minister of Environment and Tourism and by the first secretary.

The National Corporation for Antiquities and Museums (NCAM) looks forward to presenting the next series of archaeological reports shortly in the forthcoming KUSH Volume.

The Editor
Hassan Hussein Idress
Excavating the Palace of Natakanami
at Napata the Entrances

Alessandro Roccati - University of Rome "La Sapienza"

The royal building discovered by Prof. S. Donadoni in the archaeological site of jebel Barkal has proved to have been much destroyed. A recent report\(^1\) outlined the contour of the platform on which the palace stood, and the main architectural features that could be checked, but very few finds from the interior of the area have since come to light. In the last four seasons (1993-1996) it was decided to look for remains outside the peripheral wall which might lead to a better understanding of the scanty evidence inside the building.

The first results to advance our knowledge of the monument have revealed important access points at the centre of each side of the square platform. An entrance on the south side is symmetrical with the one found in 1982 on the north side. The north entrance was reached by a monumental gangway linking a central peristyle court -formerly interpreted as a kiosk, where a trench was first dug - with the exterior, and this entrance was considered the main one as it had imposing elements such as the presence of lion pairs (male and female) and other remarkable decorations.

The south entrance, uncovered in 1995, is likewise provided with a long stairway leading to a terrace, guarded by lion statues. The measurements of both entrances are similar, but there are reasons for thinking that the south entrance was built first. It abutted the peripheral wall before it was plastered, like the east entrance uncovered last season, where as the north and west entrance were constructed after completion of the plastering of the outer walls. Moreover, the south entrance is precisely aligned with the central court, whereas the court is slightly out of alignment with the north entrance. The corridor linking the south entrance with the court is not in line, however, either with the (south) terrace or

---

with the court, and the same feature seems to be shared by the east side also. The west side of the court is destroyed and could not be checked.

The south entrance has another interesting feature. We do not know to what area the north entrance was related, but the south entrance looks towards the great Amun temple (B 500); it even makes a slight bend (about 3°) in its direction, and a ceremonial way may once have linked the two edifices. This demonstrates the ritual character of the royal palace of Natakamani and its open relationship with the worship of Amun.

In 1990 excavations on the west side, facing the mountain, cleared the remains of a terrace opening on to a stairway, oriented to the south, along the outer wall of the palace, looking towards the temple of Amun, so that it is possible that a way from here joined the way from the south entrance. We are reminded that among the rams in front of the first pylong there are remains of a kiosk built by Natakamani, which might be the arrival of the way coming from the palace.

Up to now, lion statues have been found at the south, east and north entrances, so that the building may be called "lion palace". Their sizes are also uniform, around 1.5m high with the base, but one most impressive piece of sculpture was found near the south terrace (we expect more in the as yet unexcavated area) with an extraordinary attitude. This lion had been thrown down not far from its original position. It watches the ramp, but its head is turned to the left towards the Amun temple. Its face has turned up subsequently, the body is well preserved and the workmanship is superb. The hair is accurately cared, as are the muscles of its paws. Another lion is much less well preserved, already broken into many pieces, having been thrown on to the ruins of the palace's peripheral wall, which here is almost completely destroyed. This lion's attitude was the usual one, sitting and looking forwards. All the sculptures have been treated and safely transferred to the Museum built inside the archaeological area.

A large part of the wall of the south side, east of the terrace, has been found fallen in front of its foundation, plastered face upwards, with a glazed though broken tile still attached to it. More fragments of glazed tiles from this
area point to different patterns in the decoration.

In 1996 for the first time two doors were clearly outlined, consisting of (rests of) thresholds and jambs in red bricks, around the peristyle court. Two entries on the southern side of this inner court correspond with two parallel oblong rooms. The one to the west is a corridor coming from the southern access (the "god's access"), in line with the ceremonial way on the opposite side of the peristyle court (the "king's access"); the other one, to the east and with a smaller door, contains a hard white floor, perhaps due to the lack of a roof, and was closed by a wall at its end, being entered from the peristyle court only. Regular holes in the floor on both sides of this room point at the possible presence of amphorae for water storage.

The results of last years have demonstrated what might anyhow have been guessed, that the palace was not an isolated unit, but that it was linked to other structures in its vicinity. To better establish that, and to prepare a basis for future work, the mission has executed a computerized topographical and archaeological mapping, linked with the town plan of Karima and the field cadastre of the village of Barkal, encompassing too the Jebel Barkal as far as the pyramid field\(^2\). This way it will be possible to obtain a precise idea of the correspondence between buildings, even when only scanty ruins remain, and of their relative sizes, and even of their relative ages. We are therefore investigating the problem of interconnections inside and outside the building, so as to discover its interior and exterior passages and their possible relationship.

We hope too to learn more about the meaning and function of the building, now that its dependence on the religious importance of the temple of Amun has become apparent. It needs to be clarified whether the building might continue the role for example of that excavated by Reisner which has recently been interpreted as an older royal palace\(^3\), in use through several reconstructions from Napatan times till the Meroitic suzerainty.


Indeed, the excavations of our palace are constantly coming across evidence of older settlements, even though for the moment this has not been their aim. In this light we have to evaluate a few clay moulds found in 1993 in a small space on the east side of the ceremonial gangway⁴. They show cult images, as the god Amun, a ram’s head and a sacred snake, but it is uncertain to what period they may be attributed. In the same area, however, Meroitic painted potsherds also came to light.

The excavations have uncovered a wide stretch of the palace area, and it is now time to begin substantial restorations of the palace’s main features. The outer wall of the north side, as well as the south-east corner and the terraces to north, east and south have been covered by modern masonry to protect them and to outline their position. This operation is time consuming and expensive, but it is hoped that it will prevent the disappearance of the excavated area under the sand, as well as stopping further damage to the antiquities from people wandering in this still unguarded area.

Results of a Preliminary Survey of Stone Monuments of the Southern Red Sea Hills, Sudan

Anwar A. magid, Knut Krzywinski, and Richard H. Pierce

Background

The authors are engaged in an interdisciplinary study of that part of the southern Red Sea Hills which lies between 18° 00' and 19° 20' N and 35° 10' and 38° 00' E. This project is an attempt to integrate archaeological, historical, and botanical data so as to gain an understanding of the past and present cultural landscapes of that region.

Since very little information is presently on record about the archaeology of the area, a reconnaissance survey was planned; and the first season of work was carried out in 1993. The results of this preliminary survey reveal the area to be rich in archaeological remains and indicate that much more intensive and extensive surveys should carried out. Nevertheless, even during this limited survey there were recorded a great number of widely distributed stone structures, many of which are locally called akerataheils. The present paper is based on information gathered during the first season of field work and focuses on the following aspects of these archaeological monuments:

1. The meaning of the word akerataeil.
2. The different types of monuments recorded during the survey-period.
3. The distribution of these monuments.

Akerataeil: Origin, meaning, and usage

The word akerataeil has occurred a few times in published works (e.g. Clark 1938 and Leclant 1970); but none of these provides a full account of the meaning of this word.

As regards the origin and meaning of akerataeil, it belongs to the lexicon of the Beja language (Tu Bedayue). According to Hadendowa informants it consists of two parts: akera, which means ‘hard’, and taheil which means ‘spot’ or ‘place’. If this information is correct, the word akerataeil may mean ‘hard place’ or ‘place where it is hard’; but we cannot exclude the possibility that this is a folk etymology. Further study will be necessary.

The present Hadendow population in the area surveyed could tell us nothing about the cultural associations of these structures or about their nature or contents. Even so, they regard them as sacrosanct, treat them with respect, and
approach them with awe and fear. People do not use the word *akerataheil* with reference to graves known to be Islamic.

In the light of our observations in the field, oral traditions we collected in the area, and the few published sources dealing with this particular issue, we have concluded that in the Beja language *akerataheil* denotes and assortment of man-made, pre-Islamic monuments of different forms and plans that are built mainly of specially chosen or carefully shaped oblong slabs of stone without the use of any cementing material.

**Types of stone monuments**

Thirteen types of stone structures were recorded in the areas we surveyed during our first season of archaeological exploration. This must not, however, be taken to imply that these are the only types existing in the area. It is to be expected that we shall record additional types during the coming seasons. Moreover, it should be noted that the distinction drawn here between different types of monuments is based on the study of superstructures. It is also likely that our final topology will be simpler and consist of fewer types. What is presented here must, therefore, be regarded as constituting only a preliminary topology which still lacks a chronological framework. The order in which the types are presented is based merely on the order in which they were recorded in the field. The following are the above-surface structure types presently in our records:

1. **A Circular Heap of Stones**
   This type of monument consists of a circular heap of stones of different sizes and shapes piled up in a disorderly fashion (Figure 1). The size of these heaps ranges from relatively small ones, 1.5m in diameter and 0.50 to 0.70m in height, to heaps nearly twice as large, 3.0m in diameter and 1.0m in height. They also differ from one another in form; some have a flat top, others a convex one (Figure 1). Some of these structures are slightly oval in plan.

2. **A Ring of stones enclosing an empty area**
   This type consists of a circular enclosure or a fence-like stone structure often built of erect oblong stone slabs the upper ends of which are roughly pointed. Less frequently such enclosures are made of flat, oblong or rounded, stone slabs which are laid horizontally on the surface of the ground (Figure 2). The diameter of these rings is, on average, greater than that of monuments of the first type (i.e. the circular heap of stones)
and ranges between 3.0 and 4.0m; while the height of the ring of orthostates varies between 0.40 and 0.70m.

3. A Ring of stones with a heap of stones in the middle of the area enclosed
This type is a combination of the first and second types (Figure 3); but the diameter of the ring is greater (a minimum of roughly 4.0m) than that of the second type.

4. An approximately rectangular stone structure
Carefully shaped, oblong slabs of stone are used to build rectangular stone structures with different ground plans (square or oblong) and sizes (e.g. from 2.0 x 2.0 x 0.70m to 2.5 x 2.0 x 1.0m) which are filed in with stones of different sizes and shapes piled up in a disorderly fashion. The corners of these structures are rounded (Figure 4).

5. Two concentric rings of stones enclosing an empty area
This type consists of an outer and an inner ring of stones about 0.80 to 1.0m a part. In some of these structures the space between the rings is filed with stones of different sizes and shapes, in others it is empty. The central area of all these monuments is empty. This type of structure is similar to the second and third types in that its rings too are built of oblong orthostates (ca. 0.40 to 0.60m in height, figure 5). The diameter of this type of structure ranges between 5.5 and 8.00 m.

6. Two concentric rings of stones enclosing a circular heap of stones
This type is similar to the preceding one as regards its size and plan and the manner in which the concentric rings of oblong slabs of stone are set up; but at the center of the space the rings enclose there is a heap of stones piled up in disorderly fashion (Figure 6). The height and diameter of the enclosure of concentric rings. Stone structures similar to these are reported from Berenice Panchrysos along the Wadi El-Allaqi in Egypt (Castiglioni, A. and A. 1994).

7. A complexe of connected stone structures: ‘the fishtail complex’
This is the only type of monument found in the area we are investigating of which there is published a fairly detailed description (Seligman 1915). We recorded a few more complexes of this type (in different states of preservation) in the area we surveyed. The complex layout of this kind
of structure is well illustrated in Seligman’s sketch plan as modified in the present work (Figure 7). The whole structure is built of stones. Its exterior walls are made using carefully shaped, oblong slabs of stone which are laid horizontally on top of one another to form a set of oval, oblong, or approximately rectangular structures that are linked by curved connecting walls, which in plan are reminiscent of corridors. All the structures are filled in with stones of differing size and irregular shape. As Seligman correctly reported (op. cit.), this type of stone structure consists of three main interconnected elements. These are:

a) An oblong stone structure with moderately rounded corners, situated at the southern end of the complex. Its dimensions differ from one complex to another. The dimensions of the largest we found are ca. 8.0x 7.0 x 1.5m, while those of the smallest are ca. 5.0 x 3.0 x 1.0m.

b) Two oval structures of stone, each having an extension which in plan resembles a fish tail, whence the label ‘fishtail complex’. Regardless of the differences in dimensions between one complex and another, the lengths and widths of these two oval structures are less than those of the oblong one, though they reach the same height as it does. The heights of the fishtail extensions, on the other hand, are slightly less than that of the oblong structure. The combined length of an oval and its extension is approximately that of the length of the corresponding oblong structure. The two ovals are built of oblong slabs of stone laid horizontally on top of one another. The only exceptions to this pattern are three oblong orthostates of stone that are placed side by side at roughly the middle of the sides of the ovals that face the main oblong structure (Figure 7).

c) Two curved walls connecting these structures, one between the oblong structure and the first of the two ovals, the other between the first and the second oval (Figure 7).

8. A circular stone structure with a complexe interior plan
This is a properly built circular structure of stone slabs. Its exterior wall consists of oblong orthostates of stone. As viewed from above, this structure consists of two concentric rings of oblong slabs of stone that are laid horizontally end to end, with the narrow (ca. 8cm) space between compactly filled with stones and pebbles (Figure 8). These concentric rings enclose another broader ring that is also compactly filled with small
stones and pebbles. Inside this ring, at the center of the whole structure, there is a pile of large stone slabs of irregular shape (Figure 8). The diameters of these structures vary but on average are ca. 3.0m, while their heights range between 0.70 to 0.80m.

9. An oblong rectangular stone structure with three erect stones against its southern side
This type of stone structure is similar to the fourth type in that its outer wall is made of oblong slabs of stone laid horizontally on top of one another, while its core is filled with stone slabs and pebbles of different sizes and shapes. The corners of this structure are also rounded. Its distinctive feature is that it has three oblong orthostates of stone standing against the middle of its southern wall (Figure 9). The average dimensions of this type are 2.5 x 1.9 x 9.0m.

10. A circular stone structure with orthostates
This is a properly built circular structure of stone, similar to the eighth type, with its outer wall built of oblong slabs of stone laid horizontally on top of one another, but also incorporating irregularly spaced orthostates (shorter than the height of the structure). This outer wall encloses a broad ring of small slabs of stone piled up in disorderly fashion, while at the center of the structure there is a mass of oblong slabs of stone which are also piled up in disorderly fashion (Figure 10). The diameter of this type varies between 4.0 and 5.0m, while its height ranges between 0.90 and 1.0m.

11. A complex structure with a large oblong central unit of stone with several similar but smaller units abutting it: ‘the tortoise complex’
This type, of which our corpus contains but a single example, consists of a large central unit and six smaller units abutting its outer walls at different points. These are:

a) A main central structure. This a large oblong structure of stone (8.0 x 7.5 x 1.5m), rounded at the corners. At its center there is a truncated conical hole, wider at its mouth than at the bottom and built up of elongated slabs of stone carefully laid within its compact body; the diameter of the opening of this hole is 2.2m.

b) The smaller abutting units consist of the following:

   i) Two oblong structures of stone, each 2.8 x 2.1 x 1.0m, one abutting the northwestern corner of the central
structure, the other (which has a small truncated conical hole in its center) the northeastern corner (Figure 11).

ii) A square structure of stone which lies between the two structures just mentioned and abuts the middle of the northeastern wall of the large central unit.

All the structures abutting the northeastern wall of the large main structure have corners so rounded that they convey the impression of being almost circular in plan (Figure 11).

iii) Two small square structures of stone at the opposite end of the central structure, one abutting its southwestern corner, the other abutting its southeastern corner, each being 2.2m sq.

iv) A relatively large oblong structure of stone (5.0 x 4.0m) that lies between the two structures just described and abuts the middle of the southern wall of the central structure.

Even though all the units of the complex are built of slabs of different sizes and shapes, all the stones used have smooth flat surfaces. In plan the whole structure is reminiscent of a tortoise sticking its head out of its shell (Figure 11), whence its label.

12. A rectangular stone structure with three truncated conical holes opening onto its upper surface.

This is a large, oblong, rectangular stone structure (11.7 x 10.0 x 1.2m) with rounded corners, similar in plan and orientation to the central oblong structure of the foregoing type (i.e. the tortoise complex). The sizes and shapes of the stone slabs of which it is built are also similar to those used in the tortoise complex. It differs, however, in that it has no units abutting its corners or sides. It is also distinct from the other rectangular structures previously described in that it has three truncated conical holes opening onto its upper surface: one large one (1.4m in diameter) at the center, another small one (0.90m in diameter) near the middle of its western side, and a third, even smaller one (0.50m in diameter) near the middle of its northern side. Both the smaller conical holes are 0.50m from the central one, and all three are built of oblong slabs of stone (Figure 12). Hitherto only one such structure has been recorded in the survey area.
13. A square stone structure with a single truncated conical hole opening at the center of its upper surface. This is a neatly built and well planned square structure with rounded corners. It is constructed of carefully shaped, oblong slabs of stone (the thickness of each is not more than 5cm), and specially shaped stone slabs are used to make its rounded corners. The stone slabs are laid horizontally on top of one another to a height of one meter. In plan it is 2.5m sq. its interior is filled with stones; but less attention was paid when picking and/or shaping them. A truncated conical hole (ca. 0.70m in diameter at its opening), similar to the ones mentioned earlier, opens at the center of the compact body of the structure (Figure 13).

General Remarks

Other observations and general remarks relating to these stone structures recorded during the first survey can be summarized under the following points:
1. All the structures we have recorded are built of slabs of stone without the use of any cement or mortar. Smaller stones and pebbles are frequently used to fill in the gaps between the large slabs.
2. Most of the structures are situated by the sides of seasonal gullies (Ar. Khor) or seasonal streams (Ar. Wadi) or at their junctions. Where there are no seasonal gullies or streams, they lie at the foot of hills or on rocky plateaus and flat areas on elevated ground.
3. The monuments are generally found in clusters (of the same or mixed types); but they are also recorded as isolated structures.
4. Such structures occur both within Muslim cemetaries and on their outskirts.
5. The results obtained from this survey are based entirely on field observations of what lay above ground and of differences among superstructures. The section given in some of the figures may, therefore, require revision. Test excavation planned for 1994 will perhaps provide the data necessary for determining the age, function, and cultural context of these monuments. Our study of the data presently available to us indicates that many of them are pre-islamic.

Acknowledgements

This study was carried out with the financial support of the Norwegian Research Council (NFR), the Norwegian Universities Committee for Development Research and Education (NUFU), the Faculty of Natural Sciences of the University of Bergen, and the Grolle Olsen
Fund. We are grateful to the Board of Directors for Antiquities and National Museums, Sudan, for granting us our archaeological concession. We are particularly grateful to Mohammed Beddawie, the Director of the Sudanese Red Crescent in Sinkat, and Dr. Salah Shazali, both of whom when out of their way to further our efforts; and we owe a great debt of gratitude to the Beja people among whom we have worked and without whose friendship and trust our endeavor would have been impossible.
References


Types of stone monuments
(all are sketches of the superstructures)

Figure 1

a) side view

(i) flat top         (ii) convex top

b) top view of (i) and (ii)

Figure 2

side view         top view

(i) erect elongated stone slabs  (ii) elongated and/or rounded stones laid on their side
Figure 3

(i) erect elongated stone slabs
(ii) elongated and/or rounded stones laid on their side

Figure 4

side view

Figure 5

empty space between the concentric rings
filled space between the concentric rings
Figure 12

Figure 13

39 _______________ AUSH
Prehistoric Investigations in the Wadi Howar Region:  

Birgit Keding

Introduction:
Within the framework of the cooperative special research project ACACIA - Arid Climate, Adaptation and Cultural Innovation in Africa (SFB 389, Kultur- und Landschaftswandel im ariden Afrika) - the University of Cologne conducted a first field research in the Wadi Howar (northwestern Sudan) from November 1995 to January 1996. The main focus of the new research program, which is carried out in Egypt, Sudan and Namibia, is the historical development of the African continent and its people in light of man’s dependence on an increasingly arid habitat. Based on the results of the former B.O.S.-project which had been started by the University of Cologne already in 1980 (Kuper 1981, 1986, 1988, 1995), the Wadi Howar region was selected as one of the principal research areas.

Stretching over 100 km from eastern Chad to the Nile at the southern fringes of the Libyan Desert, the Wadi Howar is the longest dry river system in the Eastern Sahara (Fig.). Rising in the highlands of the Ennedi Mountains, this dry water-course runs in an east-northeastwardly direction until it seems to disappear in the desert south of Djebel Rahib. It is only in the last ten years that geomorphological and palaeontological investigations have been able to verify earlier speculations regarding an eastward connection to the Nile (MKeissner and Schmitz 1983; Kropelin 1993a, 1993b). This suggests that the former river mouth of the Wadi Howar was located in the Nile valley between the third and fourth cataract opposite Old Dongola. Therefore the Wadi Howar has to be regarded as a tributary of the Nile in the early Holocene. Later the river was transformed into a chain of fresh water lakes fed by rainfall. Numerous prehistoric sites indicate the intensive human occupation of the wadi banks, thereby reflecting the regions ecologically favourable conditions and its geographically key-position during the 1st ten thousand years (Richter 1989; Keding 1993, 1996, in prep.).

The project focuses on prehistoric sites along the Wadi Howar, the change and function of regional adaptation strategies and the role of the wadi as throughfare between the Nile and the Chad area. The objectives of this field work were to record regional as well as local settlement structures, to obtain
information regarding the economic development and ecological conditions and to improve the ceramic-chronology of the area. As a precondition it was necessary to locate sites with well preserved organic remains for zoological and botanical studies.

Survey Tour

The field-campaign began with a survey in the lower and middle reaches of the Wadi Howar and ended in the Ergo of Ennedi¹. The main aim of this tour was to get a more precise insight into the archaeological potential of the area and to locate sites warranting of excavations. In addition to the numerous sites, which were discovered on the banks and in the Wadi bed, several settlements were located in the flat, monotonous plain of the "West Nubian Lake Basin" in the Ego of Ennedi. many sites are characterized by dense concentrations of pottery decorated in the Leiterband-style (Keding 1993) and well preserved bones of cattle. The ceramic discovered there serves to close the gap in the distribution of the Leiterba+nd-complex between the Middle Wadi Howar in the south-east and the Ennedi Mountains in the west (BAILLOUD 1969). However, regional variations of the ceramic styles have to be taken into account. Moreover pottery with "button ornamentation" was observed, which corresponds to ceramics recovered in the Laqiya area at Wadi Shaw 300 km further north.

Lower Wadi Howar

The fieldwork of December focused on detecting ceramic bearing stratigraphies. Since so far the only stratigraphic sequence known from the Wadi Howar had been discovered at a dune site (Conical Hill 84/24; Gabriel et al. 1985) we hoped to find samples of ceramics and lithic artifacts at various levels of other dune habitats, too. As a result of settlement activities of several thousands of years, the surfaces of these dunes are covered with millions of artefacts, which protect them from wind erosion. During this campaign 31 previously unreported dune settlements were discovered, situated on the northern side of the Lower Wadi Howar, east of Djebel Rahib and 200 km further downstream. A common feature of all these dune habitats is the existence of

¹ According to hydrological, geomorphological and geological criteria, the Wadi Howar is subdivided into three sections: The Upper, the Middle and the Lower Wadi Howar. The Lower Wadi Howar comprises the 400 km long section between the Nile valley and the Djebel Rahib, the Middle Wadi Howar refers to a 400 km long adjoining section west of Djebel Rahib and the Upper Wadi Howar denotes the following 250 km long region of the upper reaches of the Wadi (Gabriel et al. 1985).
dense scatters of stone-artefacts, grinding-stones and different types of stone-structures. They vary, however, in their micro-environmental locations, as well as in extent and range of the used raw-materials, which seems to have been largely determined by local outcrops. Also the spectrum of pottery seems to be largely corresponding. Dotted Wavy-Line ceramics, pottery with zig-zag decorations and ceramics with herringbone patterns are very common. While the first two mentioned wares are well-known and widespread throughout the southern Sahara and the Nile valley, the herringbone decorated ware, which is red, well-burnished and an organic tempered has so far not been documented in the Wadi Howar and is apparently restricted to regions east of Djebel Rahib. They indicate a general resemblance with the pottery of the Nubian Pre-Kerma or A-Group.

Three dunes habitats were chosen for test-excavations. Site Abu Tabari S95/2 is the largest of a complex of four dune habitats, measuring 750 m on its north-south axis, 750m on its east-west axis and 20m high. It is located 250km west of the Nile valley and represents the most eastern situated dune habitat currently known. The archaeological material is composed of stone-artefacts and numerous, well preserved pottery-sherds. Two areas were marked for excavation, one in the eastern slope, the other in the centre of the dune plateau. The archaeological deposit of the first test trench was only 0.50 cm thick and contained mainly stone-artefacts. The second trench S95/2-2 was excavated to a depth of 1,10 m and yielded a total of 458 sherds, 183 of which are undecorated. The 275 decorated sherds, which represent 217 vessels, provide a stratigraphic ceramic-sequence in which Dotted Wavy-Line pottery is followed by dotted zig-zag-motifs, double-proned ornaments, herringbone patterns, geometric ornaments, plain zig-zag-decorations and finally in the uppermost levels by Leiterband-ornaments.

A third excavation area carried out on the southern slopes of the dune habitat uncovered an undisturbed burial. A grave shaft was not discernible. The skeleton was assigned to a young female, who had been buried in an strongly contracted position. She lies on her right side along a north-south axis, her head pointing to the north. Two globular pots, the smaller inside the larger, had been placed close to the pelvic. The pottery is an organic tempered, have a reddish surface and is decorated with herringbone patterns. Grave-goods including one shell, a small axe, seven stone-artefacts, a small lump of ochre, a burnt animal bone and a fishbone were placed both on and around the body.
The most western occurrence of this type of settlement is currently represented by a loose series of large dune habitats in the northern hinterland of the Lower Wadi Howar, a few kilometers east of Djebel Rahib in the region of Conical Hill. Here two dune habitats were studied.

Site Conical Hill S92/3 measures ca. 600m by 500m. A test trench was placed on the dune plateau, which was covered almost exclusively with stone-artefacts. Cultural remains were followed to a depth of 0.70 cm. 15 to 25cm under the surface a hearth was uncovered. The excavation yielded a total of 144 potsherds and 2,462 lithic artefacts. Predominant is an undecorated, an organic tempered ware with brown surfaces. Decorated pottery consists entirely of 13 small fragments of an organic tempered, brown, burnished ceramics of the Leiterband-type, partially found in the ashes of the hearth.

Site Conical Hill S95/4 is a large parabolic dune of few kilometers northwest of site Conical Hill S95/3. The surface material consists primarily of unretouched quartz artifacts. The few ceramics comprise Dotted Wavy-Line and Laqiya-type pottery (cf. Schuck 1989), as well as zig-zag decorated ceramics and fragments of Leiterband pottery. The archaeological deposit of a test trench of the dune top, was 1.10m thick. At a depth of 50 to 60 cm one poorly preserved burial with no discernible grave structures was discovered. While the fragment of an ostrich egg-shell pendant with a notched rim was apparently a grave offering, the association with a few Dotted Wavy-Line-and Laqiya-type ceramic sherds recovered around the skeleton is not secure.

Middle Wadi Howar

In January the field work was moved to the Middle Wadi Howar, west of Djebel Rahib. Here the Wadi Howar is merely a shallow depression, between 8 to 11 km wide. A limited amount of vegetation on the wadi beds, including some shau-bushes and acacia-trees, is due to the high ground water table.

Fieldwork began with a detailed survey. A 3km wide transect was established across the wadi, with its eastern limits 0.5km west of the Ku Wad’lau lau where it joints the Wadi Howar. The surveyed area encompassed a 3km wide stripe, starting at the southern banks, through the wadi bed to the northern banks. The survey was conducted in walk-over of three teams, each consisting of 2 to 3 members. Within this area of 3 to 12km, 202 archaeological sites were discovered and described with regard to their size, structure and archeological
material and located by using a GPS (Global Positioning System) satellite receiver.

At most sites ceramics are predominant. Stone-artefacts, grinding stones, ostrich egg shell beads and bone fragments complete the artefact spectrum. At least six ceramic types, which have yet to be fully differentiated, are characteristic of the recorded sites. These were mapped, by arranging the respective types from the probable oldest to the youngest, in order to provide an idea of the changing patterns of settlement in this area during the Holocene. Due to their favourable geographic location with regard to the Ku Wad’lau lau the southern banks of the wadi seem to have been settled during all phases, while the centres of the habitations are shifting.

The two oldest ceramic-types are Dotted Wavy-Line and Laqiya-type pottery, which both are present at 15 sites (8%). They are restricted to the southern wadi banks and to the southern area of the wadi bed. The third type of ceramics, decorated in the Leiterband-style, is prevailing at 50 sites (25%). It is usually found scattered along the southern and northern banks of the wadi and in the southern area of the wadi bed in association with concentrations of well preserved cattle-bones. The fourth ceramic-type shows fine geometric decorations and appears at 35 sites (17%), located on the southern banks and throughout the wadi bed. Pottery with rough geometric patterns and ceramics with mat-impressions represent the fifth and sixth ceramic-type and are by far the most common. Usually found in the same proximity they are present at 138 sites (68%). Their distribution is almost entirely restricted to the wadi bed. This shifting of the site scatters from its earlier distribution on the wadi banks to its later positions in the wadi bed, suggests a correlation between environmental change and a change in settlement patterns. Indications for this development have already been noticed (Ritcher 1989) during large scale surveys, but have now for the first time been clarified by systematic investigations.

Six of the 202 recorded localities were chosen for further examinations. Three of the localities were burials, located on the northern and southern banks of the wadi. Due to wind erosion all of the skeletons were fragmented and poorly preserved. The bodies were buried in an extended position, two of them orientated east-west with the head pointing to the west. All of the burial sites yielded numerous grave-offerings, consisting of stone and ostrich eggshell beads and pendants. The pottery which was recovered suggests a connection with the Leiterband-complex.
Further on three settlement sites, which seemed to represent a single occupation phase and well preserved bones were chosen for test-excavations.

Site Djabarona S96/2, with an area of ca. 100 to 50m, is situated in the wadi bed. Its dense artifact-scatter consists of numerous ceramic-scherds, decorated with incised and impressed, fine geometric motifs. In order to determine the spectrum of this until now nearly unknown ceramic-type in this area, a dense ceramic concentration of 20 m² was excavated.

Site Djabarona S96/3 is located in the wadi bed, were limnic sediments and molluscs indicate the shore of a former lake. At two concentrations of organic tempered ceramics with mat-and rough geometric-decorations and well preserved bones test excavations have been carried out. Here the organic finds were of special importance, as together with mat impressed ceramic wares, which represents more than 50% of the sites in the Middle Wadi Howar, to date no evidence for the related economy could be obtained. The excavations revealed two hearths with burnt cattle and sheep/goat bones (identification by H.Berke), in direct association with the mentioned pottery.

Site Djabarona S96/5 is situated ca. 5km west of the junction of the Ku Wad’lau lau with the Wadi Howar. Covering an area of ca. 80 to 40m, it is characterized by 24 concentrations of ceramics and bones. From two of these red-slipped ware with geometric decorations–until now unknown in this area–and bones from domesticated as well as from wild animals were excavated. Below the artefact-concentrations, faint structures became apparent, but could not be precisely identified. Investigations will be continued during the next field season.

Conclusion

The first field-campaign of the new cooperative research project ACACIA carried out in the Lower and Middle Wadi Howar concentrated on the change of settlement patterns and survival strategies during the Holocene. Since the excavated material from the nine excavated sites is still undergoing analysis only preliminary results could be given here. The archaeological evidence from the areas east and west of Djebel Rahib and its adjacent dune barrier seems to reflect different cultural and environmental developments in the Lower and Middle Wadi Howar. This concerns the regional patterns of settlement as well as large scale relations. While Dotted Wavy-LKine pottery is still found in both areas, the predominant ceramics of the younger phases show different facies. The ceramics of the Lower Wadi Howar apparently reflect a strong influence from the Nile
valley, while the ceramics recovered from the Middle Wadi Howar seem to indicate local or more western orientated connections. Furthermore, these two regions are characterized by different settlement patterns, whose social and economic meaning will be a main subject of the next field research planned for the winter season 1996/97.
Keding, B. 1993: Leiterband sites in the Wadi Howar, North Sudan.
- 1993b: Environmental change in the southeastern Sahara and the proposal of a Geo-Biosphere in the Wadi Howar area (NW Sudan).

In: L.Kryzaniak & M.Kobusiewicz (eds.), Late Prehistory of the Nile Basin and the Sahara, Poznan 1989, 431-442.

Fig. Map of North-western Sudan: -1 - Lower Wadi Howar and - 2 - Middle Wadi Howar

Photo 1: Dune habitat Abu Tabari S95/2
Photo 2: Grave - Abu Tabari S95/2-3

Photo 3: Vessel decorated with herring-bone patterns of grave Abu Tabari S95/2-3
Photo 4: Burial - Djabarona S96/1-1

Photo 5: Stone-beads of burial Djabarona S96/1-1
Photo 6: Stone-beads of burial Djabarona S96/4

Photo 7: Ceramics of Djabarona S96/3
Photo 8: Ceramics of Djabarona S96/3

Photo 9: Concentration of ceramics and bones of Djabarona S96/5
L'habitat agricole Kerma de Gism el-Arba
Campagne 1994

Brigitte Gratien
CNRS - URA 1275

Le site de Gism el-Arba est localisé entre Kerma et Dongola, sur la rive orientale du Nil, en bordure de la zone cultivée, à l'extrémité nord du Ouadi el-Khowi; c'est l'un des nombreux lieux baptisés Kanissa dans la région.

Il se présente actuellement comme un kôm de forme ovale, relativement plat, mesurant 140m du Nord au Sud et 95 m d'Est en Ouest, et 2 m de haut à son maximum; il est environné par des cultures et des chemins âniers modernes, qui lui donnent sa forme actuelle, tandis que toute la partie centrale a été bouleversée, il y a une trentaine d'années selon les villageois, par les chercheurs de sebbakh (Pl.1).

La fouille de Gism el-Arba est une fouille de sauvetage, le propriétaire désirant mettre le terrain en culture dès que possible.

Habitat Kerma, le site fait partie de la chaîne de sites qui bordaient le Ouadi el-Khowi, et dont la mission de la Sudan Archaeological Research Society, dirigée par Derek Welsby (1), trouve de nouveaux exemples plus au Sud; plusieurs ont été repérés par Jacques Reinold et la Section Française auprès de la Direction des Antiquités du Soudan dans ce secteur, les villages littoraux, nombreux sur une bande de 50 à 200m de large et sur plusieurs kilomètres de long (2). Les observations que nous avons pu faire corroborent les relevés de Jacques Reinold dans la région qui montrent une occupation continue dans l'antiquité, habitats de types villageois, le plus souvent de faibles monticules qui doivent correspondre à un habitat dispersé en hameaux; toutefois, il faut signaler que ces sites sont menacés d'une disparition rapide tant par l'extension des cultures que par le développement de la circulation automobile: Gism el-Arba est l'un des rares habitats qui subsistent encore dans le secteur et le mieux conservé de tous ceux que nous avons pu observés. Quant aux cimetières correspondants repérés, ils se situent plus à l'est, en bordure du désert.

Charles Bonnet et la Mission Archéologique de l'Université de Genève ont dégagé en 1986 une des structures apparentes au sommet du Kôm (3). Fortement encouragée par lui, nous décidâmes d'entreprendre la fouille exhaustive de cet habitat Kerma, habitat qui pouvait nous apprendre, en contraste avec celle d'une capitale, l'organisation d'un village de l'
arrière-pays Kerma; en effet, plus au nord, hormis les structures dégagées par André Vila dans la région d' Amara (4), les sondages pratiqués sur le site urbain de Saï avaient montré que ce dernier avait été complétement lessivé par les eaux (5). La première campagne eut donc lieu de fin janvier à mars 1994.

La fouille débuta par le dégagement complet de l'unité sondée par Charles Bonnet, suivi par celui du secteur nord, plus menacé par les cultures. La limite orientale atteinte pourrait être celle du village antique qui, dans ce cas, n'aurait conservé aucune trace de fortification ou d'enceinte de ce côté dans sa phase la plus tardive.

Dès les balayages de surface, deux niveaux apparaissent, chacun présentant une organisation très différente: ils peuvent être datés par le matériel du Kerma classique, ou de la fin du Kerma moyen, au Kerma Récen (Fig.1). Cependant, parmi la céramique recueillie, certains tessons remontent au Kerma ancien le plus pur; ceux-ci sont plus abondants au nord-est. Il est donc probable que le site a été occupé dès cette période et continuellement, puisque sur près d' un mètre - les niveaux archéologiques se superposent au point le plus élevé.

Le niveau ancien

Le niveau le plus ancien atteint lors de cette campagne, du Kerma classique, comprend plusieurs grandes unités quadrangulaires, chacune formant un îlot, qui s' échelonnent le long de rues qui se croisent selon un plan orthogonal; un axe nord-sud d' une dizaine de mètres de large apparaît déjà le long des maisons 1 et 2. Des annexes domestiques, cuisines ou installations liées à l' élevage, peuvent déborder dans la rue, comme dans le cas de la maison 7. Par deux fois, dans les maisons 1 et 7, les parois arrondies ont été remplacées par des murs de briques rectilignes.

La brique crue est le matériau le plus utilisé, de grandes briques de taille très irrégulière, en moyenne de 34/36 par 17/18 cm; les murs, très minces et fragiles, d'une brique d' épaisseur, liés à la mouna; sont fréquemment renforcés de piliers sur lesquels pouvaient également reposer les poutres de la couverture, mais qui ne pouvaient supporter un étage; le pisé est parfois, employé, pour les enclos ou la construction des mastabas; les structures légères; à armature de végétaux, sont utilisées pour les annexes domestiques et les aménagements des cours. Parfois, les sols sont enduits de terre battue, souvent dans le niveau le plus tardif; par une fois seulement nous avons relevé l' existence d' un enduit blanc.

Ce type d' architecture rappelle donc celui des habitations de la capitales; Kerma (6) et des demeures modernes.
L'unité la plus imposante est la maison 1, partiellement dégagée en 1986 par Charles Bonnet (P1. 2); elle mesure 21 m par 14, 40 m; l'entrée se fait par un passage au nord-est; une entrée secondaire; au sud-est, donne accès directement à la cour; des pièces quadrangulaires sont disposées sur le pourtour; deux piliers comportant quelques briques cuites, rectangularies, pouvaient être réunis par des cloisons végétales dont le sol a conservé l'empreinte. La cour dont L'angle Sud-est arrondi renferme plusieurs foyers et.

Amanagements en pisé ainsi qu'un grand nombre de trous de poteaux dont certains présentent des alignements. Au nord-ouest, une salle isolée renfermait un imposant foyer, ainsi que deux autres au sud-ouest. Le coté méridional a été détruit et remplacé par un mur rectiligne.

L'ensemble 7-8 se compose de deux grandes salles rectangularies où des pierres plates pouvaient servir de bases à des colonnes de bois et où des cloisons intérieures délimitent des espaces; elles se situent de part et d'autre d'une cour fermée qui comporte une cuisine circulaire dans l'angle sud-est, plus tard remplacée par une structure rectiligne. On est tenté d'y reconnaître la partie publique et partie intime d'un même ensemble. Plus au nord; de nombreux trous de poteau sont à mettre en relation avec une structure de type "reouba".

La maison 2, très détruite par les sebbakhin, mais d'un plan différent, aux longues salles rectangularies accolées, pourrait être un entrepôt ou un bâtiment à caractère officiel ou artisanal.

Le niveau récent

Ces grandes unités ont été arasées et remplacées par des habitations beaucoup plus modestes, de 3,50 à 4,50 m de côté, de une, deux ou trois pièces, également édifiées en briques crues, mais d'un matériau plus argileux et plus compact que les précédentes; elles sont dispersées de manière anarchique, et assez éloignées les unes des autres; encore imprécisément daté, ce niveau pourrait toutefois remonter au Kerma Récent, car la céramique de cette époque est assez fréquente.

La maison 4 est une maison de type-escargot, bien qu'une crapaudine et un massif qui pourrait être un seuil laissent supposer l'existence d'un passage au sud (P1.3). La maison 5 est d'un modèle plus étendu, avec deux pièces et une cour ouverte au nord.

Des fours d'un modèle très simple, identiques à ceux que Béatrice Privati a dégagé à Kerma (7), parsèment le site, avec un regroupement plus marqué au nord-est. L'un d'eux a été sondé, une cuvette circulaire plus ou moins
marquée, d'une dizaine de cm de profondeur, de 2m. de diamètre, recouvert
d' un matériau blanc cendreux, très dur, en cours d'analyse (P1. 4).

**Le matériel**

Le matériel lithique, très abondant, est presqu'entièrement composé d'
éclats de quartz, et de quelques microlithes de cornaline et silex. Les
broyeurs; les percuteurs et les meules sont très nombreux; plusieurs dizaines
ont été ramassés dans le secteur fouillé; leur abondance confirme l'
importance des activités agricoles sur le site. En outre, quatre polissoirs d'
amphibolite et une molette dentelée ont été mis au jour, ainsi que des haches
et des palettes.

Le matériel osseux et en ivoire est en cours d'étude: polissoris, poinçons,
alènes et ce qui pourrait être une figurine (P1.5).

Hormis la porterie du Kerma ancien déjà signalée et quelques tessons
Kerma ancien tradif proches des décors du Groupe C, la céramique est
beaucoup plus grossière que celle déposée dans les nécropoles et composée
essentiellement de céramique utilitaire; l'essentiel, les 2/3 environ, est
constitué par des pots de cuisson hémisphériques, au fond parfois renforcé,
soit Kerma moyen, soit Kerma classique, dont ceux imprimés sur natte; le
décors incisé ou imprimé à la molette lisse ou dentelée, soit directement sous la
lèvre, soit en bande: l'étude détaillée pourra peut-être permettre d'en
affiner la datation (Fig.2 et 3).

Les jarres, plus nombreuses que dans les nécropoles, sont de vastes
jarres-greniers au col étorit et à la lèvre débordante.

La poterie fine est rare: des bols rouges à bord noir et quelques beakers à
bande blanche. Enfin, quelques tessons isolés sont à rapprocher de la
céramique pan-graves, notamment celle imprimée horizontalement au
peigne.

Enfin, un scarabée de terre cuite, d'un modèle découvert assez
fréquemment à Kerma, et au plat gravé de hachures nervurées, prouve que
Gism el-Arba était en liaison administrative avec la capitale (18).

Nous sommes donc en présence d'un habitat agricole de type villageois, lié
t à l'exploitation d'un terroir, le Ouadi el-Khowi, sur lequel a pu s'appuyer la
fortune de Kerma, habitat d'un type campagnard par opposition à la
capitale. Les contacts commerciaux sont quasiment inexistants si l'on en
croit la rareté des céramiques tournées ou des pâtes calcaires égyptiennes, et
jusqu'à présent l'inexistence d'objet manufacturé; Gism el-Arba semble à
l'écart des courants commerciaux dont bénéficient Kerma. Les perles en test
d'oeuf d'autruche était fabriquées sur place et celles en faïence sont très
rare. La plus grande partie de la céramique, pots de cuisson et céramique usuelle pouvait être façonnée dans le village, tandis que la poterie fine, qui demande une technologie plus avancée, pouvait être acquise dans la capitale.

Toutefois, quelques fragments de creusets et de scories de cuivre, ainsi que des tessons de moules à pain, un poids de tisserand (?), prouvent que les villageois pratiquaient quelques activités artisanales.

Les éléments de comparaisons sont rares. L' architecture de Gism el-Arba est très proche de celle de Kerma. Si les techniques de construction avec piliers engagées et piliers carrés sont particulières à la Haute Nubie, la juxtaposition d' édifices en briques et d' abris circulaires rappelle aussi des village du Groupe C comme celui d' Areika en cours d' étude par Wegner et publié par David O' Connor (9).

Ainsi, Gism el-Arba prouve que, si l' élevage constitue l' une des ressources essentielles du royaume de Kerma, il ne faut pas sous-estimer l' apport de l' agriculture, et l' importance de l' arrière-pays avec la mise en exploitation du Ouadi el-Khowi.
Liste des planches et figures

Pl. 1 : Gism el-Arba, vue générale (cliché B. Gratien).
Pl. 2 : Gism el-Arba, maison 1 (cliché B. Gratien).
Pl. 3 : Gism el-Arba, maison 4 (cliché B. Gratien).
Pl. 4 : Coupe d'un four (cliché B. Gratien).
Pl. 5 A et B : Poinçon et polissoir en os (clichés B. Gratien).
Fig. 1 : Gism el-Arba, plan d'ensemble du secteur fouillé en 1994.

Fig. 2 : Exemples de céramiques du Kerma ancien (206, 207, 203), du Kerma classique et récent (229,19,169, 79) (dessins B. Gratien, I. Gabriel, S. Hauenstein).

Fig. 3 : Exemples de céramiques du Kerma moyen (dessins B. Gratien,I. Gabriel, S. Hauenstein).
Notes


7. Privati, Béatrice, " Les ateliers de potiers et leur production", in Bonnet, Charles, o.c., p. 121.


The excavation campaign of the Swiss Mission to Kerma took place between 7 December 1994 and 31 January 1995. Gad Abdallah and Saleh Melieh, with the help of Abdelrasek Omer Nuri, directed the excavations and restoration work, which involved almost 150 people. Between 30 and 50 of these were assigned to reconstruction work, making bricks, and building an enclosure wall of 550 metres.

The research focused on the south west, in the secondary settlement, whose limits and organization began to be better understood. A stratigraphic excavation of building I was undertaken and a deposit of jars dating to the end of the Classic Kerma period was surveyed and studied. In the eastern necropolis, 4 kilometres from the ancient town, work on the pre-Kerma settlement revealed an occupation level older than the structures found previously. This super-imposition suggested a stratification of several levels along a fossil branch of the Nile. Eight tombs were excavated in sectors CE 22, which are transitional between Ancient Kerma (2500-2050 BC) and Middle Kerma (2050-1750 BC). The funerary chapel KXI, excavated by G.A. Reisner between 1913 was cleared again, as it had suffered particularly badly during the heavy rains of 1994, and from animal depredations and those of careless visitors. Finally, a new investigation was made of the Napatean cemetery, which was established in the town in about 500 BC.

The pre-Kerma settlement

Forty five circular pits-granaries or storage pits - were studied during this season. One still contained an up turned jar, (Fig. 1) but very little archaeological material was recovered. Several postholes traced the line of a fairly long palisade.

Twenty to 30cm below the cleared surface were traces of an earlier occupation, further confirming the interest of the site. Several postholes, some of which were in rectilinear arrangements, and an oven,
demonstrated that there were occupation layers in situ. There were flint flakes and animal bones on the small surface area that was cleaned.

The south-western settlement

Excavation of chapel E I provided evidence of a long architectural evolution. Even though the earliest levels were not reached, it is clear that the first buildings belong to the Ancient Kerma period. The first was a circular hut, 4.30 metres in diameter, associated with a layer containing animal bones. It was cut by a second hut, which as a result of rebuilding was slightly enlarged (its diameter was between 4 and 4.30 metres). This was followed by a new structure with much larger posts; it was rectangular in plan, with two or perhaps three bays, and its siting respected that of the roundhouses. The next building, which was still made of wood, was also rectangular and fitted almost exactly within the mud brick chapel which succeeded it. This was also enlarged and modified, and had a courtyard beside a colonnade in front of the sanctuary (Fig. 2).

Two very large houses (M 137 and M 138) were found to the north, adding to our knowledge of the topography of the secondary settlement. They were occupied for a long time during the Middle and Classic Kerma periods. Their kitchens were of a good size and were equipped with several large ovens.

As a result of an expansion of the secondary settlement, a road was built at the north-eastern limit of the town over an ancient ditch. In this sector, ashes and reddened earth may have been associated with a workshop (A 142); this latter included several small rooms, sometimes containing hearths. A large square block, with sides of 1.30 metres, had supported a wooden superstructure, perhaps used as a bench. A tiny ingot of gold was found in the spoil.

Further to the south, the rectangular foundation of some sort of tower and the walls of a door indicated the location of a monumental entrance. A rounded ditch forced visitors to pass lower down and a palisade restricted progress close to the fortified walls.

A deposit of jars

Still within the secondary settlement, a depression 25 metres by 17
metres had been dug, very probably at the end of the Classic Kerma period. The depression, which was up to 1.50 metres in depth, had partly destroyed the defensive walls (Fig. 3). Deposited on its slopes and its flooded bottom were more than 200 large jars. They were globular in form with an open neck; the rims and the upper part of the body were usually decorated. Most of the pots bore traces of use or repair and they had been placed upside-down, with their rims driven into the ground. The lower parts and base of the depression were littered with fragments of broken pots. The depression seems to have been deliberately refilled with the soil from nearby mud brick buildings. Later, a well had been dug into the fill, with walls made from fired bricks which seemed to have been made specially for this purpose as they had a rounded profile.

The jars could have been a votive deposit or they may have been associated to a certain festival, like those that were held in villages up to a few decades ago. On these occasions, beer was brought in jars of a very similar type. When empty they were always stored upside-down.

The eastern necropolis

All the tombs in sectors CE 21 and CE 22 had been robbed. However, surface finds of two fragments of an alabaster was bearing the cartouche of Meryra encouraged up to extend the area of excavation in this zone. We found a leather coffin placed beside a corpse and, in another tomb, a pendant consisting of a rock crystal mounted in gold.

Chapel KXI

The reclearing of this building allowed us to make a detailed study of the pointed murals on the internal walls and to plan scenes that were not published by G.A. Reisner. Despite the very mediocre state of preservation, we were happily surprised by the diversity of the scenes representing sailing, fishing with nets, domestic and wild fauna, etc. and by the vivacity of the treatment of an iconography that is more Nubian than Egyptian (Fig. 4).

The architectural analysis also added to our understanding of this monument, notably the discovery of at least three stele more than 4 metres high in front of the entrance (Fig. 5).
The western necropolis

Some more Napatean tombs were excavated in the secondary settlement. They confirmed the contemporaneity of two different modes of inhumation, one in flexed position (Fig. 6) and the other extended within a coffin. Notable was the discovery of beaded nets on the bodies of two women who had been buried in painted sarcophagi.
Fig: 1
Kerma. A jore - Kerma jar
Fig: 2
Chapels of the south-western settlement
Fig: 3
The deposit of jars
Fig: 4
The entrance of K X1
Fig: 5
Chapel K X1
Fig: 6
Anapafon fomb.
The Meroitic, post-Meroitic & Christian Cemetery at Gabati,
D.N. Edwards & P.J. Rose

Introduction

A team working for the Sudan Archaeological Research Society period
cemetery at Gabati between 6 November 1995 and 18 Jan. 1995. The project
was based in Aliab, 14km north of the site, and we would like to acknowledge
all the help given to us by the local Mejlis and our neighbours. We are also
very grateful to the National Corporation for the duration of the project and
for transporting equipment and other material to and from Aliab. The
Antiquities Service went on to provide every possible assistance throughout
the project and we are very grateful to the Director General, Dr. Hassan
Hussein and the Head of the Excavation Section Dr. Salah Mohammed
Ahmed for all their help and professional advice and the great interest they
showed in our work, despite all the other demands on their time. Our
Inspector,, Fatih Abdel Hamdi Saleh played an invaluable role throughout,
both on and off site.

The site, located on the east bank of the Nile some 40km north of the
royal city and pyramids of Meroe-Begrawiya (Fig.1) was identified during
the first season of the SARS Begrawiya-Atbara Survey between Begrawiya
and Atbara, organized to survey and record archaeological sites along the
line of the "Challenge Road", a new tarmac road linking Khartoum-El Geili
and Atbara (Mallinson & Smith 1993, Mallinson et al. 1994).

Gabati lies at the Alian Basin, A low-flying area which, like similar
basins along the Nile, has been a focus of agriculture for millennia, and is
now under intensive irrigated agriculture. No major archaeological sites have
been previously recorded in the area, although the numerous large stone
cairns running along the edge of the hills to the east have been noted in
passing by a number of archaeologists (Hintze 1959:174). Gabati itself is the
site of the ancient Qubba tomb of Sheikh Omar en Nashua, noted by
Nurchardt as he passed through this area in April 1914 (Burckhardt side of
the hamlet of El Natalia and had a dirt road running along its west side in an
other wise quite open gravel plain with sparse tree cover, rising gently to
wards the hills along the desert edge.

The tumulus cemetery lay directly on the projected roadline and it was
expected that at least the east side of the site would be largely destroyed by
road construction by the end of 1995. The initial surface survey identified
some 80 tumuli and test excavations were carried out during the spring of
1994, sampling nine units directly on the road line. These included some of the largest tumuli on the site which proved to be of late post-Meroitic date, as well as a number of smaller graves of Christian types. An unexpected find at the close of that season was the discovery of a large Meroitic tomb with a mud brick pyramid superstructure, uncovered during the excavation of a small Christian tumulus. This was partially excavated, but the work could not be completed in the time available.

The test excavation of the post-Meroitic and Christian grave, revealed that they were all undisturbed, and further work of the site was clearly justified. However, the chance discovery of the large Meroitic tomb indicating the presence of a further earlier phase of use of the site made it imperative that a large-scale rescue excavation was carried out. On the evidence of other Meroitic cemeteries this was likely to be as large, if not larger than the later cemetery.

Following this preliminary work, it was clear that the 1994-1995 rescue excavations would have to deal with a very large cemetery, probably somewhere in the order of 15-200 graves, and possibly many more. In view of resources available and it was expected that it would only be possible to evacuate about 100 graves during the season. Faced with this problem, or general strategy was to:

1. Clear as much of the cemetery lying directly along the projected road line (an area measuring some 40m E-W x 100m N-S) (See Mallinson et al. 1994 Fig. 1).

2. Excavate a sample of the other areas of the site, selecting those areas most likely to provide information to supplement the material found on the east side of this site.

While constrained by the demands of a rescue programme it was hoped to maximize the wider research value of our work which had great potential for the study of both the Meroitic and post-Meroitic Christian components of the site. Few cemeteries of either period have been excavated in central Sudan and the material recovered from the graves was likely to be of considerable importance for the development of our understanding of the archaeology in this region. In view of the limited material likely to be recovered from Christian graves, it would only be possible to justify excavating a relatively small number of these.

General results:

During the season, the project was able to excavate some 104 graves of over 160 located (Fig.2). Nearly all of the most threatened area on the east
side of the site was excavated as well as a large area of the central portion of the west side. The general extent of the underlying Meroitic cemetery was defined but due to the often considerable depth of surface deposits and later tumuli sealing these early graves, especially towards the west of the site, it was impractical to carry out a total surface clearance in order to provide a complete picture of its extent.

The excavated graves included 65 Meroitic, 26 post-Meroitic, 8 Christian and a further 5 burials or other features of uncertain date, one possible Fung. Most of the unexcavated graves were post-Meroitic or Christian tumuli or cairns located on the less-threatened western side of the site. In general, the Meroitic material was unexpectedly rich and varied and would appear to span a relatively long period from the late centuries BC to the end of the Meroitic period. The wide range of Meroitic ceramics recovered, both wheel made and hand made was of particular interest although the graves had been extensively robbed. The material from the post-Meroitic tumuli proved to be very similar to that found during the test excavations (Mallinson et al. 1994) including much well-preserved organic materials, but provided relatively little new information to supplement the very interesting finds from the initial season. The large collection of skeletal material recovered is potentially one of the most important groups of such material of these periods recovered from Central Sudan and provides a very important resource for future studies in this field. No traces were found in the vicinity of any ancient settlements which might be associated with the cemetery. It seems likely that they may have lain nearer the river in areas no under cultivation.

Meroitic cemetery:

The excavations revealed the presence of a large, apparently quite well-ordered meroitic cemetery. While its dimensions could not be defined with any precision, testing across the site established that it extended no further east than c. 450 E and no burials were found north of 106N. Defining the west side of the site was more difficult, but at the northwest edge of the site in an area disturbed during grading of the current road no traces of Meroitic graves or sherd material were found. Further south, surface sherding and limited tests suggested that the site extended as far west as the present road but probably no further. It was impossible to excavate the area covered by the present road where a few graves may have been located.

Some 65 graves were excavated, mainly along the roadline but with a further sample in the southwest quadrant of the site. The cemetery appeared quite well-ordered, with several groups of graves forming rows although no overall pattern could be discerned, as yet its internal structuring remains
unclear although it seems likely that the graves may be divided into a number of distinct groups. There was no intercutting of Meroitic graves although several had been truncated by later burials.

Two graves with mud brick pyramid superstructures were found on the east side of the site and a further three to the southwest. The largest superstructure measured some 4.1m square with a rectangular forecourt or chapel 4.1x4.3m on its east side overlying the entrance rap. The other examples were all smaller and much eroded. One example on the west side of the site (T.68) had preserved parts of a small chapel/inch on its side of the type commonly found in Lower Nubian cemeteries (Wooley and Randall-Maclver 1910:p1.113). The other graves would appear to have had no formal superstructure but their position would in most cases have been clearly marked by low mounds of up cast white gravel excavated from their shafts and chambers. No evidence for other forms of markers such as wooden posts was found.

The substructures of three of the pyramid graves conformed to the classic Meroitic form with east-west ramps and axial chambers at the west end, constructed to hold the Egyptianized form of extended east-west burials. All the others had small transverse chambers at the west end, holding north-south oriented contracted burials. Figure 3 shows the plan of T.68 with an axial east-west chamber and a pyramid superstructure. A grave with the more common form of north-south oriented transverse chambe (T.69) lay just to the north. The shaft of the larger grave was cut through on its north side by a Christian grave T.97. It seems that when this late grave was being dug, the still intact mud brick grave blocking of the Meroitic grave was exposed, partly removed and the Christian burial inserted into the Meroitic grave chamber. Most of the chambers were sealed with blackings of sandstone slabs although a small number used mud brick. No traces of coffins or cartonnage were found.

Almost all the Meroitic graves investigated had been robbed systematically in antiquity, generally with self-definded sand-filled robbing pits over their burial chambers. It was likely that this was made possible by the presence of the low gravel mounds covering them. Preliminary analysis suggests that the robbing mainly took place during the Meroitic period and generally before the digging of the late post-Meroitic tumulus burials, a few burials, such as T. 69 appear to have survived intact somewhat later; in this case the excavation of the Christian grave T 97 cut through the south end of its chamber providing an opportunity for robbers to search its contents.

Despite the heavy disturbance, large quantities of pottery as well as other finds were recovered, including some 80 complete or reconstructable
vessels. Other objects included two bronze bowls, fragments of several wooden kohl pots and of bronze sheathing form unidentified wooden objects. Single examples of a fine bronze "Klepsydra", a decorated faience jar, an imported glass dish and a turned ivory pot were recovered. The "klepsydra" (1104), bronze bowls (6204, 7301), glass dish (8903) and faience jar (9402) are illustrated in Figure 4. Weaponry was notably absent except for one group of six barbed iron arrowheads recovered from one, probably late Meroitic grave. In a number of graves, evidence was found indicating that tomb robbers had removed a number of other items of bronze jewelry and faience objects. It is also likely that there were originally other more intrinsically valuable items such as gold or silver jewelry with the head and hands of bodies being specially targeted by robbers. No fragments of 'Bastatues' or stonework was found on the site.

Preliminary analysis of the skeletal material confirms that multiple burials were common, with up to six burials in a single grave in some cases. Evidence for the recutting of shafts and disturbance of burials indicates that the tobs were reopened and further secondary burials added. Most burials were probably accompanied by one or two ceramic vessels and personal jewelry, although no standard grave equipment can be identified. While several graves included both jars and bowls/cups, in others there was a marked imbalance between the numbers of jars and bowls, the former being considerably more common. This would appear not to be just a result of robbing. Numerous pots cleared from grave chambers by the robbers were subsequently discarded in the robbing pits and together with the sparsity of shreds material derived from discarded vessels on the surface, it would seem that the pottery in the graves was of little or no interest to the tomb robbers. The richest burial under the largest pyramid included at least 14 vessels as well as the bronze "klepsydra", a wooden kohl pot and part of a small ivory object.

The range of pottery is still under study but it is clear that this represents a particularly interesting and varied group of Meroitic vessels (Figs. 5-6), at present the ceramics may be divided into two main chronological groups. The earlier group is mainly wheel made pottery, probably made from local clays and consists largely of jars with some bowls and cups (see also Edwards et al. 1995 Figs. 5-6).

These jars showed considerable variation in the form of their necks and rims and some had well burnished orange or cream slips. Decoration was relatively simple, including stripes and bands in black, dark red and white, some repeated isolated motifs, and wavy bands (1103, 2901, 659/1). Stripes and wavy bands (1103, 2901, 659/1). Stripes and wavy band motifs were most common and would appear to have remained in use into the late Meroitic period.
Open vessels ranged from tall beakers to hemispherical bowls made from a finer version of the clay used for the jars. They were commonly very delicate with thin walls. Usually red slipped and polished, decoration was limited, consisting of narrow while or black bands around the rim or upper body (3805), or in one instance stamped impressions below the rim (1501). Occasionally, the same forms were found in undecorated black burnished wheel made pottery. None of the well known Meroitic 'egg-shell' fine wares were found in these early graves. Few handmade vessels could clearly be associated with the early material. A single example of a fine black burnished aryballos (1401) was found, although it was impossible to determine whether it was handmade or 'owners marks' and inscriptions on the shoulders of some vessels, most examples of which come from the largest grave, 11B (cf. 1103).

The earliest material seems likely to date to about the first century BC, with good parallels for the form and decoration of some jars found at Kerma (Bonnet 1978, Fig. 16; 1990, Fig. 7). Many of the there jars types are less easy to parallel and the surprisingly few comparisons can be drawn with pottery from the more cemeteries, or indeed from the city site.

The second group of material is better known and dates to the later Meroitic period, and can be partially paralleled with finds at Kadada, probably dating to the third and early fourth centuries AD. Like the earlier materials, the pottery is largely wheel made, but of poorer quality, with many irregular and asymmetrical vessels and unevenly applied slips. Burnishing is common but often less well executed and decoration is rare. The clays are again probably local but often have more organic temper and are less well fired. Small open forms, bowls are commonly ledge-rimmed and tend to occur in groups rather than singly as in earlier graves (511, 9410). Several forms of wheel made jars were found, including one examples of the typical late globular pot with a short neck of the type commonly found at Kadada (877/1). Other jar types commonly found in very late contexts at Kadada (Lenoble 1987:105, 109) were only found as sherds in robbed graves. In some cases these had clearly been used as digging tools and were not part of the original grave assemblages.

Examples of decorated fine ware ('egg-shell') cups with both stamped and painted decoration were occasionally found associated with the later graves, although much of this material was recovered as sherd materials from the surface of the west side of the site (515, 755/3). While representing only a very small percentage of the materials recovered from this site, there was sufficient to suggest that such wares were not as scarce in central Sudanese contexts as has often been supposed.
A further important group of material consists of a relatively large number of hand made vessels which were commonly found on their own or associated with similar vessels. Due to the lack of other types of associated material these types of vessels cannot be dated to either of the two main groupings of merotic ceramics, although a single radiocarbon date from T.75 (see sample 7502/C1 below) suggests that some may date to the early first or late second century BC. Mainly jars, the vessels were largely of a brown burnished ware with combimpressed designs around the shoulder and neck. Most commonly these designs consisted of vertical zig-zags between horizontal bands, sometimes with further motifs running up the neck and a row of impressions around the rim (7503, 3902). There were some more complex geometric designs and in a few cases presentational motifs. Such materials may be distinguished from the well-known Meroitic true black burnished handmade wares which were rare at Gabati.

A number of radiocarbon samples are now being processed which we hope will throw further light on the chronology and development of the site, although unfortunately relatively little wood or other suitable materials was recovered from the Meroitic graves. The results of the A.M.S. determinations from the first three samples are listed below (full details with calibration will be published once the results from further samples are available).

<table>
<thead>
<tr>
<th>Sample</th>
<th>Age (BP ± Error)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBT94-4104/C1</td>
<td>1,854 ± 45 BP</td>
<td>(GX-20968-AMS)</td>
</tr>
<tr>
<td>GBT94-5703/C1</td>
<td>1,910 ± 50 BP</td>
<td>(GX-20966-AMS)</td>
</tr>
<tr>
<td>GBT94-7502/C1</td>
<td>2,105 ± 55 BP</td>
<td>(GX-20967-AMS)</td>
</tr>
</tbody>
</table>

Until further samples are processed it would be premature to place undue significance on these first results. However, in general terms they would seems to confirm our interpretation of the general chronology of the site, suggesting calendar dates from the second century BC to the third century AD. Further studies are being carried out on botanical and other remains recovered from within mud bricks, as well as on residues found within several of the jars.

Post-Meroitic burials:

During the season it was possible to excavate a further 26 post-Meroitic burials, which included several infant and child burials which were scattered around the tumuli. These included a further eight tumulus burials along the road line as well as a number on the west side of the site. A number of other graves were found which lacked tumulus superstructures, while some tumuli covered more than one grave.
The tumuli were generally quite small, up to 8m in diameter and rarely more than 50cm high, although they had clearly been much eroded by the action of wind and rain. Most had quite well-defined kerbs of rough stone blocks and smaller blackened sandstone fragments of a type which cover the gravel plain in this area. The core of the tumuli was formed of the red posited grovels excavated from the tomb shafts and chambers, which was then covered by layers of mixed sand and gravel. This material came from quarry pits close to the tumuli, a number of which were identified and partially excavated. In a few cases the mounds contained substantial quantities or red posited meroitic sherds and more rarely bone fragments from robbed graves in the vicinity, although in only one case had a Meroitic grave been cleared out and re-used. In a few instances, small deposits of charcoal and ash were found on the surface close to the tomb shafts or included in the shaft fills but it remains unclear whether these remains of small fireplaces may be related to burial rites.

The substructures of the graves were very similar to those found in the trial excavations (Mallinson et al. 1994). The orientation of the grave shafts was variable although most chambers of the adult graves were aligned approximately north-south, whichever way the shafts were cut. Two examples were found with east-west chambers however. A common feature of the shafts was the cutting of steps or ledges running along their longer sides with raised shoulders on both sides of the chamber entrance. Chamber blackings, all of which were intact, were generally well-constructed with stone slabs, often bonded with a mud mortar.

As was found during the test excavations during April 1994, the graves were undisturbed and well-preserved. Pottery finds were relatively few, in most cases consisting of one or two small handmade bowls and jars, or further examples of imported Egyptian oil bottles (8301). The frames and legs of wooden beds were again common and it was clear that these had been dismantled before being bought into the chambers through their narrow entrances. In some cases some elements of the beds were discarded and buried in the grave shafts.

With the relatively good preservation of organic materials, many samples of textiles, leather, basketry and wooden objects were recovered, but many of the organic were too badly decayed and term it eaten to be recoverable intact, and only their presence could be recorded. However, a number of objects including wooden combs, small leather-covered baskets and coloured woolen textiles, were conserved. The most remarkable finds were further examples of turned ivory and wood kohl-pots, several in excellent condition. Their occurrence cannot be paralleled elsewhere in central Sudan, although in form at least the ivory vessels are similar to
examples of an alabaster 'ointment pot' and a bronze 'khol flask' recovered from the royal cemetery at Ballana in Lower Numbia (Emery and Kirwan 1938:76A: Farid 1963:125, Fig. 65.2).

No traces of the typical early post-Meroitic burials of the type well documented from the Shendi area, notably at Kadada (Geus and Lenoble 1985, Gues, Hinkel and Lenoble 1986) were found and all the evidence places these burials close to the transition of Christianity. Three graves of post-Meroitic types, two of which lacked other grave goods were found to have complete vessels deposited or the ground surface below their tumuli and may represent transitional forms of burial. Such a practice has not been encountered before in this region although ceramics found beneath a transitional/early Christian tumulus at Sesibi near the Third Cataract may represent a similar practice (Edwards 1994).

The pottery was markedly different from that found in the Meroitic graves. Most was found in situ within undisturbed graves and very few sherds of post-Meroitic types were found on the surface or in the robbing fills of the earlier graves. Most were handmade and generally well-finished, slipped and burnished (11703). The most common vessels were bowls in a variety of forms, a common type being carinated, often with a single pierced lug. Some were decorated with shallow vertical grooves, parallels can be found on sites further south, both at Soba (Welsby and Daniels 1991: Fig.104. types N2-11). along the Blue Nile at Qoz nasra Marangan (Edwards 1991: P1.IXC, QM0019), as well as further north near Berber (Lernoble 1991, Fig.4). The parallels with material from Soba emphasize the late date of these vessels. In this respect a most interesting find was that of a decorated wheelmade bowl placed beneath the tumulus of T.27 (Edwards et al. 1995: Fig. 6, No.36) the only wheelmade vessel other than the imported Egyptian oil bottles from the site. The decoration and shape of this bowl is reminiscent of examples of Early Christian contexts from Old Dongola (see for example Pluskota 1991. 42, No.8). The oil bottles (8301), many of which were coated with thick black residues are very similar to examples from Elephantine dated to the mid-fifth into sixth centuries AD (Gempeler 1991:135 (T713), Abb, 77 Nos.2-5). A further interesting category of handmade vessels included two example of coarse jars with incised and impressed decoration (40/1), both found as surface deposits below tumuli.

Christian burials:

It was only possible to excavate a small group of eight Christian graves, some being topical west-east dorsally extended burials, although in other cases the bodies were laid with the head to the east. In two cases, crudely-made unfired clay vessels and basketry were placed with the bodies.
Some graves were covered by stone mounds, one example at the extreme southwest corner of the site being the most prominent superstructure on the site. Others, however, had no superstructure and no examples of the rectangular stone or mud brick 'box-graves' commonly found in Christian cemeteries were found. The grave shafts were generally quite simple, with most having blackings of rough stone slabs laid just above the burials, in some cases sealed by matting. Other smaller graves, generally of children, were shallower and sealed with roofing made of branches or other small wood. Due to the constraints of time and relatively low priority given to burials of this period, several Christian tumuli/mausoleums as well as unmarked graves identified during the course of the work were not excavated.

General Conclusions:

These excavations proved very successful in providing valuable new information on both Meroitic and post-Meroitic burial in this little-known region. While, as expected, it proved impossible to totally excavate the site, the most threatened areas were quite thoroughly explored and it remains possible that unexcavated areas may survive the construction of the road. The Meroitic material is of particular interest and provides valuable new insights into the character of Meroitic burial in this core region of the Kingdom and especially into intra-regional variability in mortuary practice. The dominance of contracted north-south burial forms contrasts markedly with the almost universal practice of extended east-west burials in the elite cemeteries at Meroe and throughout Lower Nubia. The way in which at Gabati, within 40km of Meroe, extended burial was restricted to only a small segment of society may be an indicator of a fundamental social or religious distinction within Meroitic society. More generally, the evidence from Gabati serves to highlight the degree to which Lower Nubian cemeteries can in no way be taken to represent Meroitic norms.

The lack of the late Meroitic burials similar to those at Kadada is also of interest and most of the Kadada burials seem likely to be of slightly later date. Despite the general similarities in grave form and ordination, comparison with the Kadada graves shows that they were commonly much larger and certainly very few of the graves at Gabati could have held any number of either the large globular or straight sided jars which were often found in large numbers there. It seems possible that the small quantities of pottery of this period found on the site may actually have been introduced during a major phase of robbing of the cemetery. Certainly, most of the robbing would appear to have taken place long before the late post-Meroitic graves were dug.

As it seems that the cemetery was in use for over a considerable length
of time there is some reason to think that it may have been used only intermittently. Even allowing for a further significant number of undetected infant burials, which were not found in any numbers within the cemetery, the likely total number of Meroitic burials on the site seems very small to represent continued use by a population of any size over a period of possibly more than 400 years. This is perhaps also suggested by the lack of any coherent overall pattern in the cemetery’s development of the type seen in some of the larger Lower Nubian cemeteries, studies now under way may throw further light on this problem, but if we assume that the site relates to a permanent farming community, it is unlikely to have been large.

The post-Meroitic and Christian material, probably dating to the later fifth and sixth centuries AD, marks a further useful addition to our knowledge of this period. Once the material is more firmly dated, this may prove very useful for comparisons with material from for example, early context at Soba, and help us being to establish a longer ceramic sequence through the period which saw the adoption of Christianity in central Sudan. Comparative work may also help better define the cultural manifestations of the development of the southern Nubian kingdom of Alodia. Most of the pottery suggests the Gabati fell within the sphere of the southern kingdom of Alodia although the presence of the single wheelmade bowl of a type perhaps to be associated with Old Dongola is of interest. With the discovery of what may be transitional grave forms were may also hope to be able to provide, with the help of radiocarbon dates, some absolute calendar dates for the adaptation of Christian burial rites in this region.

The wealth of new material recovered from the site within a single season of rescue excavations is encouraging and certainly shows the worth of such work. It has certainly opened up a number of new problems areas and avenues of research into both the Meroitic and later archaeology in this region. In particular there is clearly a desperated need to develop the study of Meriotic ceramics in the region, both for its importance as a chronological guide but also to begin to understand its production, distribution and social significance. The lack of parallels which can be drawn between the pottery form Gabati and material recovered from either cemetery or domestic contexts at Meroe, only 40km to the south, is particularly thought provoking. Our preliminary post-excavation work suggests that the results of this rescue project at Gabati will provide many new insights into the mortuary culture of the Meroitic and post-Meroitic periods in this region, usefully complementing other recent research programmes at for example Kadada and El Hobagi. Overall, this work has already thrown up many new problems and questions, in many respects highlighting how little we no of the archaeology of this region, further work, whether rescue oriented or as part of research programmes, is essential.
The project was organized and funded by the Sudan Archaeological Research Society with additional grants from the British Museum and the British Institute in Eastern Africa and we are particularly grateful to these institutions for their support. The British Museum also provided the services in the field of two Conservators, Colin Johnson and Barbara Wills, who also carried out a training workshop with Conservation staff from the National Museum in Khartoum. Thanks also to the McDonald Institute for Archaeological Research, Cambridge for assisting our post-exavation work.

The field team consisted of David Edwards (Field Director), Michael Mallinson (Co-Director), Dr. Pavel Wolf, Ian Marsden, Tertia Barnett, Fatih Abdel Hamid (Inspector), Dr. Pamela Rose, Dr. Laurence Smith, Adrian England, Joyce Filer, Time Compton, Colin Johnson and Barbara Wills. A special acknowledgment is also due to Adrian and Robin Thomas and the staff of the British Council in Khartoum for all their help and support.
Bibliography


Emery, W.B. & Kirwan, L. 1938. The Royal Tombs of Ballana and Qustul, Cairo.


*The editor would like to apologise for not including figs. 3, 4, 5, and 6 to the author’s article.*
Figure Captions

Figure 1. Gabati and the Shendi-Atbara region.
Figure 2. General plan of the Gabati cemetery.
The SARS Survey in the Northern Dongola Reach: Preliminary Report on the Third Season, 1994/95

Derek A. Welsby

The Sudan Archaeological Research Society project was in the field for a total of ten weeks¹. The team members were drawn from the USA, Canada, Sweden and the UK and were accompanied by an antiquities officer from the National Board for Antiquities and Museums in Khartoum.²

The Society holds a license for survey and trial excavation on the east bank of the Nile in an area 80 km north-south from opposite the town of el Khandag to Eimani and from the river to the edge of the plateau, a maximum of 18 km to the east. The first season was devoted to a detailed survey of the immediate environs of the site at Kawa. During the second season the area to the east and a little to the south of that site was investigated (Fig. 1). During the last season the northern part of the concession from the latitude of Kawa northwards to the southern edge of the area being studied by Jacques Reinold at Eimani was the theater of operations. As in the last season a two pronged strategy was adopted with systematic survey along east-west transects at 5 minutes of latitude intervals (approximately 9.25 km), and the recording of the more visible sites throughout the survey area.

Until the very recent past almost all occupation has been confined to the banks of the Nile (hereafter the Dongola Nile). It is the advent of diesel powered water pumps which has allowed the intensive utilisation of the Seleim and Kerma basins and now of the plains stretching east towards the Wadi el Khowi. In the distant past the situation was rather different. This was the result of two factors, changes in the local climatic conditions and changes in the character of the river itself perhaps influenced by climatic variation in the headwaters of the river. Recent studies have suggested that the climatic belts during the Neolithic and

¹ The project would like to record its thanks to the staff of the National Board for Antiquities and Museums who facilitated the work. Thanks are also due to the British Council, particularly to the Representative Adrian Thomas and to Suleiman. Jean and Martine Roland kindly offered their hospitality to the directing staff, many thanks.

² The team members were Elizabeth Bettles, Karen Barker, David Hooker, Margaret Judd, Simon Mortimer, Tom Rutledge, Isabella Sjostrom, Derek Welsby and Hassan.
Kerma periods were some 400-500 km to the north of where the lie today\(^3\). This would place the northern Dongola Reach in an area of savannah, an environment much more favourable to the practice of a pastoralist economy and perhaps also supporting some rain-fed agriculture. Greater volumes of water in the Nile may explain why the river flowed in a braided channel which effectively formed massive islands several kilometers wide and perhaps well over 80 km long. During the Kerma period there were two branches of the Nile to the east of the present day river and in the Neolithic there may have been others. The eastern branch (the Alfreda Nile) runs north-south by the eastern edge of the plain before turning westwards to join the central branch (the Hawawiya Nile) a little to the west of the modern village of Hillat el Nakhla\(^4\). Thereafter the combined streams (the Seleim Nile) flows north in close proximity to the eastern edge of the Seleim basin, but certainly does not flow into the basin at least within the SARS concession.

The river channel of the Hawawiya Nile is very indistinct but the location of sites set along both sides of a wide depression indicate its course. Along both banks was an almost uninterrupted spread of occupation material which appears to date to the Neolithic period. Set within this spread is a number of discrete settlements associated with ceramics of the Kerma culture. The settlements are prominent mounds with the remains of stone buildings visible on a number of them. Close to a several of these settlements are cemeteries, the burials placed under earth tumuli covered in brown quartzite pebbles. A detailed study of the ceramics and other artifacts has yet to be undertaken but it appears that there is no pottery later than Kerma Maine (2050-1750 BC) from these sites. This would suggest that the Hawawiya Nile ceased to flow during that period forcing the inhabitants to relocate their settlements elsewhere. However, the few Serabs from these sites appear to date rather later\(^5\).

To the east of the Hawawiya Nile, between it and the Alfreda Nile, two Neolithic cemeteries were noted in the 1993-4 season and another was found this year. Rescue excavations were undertaken on one of these (L14) where eolian erosion was severely damaging a number of the burials. Four skeletons were

---

\(^3\) Chaix and Grant 1993, 402 (with references): Pachur and Kropelin 1987, 300.

\(^4\) The Nile channels are named after modern settlements along their banks.

\(^5\) Quirke 1995.
excavated, all of which were in an extremely fragmentary and friable conditions. Two cemeteries of Kerma Ancient (2500-2050 BC) were also investigated. Two skeletons one of a juvenile, the other of an adult male, were recovered from site L1. Each individual was buried in a crouched position on their right sides with the head to the east facing north. The other cemetery, O16, lay a few hundred meters to the east of the Hawawiya Nile. Ten burials were investigated, all of which had been visible on the surface before work began. Although partly destroyed by erosion which particularly affected the skull, the other parts of the bodies, protected by a few centimeters of sand, were often extremely well preserved. In a number of cases extensive remains of leather was found and one body was buried on an hide, a type of burial well known from Kerma. Human skin also survived in some cases.

North of the confluence the Seleim Nile was lined on both banks by extensive settlements and cemeteries which yielded pottery of all Kerma periods as do the sites along the Alfreda Nile studies in the 1993/4 season. In this area the river channel is clearly visible although masked in places by large dunes. As the river approaches the Seleim basin the settlements are located on the east bank and are rarely more than 1 km a part and frequently less. Towards the northern limit of the survey area an absence of sites over several kilometers may be the result of recent human activity. A large modern village lies in this area and, although information was sought from the locals, no sites could be found. All the settlement sites hitherto described will have relied economically at least to some extent on the river and on the potential if offered for irrigation. Settlement was, however, not confined to the river banks. A number of sites were also located on promontories extending into the Seleim basin which was presumably being utilised by their inhabitants. Today this area is extensively irrigated and farmed although in the past, with the much more primitive water lifting devices, it may have had a greater potential for grazing. The heavy rains of autumn 1994 resulted in the formation of a number of large lakes in the basin which survived for several months and supported some fishing activities. In the wetter climate of the Kerma period this may have been a more frequent occurrence.

Only one site was found on the western margin of the basin although again

6 The skeletons were excavated and studied in the field by Margaret Judd to whom the writer is grateful for permission to use the results of her preliminary analysis.

7 E.G. Bonnet 1990, 75.
the presence of the modern village of Seleim, which extends north-south for over 15 km, may be held to account for this. In a number of instances there was evidence for the recent total destruction of Kerma settlements, the sites only being represented by a few large stone blocks. A group of such blocks was found within Seleim perhaps indicating the site of at least one settlement.

The banks of the Dongola Nile also played a part in the demography of the Kerma period in this region. One settlement site was noted and others had been found in the vicinity of Kawa two years ago. One cemetery of this date was also recognised.

Stone structures are a distinctive feature of the Kerma sites within the survey area. On a number of sites several small structures of this type are present while at P26 there may have been over 15. They are built using large stone blocks which show no evidence for having been dressed. Rocky outcrops within the plain and the edge of the escarpment will have been convenient sources for this material. The external walls are either formed entirely of stone, at least in their lower parts, or presumably of timber posts resting on the stones which are spaced at intervals of approximately 1 m and will have functioned as post-pads. Within all have parallel rows of post-pads again usually around 1 m part centre to centre. Many of these structures are too small to have required roof supports in such close proximity and this has led to the suggestion that these blocks supported a raised floor presumably of timber.

Surface cleaning of three of these structures allowed detailed plans to be made. The structure at P4 was particularly interesting (Fig. 2). It has a narrow door in its north wall which gives access directly onto a line of post-pads which can hardly have supported roof supports at this point. This structure measures 11 m square. Another equally large building was found within the settlement at R28. This is a rectangular structure with external walls presumably of timber frame construction. The internal post-pads are rather more widely spaced than in many of the other examples and this, together with the presence of a very shallow internal apse at the north end of the central aisle, may indicate that here the internal post-pads were actually connected with roof supports. At

---

8 Drawn by S Mortimer and D Welsby. For a photograph of this structure see Bonnet 1990, 21.

9 For a plan see Welsby 1995, Fig. 2.
site T1 the juxtaposition of large stone blocks and mud bricks suggests that a construction with stone, timber and mud brick elements had stood there.

The Maheila Road is today a major route between the regional centres of Dongola and Kareima. No sites along this route have hitherto been noted and its importance in the past is not proven. It was, therefore, with great interest that a site, P26(29), was recorded on the edge of the plateau escarpment at a point where the Maheila Road leaves the plain. At the foot of the escarpment is a Kerma settlement of the usual type. The site in question lies 100 m to the north east. It enjoys very extensive views to the north, south and west though its outlook to the east it not-more than a few kilometers. The irregular rectangular structure 31 by 19-22 m in size has an entrance about 2.5 m wide through the south wall leading into a courtyard. Beyond is a podium within which is a single room perhaps originally square. A number of later hut circles and cairns had been erected on top of and on the edges of the original structure. The unique nature and scale of the early structure suggests that it had a special function and its position would be ideally suited to observe/control the point where the cross-desert route reaches the plain. Its date remains unclear but it does not appear to be modern.

No sites of an Egyptian character were discovered although occupation of the Kerma sites presumably continued at least in some cases, the inhabitants using their traditional pottery and other artifacts. Likewise evidence for Napatan, Meroitic and post-Meroitic occupation was not recognised. All the evidence for medieval and post-medieval settlement was located on the bank of the Dongola Nile except for modern settlement and one or two Muslim cemeteries. Several medieval settlements and occupation scatters were found opposite Argo Island, the island itself lies beyond our concession area. One of these settlements, which covered a considerable area was of particular interest. Much of the evidence for occupation consisted of mounds a few meters in diameter which appeared to be made entirely of pot sherds. Other finds of medieval pottery were made south of Kawa and one cemetery of five box graves all aligned east-west must also be of that date. In the same area were a number of Muslim cemeteries, some still in use. Seven, Gubba were recorded all at the northern end of the concession. Many of these are in a ruinous condition. Modern cemeteries are found in proximity to these and other modern cemeteries lie close to the river over 1 km to the east of the modern settlements.

As in the previous season a large number of stone axes were recovered
from sites of Neolithic and Kerma date. Among those from the latter period sites were many of the rough-out types made from feruginous sandstone. Concentrations of debitage at a several sites indicate the presence of tool manufacturing centres. Some of the tools, particularly the barbed arrowheads and the backed blades, were of fine quality. A number of these latter types were found associated with several dense concentrations of small fragments of bone at site R46 suggesting that this was a specialised butchery area rather than a typical settlement.

The excavations within the Neolithic period cemeteries yielded pots, stone axes, items of jewellery and bone points. Among the pots was a rather crude calyxi from beaker (Fig. 3)\textsuperscript{10} and a bag-shaped vessel decorated over the whole of the exterior with rouletting. A hole had been roughly made through the base prior to its burial.

\textsuperscript{10} Drawn by D Welsby and C Thorne.
Bibliography

Science 237, 298-300.
Quirke S 1995 ‘The Northern Dongola Reach Survey, the 1994/5 season. b: the scarabs and scaraboids’.
SARS Newsletter No. 8, 7-11.
Welsby D A 1993 ‘Kawa Survey Project’
SARS Newsletter No. 4, 3-7.
Welsby D A 1994 ‘The SARS Northern Dongola Reach Survey a: the survey’
SARS Newsletter No. 6, 2-6.
Welsby D A 1995 ‘The Northern Dongola Reach Survey, the 1994/5 season. a: the survey’
SARS Newsletter No. 8, 2-7.
blocks probably *in situ*

Fig: 2

a Preliminary Report

Francis Geus

The island of Sai, covering approximately 12 km N-S and 5.5 km E-W, is remarkable for its preserved archaeological remains which date back to the Palaeolithic and include important New Kingdom Pharaonic sites. It is divided among four villages, named Saisab, Adu, Morka and Arodin. So far, two series of campaigns, directed by J. Vercoutrter in 1954-1957 and 1969-1981 (Vercoutrter 1958, 1972, 1986a and by Geus 1994, 1995) have focused on the most visible remains and their surroundings: in the centre a large Kerma necropolis that borders on the east a vast settlement area (Gratienm 1986; Gratien and Olive 1981); on the north (a) a Pharaonic town-site, whose southern part is covered by a XVIIth century AD Ottoman fortress (Azim 1975), (b) a necropolis of wide extend used since the second millennium BC (infra : 4) and (c) a medieval cathedral where the work was restricted to surface observation and survey.

Postponed in 1981 for twelve years, the exploration was resumed in 1993. Two campaigns have been carried out from the 10th of December 1993 to the 25th of January 1994 and from the 12th of December 1994 to the 24th of January 1995. The staff of the first campaign included Francis Geus, Director, Carolina Geus, recorder, Yves Lecointe, archaeologist, Albert Hesse, archaeologist, Bernard-Noel Chagny, medical doctor, Morgan De Dapper, geographer, Rudi Goossens, geographer and Awadallah Ali el Basha, foreman. The staff of the second campaign included Francis Geus, Director, Carolina Geus, recorder, Yves Lecointe, archaeologist, Jean-Luc Despagne, topographer, Michele Dohet, draughtswoman, Bruno Maureille, physical anthropologist, Morgan De Dapper, geographer, Rudi Goossens, geographer, Abd el-Hai, antiquities inspector and Awadallah Ali el-Basha, foreman. I would like to take this opportunity to express my gratitude to the staff of the National Corporation for Antiquities and Museums and the Cultural Section of the French Embassy in Khartoum for their invaluable assistance and support.

During the two campaigns, work concentrated mainly on the geomorphologic survey (infra : 1), the archaeological survey (infra : 2), the surface exploration of a Khartoum Variant site (infra : 3) and the excavation of two areas in the Northern necropolis (infra : 4).
1. The geomorphologic survey

The aim of this long term research is, of course, to reconstruct the geomorphologic history of the island, in order to facilitate our understanding of its human occupation. M. De Dapper and R. Goossens (Gent University, Belgium), worked on the field in January 1994 and January 1995. They covered the whole island on foot and made observations in numerous localities -88 during the first season- whose geographic co-ordination have been established with a GPS (Global Positioning System) device based on the NAVSTAR satellite system. The data collected during the first season (De Dapper & Goossens 1994; Goossens et al, in press) suggest the following reconstruction of the evolution of the island since the formation of the Basement Complex:

1. Before the Tertiary (a) formation of the Precambrian Basement Complex -mainly quartz and schist-, (b) formation of quartz veins, (c) erosion of the Basement Complex resulting in a peneplain with irregular surface and, finally, (d) deposition of continental detrital sediments, the Cretaceous Nubian Sandstone Formation (NSF), resulting in the formation of an accumulation surface.

2. During the Tertiary and the Quaternary, erosion of the NSF accumulation surface resulting in a pediment forming a gently sloping pediplain from which emerged Jebel Adu, a remnant of the original NSF accumulation, as well as outcrops of quartz and schist belonging to the Basement Complex.

3. During the Quaternary, aggravation and erosion resulting from river and wind activity: (a) Along the pediment, Nile sediments, which sometimes interfinger with pedisedsiments, are deposited. They are arranged in a system of terraces and point bars fringed by recent alluvial clay. Here and there, outcrops of the Basement Complex and of gravel bars indicate former islands. River sands are transported by the wind during the low water season, resulting in the formation of sand dunes at the outer edge of the Nile sediments. Sand and gravel bars develop in the river bed. (b) At the same time, in two areas of the eastern bank, the river flows along outcrops of the Basement Complex and the Nubian Sandstone Formation where erosion takes place, mainly by undermining. It is accompanied by the formation of occasional caves in the Nubian Sandstone Formation. An intricate network of small khors develops in the pediment and the river deposits.

Figure 1 provides an idea of the horizontal distribution of the formations
which have just been described and allows the following comments:

1. The Basement Complex outcrops, Jebel Adu and the pediment occupy a large N-S area which constitutes the core of the island. To the north and to the south, that area forms points whose eastern borders are, at least partly for the southern one, in direct contact with the river. Elsewhere it is fringed by Nile sediments bordered by recent alluvial clay and, in some instances, dune formations.

2. The two river channels are quite different. In the western one, low river activity is indicated by an uninterrupted N-S stretch of Nile deposits including, from west to east, gravel bars, alluvial clay and sand dunes. In the eastern one, high river activity is indicated by the scarcity or absence of sand and gravel bars and by the alternance of areas where erosion has operated and those where sediments have accumulated, a phenomenon which is favoured by the presence, in the south, of a large Basement Complex outcrop where the water erodes sediments which are carried away and deposited downstream. Among the areas where sediments have been accumulating, the central one is the most interesting. It is a significant example of a point bar system, which has developed gradually from west to east, probably since the Early Holocene.

3. In the northern part of the island, a large stretch of rather recent alluvium crosses the island in a SW-NE direction. It possibly indicates the presence of a former river channel which would have dried up in recent times, possibly starting in the 1st millennium BC.

As previously stated, this description is based on the results of the first campaign. The second campaign focused mainly on the terrace system, allowing the identification of at least four units which, in certain areas, were found in connection. On the other hand, large silt blankets were identified in unexpected locations. They must certainly be related to the Late Pleistocene/Early Holocene Wild Nile, which had a strong effect on the ecology of the whole Nile valley (Butzer & Hansen 1968; Vermeersch et al 1989). A short visit on the East bank in front of the island revealed that large sheets of the same formation were also present there. It seems that the Batn el-Hagar braked the discharge of those high floods which, being forced back, covered large areas where they deposited part of their silts.
2. The archaeological survey

Most of the archaeological sites recorded so far in Sai are situated near obvious antiquities, such as the Turkish fort, the Pharaonic town, the Kerma necropolis, the X-Group tumuli and the Medieval cathedral. The explanation for this fact is that the island has never been systematically explored therefore justifying the archaeological survey that was included from the beginning in our research program. Nevertheless, due to a lack of time and inadequate means, it was limited so far to local observations and identifications which, first realised as a complement of the geomorphologic survey, were multiplied at the end of second campaign, when we heard that new agricultural schemes were scheduled in Abdu and Arodin. Our departure pending, we were unable to obtain complete details about these projects, but the local authorities kindly accepted to modify and delete some of the operations. On this occasion, we also heard about the imminent construction of a cultural centre and a mosque in Adu, in an area that was thought to hold occupation remains. The time being short, we could not undertake necessary controls, but the project was displaced in an area of our choice, where no archaeological remains were expected.

As reported by Arkell in his day, Palaeolithic rolled artifacts are present on the surface all over the island. This was confirmed during our two campaigns, but M. De Dapper and R. Goossens also identified lithic implements inside natural deposits, sometimes in areas where two superimposed terraces come into contact. The material found in this context is fresh, indicating the possibility of in situ sites as already expected by Arkell (1949 : 43). In the light of these discoveries, which have been precisely located, the participation of a prehistorian has since been scheduled for our next campaign.

The most significance result of the survey was the discovery, in Adu and Arodin, of a number of habitation sites of the Khartoum Variant, the most ancient Ceramic Age industry in the area. Three of them are particularly interesting. Like a previous one, discovered in Adu by A. Hesse in 1978 (infra), they are linear settlements apparently including habitation structures, a remarkable fact for this industry which, until now, has been mainly documented through denuded sites providing only rather poor surface series of lithics, ceramics and, more exceptionally, faunal remains. Two are situated in Adu where they appear as the northern and southern continuation of the site previously known. The third one is situated in Arodin, near the western channel of the Nile. Only the northern Adu site could be observed in detail, as the two others were discovered in the very last days of the 1994-1995 season. All of them, including the first Adu site,
are situated along what appears as an old river bank, which follows the contact line between the pediment and the old Nile alluvium and certainly indicates the eastern and western limits of the island in the early Holocene. As the new agricultural schemes aim at the cultivation of this alluvium, this line was selected by the engineers for implantation of the canals and therefore most of these sites are highly threatened. Fortunately, as stated above, the local authorities accepted to displace the canals from the archaeological areas but these sites, which are particularly vulnerable, will certainly suffer considerably from increasing agricultural activity.

Other later sites have also been recorded during these two seasons, mainly in Arodin. They include an Early and possibly Middle Kerma cemetery, situated in the same area as the Khartoum Variant site, and several Christian mud brick buildings, situated in the eastern part of the village, some of which were already reported by Arkell in 1941 (Hinkel, unpublished manuscript).

3. The Khartoum Variant site

In 1978, A. Hesse discovered Khartoum Variant pottery sherds among small depressions in the western edge of the large point bar system described above, along an area which he rightly interpreted then as a former river channel bank. He thought that the depressions were the remaining of habitation structures, an idea which he was unable to control in the following years, as the annual campaigns were then adjourned. He had to wait until the 1993-1994 campaign, which he mainly devoted to the realisation of a photographic air-cover of the area, in order to get a precise idea of the ground organisation of the site. This could be done thanks to the participation of B.-N. Chagny who developed in recent years a kite device for aerial photography. In January 1994, the whole area was photographed from a distance of about 75 m (Chagny 1994; Hesse & Chagny 1994) and later, in France, the prints were arranged in mosaics. These actually suggest that the depressions are the remains of habitation units associating structures of standard design, some of them displaying a kind of a trefoil pattern. On the other hand, field observation showed that the western most part of the site, which is certainly the most ancient area of occupation, does not include ceramics, the material associated with the structures deriving almost exclusively from a quartz industry.

4. The Northern necropolis

This large site, which covers an area of approximately 1500x500 m, was used as a cemetery at least from the New Kingdom period onward. In the past,
excavations were carried out in different areas, where burials dating to the New Kingdom (Minault-Cout 1994), Napatan (Geus & Reinold 1975; Geus 1976), Meroitic (Vercoutter 1979), X-Group (Vercoutter 1958; Geus & Reinold 1975) and Christian (Vercoutter 1979) times were cleared. But no global approach has ever been scheduled, although it constitutes a most valuable source of data for the study of the local population and society over three and a half millennia, more particularly in the fields of chronology, material culture, social structure, burial customs and physical anthropology. This is why we decided to carry out a systematic and long term approach of this exceptional burial ground.

The excavation started during the 1994-1995 campaign under the supervision of Y. Lecointe and B. Maurelle (Geus et al. 1995). Work developed in two areas, already excavated during former campaigns, (1) SAP1, situated to the south-west of the Pharaonic town and known to contain Napatan graves, and (2) SAS2 situated to the west of the Pharaonic town and known to contain Meroitic graves, both areas being considered as convenient cores for the planning of future excavations.

In SAP1 (Geus & Reinold 1975, Geus 1976, Geus et al 1995) a 10×10 m square, which had been prepared for excavation in 1974 and left unexcavated, was selected. Nine graves were identified, seven of which are undoubtedly Napatan. All Napatan burials are single or double side cave graves, oriented E-W. As a rule, a vertical pit leads either to a single cave situated to the north, or to two caves situated one to the north and the other to the south. The caves are usually closed with mud brick walls but, in one case, the wall was of rough pieces of stone while, in another, it was of mixed mud bricks and rough pieces of stone. Due to the heavy plundering of most graves, the skeletons were usually disturbed, but enough remained to indicate that the bodies were lying down on their backs, head to the west or, more exceptionally, to the east. For the same reason, they provided few objects, mainly pottery vessels, some of which were placed in baskets which were all poorly preserved. Beside these, the remains of wooden beds, mats and shrouds, as well as large fragments of a bucranium were recovered.

Although a poor burial, the only unplundered grave (fig. 2) is a good illustration of the type. Its single northern cave was closed by a wall of mud bricks enlarging the cave on its upper part and carefully coated by hand with mud plaster. The enlarged cave was just large enough to contain a single individual with few offerings. As shown by the drawing, the skeleton was laid on the back
on a wooden bed too small for it, head to the east facing south, both arms and being straight along the body. It was accompanied by few offerings, including a basket containing two red pottery bowls (fig. 2,a-b) and another one containing a pilgrim bottle, the latter showing heavy marks of use (fig. 2,c). The bed was made of a wooden frame filled with a mat-like material. As shown by the profile of two pieces collected from both its eastern and western sides (fig. 2,d), it had very low legs and finely carved bed-heads.

Concerning the skeletal material, a number of observations could be made, indicating significant pathologies, both traumatic and degenerative, which will considerably add to our knowledge of the life of a provincial or rural human group during that period.

In SAS2, our approach was different. We were looking for Meroitic and later burials, but at the same time, our wish was to isolate this part of the site from the present cemetery, which is slowly encroaching upon it. Therefore, the threatened area, covering a surface of 40 m E-W x 70 m N-S, was squared into 10x10 m units and carefully surveyed. Seven squares, covering the whole area from north to south and from east to west, were then selected for surface cleaning and excavation, revealing the presence of 194 rectangular or sub rectangular pits of different sizes, with a surprisingly low number of cross cuttings. Most of them are oriented N-S or E-W, with a high proportion of E-W units. Sixteen were selected for excavation, mostly among those cutting through each other and, finally, only eight could be fully excavated, because a strong and persistent wind disturbed our mission during the whole season, particularly toward the end.

All the recorded graves were labelled SN (Sai Necropolis). Three of the excavated ones, numbered SN 77, SN 141 and SN 194, could be identified as Meroitic. All were single side cave graves and, although thoroughly plundered, they still contained information about the burials and their equipment. All three were oriented differently, SN 77 being SE-NW, skull to the SE; SN 141, which did not contain any bone remains, being E-W; SN 194 being N-S, skull to the south. SN 77 and SN 194 still contained the remains of wooden coffins and all included various items showing how diversified the burial goods were. In SN 77 we recovered two iron arrow-heads, a fragment of a wooden cosmetic container and a polychrome textile fragment decorated with ankh designs; in SN 141, we found fragments of a glass vessel, remains of a mat and two fragments of leather objects, one in the shape of a lotus flower with two buds. However, the most numerous discoveries were made in SN 194, which provided a large pottery jar
(fig. 3,a), a glass vessel containing solidified perfume (fig. 3,b), a few personal adornments, various textile fragments, one being decorated with coloured diamonds, two ceilings, two leather fragments bearing Meroitic cursive writing in black ink (fig. 3,c) and three objects, possibly pens, which include a porcupine spine and a feather from a large bird.

Dating the other excavated graves is not an easy task as grave goods were absent but, judging from the position of the occupants lying on their backs heads to the west, we can say that most of them are probably Christian. All the skeletons were complete, in anatomical connection, many being wrapped in shrouds which, in many cases, are well preserved (fig. 4). More graves should be excavated before establishing a confident topology of the burials, but already several types have been identified, including one with a slight lateral cave (Geus et al. 1995).

As in the southern area, significant pathologies, both traumatic and degenerative were observed by B. Maureille, who noticed also, among the non excavated graves, a large number of immature individuals. But the most interesting discovery was that of a young woman, probably Christian, who, apparently, died during delivery, the child being still in situ in her uterus.
References


Vermeersch et al., 1989, Vermeersch, P., Paulissen, E. et Van Neer, W., The Late Palaeolithic Makhadma sites (Egypt) : environment and subsistence, Late Prehistory of the Nile Basin and the Sahara, L. Kyzaniak et M. Kobusiewicz eds., Poznan.
Captions of Figures

Figure 1  Provincial lithological map of Sai island, showing the localisation of Neolithic sites (after M. De Dapper and R. Goossens).

Figure 2  SAP1-C3-T2, a Napatan burial: a-c. pottery vessels; d. bed-heads.

Figure 3  Objects from the Nertoitic grave SN 194: a. large pottery jar; b. glass vessel; c. leather fragments with Nertoitic cursive writing (black ink).

Figure 4  SN 39, a medieval burial wrapped in a large shroud.
Report of the First Season at Gebel Barkal Necropolis, 1995  
- Sector 2000 -  
Archaeological Sudan Mission, Fundacio Arqueologica Clos,  
Barcelona (Spain)  
Francesca Berenguer  

The team of the Spanish Mission of the Fundacio Arqueologica Clos at Gebel Barkal necropolis consisted of Francesca Berenguer, Director; J. Lara and J. Morer archaeologists; J. Tre, topographer; A. Gamarra, conservator; M. Ines, draughts woman; A. Montes, photographer and the Mr. Fathi Abdel-hamid Salih, inspector, representing the Sudan National Corporation for Antiquities and Museums. Finally, twenty-seven workmen from Karima and Barkal, supervised by Rais Omar Abdel Rahim Hamed.  

I would like to thank Mr. Hassan Hussein Idris, Director of the NCAM and Mr. Sadiq Mohamed, Director of the Sudan National Museum for their assistance. Also Mr. Esam and the Karima Faculty and Mr. Abdel Gafar Quited of the Karima Museum for their support.  

Fundacio Arqueologica Clos. Barcelona.  
Francesca Berenguer  

During the first season of our Mission of the Fundacio Arqueologica Clos (November-December 1995) to the vast archaeological field of Gebel Barkal, to be precise in the Sector 2000, various archaeological works were executed. Among them, five small tombs were discovered, excavated in rock, with different chronology - the most exceptional because of its characteristics is the discovery and excavation of the tomb that we hereby report as follows. It is an unexplored burial site, as up till now there is no existing cognizance of any verbal or bibliographic references of any kind referring to its existence. Thus our aim is to expound and make known the most relevant preliminary results of the operation in the area mentioned above.  

The recent findings reveal, first of all, that the utilization of Gebel Barkal as necropolis was more extends and varied than has been supposed. And although it is true that the initial orientation of the first works in that necropolis was fruitful and interesting, so is the fact that since then, the 1920's there has been a period of total disinterest in this area and no new archaeological fields have been opened for investigation.  

The location of the royal burial structure was prospected before the first season - February 1995 -, study centered near the old capital of Napata,

108 ___________________________ ΑUSH
more specifically in one of its necropolis, Gebel Barkal. Given the importance it bore as a capital, we chose to prospect that unexplored area-Cemetery. For the archaeological intervention of the first season, a precise spot of the concession was chosen, as area characterized by its mounds, or small elevations of terrain-Sector 2000 -.

In the beginning of the 1995 season our fundamental objective was to verify the possibility of those mounds being burial structures or not (or "containing something"). It was corroborated immediately that the blocks in one of them corresponded to a superstructure. The dispersed blocks of stone made us think of a construction, chair-based, of considerable importance, although quite devastated.

Once the burial structure had been verified we have named it, logically, P.26. From the first moment we observed that the tomb had been plundered, as the place where the entrance of the substructure must have been showed a great hole of furtive; in fact it had been plundered twice. Nevertheless we couldn't date these events, as the scarce archaeological material found didn't provide us with any data on this matter.

DESCRIPTION OF THE TOMB P. 26 (SECTOR 2000)

PYRAMID P. 26 : Basically the tomb had a square ground plan (9x9 m. approx.) and the substructure was been out of the bedrock - 6 m. below ground-level - which in turn is divided into two burial chambers with vaulted ceilings (3.60 m. x 2.60 m. x 3.08 m. x 2.10 m., in the second instance), partitioned by a short corridor. These subterranean areas are reached by means of a dromos - or stairway - located on the east. This corridor is a covered staircase consisting of 37 steps, which has been cut out of the rock, and which measures 22 m. in length. The walled up entrance was made using blocks of stone and a hole had been made it in its upper section, which would seem to confirm the hypothesis that the tomb had been plundered in the past. The second chamber, as is the case of the first, is devoid of all archaeological remains, with the sole exception of large stone blocks which have broken up and lie scattered on the ground - some of which in situ-, that we have interpreted as being a burial bench, as well as fragments of pottery and human bone, belonging the tomb's occupant, who, according to analyses carried out by Dr. D. Campillo, probably belonged to an adult male. Another very interesting architectural element is the presence of a small niche located on the west wall of the same chamber.

Pyramid P-26 offers, therefore, the typical characteristics - dimensions and location - of burial places and rituals of the area and in other necropolises in Napata. That is to say, it presents a typology and a series of characteristics that correspond to a royal pyramid:
- superstructure with square ground plan - made of blocks of stone -
- a dromos with steps leading downwards
- an entrance walled up by stone blocks between the jambs
- two burial chambers and corridor
- stone axial burial bench
- high niche on west wall
- polychromed decoration of the burial chambers and texts
- royal serekh
- east entrance.

No remains of the funerary chapel were found which must have backed onto the superstructure's east side, nor were there any signs of its deposits foundations - perhaps due to the systematic sacking that has taken place in the tomb. Nevertheless, P-26 displays a series of peculiarities that make it an exceptional example of its kind (See chapter on Astronomical Ceiling).

Of all the pottery found in Sector 2000 two objects, whose function is still somewhat ambiguous, are especially noteworthy due to their unusual nature. It is, however, extremely likely that they were used in burial rites given the nature of the place in which each was found: at the doorway of either entrance to the substructure of P-26. The objects - according to D. Dunham - are of the R.W. type, whose main exponents have been discovered in the royal pyramids in the Nuri necropolis in the Napata area - NU. 28, NU. 47, NU. 48, etc., all of which date from Napata area - NU. 28, NU. 47, NU. 48, etc., all of which date from Napata period, that is to say from 6th century BC - . There is no doubt that this fact provides us with fundamental information which will allow chronological approximations to be made concerning P-26. (See illustrations).

At the same time as excavations on P-26 were being carried out other interesting discoveries were made: a group of five small tombs excavated in the rock. While the sector was being cleared to mark out the area to be studied (always in the vicinity of P-26 and the first burial mound P-27?), new marks were found on the stone which were of far smaller dimensions but well defined and clearly delimited. Due to the limited time available, we were only able to excavate two of the tombs: T-1 and T-4. Tomb T-2 was partially excavated. Tombs T-3 and T-5 will be excavated in the next season.
THE ASTRONOMICAL CEILING OF P-26.

As was mentioned before, the decoration of the burial chamber of P-26, constitutes a discovery of great value due to the iconography which appears in its, as it is only the second time such a find has been documented. It is what is traditionally known as an "Astronomical Ceiling" - also known as diagonal calendars - parallel phenomena and more directly related examples can be found in Egypt's New Kingdom (as, for example: the tomb of Senenmut, Seti I, various Ramesses; Mentuemhat and Pedamenope in the Asasif area - Thebes W. - belonging to the Prophets of Amon of the XXV and XXVI Dynasties, among others).

At present there are five prototypes of astronomical themes (Neugebauer-Parker) which are considered to make up the main groups of Decan Families: major - or principal - group of the Senenmust family - with two subgroups A and B - : family of Seti I A - also with subgroups -; family of Seti I B, family of Seti I c and, finally, the Tanis family group.

The first and only known example of an Egyptian Text Astronomical Ceiling in the Sudan to date was located on queen Khnuwa's pyramid, situated in the Meroitic necropolis of South Begrawiya - Beg. S 503 -, and belonging to the major Senemut family group and its subgroup A. In the 80s a manuscript by Reisner - text and illustrations - was re-discovered and published, which dealt with the substructure of this pyramid whose occupant was a Royal Spouse - and possible a queen, of Amanislo, 270-260 BC-. From this manuscript it can be deduced that when Reisner copied and when Dunham published the results of the archaeological excavations in the area of Meroe, they were unaware of the importance of the text and the figures they had uncovered, in other words, they did not recognize that the theme portrayed was an "Astronomical Ceiling" of the Egyptian type.

The first Astronomical Ceiling recorded inside a tomb is that of Senenmut, who lived during the reign of Hatshepsut - or Aspesis - of the XVIII Dynasty. This "ceiling" and successive examples belonging to the XIX and XX Dynasties are considered, as previously pointed out, to be prototypes of the Egyptian Astronomical Ceiling. In fact, those found in the Sudan probably formed part of this tradition, -0 and in the case of P-26 in particular - in view, on the one hand, of the parallelism and similarities that the latter offer in relation to the former, and on the other hand, of the influences under the region of Rameses that have been recorded in these Kingdoms of Cush.

The axis of the vaulted ceiling of P-26 has an east-west orientation. The astronomical decoration has been partially preserved - of which only one fragment remains,- although the figures are sufficiently clear to be able to discern the scene and the subject portrayed. Four of the five planets known
to the Ancient Egyptians can be seen here: Mars is behind Jupiter and Saturn; Venus, as is customary, follows theme. The figure and the name of the planet Mercury were either omitted or have not been preserved. Between Mars and Venus there is a Doyen - Stwy, two turtles - and the whole fragment is presided by the star and sothis decan - Spdt -, a constellation of the southern hemisphere (See illustrations).

In opposition to the major Senenmut family group, P-26 includes the planet Mars behind Jupiter and Saturn. In the major Senenmut family group, Mars is always excluded. The ceiling of P-26, therefore, probably belongs to Subgroup A of this family, as is the case of Beg. S 503. Unfortunately there is no trace of the texts that accompany the figures.

The discovery of P-26 reveals that, once again, the existence of this Egyptian decoration so characteristic, in places so far away from Egypt such as Napata or Meroe. The first of these "ceilings" appears documented in the royal necropolis of Begrawiya, the pyramid B. S 503; the second in the royal necropolis of Gebel Barkal, the pyramid P-26. Curiously enough we have a "ceiling" in each capital. In other words, one in Napata and one in Meroe. The presence of "astronomical ceilings" in the royal meroitic tombs proves, likewise, the continuity of purely Egyptian traditions, although not completely customary, since they are found, basically and fundamentally in the New kingdom.

Based on all of these facts, one must inevitably question whether the P-26 and Gebel Barkal is contemporary, previous or subsequent to Beg. S 503. Naturally, at the moment this question will continue as such. Nevertheless, the answer could be related to the same royal Meroitic necropolis and their capitals.

In other words, chronologically speaking, and spatially, Napata was capital before Meroe; so thus if P-26 is situated in Napata there lies a possibility that it was previous to Beg. S 503. If we accepted that possibility, we could consider, also, that the Egyptian tradition of the astronomical theme was introduced in Napata during the era of the XXV' the Dynasty, or even earlier. The tradition of this Egyptian theme would have lasted throughout the Napatan of this Egyptian transmitting it subsequently to the Meroitic period. However, as had already succeeded in Egypt, it was continually used in rare occasions for other themes and burial texts, likewise Egyptian but more typical and known.

THE SEREKH OR HORUS NAME OF P-26.

Another important and fundamental fact is the presence of the three royal serekh embedded in the astronomical decoration, thus forming a single
entity. Following recent paleoanthropological research carried out by Dr.
Campillo, according to which the remains of human bones found inside the
funeral or burial chamber almost certainly belong to a tall, male subject. The
Horus names to be found in P-26 therefore, correspond to the individual in
question, that is to say, to the kind, occupant of pyramid P-26.

The three royal Serekh B1, B2 and B3-without a doubt, constitute the
principal and most important mystery that remains to be solved as far as
P-26 is concerned. The Horus names written in Egyptian hieroglyphics are at
present being studied, as well as the rest of the parietal hieroglyphic texts.
However, to date we are able to confirm that no Hours name, similar or the
same as the one in P-26 has been found in any Meroitic document or
monument. The B-2 and B-3 serekh-corresponding to Jupiter and
Saturn-contain the same royal name which following the signs in strict order
reads: SMSW WHMU. The name inscribed in serekh B-1, in contrast, is
completely different, and since the hieroglyphics in the latter present
problems it is still to early to offer a conclusive translation (See illustrations).

On the other hand, all these circumstances once again make it possible
confirm that we are indeed dealing with a serekh used on very few and on
very specific occasions by Egyptian royalty - with the exception of the serekh
of Anemones I, part of the titles of Seti I and the "Renaissance era" under
Ramesses IX and Herihor, in other words When msw-. It is precisely this
data, together with other information, that leads us to believe that the name
of the Nubian serekh may bear some relation between the "Astronomical
Ceiling" and a "re-birth" - or "repeater of births" - that is to say,
"Renaissance era", in an allusion to a change of era. Nonetheless, it would
seem that there is no doubt whatsoever that the name of the B-2 and B-3
serekh hint at the idea of the "renaissance".

There is therefore no question as to existence of an authentic Horus
Name but there are no traces of the rest of the king's titles. Therefore, it is
extremely difficult, if not impossible, to attribute these serekh to their
corresponding cartouches, or vice versa, that is to say, to which of the known
cartouches we can attribute the serekh found in P-26. However, it is probable
that the name of the royal serekh will have to be classified as a king about
whom we have no dates or records available, as of yet no references have
been found on royal lists or documents which would give us access to data
regarding the members of this family - its genealogy-. We may be dealing
with an unknown king, which leaves us to try to place him in a period
-bearing in mind and accepting the parallel Dynasty of Napata - and to
include him in the existing royal lists in Meroitic history.

In any case, it is of utmost importance to remember that during the
Meroitic Period, in other words as soon as the capital was transferred to Meroe (300 BC approx.), in Napata, a Kingdom, independent of that of Meroe, rose and constituted what was called the Meroitic Kingdom of Napata - according to G.A. Reisner - choosing Gebel Barkal as its necropolis. In this way, the presumed king of P-26 could perfectly well be situated in this branch of independent Napatan dynasty, making his burial place, logically, in Gebel Barkal. There is also possible of it being previous to the date given by Reisner, supposing of course that this independent Kingdom of Napata rose in the Napatan period, and not in the Meroitic one. This supposition, on the other hand, could explain the state of total devastation presented by the superstructure of P-26, in contrast to the North and South group of Pyramids at Gebel Barkal-Sector 1000, which have preserved their pyramidal superstructure.

Together with excavation of P-26 we made some interesting finds: a group of give small tombs hewn out of the rock. While clearing the sector to delimit the working area (always around P-26 and the first burial mound P-27 ?), cuts in the rock appeared once again, in this case of smaller dimensions, but also well-defined and delimited. Due to the lack of time, we were only able to excavate two tombs in their entirety: T-1 and T-4. T-2 was only partially excavated. T-3 and T-5 will be excavated in the next season.

TOMB T-1: Located about two metres south of the P-26 dromos, it consists of a small dromos with three steps (2.40 metres in length) that gives access to a small chamber - an oval-shaped pit. The entrance was completely walled up with stone blocks and mortar, and was found intact. The small chamber or funerary grave contained the complete skeleton of an infant of between two and four years old whose sex has not yet been determined. The body was found lying at the bottom of the pit, had been buried in a doubled up position and laid to rest on its right-hand side. Next to the body, close to its back, a simple but interesting trousseau was found in situ. The objects that constitute the funerary array were a bronze bowl, a complete silver earring, the fragment of a second earring, two bronze anklets, and a small necklace of faience beads with two small semi-precious carved stones. Together with the skeleton very small fragments of fabric were found, probably belonging to the infant’s shroud. No form of burial bed or resting place was present.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Date (BP)</th>
<th>Sample Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBT94-4104/C1</td>
<td>1,854 ± 45 BP</td>
<td>(GX-20968-AMS)</td>
</tr>
<tr>
<td>GBT94-5703/C1</td>
<td>1,910 ± 50 BP</td>
<td>(GX-20966-AMS)</td>
</tr>
<tr>
<td>GBT94-7502/C1</td>
<td>2,105 ± 55 BP</td>
<td>(GX-20967-AMS)</td>
</tr>
</tbody>
</table>
In order to determine the chronology of T-1 we established the appropriate comparisons based on the typology of the tomb and the trousseau found in it. There are strong indications that lead us to believe that we are dealing with a tomb of the E-03 type. This type of burial is common in other Meroitic necropolises.

TOMB T-2: This tomb has only been excavated up to its entrance which is walled up by stone blocks, similarly to that of T-1. It also presents a small, perfectly defined stepped dromos (seven steps). However, a complete excavation was unable to take place as we came up against serious difficulties. T-2 was found underneath the possible superstructure of P-27 (?); that is to say, it constitutes part of its foundations. We were therefore unable to excavate T-2 as it would have meant that the stone blocks of P-27 would have fallen on the small tomb damaging both burial places. Over the next season, once P-27's superstructure has been excavated and documented, we will be able to finish work on T-2.

TOMB T-4: This is a small tomb hewn out of the rock which has been entirely plundered. Due to its small size it could have been the grave of an infant. Once again, by making typological comparisons with other graves - since no archaeological remains were found -, we were able to estimate its chronology. This tomb belongs to the type that Emery and Griffith labelled the lateral niche grave. These tombs have a small pit opening onto a small chamber, dug out alongside the pit and whose chronology stretches from the Meroitic period to the X Group Culture, very common to the area.

An absence of superstructures has been observed in general and it would seem to be the case of these five tombs.

FUNERARY STRUCTURE P-27 (?): As mentioned above, our archaeological research in sector 2000 began on this structure. Located south-east of P-26, we identified the remains of what seems to be a somewhat dilapidated funerary superstructure, - as is the case of superstructure P-26-but with the presence of scattered stone blocks and signs of the level of the foundations. We were also able to identify an opening which enable sacking to take place where the entrance to the presumed tomb should have been. Nearby the rock was carved out, which may correspond to a dromos belonging to structure P-27. Given the great importance and significance of the grave, it was decided to excavate it in the coming season. This will undoubtedly be one of the first and most immediate operations to take place in sector 2000, as well as the complete excavation of superstructure P-27.
PRELIMINARY CONCLUSIONS:

Archaeological findings to date have not enabled the exact figure of burial mounds to be calculated. Although, by adding up all the pyramids excavated and recorded by Reisner to the new burial places found in sector 2000, we reach a number of 26 - or 27 - pyramid structures. This is a relatively low figure in comparison with the large surface area of the necropolis. This leads us to believe that this necropolis may contain more tombs of this type as well as smaller burial mounds, that, as has already been seen, were recorded in Gebel Barkal for the first time, during the first season.

As you can see, the discovery of a new pyramid in the Gebel Barkal necropolis means that we will have to think again about the problem regarding Meroitic chronology. Hinze made references to this particular aspect when he said that few chronological assumptions could made just by basing ourselves on materials excavated to date.... All new excavations usually prove to be a source of materials for history and chronology.

In addition, we can also say that as far as the chronology of Meroitic sovereigns is concerned, we can still only base our assumptions on the tombs found where they were buried. This means that we are presented with a relative chronology and we can only talked of absolute chronology in a few, scarce instances. In other words, the royal necropolises of Napata - El Kurru, Nuri and Gebel Barakal - are still crucial when establishing Meroitic chronology.

Another problem facing us as regards Meroitic history is that raised by the so-called Parallel Dynasties of Napata. The American archaeologist G.A. Reisner observed, in his excavations of the Gebel Barkal necropolis, that the pyramids of the South group and some of the North group, displayed great architectural similarity to the royal pyramids of Meroe. As he believed they were built at the same time he arrived to the solution of the existence of two parallel dynasties in Napata, the main line of which resided in Meroe. We believe that our research should follow this line of investigation.

Therefore, in view of the new data available we should reconsider the dates regarding when the necropolis was first and last used. Due to its privileged position - next to the "Holy Mountain" - we suspect that it could have been occupied at an earlier stage, by individuals who may or may not have been royal, but was later reduced to occupation by private or ordinary citizens - as the discovery of small civil tombs illustrate. In fact, it may first have been used at the height of the Napatan period, and may be even before, as the discovery, to date, of a new pyramid in the area - P-26 - would indicate.
All this is backed by the recent discoveries which show a density, a typological variety and chronology of the necropolis of Gebel Barkal which had never before been thought possible. As mentioned above, this leaves us no other option than to reexamine this question and to adopt a more guarded attitude. Nevertheless, we firmly believe that as a result of these findings the chronology of this necropolis should be revised and reconsidered.

For the moment nothing more can be added, as was said before, circumstances oblige us to adopt a more guarded attitude. In other words, under such circumstances hasty conclusions should not be made. Taking all these factors into consideration - and whilst waiting for the laboratory analyses on the pottery and epigraph - we will try to establish a necessary investigations and comparisons in order to corroborate the hypothesis put forward, and also in order to provide the approximate age of the tombs - in particular of P-26- as accurately as possible. It is necessary to wait for the results of coming seasons, in particular of the small tombs and a possible P-27, that may help to define the nature and chronological limits of the area. Future archaeological excavations will provide us with a more complete vision of the necropolis, as well as more information and data on the different phases of occupation and their chronology. Perhaps all of this will help us to fill in the many blanks that we now face in the investigation of the ancient city of Napata, Meroitic chronology, end even the origins of Napata's royalty and of the Gebel Barkal necropolis.
BIBLIOGRAPHY


F. Berenguer and Luis M. Gonzalvez, Mision Arqueologica en Dyebel Barkal (Sudan).


F. Berenguer, Descubrimiento de una tumba real inedita en la necropolis de Dyebel Barkal (Karima-Sudan).


E.A.W. Budge, Annals of Nubian Kings

London, 1921

D. Dunham, Royal Cemetery of Kush. I.V

Boston, Mass., 1950-1963

D. Dunham, Macadam and M.F. Laning, "Names and relationships of the royal family of Napata"

JEA, 35 (1949)

Garstang, J; Sayce, A.H.; Griffith, F. Ll., Meroe, the City of the Ethiopians

Oxford, 1991

F.Ll. Griffith, Oxford Excavations in Nubia,

LAAA, 12 (1925)

F. Hintze, "Meroitic Chronology: Problems and Prospects".

Meroitica 1, Berlin, 1973
F. Hintze, Studien zur Meroitischen chronologie und zu op fer tafeln aus pyramiden von Meroe.

Abh. der Deutschen Akademie der Wissenschaf ten zu Berlin, 1959

I. Hofmann, Beiträge zur meroitischen Chronologie


M.F.L. Macadam, "On a Late Napatan or Early Meroitic King's name" JEA, 33 (1974).


R.A. Parker, The Calendars of ancient Egypt

Chicago. 1950

G.A. Reisner, Outline if the Ancient History of the Sudan. IV. The First Kingdom of Ethiopia

SNR, 2. Khartoum, 1919

G.A. Reisner. "The Meroitic Kingdom of Ethiopia: Chronological outline".

JE A, 9 (1923)


A.M. Sayce, The Ethiopian sovereigns at Meroe

Ancient Egypt, Par II, London-New York, 1920

P. L. Shinie. Meroe, a civilization of the Sudan

London, 1967

L. Torok, MEROE. Six Studies on the cultural Identity of an Ancient African State

Studia Aegyptiaca XVI, Budapest, 1995
Derek A Welsby, The Kingdom of Kush
St. Wenig, Nemerkungen zur Chronologie des Reiches von Meroe.
Meroitica 7 (pp. 577-582), Berlin, 1984.
FUNDACIÓN ARQUEOLÓGICA CLOS

Yacimiento: Dyebel Barkal

Descripción: Planta y contenido DB T1

Nº plano: DB 2000/5

Escala: 1:10

Fecha: 3/12/95

Dibujante: Montserrat Inés

Topografía: Javier Tre

Observaciones:
Between Superstructure P-27(?) and T-2

(DB) P-26

Some POTTERY FROM DYEBEL BARKAL.

SECTOR 2000 (Drawing by M. Bernad)
Plate: 1
CHAMBA A - P - 26

Plate: 2
Entrance P - 26
without stores

Chamber B (P - B) P - 26

134 HUSH
Plate: 5
Chamber B (D-B) P - 26
Stone - bench, in situ

Plate: 4
Entrance P - 26
Door Blooming type

Plate: 6
Anubis - P - 26
Plate: 8 Pot stand, Wh eelmade
With two hoks punehed inside P - 26

Plate: 7 id. RW - P 26

Plate: 9
Tomb (D - B) T. 1 skeleton
Khartoum - Atbara Road Rescue Project
Shendi - Begrawiya Section Field Report

H. Paner
The Expedition of the Archaeological Museum in Gdansk (Poland)

The project was developed as an extension of a larger rescue programme designed to record and map all archaeological sites located along the line of the new Khartoum to Atbara road. In January 1995, a group of Polish archaeologists from the Archaeological Museum in Gdansk was asked to take part, together with representatives from the National Corporation for Antiquities and Museums of the Sudan, in the task of recording the sites along the road section from Shendi to Begrawiya.

The main body of the task team consisted of four specialists for the Archaeological museum in Gdansk (Poland):
1. Henryk Paner - Leader of the team in the field
2. Elzbieta Kolosowska
3. Zbigniew Borcowski
4. Adam Kamrowski and three inspectors from the Sudanese Antiquities Service:
5. El-Hassan A. Mohamad (till 18th January)
6. Abd El’Zeem Ahmed Babikir
7. Nasir El Din M. Ahmad

The whole project was supervised by Dr. Salah Mohamed Ahmed, Head of the Antiquities Service’s Field Department.

The Project’s Objectives

The main aim of the project was to carry out a fieldworking survey on both sides of the planned course of the road, covering a belt of approximately 100m in width, and to record all visible features and scatters of archaeological material noticed within the covered zone.

The team was also asked to prepare detailed topographical plans of any features encountered and draft an overall map of the archaeological sites in the area in question.

Special attention was to be paid to three sites located in the vicinity of the road, but outside the planned zone of fieldwalking, and therefore not immediately endangered by the construction works-namely:
1. A group of three tumuli in Begrawiya
2. The Awalib site
3. The Abu Erteila site

No surface finds of any kind were to be collected during the survey.
Equipment and Methodology

Due to the lack of any detailed maps of the region-smaller in scale than 1:25000 (the only maps available were 1:1000,000 from the Ordnance Office in Khartoum and 1:500,000 from the Museum archives), the survey had to rely on a photocopy of a map put together by an Italian company for the road constructors from a series of aerial photographs. The photocopy had a scale of approximately 1:50,000 and showed both the course of the new road as well as the row of benchmarks situated along it. When compared to the actual situation in the field, these details proved to be plotted with sufficient accuracy to allow the copy to be used as the basic background for mapping all the significant archaeological features found during fieldworking. However, for those sites whose boundaries were marked by scatters of archaeological material only, it was decided, that the geographical position, established using a Global Positioning System (GPS) receiver reading taken approximately in the centre of the site, with further references to the location of benchmarks and the estimated extent of the scatter, would be the most sensible solution. Features were plotted using a theodolite and measuring staff (both distance and an angle from the bearing axis), always with reference to the base line, which was set up between the two closest benchmarks. When the benchmarks were too far from the objects being measured or their elevation made it impossible to obtain horizontal bearings, temporary benchmarks were chosen (usually marked as "X" with a cipher index on the sketch plans on the feature forms). As for the contour maps of the features and sites, these were plotted within a gird laid out using two main axes with benchmark references. Depending on the given feature’s topographical form, the size of the grid squares varied from 0.5 x 0.5m to 5 x 5m, with a level reading being taken at each grid intersection.

To facilitate data recording of both sites and features, pre-printed forms were prepared for use in the field. The numbers of these forms correspond to the numbers allocated to sites and features and run progressively for the whole project. Some of the sites record had already been given inventory symbols by the National Corporation for Antiquities and Museums, but since not all of them were known during the survey, the numbers used in this report are unique to the survey and will have to be revised in the near future.

As is usually the case when examining sites by fieldwalking alone, so here it was also difficult to determine the precise chronology of features. In most cases there were no associated surface finds and since most of the features were burial mounds, the dates given on the forms have to be regarded as provisional.
only, until excavations provide more reliable dating evidence.

Originally, it was intended that a fragment of map be included on each record sheet, showing the plotted features and the extension of each site. The available charts, however, precluded this procedure. Their scale was too large to plot the shapes of whole sites, not to mention single features, in a sensible way. Therefore, it was decided to include this information using small situation sketch-plants drawn next to the entry for "Topographical form" and give the measurement data (i.e. dimensions and elevation values) under the "Description" heading. To give an idea of the actual topography of the features, three level readings were usually given, always measured along the base line indicated on the sketch plan. These readings were taken at the front of the feature, in its centre and finally at the back of it. In some cases, when the form of a feature was more complicated than that of a typical tumulus, more levels were taken. Those features for which contour maps already exist were measured only in the centre, their outline being determined by contour lines.

The sketch plans which were drawn in on the feature forms were, however, not very informative as far as whole groups of features were concerned. Thus, a further five plans of whole burial sites (nbrs. 76, 8, 21 and 22, 24, 28) were made, giving references to the line of benchmarks and the course of the planned road. An overall distribution map of the sites surveyed during this project, is included with the final report (Fig. 1).

Fieldwork

The survey took place in a well-known region where several long-term archaeological projects have previously been carried out. The most recent one, along the line of the new road and similar in its objectives to the present one, was conducted by Dr. Salah Mohamed Ahmed in 1992.

His report already mentions most of the sites encountered by the present mission, thus, in many cases, this survey's task was to verify their location and plot them in detail.

The actual fieldwalking started on 12th January and was completed on 3rd February 1995. The survey began from benchmark 93 and proceeded towards Shendi.

Having assessed the topographical characteristics of the region along the road, it was decided to widen the area of examination up to an additional 100m,
so that the covered stretch measured 200 m in width instead of the earlier planned 100m.

The work was carried out up to benchmark 42, which marks the 20th kilometer of the road from Shendi. The survey was suspended here as the road constructors had already managed to lay a metallic surface on the grade up to this point (Fig. 1).

It seems worth mentioning that benchmark 42 is situated on a top of a considerable tumulus which is the last of a large group of others extending to the south on both sides of the road. The whole group of tumuli should be regarded as a separate burial site (here recorded as number 38) not mentioned in Dr. Salah Mohamed Ahmed’s report.

A total of 38 archaeological sites were recorded up to this point; of which 34 lay in the walked zone. Of the total number of recorded sites, 24 possessed no visible features. At the remaining sites the number of features amounted to 22. All of them were plotted, with contour maps being drawn up for 17 of them.

In addition to being mapped, all of the features were photographed (i.e. Fig. 6). The archaeological material found on site was either drawn or photographed on the spot since its collection was not included in the scope of the project.

Some of the sites were covered more extensively, either by prior request of the Sudanese authority or, as in the case of site 8, because it was deemed unwise to cut them by the designated fieldwalking zone when they clearly formed one spatial entity.

Located in the Wadi al-Hawwad, site 25, better known as the Awalib site, received special attention resulting in 1 3-D representation (Fig. 5) and detailed contour map (Fig. 3) of all features and the surrounding terrain being drafted.

The whole area, previously enclosed by a no longer extant fence, was embraced by a polygon consisting of 12 base points, covering a surface area of c. 3.26 ha. Six artificial forms were identified within the area to be contoured. They were given consecutive numbers in accordance with the project system, from 142 to 147, like any normal archaeological features at other sites. They cannot, however, be regarded as single units of the site because other features are
undoubtedly present within them. Nevertheless, to facilitate contouring, they were treated as single entities in the grid of measurements, all the more so as there were no discernible intervals between the bases of each feature.

The grid was laid out with various sized squares, depending on the actual form of the feature. The size of the squares ranged from 0.5 x 0.5m to 2 x 2m.

The total number of level readings taken at the intersections of the grid amounted to over 10,000 for the whole site, under the assumption that the contour lines would be drawn at 0.2m intervals. The main axes of the grid were measured from the line between benchmarks 80 and 81. The elevation value of benchmark 81 (361.89m) became the reference value for all the measurements of the site.

Other than the contour map, a distribution map showing 40 stone construction elements (including detailed descriptions of their forms and decorations—listed on pp. 10-11 of this report) was also drawn up (Fig. 4).

Due to the enormity of the task, and the apparently lesser significance of sites 26 and 27, a slightly different method was applied to the contouring here. Only the bases of their features were measured at chosen polygonal points and afterwards the levelling ran along various axes, cutting through the most informative planes of the mound. In the case of site 26, the distribution of stone construction elements was also plotted.

A Brief Description of the Sites

The area of the fieldwalking survey extended mostly over a low terrace rising markedly East of the paleo-channel of the River Nile, where most of the present-day population is settled. Much higher hills and the Jebel Makbor range border the area further East, running approximately along the line of the new road, and therefore along the course of the survey. The surveyed region itself is not devoid of small topographical forms, though as a whole it appears to be flat. It consists of a series of gentle hills and knolls often separated by shallow khors. With the possible exception of the somewhat higher banks of the Wadi al-Hawwad no prominent topographical forms can be discerned here.

The decided majority of sites fell into the category of either burial places or habitation areas, except may be site 6, which was identified as a stone industry workshop. Located on a gentle slope of a long, South-facing elevation, it
contained a vast amount of shattered quartzite pebbles. It is worth noting, that no single pebble was found intact in the immediate vicinity, where the source material, though present, was never seen in a similar concentration.

No finished tools, however, were found and the few accompanying potsherds indicate that the site is of post-neolithic date.

As for the burial sites, these consisted mostly of various sized tumuli. Some were clearly conical (Fig. 6), the majority flat and a few distinctly concave. Only a few tumuli (together with the scatter of fired bricks of potsherds accompanying them) were determined as separate sites (sites 1,3) and possibly 2), the rest of them tending to group into clusters, forming either extensive {sites 8 and 24} or small burial place {site 7}.

It is possible that this tendency mirrors the topography of the area, since the mounds were located mostly on the slopes or tops and ridges of hills and never in depressions separating the different forms of the terrain. On the other hand, site 7 was situated on flat ground, as was site 22, where a cluster of burials was encircled by a row of stones.

All of the tumuli were clad with medium-sized stones, the variety of stone used depending on the local source. Generally speaking, up to the 64th benchmark, dark ferrocide stone (or a similar kind of volcanic rock) casing predominates. Thereafter, for a Kilometer or so, ferrocide stone appears together with light-brown chert, giving up entirely to chert at the end of the survey course.

Despite being in groups, the tumuli form separate entities, except on a few occasions where smaller burials are set in the casing of larger ones, although very often the small mounds are different in character to the rest of the burials in the whole group.

They are almost without exception oblong, flattish forms with additional bigger stones placed either at both or one end. In the case of site 22, these graves are set outside the aforementioned stone circle, even though they seem to create one group with the remaining tumuli.

In addition to those forms described above, other features of undetermined function were located within the burial grounds. These were very rarely encountered in comparison to the tumuli and were easily singled out. At site 8
there was a small stone ring and two adjoining circles paved with slabs.

In general, there were insignificant scatters of potsherds within these burial sites, a very limited amount of fired brick fragments and no human bones on the surface.

One notable exception was site 29, located at the central square of Deim El-Garay village. There is definitely a Meroitic or post-Meroitic period cemetery situated within the confines of the square, although in contrast to the other sites, no discernible features were visible here. Interviews with the local inhabitants revealed that during the rainy seasons there is an abundance of small finds and bones (human) all around the place.

There were also some doubts relating to the treatment of those sites at which extensive, though sparse scatters of potsherds and grinders were observed as well as an occasional tumulus. These sites seemed to qualify more as habitation places where some burials had taken place, although without further investigation it is difficult to say whether they took place before or after the area was settled {sites 1,3,7,14}.

It was slightly easier to determine the character of sites without any visible surface features and only a thin scatter of archaeological material. The lack of human bones among the finds suggested that they were habitation places, either temporary camps homesteads or larger settlements. Here again, their precise function could be established by trial trenching.

It seems worth mentioning, that across the whole surveyed area there was indication of some lithic industry, the tools of which were made of light brown chert (very occasionally of rhyolite) and were noted in lower or higher densities everywhere where fieldwalking was carried out. The techniques of their production were quite uniform and shall be further studied to reveal their provenance.

Far more complex, and therefore more difficult to describe with any degree of accuracy (as far as the function of their features is concerned), following only a fieldwalking survey, are the sites of Awalib {sites No. 25 (Fig. 3,4,5) and 26} and Abu Erteila (site No. 27) From the material covering its surface only, it seems obvious that the Awalib site is complex, not only functionally but also chronologically.

In general, it is possible that its stratigraphy could span from the Napatan
to post-Meroitic period. Of its 6 "features", 142-145 were recognised as the remains of buildings constructed of fired bricks (Fig. 9) with the addition of sandstone masonry elements which were found on the surface in the shape of column drums and blocks with relief decoration (Figs. 7 & 8).

The abundance of potsherds and human bones within "features" 146 and 147 indicates that they are burial places. However, the remains of mudbrick walls visible in the eroded East section of mound 147 strongly implies the presence of constructions pre-dating the cemetery.

Some 300 metres South of site 25 there are two large mounds, (148, 149), covered mostly with fragments of fired bricks. At least five large fragments of column drum lying on the West slope of feature 148, point to the remains of an official building there. As the accompanying potsherds were of Meroitic date, it seems possible, that the mounds belong to the complex site 25, though they were given a separate inventory number (26) in this project.

Finally, there was site 27, Abu Erteila, also apparently a building complex composed of four mounds, which were given consecutive feature numbers from 217 to 220. All of these features consisted of heaped up fragments of fired bricks with no evidence of any other building materials being present. The sparse scatter of potsherds within the site was mainly Meroitic.

General Remarks
The survey established that the following features appear to be directly endangered by the construction of the new road:

- at site 8 - features 22 & 23, 24, 28, 59, 60, 61, 62 & 63, 69, 70, 75, 94, 96, 99, 101, 102, 103;
- at site 24 - features 141, 162, 163, 164, 165, 166;
- at site 28 - features 208, 209, 210, 211, 214, 215.

In the case of site 25 (Awalib), though not under threat from the construction project, it was noticed that a considerable amount of damage had been caused by passing vehicles, and the activity of robbers seeking building materials and small finds from the graves. In addition, the site is subject to heavy erosion during the rainy seasons.

For all these reasons an immediate rescue project is recommended. Of all the sites without any visible surface features, site 34 seems to be the most
promising and worthy of more through examination either in the form of trial trenching or proper excavations. It is widely believed among the members of the task team that some of their undertakings would not have been possible without the help of the technical staff of the construction company. Firstly, they provided the survey with the numeric values of the benchmarks, without which all the levelling measurements would have been imprecise. In addition, when the danger of destroying at least two burial mounds was indicated whilst surveying site 24, they immediately agreed to leave a sufficient margin of the road for as long as was necessary to allow proper rescue excavations to take place. On the whole, they showed great interest in the preservation of archaeological monuments, which bodes well for future co-operation during similar rescue operations.
The Awalib Site

Architectural elements of greatest significance found scattered within the features.

Site No. 25 (Fig. 4)

Feature No. 142

8. Fragment of column drum, sandstone, height: 0.36 cm
9. Fragment of column drum, sandstone, height: 0.28 cm, together with more unidentified sandstone chippings covering an area c. 200 x 200 cm.
10. Four large sandstone chippings covering an area of 200 x 130 cm.
11. Fragment of sandstone block with relief ornament of a wing, carved surface: c. 0.043 x 0.31 cm, thickness: 0.20 cm.
12. Fragment of sandstone block with relief ornament of rosettes or stars, carved surface: c. 0.20 x 0.40 cm, thickness: 0.22.
13. Fragment of sandstone block with pairs of chiselled grooves, c. 0.46 x 0.40 x 0.27 cm.
14. Fragment of sandstone block, c. 0.60 x 0.43 x 0.40 cm.
15. Fragment of column drum, sandstone, height: 0.16 cm.
16. Fragment of column drum, sandstone, height: 0.15 cm and three other sandstone chippings covering an area of about 150 x 120 cm.
17. Undefined fragment of sandstone block, c. 0.31 x 0.25 cm.
18. Undefined sandstone block, c. 0.41 x 0.29 cm.
19. Undefined sandstone block, c. 0.36 x 0.34 cm.
20. Fragment of column drum, sandstone, height: 0.31 cm.
21. Fragment of column drum, sandstone, height: 0.30 cm.
22. Sandstone block, c. 0.35 x 0.45 cm.
23. Sandstone block, c. 0.30 x 0.42 cm.
24. Possible fragment of column drum, sandstone, height: 0.30 cm.
25. Heavily eroded sandstone block, c. 0.66 x 0.30 cm.
26. Sandstone block, c. 0.60 x 0.31 cm.
27. Sandstone block, c. 0.59 x 0.28 cm, three smaller sandstone chippings around.
28. Sandstone block, rectangular, c. 0.60 x 0.40 cm, eroded upper surface.
29. Fragment of column drum, sandstone, diameter: c. 0.73 cm.
30. Sandstone block, irregular, c. 0.55 x 0.70 cm.
31. Fragment of sandstone block with linear relief decoration, c. 0.20 x 0.16 cm.
32. Sandstone block, eroded, c. 0.45 x 0.54 cm.
33. Fragment of column drum, sandstone, diameter: c. 0.70 cm.

Feature 143
34. Sandstone block, eroded at the bottom, rectangular, c. 0.70 x 0.47 cm.
35. Fragment of column drum, sandstone, diameter: 0.75 cm.
36. Fragment of column drum, sandstone, diameter: c. 0.71 cm.
37-40. Four fragments of column drums, buried in sand.

Feature No. 144
5. Undefined sandstone block, one surface smoothed, dimensions: 0.72 x 0.27 cm.
6. Fragment of sandstone block with relief ornaments and masonry tool traces, c. 0.60 x 0.59 x 0.40 cm.
7. Fragment of sandstone block, mostly buried in sand, c. 104 x 0.80 cm.

Feature No. 145
1. Undefined sandstone block, c. 0.40 x 0.3 x 0.30 cm.
2. Fragment of column drum, sandstone, diameter: 0.66 cm, height: 0.50 cm.
3. Undefined sandstone block, partially buried, dimensions: 0.59 x 0.42 cm.
4. Undefined triangular sandstone chipping, side c. 0.52 cm, height: 0.36 cm.

Site No. 26
Feature No. 148
41. Fragment of column drum, sandstone, diameter: c. 0.65 cm.
42. Fragment of column drum, sandstone, diameter: 0.71-0.72 cm.
43. Fragment of column drum, sandstone, diameter: c. 0.72 cm.
44. Fragment of column drum, sandstone, diameter: c. 0.72 cm.
<table>
<thead>
<tr>
<th>Site nb</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>long. E 33°43'40.8&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°55'45,0&quot;</td>
</tr>
<tr>
<td>2</td>
<td>long. E 33°43' 52.6&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 166° 55,22.5&quot;</td>
</tr>
<tr>
<td>3</td>
<td>long.E33°43'44,5&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°55'12.8&quot;</td>
</tr>
<tr>
<td>4</td>
<td>long. E 33°43'40,4&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°55'01,1&quot;</td>
</tr>
<tr>
<td>5</td>
<td>long E 33°43'19,0&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°55'06,8&quot;</td>
</tr>
<tr>
<td>6</td>
<td>long. E 33°43'28,4&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°55'02,3&quot;</td>
</tr>
<tr>
<td>7</td>
<td>long . E33°43'30,1&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°54,53,1&quot;</td>
</tr>
<tr>
<td>8</td>
<td>long. E33°43'18,3&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°54'38,2&quot;</td>
</tr>
<tr>
<td>9</td>
<td>long. E33°42'53,5&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16°53'52,3&quot;</td>
</tr>
<tr>
<td>10</td>
<td>long. E 33°42'46,8&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16° 53,55,7&quot;</td>
</tr>
<tr>
<td>11</td>
<td>long.E33°42'49,3&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16° 53'46,7&quot;</td>
</tr>
<tr>
<td>12</td>
<td>long.E33°42'33,2&quot;</td>
</tr>
<tr>
<td></td>
<td>lat.16°53'35,5&quot;</td>
</tr>
<tr>
<td>13</td>
<td>long.E33°42'47,0&quot;</td>
</tr>
<tr>
<td></td>
<td>lat. N 16° 53'34,4&quot;</td>
</tr>
<tr>
<td></td>
<td>Long. E33°42'35.5&quot;</td>
</tr>
<tr>
<td>---</td>
<td>------------------</td>
</tr>
<tr>
<td>14</td>
<td>Long. E33°42'14.6&quot;</td>
</tr>
<tr>
<td>15</td>
<td>Long. E33°41'28.9&quot;</td>
</tr>
<tr>
<td>16</td>
<td>Long. E33°41'14.8&quot;</td>
</tr>
<tr>
<td>17</td>
<td>Long. E33°40'41.6&quot;</td>
</tr>
<tr>
<td>18</td>
<td>Long. E33°40'14.4&quot;</td>
</tr>
<tr>
<td>19</td>
<td>Long. E33°40'13.0&quot;</td>
</tr>
<tr>
<td>20</td>
<td>Long. E33°39'59.4&quot;</td>
</tr>
<tr>
<td>21</td>
<td>Long. E33°39'54.5&quot;</td>
</tr>
<tr>
<td>22</td>
<td>Long. E33°39'48.1&quot;</td>
</tr>
<tr>
<td>23</td>
<td>Long. E33°39'46.1&quot;</td>
</tr>
<tr>
<td>24</td>
<td>Long. E33°42'44.8&quot;</td>
</tr>
<tr>
<td>25</td>
<td>Long. E33°42'38.3&quot;</td>
</tr>
<tr>
<td>No.</td>
<td>Longitude</td>
</tr>
<tr>
<td>-----</td>
<td>-----------</td>
</tr>
<tr>
<td>27</td>
<td>E33°42'17.5&quot;</td>
</tr>
<tr>
<td>28</td>
<td>E33°39'17.2&quot;</td>
</tr>
<tr>
<td>29</td>
<td>E33°38'59.5&quot;</td>
</tr>
<tr>
<td>30</td>
<td>E33°39'01.9&quot;</td>
</tr>
<tr>
<td>31</td>
<td>E33°38'48.4&quot;</td>
</tr>
<tr>
<td>32</td>
<td>E33°38'30.4&quot;</td>
</tr>
<tr>
<td>33</td>
<td>E33°38'34.5&quot;</td>
</tr>
<tr>
<td>34</td>
<td>E33°38'19.3&quot;</td>
</tr>
<tr>
<td>35</td>
<td>E33°37'37.0&quot;</td>
</tr>
<tr>
<td>36</td>
<td>E33°37'35.6&quot;</td>
</tr>
<tr>
<td>37</td>
<td>E33°37'29.6&quot;</td>
</tr>
<tr>
<td>38</td>
<td>E33°37'09.2&quot;</td>
</tr>
</tbody>
</table>
Fig. 2
Khartoum – Atbara Rescue Project
Section Begrawiya – Shendi
Site distribution map
Fig. 5.
Khartoum - Atbara Rescue Project
Wadi - el - Hawwat, Awallib Temple Complex
Computer - generated 3 - D image of the site 25.