THE REPUBLIC OF THE SUDAN
MINISTRY OF TOURISM AND NATIONAL HERITAGE
NATIONAL CORPORATION FOR ANTIQUITIES AND MUSEUMS (NCAM)

EDITOR: HASSAN HUSSEIN IDRIS

EDITORIAL COMMITTEE: SALAH EL DIN MOHAMED AHMED
                        SIDDIG MOHAMED GASM ELSEED
                        HAYDER H. MUKHTAR
                        SALAH OMER AL SADIG
                        FRANCIS GEUS

ADVISORY COMMITTEE: YUSUF FADL HASAN
                     EL ZAKI ALI BUSHARA
                     ALI OSMAN MOHAMED SALEH
                     OMER HAJ EL ZAKI
                     JAFIR MIRGHANI
                     AHMED OMER ABD EL RAHMAN

EDITORIAL ASSISTANTS: CAROLINA GEUS - DE BOSCH KEMPER
                      ABDEL RAHMAN ALI MOHAMMED
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDITORIAL NOTES</td>
<td>7</td>
</tr>
<tr>
<td>ORDINANCE FOR THE PROTECTION OF ANTIQUITIES 1999</td>
<td>15</td>
</tr>
<tr>
<td>ARCHAEOLOGICAL RECONNAISSANCE IN THE BERBER-ABIDIYA REGION, 1997</td>
<td>25</td>
</tr>
<tr>
<td>By Julie Anderson and Salah eldin Mohamed Ahmed</td>
<td></td>
</tr>
<tr>
<td>THE ARCHAEOLOGICAL MISSION OF THE UNIVERSITY OF GENEVA TO KERMA,</td>
<td>35</td>
</tr>
<tr>
<td>FINAL REPORT FOLLOWING THE 1998-1999 EXCAVATION SEASON</td>
<td></td>
</tr>
<tr>
<td>By Charles Bonnet</td>
<td></td>
</tr>
<tr>
<td>KURGUS 1998: A PRELIMINARY SURVEY</td>
<td>45</td>
</tr>
<tr>
<td>By Vivian Davies and Isabella Welsby Sjöström</td>
<td></td>
</tr>
<tr>
<td>TWO SEASONS IN SAI ISLAND (1996-1997)</td>
<td>61</td>
</tr>
<tr>
<td>By Francis Geus</td>
<td></td>
</tr>
<tr>
<td>GISM EL-ARBA - CAMPAGNE 1997-1998</td>
<td>81</td>
</tr>
<tr>
<td>By Brigitte Gratien</td>
<td></td>
</tr>
<tr>
<td>A PRELIMINARY REPORT</td>
<td></td>
</tr>
<tr>
<td>By Birgit Keding</td>
<td></td>
</tr>
<tr>
<td>THE NAGA PROJECT, EGYPTIAN MUSEUM BERLIN</td>
<td>97</td>
</tr>
<tr>
<td>By Karla Kroeper and Dietrich Wildung</td>
<td></td>
</tr>
<tr>
<td>PRELIMINARY REPORT ON THE 1999 SEASON OF EXCAVATIONS AT KADERO</td>
<td>103</td>
</tr>
<tr>
<td>By Lech Krzyzaniak</td>
<td></td>
</tr>
<tr>
<td>RELATIONS BETWEEN THE MEROITIC KINGDOM AND THE MEDITERRANEAN WORLD</td>
<td>109</td>
</tr>
<tr>
<td>(490 BC - 350 AD)</td>
<td></td>
</tr>
<tr>
<td>By Salah Omer Al Sadig</td>
<td></td>
</tr>
<tr>
<td>THE SARS SURVEY ALSO THE OMDURMAN-GABOLAB ROAD 1997:</td>
<td>131</td>
</tr>
<tr>
<td>INTERIM REPORT ON THE POTTERY AND SMALL FINDS</td>
<td></td>
</tr>
<tr>
<td>By Laurence Smith</td>
<td></td>
</tr>
<tr>
<td>THE UNIVERSITY OF CALIFORNIA DONGOLA REACH EXPEDITION,</td>
<td>157</td>
</tr>
<tr>
<td>WEST BANK RECONNAISSANCE SURVEY, 1997-1998</td>
<td></td>
</tr>
<tr>
<td>By Stuart Tyson Smith</td>
<td></td>
</tr>
</tbody>
</table>

continued overleaf
CONTENTS – continued

THE IS.I.A.O. EL SALHA PROJECT
   By Donatella Usai .......................... 173

SURVEY AND EXCAVATIONS AT KAWA 1997-1998
   By Derek A. Welsby ......................... 183

INVESTIGATIONS IN THE SO-CALLED ROYAL BATHS AT MEROE IN 1999
   By Simone Wolf and Hans-Ulrich Onasch ......................... 191

Arabic version of the Editorial Notes At the end of the volume
Editorial Notes

by HASSAN HUSSEIN IDRIS

Whilst celebrating the golden jubilee of Kush (1953-2003), we have the pleasure to present its XVIIIth issue on the hundredth anniversary of the National Corporation for Antiquities and Museums (1993-2003). We apologise for the delay in publishing the journal for reasons beyond our control and we extend our thanks and appreciation to whoever contributed to the publication of this volume. We especially thank the Department for Cooperation and Cultural Action of the French Embassy in Khartoum for their financial support, and Mrs. Carolina Geus - de Bosch Kemper for her determination in setting up the volume.

The recent past period teemed with momentous events with the discovery of antiquities in Sudan by the officials of the Corporation, Sudanese universities, which established departments of archaeology and started to participate with the Corporation in this task of unearthing, and foreign archaeological missions from international universities and museums. The Antiquities Protection Ordinance, which was passed in 1999, assisted in organising work in the field of archaeology, its preservation and holding exhibitions.

The State showed interest in the antiquities and museums and a number of ministers paid visits to archaeological sites and museums, which culminated in the visit of the first Vice President to archaeological sites in the River Nile State. The special session of the Council of Ministers at the Sudan National Museum, the visit of the President of the Republic, as well as some ministers, to archaeological sites at Musawwarat es-Sufra and Naga, their directives to protect the antiquities and the honouring of some archaeologists through awarding them the Two Niles Medal (Wisam El Nilein), is a further corroboration of the executive authorities’ concern for the antiquities.
One of the external efforts to shed light on the Sudanese civilisation was the exhibition "Kingdoms along the Nile Valley" with joint cooperation of the Kunsthalle der Hypo-Kulturstiftung in Munich (Germany) and the Arab World Institute in Paris (France) and through appreciable efforts on the part of Professor Dietrich Wildung and Dr. Badr el Din Ardakky. The exhibition was shown in Germany, France, Holland and Italy. Currently, an exhibition is being shown in Spain and plans are underway to mount an exhibition in Great Britain in coordination with the British Museum. All these external programmes have been planned under the directives and patronage of His Excellency, the Minister of Tourism and National Heritage. Within the perimeter of internal activities, three exhibitions have been mounted in coordination with French, Polish and German missions.

Archaeological research is being continued by all the missions mentioned in Kush XVII, as well as the participation of the new universities of Dongola, Shendi and Wadi El Nil. Survey, rehabilitation and excavation work are centred on the sites threatened by the expansion of the development projects such as roads and dams. The most important of these are the Challenge Road (Tareeg El Tahadi), running through Atbara and Haya, and the Sherian El Shamal (Vein of the North), running from Omdurman to Dongola, Merowe and passing through the area ear-marked for the Merowe Dam on the Fourth Cataract. Survey and excavation work will continue throughout all the States of the Sudan in an endeavour to complete the archaeological map with emphasis on systematic excavation, which relies on scientific methods and gleaning information, which may contribute to unravel the Arab-Afro-Islamic and international civilisation.

THE OUTSTANDING CURRENTLY EXISTING AND FUTURE PROJECTS OF THE CORPORATION

1. Merowe Dam Antiquities Salvage Project

The construction of the Merowe Dam will encroach upon the archaeological sites and many sites will disappear for ever owing to the engineering works on the site of the dam, the immersion below the lake behind the dam, the erection of the high tension electric cables to convey electricity to the various parts of the country, as well as the resettlement works at Wadi El Muqaddam and El Mukabrab. Other historical buildings will be affected by the change of climate, the effect of which may extend to hundreds of kilometres away from the site of the dam. These sites include the pyramid cemetery at Nuri, the site at Jebel Barkal, the El Kurru cemetery, the post-Meroitic cemetery at El Zuma and Islamic fortifications along the Nile.

Archaeological fieldwork has been launched in the area which will be affected by the construction of the El Hamadab Dam and whose inhabitants will soon move to El Multaga in the Abu Dom Goshabi area:

El Multaga

This is a resettlement area for part of the affected population. It lies in a triangle at the junction of the Sherian El Shamal -Omdurman-Dongola-Merowe- road, over an area extending over 15 kilometres in length on a maximum width of 5 kilometres. This resettlement project includes the construction of three villages, numbered (1), (2), (3), and an agricultural river-fed project, where water will be conveyed through a main canal and a water station.
The work plan has covered surveying and rescue excavation with the participation of the French Unit, under the leadership of Dr. Francis Geus. The archaeological survey has led to the discovery of a residential site at the location of the projected water station. The site dates to the Christian era. The relevant excavations have been done and the site documented. Some Christian pottery has been discovered and particularly the pottery which was used in a waterwheel confirms that it was the very place used as a water station at the time. Coordination has been made with the irrigation engineers to conduct an archaeological survey in the area of the irrigation project, which covers 75 square kilometres, before digging the canals. The locality has been surveyed on foot. Some 119 sites, which date back to the Stone Age, have been discovered.

Location of the dam and the lake

The preliminary construction work will demolish some of the archaeological sites at the Dam area for a length of 4 kilometres extending both north and south of the Dam (Jebel Kulgeili) in addition to part of El Hamadab Island. This area will be accorded top priority in the field of archaeological rescue work. Besides this there is the lake area behind the Dam. The lake will submerge the archaeological sites on both banks of the Nile and the islands over a distance of 170 kilometres. Besides the officials of the Corporation there are some specialists from the College of Arts and Humanitarian Studies of Karima and Dongola universities, in addition to the Archaeological Department of the University of Khartoum.

At the site of the constructions the area has been surveyed on foot. The sites have been localised (pin-pointed), classified and archaeological excavation for the rescue of the sites given priority. The rescue excavation has started at the El Haraz site. There is a cemetery consisting of 318 graves and dating to the post-Meroitic era. The graveyard has been documented through photographs and drawings. Five graves have been excavated, classified and other graves prepared. The Corporation and the University of Dongola have been conducting archaeological works since 1997. The excavation work has so far disclosed some complete pottery ware, as well as some decorations made of stone, glass and faience.

The archaeological survey work for the area expected to come under water (170 kilometres behind the Dam) has been done. Some 1000 archaeological sites have been registered on the eastern bank of the Nile as far as El Kirbékkan Valley. The archaeological rescue work continues smoothly according to the timetable.

A heritage survey of the cultures of all the people in the area threatened by the construction of the dam is underway. The heritage, cultures and handicrafts shall be documented before they disappear owing to the relocation of the people to their new sites. The mission of the Gdansk Polish Museum and the mission of the British Archaeological Society have participated in the rescue of the archaeological sites, which are threatened by the construction of the Merowe Dam.

2. The archaeological project at Dangeil

This is one of the projects where the Corporation implements and undertakes excavations on the site north of Berber in the River Nile State with the assistance of an archaeological consultant from the Royal Ontario Museum. The remains of a city dating to the civilisation of the Meroitic era have been unearthed including a fortified
redbrick building with multi-storey towers. An ascending staircase and columns with
drawings and coloured decorations have been found. The archaeological work is
expected to disclose a lot of details within that town and its affinity to the civilisation of
the Meroitic era.

3. The site of Jebel El Maragh (El Maragh Mountain)

The National Corporation for Antiquities and Museums works on this site in
conjunction with Dr. Tim Kendall. The site lies in the Bayuda Desert, in the Northern
State, where some relics of sandstone buildings have been discovered. This signifies a
city in the heart of the Bayuda Desert, which might have been lying on the desert route
between Meroe and Jebel Barkal. The site is considered one of those archaeological
sites which arouse controversy about the location and the purpose of its construction.
There are also a number of graves and other extensions of residential areas in the
location. Research work is continuing to reveal more about this city.

4. Hawani El Sungur Site

The El Sungur mountains lie in North Kordofan. Excavation work, which the
Corporation conducted, have led to the discovery of a number of graves located in a
semi-circle, the tops of which are covered with stones. They date to the post-Meroitic
times. This work is considered the nucleus of a comprehensive archaeological survey
project, particularly about places in North Kordofan. What has so far been discovered
of archaeological relics in the states of Darfur and Kordofan calls for serious
concentration in conducting further archaeological work.

5. The archaeological and heritage survey project for Darfur State

In an endeavour to survey, record and classify archaeological sites, a team from
the National Corporation for Antiquities toured Darfur State and visited all the
numerous archaeological sites. Some of these are the following:

Shoba Archaeological Site

Shoba lies some 15 kilometres northeast of Kabiyyah, which in turn lies some
165 kilometres west of El Fasher. The locality has three important archaeological
features which date back to the period of Sultan Mohamed Terab (1768-1787), one of
the Sultans of Darfur Kingdom, which extended from 1440 until 1916. The site
accommodates a redbrick mosque, the palace of Sultan Terab and the palace of Sultan
Terab’s mother.

The Site of Torrah Salateen

Torrah Salateen lies in Western Darfur State in Jebel Marra and represented the
headquarters of the Sultans of Darfur. There stands one of the most ancient mosques of
Sudan, which Sultan Musa Ben Suliman Solong built in 1640. The mosque was built of
sandstone on a high mound. There are also 10 graves of the Sultans of Darfur.

Tong Kilo

It lies east of Torrah in Jebel Nami (Nami Mountain). It is a large stone mansion,
which belonged to two sultans of Darfur, namely Sultan Solong and his son Musa, of
the ruling Kira Fur tribe.
6. The Archaeological Survey Project in Southern Sudan

Having contacted the authorities of the Coordination Council for Southern Sudan States, an agreement has been made to conduct a comprehensive archaeological survey in the Southern states and to build a museum in Juba. The National Corporation for Antiquities and Museums is hoping to build a museum in every state of the South. Despite torrential heavy rains in the rich savannah area, which obscured most of the features and archaeological sites, some archaeological sites dating to pre-historic periods have been noted. It has also been agreed with the commissioner of Fashoda to open the Fashoda Museum and, Allah willing, to conduct a comprehensive archaeological survey in the state.

7. The Archaeological Survey Project in the Gezira State

The Gezira State teems with several archaeological sites, which date to different historical periods. A number of sites have been specified and registered at El Shabarga, El Kasambre, Abu Usher, Wad El Fadni, El Nuba and Goz Kabaru.

8. The Archaeological Survey Project for the Blue Nile

In cooperation with the Sudan Civilisation Institute and the Environment Protection Society, archaeological survey work and systematic excavations have been conducted at Ed Dinder National Park and along the banks of the Dinder and Rahad rivers since 1997. Important archaeological sites, dating to prehistoric and post-Meroitic eras, have been identified and recorded. It has been agreed with the Tourism Administration in Sennar to conduct an archaeological survey with excavations, which have already been carried out at Jebel Moya and the old Sennar site, which date back to the time of the Black Sultanate (El Sultana El Zirga), Abu Geili and Wad El Haddad. These recent archaeological excavations have been conducted by the Corporation, which unearthed a cemetery dating to the post-Meroitic era. Some large-sized pottery has been found nearby.

REHABILITATION PROJECTS

1. El Bejarawiya Rehabilitation Project

Among the maintenance and rehabilitation projects of the Corporation is the project for the rehabilitation of the pyramids at El Bejarawiya, which represent the royal cemeteries of the kings and queens of the Meroitic civilisation in cooperation with Dr. Friedrich Hinkel, the German architectural consultant. Two pyramids have been rehabilitated during the past two years at the western cemetery, one pyramid in the southern cemetery and the chapels of these pyramids have been rebuilt. The Corporation extracts financial support from the ministries and various parts of the world, from those interested in Sudanese antiquities.

2. Suakin Rehabilitation Project

The importance of Suakin emanates from its being a seaport on the Red Sea and to her cultural, religious and commercial role for many centuries between Sudan, Egypt and the Arab Peninsula. The town had acquired its Islamic architectural shape since the
8th century. It represents the Islamic model of architecture tinged with the Egyptian and Turkish style. It is a unique style in Islamic architecture. The importance of Suakin diminished when Port Sudan came into being. The town was deserted, its buildings deteriorated due to human and natural factors. It was then essential to document and rehabilitate the buildings of Suakin. Owing to the immensity of the project, the National Corporation for Antiquities and Museums is trying to elicit international financial support. An agreement has been concluded with the Turkish government through the agreement of the cultural relations between the two governments. The Corporation is continuing the maintenance work of the buildings of this historically important town.

IN THE FIELD OF MUSEUMS

1. The construction of El Tarabil Museum at Bejarawiya

Within the different Corporation's developmental plans at the archaeological sites, the foundation stone has been laid for the El Tarabil museum (the pyramids). It is a museum, which lies in the centre of the El Bejarawiya pyramids, between the two groups, the northern and the southern; and overlooks the group of the western pyramids. The construction started in 1997 taking into consideration the Meroitic style of architecture. The work has ceased at the ceiling stage. We hope efforts will be continued to complete the construction of this museum in order to exhibit all the archaeological pieces related to the El Bejarawiya pyramids. It would give the site a further tourism dimension.

2. El Barkal Museum

It is one of the site museums. The building has been completed and is waiting for financial support to open.

3. Nyala Museum

Part of the Corporation wide program is the setting up of museums and plans are underway to build a museum in Nyala to exhibit archaeological pieces of all the historical eras.

4. Kerma Museum

This is a site museum. Work has started in the Ministry of Tourism and National Heritage and the Committee for the Civilization of Kerma under the auspices of the National Corporation for Antiquities and Museums.

ANTIQUITIES PROTECTION ORDINANCE

The Antiquities Protection Ordinance was passed by the National Assembly and signed by the President of the Republic for approval in 1999. This ordinance is considered an achievement for the protection of antiquities and archaeological sites.
A number of national and foreign universities are working in conjunction with the National Corporation for Antiquities and Museums in the field of research, excavation and archaeological survey. These are namely:

1. The NCAM and the University of Khartoum. The Fourth Cataract, Northern State. The representative of the Corporation.

2. The NCAM, the University of Khartoum and the Wadi El Neel University. The Fifth Cataract, River Nile State. Ali Osman Mohamed Salih.


5. The NCAM and the University of Shendi. Shanan Fortress, River Nile State. Salah Omer El Sadig.

6. The NCAM, the University of Shendi and the French Unit. El Hassa (Deim El Garai), River Nile State. Vincent Rondot.


8. The NCAM, the Shendi University and the Humboldt University Berlin (Germany). Domat Al Hamadab, River Nile State. Pawel Wolf.

9. The NCAM and the University of Khartoum (Faculty of Education). The Historical Archaeological Survey Project for the White Nile. Khidir Adam Eisa.


Foreign Missions:


11. Cassino University (Italy). Hillat El Arab, Sanam Abu Dom, Northern State, Irene Liverani.


17. The University of Rome (Italy). El Geili, River Nile State. Isabella Caneva.


Ordinance for the Protection of Antiquities
1999 (Translated from the Arabic)

THE NATIONAL CORPORATION
FOR ANTIQUITIES AND NATIONAL MUSEUMS

CHAPTER I - PRELIMINARY REGULATIONS

1. The name of the Act and the date it is effective

This Act shall be called The Ordinance for the Protection of Antiquities 1999 and is effective on the date it is signed.

2. Revocation or exclusion

The new Ordinance cancels the Antiquities Protection Act 1952, but all regulations issued on its strength shall remain in force until they are either modified or cancelled on the strength of this Ordinance.

3. Explanation

In this Act, unless the context otherwise requires, the following words mean the statement before each.

Antiquities:

Means anything surviving from the ancient civilisations or past generations and has been discovered or excavated whether the object is fixed or mobile and is a hundred years or more old. The Antiquities Corporation could for technical or historical reasons consider any premises or relics of archaeological value if there is any interest for the country in its preservation. Documents, prints, some human, animal or botanical remains are also considered as part of antiquities.

Archaeological Land:

Means the land which accommodates the site of archaeological interest, or a historical building. The limits of such land shall be defined by the National Corporation for Antiquities and Museums.
KUSH XVIII

Excavations:

Means all the prospecting, surveying, excavation, sounding and investigation activities for the purpose of finding antiquities deep in the earth or on the surface, or in water courses, lakes or regional waters.

A Historical Building:

Means any building or part thereof surviving from the past generations or civilisations. It becomes an object of archaeological interest according to the terms of this law.

The Director General:

Signifies the post held by the Director General of the National Corporation for Antiquities and Museums.

The Discoverer:

Means anyone who finds anything of archaeological interest and includes local or foreign archaeological missions.

The Archaeological Site:

Means any site of archaeological interest defined by the National Corporation for Antiquities and Museums, which is established by the law of the National Corporation for Antiquities and Museums 1991.

The Minister:

Means the Minister defined by the Council of Ministers.

CHAPTER II - ANTIQUITIES AND ARCHAEOLOGICAL SITES

4. Ownership of antiquities

1. All relics or objects of archaeological interest, whether buried deep in the earth or found on the surface, are considered property of the State.

2. The Corporation is responsible for the preservation of antiquities and for assessing the archaeological value of objects, historical buildings, the archaeological sites and recording such information and is also responsible for the implementation of the terms of this law.

5. The State Power to take possession of archaeological sites

1. The State is empowered, within the terms of the law, to dispossess and to take into possession any site or historical building and has the right to invalidate any right of property essential for a passage or for a road to lead to such a site. The State also has the right to take any antiquity from a land the State does not own, provided the State pays adequate compensation to the landlord or occupant of the land for the actual losses incurred.

2. On assessing the value of land in which objects of archaeological interest are found, the value of the antiquities found deep in the earth or on the surface is not taken into consideration.
6. Prohibition of disposal of objects of archaeological interest

1. The landlord is not permitted to dispose of objects of archaeological interest found on the surface of his land, nor is he/she allowed to excavate for any relics without prior approval of the National Corporation for Antiquities and Museums.

2. Whoever excavates or disposes of relics or objects of archaeological interest thereby acting contrary to item (1) shall be punished with imprisonment for a period not exceeding 5 years, or be fined, or receive both punishments.

7. Placing posters or notice-boards on archaeological sites

1. It is not permissible to place advertisements or posters on registered buildings of historical importance, or on sites of archaeological interest, or on museums.

2. Whoever places a notice board or an advertisement poster on a registered archaeological site, a historical building or a museum shall be fined.

8. Prohibition of any modification to historical buildings

1. The landlord of any registered building of historical interest shall make no changes whatsoever and does not possess any right to demolish the building concerned, or make any modification that may change the historical shape of the structure or its artistic character. It is forbidden to construct a new building near an archaeological or historical building without the prior approval of the National Corporation for Antiquities and Museums.

2. Whoever violates the regulations of item (1) shall be imprisoned for a period not exceeding 3 years, or be fined, or receive both punishments.

9. Prohibition of the use of archaeological land for purposes part from those earmarked for its utilisation

1. It is not permitted to build, or dig irrigation channels, or make a cemetery, or a water tower, or any other activity leading to the erosion of traces of antiquities on archaeological or historically registered land. Both the planting of trees and their cutting on such land is forbidden without prior permission from the National Corporation for Antiquities and Museums.

2. Whoever is found guilty is liable to a fine punishment, or imprisonment for a period not exceeding 6 months, or may receive both punishments and should remove the damage.

10. Prohibition of building bakeries, laboratories or factories on archaeological sites

1. It is not allowed to build any sort of structures or roads at a distance that may affect buildings or sites of archaeological interest without the prior approval of the National Corporation for Antiquities and Museums.

2. Developmental projects may be initiated after the completion of archaeological studies and surveys provided the benefiting parties bear the expenses incurred by the studies, surveys and salvage operations.

11. Site admission powers of the staff of the National Corporation for Antiquities and Museums

1. It is possible for any staff member of the National Corporation for Antiquities and Museums to enter any archaeological or historical building or land that contains
antiquities for the purpose of inspection, observation, mapping, research or taking photographs. But he/she shall observe the conditions of inspection stated in the procedures of the Sudanese criminal law 1991, provided somebody else owns the land or the building.

2. Whoever objects or hinders the staff member of the Corporation to exercise his/her powers as stated in Article 11 (1) shall receive prison indictment for a period not to exceed a year, or a fine, or both punishments.

12. Preparing archaeological sites to receive visitors

The National Corporation for Antiquities and Museums prepares registered archaeological sites and historical buildings owned by the State for visits by the citizens, research students and tourists, and shall demonstrate or reveal the technical aspects and the historical properties for the visitors.

13. Preservation of antiquities

1. The National Corporation for Antiquities and Museums is assigned to preserve movable antiquities in museums, where they would be studied, conserved and exhibited in permanent or temporary exhibitions. The remaining antiquities shall be kept in the antiquities stores and provided with the relevant temperature conditions.

2. The National Corporation for Antiquities and Museums shall provide an authenticated and recognised map of all archaeological sites that are discovered, or are in the process of being so, or expected to yield antiquities findings.

14. The sale of antiquities

The sale or donation of registered antiquities owned by the State is prohibited. These shall be kept in museums and shall not be removed from the sphere of influence of the Corporation, except through legitimate ways according to the terms of this law.

15. Exchange of antiquities with other museums and foreign scientific institutes

It is possible for the National Corporation for Antiquities and Museum, having obtained the approval of the Minister, to exchange portable and duplicate archaeological objects with similar organisations, international museums and educational institutions provided that the Corporation feels that it will provide some benefit to the Sudan.

16. Mounting temporary exhibitions of antiquities

It is possible for the Corporation, with the approval of the Minister, to arrange temporary exhibitions of archaeological and other heritage material within the Sudan or overseas to disseminate knowledge and present Sudanese culture.

17. Reporting any new archaeological discovery to the Government

It is imperative upon whoever discovers anything assumed to be of archaeological interest or leads to such an assumption, whether he is an occupant or proprietor of such land, whether on its surface or below the surface, to report such incidents to the National Corporation for Antiquities and Museums, or to the nearest possible administrative authority. The authority thus informed shall report the news to the Corporation at their earliest possible convenience.
18. The rights of antiquities discoverer

It is possible for the National Corporation for Antiquities and Museums, with the approval of the Minister, to decide whether they would like to add the discovered antiquities to the already preserved collections in museums or to leave them in the possession of the person who found them, or in the possession of his descendants according to the following conditions:

a. In case that the Corporation decides to keep the discovered antiquity, the Corporation shall pay the equivalent current market value of the discovered object whether it is a piece of gold, silver or jewellery, without taking into consideration the artistic or archaeological value. But if it is a treasure, the Corporation pays the discoverer four fifths of the value of the discovered treasure.

b. The Corporation shall assess the value of the antiquity according to the current market value. The person who made the discovery may sue the Corporation into court if he is not satisfied with the value assessment made by the Corporation. He shall do so within three months after being informed of the assessed value.

c. The person concerned, who possesses the antiquity, shall sign a concession to confirm the right of possession of the Corporation of the discovered object, after payment of compensation by the Corporation.

d. If, on the contrary, the Corporation decides to allow the discoverer to retain possession of the object concerned, they shall then write and sign a concession to this effect and register the object concerned under the name of the discoverer. In this case possession devolves to the discoverer.

e. The owner of the antiquity is not permitted to dispose of his/her object without prior approval of the Corporation.

19. The right of the Corporation to demand an antiquity from its proprietor

It is legally possible for the Corporation to demand from owners of registered antiquities to temporarily hand over their property to the Corporation for the purpose of study, drawing, photographing or taking a mould of it, or for the purpose of temporary exhibition. It will thereafter be returned to the owner.

20. Conservation and restoration of antiquities

Conservation and restoration of antiquities shall not be allowed without approval of the Corporation. Conservation and restoration shall be conducted under the supervision of the Corporation.

21. Prohibition of imitation and falsification of Archaeology

1. Imitation and falsification or trading in transportable antiquities is prohibited.

2. Despite the regulations of item (1) it is possible to make models, moulds or photographs of antiquities with the approval of the Corporation according to the conditions the Corporation deems appropriate.

3. Whoever violates the regulations of item (1) shall be imprisoned for a period not exceeding 7 years, or be fined, or receive both punishments.
CHAPTER III - ARCHAEOLOGICAL EXCAVATION

22. Licences

1. The National Corporation for Antiquities and Museums enjoys the right to embark on archaeological excavation and to authorise missions of universities and museums to excavate on the basis of a special licence in accordance to the terms of this law.

2. It is forbidden to start excavation work on any land owned by the government, or individuals, without prior receipt of a licence issued by the National Corporation for Antiquities and Museums, or from whoever is delegated by the Corporation.

3. Licences are divided into three types:
   a. A licence to search for archaeological sites without making any excavations.
   b. A licence to make an archaeological survey authorising the holder to use any means of search except excavation, but authorising the holder to make preliminary diggings to ascertain the existence of archaeological objects.
   c. A licence for archaeological excavations and to conduct a comprehensive scientific study on the site, on the archaeological findings and the environment.

4. The licences are issued, on the strength of the signature of whoever is authorised by the Corporation, after payment of the relevant fee charged by the Corporation.

23. Conditions for the issuing of licences

1. It is possible for the Corporation, or whoever it may authorise, to issue licences referred to in Section 23 (3) for individuals, institutions or missions which satisfy the following conditions:
   a. The institution must possess an adequate scientific competence to enable it to complete surveys, prospection, study and excavation work in this field.
   b. The institution must have the financial capability to pay for all the operations carried out according to the approved plans, on the specified period and to pay the expenses of maintenance, study and publication activities.
   c. The institution concerned has already published or made arrangements for the publication of results of excavation work they conducted in the past.

2. The licensed authority shall undertake to do the following:
   a. To maintain the site and any antiquities he discovers and to submit a comprehensive report on his achievements.
   b. To hand over to the Corporation all antiquities he has discovered and all copies of the documents pertinent to the special survey, prospection and excavation.

3. The Corporation shall have the right to:
   a. Participate with any archaeological mission to investigate the existence of antiquities on a site provided the Corporation states its financial, scientific and technical participation conditions on the excavation licence.
   b. Add any conditions the Corporation deems appropriate to any licence.
4. Any archaeological mission authorised to conduct archaeological activities shall be accompanied by a representative of the Corporation whose expenses shall be borne by the licence holder. This representative shall submit an administrative and scientific report to the Corporation at the end of the mission's work.

24. **Request for licence**

The application for a licence made to the Corporation shall include the following details:

1. Name of applicant, academic qualifications and his past experience in archaeological excavation and publication work.
2. The boundaries of the archaeological site intended to be surveyed and excavated.
3. A summary of the excavation plan and the work programme.

25. **Special licensing conditions**

1. The applicant for a licence must satisfy the following:
   a. Shall be a representative of a non-profit seeking scientific institution or is affiliated with a non-profiting scientific institution.
   b. The archaeological mission shall be composed of a panel of specialised scientists in archaeology, architecture, drawing, survey and excavation, documentation, maintenance or affiliated sciences.
   c. Excavation work shall be continued as agreed with the Corporation.
   d. Reports shall be submitted to the Corporation on the excavation work with the results and all details on discovered archaeological remains.
   e. Maps/plans and sections are drawn according to the internationally and scientifically recognised standards. These plans shall contain the details of conditions of archaeological remains at the time of discovery in a way so as to enable their re-structuring or rebuilding.
   f. A list including the relevant scientific details on all the discovered and transported antiquities shall be compiled and submitted to the Corporation at the end of the excavations, together with a complete collection of copies of the maps, plans and photographs.
   g. To publish, within two years after the termination of the excavation work, a scientific publication to show the general results of the excavations, mentioning the names of the sites where the antiquities were found, and what has been done. To present two copies of such a report or publication to the Corporation.

2. The licence holder must do the following:
   a. Present 10 books, with the publications of articles, he issues on his excavation work and results to the Corporation.
   b. Arrange at his own expense the area in which he made his excavations and display the most important archaeological remains left on site. Provide clues or indications to show the sequences of archaeological stratifications and the different eras that have survived.
3. No part of any building shall be removed or transported before satisfying item (e) of Section (25).

26. The termination of a licence, its withdrawal or cancellation

1. The Corporation shall either terminate or withdraw the licence if the holder deviates from or violates any conditions of the licence.

2. The licence shall be terminated if the holder suspends his activities for two seasons in two consecutive years without permission or an acceptable reason. A new licence may be authorised for another archaeological mission, which satisfies the conditions, on the same archaeological site.

27. Rights of scientific property

1. The National Corporation for Antiquities and Museums shall preserve the rights of scientific property on the results of excavations and research conducted by archaeological missions. It will offer them a priority right on publications of the antiquities they discovered and will register the photographs of their discoveries in the publications of the museum in which the archaeological remains are exhibited or stored. The study and publication shall be conducted within 10 years after the date of the discovery.

2. The Corporation undertakes to create links among national societies and organisations functioning in the field of archaeology and similar foreign societies, institutions and organisations and co-ordinate archaeological activities among them for the aim of gaining experience and effecting close observation so as to avoid loss of antiquities.

28. Ownership of discovered antiquities

Ownership of all discovered antiquities rests with the Government and is kept in museums for exhibitions and study, whereas it is possible for the mission which made the discovery, after the approval of the Minister to:

a. Take moulds of the discovered antiquities and their photographs, drawings, maps and plans.

b. Take duplicate pieces of antiquities discovered on the same site and which are similar in material, type, description, historical significance and artistic value, which the Corporation may dispose of on duplication grounds, after the publication of all information related to these antiquities for the sake of briefing countries overseas on the civilisations of the Sudan which prospered in the past. The licence holder may specify such artefacts for exhibition in museums open to the public in his/her own country for an exhibition period not exceeding two years.

c. Borrow antiquities for the purpose of temporary exhibition or study.

d. Study, draw or photograph objects he/she discovered, which are kept in museums or stores.
KUSH XVIII

authorisation in relation to their assigned duties, to combat illegitimate trading in antiquities and their smuggling and to combat damages against museums and archaeological sites.

2. Any antiquities, which are the subject of a dispute, shall be handed to the Corporation until the dispute is legally settled.

35. Power to issue regulations

The Minister, on the strength of a recommendation from the Corporation, shall issue the relevant regulations for the implementation of this law.

CERTIFICATE

This is to certify that The National Assembly has passed the Ordinance for the Protection of Antiquities 1999 in their session No. 20 of the eighth tournament dated 8th Shaaban of the year 1420 Hijriyah, which conforms to the 16th November 1999.

Dr. Hassan Abdalla Al Turabi
Chairman of the National Assembly

I agree

General (PSC) Omar Hassan Ahmed El Beshir
President of the Republic

Date: 23rd Shaaban 1420
1st December 1999
29. Exemption from Customs

1. The foreign archaeological mission holding a licence is allowed to import its equipment free of customs and other levied taxes on the entry of such equipment into the Sudan.

2. Customs law is applied in case of disposal of equipment belonging to archaeological missions, to non-government organisations or individuals.

30. Recovery of lost antiquities

1. The National Corporation for Antiquities and Museums endeavours to recover antiquities that were taken out of the country by illegitimate means.

2. The Corporation undertakes to preserve and to recover stolen antiquities in cooperation with the judicial procedures.

3. The police is assigned to antiquities.

31. Prohibition of export and trading in antiquities

1. Trading in and exporting of antiquities is forbidden except under a licence from the Corporation.

2. Whoever breaks the rules of item (1) shall receive 3 years imprisonment, or be fined, or receive both punishments.

32. Destruction of antiquities or demolition of an archaeological building

1. Whoever intentionally destroys a recorded or recently discovered archaeological site, or demolishes with ill intention a recorded archaeological building, or part thereof, or takes one of its stones or decorations or does anything that may change the features, shall be imprisoned for a period of not less than 3 years, or be fined, or receive both punishments.

2. If the wrong-doer of a crime stated in item (1) is a staff member of the National Corporation, or in the field of antiquities, museums, conservation, restoration at universities, or missions working in the field of archaeology, or that the piece of antiquity is important, or one of the prominent antiquities the destruction or demolition or collapse of which would lead to the loss of part of the national archaeological heritage, the wrong-doer shall be punished with imprisonment for a period of not less than 5 years, or be fined, or receive both punishments.

33. Conducting unlicensed archaeological activity

Whoever carries out survey, prospection or archaeological operations, or helps, or instigates or encroach upon registered archaeological land or site and transports antiquities from one place to another within the Sudan without a licence, shall be punished with imprisonment for not less than 3 years, or be fined, or receive both punishments.

34. General Regulations

1. Inspectors of antiquities, museum curators and guards of museums and archaeological sites are endowed with police powers to arrest without prior legal
Archaeological Reconnaissance in the Berber-Abidiya Region, 1997


The Berber-Abidiya Archaeological Project is a joint Canadian-Sudanese project of the National Corporation for Antiquities and Museums and the Royal Ontario Museum. Our purpose is to conduct an in-depth regional survey and rescue excavations of archaeological sites along both banks of the Nile between Berber and Abidiya in northern Sudan. Although very limited archaeological work has been conducted in the region thus far, some of its antiquities have been mentioned by earlier travellers and treated by archaeologists in modern times.

Linant de Bellefonds visited the region in April 1822. Describing his passage northward from Berber, he wrote in his diary:

Le 10 nous partimes une heure et demi après le lever du soleil, et en passant vis à vis des montagnes de Narrara, je vis à un petit village nommé Danguelle les restes d’une ville batie en briques cuites. Il n’y reste plus rien que des décombres que les gens du pays nomment L’Canisse. De l’autre coté du Nil sur la montagne, il y a les restes d’une muraille ou d’un petit fort bati en petites pierres non taillées, et en bas il y a aussi des décombres semblables à ceux du coté de l’est (Linant de Bellefonds, 1958: 154-155).

As has already been mentioned by M. Shinnie (Linant de Bellefonds, 1958: 154-155) it is clear that ‘Narrara and Danguelle’, as pronounced by a French speaker, are respectively the sites of Jebel Nakharu and Dangeil. Linant de Bellefonds also identified house remains at the foot of Jebel Nakharu and compared them with the ruins of Dangeil on the other side of the river.

At the same time another French traveller, F. Caillaud, arrived in the region with the Turkish army. Coming from the Abu Hamed region through the Bayuda desert, they joined the Nile north of Bauga. Although they followed the western bank of the Nile upstream to Berber, Caillaud failed to notice the eminent fort on Jebel Nakharu. On his way back to Egypt from Sennar, he recognised remains that he considered to be an ancient town, in the region between ‘el-Mekheyr’ and ‘el-A’beydyeh’. Although he did not mention the name of the site, what he was describing could not be something other than the remains of the walled town of Dangeil (Caillaud, 1826: III, 179).

The two sites were visited and described by O.G.S. Crawford during his inspection tours in the Middle Nile Region in 1951-52 (Crawford, 1953: 8-11; Ibid. 1961: 17-19). At Dangeil, Crawford found a granite block bearing a Meroitic cursive inscription that was being employed by local women for domestic uses. He brought this stone to Khartoum. The stone had been previously noted by Crowfoot and published by Griffith
KUSH XVIII

(Crowfoot and Griffith, 1911: 89). Crawford also discovered the site of Et Tikawin (site 7 below) on the left bank of the Nile. Among the primarily red-slipped pot sherds, he found one piece of 'undoubted Meroitic ware with dotted feston ornament' and identified the site as a Meroitic village (Crawford, 1953: 11, 29).

Recent work in the region includes P. Lenoble's rescue excavation of a double-shaft Post-Meroitic tomb at Kankar, a little distance north of Berber (Lenoble, 1991: 167-188), a gazetteer of sites within the area in Edwards' recent study of Archaeology and Settlement in Upper Nubia (Edwards, 1989: 63, 66-78, 127-129) and some late Meroitic-early Post-Meroitic ceramics that originated from a disturbed tomb and were rescued by the Sudan Antiquities Service in 1992 in the modern village of El-Fereikha (site 1 below) (Ahmed, 1993: 334-341).

![Map of the Berber-Abidiya Region](image.png)

FIG. 1. MAP OF THE BERBER-ABIDIYA REGION.
During our first field season held in October 1997, a limited site reconnaissance was conducted along the Nile south of Abidiya in the region of Dangeil (FIG. 1). As this is a small-scale project, the pragmatic approach to survey as advocated by Edwards and Osman was adopted. Sites recorded ranged from Meroitic to Islamic in date and included several Post-Meroitic tumuli fields, a fortress, the walled Meroitic settlement of Dangeil and some washed prehistoric material. The rescue excavation of a Post-Meroitic tomb was also undertaken in the village of El-Fereikha (site 5).

Geologically and geographically the left and right banks of the survey area appear quite different. Just north of Abidiya, the region is bordered by the 5th cataract which forms an imposing natural boundary inhibiting movement along the river and making desert travel around the cataract necessary. To the south of Berber, the Atbara river joins the Nile. Within the study area, the right bank is rather flat and primarily composed of an undifferentiated basement complex and undifferentiated schist while the left varies noticeably in elevation and contains metasediments, hornblend gneisses and schists and some volcanic basalts.

One of the most striking features of the Dangeil area was the concentration of Post-Meroitic material. Cemeteries of Meroitic and Post-Meroitic date were found to surround Dangeil (site 12) on the north, west and south sides underlying the modern villages of El-Fereikha, Dangeil and Hassa (FIG. 1). These cemeteries are situated along the desert edge, just outside the cultivation, and appear to be oriented along the river. It is not yet known if they run contiguously and this is made further difficult by the overlapping modern village occupation; however, a close relationship between Post-Meroitic sites 1, 5, 11, 14 and 15 is postulated. Hundreds of Post-Meroitic tumuli were noted on the west bank (sites 8 and 10), as was the Post-Meroitic village and fort on top of Jebel Nakharu. The large fortifications of Jebel Nakharu and Dangeil (sites 8 and 12) oppose each other across the river and it appears that at one point, they may have been occupied simultaneously. Future work in this region hopefully will cast additional light on the transition and continuity between the Meroitic and Post-Meroitic periods and perhaps upon trade relations between the Nile Valley, Red Sea, the neighbouring deserts and along the Nile Valley itself. The limited work executed in 1997 has clearly revealed the archaeological wealth of this region and the extension of agricultural and urban zones constitutes a major threat to the ancient remains. Our activity in the future will include the continuation of site survey and recording and the salvage excavation of El-Fereikha cemeteries and other endangered sites around Dangeil. A thorough survey of the Islamic remains in the town of Berber will be conducted concurrently.

The following sites were noted by the mission during the 1997 field season. They are within Berber Province and located on Sudan Survey Department 1:250,000 map NE-36, entitled Dongola and Berber.

SITE LIST, 1997

   During the excavation of the foundation for a minaret, five complete early Post-Meroitic vessels were recovered from the area by the mosque's Imam. Highly denuded sherds were scattered on the surface in the area. The extent of this cemetery is not known and may include sites 5, 11, 14 and 15.

2. El-Fereikha (18.08.58.N./33.57.36.E.), east bank.
Red bricks measuring 38 x 39 x 8.5 cm were discovered in a roadway after having been exposed by a lorry. Several bricks were reused beneath a water pump. One rounded vaulting brick had the Greek letters MHNA inscribed on it prior to firing suggesting the presence of a Christian cemetery in this vicinity (Fig. 2).

3. Mosque of Wad (el) Toum (18.07.52.N./33.57.20.E.), east bank (Plate 1).
On the western edge of Dangeil village stands a small sandstone, one-room structure locally identified as an early mosque. The building measured 5.5 x 6 metres, stood approximately 3 metres high and was located on the north side of a courtyard (22.5 x 19.5 m) enclosed by a jalous wall. Preservation of the structure was good with the walls and a large portion of the roofing completely preserved. The lower part of the building was constructed of flat sandstone slabs laid horizontally in rows mud-mortared together, while the upper part of the walls were of jalous construction. The thickness of each course ranged between 5 to 9 cm and the length of stone used varied from 18 to 40 cm. The interior of the structure was mud plastered and roofing was of dom beams, palm fronds and tabas grass. A door was located slightly off center in the south wall and a large rectangular window opened just to the east of the doorway. Also on the south wall were two smaller square windows situated high up the wall on either side of the main roof beam. Dom wood was used for the lintels. A recent mudbrick structure (10.8 x 6 m) was constructed within the courtyard along its north side, just to the east of the stone building. A few sherds of Islamic date were recovered from the courtyard and some also had been incorporated into the enclosure wall and mosque walls. Oral tradition in the village dates the first installations on this site to the 17th or 18th centuries. The main activity period of this mosque and Koranic school could be related to the Turkish period.

A series of low gravel mounds, standing 2 to 2.5 metres high and covering an area of approximately 200 metres north-south and 25 metres east-west, ran parallel to the Nile and modern roadway. A modern Islamic cemetery was encroaching on the mounds from the north and east. Sherds, bone, plaster and red brick fragments and some lithic material were scattered across the surface of the mounds and these surfaces were extremely spongy. Diagnostic sherds were Meroitic in date. Some prehistoric lithic material had been washed down onto the site from an as yet unidentified source. A Meroitic sandstone offering table was recovered from the site by a local inhabitant and given to NCAM (Fig. 2). Approximately 200 metres northeast of these mounds, a lorry had fallen through a grave and several red bricks were exposed.

5. El-Fereikha (18.08.35.N./33.57.28.E.), east bank.
A Post-Meroitic cemetery, possibly an extension of site 1, runs beneath the houses of El-Fereikha village and its exact dimensions are unknown. Rescue excavations were undertaken in an El-Fereikha street where a pipe trench had been cut through the southern shaft of a double-shaft, Post-Meroitic tomb. No evidence for a tumulus was discovered, but considering the disturbed nature of the surface this is hardly surprising. The southern shaft was opened and descended a length of 3 m
to the tomb chamber. The northern shaft was not excavated and within the tomb chamber was found sealed with red bricks. The tomb chamber was oval, oriented north-south, measured 5 x 2 m and was a maximum of 1.5 m high. Tomb contents were found in situ associated with the fragmentary remains of an adult, probably a male, and child. The skeletal remains were reduced to powder due to water damage. Among the finds were two beer jars, a large spouted bowl, a black libation bottle, arrowheads, a censer, negative impressions of two bows and two pot stands, one decorated with a band of uraei. The grave goods were arranged in a semi-circle around the adult deceased. Analogous examples of Post-Meroitic double-shaft tombs have been discovered at Meroe and near Berber.

Fig. 2. Inscription on red brick from site EL-FEREIKHA 2/97 and sandstone offering table from site EL-FEREIKHA 4/97.
6. Dangeil NE (18.08.13.N./33.57.47.E.), east bank.
Two small mounds covered with sandstone rubble, red bricks and coarse plaster were located roughly 300 m to the northeast of Dangeil. The larger mound measured approximately 28 m north-south and 15 m east-west, while the smaller was 20 m north-south and 13 m east-west. They stood between 0.5 m and 1 m above the surrounding plain and the surface was spongy in some locations. Ceramics associated with the mounds were late Merotic in date and Nile oyster shells were numerous. A greater quantity of sandstone pieces were noted on the larger mound and the presence of some human bone fragments suggests a grave, possibly of a later date, in the vicinity. Fields were encroaching upon this site on three sides, while a drainage canal formed a border along the fourth side. This site could be related to the outskirts of the walled town of Dangeil (site 12), a situation similar to that found at the town of Meroe.

A low, wide scatter of red brick fragments, adjacent to a mosque, covered an area c. 150 m north-south x 50 m east-west. A modern Islamic cemetery was encroaching upon the site. Few diagnostic sherds were noted. This site may have been referred to as Bauga I by Edwards (1989: 67) and noted by Crawford.

8. Jebel Nakharu (18.08.13.N./33.56.08.E.), west bank.
On the west bank, several sites were identified in the immediate vicinity of Jebel Nakharu the most prominent being the stone fortress perched on top of the jebel overlooking the river. As already mentioned, the site was visited by Linant de Bellefonds and was noted by Crawford during his reconnaissance through this region. From this vantage point traffic and trade along the river could be easily regulated and to a lesser extent approaches through the desert also could be monitored.
The fortress forms an extremely large rectangle that is divided into two roughly square enclosures. The primary and most strongly fortified section is located on the east side closest to the river and it measures approximately 70 by 70 metres. The tumbled remains of bastions, approximately 10 x 10 metres in size are located at its corners and in the center of the north, west and south walls. This enclosure also contains the collapsed remains of several stone buildings that were roughly rectangular in shape where their shape could be determined. No structures were visible in the adjacent annex enclosure which is roughly the same size as the primary fortification. The fort is extremely sturdy with ferricrete sandstone walls standing approximately 3-4 metres above the surrounding plain and measuring up to 5 metres wide at the base and 1.5 to 2 metres wide at the top. Most walls exhibited some degree of slumping and collapse. Irregular blocks of varying sizes and the exceptional red brick were incorporated into the drystone construction that is still visible in some locations. Few ceramics were found within the fort and much of the structure had collapsed into large heaps of rubble; however, those that were found were Post-Meroitic to Islamic in date and it may be suggested that the fort was constructed during the Post-Meroitic period then later reused.
A large village comprised of at least 20 small, circular ferricrete sandstone huts occupies the plateau north of the fort. Stone used for these structures was unworked and of varying sizes. The hut diameter was 2 metres on average.
Ceramics scattered through this area suggest that the village is also of Post-Meroitic date and contemporary with the large stone fortress. Two Post-Meroitic tumuli fields, separated by a wadi, occupy the base of the Jebel to the north. Roughly 40 tumuli were visible and most appeared to have been robbed. A small julus, mudbrick and unworked ferricrete sandstone Islamic fortification was also situated on the Jebel's plateau north of the Post-Meroitic fortress, surrounded by the Post-Meroitic village. It measured roughly 8 x 6 metres in size and was preserved c. 1 m high. Two ceramic pipe bowls were recovered from within.


9. Jebel Nakharu (18.08.28.N./33.56.14.E.), west bank. A sandstone quarry lay north of the fortress at the foot of the Jebel on the east side. It is approximately 200 metres away from the river. Stone from the quarry was extremely soft. A sample of stone from the quarry was compared with the surface material found across the river in the walled city of Dangeil (site 12), but no match was made. This quarry is also not a source of ferricrete sandstone. Graffiti present within the quarry included shoes, crosses and boats suggesting possible Meroitic to Christian period usage. Unfortunately few diagnostic ceramics were in evidence to corroborate this hypothesis.


10. Wawissi (18.10.56.N./33.55.08.E.), west bank. An extensive Post-Meroitic tumuli field lies to the north of Jebel Nakharu approximately 300 m west of the village of Wawissi. It stretches over 3 kilometres in length and contains several hundred tumuli. The gravel covered tumuli varied in size, ranging on average from approximately 5 to 10 m in diameter and standing 1 to 2 m above the surrounding plain. This may be the same tumuli field referred to by Crawford (1953: 11-12) and called Bauga II by Edwards (1989: 67).

11. El-Fereikha (18.08.46.N./33.57.36.E.), east bank. Approximately 400 m northeast of the El-Fereikha mosque (site 1), a large hole excavated in a courtyard for a water pipe exposed bone fragments and large red bricks. The bricks were similar in size to those from site 5, measuring 35 x 17 x 8 cm. The largest brick uncovered measured 41 x 45 x 8 cm. The extent of this site is not known, but it may be part of a larger Post-Meroitic cemetery that could include sites 1, 5, 14 and 15.

12. Dangeil (18.07.53.N./33.57.29.E.), east bank. Dangeil is enclosed by the modern villages of Dangeil, El-Fereikha in the north and Hassa in the south. The western portion of the site disappears under the modern village of Dangeil. As noted by Crowfoot and Crawford, part of the site is surrounded by a mudbrick wall, faced on the exterior with red brick. A high proportion of gravel seems to have been incorporated into these mudbricks. The enclosure measures roughly 300 x 175 metres and appears to be quadrilateral. Remains of a large bastion occupy the south-east corner of the enclosure. Several rather peculiar mounds, some standing up to 4 m high, dot the interior and the surface of these mounds is covered with sandstone fragments, hammerstones and grinding stones, red brick and mudbrick rubble. Diagnostic surface ceramics were
Meroitic in date with a few Post-Meroitic present as well. Some white Meroitic fine ware and some small turquoise faience fragments were noted. Bibliography: Crawford, 1953: 8-9; Ibid., 1961: 17; Crowfoot and Griffith, 1911: 8; Edwards, 1989: 68.

   A small mound covered with red brick rubble, sherds and modern debris was located within the village of El Hassa and surrounded by houses. It measured 20 m north-south by 35 m east-west and stood up to c. 80 cm high.

   Large red bricks, similar in size to those from site 1, and the top of a red brick wall were uncovered during the planting of trees along a courtyard wall. This site is c. 150 m north of site 5 and is probably an extension of it.

15. El-Fereikhha (18.08.42.N./33.57.30.E), east bank.
   Approximately c. 100 m to the east of site 1, a large hole created by a lorry exposed several large red bricks. Some were vault bricks. It is suspected that this site is an extension of site 1 and perhaps also sites 5, 11 and 14.

REFERENCES


CROWFOOT, J. and GRIFFITH, F., 1911. The Island of Meroe and Meroitic Inscriptions I. London.


a. SITE 3, MOSQUE OF WAD (EL) TOUM.

b. SITE 8, FORTRESS ON TOP OF JEBEL NAKHARU, SEEN FROM THE EAST BANK OF THE NILE.
a. SITE 10, POST-MEROITIC TUMULI FIELD AT WAWISSI.

b. SITE 12, THE WALLED MEROITIC CITY OF DANGEIL.
The Archaeological Mission of the University of Geneva to Kerma (Sudan)

FINAL REPORT FOLLOWING THE
1998-1999 EXCAVATION SEASON

by CHARLES BONNET

The 23rd excavation season of the Swiss Mission to Kerma (Northern State, Sudan) took place between 1 December 1998 and 6 February 1999. The Raïs Gad Abdallah, Saleh Melieh, Abdelrazek Omar Nuri and Idriss Osman Idriss directed the 150 workers on five sites. The inspector Ali Mirghani and the Director of the Archaeological Excavations Section of the Department of Antiquities and National Museums of Sudan (NCAM), Salah el-Din Mohammed Ahmed, both took part in our research; the latter was responsible for the site of Doukki Gel. Eleven Swiss and French colleagues made valuable contributions in their own areas of expertise.

The excavations are gradually adding to the very important discovery of three neolithic horizons and the pre-Kerma settlement. In the ancient town, the study of a fortified rectangular enclosure of Middle Kerma date contributed to our understanding of these later areas. The techniques of construction in this first urban centre used ‘galous’ (lumps of clay), demanding a meticulous approach to excavation and presenting certain problems of interpretation. The excavation of thirty or so tombs of ancient Kerma date in the eastern necropolis provided new information on the origins of the funerary traditions. We were also able to complete the excavation of an enormous royal tomb of the Middle Kerma period, whose burial pit was 2 metres deep and 12 metres in diameter. Approximately 3000 bucralia were arranged in a crescent on the southern side. The clearing of the funerary chamber of tumulus K III, excavated by G. Reisner, provided additional information not seen for 85 years.

The site of Doukki Gel was occupied during the Classic Kerma period and seems to have been a special religious centre for three millennia. This season we uncovered the foundations of a temple that preceded the classic Meroitic period temple discovered during our two previous campaigns. The remains of New Kingdom bakeries and of reused stones from this same period added to our understanding of this architectural complex. Particular attention was given to the restoration of the eastern Deffufa, the religious quarter and several houses in the south-eastern part of the ancient town. These remains are very important for the early history of Sudan and this restoration work provided the opportunity to develop the remains in view of the more regular visits now made by tourists. The town and its major temple are a kind of open book for visitors who take an interest in the capital of the Kingdom of Kerma (2450-1450 BC).
THE PRE-KERMA AND NEO-LITHIC SETTLEMENTS

The excavations around the pre-Kerma town revealed storage pits and the postholes of palisades and circular and rectangular structures, adding to what is a unique overall plan of one of the most ancient settlements of the African continent. The system of fortifications, with its rounded enclosures, provides a striking image of this town. We added to the stratigraphic information, both horizontal and vertical, and several levels were dated by carbon 14 analysis. Hearth and alignments defined by postholes were associated with a neolithic occupation. Although these surfaces were water worn, archaeological material and animal bones were recovered; it was thus possible for Matthieu Honegger to present the first chronological picture of these prehistoric and protohistoric periods (PLATE I).

THE ANCIENT TOWN

Work was carried out in the north-west part of the ancient town in order to research the relationship between the rectangular Middle Kerma (c. 2000 BC) establishment and the urbanised zones of the Classic Kerma period (1750-1500 BC). The eastern facade of primitive fortifications was located in the form of powerful circular foundations 7 metres in diameter and bastions of lesser proportions. Their juxtaposition made it possible to reconstruct some elements of a defence made in ‘galous’. This material, used in this case in concentric circles, was not easily distinguished from the alluvial soil; where this was possible it was mainly thanks to the yellowish colour that marked the outline of the joints. Two gateways were discovered but their plan, frequently modified, was almost impossible to date in terms of the major phases of the urban development. Palisades of posts driven into the ground and imprints of the hoofs of cattle or sheep also helped to define these thoroughfares (PLATE II).

The town grew considerably beyond the enclosure and we were able to follow the organisation of the plots and roads that skirted the royal nucleus. There were many gates and all traffic must have been under surveillance. The main routeways had mud brick walls but walls were also made from posts. A number of houses (M179, M180, M181) were uncovered; they were buildings fairly characteristic of the late Middle Kerma and Classic Kerma periods, with spacious rooms and interior courtyards. The southern side opened on to a garden or a place for storing food. A curious wall bounding an alley to the east and south of house 181 was set at an angle formed by successive offsets of 2 to 3 metre segments.

THE EASTERN NECROPOLIS

A sector (CE 27) of Ancient Kerma I was excavated in order to increase our understanding of the chronology of the origins of the Kerma kingdom. Thirty tombs were found, the burials placed in contracted position in oval grave pits that were very narrow and fairly deeply sunk into the sand, below the level of alluvial silt. The tombs were almost without grave goods, the dead being placed in leather covers with some clothing in leather or cloth. In five or six cases we found sandals, also made of leather. At the surface, motor vehicles, cattle and people had almost entirely destroyed the superstructures. However, almost all the graves had been marked by a series of seven
stele and the bases of some eroded stele were still in a circle, held in place by quartz gravel or silt.

A small wooden building with sides of 2.20 by 2.50 was located by four corner posts. The points of two of them, on the northern side, had been burnt in order to protect the wood from termite attack or damp. Several fragments of wood fibre still remained in the postholes. Although we have no definite proof, we assume this structure to belong to a construction used during the funerary ceremonies (PLATE III).

The Middle Kerma royal tomb that we began to excavate in the previous season was completely emptied. This tomb 253 (CE 25) had no doubt once been richly equipped, but all the remains had been disturbed and broken by tomb robbers. However, it is clear that at least three individuals were buried in the enormous grave pit: an adult male, a woman of between 20 and 25 years of age and an adolescent. Twenty-two sheep, two goats and two dogs accompanied the dead, together with a quantity of ceramic vessels. Two offerings tables and a rounded stele were probably originally placed on the tumulus while around 3000 cattle frontals were laid out to the south of the mound; some of these bore marks in red ochre (PLATE IV).

The prince was laid on a large bed, decorated with small bone plaques; it was possible to study the decoration on the two fragments recovered. There was a wooden cover over the bed; the posts, with 8 cm sides, were set between 2.64 and 3.38 from each other in a rectangular. This seems to be a sort of canopy that was probably constructed just for the brief period of the funeral.

The funerary chamber of tumulus K III, associated with temple K II, the eastern Deffufa, was cleared again. A verification of the building phases was necessary prior to the publication of a new interpretation of the buildings of the necropolis. During the cleaning of the end of the sacrificial corridor which provided the access to the chamber, two beautiful fragments of a statue of a crocodile in glazed quartz were recovered. The chamber of the royal tomb had been restored as it was lined with low walls. Two sections of a stele had been reused in these consolidating walls. The side walls had been painted with bands of yellow ochre 0.40 m high in both phases of building. Our work clarified the construction methods used for the vault between the vestibule and the burial chamber; here there were also clear traces of restoration.

THE SITE OF DOUKKI GEL

We continued our research on a classic Meroitic temple constructed in fired brick with mud brick and stone, the eastern half of which we had excavated previously. We were surprised to discover below the Meroitic foundations an earlier temple of very considerable interest. This monument was built in mud brick with doors of stone. The door posts, which were preserved to a height of half a metre, took up a metre's width in the brick wall. The entrance, with its silt of sandstone blocks, had two granite bearings. The one on the western side still retained a sheet of bronze folded in four whose purpose was to ease the movement of the door pivot. Through this large doorway, one entered a chamber whose roof was supported on four columns; the stone bases of two of these were still in situ and had been restored many times. A second stone doorway gave access to two further rooms whose outline plans were recognised.
The Meroitic architect had taken account of this first sanctuary in building the second temple. The superimposition was very interesting and allowed a better understanding of the very degraded remains of the southern part (PLATE V). These religious buildings were constructed on a foundation of fragments of brick mixed with sherds from the moulds for bread offerings. This material dates these layers to the New Kingdom. Decorated blocks that were reused in a floor and the masonry of the first temple probably also date to the same period. The quality of the bas-reliefs and the interpretation of three fragmentary cartouches should provide a more specific dating.

A magnificent piece sculpted in the Meroitic period and showing a king presenting his cartouche to the ram's head Amon was found in the rubble associated with the destruction of the Meroitic temple. The interpretation of the damaged cartouche gave nb maat to which one could add re and thus obtain the name of the king Amanitenmemide who lived between 78-93 or 45-62 AD. We thus have confirmation for the dating of the classic Meroitic temple to the first century AD, which the painted decoration of fragments lying at the foot of the pylon also suggested (PLATE VI, a).

RESTORATION AND CONSERVATION

Despite heightened surveillance of the site of Kerma, the children of the town continue to damage the monuments. The eastern Deffufa has suffered a great deal and the fragile mud brick masonry is in danger. Large scale restorations were undertaken on this important building while the construction of a museum in the immediate vicinity was planned. The door of the Deffufa was restored to a height of one metre and also the stairs giving access to the upper terrace. In conserving these steps we covered over the original remains to protect them. Similar work was undertaken on the palace of the religious centre and its colonnade, the south-eastern sector of the town and a Classic Kerma gate (PLATE VI, b).

This work gave a new aspect to the site and the first reactions of visitors were very positive. These strong lines integrated within the eroded massif of the Deffufa provide a structure to the ruin, which gives it a more grandiose appearance. The interpretation of these remains is also an important aspect of this work; the architectural assemblage is now easier to understand. But what had guided the work is the desire to protect the remains of a unique town, which has become a site type.
POSTHOLES OF THE PRE-KERMA SETTLEMENTS.
ROUNDED ENCLOSURES AND A SQUARE BUILDING.
ELEMENTS OF A DEFENCE WALL MADE IN 'GALOUS'.
A WOODEN BUILDING LOCATED BY FOUR CORNER POSTS (2375 BC), PROBABLY A CHAPEL.
3000 OR 4000 CATTLE FRONTALS WERE LAID OUT TO THE SOUTH.
PLATE V

THE SUPERIMPOSITION OF THE TWO TEMPLES OF DOUKKI GEL
(CLASSIC MEROITIC AND NAPATAN PERIODS).
a. DOUKKI GEL. A SCULPTED PIECE OF THE MEROITIC PERIOD.

b. THE DOOR OF THE DEFFUFA AND THE CEREMONIAL PALACE WERE RESTORED.
Kurgus 1998: A Preliminary Survey

by Vivian Davies and Isabella Welsby Sjöström

The Inscriptions by Vivian Davies

Kurgus is situated between the Fourth and Fifth Cataracts of the Nile, about 520 km north of Khartoum and 40 km south of Abu Hamed. It has long been recognised as an archaeological site of some importance (see Davies, 1998: 28, for earlier bibliography) but it has never been systematically investigated. In a short, two-week season during February 1998 a preliminary survey of the site was undertaken by a joint-expedition of the British Museum and the Sudan Archaeological Research Society, the team consisting of Vivian Davies, Derek Welsby, Isabella Welsby Sjöström, together with El-Tahir El-Nour of the National Corporation of Antiquities and Museums of the Sudan. It proved to be a productive visit, made all the easier and more pleasant by the help and hospitality received from the modern villagers of Kurgus.

![Kurgus Location Plan](image)

Fig. 1. Kurgus: Plan showing the locations of the three main archaeological areas.

There are three main areas of archaeological interest at Kurgus (Fig. 1), namely the remains of a fort (KRG2), a cemetery of tumulus-tombs (KRG3) and a large quartz-rock outcrop, the ‘Hagr el-Merwa’ (KRG1), which bears Egyptian inscriptions. The nature and extent of their association, if any, remain to be determined. Isabella Welsby Sjöström reports below on the survey of the fort and the cemetery. I confine myself here to a brief account of the inscriptionsal record on the Hagr el-Merwa, which turned
out to be considerably more substantial than indicated in the earlier accounts of Arkell (1950) and Vercouther (1956). A fuller treatment, which should ideally follow on a further visit to the site, is under preparation. A selection of the material has recently been published in Davies (1998).

The Hagr el-Merwa (PLATE I, a-b) is located about 1200 meters from the fort at the border between the cultivation and the desert. Its maximum dimensions are approximately 23.6 m (height), 40 m (length) and 9 m (thickness). The inscriptions occur along the north-east face of the rock (FIG. 2, A and B) and on a small area of the south-west face (FIG. 2, C). The majority were hammered into the rock, though a considerable number were rendered in red paint.

![Diagram of Hagr el-Merwa](image)

**FIG. 2.**

THE HAGR EL-MERWA: PLAN SHOWING THE LOCATIONS (A, B AND C) OF THE INSCRIPTIONS.

A. This is the primary area of decoration, well known from the drawing of Arkell (1950: 37, fig. 4), which, however, is very cursory, inaccurate in detail and does scant justice to the artistry of the representations. The main content comprises the royal inscriptions including the so-called boundary stelae of Thutmose I and III respectively, each consisting of the same threat-formula aimed at potential Nubian transgressors. Both are surmounted by representations of the ram-headed Amun-Ra, enthroned and facing in each case a serekh containing the Horus-name of the king in question. The Thutmose I tableau occupies the best spot, high up on the rock-face, the top of the god’s headdress being well over 4 metres above ground level (PLATE II). Associated with these scenes are four large animal figures, two bulls labelled as ‘Amun-Ra’ and two lions, the lower identified as ‘the good god Aa-kheper-ka-ra’ (the *prenomen* of
Thutmose I), the upper as ‘the good god Men-kheper-ra’ (the *prenomen* of Thutmose III). This latter lion, rendered largely in red paint, is very well preserved and is a wonderful piece of animal art (*Plate* III, a; see Davies, 1998: 28, colour plate xviii). In front of it are two columns containing a much-effaced historical inscription mentioning that the king journeyed ‘to the boundary of the north (and) of the south’ and including the phrase ‘from Naharin to Kush’.

It has been possible to make considerable improvements to previous readings of the inscriptions in this area (see Davies, 1998). For example, we have established that the Thutmose I stela does not end with a year-date (as Vercoutter, 1956: 70) and that the two cartouches positioned below the stela do not belong to Thutmose I (as Arkell, 1950: 37, fig. 4) but to Ramesses II and thus represent the first hard evidence for a Ramesside presence at the site. It is also very probable that a year-date beginning a fragmentary inscription located below the lion of Thutmose I (Vercoutter, 1956: 68-69, no. 4) is to be read as 44 rather than the 35 previously suggested, in which case it belongs to either Thutmose III or Ramesses II. We have also identified a number of previously unnoted inscriptions naming various dignitaries, among them the ‘High Priest of Amun, Djehuty[-mes ?]’ and the ‘King's son, Amen-em-hat’ (*Plate* III, b).

B. This area of the rock face contains a large series of private inscriptions, mostly placed at head-height or below and consisting mainly of names and titles, though some also have biographical content. Those that are certainly datable are Thutmoseide. All are written in hieroglyphs, reading from right to left, mostly in vertical columns. Many are now eroded or incomplete. I list here a selection of the most legible, roughly in order of their location from south to north:

‘Scribe, Djehuty[-mes?]’, red paint.

‘Steward of Upper and Lower Egypt, Hor-iu ...’, red paint (Davies, 1998: 29, colour plate xx).


Biographical text in four columns describing the owner, whose name is illegible, as following the ‘lord of the two lands, Men-kheper-ra, at his footsteps ... from Naharin to [Khent-hen-nefer ?]...’ (*Plate* IV; see Davies, 1998: 29, colour plate xxii).

‘Wab-priest of Amun-Ra (or ‘Ra’), Sen-hotep’, red paint (Davies, 1998: 29, colour plate xxiii).

Two columns, each containing the titles ‘King’s son, overseer of the [southern] foreign countries...’, the names yet to be read (Davies, 1998: 29, colour plate xxiv).

‘Wab-priest of Amun, herald, Iry’ (*Plate* V, a; see Davies, 1998: 29, colour plate xxiv).

‘[Broken title +], Djehuty’ (Davies, 1998: 29, colour plate xxiv).

Biographical text in two columns, the owner described as a ‘praised one of the king, follower of his lord at his footsteps upon every foreign country which is loyal to him’, name lost (Davies, 1998: 29, colour plate xxv).

Biographical text in three columns, including the name ‘Amen-hotep’ (Davies, 1998: 29, colour plate xxv).
C. The inscriptions in this area are a mixture of royal and private, arranged in horizontal lines, some again done in red. Only the following are easily legible:

‘Great royal wife, Ahmose, may she live’, red paint (Davies, 1998: 29, colour plate xxvi).

‘Child of the inner palace, who follows the king at his footsteps, Iry’, red paint (Davies, 1998: 29, colour plate xxvi).

‘Great royal wife, Ahmose, may she live’ (Davies, 1998: 29).

‘King's daughter, [name unclear], may she live’ (Davies, 1998: 29, colour plate xxvii).
The Cemetery

To the north of Hagr el-Merwa lies an extensive cemetery (FIG. 3) of unknown date, stretching over an area measuring approximately 1400 by 500 metres, but with no firm boundaries; more graves are visible to the north and south, on the low plateau cut by khors, though they are not close enough to be considered part of this cemetery. Only a few of the graves showed signs of having been robbed and even around these there were no fragments of bone and pottery, nor of other types of grave goods that might have given a clue as to the date of the burials (PLATE V, b). Arkell records finding some sherds of 18th Dynasty date (Arkell, 1950: 39), but none were found during the present campaign.

About half a dozen of the interments were (Christian?) box graves, located in the central, most densely occupied part of the cemetery. Otherwise the burials were round or sub-rounded tumuli, varying greatly in style: some were very shallow, virtually flush with the ground, discernible only by an outline made up of black sandstone laid out in a circle. Others had vertical sides about 50 cm high, with a flat interior (PLATE VI, b). Graves of this type were at times found abutting each other, usually a larger grave with between one and three ‘satellites’, possibly denoting some kind of hierarchy between kin or family retainers. Some had their interiors decorated with white quartzite pebbles, some were unmarked mounds that virtually blended into the gravel plain, and two or three had stones laid out to indicate a kind of ‘dromos’ on the south west side. These were located on the periphery of the cemetery. Down the slope towards the railway are large, nearly flat mounds measuring some six metres in diameter (PLATE VI, a). A last category was akin to box graves, but with the stones (in all cases the local black sandstone) piled high to form a pointed ridge. The location of the various kinds of tumuli tended to be related to their style (but not always) and a more detailed study of the location of the various types, as well as excavation of a representative of each group, might clarify the dates during which the cemetery was in use.

The Fort

The remains of a fort lie near the bank of the Nile, some 1200 metres from the Hagr el-Merwa (PLATE VII and FIG. 1), slightly to the northwest of the rock. An irrigation ditch skirts the mound to the north and east sides, while to the south modern farm houses and animal pens are built some distance from the last visible traces of the fort.

Whereas Vercoultor and Arkell claimed the fort for the Pharaonic period, the abundant surface pottery within the fort is all of Christian date, and the evidence of the building methods and plan of the building do not support a Pharaonic date per se, even if it would be logical for a fort of that period to have existed on the site, particularly in view of the fact that it is from here that a route might leave the Nile, heading for the gold mines (worked in Pharaonic times) in the western desert some 100 kilometres distant.

A survey of the remains visible on the surface was undertaken, resulting in the plan here shown (FIG. 4). As no excavation or surface clearance was carried out, the
whole of the fort plan may well be recoverable, although it is clearly best preserved to
the north, where it stands to a height of 5.4 metres above the surrounding ground.
Unfortunately this height has led to the mound being used for parking tractors with
faulty starting motors (cf. PLATE VII, in foreground) and some damage will inevitably
be caused to the structure.

In its original phase the fort was approximately square, each side measuring
72 metres, with round towers or bastions on the visible corners to the north-east and
north-west. There were rectangular intermediate towers, now visible on the west, north
and east sides. There definitely does not seem to have been an entrance in the north
curtain wall, but there may have been one on the east; it is not possible to tell with the
other two sides.

The curtain wall measures 5 metres in thickness, all of one build, the average brick
size 400 x 210 x 7 mm, which would be suitable if the fort were of Pharaonic date
(Spencer 1979, passim), but there is no evidence for wood lacing being used, which
would be to be expected if the building dated to the Middle Kingdom, as this is found in
Egyptian forts in the Second Cataract area. In surface area the fort is also much smaller
than any of the New Kingdom forts and there are no visible traces of an outlying
settlement, though approximately half way between the fort and the Hagar there is an
extensive but sparse pottery scatter of indeterminate date, but it is unlikely to be
mediaeval.

In a secondary period a stone revetment and mud-brick annex were added to the
north-west corner tower. There is a gap between the two, suggesting that they are not
contemporary. The stone revetment continues, perhaps as a wall in its own right, along
the west side (towards the river), but is now reduced to rubble. It runs about 10 metres
further to the west than the original mud-brick wall. Arkell suggested that the stone was
added at this point to protect the mud-brick against flooding, and this may well have
been the case, but as seen in the tower, they are not contemporary. Stone appears to
have been used in other parts of the building, especially to the east, and straddling the
western mud-brick curtain wall, but no structures were discernible.

Arkell refers in his brief description of the fort to a glacis, by which he must mean
the scatter of stone and red-brick fragments around the north-west corner. However,
this need not be anything but the collapse of the tower walls. There are indistinct traces
of an outer mud brick protoarchaisma to the north and east, but if there was a ditch, this
has now filled in so completely with sand as to leave no trace.

In a few areas within the fort there are concentrations of red-brick fragments,
notably in a mound in the west-central part of the fort. Red brick generally is held to
indicate a Christian period building, most likely a church, but no building plan could be
made out and the brick was too fragmentary to get an idea of its size. Red brick
fragments otherwise occur around the periphery of the fort ruins, suggesting perhaps a
general overhaul of the structure at some stage of its life span, or robbing of the central
structure and subsequent squatter occupation.

The stone used in the fort is the same dark grey ferruginous sandstone that is used
in the make-up to the tumuli and cairns in the cemetery.
Brief overview of possible parallels for the fort (KRG2)

Looking at other forts in Nubia, no close parallels emerge from any period ranging between the Middle Kingdom and the Islamic period, neither in respect of their building materials nor plan. The Egyptian forts are predominantly built of mud-brick, while Christian forts are usually constructed out of mud-brick and stone, and, as described above, the fort at Kurgus is built of mud-brick in its first phase, with later additions of stone and red-brick.

Details which are paralleled in the earlier period forts include the outer mud-brick wall at Buhen (originally of Middle Kingdom build, but refurbished in the New Kingdom), though the traces of such are admittedly extremely faint, and we have no evidence at this stage to determine whether it is contemporary with the main structure. The plan of Sesebi’s town wall has towers like those at Kurgus, but Sesebi is a town, the whole construction being on a much larger scale than what we have at Kurgus. According to an inscription, a fort dating to the reign of Thutmose I is known to have existed in the Third Cataract area, but if this is the structure recorded by Edwards and Osman at Gezira Dabaki it is built of a combination of stone and mud brick. This is natural enough, in view of its location on a rocky island subject to the Nile floods, but its plan does not carry much resemblance with that of Kurgus (Edwards and Osman, 1992: 28).
The fortifications at Old Dongola, again a much larger site, date to the Post-Meroitic period and are built of a combination of stone and mud-brick. The fort at Jebel Nakharu, either Post-Meroitic or early medieval in date, is of a size and plan that compare quite closely with that of Kurgus, although it is built entirely of stone. However, as it is located high above the Nile on a rocky plateau, this is hardly a valid argument for discounting it as a parallel. The choice of building material is clearly subject to availability and the practical considerations relating to the location of a building, such as the risk of flood damage to mud-brick, for example.

Forts of the Christian/Islamic period, such as those of Bakheit, Estabel and Kiliseikal, do not offer parallels with Kurgus either in terms of plan or building technique.

The closest parallel is that of the stone fort at Jebel Umm Marrahi (in the Khartoum area), which does have a similar plan, measuring approximately 82 metres square (Crawford 1953: 39), which is only a little larger than Kurgus. It was tentatively dated to ‘Meroitic or earlier’ period.

In conclusion, while we may be confident that both the fort and cemetery were in use in the Medieval period, it is only by excavation that the question of a New Kingdom presence at Kurgus, apart from at the Hagr el Merwa, can be resolved.

REFERENCES


a. THE NORTH-EAST FACE OF THE HAGR EL-MERWA.

b. THE SOUTH-WEST FACE OF THE HAGR EL-MERWA.
REPRESENTATION OF THE GOD AMUN-RA, TIME OF THUTMOSE I.
PLATE III

a. HEAD OF THE LION OF THUTMOSE III.

b. INSCRIPTION OF THE ‘KING’S SON, AMEN-EM-HAT’
BIOGRAPHICAL INSCRIPTION OF A MAN WHO FOLLOWED THE
'LORD OF THE TWO LANDS, MEN-KHEPER-RA (THUTMOSE III), AT HIS FOOTSTEPS ...'
Plate V

a. Inscription of the 'Wab-Priest, Herald, Iry'.

b. Graves - General view looking North.
a. GENERAL VIEW LOOKING SOUTH SHOWING FLAT, SHALLOW TUMULI 93, 94, 95.

b. TUMULUS 73, PROMINENT SUB-RECTANGULAR TUMULUS.
GENERAL VIEW OF THE FORT LOOKING TOWARDS HAGR EL-MERWA, WITH THE ROUND TOWER, BASTION IN THE CENTRE, DAMAGING TRACTOR TRACKS IN FOREGROUND.
Two Seasons in Sai Island
(1996-1997)

by FRANCIS GEUS

Two campaigns have been carried out in Sai Island from the 9th of January to the 23rd of February 1996 and from the 1st of January to the 23rd of February 1997.¹ The staff of the first campaign included Morgan De Dapper, geographer, Paul De Paepe, geologist, Jean-Luc Despagnie, topographer, Francis Geus, director, Rudi Goossens, geographer, Albert Hesse, archaeologist, Yves Leccointe, archaeologist, Valérie Loze, student in archaeology, Bruno Maureille, physical anthropologist, Anne Minault-Gout, archaeologist-egiptologist, Laurent Soldati, draughtman, Suad Osman Mahgoub, student in archaeology, Florence Thill, archaeologist-egiptologist, Philip Van Peer, prehistorian, Omran Ali, inspector, and Awadallah Ali el-Basha, foreman. The staff of the second campaign included John Alexander, archaeologist, Jean-Luc Despagnie, topographer, Bertrand Ducourneau, archaeologist, Francis Geus, director, Frank Herman, prehistorian, Yves Leccointe, archaeologist, Bruno Maureille, physical anthropologist, Lancelot Meurillon, student in archaeology, Anne Minault-Gout, archaeologist-egiptologist, Laurent Soldati, draughtman, Suad Osman Mahgoub, student in archaeology, Philip Van Peer, prehistorian, Ali Mirghani Mohammed Ahmed, inspector, and Awadallah Ali el-Basha, foreman. The two campaigns have been financially supported by a grant from the ‘Commission des Fouilles’ of the French Ministry of Foreign Affairs and by funds from the Bittar and Ariab Mining companies in Khartoum, EDF-Lille, the Michela Schiff-Giorgini and Haycock Foundations. I would like to take this opportunity to express them my gratitude. I also would like to address my warmest thanks to the staff of the National Corporation for Antiquities and National Museums, the French Embassy in Khartoum and the University Charles de Gaulle-Lille 3 for their invaluable assistance and support.

During the two campaigns, while trying to make progress in the survey work (topography, infra 1; geomorphology and geology, infra 2; archaeology, infra 3), we concentrated our activities on the excavation of sites 8-B-11² (Palaeolithic occupation, infra 4), 8.B.10.A/SKP1, 8-B-10.B (Neolithic occupation, infra 5), 8-B-52.A (pre-Kerma storage pits, infra 6), 8-B-51 (Kerma cemetery, infra 7), 8-B-5.SAC5 (Pharaonic

¹ A more detailed description of the two campaigns has been published in French in Archéologie du Nil Moyen (Geus, 1998).
² Since our last campaign, the sites of the island have been registered according to the system used for the Archaeological Map of the Sudan (AMS) by Fritz Hinkel (1977), who gave us a copy of his provisional manuscript for Sai Island.
cemetery, infra 8), 8-B-5.SN, 8-B-52.B, 8-B-5.A (Meroitic cemeteries, infra 9) and 8-B-1.B (Ottoman fort, infra 10).

FIG. 1. NORTHERN PART OF SAI ISLAND,
MAP SHOWING THE LOCATION OF THE SITES MENTIONED IN THIS PAPER.

1. TOPOGRAPHICAL SURVEY

J.-L. Despagne established a topographic grid covering the northern part of the island and levelled several archaeological sites, but his main achievement has been to re-assess the altitudes published since 1969. Indeed, in the absence of a local bench mark, those have been calculated so far from an arbitrary reference level that had to be re-evaluated. Thanks to the collaboration of the Survey Department office in Abri, he was able to establish that all the altitudes published in previous publications are lower by 42,42 m than the actual ones.
2. GEOMORPHOLOGY AND SURFACE GEOLOGY

M. De Dapper and R. Goossens have considerably improved their approach of the geomorphology of the island (Geus, 1995a: 32-34, 1995b: 81-84, 2000; Goossens et al., 1997). The study of the terraces allowed the identification of two new levels of silt, of which the most recent has been C-14 dated around 9000 BP\(^3\). Moreover, a thick formation of silt mixed with pottery sherds, which may be related to catastrophic floods in medieval times, has been identified in several areas, in particular in the north of the island. In collaboration with Ph. Van Peer, they also demonstrated that there is a strong relation between geomorphologic units and Prehistoric sites. Their research has been completed by P. De Paepe, who carried out a comprehensive survey of the surface geology of the island.

3. THE ARCHAEOLOGICAL SURVEY

In 1996, Ph. Van Peer surveyed large areas in the surroundings of the Pharaonic town site, around Jebel Adu and in the south-eastern part of the island in order to identify Palaeolithic occupations. He recorded ten sites, of which seven have been classified as Middle Palaeolithic and three as Final Palaeolithic. The Middle Palaeolithic sites are mainly situated near Jebel Adu, on terrace T4, a Middle Pleistocene formation, and two of the Final Palaeolithic ones in black silt deposits near the Pharaonic town site. These, numbered 8-B-54 and 8-B-57, have been C-14 dated to 9180 ± 45 BP and 8980 ± 60 BP\(^4\), a time-period as yet poorly documented in the Nile valley (Connor and Marks, 1986)\(^5\). The third Final Palaeolithic site is located on the southern bank of the wadi that borders the southernmost slope of Gebel Adu.

For the more recent periods, several significant new sites have been discovered in the course of the two seasons. They include an Abkan settlement (Adu, 8-B-10.B), two pre-Kerma settlements (Adu, 8-B-52.A and 8-B-53), a Pharaonic rubbish dump (Adu, 8-B-6), two Meroitic cemeteries (Adu, 8-B-5.A and 8-B-52.B), an X Group cemetery (Arodin, 8-G-48) and a large artificial mound of silt (Saisab, not numbered). Test excavation that, in 8-B-10.B, 8-B-52.A, 8-B-52.B and 8-B-5.A, developed in extended excavation have been carried out on the six Adu sites.

4. THE PALAEOLITHIC SITE 8-B-11

In 1997, Ph. Van Peer selected for excavation one of the Middle Palaeolithic sites recorded during the previous season. It is located between Jebel Adu and the wadi that borders it to the south and it corresponds obviously to a site recorded by Arkell in 1941 and listed as 8-B-11 by Hinkel in the Archaeological Map of the Sudan (supra, p. 61 and note 2).

\(^3\) Infra, 3: sites 8-B-54 and 8-B-57.
\(^4\) UtC-4860 (shell) and UtC-4861 (charcoal). After calibration (2 σ), between 8300 and 7900 BC.
\(^5\) Connor and Marks (1986): The exploration of Lower Nubia did not provide evidence of human occupation for the period extending between 11000 and 8000 BP that succeeded the so-called Wild Niles (Butzer and Hansen, 1968; Vermeersch et al., 1989; Geus, 1995b: 84) and saw the setting of the present Nile. That long documentary hiatus remains to be explained.
The excavation of a surface covering 10 m² provided a lithic industry based almost exclusively on quartz and displaying both Levallois and discoidal reduction strategies, with a high Levallois index (FIG. 2). It includes foliates, Levallois points and scrapers and may be related to the 'Nubian complex'. According to the profiles, the site must have been located on the north-western ridge of a small lake, which was partly filled by playa sediment at the time of occupation. The discovery of a hearth filled with charcoal and covered with burned stones that has been C-14 dated 5685±35 BP\(^6\) indicates for its part a later Neolithic occupation.

![Quartz tools from Site 8-B-11](image)

FIG. 2. QUARTZ TOOLS FROM SITE 8-B-11 (SCALE 2:3).

a. foliate; b. levallois flake; c. discoidal core; d. end-scraper (Ph. Van Peer).

5. THE NEOLITHIC SITE 8-B-10

As already stated before (Geus, 1997a: 99), the Early Neolithic of Sai has first been discovered by A. Hesse in 1978, in an area that produced pottery related to the widely distributed Dotted Wavy Line family, the 'Khartoum Variant' of the second cataract area (Shiner, 1968; Geus, 1992: fig. 5). During these two campaigns the same material has been identified in other places. It covers extensive strips of land that we assume to have been former river banks.

\(^6\) UdC-7247(charcoal). After calibration (1 σ), between 4538 and 4467 BC.
The only area that has been so far explored in detail is SKP1, the site recorded in 1978 by A. Hesse, which, following the AMS recording system (supra, p. 61 and note 2), has now been re-named 8-B-10.A. In former reports (Geus, 1995: 85-86, 1997a: 99), I described the previous work of A. Hesse, who tried in 1993-1994 to understand the ground organisation on a photographic air-cover that suggested the presence of habitation units associating structures of standard design (Hesse, 1996, 1997).

In 1996, a field control of the photographic data was carried out and soundings were undertaken in two depressions, in order to check their nature and work out an appropriate method of excavation. SKP1.1, an isolated circular depression, was selected because it did not display any material on the surface. As expected, it was filled with superimposed layers of aeolian sediments and contained no artefacts. SKP1.2, the second one, was a larger elongated depression covered with archaeological material and surrounded with a fold of sediment mixed with fragments of schist and quartz. The excavation was limited to a trench of 1.25 m², cutting through the fold up to the centre. It revealed the presence, under the surface and down to the bedrock, of pottery sherds, lithics -mainly debitage-, ostrich eggshell beads and fragments, fish bones, fresh water molluscs and small pieces of burned clay. Unfortunately, possibly because of the limited extension of the test, the identification of the depression as an habitation structure could not be established. Thus, the question of the nature of the remains is still open to debate.

In January 1997, during a close surface observation near the southern extension of the site just described, I found for the first time late Neolithic pottery of Abkan tradition. As that material was located in an area where new houses had been built not long before, destroying large parts of the site, I asked F. Herman and L. Meurillon to carry out a rescue operation.

The excavation quickly demonstrated that it was a surface site and that no remains of structures were to be expected. Consequently all the material, which includes large quantities of lithics and a limited quantity of pottery sherds, animal bones and shells, was collected from two selected areas, a northern one covering 14 x 10 m and a southern one covering 9 x 7 m. The larger one, where chert was the prevailing raw material, provided numerous borers of various sizes. The smaller one was divided into two sub-areas, of which one, located to the south, was interpreted as a specialized workshop where carnelian stone, representing approximately 40% of the raw material, was apparently used to produce beads and segments, with strong indication of fire pre-treatment.

6. THE PRE-KERMA SITE 8-B-52.A

That site was discovered in January 1996, on my return from a visit on the Palaeolithic site 8-B-54, which had just been identified by Ph. Van Peer. It is located on a low mound, north of Jebel Adu at about equal distance from the two branches of the Nile, near the former north-western shore of the island. It has been dated by two C-14 analyses, which indicate that it was in use sometime between 2900 and 2600 BC7, a

---

7 4142±48 BP and 4151±44 BP (Utc-5294 and 5295, seeds of barley -Hordeum vulgare- from pits 1 and 11).
time-period still so poorly documented in Nubia that it is currently labelled pre-Kerma by field archaeologists.

To date, the work has been limited to an area of 120 m² where only storage pits have been found (PLATE I). We did not discover there any evidence of other functional structural features and, as it is hard to believe that such storage facilities were functioning on their own, we presume that they were related to an habitation area that awaits to be discovered in their neighbourhood.

The horizontal cross-sections of the pits are all circular or sub-circular but their maximum diameters vary greatly in size. They are either isolated or arranged in small compounds connecting units of different types and sizes. The vertical sections show that their shapes display a great variability, due to the relative dimensions of depths, mouth diameters and floor diameters that allow for distinguishing two basic types. Type 1 is a simple pit characterised by slightly convex sides and broad openings that widens or narrows to some degree at the top. It includes units of various sizes that certainly had different functions. Type 2 (FIG. 3) is a unit of two levels, made of a medium deep to shallow open-mouth pit in which was dug a second and lower deeper pit with a restricted mouth that was closed by a slab of schist fastened with clay. Some units of the second type, which seems to have been mainly used for storing grains, have been found intact with their original closing, but most had filled up with sediments.

Most of the excavated pits contained pottery sherds, lithics, ostrich egg-shell beads, ostrich egg-shell fragments, animal bones, charcoal and desiccated macro-botanical remains.

The pottery sherds belong to red, brown, black and black-topped red vessels of various sizes with rippled surface, incised and impressed decoration that indicate a transition between the Neolithic and Kerma traditions. A few pieces belong to vessels imported from Egypt. This is of great significance for, as far as I know, those are the earliest goods of Egyptian origin ever found south of the Batn el-Hagar in primary context.
The vegetal remains, for their part, include fruit stones, leaves, thorns, twigs, cereal glumes and seeds looking so fresh that we first thought that they were intrusive. Thanks to the collaboration of Katharina Neuman and Barbara Zach\(^8\), all the samples collected so far, including charred material, are in the process of identification. First results indicate the presence of at least 17 different types, including emmer wheat (*Triticum dicoccon*) and barley (*Hordeum vulgare*), wild millet, *Citriullus*, *Ziziphus* and *Acacia*. Most of these are edible but some, that are not, were certainly used for purposes other than subsistence. This is the case for the *Acacia* seeds which, according to K. Neuman, may have been used in hide processing.

7. THE KERMA CEMETERY 8-B-51

That site, which was discovered by R. Goossens during the 1994-1995 campaign and tested by B. Maurelle and Ph. Van Peer in January 1996, has been partly excavated by B. Maurelle in 1997. The 1996 test unearthed the contracted skeleton of an adult that was C-14 dated 3305±30 BP\(^9\) and of two neonates with no associated material. The 1997 excavation led to the identification of 38 possible graves, of which ten only could be excavated.

The shafts are rather shallow because of heavy surface erosion, but most burials are well preserved. All contain the remains of foetuses and neonates, which, in most instances, are contracted on the side, hands towards the face. Some of them are accompanied by objects that confirm the C-14 dating. It is the case of grave 8, which also shows that children's burials could be organized like those of adults: in a rectangular E-W burial shaft, the skeleton of a two years old individual laid contracted on a wooden bed, wearing two strings of small annular stone beads —one around the left ankle- and accompanied by two miniature Classic Kerma pottery vessels. In the current state of research, this site may be regarded as unique, for no other Kerma burial site devoted to foetuses and infants has ever been reported elsewhere.

8. THE PHARAONIC CEMETERY 8-B-5-SAC5

In 1996, A. Minault-Gout and F. Thill devoted most of their time to document the material originating from former excavations of this major site that is still stored in Sai (Minault-Gout, 1994, 1997). In 1997, they re-surveyed the whole site in order (a) to check if all the graves and superstructures had been located, (b) to re-visit the substructure of grave 8 where, for reasons of security, the excavation had to be suspended in 1973 (Gout-Minault, 1976: 87) and in 1981, (c) to resume the excavation of grave 23 and (d) to work out a new overall plan of the excavated structures.

Surface exploration did not reveal any more grave but led to the clearing of superstructures related to graves T 8, T 21 and T 25, raising the total number of those to thirteen. For the first time on the site, the sandstone stand of a stele was found within

---

\(^8\) Seminar für Vor- und Frühgeschichte, Archäologie u. Archäobotanik Afrikas, Frankfurt am Main.

\(^9\) UTC-5118 (human tissues). After calibration (1 o), between 1609 and 1524 BC, *i.e.* towards the end of Classic Kerma.
the remains of the superstructure of grave 25 with, in front of it, a pottery vessel and numerous pottery sherds.

A short visit of the substructure of tomb 8, which provided objects of high quality during previous seasons, confirmed the threats of collapse of the ceiling, which will require good shoring before further excavation.

Grave 23 is marked on the surface by the remains of a vast structure of mud brick that include a pyramid, an enclosing wall and a sloping way. In spite of eight soundings, carried out in 1975 and 1981, no substructure has ever been traced out. A careful cleaning of the structure and new soundings did not solve that problem.

9. THE MEROITIC CEMETERIES 8-B-5.SN, 8-B-52.B AND 8-B-5.A

In 8-B-5.SN, where Meroitic graves have been excavated during previous seasons (Vercoutter, 1979; Geus, 1995b: 87-88, 1997a: 101-102; Geus et al., 1995: 111-122), B. Maureille and S.O. Mahgoub excavated 28 burials among which, surprisingly, only three revealed to be Meroitic, the others dating from Christian or later times. This confirmed the distribution of the Meroitic graves in that area, where they occupy a narrow N-S strip of land bordering a small depression at the eastern edge of the northern necropolis. Two of these graves consisted of a vertical E-W shaft and a side cave, while the third consisted of a short E-W sloping way giving access to a transverse N-S cave. All were plundered and eroded but, except in one of the E-W caves, the burial was fairly well preserved, with one skeleton laying on the back head to the west in the E-W cave and two skeletons head to the north in the N-S cave. In spite of severe plundering, the burial goods included a bronze grip, a small bird-shaped wooden figurine, a bronze ring and the remains of a wooden kohol container. The E-W caves also contained the decayed remains of wooden coffins.

While trying to delimit the extension of 8-B-52.A (supra, 6) in the days that followed its discovery, I noticed in the northern part of the mound low depressions and few Meroitic pottery sherds. A test square 10 x 10 m large revealed soon the presence of axial cave graves of medium size and, consequently, of a Meroitic cemetery. So far, seven graves of that type have been excavated, four in 1996 and three in 1997. They are made of a sloping descent leading to an axial longitudinal chamber closed by a low wall of mud brick and/or stone and they are covered by the remains of square or rectangular mud brick structures.

Two superstructures only are partly preserved. They are square constructions with sides not exceeding 3,50 m in length. One can assume that they are the remains of small pyramids or mastabas, which, so far, did not display any complementary features. One of them is related to two cave graves, T 9 and T 10, whose descents, which are parallel to each other, are located on either side of the east-west central axis. The only find that may be directly associated with them is a sandstone offering table displaying a double inscription and a nice carving of Isis and Anubis carrying out a libation on breads (PLATE VI). Numerous children burials have also been found around them, along their walls, which they sometimes partly underlie.
All the substructures have witnessed very destructive plundering because of their deep narrow caves that led the plunderers to scrape out their contents. They still contain few remains of the burial goods and large quantities of human bones. The latter are particularly numerous in the descents, where they sometimes mummified (PLATE III). T 11 (FIG. 4), which witnessed a complex history, is the only one that still contained a burial in primary position. The skeleton lays on the back, head to the east, accompanied by two pottery vessels, an archer's kit (bow, quiver and arrow heads), a spear head and a large unidentified object of thin leather decorated with embossed designs of wavy lines and spirals. The grave goods recovered from the other graves include various types of beads, fragments of glass vessels, complete pottery vessels and pottery sherds displaying painted or stamped decoration (FIG. 5, a), a wooden kohol tube, kohol sticks in wood and metal, a simple bronze ring and two bezel rings, one being in bronze and the other in iron. Decayed remains of wooden coffins as well as fragments of shrouds, ropes and basketwork are also common.

When walking between the excavation premises and 8-B-52, one almost inevitably crosses a low N-S mound located at about fifty meters west of the Pharaonic girdle wall and at about hundred meters north of 8-B-5.SN. It is while going across it, on a return from 8-B-52.B, that I noticed a tiny Meroitic sherd, then fragments of a glass aryballos of the type found in grave SN 194 during the previous season (Geus, 1995b: 88 and fig. 8, 1997a: 102 and 104, fig. 3, b; Geus et al., 1995: 114 and fig. 13). A test square
10 x 10 m large soon revealed a Meroitic cemetery similar to 8-B-52.B with slightly larger axial cave graves and superstructures. So far, seven of those have been excavated, three in 1996 and four in 1997.

Here the remains of superstructures are better preserved than in 8-B-52.B. The most interesting ones belong to graves 304 and 307, where mud brick square structures 4,40 and 5,50 m large are completed to the east by fragmentary walls, extending over about six meters, that may be the remains of a chapel and a courtyard (PLATE II). Some finds, such as a fragmentary funerary stele (PLATE VII) and a pottery vessel, may be directly related to them. Like in 8-B-52.B, many burials of young individuals were found at the base of their external walls or partly underlying them.

Just as those of 8-B-52.B, the substructures consist of an E-W descent giving access to a western axial longitudinal cave closed by a wall. Six caves have been excavated, the opening of the seventh (T 307) having been deferred, for lack of time, to the next campaign. Like those of 8-B-52.B, all were heavily plundered but the grave goods left by the plunderers seem to be more numerous. As a whole, they indicate a funerary equipment of high quality that includes fragments of a polychrome shroud, of which one displays a crocodile god carrying a hst pot in the left hand (PLATE V, b); glass vessels, of which one is a plate engraved with a scene representing a fisherman and fishes; stamped and painted pottery (FIG. 5, b), with one fragment displaying a Hathoric face (PLATE V, a); a large variety of glass beads; a crocodile-shaped faience amulet; a small tripod bronze vessel; two bronze bezel rings; a bronze amulet representing a triple Osiris; the remains of a wooden casket decorated with ivory inlays representing Hathor, Bes (PLATE IV, a) and birds; ivory inlays representing an Hathoric face flanked by two Uraei (PLATE IV, b); a decorated leather sandal. Like in the other Meroitic burials, decayed remains of wooden coffins and fragments of leather, wood, ropes and basketwork are common.

10. THE OTTOMAN FORT 8-B-1.B

The Ottoman fort, which has been built over the southernmost quarter of the pharaonic walled town, which it overflows towards the south, has always been the most visible ruin of Sai. However, because of its late dating, it has never been studied in detail, even when it was partly destroyed to facilitate the excavation of the underlying levels. It is however of great interest, for it was, from the XVIith to the XIXth century AD, one of the key positions of the Ottoman empire in the Nile valley. This is why, J. Alexander, who, since his excavations at Qasr Ibrim, specialized on the question of the Ottoman frontier, agreed to accompany the mission during the campaign 1997 and expertise the site.

During a few weeks, he carried out, with the assistance of J.-L. Despagné, L. Meurillon and B. Ducourneau, a detailed plan of the visible structures (FIG. 6), of which he proposed a first interpretation (Alexander, 1997). His work led him to confirm that the fort overlays the ruins of an older structure dating probably from Christian times, to identify various areas of activity, to select areas where excavations would be desirable and to analyze the conditions of the abandonment of the site, this last point being also documented through contacts with the older inhabitants of the nearby hamlet.
FIG. 5.
a. MEROITIC CEMETERY 8-B-5.A, STAMPED POTTERY VESSEL (L. Soldati).
b. MEROITIC CEMETERY 8-B-52.B, PAINTED POTTERY VESSEL (L. Soldati).

FIG. 6. PLAN OF THE OTTOMAN FORT
(B. Ducourneau).
REFERENCES


STORAGE PITS IN PRE-KERMA SITE 8-B-52.A.
SUPERSTRUCTURE OF A MEROITIC GRAVE (8-B-5 A).
PLATE III

A DESCENT OF A MEROITIC GRAVE AND ITS CONTENT (SITE 8-B-52.B).
a. IVORY INLAY REPRESENTING BES; b. IVORY INLAY REPRESENTING HATHOR AND TWO CROWNED URAEI (MEROITIC CEMETERY 8-B-5-A).
a. PAINTED DESIGN REPRESENTING HATHOR (POTTERY);  
b. PAINTED DESIGN REPRESENTING A CROCODILE (TEXTILE) (MEROITIC CEMETERY 8-B-5.A).
SANDSTONE OFFERING TABLE WITH A SCENE REPRESENTING ISIS AND ANUBIS LIBATING ON BREADS (MEROITIC CEMETERY 8-B-52.B).
SANDSTONE FUNERARY STELA (MEROITIC CEMETERY 8-B-5.A).
Gism el-Arba - Campagne 1997-1998

par BRIGITTE GRATIEN1 avec la collaboration de
JEAN-PIERRE BRACCO, SEVERINE MARCHI et VINCENT RONDOT


LE PALEO-ENVIRO/NEMENT

En collaboration avec les docteurs Bruno Marcolongo et Nicola Surian de l’Istituto di Geologia applicata-CNR de l’Université de Padoue, ainsi qu'avec le Professeur Charles Bonnet et la Mission Archéologique de l’Université de Genève à Kerma, s’est poursuivie l’étude sur les cours du Nil ancien dans le secteur3. Le Nil, au quaternaire, montre un déplacement général de l’est vers l’ouest; la région est très riche en traits paléo-géomorphologiques et quatre cours principaux avaient été reconnus précédemment. Les paléo-cours sont nettement en rapport avec les sites archéologiques dans la région de Gism el-Arba; mais à l’Holocène, et peut-être au Pléistocène, le Nil semble caractérisé par une instabilité horizontale. La confrontation des données prouve la continuité de l’occupation humaine aux mêmes emplacements, en bordure de cours d’eau; toutefois, à partir du Kerma classique, les habitats sont déplacés plus à l’ouest tandis que l’occupation se maintient sur les plus anciens d’entre eux.

---

1 CNRS - Université de Lille III.
KUSH XVIII

PROSPECTION

Le survey s’est poursuivi à l’intérieur de la concession; jusqu’à présent, quinze sites ont été repérés : quatre cimetières et onze habitats. Les premiers datent tous du Kerma classique, ce qui soulève le problème de la localisation des nécropoles des phases antérieures, Kerma ancien et moyen⁴, qu’ils soient installés plus à l’est en bordure de la zone désertique ou sous les cultures actuelles et détruits.

En 1995-1996, un sondage avait été pratiqué au lieu-dit Assaia, sur le cimetière 1, sur la limite sud de la concession; il est installé sur une butte déjà occupée au néolithique; les tombes du Kerma classique ont été creusées sur le pourtour. Six ont été fouillées, qui présentent toutes les caractéristiques de la période : fosses rectangulaires sous une superstructure de pierres noires et de galets blancs, inhumation du corps principal sur lit, tête à l’est, sur le côté droit, en position fléchie, sacrifices humains et animaux (ovi-caprinés), céramique rouge à bord noir, dont les vases-tulipes à bande blanche, jarres en pâte lustrée rouge, jarres en pâte orangée, perles discoïdes en pâte émaillée bleue et en coquille d’œuf d’autruche, ainsi que des éléments géométriques en ivoire provenant vraisemblablement d’un décor de lit, sinon de coffre.

Malheureusement, ce site a subi une très forte érosion éolienne, de plusieurs dizaines de centimètres d’épaisseur, ainsi qu’un pillage ancien intensif : peu d’éléments étaient restés en place et seul le fond des fosses affleure à la surface.

Le cimetière 2, au nord de la concession, est au centre d’une zone sableuse allongée, couverte d’alfa, d’un demi-kilomètre de long, ponctuellement utilisée comme nécropole. Ce noyau mesure 180 x 40 m environ et la surface est parsemée des restes des superstructures de pierre noire et de galets blancs, parfois encore disposés en cercle de 2 à 3 m de diamètre; on a estimé la taille du cimetière entre 60 et 80 sépultures. Mais elles aussi avaient fortement souffert d’une très forte érosion éolienne, que l’on peut supposer de 60 à 80 cm d’épaisseur, si bien que les inhumations avaient complètement disparu dans la partie ouest et que seuls les vestiges posés sur le fond de la fosse affleuraient dans la partie est, comme l’ont prouvé les quatre sondages réalisés en 1997-1998.

Les rites funéraires et le mobilier sont caractéristiques du Kerma classique et identiques à ceux découverts dans le cimetière 1. Les puits sont très espacés, rectangulaires, orientés est-ouest, et parfois creusés, aux extrémités, de deux fosses ou de quatre cavités, destinées à recevoir les offrandes et/ou les pieds du lit; le défunt est enterré tête à l’est, sur le côté droit, en position fléchie; tombes d’adulte et tombes d’enfant sont mêlées; un agneau, aux pattes liées, est parfois déposé à l’ouest et des découps animales placées dans la fosse; le matériel est d’un type bien connu, qu’il s’agisse de la céramique, des ornements corporels, d’un polissoir; un protecteur de corne en ivoire, sans décor, a également été découvert⁵.

---

⁴ Depuis cette date, un cimetière du Kerma ancien a été découvert dans le prolongement nord du cimetière C2 du Kerma classique, mais totalement érodé, il n’a pu être fouillé.

⁵ Protecteur d’un modèle identique à ceux découverts par Reisner à Kerma : Excavations at Kerma, Part IV-V. 1923. Pl. 52-3, 1ère rangée, n° 3 à 7.

82
Le site ayant donc extrêmement souffert et les vestiges étant quasiment tous hors contexte, il a été décidé, avec l’accord du Service des Antiquités, de le rendre à son propriétaire.

Les onze habitats sont disposés en deux lignes parallèles d’après les premières observations; ceux situés le plus à l’est ont été occupés du Kerma ancien au Kerma classique ou récent, c’est-à-dire continuellement pendant toute la durée de la culture Kerma; ceux plus à l’ouest sont, d’après les observations de surface, datables du Kerma classique et récent; une dernière ligne d’occupation, proche de l’île d’Argo, comporte des vestiges napato-méroïtiques. Lors de la prochaine campagne (1998-1999), un relevé topographique, un sondage et un ramassage seront effectués sur chacun d’eux. Les deux plus caractéristiques sont en cours de fouille.

**FIG. 1. PLAN GENERAL DE LA FOUILLE DE GISM EL-ARBA.**
**HABITAT 1, APRES LA CAMPAGNE 1997-1998.**

**LE KOM PRINCIPAL (HABITAT 1)**

Etabli sur une éminence naturelle surmontée d’un niveau anthropique au milieu des cultures, l’habitat mesure aujourd’hui 150 x 80 m; il est perturbé dans sa partie centrale par des fosses modernes et fortement érodée dans sa partie nord, où affleurent les niveaux les plus anciens : des huttes circulaires de 4 m de diamètre en moyenne.

La surface du kôm et le niveau supérieur sont maintenant presque totalement étudiés et 31 unités ont été dégagées, outre des structures secondaires signalées par des trous de poteaux (FIG. 1). Parmi les mieux conservées, sept peuvent être datées avec

---

certitude du Kerma classique; elles se situent sur l’arête centrale de l’éminence, alignées le long de voies de circulation et sont bordées de zones d’activité dont des fours primitifs reconnaissables aux dômes de cendres blanches et dures qui les surmontent. Plusieurs pièces de petite taille, le plus souvent quadrangulaires, s’organisent autour d’une cour centrale, ainsi les maisons 1, 2, 7-8. Le plan de ces unités est d’ailleurs similaire à celui des grandes habitations contemporaines de la capitale, Kerma. Les murs, en briques crues de taille variable, sont minces et renforcés par des piles engagées. Les annexes sont parfois montées en galous. Le matériel consiste essentiellement en céramique du Kerma classique et en outils en os ou en pierre polie et taillée (poinçons taillés dans des os longs d’ovi-caprinés ou de gazelles, nombreuses haches polies, broyeurs, meules, percuteurs et outils taillés), souvent rangés dans les zones de travail à proximité des parois; la quasi-totalité des déchets de cuisine provient de bovinés et ovi-caprinés.

Toutes ces demeures ont été rasées à la fin de la période, certaines incendiées; ce phénomène pourrait être mis en rapport avec l’arrivée des armées égyptiennes au début du Nouvel Empire.

Du Kerma récent, deux nouvelles structures ont été dégagées; elles sont disposées de manière anarchique, sans alignement dominant, sur toute la surface du kôm, mais mieux conservées sur la crête, et l’orientation en varie quelque peu. L’ouverture se trouve généralement au sud ou à l’est, mais par une fois à l’ouest. Les murs sont en briques crues, avec parfois un pilier d’angle; lorsque la salle est de grandes dimensions, un poteau peut soutenir la toiture. Les plans sont de deux types : soit une salle unique quadrangulaire, comme la maison 28 qui mesure 4,50 m de côté, ou la maison 31 (3,70 x 3,30 m), soit deux salles, la pièce principale avec un foyer, et généralement à l’est, une salle allongée, dans laquelle un foyer occupe la quasi-totalité de la surface. Les outils de pierre sont rangés le long des parois.

Une large zone a été sélectionnée pour étudier l’évolution de l’habitat, en y pratiquant un sondage stratigraphique : le secteur des maisons 2, 3, 4, car le mieux conservé au sommet du tell. Durant la campagne 1997-1998, les niveaux de la fin du Kerma moyen ont été atteints:

- A la fin du Kerma moyen, il n’existait qu’une maison de deux pièces, selon un plan repris au Kerma récent : la principale, de plan carrée s’ouvrait au sud sur l’extérieur, un foyer était préparé au centre et des céramiques rangées contre le mur sud-

---

10 Les dégagements furent prolongés, les campagnes suivantes, jusqu’aux débuts du Kerma ancien, et complétés par un second sondage profond, où l’on atteint des niveaux provisoirement datés, par la céramique, entre la fin du pré-Kerma et le début du Kerma ancien.
ouest; elle s’ouvrait au nord-est sur une salle longitudinale. Cette subdivision semble avoir été abandonnée consécutivement à une phase d’abandon.

- A la suite de sa probable destruction par un incendie, l’espace a été réaménagé pour parvenir au plan du début du Kerma classique : plusieurs murs sont reconstruits et le mur ouest édifié dans le but, semble-t-il, de redonner à la pièce une forme carrée tout en consolidant l’ensemble. La présence de cavités de 8 cm de diamètre en moyenne dans les murs de l’angle sud-ouest peut être interprétée comme les traces d’une structure à clayonnage de type véranda (FIG. 2). Par ailleurs, la maison est agrandie par plusieurs pièces vers l’ouest, probablement au moment de la reconstruction; une structure circulaire en briques crues dans la cour pourrait être la base d’un grenier.

Fig. 2. PLAN DE LA MAISON 2 (HABITAT 1) AU KERMA CLASSIQUE (dessin S. Marchi).

- Au Kerma classique, la maison subit plusieurs réaménagements après la destruction liée à une phase d’incendie de la salle principale; mais le plan général reste le même, le plan-type du Kerma classique : celui d’une structure d’environ 15 m² caractérisée par une série de pièces organisées autour d’un espace central, interprété comme une cour, dont on cerne mal l’extension en raison des destructions qu’ont entraînées les sebakhin à l’époque moderne et les fondations des maisons postérieures.

- Les structures sont abandonnées au Kerma classique, voire à la fin de la période; deux habitations de taille moyenne du Kerma récent les remplacement (FIG. 3). Les vestiges de la maison 3 (8 x 5 m) se caractérisent par des murs de briques épais (deux rangées) qui parfois sont fondés sur des murs de la maison 2; le sol était partiellement recouvert de mouna. Les murs de la maison 4, d’un plan à deux pièces, étaient encore
conservés sur deux assises et recoupaient les murs nord-ouest de la grande demeure du Kerma classique.

- Outre l’importante quantité de céramique découvert dans ce secteur, de nombreuses meules de petite taille, pouvant présenter des restes de pigments, ont été mises au jour, ainsi qu’une hache polie en pierre dure et trois poinçons en os, dont l’un réalisé dans un os de gazelle, dans les niveaux Kerma classique.

Cette campagne a permis d’atteindre pour la première fois les niveaux du Kerma moyen, jusqu’à présent seulement attestés par la céramique; le passage de l’architecture en bois à celle de briques constitue l’un des objectifs de la prochaine campagne.

L’HABITAT 2

Très tôt, notre attention avait été attirée vers cette zone, à cause de la céramique particulière comportant un fort pourcentage de céramique tournée orangée du type égyptien de la fin de la Deuxième Période Intermédiaire et du début de la XVIIIe dynastie à côté de la production traditionnelle Kerma.

Le tertre est actuellement réduit à une zone au faible relief, de 150 m N-S x 100 m E-O, cernée par des dunes qui pourraient recouvrir une partie de l’habitat. Ce dernier est en grand danger car traversé par plusieurs pistes de camion. Les mesures de protection ont été prises et le site entouré d’un fossé.

Deux sondages ont été pratiqués, cette année-là, l’un au nord, l’autre dans la partie centrale.11

- Au nord, la façade septentrionale d’un grand bâtiment en briques crues mesure 12 m de large (Str. 1); les matériaux sont de très belle qualité et les murs montés en deux rangées; l’espace était divisé par trois murs de refend, délimitant quatre salles.

- Dans la partie centrale, quatre structures ont été dégagées:
  
  - Un vaste bâtiment aux fondations de pierre, des blocs naturels de grès ferrugineux, dégossis, liés au mortier, pouvant atteindre 40 cm de côté; long de 13 m (Str. 2), il était subdivisé en espaces quadrangulaires, bien conservés au nord-ouest. Cet édifice est comparable à celui publié par D. Welsby dans la partie sud du Wadi el-Khowi.12

- Deux structures en briques crues attenantes sont d’un plan proche des habitations du Kerma classique de l’habitat 1.

- Un atelier, en cours d’étude, occupait l’espace ouest de ce secteur, composé d’un abri et de plusieurs foyers. La fouille en sera terminée en 1999.


A proximité ont été découvertes près d’une trentaine de figurines animales, entières ou en fragments, dont l’une en terre crue et les autres en terre cuite (FIG. 4), ce qui permet de supposer qu’elles étaient façonnées et cuites dans l’atelier voisin. Elles représentent un troupeau idéal, peut-être à signification rituelle : taureau, boeuf, vache, ovi-caprinés; plusieurs statuettes sont ornées de disques frontaux, et, ce qui accroît leur intérêt, un certain nombre porte des marques gravées sur les cuisses et/ou les épaules, marques en forme de grilles ou de pièges (?), ou parfois de volatiles. La trouvaille de telles figurines n’est pas rare en Nubie mais c’est la première fois qu’elles sont regroupées en si grand nombre et ornées d’emblèmes, sur le lieu probable de leur fabrication.

![Diagramme des maisons 3 et 4 (habitat 1) au Kerma recent](image)

**Fig. 3. PLAN DES MAISONS 3 ET 4 (HABITAT 1) AU KERMA RECENT** (dessin S. Marchi).

**LE MATÉRIEL LITHIQUE**

L’étude du matériel taillé est en cours d’étude\(^\text{13}\), un matériel rarement étudié à l’époque Kerma. Le quartz est prédominant sur l’habitat 1, mais parfois silex, agate, corail sont employés; ces matières premières ont été recueillies sous forme de galets, dans des alluvions du Nil, et peuvent se trouver localement. Le matériau permet un contrôle relativement précis de l’onde de choc lors de la percussion; les quartz, en particulier, dont certaines variétés sont difficiles à exploiter, sont à Gism el-Abba toujours à grains fins et homogènes et surtout sans zone de faiblesse, ce qui autorise une

bonne qualité de taille. Trois concepts ont été reconnus à partir de l'examen du matériel : une production d'éclats, avec un débitage par surfaces parallèles ou centripètes d'éclats laminaires et multidirectionnels, un façonnage sur galets (8 %) et une production de lames, rare. Les chaînes opératoires, très simples, font preuve d'une productivité immédiate, identique dans les deux phases Kerma analysées.

Les premières observations réalisées sur l'habitat 2 montrent des faits similaires quoique les galets aménagés y soient plus abondants.


Fig. 4. EXEMPLES DE FIGURINES ANIMALES, HABITAT 2 (dessins S. Marchi).

by Birgit Keding

Introduction

The Wadi Howar, one of the largest dry-river systems in Northern Sudan, is a former tributary of the Nile. It originates in the mountainous regions of the eastern Chad and follows the southern fringe of the Libyan Desert over 1200 km until it joins the Nile opposite Old Dongola (Meissner and Schmitz, 1983; Pachur and Kröpelin, 1987). This former river of the early Holocene, which later transformed gradually into a chain of fresh water lakes fed by local rainfall, was over millennia an ecologically favoured area (Kröpelin, 1993). Judging by the numerous prehistoric sites on the banks of the wadi, the significance of the Wadi Howar as a settlement area and link between the Nile valley and Inner Africa, seems to have been enormous. This must have been the case especially during the middle and late Holocene when due to the dramatic climatic changes most regions of the Sahara became uninhabitable for man. During this period this area could have been a retreat for people until even here the ecological conditions became too arid for more than seasonal exploitation.

Fig. 1. MAP OF THE WADI HOWAR REGION.
So what was the human influence on the environment in the Holocene and how did man react to the increasing aridity? These are central aspects of the research of the cooperative research project ACACIA -Arid Climate, Adaptation and Cultural Innovation in Africa (SFB 389, Kultur- und Landschaftswandel im ariden Afrika) of the University of Cologne. Since the research program focuses on the historical development of the african continent and its people in the light of man’s dependence on a habitat which is becoming increasingly arid during the Holocene, the Wadi Howar was selected as one of the main research areas in Africa besides Egypt and Namibia. Based on results of the former B.O.S.-project, headed by Rudolph Kuper, which had already been started by the University of Cologne in 1980 (Keding, 1997a; Kuper, 1981, 1986, 1988, 1995; Richter, 1989), the first field research 1995-1996 concentrated on prehistoric sites along the Wadi Howar (Keding, 1997b, 1998). The results gave a first impression of the holocene occupation in this region. During the last two field seasons (1996-1997; 1998) this work was continued: the objectives were to record regional as well as local settlement structures, to obtain information regarding the economic development and ecological conditions and to improve the pottery-chronology of the area (Keding and Vogelsang, 2001).

**MIDDLE WADI HOWAR**

The fieldwork of November and December 1996 started with an intensive survey in the Middle Howar (FIG. 1). Located west of Djebel Rahib and the dune-barrier which is separating the Middle and Lower Wadi Howar, this section of the former river is a shallow depression. Due to the high ground water level, the 12 km wide wadi bed and the banks are still covered by some shau-bushes and acacia trees. In order to enlarge the data base of the fieldwork from January 1996 (Keding, 1997b) and to get a wider overview of the occupation of the Middle Wadi Howar, two more transects across the wadi -in addition to the one already investigated in January- were surveyed with the same method. At the end of the season, altogether three transects, each at a distance of 15 km to the other, had been surveyed on foot. Within this area of 9 to 12 km,

---

1 The project would like to thank the National Corporation for Antiquities and Museums for its great help and assistance.

2 The team members of the 1996 season of ACACIA, University of Cologne, were Hubert Berke (archaeozoologist), Helmut Deutschmann (technician), Sharon Günther (archaeologist), Birgit Keding (archaeologist), Christian Reepmeyer (student of archaeology), Markus Westphal (archaeologist), Abdelhai Abdelsawi (NCAM) and Mubarak Mohammed (GRAS). The team in the 1997 season consisted of Hubert Berke (archaeozoologist), Sharon Günther (archaeologist), Friederike Jesse (archaeologist), Birgit Keding (archaeologist), Klaus Herbst (technician) and Abdelhai Abdelsawi (NCAM). Members of mission in 1998 were Hubert Berke (archaeozoologist), Wolfgang Frank (technician), Nicole Grajewsky (student of archaeology), Philipp Hoelzmann (geographer), Birgit Keding (archaeologist), Lutz Kindler (student of archaeology), Barbara Zach (archaeobotanist) and Abdelhai Abdelsawi (NCAM).

3 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 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).
altogether 860 archaeological sites were discovered, described with regard to their size, structure and archaeological finds. The analyses confirm and broaden the results from January (Keding, 1997b), which should here partly be repeated and summarised as follows:

- The wadi banks and bed are covered with a dense scatter of sites. Most of the recorded sites seem to be settlements which were occupied several times. They are characterised by pottery, stone-artefacts and grinding-stones. At half of the sites faunal remains were recorded. Burials are rare, only twenty have been discovered. Usually they are distributed on the wadi banks and are heavily eroded. They show no signs of grave pits or surface marks. Four of them contained personal adornments as well as not definitively associated pottery as grave goods.

- At least six pottery groups of different chronological phases are characteristic of the 860 recorded sites, listed from the earliest to the latest: Dotted-Wavy-Line (present on 1.7 % of the sites), Laqiya- (4.8 %), Leiterband- (18.0 %), Halbmondleiterband- (18.0 %), 'fine' geometric pottery (18.7 %) and 'coarse' geometric pottery (19.4 %). Mat-impressed ceramics, present on 53 % of the sites with pottery finds, is associated with both 'fine' and 'coarse' geometric pottery. Furthermore, several previously unknown pottery types -often represented by single sherds- have been recorded at 15 % of the sites.

- According to supraregional, typological comparisons of the pottery and radiocarbon as well as AMS dates, the Holocene occupation probably covers the period from the sixth to the first millennium BC. However, a clear emphasis of the occupation lies between the Leiterband and 'coarse' geometric pottery horizons.

- During this period the settlement patterns are changing. At the beginning of the occupation of the Middle Wadi Howar the people settled principally on the banks. A gradually shifting in the younger phases towards the wadi bed marks the drying up of the river bed. In the last phase the settlements seem to be concentrated around small, at least periodical water-resources.

- Survey observations and the results of excavations demonstrate a repeated change of the economic base in the occupation phases of the Wadi Howar. The early sites with Dotted-Wavy Line and Laqiya pottery seem to have been occupied by foragers. The people of the Leiterband- and the following Halbmondleiterband phase largely depended on cattle-keeping. In the final horizon, characterised by geometric decorated pottery, keeping small stock and hunting seem to have become more important.

- Especially these last two aspects -the change of settlement patterns and economy- are indicators of interactions between man and a changing environment. Both verify an adaptation of man to the increasing aridity.

In December two excavations were carried out. Since data of the presumably youngest pottery horizon, characterised by 'coarse' geometric pottery which represents around 20 % of the sites in the Middle Wadi Howar, are up to now very rare, these activities were concentrated on sites from this phase. Out of the altogether 860 recorded sites, Djabarona S96/119 and Djabarona S96/120, two small sites, covering probably only a short occupation period, were selected.
Site Djabarona S96/119, located in a flat depression c. 500 m south of the southern bank, is a small site with dimensions of approximately 25 by 25 m. It is one of the best preserved sites of this phase recorded until now, characterised by a very dense concentration of stone artefacts, but especially pottery and bones. The excavation of 25 m² yielded a first base for describing the material culture and the economy, as well as for obtaining informations about some activities of the people living in the final occupation phase of the Middle Wadi Howar. The excavations revealed a hearth with cattle, sheep and goat bones as well as remnants from game like dorcas gazelle, scimitar horned oryx and giraffe (identification by H. Berke).

In contrast to the barely specific stone artefacts, which are chiefly composed of small flakes and splinters made of quartz, the pottery is very typical. The excavation and three dimensional measurement yielded more than 1500 ceramic fragments. They consist partly of large sherds in a good condition revealing very differentiated vessel forms, including simple pots, curved profile vessels and dishes of different sizes. The outside of the vessels is chiefly decorated with mat-impressions and bands, encircling the vessels parallel to the rim. These bands consist mainly of single rows of simple impressions or large triangles filled with comb-impressions. Occasionally the inside of the ceramics is decorated just below the rim with hitch-hatch-decorations and triangles. Since the pottery is mainly organically tempered and plant-impressions characterise its inner and outer surfaces, there is a good chance for botanical investigations. These are still ongoing.

Two AMS-dates of charcoal suggest an age around 1500 BC (UtC-5941 - 3320 ± 60 bp - 1573 ± 73 cal BC; UtC-5942 - 3294 ± 38 bp - 1551 ± 53 cal BC).

In contrast to Djabarona S96/119, whose features resulted from feast and perhaps occupation activities, the excavation of Djabarona S96/120 allowed a closer insight in the burial practices of this phase (Jesse and Keding, 2002). Situated on the southern bank of the wadi, several burials, pottery and bone concentrations were discovered. Distributed over an area of c. 30 by 10 m, four burials, two pottery and one bone concentration were excavated. Though the burials were heavily eroded and grave pits were no longer discernible, it was plainly recognisable that the deceased had been buried in a contracted position. There were no grave-goods directly connected with the burials, but some well preserved pottery vessels (mainly large pots with S-profile) of the ‘coarse’ geometric type, deposited some metres away, bottom up, suggest a membership of this phase.

LOWER WADI HOWAR

In January and February 1997 the field work focused on the examination of indications of the uses of dune habitats, which are the characteristic long-term sites of the Lower Wadi Howar (FIG. 1). For this purpose, an area with four neighbouring dune habitats -S97/1-S97/4- and some small wadis and outcrops, located 300 km west of the Nile Valley, was chosen. The investigation began with small scale surveys on foot, carried out in an area of 3 to 4 km, covering the four dune habitats and the plains. The objective was to uncover possible different uses of the dunes and the plains, but the results were not convincing. Although at first sight the alluvial sand plains between the dune habitats seemed to be scattered with sites, a closer examination yielded only a few
knapping sites and isolated Palaeolithic artefacts. Afterwards work concentrated on the dune habitats themselves. In order to get a first understanding of the different uses of the dunes in earlier times, an extensive measurement program was undertaken. On the four dune-habitats features and structures like burials, stone-circles, stone features of different forms and sizes, stone ‘pavements’, artificial collections of stones, large grinding stones and special finds were documented. Altogether 1246 selected features and finds were recorded three-dimensionally, indicating by their distribution and quantity zones of different activities on the dunes. Although definite habitation structures like stone circles are rare, the enormous mass of finds proves an intensive occupation of all the four dunes examined. The large quantities of grinding stones seem to be of special significance, some of them forming concentrations at the bases of mainly two dunes (S97/3 and S97/4). Here they indicate an intensive exploitation of plant food. The numerous stone structures and ‘pavements’ seem to be relicts of different usages. Regional and supraregional comparisons point to an interpretation as burials, but this hypothesis has still to be verified by excavation.

During a final examination in order to determine the depth of the cultural layer and to improve the data base for pottery chronologies in the Wadi Howar region, a small test trench of two square metres was dug in the centre of the plateau of dune habitat S97/1. This dune habitat is the most prominent of the four dunes under investigation in this area and measures approx. 540 by 350 m. At its base a small green wadi still exists. The surface of the dune habitat is covered by a dense scatter of pottery and stone artefacts of quartz. The cultural layers of S97/1 were 0.95 m deep and seemed to be somewhat disturbed. It yielded pottery sherds from 862 vessels, which provided a stratigraphic ceramic sequence with a dominance of Dotted Wavy-Line pottery and pottery with dotted zigzag motifs in the lower levels, and pottery with herring-bone pattern, Leiterband ornaments and undecorated sherds in the upper layers. This series corresponds basically to stratigraphic sequences obtained from dune habitat Abu Tabari S95/2 (Keding, 1997b), 50 km to the east of S97/1. However, on S97/1 some fragments of Laqiya pottery were found thus belonging to the early settlement phase, and more distributed in the region of Conical Hill to the west and Laqiya area to the north-west. Altogether this stratigraphic sequence confirms results drawn from two more sequences (Gabriel et al., 1985; Keding, 1997b, 2000) and survey-observations, which seem to locate the chronological centre of the occupation in the Lower Wadi Howar in the early period between the Dotted Wavy-Line and the Leiterband horizon.

**SURVEY TOUR**

In order to understand the broader context of the former river and its adjacent areas, in addition to the research carried out in the immediate vicinity of the Wadi Howar, surveys were undertaken in January and February 1998 in the neighbouring areas west (Ennedi Erg) and south (Djebel Tageru) of the wadi (FIG. 1). The results of these exploratory trips form an important basis for the research planned for the next three years (Keding and Vogelsang, 2001; Keding, in press).

Located south of Djebel Rahib and the Middle Wadi Howar, the Djebel Tageru extends over 160 km north-south. It is a sandstone massif, with an eastern side, sloping in a hammada and a western side forming a scarp. This scarp is characterised by several inlets, leading to narrow valleys. The plains on the western side of the Djebel Tageru
show many relics of former water runoff from the scarp and from the Meidob Hills in the south. Both, the southern precipitation, which reached the Djebel Tageru via Wadi Magrur, and the local runoff were collected in a long depression, stretching along the western Djebel Tageru Mountain side. This subsequent depression, filled with water, formed stable fluvio-lacustrine environments with shallow lakes and swamps (Pachur and Hoelzmann, 1990: 217).

In order to get a more precise insight in the archaeological potential of this area in one of the largest valleys, leading deep into the mountains -the Wadi El Khudeira-intensive surveys were carried out. Altogether five survey-trenches, mainly with dimensions of 1 by 3 km were established through one of the main arms of the Wadi El Khudeira and continued in the foreland of the Djebel Tageru. Numerous sites were recorded in the valley. Generally they are severely eroded by water. Most did not yield any pottery, but stone artefacts. These are very often, as expected, small knapping sites. In the plains the situation is different. Here a dense scatter of partly large sites with stone artefacts, pottery and bones is situated in the flatland and on the dunes. Approx. 20 km west of the Djebel Tageru, indications of human occupation become very rare.

In the Tageru region altogether 263 sites were discovered and described, classified and sometimes photographed. The pottery corresponds to the already known types from the Lower and Middle Wadi Howar, proving intensive contacts between these regions. But while the occupation of the Lower Wadi Howar centres in the earlier phases and that of the Middle Wadi Howar in the younger phases, the sequence of the Tageru region covers the whole time-span, with a main emphasis in the horizons with Leiterband and ‘coarse’ geometric pottery. This long sequence of the Djebel Tageru reflects the ecologically favourable situation of this area, which seems to have been less dependent on the climatic development than the northern regions.

In February the survey was continued in the region of the Ennedi-Erg, located in the western Nubian basin, north-west of the Middle Wadi Howar. In the climatic optimum of the humid phase in the Holocene, this region was characterised by lakes. The largest one was ‘Lake Ptolemy’ (Pachur, 1997: 229) probably supplied by several inlets from the Ennedi Mountains (Hoelzmann, 1993: 126). Today this region is a flat, featureless plain with some small dune fields and lacustrine sediments. To determine the size of Lake Ptolemy in more detail, an intensive measurement program with a Sokkia satellite-receiver was carried out. Altogether 250 points were taken on lacustrine sediments along six profiles laid through the assumed lake. At the same time, large sections of these transects were archaeologically surveyed by foot. The general objective was to get first information on the occupation of the borders of the former lake. By connecting the geomorphological and archaeological data we hoped to get a better understanding of the period of increasing aridity, when the shrinkage of the lake would have been perhaps reflected in the movement of the sites, following the water (Hoelzman et al., 2001). The results were not so clear as hoped for. Altogether 258 sites were recorded. However, the density and preservation of sites as well as the finds varied in the different areas. In the northern and eastern areas only some sites were recorded. These were very often characterised by a bad preservation and consisted in general only of some stone-artefacts. In contrast, the south-west area of the presumed lake is covered with a dense scatter of well preserved sites. These are situated on large dunes at the assumed lake border, belonging to early occupation phases, or in small
depressions, belonging to the youngest phase. The archaeological material corresponds largely to the finds from the Wadi Howar. However, it covers only its earlier occupation period. The pottery phases recorded are Dotted Wavy-Line, Lajiya, Leiterband and Halbmondleiterband. Whereas the first three phases are presented each by 13 to 17 %, a clear increase of Halbmondleiterband sites points to extreme favourable conditions in this area during this period. However, after this maximum of site density the region seems to have been abandoned. From the later phases, characterised in the Middle Wadi Howar and Djebel Tageru by geometric pottery, only two single fragments were discovered until now.

CONCLUSION

The second and third season of the cooperative research project ACACIA, carried out in Lower and Middle Wadi Howar in 1996-1997 and in the neighbouring areas Djebel Tageru and Ennedi-Erg, in 1998, focused on elaborating chronologies of the occupation for each area and on investigations on settlement patterns and exploitation of the different ecological regions in the change of time. In addition three excavations were carried out, two of them concerning the youngest settlement phase of the whole region. Preliminary results indicate cultural relationships from the earliest to the latest occupation phase for the four areas under consideration. However, each of the four areas only represent a section of the whole settlement series (Keding and Vogelsang, 2001; Hoelzmann et al., 2001; Keding, in press). The four occupation series of the different areas reflect several movements of the occupation centres, which were probably caused by the increasing aridity: the early occupation of the Dotted Wavy Line horizon mainly centres in the Lower Wadi Howar, the Ennedi Erg and the Djebel Tageru, whereas the later settlement of the Leiterband and Halbmondleiterband horizon reveal concentrations in Middle Wadi Howar and Ennedi Erg. In the final phase, characterised by 'coarse' geometric pottery, only the Middle Wadi Howar and the Djebel Tageru region seemed to have been occupied whereas the Lower Wadi Howar and the Ennedi Erg had already been abandoned for some hundreds of years. Hand in hand with this development a repeated change in the settlement patterns and in the economy seems to emerge. To study in more detail the changing environments on a regional scale, the -perhaps- seasonal settlement patterns and the exploitation of the diverse areas in the different phases will be the objectives of the next seasons.

REFERENCES


Beiträge zu Archäologie und Umweltgeschichte Afrikas zu Ehren von Rudolph Kuper. 

KEDING, B., 1997a. Djabarona 84/13. Untersuchungen zur Besiedlungsgeschichte des Wadi 

— 1997b. ‘Prehistoric Investigations in the Wadi Howar Region: A Preliminary Report on the 


— 2000. ‘New data on the Holocene occupation of the Wadi Howar region (Eastern 
Sahara/Sudan)’, in Krzyzaniak, L., Kröper, K. and Kobusiewicz, M. (eds.), Recent research 
pp. 89-104.

— in press. ‘The Yellow Nile - Settlement shifts in the Wadi Howar region (Sudanese Eastern 
Sahara) and adjacent areas from between the sixth to the first millennium BC’, in Proceedings of the Ninth International Conference of Nubian Studies. Boston, August 21-26, 1998.

pp. 257-282.

KRÖPELIN, S., 1993. ‘Zur Rekonstruktion der spätneolithischen Umwelt am Unteren Wadi Howar 
(Südöstliche Sahara / NW-Sudan)’, in Ergenzinger, P.-J., Jäkel, D., Pachur, H.-J. and 

KUPER, R., 1981. ‘Untersuchungen zur Besiedlungsgeschichte der ostlichen Sahara. Vorbericht 
über die Expedition 1980’. Beiträge zur Allgemeinen und Vergleichenden Archäologie 3. 

— 1986. ‘Wadi Howar and Laquiya - Recent Field Studies into the Early Settlement of 

Korrespondenzblatt 182. pp. 127-142.

Conclusions of the B.O.S. Project’. Actes de la VIII Conférence Internationale des Études 
Nubiennes, Cahier de Recherches de l’Institut de Papyrologie et d’Egyptologie de Lille, No. 
17, I-Communications principales. pp. 123-140.

mit Hilfe von Fernerkundungsdaten: Am Beispiel des Nordwest-Sudan’, in List, F.K. and 
Meissner, B. (Hrsg.), Beiträge zur Fernerkundung der Erde an der Freien Universität 
Berlin. Berliner Geowissenschaftliche Abhandlungen (A) 47. pp. 87-93.


PACHUR, H.-J. and HOELZMANN, P., 1990. ‘Gebel Tageru and its Western Foreland’. In Late 
Quaternary Fluvio-Lacustrine Environments of Western Nubia. Berliner 
Geowissenschaftliche Abhandlungen 120.1, Berlin 1990.


The fourth season of excavations (director Prof. D. Wildung) took place January through March 1998\(^1\). As in previous seasons work continued in the Amun temple complex, in recording of buildings in the western part of the city and on the construction of a fence around the site. Re-erecting of the ram sculptures in front of the temple proper by F. Hinkel was continued where possible, so that now ten bases of the rams and eight ram figures have been placed in their original position (PLATE I, a).

While removing sand from the southern supporting wall of the Amun temple terrace, another new ramp was found on the south side of the temple (two ramps had so far been found on the north side of the temple in previous campaigns). This shows that the temple terrace was accessible from at least three sides by means of ramps. Further evidence shows that the temple proper did not have a wall surrounding it, but was standing on an open terrace and was visible from far away.

The entrance gateway of the temple building was cleared this season as well as the first transverse room, the Hypostyle. Of the eight columns which once stood in the hall, all but one have collapsed and lie now, in some cases in situ, on the floor. After clearing the sand covered drums of the columns, well preserved relief and inscriptions became visible. In future seasons it is hoped that these columns can be re-erected. The floor of the Hypostyle, south and north, consisted of fine compact sand; the central part of the hall however, leading from one room to the other, is covered with a pavement made of sandstone slabs.

Work was commenced this season to clear the area behind the Hypostyle hall. To the north-east of the Hypostyle hall a long narrow room not previously known was discovered. The room is oriented east-west parallel to the northern outside wall of the temple. The entrance of this room is not from the west axial to the temple but from the east end of the room. After clearing the western part of the room, a complete and well preserved almost square dais (155 x 155 cm, H. 70 cm) with an approach of six steps from the east was found (PLATE II). On top of the dais had been placed a solid block of stone (54 x 54 cm, H. 45 cm) with a torus moulding and cavetto cornice as well as a sun

---

disc at the top centre facing east. Next to the block, a fragmentary sandstone offering table with rosette and ankh decoration (Plate I, b) was found, as well as the feet of a statue (faience) and various ceramic plates. The dais is built of sandstone blocks, which were covered with a fine lime plaster. On clearing the northern wall of the dais, multichrom paintings applied directly on the lime plaster were discovered in a faded but well preserved condition. The scene shows two pairs of Nile gods (Hapi), each pair tying papyrus plants in a knot around a central floral motive. The preserved colours range from blue for the body of the Nile gods to golden yellow for the skirts of the gods. The plants are highlighted with strong red colour. The motive is well known from Egypt (representing the unification of the two lands) but the raised arms of the Nile gods are unknown in Egypt. The closest parallel (in relief) is found in the Amun temple of Meroe on the central stone altar and on a bronze cap found in Jebel Barkal B500 (Boston Museum of Fine Arts 24856). The east orientation of the room points to a possible function of this room as a sun sanctuary. The parallels from Meroe and Kawa may however also indicate a function as a throne room. The complete clearance of the room will take place next season.

The two old fencings erected in the forties around the Lion temple and the Kiosk were removed this season. Surprisingly, an inscribed stone was found cemented to the bottom of one of the metal stakes of the Lion temple fence. The block c. 28 cm in diameter is flat on one side and slightly conical on the other. The flat side is engraved with four lines of Meroitic inscription. According to K.-H. Priese the king’s name -MNHREQERMA- is similar to the one found on the rams in Soba (Griffith 1911: 52; Plate XVI) and Saiyal Sirag (Shinnie and Bradley 1977: 29-31; Wenig 1992: 678 ff.) -a site also known as El Hassah (Geus and Reinold 1979)- as well as on the ‘Omphalos’ from Napata (Boston MFA 21.3234; Kendall 1996: 270).

The city survey carried out by J. Knudstad and R. Frey was also continued this season. Four buildings, Nos. 800, 900, 4500 and 4600, were traced in plan. Two of the buildings, 800 and 900, had been mapped by the Lepsius expedition in 1842. They turned out to be a pair of temples closely duplicating buildings 600 and 700 in plan and size. Two residential buildings, 4500 and 4600, were noted on the plan of Lepsius only as heaps of debris covered by later tumuli. The most striking feature of building 4500 is the colonnade. The columns are missing, but three sandstone bases facing north into the courtyard are preserved. On each three elephants (one larger flanked by two smaller elephants) are carved. The surfaces of all three bases are badly worn but the elephants are easily recognizable and the first to be found at Naga. The bases were covered again for safe keeping and until such time as the building can be properly excavated.

The next season work is to continue mainly in the Amun temple and the city survey.

REFERENCES


FIG. 1. MEROITIC INSCRIPTION.
THE NAGA PROJECT - EGYPTIAN MUSEUM BERLIN

PLATE I

a. RE-ERECTED RAMS.

b. OFFERING PLATE WITH ROSETTE AND ANKH SIGNS IN SITU DURING EXCAVATION.
VIEW OF THE ALTAR DURING EXCAVATION. THE FIRST STEPS UP TO THE DAIS APPEAR.
Preliminary Report on the 1999 Season of Excavations at Kadero

by Lech Krzyzaniak

The excavations at Kadero were continued in 1999; it was the fifteenth season at this site. Since the eighties the field-work is being carried on biannually in order to organise a bigger budget for the project and, consequently, to be able to come to the field with a larger personnel exploring the site for a longer period of time and carrying on different kinds of research. Similarly to the previous seasons, the project was carried out by the Polish Centre of Mediterranean Archaeology (University of Warsaw) in collaboration with the Poznan Archaeological Museum (Krzyzaniak, 1998, earlier bibliography; also id., 1999).

Fig. 1. PLAN OF THE KADERO SITE SHOWING THE PROGRESS OF THE EXCAVATIONS. ROMAN NUMBERS INDICATE SEASONS. THE DASHED AREA INDICATES THE SETTLEMENT MIDDEN.
The season started on 11 November and terminated on 9 December 1999. The field-party was composed of seven persons representing field archaeology (Prof. Lech Krzyzaniak, Dr. Karla Kroeper, Prof. Michal Kobusiewicz, Przemyslow Bobrowski, Maciej Jordeczka), physical anthropology (Dr. Maria Kaczmarek), geology (Prof. Wojciech Stankowski) and botany (Dr. Lucyna Kubiak-Martens). The National Corporation for Antiquities and Museums was represented at the site by their inspectress Amal Wad Mokhtar. Up to thirty local workers, mostly from the nearby village of El-Zakyab, were recruited to perform the manual labour. Most of them have already been trained in this work during the previous seasons at Kadero. The ghafir of the site was Abdallah Nouri from Geili who also is performing this function for the site of Geili and Saqqai.

The programme of the season was composed of several objectives: continuation of the excavation of the Neolithic settlement and its burial ground, investigation of the botanical macroremains from the settlement middens and grave-pits, investigation of the geology and geomorphology of the Kadero mound and study of the human remains found in graves. The excavations of the Kadero Neolithic cemetery was executed by enlarging the trench excavated during the previous seasons across the hill on an NNW-SSE axis. Consequently, seventeen new squares of 2 x 2 m were excavated adjoining the eastern side of the trench (squares Nos. 899-902 and 913-925) and thirty-six squares on the NNW end of this trench (squares Nos. 639-674), considerably enlarging this testing area by a total of 212 square metres (FIG. 1). All these squares were excavated to the depth of 1.0-1.1 m. In the Neolithic settlement middens the testing was similar to the last few seasons at this site: primarily in order to obtain macrobotanical remains, a series of pits of 1 square metre were excavated in the northern and southern settlement midden. Thus ten such pits were excavated in the northern midden and another ten in its southern counterpart. All these pits were excavated up to 0.45 m in depth reaching the virgin soil. The soil from these pits was first examined by the botanist by hand-picking the floral remains and sieving and its non-botanical contents (potsherds, lithics and animal bones) were examined and recorded by the archaeologists.

In total, fourteen Neolithic burials were found this season: twelve were explored in the squares of the large trench excavated across the site and two were found away from this trench, on the eroded surface of the mound; they were noted during a routine, systematic examination of the surface of the Kadero mound made each season. The burials discovered this season show many similarities to other Neolithic graves found at Kadero so far: human skeletons were in contracted position and furnishing was consisting of pottery vessels (FIG. 2 and FIG. 3) and necklaces composed of carnelian beads; in some cases the grave pit could have been noted. In most cases it was possible to state the age and sex of the deceased person.

FIG. 2. KADERO. A NEOLITHIC POTTERY VESSEL FROM GRAVE NO. 229.
The season also initiated the research on the geology and geomorphology at Kadero. The geologist was able to make several tens of borings using a hand-operated augur. The borings were made along two lines, running across the North-South and East-West axes of the mound. As a result, some 180 samples of soil were collected. The geological, botanical, zoological (animal remains from the settlement middens) and samples of human skeletons (teeth) are now subject of a specialized research in laboratories.

The season also witnessed more work on the protection of the Kadero site. The author’s experience made in the Sudan so far produced a method of protecting a site consisting of a mound without any architectural remains. The method has been tested at Kadero over the last several seasons. The work consists of a shallow rampart excavated around the whole site; a number of concrete posts, all bearing the inscription (in Arabic) informing the visitor about the presence of an archaeological site and painted red and
white, were erected along the rampart (PLATE I). It turned out that the rampart plus posts create a physical and psychological obstacle big enough to keep lorry drivers, gravel diggers, road and canal builders, etc., away from the Kadero mound. The rampart was again deepened and concrete posts re-painted last season. Acting on instructions from the National Corporation for Antiquities and Museums a similar rampart was also excavated around the near-by site of Kadero 2.

It is planned to continue the Kadero excavations in 2001.

REFERENCES


KADERO.
A COMBINATION OF A RAMPART AND A ROW OF CONCRETE POSTS PROTECTING THE SITE.
Relations Between the Meroitic Kingdom and the Mediterranean World
(490 BC - 350 AD)

by Salah Omer Al Sadig

In this study the writer will discuss some topics concerning contacts between the Mediterranean World and the Meroitic Kingdom (Map 1) as demonstrated through historical sources and material culture.
1. Herodotus and Classical writers;
2. Material culture;
3. Conclusions.

First, a historical analysis is very important in order to explain the relationship between Meroe and the Mediterranean coast. Coastal objects and motifs came to Meroe and influenced Meroitic artists who in turn reflected them in their work. Certainly, historical events also played an active role in the daily life cycle of the Meroites. As a consequence, these thoughts indicated that it is necessary to study the material culture.

Second, there are elements within the material culture that must be credited to the Mediterranean. Material culture is taken here to mean archaeological objects and architecture found on Meroitic sites. The material culture section has been subdivided into the following important subjects:
1. Sculpture;
2. Architecture.

From the above mentioned subjects, the writer will attempt to determine the Meroitic elements and the Mediterranean ones. According to historical fact ‘during the late Roman empire all Mediterranean coast was Romanized’. Henceforth, when one mentions any subject connected with Greece or Rome that is taken to mean all the Mediterranean coastal countries. This is because the Romans conquered the Greeks and adopted features of the Greek civilizations that dominated the Mediterranean coast at that time.

In sculpture and architecture the Mediterranean artists mixed Greek and Roman characteristics with the local indigenous styles of art to create a new style of art. This new style will be studied methodically. The study material will be based upon objects in the Sudan National Museum and museums abroad as well as publications of Archaeological Missions who work on Meroitic sites.
HERODOTUS’ HISTORY

The famous ancient writers who mentioned Meroe gave us a clear picture about all branches of life there including religion, history, environment, etc. I shall concentrate and follow their remarks and statements about Meroe and its relationship with the Mediterranean world.

During his trip to Egypt where he describes life in ancient Egypt, Herodotus (490-430 BC) the Greek Historian mentions Meroe as the big capital city of the Ethiopians. Unfortunately he did not visit Meroe and traveled only as far south as Elephantine where he questioned people about the Meroites or ‘Ethiopians’ as they were known by the Greeks. Through their answers, Herodotus was able to acquire information and describe Meroe.

Under conditions such as this, one cannot accept his information without a hint of doubt unless otherwise proved by archaeological or other historical evidence. For example, one such doubtful statement made by Herodotus is ‘The inhabitants worship Zeus and Dionysus alone of the gods, holding them in great honour. There is an oracle of Zeus there’. However, there are many interpretations for this statement. The first possibility is that the people of Elephantine provided Herodotus with wrong information. As far as we know there is no temple or cult of the Olympian Gods or Goddesses among the Meroites during the time of Herodotus. Furthermore, up until now, the historical and archaeological evidence does not support this idea.

The other suggestion is that Herodotus believes that there was one main God a ‘chief of the Gods’. If it was Zeus in Greece, it is Amon in Egypt and Ethiopia ‘for Amon is the Egyptian name for Zeus’.2 As stated before, he may have been alluding to the temple of Amon at Jebel Barkal as a Zeus oracle because it was a distinguished temple where new kings were often chosen according to prophesies made by the high priest. Coronation of new kings also took place there. Various inscriptions left by Meroitic kings confirm this and the suggestion is further strengthened when we notice that the Greeks called the oracle of Amon at Siwa, the Amon-Zeus oracle. This was mentioned when Alexander the Great (356-323 BC) visited Siwa in 332 BC.

In addition to this, there are coins from Cyerene on which there is a design showing the head of Zeus with the ram horn symbol of Amon. This portrait is called Amon-Zeus. One of these coins is in the British Museum, case No. III, Greek section. It is dated to c. 400-336 BC.3 All of these factors may explain why the Greeks combined the two Gods into one and referred to Amon-Zeus. We can also see the important status occupied by Amon among the Greeks. They built an oracle temple in Dodana in Magna Graecia dedicated to him.4

---

2 Ibid. p. 119.
MAP 1. NAPATAN AND MEROITIC KINGDOMS.
Regarding Dionysus, ‘Bacchus’ the God of wine and drama, Herodotus tells us that ‘Dionysus, as soon as he was born, was sewn up in Zeus’ thigh and was taken to Nysa, which is in Ethiopia above Egypt.’ This statement was taken from the Greek theogony. It confirms the fact that the Greeks knew of Ethiopia from ancient times. This aspect of the religion of ancient Greece was discussed by Homer in the ninth century BC and by Heisod in the eighth century BC.

Herodotus tells us also that Osiris was equated with Dionysus. As we mentioned before, Dionysus was the God of wine and drama while Osiris was the God of the Underworld. As a matter of fact, Osiris was similar to the Greek God Hades, God of the Underworld. Thus we can see clearly that Herodotus was influenced by Greek traditional mythology. For instance, he describes the Nile as winding like Maenads, the drunken young women who follow Dionysus the God of wine and drama.

The classical writers follow the earliest Greek writers in their historical narrative and mythology. Herodotus has been considered the first person to provide information concerning the first contact between Greeks and Meroites. This contact happened during the Persian wars of 480 BC when the Meroites were fighting on the side of Persia against Greece. The Greek army was commanded by Araxes, while the Persians were led by Arsames, son of Darius. Herodotus gave a full description of their arms and war tactics.

THE TRADE ROUTES

After Herodotus, the relationship between the Mediterranean world and Meroe continued via several trade routes (MAP 2). The main and safest route was the Nile where the goods and travelers made their trip downriver along the river or in caravans near the Nile from Meroe to Alexandria, Egypt. Another route from Meroe to Egypt was across the desert (Sahara) via Selima and Kharga Oases, then to Assiut on the Nile. There is also a route from Meroe to Alexandria or Cyreniaca via Selima and Siwa Oases. From the oases it divided into two directions one to Alexandria and the other to Cyreniaca. An important route crosses the Sudanese and Libyan Desert from Meroe to Cyreniaca, Tripolitania and Carthage on the Mediterranean coast. This route runs via the Libyan Desert towns of Eened, Kufra, Zuila, and Germa. It is worth mentioning that this route is still used as a caravan trade route between Sudan and Libya. Moreover, the sea trade route between Meroe and Ptolemaic Egypt (305-30 BC) on the Red Sea flourished especially after the Ptolemies established several ports on the Red Sea coast. One of these ports is probably Aqiq because there are the remains of buildings with regular structure and square well-cut stones. One building stands on a mound that gives a clear view of both the sea and the plain. Within the stones of this building is a plastered fluted column. Near this structure are graves with a huge

---

vertical tombstone. Close to the seashore stands the Turkish fort, used in recent times as a government rest house\textsuperscript{10}.

Diodorus Sicilus, who lived between 80-20 BC, describes the trip from Rodhos, one of the Greek islands in the Aegean Sea, to Ethiopia (Meroe) via Alexandria. The trip took fourteen days\textsuperscript{11}. The Mediterranean world imported elephants, ivory, ebony, and ostrich feathers from Meroe. During the Roman period, they imported wild animals for fighting with humans for public show in the amphitheatre. In exchange, Meroe imported bronze objects (a rare metal in Meroe), mirrors, lamps, vases and other goods. The most important route between Sudan and Egypt was by land along the Nile bank.

These principle routes were used by the Meroites until the decline of Meroe in the fourth century AD. Moreover, they were used by the cultures following Meroe.

\textbf{MAP 2. TRADE ROUTES BETWEEN MEROE AND THE OUTSIDE WORLD (1000 BC - 300 AD).}

\textsuperscript{10} The writer visited this site in 1977.

THE GREEK CONCEPTION OF MEROITIC CULTURE

Diodorus is considered the second writer after Herodotus to relate some important events about the Ptolemies and their relationship with the Meroites although he mentions in his book some Greek writers before him who wrote about the Ethiopians, their works have not been discovered yet. Diodorus described Meroe as the chief and noblest town of the Ethiopians. Also from this literary source we get valuable information regarding how the Greek pantheon respect and like the Ethiopians. They described the Ethiopians as pious and religious people. This statement is mentioned by Homer in The Iliad. Furthermore, Diodorus describes the Ethiopian King Shabako (716-701 BC), who ruled all of the Nile Valley ‘Egypt and Sudan’, as a pious man who followed his predecessors in the worship of the Gods and who was a progressive ruler. Herodotus too gives an account of the meeting between the Ethiopian king and the spies of Cambyses. The intelligent Ethiopian king gave wise answers and good advice to the spies. He showed them the welfare of his people and the power of his army to overcome their great army, but he declared to them that his people did not like to invade other countries. The Ethiopian king also told the spies of Cambyses to advise their master not to look for a kingdom other than his own.

The above statement shows the Greek admiration of Ethiopian qualities. This point becomes very clear when we notice that the Greek writers did not describe the Ethiopians as barbarians, ‘uncivilized or uncultured persons’, while they did describe other nations as ‘Barbarians’.

MEROE AND THE HELLENISTIC AGE 323 - 31 BC

During the time between Alexander’s death in 323 BC and the battle of Actium in 31 BC most of the Mediterranean lands became half Greek. Moreover, the nations who were part of Alexander’s empire and were later ruled by his Greek generals are often called Hellenistic ‘Greek-like’. Egypt was ruled by one of Alexander’s generals Ptolemy. His descendants were known as the Ptolemaic dynasty 305-30 BC. During this period we find Meroe did not deal with Egypt in the same way as they had prior to 323 BC. They considered Egyptian culture as part of Hellenistic culture and the Mediterranean world. The Greek rulers of Egypt viewed Meroe according to their own cultural outlook and even in trade, Egypt exported Greek goods to Meroe.

This great change in relations between Egypt and Meroe occurred because the Ptolemies changed all branches of life in Egypt including arts, town planning, education and the military, to the Greek style. This change was helped by the Greeks of Naucratis, an early Greek settlement in Egypt which Psammetichus I (664-610 BC) had permitted some Greek merchants to establish.

After the death of Alexander, his empire was divided between his Greek generals. Seleucus in the east established the Seleucus Empire. Cyrenaica in the west was directed by the Ptolemaic dynasty in Egypt. The native lands of Alexander, Macedonia and Greece, were ruled by his son.

---

THE MEROITIC KINGDOM AND THE MEDITERRANEAN WORLD

This is a brief explanation of the situation in the Mediterranean world after Alexander’s death in 323 BC. The changes there cast a shadow on the future relations between Meroe, its national culture, and the Hellenistic world. Ptolemaic Egypt played a big role in introducing the two cultures to each other. At the same time other channels of communication with the Mediterranean world, particularly those of trade and commerce, continued without a break in the continuity.

Diodorus Sicilus confirms this relationship when he mentioned ‘Ergamenes a king of Ethiopia who reigned in the time of Ptolemy the second bred-up in the Crecian discipline philosophy’. Ptolemy the second ‘Philadelphus’ (285-246 BC) was well known as an educated king among the Ptolemaic kings. He was taught by the Greek philosopher Straton and the poet Philetas. He was also interested in zoology and sent hunters to hunt the wild animals and strange beasts in the Sudan to keep in his zoological gardens.

The previous facts explain to us how the Meroitic civilization interacted with other civilizations and therefore was not an isolated culture even though at times the historical records and sources are silent. Archaeological materials further prove these relationships.

THE ROMAN EMPIRE BEYOND THE MEROITIC FRONTIER

While the civilization of Meroe continued its process in regular strong steps by relying on its national heritage, the outside world was overcome by great change when the Roman Empire was broken up in 27 BC. Egypt, after the sea battle of Actium, became a Roman domain. The Roman Empire stretched all around the Mediterranean and Egypt, as a Roman Province, was governed by a Roman Prefect.

This aggressive empire beyond the Meroitic frontier looked at the Meroitic resources with great interest and the Meroites knew they had to protect their kingdom even to the point of attacking a Roman garrison if it seemed to be a threat to their security. The first conflict between Meroe and Rome was reported by the Roman writer Strabo (66 BC-24 AD) in his geography. He gave a Roman perspective to the conflict. We can notice this from the account the ‘Ethiopians who live above Syene these are nomads, and not numerous or warlike either, though they were thought to be so by the ancients, because often, like brigands, they would attack defenseless persons’. If we compare this description to that of Homer in the Iliad, Herodotus in his History and Diodorus, it seems clear that Strabo dealt with the facts according to the famous Roman phrase ‘The Roman soldier will never be defeated’ thus reflecting the Roman superiority complex.

---

16 Ibid. II. p. 176.
17 Karl Heinz Priese. op cit. p. 96.
19 See the Greek conception of Meroitic culture, pp. 3, 4.
When Gaius Petronius was Perfect of Egypt, the Meroitic army marched northwards to Syene, Aswan, Elephantine and Philae. They took them and enslaved the inhabitants and pulled down the statues of Caesar. This brief information indicates that the Roman army, when suddenly attacked, could be defeated by the Meroites. In addition to this, archaeological excavation confirmed the Meroitic victory when Garstang found the head of Augustus in the Augustus temple (M290) in the Royal town of Meroe. Following these events, Strabo credits heroic deeds to Petronius. When he describes the war, he says, ‘Petronius forced the Ethiopian to flee back’. If we examine the statement, we can explain it as follows: The Meroites after having gained their objective retreated back to their country. Petronius demanded the Meroites to return their booty and asked them why they started the war. This is a very strange dialogue between a conqueror and a retreating army. Normally the conqueror dictates his wishes upon the losers. Petronius marched south, defeated the Meroites and captured Napata. He found it hard work to march south and came to an agreement with the Meroites. They were to send ambassadors to Caesar on Samos with their demands.

From this report we can suggest that the Meroites were not completely defeated in this conflict; however, we can say that the engagement consisted of raids on the frontier where victories alternated from side to side. Even though Petronius captured Napata, the Meroitic capital of Meroe and its command structure was still stable.

Pliny the Elder (d. 79 AD) wrote about this conflict and in his judgment he wrote, ‘but never the less it was not the arms of Rome that made the country desert’. Dio Cassius, another classical writer discusses the same war. At the end of his account he says that Petronius compelled the Meroitic commander to make terms with him.

This war between Meroe and Rome happened less than ten years after Rome took Egypt into its empire. It established future relations between them. Rome realized that the Meroites would never surrender and would continue to fight even though they had been defeated once. It was better for the Romans to make peace and terms with them. This policy continued until the decline of Meroe (400 AD).

**The Material Culture**

Sculpture as one of the contact factors between Meroe and the Roman Empire:

Over a long period Meroitic art established its own features and motifs. The artists had worked with Nubian sandstone and granite, materials available locally. Meroitic art developed in a parallel line with Egyptian art until Egypt was overpowered by

---

20 Shinnie. op cit. p. 45.
22 Shinnie. op cit. p. 45.
25 Shinnie. op cit. p. 47.
26 Shinnie. op cit. p. 47.
Hellenistic art and later by Roman imperial art. After this the Meroitic artist continued to develop his art with a careful look at the art of the Mediterranean, which was now closer to him. The Meroitic artist realized that this foreign art used materials unobtainable by him and was accustomed to using sandstone, granite, diorite and the bronze imported to Meroe.

It is known that marble is more suitable than sandstone for sculpting fine detail. The best example of marble design is the statue of Laocoön and his sons. The difficulty with marble is that it takes a long time to design while sandstone is easy to design. Granite and diorite are found used in Meroitic art in huge statues such as the diorite statue of King Taharqa (690 – 664 BC) (see PLATE I). It is used especially to represent royal persons or deities in large scale, as it is difficult to control the cutting of granite or diorite in small statues.

Metals mixed with the granite gave it different colours. From two colossal gray granite statues discovered at Hag Zummar, Agro island probably of a king or god (12th century BC-12th century AD – possibly Netekamani) (PLATE II). Also from another sand stone statue found in the temple of Isis at Meroe (PLATE III), we notice that these statues follow an ancient traditional school of sculpture that continued through Meroitic art and was used especially for the representation of Gods and kings. The characteristics depicted attempt to show power and dignity and most of all the superiority of the individual represented.

THE MAIN ARTISTIC CHARACTERISTICS OF THE NAPATAN AND MEROITIC SCHOOL

(See statues PLATES I, II, III)

1. The statue in a frontal attitude.
2. The statue in a static position.
3. The chin of the statue is in word.
4. The statue is sculpted over life size.
5. The king’s head is covered by a cap with two hanging balls.
6. The features are idealized.
7. The neck is very thick.
8. The left leg of the statue is extended.
9. The statues of kings wear the crown with double uraeus.
10. The two hands are stretched and clasped.
11. The eyes are well cut and sharp looking.
12. The frontal head is flat.
13. The statue’s shoulders are flat.
14. The statue’s nose is blunt.
15. The chest is wide.
16. The waist is narrow.
17. The statue is dressed up.
18. The statue has thick lips.

Mediterranean objects imported to Meroe during the Hellenistic age (323-31 BC) include the Hellenistic bronze head of the God Dionysus made by a Greek artist from

---

Meroe pyramid no. 5. Another example from the Hellenistic age is a hanging vase in the shape of a boy with a bronze head and inlaid silver eyes. It was found at Faras (PLATE IV).

The bronze head of Augustus found at Meroe (PLATE V) is considered the first Roman statue in Meroe. However, the earliest Augustus statue and the best example of this style is the statue of Augustus in the Vatican Museum. It is known as Prima Porta Augustus. The archaeological evidence (the bronze head) and the historical evidence (accounts of classical writers) confirm that this bronze head of the emperor Augustus originated in Aswan and was taken by the Meroites from the Roman camp. The reason for the existence of a statue of the emperor in a Roman military camp was due to the worship of the emperor. He was also the commander-in-chief of the army and his worship was part of military discipline in every Roman camp.

If we look to the statue of Augustus (PLATE V), we can notice clearly that the Meroitic artist took the technique of colouring the eye ball and used it in local statues (PLATES VI, VII, VIII, IX) however, as we mentioned before, it is difficult to apply this new type of art to sandstone or granite. Or diorite.

Therefore, the local artist took the general idea conveyed by Mediterranean art and used it on non-official not official persons (i.e. Gods or Royal persons) and mostly they used plaster for these type of sand stones.

We can observe that the Meroitic artist mixed two styles of art, the traditional local style and the Mediterranean style. From both another local school (style) emerged. The characteristics of this school are as follows: (for examples see PLATES VII, VIII, IX)

1. Normality: The statue is life size.
2. Symmetry: The body of the statue is symmetrical.
3. Nakedness: The statue is naked or half naked.
4. Naturalism: The statue is coloured according to the skin colour of the local people.
5. Simplicity: Local hair and dress are used. The unusual is avoided.
6. Realism: Noticed by the gentle touching of the hair by the left hand.
7. Dynamism: Dynamic movement – two hands are placed in a contrasting position.

These new characteristics spread to all branches of the arts and can be viewed and distinguished in plates V, VI, VII, VIII and IX. It can be seen in many statues and reliefs. After viewing the above elements, we can say without hesitation that this is Meroitic art done by local artists with local material and created and developed by Meroites. Although sometimes this new style looks similar in feature to the Mediterranean art ‘style’, we must realize that the Meroitic culture was not an isolated one like the Incan or Chinese cultures.

---

28 Shinnie. op cit. p. 104. pl. 38.

118
THE MEROITIC KINGDOM AND THE MEDITERRANEAN WORLD

ARCHITECTURE

We found unique architectural buildings in Meroe town and its vicinity dated to the 2nd or 3rd century AD. These buildings combined Roman characteristics with Meroitic architecture. The Meroitic architect created a mixture between the two styles.

The Roman Bath

This structure shows a strange modification of the Roman Bath created in order to suit the country’s climate and Meroitic traditional customs. The hot climate does not permit a structure typical of a Roman bath with its caldarium room. This bath was probably used as a private pool. The structure consists of a pool dug in the ground. The inside wall was covered with plaster. There were statues and seats around the pool edge. There was also a second relaxation room with seats with arms in the form of sea horses. This is a brief description of the structure. The main point is that this bath gives a Roman atmosphere.

The Roman Kiosk

In Naga there is a remarkable temple with clear Roman characteristics and Meroitic ones. It is called the Roman Kiosk because the Roman characteristics are clearer in the building than the Meroitic ones. This building is dated to 2nd or 3rd century AD. It is built of sandstone with the Roman characteristics appearing in the Corinthian columns. The upper part of an order is decorated with the pattern of egg and dart and acanthus. In the cornice is the decoration of dentils. Roman arches are used in most of the windows.

The Meroitic characteristics are seen on the lintel above the door where there is a frieze of cobra headed uraei under which is a winged sun. There are no inscriptions found in the temple. The temple shows how the Meroitic architect mixed the two styles of architecture in one building without disturbing the harmony of the structure.

CONCLUSION

The relationship between Sudan (known as Ethiopia to the Greeks) and the Mediterranean world began in the ninth century BC when Homer the Greek poet mentioned their relationship in The Iliad. Sudan was well known to the outside world during the Napatan Twenty-Fifth Dynasty when they ruled the entire Nile Valley (750-656 BC). The Greek writers were the first who wrote about Meroites, described their country and mentioned the links between Greek and Ethiopian mythology.

Diodorus Sicilus followed Herodotus in his mythological interpretation and also added new information about the relationship between Ptolemaic Egypt and Meroe. The Greek Historians gave us balanced information concerning the Meroites, but on the other hand, we found that some Roman writers showed the Roman view of the events described.

Trade routes to the Mediterranean coast strengthened this relationship and continued without break until the collapse of Meroe in the fourth century AD. The
historical sources are confirmed by the material culture and throw more light on this relationship.

In sculpture 'statue in the round', Meroitic traditional art and Mediterranean art were mixed together by Meroitic artists to create a new style also used in reliefs. This style has its own character. The Roman characteristics appeared in architectural buildings and in the main features of these buildings; however,

1. this is not common, occurring only in a single building;
2. these buildings also have traditional architectural elements.

REFERENCES


BLOSS, J.F.E., 1936. 'The Story of Suakin'. *SNR*. Vol.XIX.


DIORITE STATUE OF KING TAHARGA (690-664 BC.) KHARTOUM, SUDAN NATIONAL MUSEUM. No. 1841.
TWO COLOSSAL GRANITE STATUES PROBABLY OF KING NETEKAMANI (12 BC-12 AD) FOUND IN HAGZUMMAR ARGO ISLAND, NOW IN KHARTOUM, SUDAN NATIONAL MUSEUM.
COLOSSAL STATUE OF SAND STONE PROBABLY KING OR GOD FOUND AT TEMPLE OF ISIS AT MEROE NOW IN NY CARLSBERG GLYPTOTHEK COPENHAGEN, AEIN 1082.
HANGING VASE IN THE SHAPE OF A BOY, HEAD BRONZE, WITH INLAID SILVER EYES, FOUND AT FARAS, KHARTOUM, SUDAN NATIONAL MUSEUM. No. 693.
A SAND STONE STATUE OF A GIRL, KHARTOUM SUDAN NATIONAL MUSEUM. No. 536.
A SAND STONE STATUE OF A YOUTH, THE STATUE COATED WITH PLASTER AND DARKERED COLOUR, KHARTOUM, SUDAN NATIONAL MUSEUM. No. 537.
PLASTER STATUE OF RECLINING MAN FOUND AT MEREOE IN THE ROMAN BATH.
NOW IN NY CASBBERG GLYPTATHET COPENHAGEN. AE I N 1484.
STATUE OF A WOMAN FROM STUCCOED AND PAINTED SAND STONE FROM MEROE ‘ROMAN BATH’ MEROITIC, SECOND TO THIRD CENTURY AD. MUNICH MUSEUM. No. 1334.
The SARS Survey along the Omdurman-Gabolab Road 1997:

Interim Report on the Pottery and Small Finds

by Laurence Smith

INTRODUCTION

In October 1997 the Sudan Archaeological Research Society undertook a survey along the line of the road under construction between Omdurman and Gabolab, the Shariyat Shemal (Mallinson, Smith and Fuller, 1998). The fieldwork undertaken during the survey included taking samples of surface material from the sites identified (FIG. 1). The basic strategy for collection was that adopted in the survey from Begrawiya to Atbara (Mallinson et al., 1996) in that collections were made in transects over sites where sufficient surface artefacts were present to warrant this method of collection. However, the density of surface artefactual material on the majority of sites was found to be much less than in the riverine area surveyed previously. Consequently, the method adopted was to take samples from approximately circular areas of about 2-3 m diameter, as far as possible distributed evenly over the area of a site. At several locations, the material itself was not evenly distributed over the site surface, but occurred in a number of small concentrations. In such cases, samples were taken from these concentrations of artefacts, being recorded by reference to the closest Survey Point, or to the nearest structure visible on the surface.

The collection and study of the artefacts from the Survey had two main objectives: dating of the sites and assessment of their cultural and geographical links. It was envisaged that the artefacts would be used for the general dating of the sites, since it was not expected that samples suitable for radiometric dating would be recovered from surface collections, other than in exceptional circumstances. As expected, the pottery has been of the greatest importance for providing initial dating evidence complementary to that obtainable from study of structural remains evident on the surface. In a few cases sites were assigned to general time period on the basis of artefacts other than pottery, as in the Palaeolithic site at 69.2. It was intended that a more refined chronology would be established subsequently when material suitable for 14C dating could be obtained through excavation.

Obtaining an idea of the links between the sites and other regions was considered to be of particular interest with regard to the area surveyed. It was thought that this could provide an indication of the periods during which this route across the Bayuda has been of significance in movement north and south through Upper Nubia. The route
KUSH XVIII

essentially provides a ‘short cut’ from the region of present-day Khartoum to the north, since it avoids the great S-bend of the Nile from the southern end of the Dongola Reach around to the Fifth Cataract area.

This paper will give an indication of the range of finds studied to date. The pottery, forming the most numerous category, will be presented first, followed by the small finds. Within each of these categories, those specimens assigned a date or time-period will be considered in most detail, followed by examples of those for which the period cannot, as yet, be assigned so closely.

THE CERAMICS

The sherd material was divided into ‘diagnostics’ comprising rims, bases, decorated body sherds and other portions of vessels such as handles, and ‘undiagnostics’ comprising the plain body sherds. In the collection as a whole the latter amounted to c. 63% whilst the diagnostics made up only c. 36% by count. Given that the diagnostics were often in poor condition, exhibiting weathered surfaces, even where the sherd shape was evident, classification of the material could often only be based on a small number of criteria. For example, only fabric and form, or fabric and incised decoration might be distinguishable. In consequence, such ceramics often only allow the dating to a broad time period of those sites where they formed the great majority of the surface material encountered.

Although no whole vessels were found, two portions of vessels were collected. The first comprised a substantial portion of the profile and circumference of a bowl from Site 107.1. This has an approximately hemispherical shape overall. In cross-section the body wall is thickened slightly from about half way up until just below the rim, where it is nearly vertical and is thinned again on the exterior. The rim is plain, rounded, and essentially symmetrical on the interior and exterior (see FIG. 2, a). Both surfaces exhibit eroded areas. On the interior the surface is plain and well smoothed, where it is not eroded, with some traces remaining indicative of burnishing or polishing. The surviving evidence for the surface treatment of the exterior shows that it was well smoothed and possibly polished or burnished originally. No trace of slip remains. Impressed decoration survives, comprising a double row of zigzags, c. 1 cm deep, between two sets of double undulating rows of closely-spaced vertical linear impressions, mostly c. 6 mm long.

The second vessel of which a substantial portion was recovered is a base and lower body from Site 97.1. It appears to be from a handmade vessel (see FIG. 2, b). In shape the base itself is rounded and is now plain; erosion of the exterior surface means that it no longer retains clear evidence of surface treatment or decoration. The present exterior surface is fired to a light brown colour. Although it is slightly irregular in some areas, it possesses a generally uniform surface, which implies that it was originally well-finished, whether plain smoothed, or having other surface texture such as mat

---

1The final drawings were produced using the computer drawing package Professional Draw by ‘Gold-Disk’ Inc. All inked drawings were scanned using ‘Prestol Page Manager’ and processed using ‘Microsoft Picture Publisher’. The final pages were assembled in Professional Draw.
impressions. The interior is black and has an irregular surface. It has suffered some erosion, but less so than the exterior, so this, together with the colour, indicates that the vessel was of a closed form such as a jar.

**FIG. 1.** MAP OF THE BAYUDA AND ADJACENT AREAS SHOWING THE LINE OF THE SURVEY AND INDICATING THE POSITION OF THE MAIN SITES MENTIONED IN THE TEXT.

*Mesolithic*

In terms of dating, the earliest ceramics recovered comprise material at present assigned to the Mesolithic period. Pottery of this period occurs most commonly in three fabric types: two characterised by a dense texture and a very low occurrence of vegetable temper fabrics (OGF2.16 and 2.17) and one with a much more porous texture containing abundant, often very coarse, vegetable temper (OGF1.11). The largest samples of ceramics considered to date to the Mesolithic came from Sites 115.1 and 61.3, with the sherds from the former being the least eroded and so providing the best representatives of the various form and decoration types.
FIG. 2. EXAMPLES OF VESSEL FORMS ILLUSTRATIVE OF THE MAIN PERIODS RECOGNISED.
Fig. 3. Examples of decorations on the ceramics illustrative of the main periods recognised.
Concerning the relatively small number of rim sherds recovered, most could be assigned to various forms of moderately or strongly inturned bowls or jars. Rim cross-sections tend to be conical and approximately symmetrical about the mid-line of the wall. In some cases the rims are flattened on the interior, forming a facet at an oblique angle to the horizontal (FIG. 2, c-f).

The most characteristic decorations noted are the Wavy Line and Dotted Wavy Line styles, albeit present on a relatively small number of sherds. Examples from Site 115.1 (see FIG. 3.a-d) are similar to that of the Early Khartoum Mesolithic as seen at the Khartoum Hospital site itself (Arkel, 1949a: Pl. 60, 61, 72) and at Shaqadud (Caneva and Marks, 1990: Pl. IV. 1, 3, 5). One example was found of a type of Wavy Line with continuous moderately-spaced undulating lines (FIG. 3, e). This is somewhat similar to D67 from the Begrawiya-Atbara Survey, also assigned to the Mesolithic (Smith, 1996: 180, Pl. 14, 2).

Whilst the visual appearance of the decoration on the body sherds in the samples from the main sites assigned to this period exhibits variation in detail, this is due largely to minor differences within a small number of types of decoration. Most are varieties of comb-impressed and rocker-stamp decoration, of which the main types are as follows:
1. Dotted undulating lines composed of closely-spaced comb impressions (FIG. 3, f).
2. Closely-packed zigzags composed of square or rectangular impressions, forming a reticulated pattern over the vessel surface. This can be very regular (FIG. 3, g-h) or irregular (FIG. 3, i).
3. Packed zigzags forming lines at an oblique angle (FIG. 3, j). This decoration is similar to part of D92 in the classification of ceramics from the Begrawiya-Atbara survey (Smith, 1996: 182, Pl. 15, 2).
4. A series of long or short straight incised lines, quite closely spaced, at right angles to the rim (FIG. 3, k). This is a characteristic decoration at the rim, noted especially at Site 115.1.

The dating of the material exhibiting the above decorations to the Mesolithic is based mainly on two observations, viz its association with the Wavy Line and Dotted Wavy Line motifs at Site 115.1 and the lack, in the sample taken from this Site, of decoration types characteristic of the ‘Neolithic of Khartoum Tradition’. The decoration characteristic of the latter period, but not encountered at 115.1, include motifs such as the ‘fish-scale’ pattern, elements comprising ‘vees’, and overlapping panels composed of semi-circular lines as at El Gharba (Arkel, 1953: 71-73, Pl. 30, 1, 2, Pl. 32, 1.7; Lecointe, 1987: fig. 6, a-b).

The dating seems to be supported by the sequence at Shaqadud, the latter site having a location similar to Site 115.1 in that it is outside the main Nile Valley and at a similar latitude. Here, certain decorations considered characteristic of the Mesolithic do continue into the levels classed as Neolithic, particularly motifs including Dotted Wavy Line and Dotted Zigzags, together with Banded and Mat decoration. As defined at Shaqadud, these latter two types (Mohammed-Ali, 1991: 69-74) correspond quite well with two of the decoration types composed of closely-packed zigzags seen at Site 115.1. However, despite the continuation of these motifs, it can also be seen at Shaqadud that they occur with decorations including ‘triangles’ and ‘vees’ and the ‘fish-net’ motif in those levels considered to be fully Neolithic, whilst these latter types are essentially
absent from the completely Mesolithic levels. Although it is clear that there is, at Shaqadud, a gradual transition in terms of decorative types from the Mesolithic to the Neolithic, the sequence at this site indicates that a sample of ceramics lacking decoration characteristic of the Neolithic is most likely to be Mesolithic, or to date very early in the transition towards the Neolithic (cf. Mohammed-Ali, 1991: 88-93).

Pottery in a similar fabric to OGF1.11 has been recovered from two areas of the southern Dongola Reach. The first is the stretch between Debbia and Korti, including the locality of Ganetti, where the line of the Shariyat Shemal returns to the Nile. The material from this area, exhibiting Wavy Line and dotted Wavy Line motifs together with several varieties of rockerstamp decoration, was identified as belonging to the ‘Early Khartoum Related Group’ by its discoverers (Marks, Shiner and Hays, 1968: 321, 323, Figs. 1 and 5). The second area is that of the Letti Basin, where sites have yielded sherds in a fabric with vegetable temper that exhibits Wavy Line and varieties of closely-spaced and packed zigzag decoration similar to types from Site 115.1. This material has also been assigned to the Early Khartoum Related Group (Usai, n.d.). A link to regions further to the west of the Nile Valley, in terms of the tradition of motifs in ceramic decoration, may be indicated by further findings of dotted Wavy Line ceramics in a highly vegetable-tempered fabric in the region of the Ennedi Erg, to the north-west of the Wadi Howar (B. Keding, pers. comm. 1998).

**Neolithic**

The next period to be considered is the Neolithic, of which there appears to be relatively little evidence, certainly for the Neolithic of ‘Khartoum’-type, amongst the ceramics recovered in the surface collections. In terms of vessel form, one Site, 74.2, yielded quite large rim sherds from a moderately inverted bowl or jar, having a somewhat ‘club-shaped’ cross-section (Fig. 2, g). This cross-section is comparable to that of Type G from Shaheinab (Arkell, 1953: Pl. 36) and to the cross-sections of examples of bowls from the Neolithic of Geili (Caneva, 1988a: fig. 4, 9). There is one decorative motif (fig. 3l) on certain of the sherds in the vegetable-tempered fabric recovered from Site 115.1 which is similar to some varieties of rockerstamp with evenly spaced packed dots from Geili, dated there to the Neolithic period, but which may also be of equivalent date to the ‘Pre-Kerma’ further north. A decoration (Fig. 3, m) comprising rockerstamp in evenly-spaced dots is similar to another type of decoration known from the Neolithic of Geili (Caneva, 1988a: fig. 8, 4, fig. 7, 5). This indicates that Site 115.1 cannot be regarded as having material solely from the Mesolithic, even if this is the period to which the majority of the ceramics in the sample taken may be assigned.

 Apart from the above, a number of sherds were in fabric OGF2.10. This fabric is, in general terms, similar to that of material from the Begrawiya-Atbara Survey that could be assigned a Neolithic date on the basis of rim form and decoration. Only a small number of rim sherds were recovered, generally from small, thin-walled inverted vessels. Rim cross-sections are usually thinned at the lip, being approximately straight on the interior and convex on the exterior as in the examples shown in figure 2, h-i. Unfortunately, sherds in fabric OGF2.10 were generally very eroded, so that it was difficult to distinguish any characteristic decoration on either rim or body sherds. Two
of the main discernible decorations, paralleled by motifs known from Neolithic contexts elsewhere, are as follows:

1. Rocker-stamp decoration, apparently executed with a plain edge, forming approximately straight, moderately-spaced, zigzags (FIG. 3, n). At least two rows can be seen, set quite closely together.

2. Single, virtually horizontal, rows of square to oval impressions, spaced 0.5-1 mm apart laterally, the rows being spaced 3-4 mm apart vertically. On the basis of the extant rows, it appears that the impressions are spaced so that each dot in one row occurs in an intermediate position relative to the dots in the corresponding positions in the rows above and below (FIG. 3, o).

The first decoration type appears to be similar to decorations D43, D43.1 and D43.2 of Group 7a in the Begrawiya-Atbara classification (Smith, 1996: 190-191). However, the parallel is not definite, since the Bayuda sherds do not retain sufficient of the original surface for it to be certain that the complete design is present.

The type specimen for the second decoration is eroded on the surface, so it is only possible to date it on the basis of the motif and its method of execution. Some decoration types giving a similar effect were found on the Begrawiya-Atbara Survey amongst material assignable to the Neolithic, although the latter examples are more clearly in pairs of rows relatively closely-spaced, separated by a wider blank band (Smith, 1996: 178; Pl. 13, 2). Such decoration is similar to some types executed in ‘alternately pivoting stamp’ known from Geili, where sherds with approximately equidistant rows of closely-spaced dots occur (Canova, 1988a: fig. 11, 8). Whilst this decoration is present in Neolithic contexts at Geili and at a number of other sites in the Nile Valley, it can be seen at Shaqadud, for example, that similar decoration types are present in the Mesolithic levels as well. At this site, the decoration type, termed ‘Dotted Straight Line’ (Mohammed-Ali, 1991: 73), occurs at an average percentage of 5.3% per pair of levels through the ‘Neolithic’ levels in which it is present. In comparison, it appears at an average of 3.17% in the ‘Mesolithic’ levels in which it was noted, indicating a greater prevalence in the Neolithic, on the basis of the data presented by Mohammed-Ali (1991: Tables 5-2 and 5-4).

A similar case has been noted in the central Nile Valley sites. Here the technique and the decoration type are known in the Mesolithic, but the technique becomes most prevalent in Neolithic contexts and the general decoration type comprising ‘lines of dots’ reaches relatively high percentages in later Neolithic contexts. Percentages range between 9.7% and 23.5% at some of the main excavated Neolithic sites, such as Kadero (Canova, 1988a: 94-96, 112; Marks and Mohammed-Ali, 1991, Table 11-5; Krzyzaniak 1984). Whilst this evidence indicates that the motif comprising lines of dots on the Bayuda sherd is most likely to represent material of Neolithic date, there is still the possibility of its being earlier, so that it cannot unambiguously support the identification of Neolithic sites.

Napatan

Site 57.2 provided the main sample of ceramics considered to be of Napatan date. This comprises sherds in Fabric OGF1.17. Characteristic forms include, for example, a jar rim, moderately outflaring, with a rounded rim profile (FIG. 2, j). Body sherds
include wheelmade examples with relatively thick walls (c. 1.5 cm) and with a moderate degree of curvature indicating that they come from vessels of appreciable size, c. 24-26 cm in diameter. The number of such sherdS available do not allow reconstruction of a sufficiently large portion of the vessel(s) to clearly indicate the original form, but it is likely that they were large jars or amphorae.

Body sherds in Fabric OGF2.20, most from Site 113.2, exhibit a light orange-brown fired colour, and a fine texture in fabric, characterised by fine voids representing vegetable temper and rare black iron oxide fragments. This fabric is similar to the fabric of Group 11 from the Begrawiya-Atbara Survey (Smith, 1996: 184; n.d.). Sherds of Group 11 had a light greenish-buff exterior zone, and some exhibited a flat type of ribbing. They can be identified as coming from vessels of Egyptian origin. Such vessels with flat ribbing often occur in jar forms having short necks and small handles (Aston, 1996: fig. 224, b), most commonly manufactured during the XXVth-XXXth Dynasties (P.J. Rose, pers. comm. 1997; J.D. Bourriau, pers. comm. 1999). On this basis, given the similarity in fabric to the Egyptian material, the Bayuda sherds can be regarded as generally of Napatan date.

A unique body sherd from a vessel made in a marl clay may represent the only other evidence recovered for the period from the Napatan to the Meroitic. Unfortunately, the date and provenance of the specimen can only be suggested through fabric, since it is too small and eroded to indicate the form of vessel from which it came, or any surface treatment or decoration. The marl clay fabric would be consistent with an Egyptian provenance. It is known from the Late Period, being the fabric of small vessels of the Persian Period occurring in embalmers' caches at Saqqara (J.D. Bourriau, pers. comm. 1999). Since Egyptian control did not extend over the Bayuda region in this period, the sherd must represent material traded into the more southerly areas of Upper Nubia. Whilst the sherd is of interest in terms of the periods to which it may be assigned and its probable provenance well to the north of the Bayuda, further material of this type must be obtained before any more definite conclusions can be drawn.

Meroitic

Sites dateable to the Meroitic period along the line of the Road are mainly identifiable through the forms of the funerary structures apparent on the surface; the proportion of sherds clearly identifiable as being of this period is not large. The most clearly diagnostic material consists of sherds of apparently handmade ‘footed stands’ or ‘offering tables’, so far identified from Sites 171.3 and 59.3, although the latter site are very fragmentary. The sherds consist of rim fragments from very shallow, straight-sided, bowl-like forms, some of which exhibit depressions resulting from the attachment of handles. Pieces of the handles themselves were found in association with the rim sherds (FIG. 2, k) at Site 171.3, although no examples were found of the rim sherds with handles still attached and nor were any of these upper portions of the vessels found attached to a base. These sherds are most likely to come from vessels similar to one type (6:1) encountered on the Begrawiya-Atbara Survey, although in the latter case the vessel was wheelmade (Smith, 1996: fig. 5). Judging from the treatment of the rim and the angle at which the handles appear to have been attached, the Gabolab examples may be closest to the forms of offering table from the West Cemetery at Merro illustrated by Dunham (1963: fig. C, 27, 28).


Medieval Period

Early Christian

The most clearly identifiable ceramics are those dating from the earliest part of the Christian period. These include a ribbed sherd with an orange-red slip (FIG. 3, p) together with a few sherds of thin-walled bowls. One is eroded at the rim, but sufficient is present to indicate that it probably had a slightly asymmetric conical profile in its original state. A sherd of a second bowl has a similar form, but has traces of a white slip on the interior, the exterior being eroded (FIG. 2, 1-m). In terms of form, its stance is generally similar to that of a small open bowl from Old Dongola and it has a similar thickening of the body wall towards the rim, although the rim itself differs in detail. In fabric, the Bayuda specimen cannot be assigned to the Old Dongola production site specifically (Pluskota, 1991: 39; 45, no. 23; pers. comm. 1998).

A few sherds from Site 171.7 form a bowl decorated on the exterior with a diamond-shaped motif infilled with cross-hatching and with a horizontal line extending from it, all in white on a dark brown band (see FIG. 2, n). Similar geometric motifs are known from the early Christian material at Old Dongola. For example, designs incorporating lozenge-shapes infilled with cross-hatching occur on material dated to the ‘Transitional Period’, in the chronology of Adams (1986: fig. 2), and described by Pluskota (1990: fig. 5, top right; bottom row, left). Although these motifs are not identical in detail to the example from the Survey and are in black outline on a white background, they are in essentially the same decorative tradition. Several examples of this type of design appear on small or moderate-sized open bowls from Old Dongola. The best comparison for the motif shown in figure 2, n is with a lozenge-shaped motif, albeit lacking cross-hatching, on a bowl similar to the Survey specimen in that the general wall-thickness becomes greater towards the rim (Pluskota, 1990: fig. 17, bottom row, left; fig. 20). Given the similarities in form and decoration, the Gabolab example can be dated to the ‘Transitional Period’ and thus clearly indicates the presence of sites dating to the earliest part of the Christian period.

Later Christian

Other material from the Survey cannot be so closely dated and, at the current stage of research, can only be assigned generally to the ‘later’ Christian period. Such material includes the neck and rim of a small amphora or pilgrim-flask (FIG. 2, o). Although this is similar in form to some material from the Aswan area, such as that imported to Gabati, or excavated from Elephantine (Smith, 1998a: 184-185, fig. 6.31, 1001; Gempeler, 1992: 184, 199, Pls. 116, 11, Pl. 28, 3), the fabric of the Gabolab Survey example differs from that of Aswan products so that it is most likely to be a Nubian-made vessel. Reasonably close parallels have been noted with types of pilgrim flask from Christian-period contexts in Nubia, such as Type L2 at Ghazali (Shinnie and Chittick, 1961: fig. 17) or Type 18E from Soba (Welsby, 1991: fig. 88). Forms with moderately prominent cordons, similarly narrow interior apertures and similar external profiles are also known from Old Dongola (J. Phillips, pers. comm., 1998).

Examples of sherds representing the largest portions of vessels found, comprise jars with approximately vertical necks and plain rims, and jars with distinctly outflaring rims (FIG. 2, p-s). The remaining portions of the latter do not seem to be sufficiently similar in form to vessels of Class A to be from ‘beer-jars’ as seen at Soba (Welsby,
1991: 165-166). However, they can be quite closely paralleled by some of the other Classes at Soba, being similar to Types such as 51L or 53L in the jars recovered during the 1981-86 excavations. The form illustrated in figure 2, r has some similarities to types 46L and 46.1L from Soba in the degree to which the rim is outflared and in the shape of the neck and rim cross-section, although it has a considerably smaller diameter (Welsby, 1991: Figs. 98, 99; 1998a: fig. 44). The relatively narrow-necked jar with plain rim shown in figure 2, p is of generally similar form to type 7L from Soba, particularly in the shape of the shoulder and the simple, slightly rounded rim. However, the Soba example has a somewhat shorter neck than the Survey vessel, so the correspondence is not exact (Welsby, 1991: fig. 97).

Open forms include a portion of a bowl with moderately-sloping sides. In cross-section the body wall is thickened for about a quarter of its depth below the rim. The latter is distinctive in being relatively broad, with a slight overlap on both exterior and interior, and in being flattened on top with a slightly convex surface (FIG. 2, t). This bowl is generally similar to types at Soba in the range 105N to 112N in overall stance, the degree of slope of the body wall and in the exterior profile at the rim. The wall cross-section, particularly with the flattened rim and the shallow undercut on the exterior below the rim and the thickening of the lower portion, make the Bayuda specimen closest in form to 112N (Welsby, 1991: fig. 109).

Decorations include plastic decoration such as that comprising roughly-executed, partly overlapping oval impressions separated by steep ridges (FIG. 3, q). This type is reasonably well paralleled at Soba in decorations 71.2 and 71.21 (Welsby, 1998a: fig. 60). Such parallels noted in vessel form and in decoration are sufficient to indicate the presence of sites most probably datable to the Christian period in general.

Later Christian and earlier Islamic

Material currently datable only to later medieval times, ranging from the Christian to the early Islamic period, has been recovered from several of the sites. Forms include inturned jars, such as those from Site 117 that have irregular flattened blobs of clay applied to the exterior (FIG. 2, u). These may be a form of plastic decoration, or act as small lugs. Certain of the sherds from Site 115.1 may be assigned a generally 'medieval' date, appearing similar in form and decoration to material from further north belonging to the medieval period (Welsby-Sjöström, pers. comm. 1998). These sherds have a rim cross-section thickened on the interior, with a flattened, somewhat convex top, and a slight lip at the junction of the rim top and the interior wall. Decoration involves a series of flattened 'X'-shaped incised motifs on the top of the rim (FIGS. 2, v and 3, r).

Decoration types that further illustrate the range of those encountered on the Survey are, at present, only assignable to this later medieval period. Decorations in this category include incised motifs, for example, ziggzags in short or long double lines (FIG. 3, s-t), forms of cross-hatched decoration (FIG. 3, u) and fragments of motifs such as that shown in figure 3, v. Plastic decoration includes thick, somewhat angular cordon, with deep oval impressions along them (FIG. 3, w), whilst impressed decorative effects include two of the main types of probable mat impressions noted (FIG. 3, x-y).

Amongst these decorations, that shown in figure 3, t for example has some similarities to decorations known from Soba. Similar types at the latter site include
decoration 52.2 or perhaps 144.2 (Welsby, 1998a: figs. 59 and 66) and so a Christian period date could be postulated. However, the Soba examples are not exact parallels. Given that considerable variation may be expected in apparently quite roughly-executed motifs such as these, general similarities between motifs may not imply contemporaneity. Hence, a date other than that of the context at Soba so far remains a possibility for this class of the Survey material.

Site 50.4 yielded sherds, including body sherds, of thick-walled jars and sherds representing two or three forms of outflaring rim. These sherds can only be from vessels of large size. The former could be from vessels such as zirs, although none of the rim sherds in the collection associated with the body sherds appear close to those of the larger current zir forms. One type of outflared rim (see FIG. 2, w) has some similarities to those of the ‘braziers’, found on the Begrawiya-Atbara Survey, considered characteristic of the later medieval period. Unfortunately, no portion of a base was recovered from the sherds evident on the surface. Hence, it was not possible to confirm the identification of such sherds as ‘braziers’ from the characteristic thick solid foot with ‘finger-holes’ at intervals seen, for example, on specimens from Site 155.3 (NE-36-K/22-F-32) near Khor Shangarite (Mallinson et al., 1996: 88; Smith, 1996: 166, fig. 4). The presence of braziers would indicate a date for the site of 13th-16th centuries, partly on the basis of parallels with Lower Nubia (c.f. Adams, 1986: 426-427) but a later date cannot be excluded.

THE SMALL FINDS

Handaxes

The handaxes, which were all recovered from a single Site, 69.2, form the earliest artefacts encountered on the Survey. They were found in relatively close proximity to each other within the Wadi Muqaddam itself. All appear to have been made on the same raw material, for which a preliminary identification of ferricrete sandstone has been made. Several are rather weathered and have been damaged in antiquity; however, the original shape in most cases can be reconstructed. Those that are most extensively abraded have been retained as part of the overall sample, but have not been included amongst those on which metric analysis has been carried out. Examples of the main shapes in which the handaxes occur are given in figure 4, a-d.

A classification of the handaxes, excluding the two most heavily abraded specimens, was carried out following the procedure developed by Roe (1968: 23-70; 1994: 151-157). This provides a classification of the implements on the basis of measurements reflecting significant aspects of their shape. The measurements taken are: overall length (L), maximum breadth (B), maximum thickness (Th), breadth at one fifth of the length from the tip (B₂), breadth at one fifth of the length from the butt (B₂), thickness at one fifth of the length from the tip (T₁) and length from the butt to the point of maximum breadth (L₁). The measurements are taken to the nearest millimetre, or 0.5 mm in the case of T₁ (Roe, 1994: 153). The ratio between L and L₁ is used to divide the bifaces into three main classes, viz those with B placed low, designated ‘points’,

---

²Thanks are due to Dr. M. White of the Department of Archaeology, University of Cambridge, for suggesting and running this analysis.
those with B placed centrally, designated ‘ovates’ and those with B placed high, designated ‘cleavers’. The values of several other ratios are used to plot individual specimens within each of these classes, to form a representation of the proportions of different shapes of biface comprising an assemblage.

Fig. 4. Examples of the main shapes of the hand axes and a portion of a quern stone from Site 69.2.
Plots of the bifaces from 69.2 are given in figure 5 and a summary of the relevant data in Table 1. From this it can be seen that seven bifaces are classified as points, two as ovates and one as a cleaver. The latter biface, S11, is classed as a cleaver metrically, but it does not have a transverse end of length over half that of the overall breadth of the implement, which is necessary for a biface to be classed typologically as a cleaver (Roe, 1994: 153). S11 would, therefore, be considered typologically as a handaxe with maximum breadth towards the proximal end.

![Fig. 5. Plots giving the shape classification of the hand axes according to the system of Roe.](image)

**Table 1.**

Handaxes from Site 69.2 with ratios of measurements significant for the shape classification of Roe. Plot designations as in Figure 5.

<table>
<thead>
<tr>
<th>Plot</th>
<th>Specimen</th>
<th>B1/B2</th>
<th>B/L</th>
<th>L1/L</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>S01*</td>
<td>0.494737</td>
<td>0.497561</td>
<td>0.278049</td>
<td>Points</td>
</tr>
<tr>
<td></td>
<td>S02</td>
<td>0.533333</td>
<td>0.507813</td>
<td>0.296875</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S04</td>
<td>0.518519</td>
<td>0.477876</td>
<td>0.309735</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S05*</td>
<td>0.373494</td>
<td>0.58</td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S06</td>
<td>0.74026</td>
<td>0.677165</td>
<td>0.338583</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S08</td>
<td>0.533333</td>
<td>0.547486</td>
<td>0.318436</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S09*</td>
<td>0.444444</td>
<td>0.621212</td>
<td>0.227273</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>S03</td>
<td>0.897959</td>
<td>0.592233</td>
<td>0.514563</td>
<td>Ovates</td>
</tr>
<tr>
<td></td>
<td>S12</td>
<td>1.027778</td>
<td>0.720000</td>
<td>0.536000</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>S11</td>
<td>0.966102</td>
<td>0.722772</td>
<td>0.554455</td>
<td>Cleaver</td>
</tr>
</tbody>
</table>
The handaxes have been compared, in terms of morphology, with material from other sites along the Nile Valley. Implements of Acheulean type have been known for some years from locations between the region of Wadi Afu on the White Nile and that of Wadi Halfa (Arkell, 1949b: 2). Much work was done in the latter region by the Combined Prehistoric Expedition during the High Dam Salvage Campaign. The current report will concentrate on the implements for which the closest parallels have been noted amongst the material illustrated by Arkell and that obtained in the Salvage Campaign (Chmielewski, 1968; Guichard and Guichard, 1968; Marks, 1970).

Several of the pointed handaxes have parallels in the Khor Abu Anga. Handaxe S01 is similar in shape to two illustrated from Khor Abu Anga, although it is smaller in overall size. It is generally similar in shape to Khor Abu Anga handaxe 4146, though with a more rounded distal end, and is of comparable size. S01 can also be reasonably well paralleled in both plan and longitudinal cross-section by an example from Lagiya, further to the north in the Dongola Reach (Arkell, 1949b: Pl. 3,1; Pl. 5, 2; Pl. 8, 4; Pl. 25, 1).

The second handaxe recovered (S02) can be paralleled by specimens 4141 and 4553 from Khor Abu Anga. It is closest to the latter in plan and longitudinal cross-section, especially in the slight degree of asymmetry in plan, with the narrowing of the implement from the distal to the proximal ends, beginning nearer to the distal end on one side than the other (Arkell, 1949b: Pl. 8, 5; Pl. 5, 2). Specimen S02 is also reasonably similar in shape to handaxe 5330/1 from Wadi Afu, although the Bayuda example is larger in overall size (Arkell, 1949b: Pl. 19, 1).

In comparison with the material from the Wadi Halfa area, neither S01 nor S02 has clear parallels with specimens illustrated from the site of Arkin 8. Concerning the implements from other sites, the closest in shape appear to be the ‘lanceolates’, particularly the ‘lanceolate with incurved profile’, illustrated from Site 400-S (Guichard and Guichard, 1968: fig. 15, g), although S01 is flaked over a greater proportion of the surfaces than this example. S02 has some similarities in the shape of the distal end to the ‘micoquinian with oval base’ (Guichard and Guichard, 1968: fig. 16, i-m), but its proximal end is not as strongly pointed as in the Wadi Halfa region examples, so that it does not appear to be classifiable as a true ‘micoquinian’.

Handaxe S05 has a distinctive shape, being noticeably narrowed at the proximal end. It approaches the shape of a ‘micoquinian’ type handaxe known in small numbers from Khor Abu Anga. However, in its shape in plan it is reasonably close to an example from Wadi Afu (Arkell, 1949b: 10, Pl. 19, 1, Pl. 12, 2). It also has similarities to some of the ‘micoquinian’ handaxes from the Wadi Halfa area illustrated by Guichard and Guichard (1968: fig. 16, i), but its point is less pronounced than in most examples from this region, being less narrow in relation to the width of the distal end. In terms of the bifaces from this northern area, it is closest to some specimens of ‘lanceolate with incurved profile’, particularly those that are only slightly asymmetric in plan (Guichard and Guichard, 1968: fig. 15, c).

The sixth handaxe (S06) is rather irregular in shape and appears to have been damaged on one side in antiquity. Its shape in plan is paralleled in general terms at Khor Abu Anga by implements mainly considered by Arkell to be typologically Late Acheulean in date (Arkell, 1949b: 7; Pl. 6, 1, 2, 4; Pl. 7, 2). The Bayuda example does not conform to the Khor Abu Anga examples in all respects, since it is not thinned
uniformly from the thickest point down to the proximal end as are the form specimens, but retains the same thickness until just before the point. The only type illustrated by Arkell having a similar longitudinal cross-section is one from Sai Island, which is fairly similar in plan. However, the Bayuda specimen appears to have more flakes removed and to have a more extensively worked butt than does the handaxe from Sai (Arkell, 1949b: 43, Pl. 27, 3).

When compared with the bifaces from the northern area, S06 does not have any exact parallel at the sites published by the Guichards. Its general shape in plan is closest to that of a ‘nucleiform’, although in cross-section it appears thicker towards the proximal and distal ends than the illustrated example. It has some similarities with the ‘cordiform’ type, but the distal end is too convex for this to be a close parallel (cf. Guichard and Guichard, 1968: fig. 14, d; fig. 14, f). However, it is reasonably close to one of the types classed as ‘cordiform’ from Arkin 8 (Chmielewski, 1968: fig. 13, 1a-c).

Handaxes S08 and S09 are also slightly asymmetric, with a distinct point, but one that is not emphasised sufficiently for them to be ‘Micoquian’. Both have forms with reasonably close parallels in the southern and the northern areas, and so seem to belong to a type with a wide distribution. They have more parallels at Khor Abu Anga in the general form than does S06. Examples given as 4411, 4319/1 and 5055 from Khor Abu Anga have a reasonably similar form, with a moderate degree of asymmetry, although the specimen numbered 5055 is incomplete. However, the specific features of S09, especially the slight narrowing of the proximal end being more evident on one side than the other, leads to this implement being closest to one of the handaxes from Wadi Afu rather than closest to the material from Khor Abu Anga (Arkell, 1949b: Pl. 3, 1; Pl. 5, 1; Pl. 12, 1).

S08 and S09 are similar to some of the ‘lanceolate’ types from the Wadi Halfa area. In particular, S09 has good parallels at Arkin 8 in a ‘lanceolate’ with a rather straight distal end (Chmielewski, 1968: fig. 14, 3a-b). Both have similarities with ‘lanceolates’ from some of the other Wadi Halfa sites, such as the ‘lanceolate with incurved profile’ from Site 400-S, which has a comparable shape overall, including a slight degree of asymmetry, and very similar proportions (Guichard and Guichard, 1968: fig. 15, g). S08 has some similarities to the ‘lanceolate’ type illustrated from Site 400-N (Guichard and Guichard, 1968: fig. 15, c) in the shape of the distal end but is slightly wider in proportion to its length.

Concerning the ovate handaxes and the ‘cleaver’ (S11), the closest parallels in overall shape noted are for S10, although this find is amongst the more heavily abraded of the sample. It is very similar in plan to an ovate from Layer 6 at Khor Abu Anga, although it is smaller in overall size and is slightly thicker in cross-section (Arkell, 1949b: 8-9; Pl. 11, 3). S10 does not appear so close to the Arkin 8 material as to that from Khor Abu Anga in shape, since it appears to be more carefully shaped into a narrower proximal end than those illustrated from the former site. This feature means that it does not fall within the definition of a true oval according to Guichard and Guichard (1968: 156), but is closer to the shape of the ‘ovaloids’ from the other sites in the northern area.

Handaxes S03 and S11 have no close parallels to the material illustrated by Arkell in overall shape in plan, but are generally similar in type to an oval, somewhat irregular and roughly-flaked handaxe from Khor Abu Anga, which appears to be from a surface
collection considered to be associated with in situ material of Late Acheulean date, although the Bayuda specimen is somewhat thinner in cross-section than S11 (Arkell, 1949b: 8; Pl. 10, 2).

Both S03 and S11 are similar to types of ovate recognised at Arkin 8, in the Wadi Halfa region. The closest type is one having extensive bifacial retouch, rather than the first type noted, having little or no retouch on one side. There are similarities also evident amongst some of the ovates from Arkin 8 in the relative straightness of the edges and in the slight degree of asymmetry in the longitudinal cross-section (Chmielewski, 1968: 121, figs 9, 2a-c and 10, 1a-c). In comparison to bifaces from the other sites in the Wadi Halfa area, S03, although generally of oval form, is not a true 'limand', since it is shorter in proportions relative to its width, and has approximately the same width at each end, in contrast to the main illustrated example (Guichard and Guichard, 1968: fig. 15, d). Its closest parallel is with types of 'oval' or 'ovaloid' -types having some similarities to those from Khor Abu Anga- although its biconvexity is rather less pronounced than in the illustrated example from Lower Nubia (Guichard and Guichard, 1968: fig. 18, a).

Overall, the sample of bifaces collected from 69.2 can be considered as 'classic' Acheulean in type. On this basis the assemblage would be assignable to a period equivalent to the 'Nubian Early Stone Age' identified in Lower Nubia (Marks, 1970: 18, 23). It may be noted that one characteristic of the Nubian Early Stone Age is the high ratio of bifaces in comparison to other tools and that the number of handaxes from 69.2 is larger than the numbers given from single sites of both Early and Middle Stone Age date investigated by the Scandinavian Joint Expedition (Marks, 1970: 23-24). Whilst further work will be necessary to confirm this dating, the handaxes provide evidence for some form of occupation along the present line of the Wadi Muqaddam as early as the Lower Palaeolithic.

Other lithic tools

Many sites also yielded collections of lithics on materials such as chert or quartzite. These have not been studied in detail. Those from Sites 115.1 and 61.3, for instance, may in general be compared to types found on other Early Khartoum-related sites. Forms include bladelets (trapeze), lunates and various flakes.

Ground stone artefacts

Grindstones were recovered from a dozen sites along the survey line, ranging from Site 125.2 towards Ganetti to Site 32.2 towards Omdurman. The largest single collections were from Sites 115.1 and 61.3, the total of complete or fragmentary grindstones from the former Site, for example, reached about twenty items. The majority of the grindstones from all the sites were in a stone for which a preliminary identification of grey sandstone has been made, although a few were found in other rock types.

Numerous fragments were found of grindstones having either one convex and one concave face, or one nearly flat and one sloping face (FIG. 4, e). These are considered to be 'lower grindstones' or 'quern stones'. The other pieces recovered are thought to be
the corresponding 'upper grindstones' or 'rubbers'; several complete examples were found. In terms of shape, most could be described as falling into three main categories, the first two having an approximately rectangular cross-section, but one being oval in plan and the other circular in plan, the third being roughly oval in both plan and cross-section (see FIG. 6, a-c). A proportion of the grindstones fell into a class intermediate between these types. Sizes of examples considered to be substantially complete ranged from c. 5 x 4 x 4 cm to c. 14 x 10 x 7 cm.

Groundstone artefacts other than grindstones were relatively rare. Examples of one type, comprising stone disks with roughly hemi-spherical depressions in the centre of each face were recovered from Site 61.3 (see FIG. 6, d). These have been identified as unfinished stone rings, on the basis of similarity to artefacts from a site in the Wadi Kenger, classed as such by the excavators (Caneva and Gautier, 1994: 76).

It has not proved possible, at the present stage of the research, to provide a close date for the main occurrences of the groundstone artefacts, since the majority comprise grindstones which have tended to retain similar forms over long periods (cf. Caneva, 1988a: 141). For example, neither 102.1/S01 nor 74.1/S01 (FIG. 6, a-b) were from sites yielding diagnostic pottery in the surface collection. The former grindstone can be paralleled at the type site of the ‘Khartoum Mesolithic’ at the Khartoum Hospital site in sandstone grinders with two flat faces, having an oval plan and an elongated rectangular cross-section, whilst 74.1/S01 is fairly similar in its proportion of length to depth to another example, with one concave side (Arkell, 1949a: Pl. 31, 2; Pl. 29, 7). Equally, quite similar types of ‘upper grinder’ are known from the Neolithic of Geili (Caneva, 1988a: fig. 33), although the specimen illustrated with an oval plan has one face more strongly convex than either face of 74.1/S01. Both Sites 102.1 and 74.1 are considered to have use dating from the post-Meroitic or Christian periods, on the basis of the structures visible on the surface.

The small grindstone (FIG. 6, c) from Site 115.1, which is generally dated to the ‘Khartoum Mesolithic’ on ceramic evidence, can also be paralleled at the Khartoum Hospital site. Disk grinders on sandstone of similar size, shape in plan, and having an irregular oval shape in cross-section similar to examples from 115.1 have been illustrated by Arkell (1949a: Pl. 32, 1 and 4). However, ‘rubbers’ of similar discoid shape are also known from Christian period contexts at Soba (Shinnie, 1955: Pl. XXIV). In general, it can only be assumed that the grindstones can be dated to the same period(s) as indicated by the surface ceramics and structural evidence at a particular site, but the possibility that they represent a period of use of the site not otherwise attested, particularly by surface remains, must be kept in mind.

The unfinished stone rings can be dated on the basis of parallels with other sites, since they are one of the artefacts considered to occur usually in a Mesolithic context (Caneva and Gautier, 1994: 76). Those from Sites 115.1 and 61.3 are clearly most probably of Mesolithic date, according to the ceramics associated with them, and this dating may be supported by the presence of stone rings at a similar stage of manufacture, with the holes partly-bored from each face, at the Khartoum Hospital site (Arkell, 1949a: Pl. 34, 1 and 2, right).
FIG. 6. EXAMPLES OF GRINDSTONES, THE THUMB RING AND THE MAIN TYPES OF BEADS.
Thumb ring

A portion of a thumb ring was recovered from Site 59.3, which also yielded some of the probable Meroitic ‘offering table’ sherds. In terms of its present size, the thumb-ring is 3.2 cm long, with a maximum diameter of 3.8 cm, thus having proportions of length to diameter approaching 1:1 (FIG. 6, e). It is noticeably straight-sided, without a strong convex curve between the narrow and the wide end. In terms of Hayes classification, it appears nearest to Type II, a type considered to be an archer’s loose, rather than ring or mace-head. Hayes’ chronology would place this type in the period c. 100 BC - c. 200 AD (Hayes, 1973: 114-116, fig. 4). According to Williams, the characteristic form of the archer’s loose during the X-Group period in Lower Nubia, at least, was one longer in proportion than those common in the Meroitic and with concave rather than straight sides (Williams, 1991: 86). Those examples illustrated from the X-Group cemeteries at Qustul and Ballana all exhibit more strongly concave sides than the Bayuda specimen apart from one (Q149-3) which has straighter sides. This example is closer in general shape to the one from Site 59.3, but it is longer in relation to the diameter (Williams, 1991: figs. 150, d: 152, b; 157, b 186, a; 161, b). On this basis, the Survey example is closer to the Meroitic forms than to the post-Meroitic ones.

The thumb ring can, however, be reasonably closely paralleled at a number of sites which may be dated to a period other than the Meroitic. It is similar, for example, to a specimen also having straight sides from pit 20 in site 195 at Faras. Although this pit is not dated specifically, the cemetery as a whole is considered to belong mainly to the ‘X-Group’ period (Säve-Söderbergh, Englund and Nordström, 1981: 65-66, Pl. 95, 1). A further specimen having a similar straight profile and proportions of height to maximum diameter was recently recovered from the shaft fill of a ‘Post-Meroitic’ tumulus containing early Christian material at Hammur el-Abbassia during the Southern Dongola Reach Survey (J. Phillips, pers. comm., 1998; Mahmoud, 1998a: 37).3

A number of thumb rings have been recovered from generally Christian-period contexts at Soba. For example, one specimen of a Hayes Type II thumb ring was found in the excavations conducted by Shinnie (1955: Pl. XX, a), whilst several specimens were found in the later excavations. Amongst those thumb rings having a straight rather than concave exterior profile, the closest to the Survey specimen in shape and in the proportions of length to maximum diameter are object nos. 228 and 230, made in coloured claystone and sandstone respectively (Allason-Jones, 1998: 76; fig. 32). A further thumb ring of quite similar form was recovered from the trial trenches at Soba. This example is close in shape to the Survey one, having an approximately straight exterior profile, with a very slight convexity and a rounded margin at the wider end. Although it is slightly greater in maximum diameter in relation to the length than that from Site 59.3, it has a very similar angle of slope on the exterior from the wider to narrower end (Allason-Jones, 1991a: 163; fig. 81, 496). Some other thumb rings of Hayes Type II were found during excavations at the Western end of Mound B. These have been given generally the dating assigned by Hayes for this Type; however,

3 I am indebted to Dr. B. Zurawski of the Polish Academy of Sciences Centre for Mediterranean Archaeology, Director of the Southern Dongola Reach Survey, for permission to cite this unpublished artefact. The tumulus was excavated by Dr. Mahmoud el-Tayeb, who uses the term ‘Early Makurian’ for post-Meroitic pre-Christian material in the Dongola Reach (Mahmoud, 1998b).
Allason-Jones suggests that either they were re-used in the context in which they were found, or that they were made at a later period than their Type would suggest (Allason-Jones, 1991b: 147). These considerations indicate that the Meroitic is the most likely period to which the thumb ring may be assigned but that, at the present stage of research on this class of artefact in general, a later dating cannot be excluded.

Beads

A small number of beads were recovered in the surface collections, from four sites. The beads have been classed according to the shape typology of Beck (1928); by which most are disk beads. These beads are generally made of a type of eggshell, most probably ostrich eggshell (FIG. 6, f-g). In their present state, they range in size from c. 4.6 mm to c. 10.5 mm in diameter, though some appear to be eroded. The majority are consistently between 1.5 and 1.7 mm in length. Whilst it may be assumed that the disk beads were intended to be generally discoid in shape, variations in their shape in plan and in the shape of the profile mean that they range from Beck Class I.A.1.b to I.A.4.f.b or I.A.4.d.b in form. A single example, from Site 171.4, was recovered which is closest to Beck Class I.D.4.f.b, this being a rather irregular cylindrical bead with rounded ends, made of greenish-blue faience (FIG. 6, h).

These beads are not of types that can be readily dated. Disk beads of eggshell or mollusc shell have been found at sites ranging in date from the Khartoum Mesolithic to the Christian period (Arkell, 1949a: Pl. 9, 3-5; Allason-Jones, 1998: 68). Caneva has noted a distinction between the prehistoric and the Meroitic beads at Geili, the former being ring shaped with a conical perforation whilst the latter are disk shaped with a cylindrical perforation. Most of the eggshell beads appear closest to 'disk with cylindrical perforation' and one, from Site 179.1, is nearer a ring with a conical perforation. Four beads from Site 208.1 are similar to Meroitic examples illustrated from Geili (Caneva, 1988b: 167, 199, fig. 25, b).

Two faience beads of the same shape and similar colour to that from Site 171.4, although slightly larger in overall size (Smith, 1998b: 230; fig. 10, 60), were recovered from the fill of a tumulus at Gabati dated to the post-Meroitic period. This date may, therefore, be taken as a terminus post quem for the Gabolab example and indicates a likely date for the Bayuda specimen. Turquoise 'cylinder beads' were recovered from several contexts at Soba. These are mostly within structures for which the main dating evidence places them in the Transitional and Early Christian periods (c. 4th-7th century AD), though one building has probable squatter occupation later in the Christian period (Allason-Jones, 1998: 68-69; Welsby, 1998b: 271-273).

CONCLUSIONS

Dating of sites

A summary of the presence or absence of ceramics currently assigned to the various chronological periods is given in Table 2. From this, it can be seen that sites can be dated, according to the surface artefactual evidence, to five main periods, viz the prehistoric (Palaeolithic, Khartoum Mesolithic and possibly Neolithic), Napatan, Meroitic, Christian and earlier Islamic. This tends to confirm that the route surveyed
across the Bayuda from the junction of the Blue and the White Nile to near the southern end of the present-day Dongola Reach has been of significance in movement north and south through Upper Nubia over a long period. Probable habitation sites are currently dated to a range of periods; for instance, Site 115.1 to the Mesolithic, or Site 54.3 to the Christian period, whilst the numerous burial sites, in several cases containing a substantial number of tumuli, are associated with material of the protohistoric and historic periods. This evidence indicates that the area crossed by the route of the Shariyat Shemal, substantially coincident with the Wadi Muqaddam, has also been of importance for settlement during much of the past.

**TABLE 2.**

Presence and absence of material assigned to the different chronological periods.

* indicates artefacts found clearly assignable to the period, (?) indicates artefacts recovered probably assignable to the period.

<table>
<thead>
<tr>
<th>Palaeolithic</th>
<th>Mesolithic</th>
<th>Neolithic</th>
<th>Late Neolithic/IIId Millennium</th>
<th>Egyptian Middle Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>*</td>
<td>(?)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egyptian New Kingdom</td>
<td>Egyptian Late Kingdom</td>
<td>Napatan</td>
<td>Meroitic</td>
<td>Post-Meroitic</td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Early Christian</td>
<td>Christian</td>
<td>Islamic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Evidence for contacts with other areas**

There are two types of evidence for the Bayuda having been linked in to other areas: evidence for participation in styles of artefact decoration that are known from broader regions, as may be hypothesised in the case of the Mesolithic material, and more specific evidence for the movement of artefacts into the Bayuda, which is available mainly for the Napatan, Meroitic and early Christian periods. Evidence so far noted for the second of these periods comprises only a small number of sherds. The material in Fabric OGF4.2 is likely to be an Aswani fabric (cf. Adams, 1986: 525-546), or a specimen of a pinkish-fired variant of the Meroitic fine ware fabric, Family M, or Type F (Adams, 1986: 435-436; Shinnie and Bradley, 1980: 154-155). This variant appears to be characteristic of the Lower Nubian production of these wares (cf. Smith, 1997: 87). In either case, the sherd clearly attests to the movement of ceramics into the Bayuda from the far northern areas of Nubia during the Meroitic period and may, furthermore, indicate one route for the transport of fine ceramics into or from the southernmost parts of the Meroitic lands.

**Potential for future research**

Table 2 shows that there are three main chronological periods for which no clear ceramic evidence has been identified so far. The first of these periods is that equivalent to the ‘Late Neolithic’ of Shaqadud (Robertson, 1991), to which the ‘IIId Millennium’
material recovered on the Begrawiya-Atbara Survey is stylistically similar (Smith, 1996: 189-190). The second period is that of the Egyptian New Kingdom, material from which might have been expected given the extent of Egyptian influence, at that time, in the riverine areas to the north and north-east. The third period is the post-Meroitic.

It is evident, therefore, that there is considerable scope for further research. The questions of the attribution of the material assigned only to very broad periods will be addressed in the preparation of the report for final publication of the 1997 Survey. The questions regarding the apparent absence of artefactual material from certain periods, and the different hypotheses that can be put forward in explanation, will form the basis for further survey and test excavations along this route across the Bayuda, now systematically surveyed for the first time.

ACKNOWLEDGEMENTS

I am grateful to the staff of the National Corporation for Antiquities and Museums, Sudan, for all the assistance during the preparation and carrying out of the Survey, in particular to Dr. Hassan Hussein Idris, Director General of Antiquities, to Dr. Salah Mohammed Ahmed, Director of Fieldwork and to our Inspector, Mr. Abdel Rahman Ali Mohammed. Funding for the Survey is gratefully acknowledged from the Sudan Archaeological Research Society and the Haycock Memorial Fund of the British Institute in Eastern Africa. The project received much assistance from Mr. D. Sloan and staff of the British Council in Khartoum.

Artefacts illustrated in this article were drawn in the field and inked by Mr. A. England. The pottery forms and decorations were drawn by the author, whilst the illustrations of decoration types were inked by Ms. J. Doole. Thanks are due to the following for advice and help in the study of both the pottery and the small finds: Ms. J.D. Bourriau, Dr. J. Bunbury, Dr. D.N. Edwards, Prof. J. Harrell, Dr. F. Jesse, Dr. B. Keding, Dr. J. Phillips, Dr. K. Pluskota, Dr. P.J. Rose, Dr. D. Usai (to whom I am also grateful for permission to cite an unpublished reference), Dr. D.A. Welsby, Dr. M. White, Ms. I. Welsby-Sjöström and Dr. B. Zurawski.

REFERENCES


A new University of California project began work from January to March 1997 with a reconnaissance survey on the West Bank of the Nile running from Hannek to Khandaq. A very short season was undertaken in January 1998, revisiting some sites and completing the survey from Akkad to Hannek. The reconnaissance was accomplished by a combination of vehicle and foot survey. Most sites were sampled by surface collection of diagnostic sherds and other artifacts. At the end of the project, sites that were potentially threatened by development were protected through the notification of the individuals concerned and local authorities, and through the posting of signs on a Christian settlement at Sahaba, two of the Teiti churches, a Kerma settlement at Khandaq, a Neolithic cemetery at Sori, churches at Gharb Benna and Koya, and the main rock outcrop at Akkad.

Areas investigated covered three basic zones, i.e. inundated land next to the river, the desert margin and desert proper (PLATE I, a). The first two zones were narrow in the southern half of the concession, with the inundated land disappearing altogether at Wad Nimeiri, Sahaba and Khandaq. The area closest to the river was usually under heavy cultivation and therefore inaccessible. A few brief examinations turned up no evidence of ancient occupation, not surprising considering that the rich alluvial soils of this inundated land were probably always used for agriculture. Most of the sites found during the survey were located at the desert margin on a low sandy and/or silty plain with scattered ancient alluvial deposits or on low hills overlooking the floodplain. Walking survey was employed extensively here. Although this area is currently being developed for agriculture and settlement, many open areas still remained to investigate and it was possible in some cases to examine uncultivated fields for evidence of ancient occupations. The area from Dongola to Akkad, however, is under heavy development from large-scale irrigation schemes. The dense concentration of fields and settlement severely limited site survival and visibility. Where possible, open areas were walked in transects but these opportunities were extremely limited since the whole area was under cultivation at the time of the survey, explaining the small number of sites identified. The desert proper consisted of an undulating plain covered by gravel and cobbles with occasional ferracritic sandstone outcrops. Survey here was mostly by vehicle and, while archeological visibility was good, the area was mostly barren. A brief reconnaissance

---

1 University of California Santa Barbara.
was made to the Wadi el-Qa'ab, where the cobbled surface turns into sandy desert with ferracritic sandstone mountains and dunes. The desert between Dongola and the Wadi el-Qa'ab was apparently barren, although evidence of ancient lakebeds and Neolithic and Islamic occupation was found in the Wadi el-Qa'ab itself.

The project located 95 previously unrecorded sites and re-identified and more precisely located six sites identified in the earlier Edwards and Osman survey (1994) at Hannek. Jacques Reinold (personal communication, 1997) had made a brief reconnaissance from Hannek to Dongola, but he found few sites for the reasons noted above. The area from Dongola to Khandaq had never been systematically surveyed. A total of 135 occupation phases ranging from the Neolithic to Islamic period were identified using diagnostic ceramics and architecture (TABLE 1 and FIG. 1). The following sections summarize the results for the different time periods, starting with the Islamic period and ending with the Neolithic, and finish with a consideration on the rock art sites from all periods.

<table>
<thead>
<tr>
<th>TABLE 1: Periods Represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neolithic</td>
</tr>
<tr>
<td>Kerma</td>
</tr>
<tr>
<td>Kerma/Pharaonic</td>
</tr>
<tr>
<td>Meroitic</td>
</tr>
<tr>
<td>Christian</td>
</tr>
<tr>
<td>Islamic</td>
</tr>
<tr>
<td>Rock Art</td>
</tr>
<tr>
<td>Unknown</td>
</tr>
</tbody>
</table>

**ISLAMIC**

Islamic occupation was intense throughout the concession with forty sites identified, including an occupation scatter, settlements, diffi (fortified mansions), qasr (fortresses) and two kinds of funerary monuments, qubbas and rectangular hilltop tombs with vaulted sub-structures (TABLE 2, PLATE 1, a). The latter were restricted to the southernmost part of the concession, with four on rock outcrops overlooking Urbi, one at Sali and two at Khandaq. Qubbas were the most common funerary monument, consisting of three types, stepped, domed (apparently the most recent style) and rare pyramidal. The last occurs only at Wad Nimeiri, the only site with examples of all three types. Groundstone fragments were common at Islamic sites, fragments of Turkish pipes were found at several sites and a ceramic spindle whorl cut from a potsherd was found at Qasr Wad Nimeiri.

<table>
<thead>
<tr>
<th>TABLE 2: Islamic Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation Scatter</td>
</tr>
<tr>
<td>Settlement</td>
</tr>
<tr>
<td>Diffi</td>
</tr>
<tr>
<td>Qasr</td>
</tr>
<tr>
<td>Qubba</td>
</tr>
<tr>
<td>Hilltop Tomb</td>
</tr>
</tbody>
</table>
Fig. 1. Sites examined within the Survey Concession.
Qasr Wad Nimeiri has a particularly complex construction history, with over a dozen superimposed building/repair phases noted. Diagnostic ceramics indicate an occupation from the 14th to 16th centuries. A sherd of European late 19th century ironstone with a blue transfer print in the classic ‘willow’ pattern was also found at Nimeiri, attesting to the long occupation and prosperity of this important fortress. Additionally, a copper Egyptian 5-piastres coin found there is dated 1898, perhaps dropped there by a soldier during Kitchener’s Omdurman campaign. The site also included a large area of extramural settlement on the south and west sides of the fortress, with substantial buildings made of mud brick and stone masonry. The extensive cemeteries surrounding the fortress and settlement contained an impressive cluster of twenty-four qubbas; some placed well out into the desert.

Although not as well preserved, Qasr Khandaq is the best constructed and oldest of the fortresses. Ceramics show that it goes back to the Christian era and a concentration of red brick in the middle of the denuded eastern half of the fortress may indicate the presence of a church. Buttressing noted at Qasr Khandaq and Wad Nimeiri was perhaps meant to absorb the effects of cannon fire introduced during the Egyptian conquest of the Sudan in 1821 (Holt and Daly, 1988: 47-52). The desert fortress at El Kab was perhaps connected to the famous Darb al-Arba‘in (Forty Day’s Road), a key route during this period funnelling camels with valuable trade goods into Egypt (Holt and Daly, 1988: 9-11). The combination of red and gray clay in Turkish pipe bowls found at this hilltop site suggests a date at the end of the 17th century, since red clay was adopted for pipes at that time and became ubiquitous from the 18th century onwards (Robinson, 1983). Its large open enclosures, which showed little evidence of permanent occupation, could have been used as a caravanseraï, serving as a secure place for encampments and the short-term storage of commodities and/or livestock.

---

2 FIG. 2, C, cf., Adams, 1986: 251, Fig. 202, 20-1; FIG. 2, A and B, Whitcomb, personal communication 1999; cf., for FIG. 2, B, Cuik and Kecall, 1996; Plate 95/48 a-g, their phase Islam 5, c. AD 1350-1550.
CHRISTIAN

The distribution of Christian sites is dense throughout the concession, including sherd scatters indicating occupation, settlements, cemeteries and churches (TABLE 3), one of which is still partly standing (FIG. 3, A and PLATE I, b). Ceramics indicated a range of dates from early Christian period down to the transition to Islamic rule. Settlements show evidence of both mud brick and dry stone construction. One interesting early settlement with the remains of ovoid dry stone foundations lies on the desert plateau at Sahaba. Pottery from this site shows an affinity to early pottery from Dongola and late Roman red slip ware (PLATE II, a, cf. Pluskota, 1990; Daszkeiwicz and Rabe, 1990). Groundstone was common on these sites and a spindle whorl cut from a potsherd was found at Sahaba. Distinctive bases and rims of qadus, water jars designed for the saqia or water wheel, were common, pointing to the extensive use of irrigation agriculture in the region.

<table>
<thead>
<tr>
<th>TABLE 3: Christian Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation Scatter</td>
</tr>
<tr>
<td>Settlement</td>
</tr>
<tr>
<td>Church</td>
</tr>
<tr>
<td>Cemetery?</td>
</tr>
</tbody>
</table>
Red brick mounds at Surtot, Sahaba, Teiti (2 examples), Qasr Khandaq, Gharb Benna and Koya (2 examples) indicate the presence of churches. The height of the mounds at Sahaba and Teiti indicates the likelihood of well-preserved architecture. One of the church sites at Teiti produced an inscribed ceramic fragment, apparently part of a cross (FIG. 3, B). The appearance of fine plaster in the surface debris almost certainly indicates that murals lie beneath the mounds of brick and sand found by the expedition. In addition to the red brick mounds, another site at Teiti has a partly standing mud brick church lying next to a substantial settlement kom (PLATE I, b; FIG. 3, A). The vaulting of the nave has collapsed, but an arched doorway remains between the baptistery and the apse. Including the last, five of these churches were located in the Sahaba to Teiti area, which curiously had some of the narrowest cultivation and desert margin in the concession, so even with the use of a saqia very little land would have been available for agriculture. These communities may have exploited islands in the river like those used by farmers in the area today and perhaps also served villages exploiting the wider cultivation on East Bank opposite (Welsby, 1996).

**MEROITIC**

No evidence of Meroitic activity was found south of Akkad. This perhaps indicates that the West Bank was abandoned or only very lightly occupied during this time, although Derek Welsby (1996) reports Meroitic occupation on the east bank opposite the southern part of the survey area. Marks from iron chisels and the pattern of closely spaced wedge incisions on quarried granite at Akkad is consistent with Meroitic techniques documented by James Harrell on the east bank and islands at Tombos (PLATE II, b; see Harrell, 1999). Meroitic graffito and one cursive inscription were identified very close to the actual quarrying. Some of the numerous animal graffito found at this extensive rock art site are also doubtless Meroitic, notably geese and a lion found near the quarry. Pottery found at the granite outcrops at Akkad also demonstrated evidence of Christian, Kerma and Neolithic occupations. Some possible Meroitic sherds were identified, but no diagnostic pottery was found.

**KERMA, PHARAONIC, NAPATAN**

Although not as numerous as the Christian and Islamic periods (TABLE 1), Kerma sites were well represented throughout the concession, including occupation scatters, settlements and cemeteries, some with characteristic oval tumuli (TABLE 4). The distribution of sites was thin but regular, spread throughout the concession. A gap in Kerma sites between Sahaba and Sori corresponds to the narrow river noted above and may indicate that the islands cultivated today had not yet appeared, or that saqia technology was always necessary for cultivation in this area. The low number of sites found between Dongola and Akkad reflects the modern development noted above rather than an actual absence of settlement. Kerma sites reappeared regularly once the irrigation schemes ended at North Akkad. Most Kerma settlements consisted of concentrations of sherds, groundstone and occasionally lithics and other artifacts. There was no obvious evidence of structures, with the exception of several large stone casemate foundations at Hannek. Kerma cemeteries were rare and distinct superstructures appeared only at Sahaba and Hannek.
TABLE 4: Kerma and New Kingdom/Napatan Sites

<table>
<thead>
<tr>
<th>Occupation Scatter</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement</td>
<td>5</td>
</tr>
<tr>
<td>Cemetery</td>
<td>4</td>
</tr>
</tbody>
</table>

TABLE 5: Kerma Sites by Period

<table>
<thead>
<tr>
<th>Kerma Ancien</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerma Moyen</td>
<td>3</td>
</tr>
<tr>
<td>Kerma Classique</td>
<td>14</td>
</tr>
<tr>
<td>New Kingdom/Napatan</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Apparent Continuities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neolithic to Kerma</td>
</tr>
<tr>
<td>Kerma Ancien to Classique</td>
</tr>
<tr>
<td>Kerma Moyen to Classique</td>
</tr>
<tr>
<td>Kerma Classique to Napatan</td>
</tr>
</tbody>
</table>

Ceramics show that all phases of the Kerma culture were represented, from Ancien to Classique, although the latter dominated (TABLE 5; FIG. 4 and 6 E-F)\(^3\). A small fine toothed stone rocker stamp found in a Kerma settlement at Surtot (Ancien to Classique) was likely used to decorate pottery. Two Kerma Classique sherds were ground into ‘buttons’ pierced with holes. Their use is uncertain, possibly as a spinning toy. Groundstone and chipped flint tools were common at these sites. The Egyptian style New Kingdom and Napatan wheel made pottery includes both Nile Silt (FIG. 5, B, D) and imported Marl fabrics (FIG. 5, C)\(^4\).

![Fig. 4. Kerma Classical Pottery](image)

(B, C and F from Sahaba; D, E and H from the Sahaba cemetery; G from Surtot).

Several sites contained a range of Kerma pottery, suggesting continuities from the Neolithic to the Kerma Ancien, Ancien to Moyen, Moyen to Classique. A mixture of diagnostic Egyptian and Nubian ceramics in a cemetery at Sahaba, and a settlement and

---

\(^3\) See Gratien 1978; Lacovara 1987.

\(^4\) For fabrics see Bourriaud and Arnold 1998.
a cemetery at Hannek indicated that they overlapped with the New Kingdom and the Napatan period. Surprisingly, no actual Egyptian colonial sites were found during the survey, confirming a pattern already noted by Derek Welsby (1996) for the Wadi el Khowi, Jacques Reinold (1993) for the Kerma basin and Krys Grzymski (1987) for the Letti Basin. The lack of Egyptian colonial sites throughout the Dongola Reach rules out for Upper Nubia the massive intervention and acculturation seen farther north in Lower Nubia.

**FIG. 5.**
A HANDMADE BOWL (A) AND EGYPTIAN STYLE POTTERY (B-D) FROM THE CEMETERY AT SAHABA.

**NEOLITHIC**

Neolithic sites were concentrated at both the northern and southern ends of the concession, although this may be more the result of preservation than original settlement pattern, certainly for the stretch between Dongola and Akkad. A handful of Neolithic sites included a Kerma component as well, suggesting continuity of occupation. The presence of large sherds and bone eroding out of alluvial deposits, along with possible pitting, suggests that most of these sites were cemeteries. Other finds at Neolithic sites include groundstone, ostrich eggshell, reflecting a food source or perhaps the raw material for bead making, and flint tools. Red mounds indicating some sort of burning episode like those reported by Jacques Reinold (1993) were often associated with cemeteries. These features tend to be ovoid and concave, with impressions of organic material in the burnt clay. As noted above, a brief reconnaissance was made into the Wadi el-Qa‘ab, where evidence of a Neolithic occupation was also found. The presence of shellfish remains over a wide area indicate the presence of an old Nile channel and perhaps later seasonal lakes (Marcolongo and Surian, 1997). Thousands of years ago, these bodies of water helped make central Sudan a rich environment supporting a large population ranging across what is now barren desert (Keding, 1997). A finely crafted bifacially flaked flint spear or javelin
point, groundstone and bone from large fish were recovered. Although no Neolithic pottery was found, the brief nature of the reconnaissance did not allow for extensive investigation.

<table>
<thead>
<tr>
<th>TABLE 6: Neolithic Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation Scatter</td>
</tr>
<tr>
<td>Settlement</td>
</tr>
<tr>
<td>Cemetery</td>
</tr>
</tbody>
</table>

Pottery of the Neolithic was made from fine sandy clay and decorated with distinctive rocker-stamped and impressed designs (FIG. 6, A-D). A pattern with scalloped rocker stamp designs that would have covered the entire surface of the vessel is very common on these sites (FIG. 6, C, D; cf. Geus, 1986: Pl. VI). Another common design uses a comb stamp or roulette to make an even pattern of dots. Similar patterns are found north at Sai and south at Saheinab and Shaqadud in strata dating from 3600-3000 BC (Geus, 1995; Robertson, 1991; Caneva, 1991, 1995; Smith, 1997). Parallels also occur in the Laqiya complex in the Wadi Sahel, which lies west of the third cataract in the Sahara. Kuper dates this material from 5000 to 3000 BC (Kuper, 1995). Sherds with fingernail impressions occur at Shaqadud in strata of the later 3rd millennium, roughly equivalent to the Pre-Kerma period (cf. FIG. 6, B and Robertson, 1991; Smith, 1997). Sherds of the Pre-Kerma complex do not appear at any of the sites, suggesting this type's limited range\(^5\).

![Image of pottery designs]

**FIG. 6. POTTERY OF THE NEOLITHIC**
(A, C and D from Akkad; B from Sahaba) and Kerma Ancien (E from Surtot; F from Akkad).

\(^5\) Cf. similar results from the Wadi el Khowi, Welsby 1996.
ROCK ART

The distribution of rock art was to a great extent constrained by the presence or absence of good surfaces for displaying images. Thus, pecked figures appeared at Akkad on the first granite outcrops, while art was sporadic south to Khandaq, concentrated at the few large sandstone outcrops, especially the cliff face at Gebel Hamid Tayy in Sahaba. Christian and Islamic art is usually readily identifiable through the use of writing, monograms, iconography and the presence of camels. As noted above, Meroitic graffiti also occurred, including geese, a reference to the king and Amun, and at least one lion, perhaps a reference to the southern lion god Apedemak. A comparison of the patination on the Islamic, Christian and Meroitic art placed on granite demonstrated that other art on the same or similar surfaces, showing a variety of animals, humans and boats, was much earlier, although whether they were contemporary with the Kerma or Neolithic periods is uncertain. The proximity of both Kerma and Neolithic sites to most of this art may indicate that these sites were used during both periods.

The largest rock art site was located at North Akkad on the first series of granite outcrops that form the third cataract. Images lightly pecked on granite boulders included numerous cows, giraffe, ostriches, other birds, human beings and hunters chasing game with bows. One very interesting heavily patinated scene shows a hunter in a skiff spearing a hippo (FIG. 7), a motif found in Egypt as early as the Naqada I period that is later connected closely with Egyptian Pharaonic kingship rituals and the myth of Horus and Seth (Wilkinson, 1994: 177-179; Säve-Söderbergh, 1953). The occurrence of this motif in Nubia suggests a common origin for this imagery and perhaps the myth itself. In the south, the largest number of graffiti were carved on a sandstone cliff at Gebel Hamid Tayy in Sahaba (FIG. 8). A series of boats are square rigged with pointed prow and stern, thus dating before the introduction of the lateen rigged felucca. Naqada style boats were also found on granite outcrops at Akkad and Hannek. These similarities between specific early Egyptian and Nubian motifs reflect connections farther south than previously known and may represent the presence of shared traditions between formative Egyptian and Nubian culture and religion (Williams, 1991).

![Fig. 7. Hippo Hunt Pecked in Granite from Akkad.](Image)
FIG. 8. BOAT INCISED IN SANDSTONE FROM GEBEL HAMID TAYY IN SAHABA.

CONCLUSIONS

As expected, the University of California survey revealed dense Islamic and Christian occupation throughout the concession, excluding the stretch between Dongola and Akkad due to the agricultural and urban development noted above. The project also documented a richer pre-Christian settlement pattern than that expected based on previous surveys from Dongola to Hannek and Khandaq to Debba, which found negligible remains of pre- and proto-historic occupation (Reinold, 1993). Kerma sites, while rarer than Christian or Islamic, occurred consistently throughout the concession, indicating a small-scale extensive utilization of the West Bank. This was also the case during the Neolithic period, with sites concentrated more at the northern and southern ends of the concession where the floodplain and inundated land is wider. Two results of this survey in particular have important implications for larger questions in Nubian archaeology. First, the identification of a settlement pattern aligned to the modern West Bank going back to Neolithic times (c. 6000-3000 BC) and continuing through the Kerma period (c. 2400-1500 BC) challenges Marcolongo and Surian’s (1997) theory postulating a progressive westward shift of the Nile into its present channel. This is supported by the results of the British Museum’s Northern Dongola Reach Survey, which also found Neolithic and Kerma sites aligned to the modern river, as well as at least two additional paleo-channels, contemporaneous with each other and the modern course of the Nile (Welsby, 1996). The work of Marcolongo and Surian (1997) will now require some revision to take into account the existence of a multiple channel system, possibly like the seasonal appearance of Argo Island which, as they note, is in the process of silting in and ceasing to be an island at all. Second, the absence of New Kingdom colonial sites in our survey continues the pattern established in other projects (Grzymski, 1987, 1997; Welsby, 1996; Reinold, 1993, personal communication 1998).
This new data favors a model of minimal imperial intervention and local autonomy that casts doubt on the survival of any significant imperial remnant to influence the rise of the Napatan Dynasty (Morkot, 1995; Török, 1997; Smith, 1998). The next phase of this project, to be carried out under the auspices of the Department of Anthropology at the University of California's Santa Barbara campus, will target sites at the third cataract to help better define the nature of Nubian Egyptian interactions and their effect on the rise of the Napatan state.

ACKNOWLEDGEMENTS

The University of California Los Angeles (UCLA) Institute of Archaeology sponsored the survey and I am grateful for the support of the Institute's Director, Richard Leventhal. The project was made possible by the generous financial support of James and Louise Bradbury, Francis Cahill and Jan Bacchi. The 1998 season benefited from a UCLA Ahmanson Field Research Grant. I also appreciate the support and assistance provided by the Antiquities Service, especially Dr. Hassan Hussein Idriss, Director General of the National Corporation for Antiquities and Museums (NCAM) and Dr. Salah Mohammed Ahmed, Head of the Excavation Section. Mr. Al Tahir Adam Al Nur ably represented the NCAM in 1997. His assistance in project logistics and archaeological expertise in the field contributed greatly to the expedition's success. The 1997 staff consisted of Stuart Tyson Smith (director), Bruce Beyer Williams (Oriental Institute, University of Chicago) and Julie Renée Anderson (Royal Ontario Museum, Toronto). Hamza Dongolawi served ably as our driver and host, assisting with local logistics in New Dongola. In 1998, Mr. Ali Mirghani Mohamed Ahmed represented the NCAM and Ms. Patti Hill Rabbitt served as archaeological assistant. I am grateful to Charles Bonnet, Brigitte Gratien and Jacques Reinold for their encouragement and for advice on the identification of Neolithic and Kerma pottery. Donald Whitcomb kindly looked at the Islamic pottery and Turkish pipe fragments. I nevertheless remain responsible for any errors in identification. I would also like to thank Ali Osman M. Salih and David Edwards for their encouragement to pursue these investigations and kindness in allowing my work to overlap with the University of Khartoum concession.

REFERENCES


a. THE SURVEY AREA NEAR URBI.

b. THE CHURCH AT TEITI.
a. EARLY CHRISTIAN POTTERY FROM THE SAHABA DESERT SITE.

b. MEROITIC QUARRY AT AKKAD.
The Is.I.A.O. El Salha Project

by DONATELLA USAI


The area interested by the fieldwork is located south of Omdurman. Starting from the left bank of the Nile it includes a strip of about 35 km, which reaches the Jebel Baroka to the west (FIG. 1).

The project has been named after the most important village of the area. It is addressed to record all the archaeological evidence present in the area and collect data that may help investigating the relation among environment, culture and human presence in the different cultural phases.

A decisive factor in the choice of the area has been the awareness of the importance that Central Sudan had in the development of the Late Pleistocene and, mainly, Early Holocene Nile Societies. Furthermore, as many other regions in Sudan, this area resulted archaeologically almost un-explored.

FIG. 1. MAP OF THE AREA COVERED BY THE EL SALHA ARCHAEOLOGICAL PROJECT.
Safeguarding archaeological evidence of the area is the main aim of the project, considering that the high urban expansion of the capital of Sudan, Khartoum, is menacing to destroy and cancel them forever. Underlying is the hope to find out traces of ancient peopling of the area, preceding the emergence of Early Holocene, Mesolithic, hunter-fisher-gatherers. We know, in fact, along the Nile Valley, north of the Fourth Cataract, of the existence of human groups dating to the Late Pleistocene period but we have no indication of such a presence in Central Sudan for the period embracing 40,000 and 10,000 years bp. We have, on the other hand, enough information to follow the evolution of Mesolithics that slowly will substitute their predatory subsistence with one based on livestock herding and develop a more or less stratified social structure as suggested by different cemeteries so far excavated to the north of Khartoum and in Upper Nubia (Esh Shaheinab, El Ghaba, Kadero, Kadada).

When we reach the dawn of the IIIrd millennium, the knowledge of the events involving this area is rather superficial until the birth of the Kushite Kingdom and the following Christian Kingdom of Alwa, of which Soba, some 22 km south of the Blue and White Nile confluence, was the capital (Welsby and Daniels, 1991). Scarce evidence of the IIIrd millennium has been already identified in other sites north and south of Khartoum (Caneva, 1988; Haaland, 1989). Fragments of pottery relating to this period were collected at one of the site located during the November-December 2000 survey.

The survey work in the field has been organised according to methods that could allow, even without a total covering, an evaluation of the potentialities of the area. We distributed our work in a series of transects of 2 x 1 km, walking in a comb pattern to record all the evidence we recognised. This intensive and systematic strategy brought us to locate plenty of prehistoric sites whose preservation is frequently compromised by water-wind erosion and may appear, for this reason, as ephemeral pottery and lithic concentrations. Transects were, furthermore, organised in such a way to cover different geo-morphological entities we could recognise from aerial photos and to make possible to evaluate the possible relation between them and the distribution of archaeological evidence.

The sites so far recorded are seventy-six, covering a chronological span from Palaeolithic to Post-Meroitic (Appendix).

The oldest archaeological evidence, dating to the Late Pleistocene, Middle and Late Palaeolithic, were located close to the Jebel Baroka, whereas those dating to the Early and Middle Holocene, Early Khartoum Mesolithic, Early and Late Neolithic, were found either near the Jebel and along the Nile river bank. Later sites, Meroitic and Post-Meroitic, appear distributed all along the strip of land we surveyed.

Two big cemeteries, 8-U-3 (FIG. 2) and 8-U-21 (FIG. 3), of tumuli made of black Nubian sandstone were mapped with the aid of a Laser Theodolite, offered by the Leica Geosystem of Milan (Italy). Of these two cemeteries one, 8-U-21, is undoubtedly of Post-Meroitic period, while the dating of the second, 8-U-3 (PLATE I, a), where tumuli have a quite different shape and dimensions, is much uncertain. We suppose they may attributed to an earlier period, probably a IIIrd millennium. These two cemeteries were built on top of a natural relief of 2/3 m of height, in front of which is a plain where numerous stone structures are clearly visible. Here fragments of pottery of uncertain date were collected. If the supposed dating of these tumuli would be confirmed this site
would acquire a considerable importance. Only the excavation of some of these structures will grant the chronological attribution.

![Map of Ceremtery 8-U-3](image)

**Fig. 2. Cemetry 8-U-3.**

Of much certain post-Meroitic chronological attribution are the earth tumuli of which isolated and grouped examples were found (PLATE I, b).

Normally stone built up tumuli seem absent in the area near the Nile bank, but there are reasons to think that many of them have been destroyed and stones were used for houses made in the last fifty years. At El Oshara village, residues of one of this tumulus were identified and from it comes a reddish stone pendant. The same village rises on the remains of a Mesolithic and Early Neolithic settlement (8-S-4), as witnessed by the abundant fragments of pottery of these two periods that were here collected (PLATE II,a).
Among all sites, those of the Early Holocene Khartoum Mesolithic are the most interesting. In two cases, 8-U-34 and 8-X-6, their dimension range around ten hectares. Site 8-X-6 is a small longitudinal mound located at the margin of what seems to have been the oldest left Nile bank or the maximum limit of its actual flooding. On the surface of this site are clearly recognisable remnants of possible fireplaces and other unidentifiable structures with animal bones, and areas of lithic workshop, to produce tools for every daily life need. Among these is a fragment of bone harpoon, used for fishing activities (PLATE II,b). The most common lithic tools are scrapers and backed pieces, mainly lunates. The pottery has a rough ware, rich in quartzite inclusions and decorated with a Wavy Line or Dotted Wavy Line motif (PLATE II,c).

The other site, of the same period and with similar dimension, 8-U-34, has been located at the foot of Jebel Baroka. The anthropic deposit, even in this case, may be not too much disturbed by post-depositional processes, as the archaeological material has been found, mainly, along small khors created by occasional rains. The pottery found on the surface of this site is entirely of the Mesolithic period and with this numerous grinding stones and sandstone rings were collected.

Actually, settlement of the following Neolithic period were found only along the Nile bank, while in the Jebel Baroka area only quartzite lithic workshops have been located (8-U-11A and B, 8-U-19), producing whole quartzite pebbles, initially struck cores, flakes and finished artefacts. The tools here realised are mainly lunates and perforators typical of the Neolithic tradition.

In general, these lithic industries are characterised by the microlithism and by the exclusive use of small quartzite pebbles. The material in these sites has been collected in a systematic way, in areas of 8 x 4 m, within a 1 m square greed, to be able to check the material distribution and perform some statistical analysis.

In one of these sites, 8-U-19, a tethering stone was found, as far as we know one of the first in this part of Sudan (PLATE II,d). We have reason to advance the hypothesis that settlement of the Neolithic phase may have been covered by more recent alluvial sediments due to a now inactive palaeochannel.

The area of the Jebel is particularly interesting for the Palaeolithic evidence. Here some bifaces made on black Nubian sandstone, cores and levantlos flakes, of Middle Palaeolithic, were found together with a pointed piece with bifacial retouch possible of the Late Palaeolithic. These findings are particularly important but, for the moment, they are only sporadic pieces. There are plans, in the next field season, to intensify the survey work in the Jebel area, to come upon much clear evidence of Late Pleistocene occupation.

All the archaeological evidence located have a great scientific value to reconstruct the human history of the region and, for this reason, is worth underlying the high risk of destruction of many of them, for natural phenomena and for human activities. From this point of view, it would be hoped to conduct an accurate research on each one. Unfortunately time and means will never allow pursuing such valuable goal. Sites that without an immediate intervention risk to disappear in a short while, are those designed to be privileged by the El Salha Archaeological Project.
REFERENCES


<table>
<thead>
<tr>
<th>Site Nr.</th>
<th>GPS points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ND-36-B/8-V-1</td>
<td>36 P 0425203 Scatter of small pottery fragments, uncertain date.</td>
</tr>
<tr>
<td>2</td>
<td>ND-36-B/8-V-2</td>
<td>36 P 0426067 Scatter of lithics, uncertain date.</td>
</tr>
<tr>
<td>3</td>
<td>ND-36-B/8-V-2A</td>
<td>20 meters to the NE of 8-V-2 Isolated sand stone hammer.</td>
</tr>
<tr>
<td>4</td>
<td>ND-36-B/8-V-3</td>
<td>36 P 0426538 Isolated sand stone grinder.</td>
</tr>
<tr>
<td>5</td>
<td>ND-36-B/8-V-4</td>
<td>36 P 0426755 Scatter of pottery, Medieval.</td>
</tr>
<tr>
<td>6</td>
<td>ND-36-B/8-V-5</td>
<td>36 P 0425046 Isolated cairns, uncertain date.</td>
</tr>
<tr>
<td>7</td>
<td>ND-36-B/8-V-6</td>
<td>36 P 0425465 Scatter of pottery and lithic, Neolithic.</td>
</tr>
<tr>
<td>8</td>
<td>ND-36-B/8-V-7</td>
<td>36 P 0425679 Scatter of pottery, uncertain date.</td>
</tr>
<tr>
<td>9</td>
<td>ND-36-B/8-V-8</td>
<td>36 P 0426402 Isolated side-scaper on a Levallois flake. Middle Palaeolithic.</td>
</tr>
<tr>
<td>10</td>
<td>ND-36-B/8-V-9</td>
<td>36 P 0426869 Scatter of pottery and lithic, uncertain date.</td>
</tr>
<tr>
<td>11</td>
<td>ND-36-B/8-V-10</td>
<td>36 P 0425453 Scatter of pottery and lithic, Prehistoric and Medieval (?).</td>
</tr>
<tr>
<td>12</td>
<td>ND-36-B/8-V-11</td>
<td>36 P 0427715 Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>13</td>
<td>ND-36-B/8-U-1</td>
<td>36 P 0422682 Post-Meroitic tumuli.</td>
</tr>
<tr>
<td>14</td>
<td>ND-36-B/8-U-2</td>
<td>36 P 0424240 Isolated cairns, uncertain date.</td>
</tr>
<tr>
<td>15</td>
<td>ND-36-B/8-U-3</td>
<td>36 P 0424240 Cemetery of cairns, III/II millennium BC.</td>
</tr>
<tr>
<td>16</td>
<td>ND-36-B/8-U-4</td>
<td>36 P 0423478 Ovoid relief with seven parallel rectangular stone graves, Early Islamic (?).</td>
</tr>
<tr>
<td>17</td>
<td>ND-36-B/8-U-5</td>
<td>36 P 0423377 Isolated cairns, uncertain date.</td>
</tr>
<tr>
<td>18</td>
<td>ND-36-B/8-U-6A-B</td>
<td>36 P 0423415 Group of cairns, uncertain date.</td>
</tr>
<tr>
<td>19</td>
<td>ND-36-B/8-U-7</td>
<td>36 P 0423363 Isolated cairns, uncertain date.</td>
</tr>
<tr>
<td>20</td>
<td>ND-36-B/8-U-8</td>
<td>36 P 0423146 Circular stone structure, Neolithic (?).</td>
</tr>
<tr>
<td>21</td>
<td>ND-36-B/8-U-9A</td>
<td>36 P 0423065 Scatter of pottery and lithics, Neolithic.</td>
</tr>
<tr>
<td>22</td>
<td>ND-36-B/8-U-9B</td>
<td>36 P 0423011 Scatter of pottery and lithics, Neolithic.</td>
</tr>
<tr>
<td>23</td>
<td>ND-36-B/8-U-9C</td>
<td>36 P 0423065 Scatter of pottery and lithics, Neolithic.</td>
</tr>
<tr>
<td>24</td>
<td>ND-36-B/8-U-10</td>
<td>36 P 0422865 Scatter of pottery and lithics, Neolithic.</td>
</tr>
<tr>
<td>25</td>
<td>ND-36-B/8-U-11A</td>
<td>36 P 0422678 Quartzite lithic workshop, Neolithic.</td>
</tr>
<tr>
<td>26</td>
<td>ND-36-B/8-U-11B</td>
<td>36 P 0422678 Quartzite lithic workshop, Neolithic.</td>
</tr>
<tr>
<td>No</td>
<td>Site Code</td>
<td>Feature Code</td>
</tr>
<tr>
<td>----</td>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td>27</td>
<td>ND-36-B/</td>
<td>36 P 0422372</td>
</tr>
<tr>
<td>28</td>
<td>ND-36-B/</td>
<td>36 P 0422520</td>
</tr>
<tr>
<td>29</td>
<td>ND-36-B/</td>
<td>36 P 0422421</td>
</tr>
<tr>
<td>30</td>
<td>ND-36-B/</td>
<td>36 P 0421545</td>
</tr>
<tr>
<td>31</td>
<td>ND-36-B/</td>
<td>36 P 0422487</td>
</tr>
<tr>
<td>32</td>
<td>ND-36-B/</td>
<td>36 P 0423881</td>
</tr>
<tr>
<td>33</td>
<td>ND-36-B/</td>
<td>36 P 0421722</td>
</tr>
<tr>
<td>34</td>
<td>ND-36-B/</td>
<td>36 P 0421210</td>
</tr>
<tr>
<td>35</td>
<td>ND-36-B/</td>
<td>36 P 0420994</td>
</tr>
<tr>
<td>36</td>
<td>ND-36-B/</td>
<td>36 P 0421019</td>
</tr>
<tr>
<td>37</td>
<td>ND-36-B/</td>
<td>36 P 0421005</td>
</tr>
<tr>
<td>38</td>
<td>ND-36-B/</td>
<td>36 P 0421170</td>
</tr>
<tr>
<td>39</td>
<td>ND-36-B/</td>
<td>36 P 0421028</td>
</tr>
<tr>
<td>40</td>
<td>ND-36-B/</td>
<td>36 P 0421256</td>
</tr>
<tr>
<td>41</td>
<td>ND-36-B/</td>
<td>36 P 0421231</td>
</tr>
<tr>
<td>42</td>
<td>ND-36-B/</td>
<td>36 P 0421576</td>
</tr>
<tr>
<td>43</td>
<td>ND-36-B/</td>
<td>36 P 0420912</td>
</tr>
<tr>
<td>44</td>
<td>ND-36-B/</td>
<td>36 P 0421036</td>
</tr>
<tr>
<td>45</td>
<td>ND-36-B/</td>
<td>36 P 0421331</td>
</tr>
<tr>
<td>46</td>
<td>ND-36-B/</td>
<td>36 P 0421258</td>
</tr>
<tr>
<td>47</td>
<td>ND-36-B/</td>
<td>36 P 0420906</td>
</tr>
<tr>
<td>48</td>
<td>ND-36-B/</td>
<td>36 P 0420902</td>
</tr>
<tr>
<td>49</td>
<td>ND-36-B/</td>
<td>36 P 0420906</td>
</tr>
<tr>
<td>50</td>
<td>ND-36-B/</td>
<td>36 P 0420906</td>
</tr>
<tr>
<td>51</td>
<td>ND-36-B/</td>
<td>36 P 0421139</td>
</tr>
<tr>
<td>52</td>
<td>ND-36-B/</td>
<td>36 P 0420263</td>
</tr>
<tr>
<td>53</td>
<td>ND-36-B/</td>
<td>36 P 0420377</td>
</tr>
<tr>
<td>54</td>
<td>ND-36-B/</td>
<td>36 P 0419823</td>
</tr>
</tbody>
</table>

179
<table>
<thead>
<tr>
<th>No.</th>
<th>Site Code</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>ND-36-B/8-U-37</td>
<td>36 P 0421032 1716469</td>
<td>Quartzite lithic workshop, Mesolithic or Neolithic.</td>
</tr>
<tr>
<td>53</td>
<td>ND-36-B/7-Y-1</td>
<td>36 P 0419112 1717555</td>
<td>Isolated cairns, uncertain age.</td>
</tr>
<tr>
<td>54</td>
<td>ND-36-B/8-X-1A</td>
<td>36 P 0437160 1716038</td>
<td>Post-Meroitic tumuli.</td>
</tr>
<tr>
<td>55</td>
<td>ND-36-B/8-X-1B</td>
<td>36 P 0437224 1715923</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>56</td>
<td>ND-36-B/8-X-1C</td>
<td>36 P 0437252 1715865</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>57</td>
<td>ND-36-B/8-X-1D</td>
<td>36 P 0437421 1715873</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>58</td>
<td>ND-36-B/8-X-1E</td>
<td>36 P 0435654 1715733</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>59</td>
<td>ND-36-B/8-X-1F</td>
<td>36 P 0437492 1715872</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>60</td>
<td>ND-36-B/8-X-1G</td>
<td>36 P 0437539 1715876</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>61</td>
<td>ND-36-B/8-X-1H</td>
<td>36 P 0437509 1715852</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>62</td>
<td>ND-36-B/8-X-1I</td>
<td>36 P 0437604 1715856</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>63</td>
<td>ND-36-B/8-X-2</td>
<td>36 P 0435759 1715511</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>64</td>
<td>ND-36-B/8-X-3</td>
<td>36 P 0438802 1716035</td>
<td>Late Neolithic settlement.</td>
</tr>
<tr>
<td>65</td>
<td>ND-36-B/8-X-4</td>
<td>36 P 0438870 1716710</td>
<td>Early Neolithic settlement (Mesolithic pottery at restricted areas).</td>
</tr>
<tr>
<td>66</td>
<td>ND-36-B/8-X-5</td>
<td>36 P 0438621 1716136</td>
<td>Meroitic settlement (?).</td>
</tr>
<tr>
<td>67</td>
<td>ND-36-B/8-X-6</td>
<td>36 P 0439487 1717766</td>
<td>Mesolithic settlement.</td>
</tr>
<tr>
<td>68</td>
<td>ND-36-B/8-X-7</td>
<td>36 P 0438887 1716825</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>70</td>
<td>ND-36-B/8-X-9</td>
<td>36 P 0437575 1714658</td>
<td>Post-Meroitic tumuli.</td>
</tr>
<tr>
<td>71</td>
<td>ND-36-B/8-X-10</td>
<td>36 P 0440534 1719667</td>
<td>Post-Meroitic tumuli.</td>
</tr>
<tr>
<td>72</td>
<td>ND-36-B/8-X-11</td>
<td>36 P 0440638 1719734</td>
<td>Mesolithic and Early Neolithic settlement.</td>
</tr>
<tr>
<td>73</td>
<td>ND-36-B/8-W-1</td>
<td>36 P 0432367 1715555</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>74</td>
<td>ND-36-B/8-W-2</td>
<td>36 P 0435288 1715516</td>
<td>Post-Meroitic tumulus.</td>
</tr>
<tr>
<td>75</td>
<td>ND-36-B/8-S-1</td>
<td>36 P 0436215 1722752</td>
<td>Late Neolithic cemetery.</td>
</tr>
<tr>
<td>76</td>
<td>ND-36-B/8-S-2</td>
<td>36 P 0436969 1724407</td>
<td>Late Neolithic settlement.</td>
</tr>
</tbody>
</table>
PLATE I

a. A SMALL CAIRN FROM 8-U-3 CEMETERY.

b. A EARTH TUMULUS LOCATED CLOSE TO THE NILE BANK.
a. FRAGMENTS OF EARLY NEOLITHIC POTTERY FROM SITE 8-S-4.
b. FRAGMENT OF A BONE HARPOON FROM SITE 8-X-6.
c. FRAGMENTS OF POTTERY FROM THE EARLY KHARTOUM SITE, 8-X-6.
d. THE TETHERING STONE FOUND AT SITE 8-U-19.
Survey and excavations at Kawa
1997-1998

by Derek A. Welsby

Kawa has long been a focus for British archaeological activity. It appears not to have been visited by many of the early travelers but General Wolseley, Commander of the Gordon Relief Expedition, forced by a leak in his diabeelah, put into shore there on his way upstream from Dongola on 13th December 1884. He noted that where he stopped was ‘the ruined village of [blank space] where there are remains of a temple & apparently of copper smelting works - I am told that some good bronze statuettes have been dug up here, also some scarabeis.’ (Preston, 1967: 86). The first known excavations on the site took place the following year when Colonel Hon. J. Colborne, a correspondent for the Daily News with the Gordon Relief Expedition who was based at Dongola, undertook with the aid of soldiers and local labourers, the clearance of a temple. According to Count Gleichen who was involved in these activities ‘The only outward sign of it at first were the broken tops of some stone pillars, all but buried in the sand ... Very soon the pillars began to grow, and the [local workmen] found themselves on the roof of a tiny temple. Digging away all around this disclosed some interesting hieroglyphics on the walls and seven or eight feet down we came on some large figures in relief of gods and goddesses, together with the top of the entrance into the holy place.’ Although they had intended to return on the following day a strong wind blew for the next three days and when they returned to the site the excavations had totally refilled. Gleichen also records that ‘The only other thing near the place were dozens of little green copper gods and goddesses strewn about: it must have been a copper foundry in its day, for in some places there were hundreds of broken crucibles and pieces of pottery, and bronze rings, and things green with age’ (Gleichen, 1888: 281-282). Other army officers also dug at Kawa after the conquest of Sudan by the Anglo-Egyptian forces which reached the area in 1896.

Further work was carried out by Jackson and by Addison in 1928 and the results of the latter work were published in Sudan Notes and Records (Addison, 1929). Large scale excavations were begun by Francis Llewellyn Griffith for the Oxford Excavation Committee in the winters of 1929-1930 and 1930-1931. After Griffith’s death in 1934 a further season, designed to allow a collation of the inscriptions and reliefs in the temples by Miles Macadam and further excavation by Laurence Kirwan, was conducted in 1935-1936 (Macadam 1949, 1955).

These activities confirmed the name of the site as Gematon which was of considerable interest for the chronology of the founding of the Egyptian town. Although a little Kerma pottery was recovered, the earliest structural remains were of a temple of Tutankhamun. Occupation was attested from that time into the reign of
Ramesses VII, c. 1145 BC. No light was shed on the fate of the town during the period between the collapse of Pharaonic control of the site and the earliest attested Kushite activity. An inscription from the temple built by Taharqo between 684 and 680 BC implies that there was a temple on the site during the reign of his ancestor Alara, who may have reigned in the earlier 8th century BC. Epigraphic evidence as late as the reign of Amanirenas and Akinidad in the late 1st century BC was recovered and archaeological evidence suggested that the town was occupied into the 3rd century AD. Its ultimate fate was uncertain but there was no evidence for occupation in the post-Meroitic and medieval periods.

The early excavations highlighted the excellent preservation of the archaeological remains. The site offers the potential to answer some of the important questions concerning the rise of the Kushite state and the continuity or otherwise of culture from the New Kingdom. The lack of erosion at Kawa where the wind-blown sand rapidly covers any abandoned buildings offers the hope that deposits relating to this period should be well preserved if the town continued to be occupied throughout that period.

In 1993 the Northern Dongola Reach Survey had defined the extent of the settlement and examined its hinterland where evidence for Neolithic and Kerma period occupation was found. A New Kingdom cemetery has not been noted, but one large and two small cemeteries of Kushite date are known and were surveyed in detail (Welsby, 1993; Salih, 1994).

The site at Kawa, like most archaeological sites along the Sudanese Nile valley is being threatened by agricultural activities, by digging for maraq and by casual vandalism. It is also at threat from the gradually expanding tourist industry.

**The 1997-1998 season**

In the light of its academic interest and of these threats SARS, with the full support of NCAM, is undertaking a five-season excavation and survey project on the site. As a first step to the protection of the urban site and of its associated cemeteries, the limits of the sites were marked by concrete posts and signs were erected.

As a prelude to the excavations on the site a detailed topographical survey was made of the 36 hectares covered by a dense scatter of artefacts and remains of buildings. The site falls into two distinct zones, an upper town to the north, where the mound rises to a height of 11 m above the plain to the east, and the lower town at an approximate elevation of 2 m above the plain. A sondage dug in the 1930's immediately to the west of the pylon of the temple built by Taharqo, which did not reach the natural found architectural remains at a level equivalent to that of the eastern plain, suggesting that the full 11 m height of the mound is the result of a build-up resulting from human activity and is comparable with the build-up of material noted by Shinnie at Meroe (Shinnie and Bradley, 1980: 27).

Over large areas of the site there were clear traces of buildings visible on the surface (PLATE I, a) and occasionally extending above it. Among these were remains of a possible temple suggested by the sandstone blocks a little to the south of Temple A, a large gateway through the east wall of the temenos to the south-east of Temple T, large numbers of domestic units and at least one industrial structure (see Welsby, 1996: fig. 74.1). Within the time available, over thirty of these were planned in detail (FIG. 1).
care being taken not to disassociate the walls from the stratigraphic deposits which abut them. As only the wall tops were brushed to a maximum depth of a few centimetres, the resulting plans are incomplete but, using this technique, it is possible to gain a reasonable idea of the plan of large areas of the town at the date of the latest surviving buildings, without prejudicing any subsequent excavations.

As the earlier work on the site had concentrated with impressive results on the excavation of a number of monumental buildings, the present project sought to excavate buildings of a more mundane character. One criterion which was used in deciding the area to be excavated was the desire not to disfigure the site by the formation of unsightly spoil heaps and hence we chose to excavate a number of buildings close to the river bank down which the spoil was deposited. Within the 300 m², which were investigated, were revealed the remains of three buildings constructed throughout of mud brick surviving to a maximum height of a little over 1 m. The northernmost of
these, designated Building B1, was totally excavated. It consisted of seven rooms, the original core of the building lying to the east (PLATE I, b). There were numerous modifications suggesting an intensive or long-lived occupation. After two phases of extensions of the building to the west, at least one of those later rooms was abandoned, the connecting doorways to the older rooms to the east were blocked and the rooms were then presumably abandoned. Within the building the rooms were virtually sterile of material and it was clear that rubbish had been dumped over the south and east walls into the adjacent streets presumably through windows, no trace of which survived. Set into the floor of one room was one pot, there was a shallow pit used as a hearth and two mud bins were noted.

The buildings to the south were a little further down the slope and had been set on a slight terrace a little below the level of the floors of Building B1. The eastern building (Building B5) was, in its first phase, probably an eight-roomed structure the walls of which were well preserved to the north, where remains of a slit window remained, while the south wall was very fragmentary. Some walls were markedly out of alignment with the rest of the building but there was no indication, at least on stratigraphic grounds, that these were not contemporary. In two rooms, circular ceramic ovens were found and one pot was set into the floor within the north-eastern room. As with Building B1, the floors were again largely free from occupation debris. After a period of abandonment, or more probably demolition, when a thick deposit had formed within some rooms, new walls were inserted while all the old walls were retained. During that phase there were a number of mud-lined storage bins within the rooms.

Building B5 had been added onto the west side of an earlier building (Building B12) which was only partly excavated. In a late phase of its use the western rooms of Building B5 were used as a depository for rubbish material being thrown into them from the north and the west (PLATE II, a). This material included much mud-brick rubble and large pottery sherds. Among the rubble in the excavated buildings was a large number of objects made from mud. Some of these were lumps of mud that had been moulded by hand with clear finger-tip impressions preserved. They were of no particular form. Others were more regular. There were small cubes and rectangular tablets, discs and tear-drop shaped objects, the latter ranging in size from 16 mm in diameter and 30 mm high to 61 mm diameter and 102 mm high. A small model of a quadruped was recovered. The most interesting object was the lower part of a steatopygous figure with incised decoration perhaps representing tattoos. The form can be readily paralleled in Neolithic and C-Group contexts (e.g. Wenig, 1979: 114, 116, 124, 125-127), although Kushite examples of rather different style are known (e.g. Wenig, 1979: 220). How these objects came to be laid amongst the rubble is unclear.

Building B12 was of similar character to that to the east. Within one room was another circular ceramic oven and in the next room to the east was a sequence of three hearths and an extensive deposit of large pottery sherds strewn across the floor. No evidence was noted for a second main phase in this building.

A number of post-building pits had penetrated below the level of the walls of Buildings B5 and B12. In these pits it could be seen that their walls rested on a layer of sand at least 300 mm thick, within which was some occupation material, but no trace of walls predating the excavated buildings in this area was noted.
In the lower town, buildings were also visible on the surface. Close to the southern limit of the site, is a prominent mound covered with a mass of pottery vessels and animal bone which partly overlies the remains of a mud-brick building of a similar type to some of those noted in the upper town. Recent illicit diggings in this area, within Building A1 (FIG. 2), had unearthed many fragments of a ceramic statue of a grotesque female figure (PLATE II, b) which has much in common with representations of the god Bes and may be identified as Beset (cf. Bonnet, 1952: 116-118; Helck and Otto 1975: 731). It bore traces of paint in white, yellow, red and brown. Holes through the ears and head-dress suggest that additional adornments had been attached to it. Another foot from a similar statue was also recovered. The back of the statue was flat and the plinth projected back about 110 mm, presumably to assist with affixing the statue up against a wall.

The ceramic material from the excavations has yet to be studied in detail but, apart from a few obviously much later pieces which include rare scraps of Meroitic fine wares and a gadus knob, all the pottery appears to be of Napatan date and many of the forms can be paralleled, for example in the Napatan buildings excavated at Kerma (Ahmed, 1992). These buildings at Kawa were the latest to have been constructed in this part of the site. Elsewhere, over much of the upper and lower towns, the pottery again seems to be of similar date suggesting the possibility that, although the town attained a considerable size in the earlier Kushite period, by the Meroitic period it had shrunk into the area around the temple complex to the north.
The work has clearly underlined the potential of the site and it is hoped that excavations will recommence in the winter of 1999-2000. If we are correct in our assertion that over large areas of the town the latest occupation dates to the first half of the 1st millennium BC, then we shall at Kawa have the rare, if not unique, opportunity to examine a large part of a Napatan town unencumbered by later occupation and largely undisturbed by archaeological activity. Kawa appears to have all the elements of a town with a religious centre, presumably an administrative centre connected with its function as a Nome capital, but also with extensive areas of mud brick domestic architecture, an industrial quarter and an adjacent and well preserved cemetery containing burials under tumuli, mastabas and perhaps pyramids.

ACKNOWLEDGEMENTS

The work at Kawa was funded by the Sudan Archaeological Research Society, which receives grants from a number of bodies, chief among them the Bioanthropology Foundation and the British Museum. The team was greatly assisted in Khartoum by the staff of the National Corporation for Antiquities and Museums, by the British Council and by the British Embassy. The team consisted of Abdelhai Abdelswai Fed-elmoula, Angela Brennan, Stephen Fletcher, Lisa Harris, Fred Heller, John Percival, Isabella Welsby Sjöström and Derek Welsby. The participation of Stephen Fletcher was funded by a scholarship from University College Wales at Lampeter generously endowed by Lord St. Davids.

REFERENCES


GLEICHEN, COUNT, 1888. With the Camel Corps up the Nile. 1975 ed. Wakefield.


a. BUILDING D1 IN THE UPPER TOWN LOOKING NORTH-NORTH-EAST TOWARDS THE TEMENOS WALL EAST OF TEMPLE T.

b. BUILDING B1 LOOKING SOUTH-SOUTH-EAST ACROSS THE LOWER TOWN.
a. BUILDING B5. RUBBISH WITHIN THE WESTERN ROOMS. THE EAST WALL OF BUILDING B12 IS VISIBLE ON THE LEFT.

b. STATUE OF BESET (500 MM SCALE).
Investigations in the so-called Royal Baths at Meroë in 1999

A PRELIMINARY REPORT

by SIMONE WOLF and HANS-ULRICH ONASCH

At the western edge of the Royal City of Meroë, between the two palaces 294, 295 and the city wall, John Garstang of Liverpool University discovered early in 1912 during his third campaign an architectural complex which he entitled “Royal Baths” and numbered M 95-194-195. Soon, he was aware of the importance of the find writing in his first report that it was the “most instructive discovery which we have made within the site” or that “it was only during the last days of our stay that its full character and importance became clear” and “nothing that had previously been found throws so much light upon the characteristics of the local arts of the period”. What he excavated was a big water basin (A) in the centre of about 7,20 m x 7,20 m and 2,50 m depth, an exedra (B) in the north and a courtyard in between with surrounding rooms as well as passages. The real sensation, however, was the original decoration of the complex, which largely remained in situ at the brick wall of about 1,50 m high at the south side of the basin known today as ‘show-wall’. Painted plaster on floor and wall, coloured sandstone sculptures and small faience objects for wall inlays have been conserved. Moreover, a huge number of sculptures and fragments of sculpture were found inside the water basin.

Ever since the discovery of the Royal Baths its most remarkable feature has been noticed: the combination of local Meroitic iconography, style, and ideas with Hellenistic elements from the north. Thus, the complex is a major evidence for the impact of Mediterranean, mainly Hellenistic culture on the art of Meroë. Apart from this it owes, event today, its impression and liveliness from the variety of materials and colours used and preserved.

Unfortunately, Garstang had no opportunity to give a complete publication of the results of his excavation in the Royal Baths. He only presented two brief reports with a

---

1 Illustration credits: FIG. 1 J. Bartel; PLATES I-V P. Grunwald. The abbreviations follow Lexikon der Ägyptologie VII (1992), p. XIV-XXXVIII.
2 For the location see J. Garstang, LAAA 7, 1914-16, 1, pl. I.
3 J. Garstang, LAAA 5, 1913, 77f. 80.
4 The only reliable plan of the complex is still that of 1913 by W.S. George, the architect of the fourth season of Garstang’s excavation, published in LAAA 6, 1914, pl. 7.
general plan and some prints of his photographic documentation, but detailed drawings and descriptions have never been worked out by himself nor his colleagues so that a lot of information is irretrievably lost. Nevertheless, the field diaries, notes, letters, agreements, photographs as well as some finds of all his investigations at Meroë City from 1909 to 1914 were transferred to the archives at Liverpool University and only recently published in greater detail by László Török. For the Royal Baths he compiled almost all remaining information together with most of the old photographs and a catalogue of the sculptures found in the complex. His enormous and important work as main source uses the material from the archives, but is not always precise concerning his archaeological observations at the site or the present whereabouts of the sculptures.

Regarding this background it is not surprising that even the most interesting questions concerning the Royal Baths are still under discussion. A more precise date for the construction and renovations of the complex than generally attributing it to Meroitic times between the third centuries BC and AD is still difficult to determine. Moreover, the system of water supply is as unclear as the purpose and the idea to the whole building.

As a first step for better insight in the history of the Royal Baths a full up to date documentation of what is remaining at the site in Meroë City itself seemed to be necessary. Such a work includes observations to architectural changes, to water channels, to different layers of plaster on the floor and walls, to details of painting on the walls and on the sculpture and comprises a description of the remaining sculpture. This project was generously supported by the German Archaeological Institute in Berlin (DAI) so that the investigations could be undertaken together with the National Corporation for Antiquities and Museums in Khartoum (NCAM) in a field campaign of about three weeks length in November/December 1999. The team of the campaign consisted of two archaeologists, one specialised on Egypt and the Sudan and the other

---

5 J. Garstang, LAAA 5, 1913, 77ff. pls. 7-9; W.S. George, LAAA 6, 1914, 15ff. pls. 6, 7.
6 School of Archaeology, Classics and Oriental Studies of Liverpool University (SACOS).
8 L. Török, op. cit. 63-91 § 23 figs. 1-9, 72-81; pls. 10, 13-53, 60.
10 It has to be mentioned that without the practical support of Steffen Wenig, director of the Excavations in Musawwarat es Sufrà, the campaign could not have been realized. He supplied the mission with a cross-country car and trailer and with all necessary technical equipment for the work in the Royal Baths. We thank him very much as well as for his constant encouragement. We also like to thank Friedrich W. Hinkel for a lot of useful hints in the preparation of the campaign.
on Greek and Roman art, an architect, a photographer, a restorer and a technical assistant.¹¹

The work was mainly restricted to the area of the water basin and its edges including the 'show-wall' at the south side: that means the area which is now protected by a modern shelter. Outside the shelter only some additional work could be carried out - a survey in order to verify the plan of Garstang's time, to identify traces of remaining walls and to determine their structure. Furthermore, fragments of sculpture and architecture with remains of plaster and painting scattered around the shelter and especially at its northwest corner were collected, described briefly and stored mainly in the shelter over the exedra. Unfortunately, most of these fragments are unidentifiable except for a small basis with two human feet, the protome of an animal, a big stone with an uraeus-frieze and a small fragment of a capital with leaves. It remains uncertain whether all these pieces originally belong to the complex of the Royal Baths or if they were transported from other places. Finally, a very well preserved part of channels for the water supply at the southwest corner of the shelter was cleaned and drawn. At that place we also found few fragments of plaster from the upright wall with traces of painting.¹²

Inside the shelter, first, layers of dust about 5 cm thick had to be removed from all over the architectural remains as well as from the statues with brushes and finally by a vacuum cleaner (PLATE I). Furthermore, a number of wasp-nests had to be taken off from sculpture and architecture thoroughly done by the restorer. All this cleaning work brought to light many details unrecognizable before. Some of them should be mentioned here.

On the floor of the water basin four thin layers of waterproof plaster are conserved differing by colour and thickness.

The upright walls of the water basin itself are to a great extent rebuilt in modern times. Only the south wall is completely preserved in full height, whereas from the west wall only the southern part is original, from the north wall the lower part and from the east wall the lower part including the staircase. The restoration was done by the use of antique bricks making it difficult to determine the precise height of the original parts of the wall. It is even more difficult to distinguish ancient from modern parts due to restoration with cement.¹³ Already at the time of discovery by Garstang only little plaster remained at the walls of the basin, mainly at the north side and at the staircase.

¹¹ Staff members besides the authors were the architect Judith Bartel, the photographer Peter Grunwald, the restorer Mustafa Ahmed al-Sharif and the technical assistant Tadj es-Sir.

¹² This must be identical with the description by J. Garstang, LAAA 5, 1913, 78: "The enclosing wall of the whole building is fairly well defined by its facing of red brick, and the painted design upon its stuccoed surface,...".

¹³ The guard Ma'awia reported that in 1946 at the time of his father, during a high Nile, water penetrated and filled the basin more than one meter high. After removing the water and drying the gaps between the masonry, joints were grouted with cement for stabilization. Also, the outflow in the southwest corner of the basin was closed at that time.
The floor of the surrounding edges of the water basin was originally covered with several layers of the same waterproof plaster. Well preserved remains were cleaned at the west and at the north side, at the west side with painting of blue and yellow stripes together with red, blue and yellow dots.

The most complex results, however, could be observed at the south side of the water basin from which the greater part of the water was conducted into the basin and where a ‘show-wall’ with wall painting, sculptures and faience inlays is still in situ (FIG. 1 and PLATES I-IV, a). At the south side of the water basin at least three major building phases can be discerned.

In the earliest phase the water entered the basin by six channels flowing through the projecting part of the south wall, i.e. the show-wall (PLATE I). Probably the only sculptural decoration at that time consisted of alternating sandstone-heads of lions and bulls placed into the show-wall (PLATE II, a; PLATE III, b, c). This projecting wall was covered with plaster the lower part of which was painted with a branch of wine leaves and grapes running from east to west (PLATE II, b; PLATE III, a). The upper part with the painting of an elephant is probably from the same time (this is still a working hypothesis). Whereas the legs of the elephant are easy to identify only traces of the wine branch are preserved at the east side of the projecting show-wall and near the figure of the reclining lion. To conclude: in the first building phase the decoration of the show-wall was relatively simple and homogeneous.

For whatever reason, at some time later fundamental alterations were considered to be necessary. In the second building phase the conduction of water was changed completely and the decoration program was enlarged. The water channels of the first phase seem to have been more or less out of function and have been replaced by new channels partly open and partly with pipes of pottery, now conducting water from the east and from the west side into the water basin. In the east part of the south wall the step in front of the panflute-player and the first lion head indicates the place of the pipes (PLATE I, b), in the west part the channel can be retraced ending at the well preserved water-gargoyle in the corner of the basin. At the same time in front of and beside the projecting show-wall sculptures of sandstone were placed: a panflute-player in the east still in situ, a kithara-player in the centre flanked probably by two reclining lions one of which is remaining in situ, and another reclining figure in the west of which the legs are still in situ as well (PLATE I; PLATE III, a). Additionally, objects of faience — tiles, rosettes, sa-knots and medallions — were fixed to the surface of the show-wall (PLATE II; PLATE III, a; PLATE IV, a). Further, the widely destroyed plaster on the wall was renewed and repainted by two large snakes, one creeping from east, the other from west, immediately above the faience objects.

In the third building phase thin iron pipes were put parallel to the line of channels of the second phase. Traces of iron and mortar from this new system can be seen on the east and on the west side of the south wall.

---

14 Today, only the basis with the feet and the lower part of the figure are remaining whereas Garstang found the whole statue and reconstructed it. L. Török, Meroë City. An Ancient African Capital. John Garstang’s Excavations in the Sudan (1997) 75, 85f. Cat. No. 195-39 (S) pl. 34.

15 Today, only traces of these snakes are identifiable, but at the time of Garstang the heads in the centre behind the kithara-player were still visible. Török, op. cit. 76 pl. 29.
All these observations were documented in drawings and photographs. A front-view, a ground plan and sections of the south wall were drawn in the scale of 1:10 in order to have a suitable documentation of all the details. Moreover, a ground plan of the east and west side of the water basin, the floor of the water basin with four different layers of plaster as well as a front-view of the west wall of the water basin were drawn. Parallel to this photographs were made in overview and details.

Apart from the observations concerning the building and decoration process of the area the remaining sculpture of sandstone was fully treated. The objects were catalogued, carefully cleaned because of the remaining colour pigments, then measured, described and photographed. Some results of this work may also be mentioned.

While cleaning the area inside the shelter from dust three fragments of heads were discovered, two of which in the non-original filling behind the upper, i.e. modern part of the north wall of the water basin, another one in the channel in the east part of the south wall. The most impressing fragment is the right half of a male bald head with fillet. The colours of its original painting are still very intensive and may give a good impression of the palette.

In general, more details of the painting of the sculptures could be observed because of the cleaning and with the help of direct light. The protomes of lions for example were painted all over with yellow and afterwards for indicating eyes, nose, mouth, paws, and mane lines of red paint were drawn (PLATE V, a, b). The same holds true for the protomes of bulls, where the inscriptions were drawn with intensive red (PLATE V, c).

Some identifications of until now little known sculptures can be proposed after studying them from all sides. A fragment of legs (PLATE IV, b) is only sparsely documented on an old photograph of Garstang together with several other fragments, unfortunately standing upside-down and for that reason not attributed. Because of the tale at the rear, the pattern of stripes on the thigh and the form of the foot the fragment is part of a Pan-figure with the legs of a goat — i.e. a mythical figure, half human, half animal, of the circle of the Greek wine-god Dionysos. The headless statue of a sitting man with crossed legs under the posterior may be the figure of a harpist as for a scribe the pose of the arms and the missing book role is unusual; he extends his right arm and holds the left one before his chest. A further fragment with the two back legs and the tale of a reclining lion seems to be the counterpart to the figure of the reclining lion which is still at its original place in front of the south wall of the water basin. The fragment has the same measures and shows the same motive but inverse to the piece in situ.

---

16 In recent literature only L. Török remarks "Fragment of sandstone slab (?) with part of raised relief (?). Present whereabouts and measurements unknown.", L. Török, op. cit. 84 Cat. No. 195-26 (S) pl. 50 (third sculpture from the right).
18 See the same remarks: L. Török, op. cit. 83f. Cat. No. 195-23 (S) pl. 50 (extreme left).
To summarize concerning the significance of the so-called Royal Baths some more indications for the Dionysian interpretation of the complex are visible now. Additional to the already known details — the musicians in front of the south wall of the water basin, the panflute-player and the kithara-player (PLATE I, b; PLATE III, a), and the faïence medallions with heads of Maenads, the female followers of the Greek wine-god Dionysos (PLATE IV, a) — the painted wine branch on the first plaster of the south wall (PLATE II, b; PLATE III, a), the figure of Pan (PLATE IV, b) and possibly the figure of a harpist have to be mentioned. It will be a further task to combine all known sculpture found by Garstang at the site of the Baths, those which are still inside the shelter over the water basin as well as those which were at that time transported to European and American museums, to classify them according to size and style and to ask whether they all belong to one and the same building program or to different phases or even places.

Besides the documentation work some first measures for conservation and protection have been realized. In front of the windows of the shelter over the water basin wire mesh was stretched to prevent the wasps to enter and to built their nests on the statues and architecture. Two rotten beams of the roof of the shelter over the water basin in the area above the south wall had to be changed because of risk to fall on the show-wall. Furthermore, some holes in the roof were closed with silicone in order not to allow water to penetrate any more during the rainy season.

In the shelter over the exedra we reopened two windows. As there was no more air circulation inside humidity was increasing and penetrating the antiquities. Afterwards iron grilles were fit into the open windows.

To protect the original plaster on the floor of the water basin as well as on the west and north edges of the water basin these areas were covered with a layer of about 5 cm of clear sand from a sand dune of the desert. On the clear sand on the ground of the water basin we placed all the statues from the edges of the basin which did not stand at their original place, except of the protomes of lions and bulls. Furthermore, some pipes with different sizes and a piece with two pipes put together in the original mantle of mortar were chosen and placed inside the water basin as well. The arranging of all these cleaned objects may give the visitors a little bit the impression of an exhibition, as well as an idea of the finding situation during the excavation of Garstang.

As a further measure of protection, we decided to construct a platform with a railing at the east side of the water basin at the level of the entrance from which the visitors can overlook the area inside the shelter. The brick-built platform is about 3,60 m wide, 0,80 m deep and is situated above the modern staircase. The brick-construction is filled with sand and covered with cement outside so that it can be removed easily, when necessary. The new arrangement of the statues and the platform allow the visitors to see most of the interesting details without entering the basin itself.

a. VIEW OF BASIN AND SHOW-WALL UNDER THE MODERN SHELTER.

b. VIEW OF THE EASTERN SECTION OF THE SHOW-WALL WITH PANFLUTE-PLAYER.
a. DETAIL OF SHOW-WALL: FIRST LION FROM THE EAST.

b. DETAIL OF SHOW-WALL, EAST SIDE: 2 PHASES OF PLASTER AND FAIENCE. SA-KNOT.
a. DETAIL OF SHOW-WALL, CENTRE: BASIS OF KITHARA-PLAYER AND 2 PHASES OF PLASTER.

b. DETAIL OF SHOW-WALL: FIRST BULL FROM THE EAST.

c. DETAIL OF SHOW-WALL: FIRST LION FROM THE WEST.
a. DETAIL OF THE SHOW-WALL: MEDAILLON ON WEST SIDE.

b. PAN-STATUE.
مجلة الهيئة القومية للآثار والمتاحف

العدد الثامن عشر
1998-2002

رئيس التحرير
حسن حسين إدريس

الناشر
الهيئة القومية للآثار والمتاحف
طبع هذا العدد بتمويل من قسم التعاون الثقافي بسفارة جمهورية فرنسا بالخرطوم والهيئة القومية للآثار والمتاحف

يرسل كل المكاتب باسم رئيس التحرير الهيئة القومية للآثار والمتاحف الخرطوم، ص.ب. 187، السودان

كل الحقوق محفوظة للناشر بما فيها النقل بأي شكل من الأشكال
جمهورية السودان
وزارة السياحة والتراث القومي
الهيئة القومية للأثار والمتاحف

هيئة التحرير

رئيس التحرير
حسن حسين إدريس

لجنة التحرير

دكتور/ صلاح الدين محمد أحمد الأستاذ / صديق محمد قسم السيد
الأستاذ / حبـندر حامد مختار الأستاذ / صلاح عمر الصادق
دكتور / فرانتيس فونز

اللجنة الإستشارية

بروفيسور / يوسف فضل حسن
الدكتور / علي عثمان محمد صالح
السيد / حاح الزاكي
السيد / أحمد عمر عبد الرحمن

سكرتارية التحرير

السيد/ عبدالرحمن علي محمد
السيدة/ كارولين قوز
بسم الله الرحمن الرحيم

كلمة رئيس التحرير

يسرنا ويسعدنا أن نقدم لكم العدد الثامن عشر لمجلة كوش ونحن نحتفل بالعيد الخمسون

تُأتي هذه النشرة على الانتشار في الموعد المحدد لإصدار متعمقة ونتمي بالشكر لكل من ساهم
وساعد على صدور هذا العدد.

فقد حفلت الفترة الماضية بعدم الأحداث الهامة في مجال الكشف عن الآثار في السودان
بلا سياسة كبار الهيئة والجامعات السودانية التي أنشأت بها أقسام لآثار البعثات الثقافية من
الجامعات والمتحف العالمية. في عام 1999 تم إصدار قانون حماية الآثار والذي ساعد على
تنظيم العمل في مجال الآثار وحفظها وإقامة المعارض.

تواصل إنتماء الدولة بالآثار والمتحف وانتشار زيارته عدد من الوزراء لمواقع الآثار والمتحف.
وتوجت بزيارة الاثنين الأول لرئيس الجمهورية لمواقع الآثار بولاية نهر النيل وانعقاد جلسة
خاصة لمجلس الوزراء الموفرة المتحف القومي بولاية رئيس الجمهورية وزيارة
السيد رئيس الجمهورية وعدد من الوزراء لمواقع الآثار بالمصيروفات الصفراء والتفاهم والتوحيد
بحماية الآثار، وأيضًا تكريم عدد من علماء الآثار بنجاحهم وسام التأليف.

ومن الجهود الخارجية للتعريف بالحضارة السودانية أقيم معرض مماليك علي النيل في عام
1999 بتعاون مشترك مع معهد العالم العربي بباريس والكونستانته بالمانيا وجهد مقدر
للبروفيسور فيليبي مديف مدير متحف برلين ود. بدر الدين عروضي وقد استمر في المانيا، فرنسا، هولندا
وإيطاليا، والآن تعمل لإقامة معرض بأسبانيا وأيضاً برلين وبوتسو في التسجيل مع المتحف البريطاني كله.
هناك هذه البرامج الخارجية تمت تحت إشراف ورعاية السيد وزير السياحة والتراث القومي، وفي
مجال المعارض الداخلية أقيم ثلاث معارض بالتنسيق مع البعثات الفرنسية، اليونانية
والألمانية.

وفي مجال البحث الآثاري تواصل جهود كل البعثات التي تم استعراضها في العدد السابق
بجانب مشاركة من جامعة دنفلا وجامعة شندي وجامعة وادي النيل، وترتكز أعمال المسح
والتنقيب بالتعاون في الجهات المصنعة للمشاريع التشريعة كالطريق والسدود أهمها طريق التحدي
الجلي شندي - عطر - هيا وطريق شريان الشمال أمدرمان - دنفلا - مروي والمنطقة
النهدة بميدان سد مروي بالشلال الرابع، مستماثل أعمال المباني والتنقيب بجميع ولايات السودان بهدف إكمال الخريطة الآثرية لحوم السودان وتركيز الابحاث على التنقيب المنظم الذي يعتمد على المنهج العلمي وجمع المعلومات التي ستستلم في الكشف عن الحضارة العربية والإسلامية والآفريقية والحضارة الإنسانية بصورة عامة.
من أهم مشاريع الهيئة الحالية والمستقبلية:
1- مشروع إقفاذ أثر مروي
إن قيام مشروع مروي سيؤثر على المواقع الآثرية وأن كثيراً من المواقع سوف تزول إلى الأبد من جراء الأعمال الهندسية في موقع السد والغرق تحت مياه البحرية المتكونة خلف السد ونتيجة لهذا الحفر لإنشاء خطوط الضغط العالي النافذة للكرهاء إلى أنحاء البلاد المختلفة ونتيجة لأعمال إعادة النحت في منطقة المقاطع وبعضاً من المراكز والمراكز هناك أيضاً بعض الصروح التاريخية الهامة في منطقة محافظة مروي سوف تتغير من الناحية الميول وتغير المناخ المتوقع يثيره ربما لمساحة مئات الكيلومترات من موقع السد، وهذه المواقع تضم موقع جبل البرك، جبالة الكروصن، أودوس، جبالة نوري الهرمية، مقابر داها، بناء حضارة مروي في الزومة والحصون الإسلامية الأخرى على النيل.
إنطلق العمل الآثري الحلي في المنطقة التي ستتأثر بقيام السد بالحدود والمناطق التي تم تهجير سكان الحمداش لها بالمثل منذ أكتوبر 2001م وذلك في مناطق:
1- منطقة السد والبحيرة
سوف تتم الأعمال الإنشائية الأولية بعضاً من المواقع الآثرية بمنطقة السد على طول مسافة 4 كم تمتلك شمال وجنوب السد ( تمام كافلي ) إضافة لجزء من جزيرة الحمداش. هذه المنطقة سوف تتمحث الأولوية في الأعمال الآثرية الميدانية لإقفاذ المواقع الآثرية بها. إضافة لهذا نجد منطقة البحرية خلف السد وذه سف تتفرق المواقع الآثرية على ضفتي النيل والجزر لمسافة 170 كم.
ويعمل في موقع السد والبحيرة إلى جانب كونواح الهيئة بعض المتخصصين في الآثار من كلية الآداب والدراسات الإنسانية (كريمة) جامعة دنها وقسم الآثار بجامعة الخرطوم ببعثة جامعة تكساوس، بعثة جمعية الآثار السودانية البريطانية.
- في منطقة الإنشاءات تم مسح المنطقة مشياً على الأقدام وتحديد المواقع الآثرية بها وتصنيفها ووضع أولويات الحفر الآثرية الإقفاذي لهذه المواقع.
في منطقة الحرائر عند جبل كاليق  توجد جبالة تورخ لفترة ما بعد مروى وتتألف من مقاتور تم توثيقها بالتصوير والرسم وحفر خمسة مقابر منها بعد تسميتها ومقابر أخرى تم تجهيزها وتجري الأعمال الأثرية بهذه الجبالة منذ 1971م بوساطة الهيئة وجماعة دنقا. وقد أُسفرت نتائج الحفريات حتى الآن عن العديد من الأواني الفخارية الكاملة وأدوات الحلي كالخرز المصنوع من الأحجار والزجاج والقشاني.

المسح الأثري للمنطقة التي ستعمرها مياه البحرية (170) كلم خلف السد وتم تسجيل حوالي ألف موقع أثري على الضفة السفلى للنيل حتى منطقة وادي الكريكان ويسير العمل في هذه المنطقة بصورة طيبة ومتواريا لإتقان كل المواقع الأثرية حسب الجدول الزمني المعد لذلك كما يجري بالمنطقة المهددة بقيام هذا المشروع مسح ترازي لكل ثقافات مكان هذه المنطقة وتوثيق هذه الوراثات والثقافات والحرف اليدوية قبل أن تندمج بتهجير هؤلاء السكان.

2/ مشروع العمل الأثري بموقع الدانقيل

هذا المشروع واحدة من المشاريع التي تنفذها الهيئة و تقوم بالحفر والتنقيب في هذا الموقع والذي يقع شمال بربر بولاية نهر النيل بدراسة أمين أمانة الأثار بمشاركة خبرة أثار ومن المتحف الملكي الكيندي وقد تم الكشف عن موقع لمدينة تورخ لفترة حضارة مروى. هذه المدينة محصنة شيدت بالطوب الأحمر ولها أبراج وبدع من عدة طوابق إذ كشف عن درج صاعد وأعمدة كان عليها رسومات وتقش ملونة وينتظر أن تكشف الأعمال الأثرية بهذا الموقع الكثير من التفاصيل داخل هذه المدينة وحول انت많ائها لفترة حضارة مروى.

3/ موقع جبل المراغ

تعمل في هذا الموقع الهيئة القومية للآثار والمتاحف بالتعاون مع دكتور تمي كنال من الولايات المتحدة الأمريكية ويقع هذا الموقع في صحراو يوضعة بالولاية الشمالية حيث كشف عن بقايا مبنية من الحجر الرملي تتمثل مدينة في قلب صحراوي بوضعة وربما كانت على الطريق الصحراوي بين مروى وجبل البرك والموقع يعتبر من المواقع الأثرية التي تثير جدا حول موقعه والغرض من بنائه. كما يوجد بالمنطقة عدد من المقابر والاستعدادات السكنية الأخرى ويتواصل أعمال البحث لكشف المزيد عن كنه هذه المدينة.
مشروع المسح الأثري والتراثي لمنطقة المحس

1/ مشروع المسح الأثري والتراثي لمنطقة المحس أهمية بعتبارة من

المشروع العامل والمظمة بهذا العمل شعبة الآثار / جامعة الخرطوم ويهدف إلى دراسة التغيرات

الثقافية في منطقة الشمال الثالث بالتركيز على العوامل الإسلامية والدينية والتاريخية التي تداخلت

بالمنطقة وذلك من خلال مواقع الأثرية المنتشرة بهذه المنطقة كما يبتع ذلك المسح مسح تراشي

لسكان هذه المنطقة وتوثيق حياتهم. ويعلم هذا المشروع كذلك إلى تدريب الدارسين وخلق كودارد

وطنية مؤهلة للمشاركة في تنشيط العمل الأثري والتراثي في كافة أنحاء السودان.

5/ مشروع المسح الأثري والتراثي لولايات دارفور

من ضمن مشاريع الهيئة في مسح وتسجيل ورصد المواقع الأثرية فقد تحرك فريق من

الهيئة ووزار معظم المواقع الأثرية التي تزخر بها ولايات دارفور الكبرى. من هذه المواقع:

أ/ موقع شبا الأثري

تقع شبا على بعد 15 كيلو متر شرق كيبكية التي تبعد 150 كيلو متر غرب الفاخر. يوجد

بالموقع ثلاثة من المعالم الأثرية الهامة التي تعود لعهد السلطان محمود تيراب (1768-1827)

م) أحد سلاطين سلطنة الفور الإسلامية التي أميت (1440-1916 م) ويوجد بالموقع مسجد

وقصر السلطان تيراب اللذان بنيا من الطوب الأحمر إضافة لقصر أم السلطان تيراب.

ب/ موقع طرة سلاطين

تقع طرة في ولاية غرب دارفور بجبيل مرة وقد كانت تمثل المقر الرئيسي لسلاطين

سلطنة الفور وبها اقيم مسجد في السلطنة الذي بناء السلطان موسى بن سليمان سولونج في

1450 م والمسجد مبنى من الحجر الرملي على سطح مرتفع، بالموقع أيضا يوجد مقابر 10 من

سلاطين سلطنة الفور.

ج/ موقع كيلو

يقع شرق طرة في جبل نامي وهو عبارة عن منزل ضخم من الحجر وهذه المكان

يخص أول سلاطين من أسرة الكيرا الحاكمة وهم سليمان سولونج وأبنه موسى.
6 / مشروع المسح الأثرى لجنوب السودان

بعد الانسلال بمجلس تنسيق الولايات الجنوبية تم الاتفاق على إجراء مسح أثري شامل للولايات الجنوبية والعمل على إنشاء متحف بمدينة جوبا في إطار مساواة بين متحف لكل ولاية وقد تم رصد مواقع الأثرية في الولايات الجنوبية بالرغم من غزارة الأمطار في مناخ السافانا الغنية طمست معظم المعالم والذين الأثرية إلا أنه تم تسجيل بعض المواقع التي تعود لفترات ما قبل التاريخ.

كذلك تم التنسيق مع محافظ محافظة فشودة للعمل على افتتاح متحف فشودة وإجراء مسح أثري شامل بالولاية.

7 / مشروع المسح الأثرى لولاية الجزيرة

تخرج ولاية الجزيرة بالعديد من المواقع الأثرية التي تعود إلى مختلف الفترات التاريخية، وقد تم تسجيل ورصد عدد من المواقع في كل من الشبايرة، الكسمبر، أبو عشر، ود الفادئي، النوبة، وقوز كبر، وقد تم إنشاء متحف الثقافة في ولاية الجزيرة بمدينة ود مدني الذي يضم تراث المنطقة ومقتنيات أثرية تعود إلى فترة ما بعد مروى والفترة المسيحية وذلك بالتنسيق والتعاون مع إدارة السياحة - مديرية - وقد شرع العمل على فتح مكتب أثار ولاية الجزيرة ليكون مقره لإدارة السياحة.

8 / مشروع المسح الأثرى للندل الأزرق

بالتعاون مع معهد حضارة السودان وجمعية حماية البيئة بدأ العمل في إجراء مسح أثري وحفريات منتظمة منذ 1997م بحثية الندل وضinci نهر الدندل والرهد وتم تسجيل ورصد مواقع أثرية هامة تعود للفترة ما قبل التاريخ وفترة ما بعد مروى، كما تم الاتفاق مع إدارة السياحة في سنار لعمل مسح أثري وحفريات للمواقع التي تم رصدها من قبل في كل من جبل مويلا وموقع سنار القديمة التي تعود لفترة السلطة الزرقاء وأبو جيلي وود الحداد التي تمت بها حفريات أثرية مؤخرًا من قبل الهيئة أسفر عن وجود مقابر تعود لفترة ما بعد مروى عثر على بجانبها على قطع تخريبية كبرى الحجم.
10 / مشروع ترميم أهرام الجيزة

من مشاريع الهيئة في مجال الترميم والصيانة يتم ترميم الأهرامات في منطقة الجيزة التي تحتوي مقابر ملكية وملكية حضارية مروية وذلك بالتعاون مع الخبراء الأمريكيين والمماليك. هكذا، تم إزالة العادات القديمة في الحفاظ على الأهرامات، وتم تطوير الآلات والتقنيات المتطورة لضمان أن تكون هذه الأهرامات محفوظة بشكل صحيح.

11 / مشروع تأهيل مدينة سوهاج التاريخية

تربع أهمية مدينة سوهاج كميناء على البحر الأحمر دورها التجاري والثقافي والديني. منذ العصور القديمة بين السودان ومصر وشبه الجزيرة العربية، وقد أخذت المدينة شكلها الإسلامي منذ القرن الثامن عشر الميلادي. تمثل النمط المعماري الإسلامي الموظف عناصره بالأسلوب المصري والتركي. وهو نموذج فريد في العمارة الإسلامية، إلا أن دور سوهاج الراحل يعد بالكامل بمرجعيات مبانيها. فكان لأداب من توقيع ترميم مباني هذه المدينة وبناءها، بالتعاون مع المصممين الشابين.

تسعى الهيئة لجعل الدعم العالمي لهذا المشروع وتقديم خدمات اقتصادية مع الحكومة التركية من خلال اتفاقيات التعاون بين الدولتين وتحريجهيئة بإتمام مصانع مباني هذه المدينة التاريخية الهامة وتجري الهيئة مع البائعين العاملين في مواقع التسوق، الصناعات كركمة، المدينة الملكية (مروري). أعمالاً ترميمية وصيانة هذه المواقع تجري حسب الخطة المعدة.
في مجال المتاحف:

12/ تشييد متحف الطرابلس بمنطقة أهرامات البحراوية

في خطط الهيئة المختلفة بالمواقع الأثرية تم وضع حجر الأساس بمتحف الطرابلس (أهرامات) وهو متحف يتوسط أهرامات البحراوية بين المجموعتين الشمالية والجنوبية ويطل على مجموعة الأهرامات الغربية وذلك في عام 1997م وقد بدأت أعمال تشييد المبنى وذلك بإسهام معماري روبي في اسلوب العمارة المروية وقد وقف العمل في مرحلة سقف المبنى وتأمل أن تتواصل الجهود لتكملة إنشاء هذا المتحف ليتم عرض كل القطع الأثرية المتعلقة بأهرامات البحراوية مما سيعطي الموقع بعدا سياحيا آخر.

13/ متحف البركل

و هو أيضا من متاحف المواقع و مباني هذا المتحف مكتبة و يحتاج للدعم المالي ليستم

افتتاح هذا المتحف.

14/ متحف نيارا

تضع الهيئة ضمن خطة بشري مشروع إقامة المتاحف و تجري الإجراءات لقيام متحف

بمدينة نيارا لمرض القطع الأثرية للكافة العشيرة التاريخية إضافة إلى المعروضات التراثية بولاية

جنوب دارفور و بقية ولايات السودان ، هذا بالإضافة إلى الإشراف على المشاريع الملحقة بالعاصمة و الولايات وهي متحف السودان القومي ، متحف بيت الخليفة / أمدرمان ، متحف شيكان ، الأبيض / متحف قصر السلطان علي دينار بالفاشر ، إذ تقوم الهيئة بتفقد المكتبات الأثرية المعروضة وفحص حالتها و العمل على القيام بأحدث طرق العرض و التوثيق للقطع

الأثرية.

المعارض

تعد المعارض من انجاز الوسائل لنشر المعرفة بالأثار و القطاع الأثرية و هي تنبي

الفرصة لمعرفة التاريخ القديم للدول وقد نظمت الهيئة عددا من المعارض و كان أجنحة على

الإطلاق معرض مثال على النيل الذي طاف أرجاء أوروبا في الفترة 1996-1998م و

شاركت فيه عدد أربعينية سنة و ثمانيون قطعة أثرية تم اختيارها من متحف السودان القومي و

من متحف أوروبية و أمريكية. تم معارض داخليه أقيمت في متحف السودان القومي نظمتها.
الهيئة بالتعاون معبعثات الفرنسية تم إعلانه عام 1905. تم إصداره عام 1905م. تم تعديله عام 1957م وظل هذا القانون ساريا حتى تم ولهودا وتم تعديله. قانون حماية الآثار

صدر أول تشريع للأثار في عام 1905م إبان اقتراح أول إدارة للأثار عام 1902م. تم تعديله عام 1967م وظل هذا القانون ساريا حتى تم ولهودا وتم تعديله. قانون حماية الآثار لعام 1919م الذي أصبح ساري المفعول بعد اكتشافه من المجلس الوطني وتوقيع رئيس الجمهورية عليه في عام 1919م وصدر هذا القانون بعد إنجازاً حقيقياً وانجازاً لحماية الآثار والموارد الأثرية.

لنشر
تكون الهيئة بإصدار مجلة كوش وهي مجلة متخصصة في مجال علوم الآثار وظللت الهيئة تصدر هذه المجلة منذ بداية القرن الماضي. هذه المجلة هي مرة تمكن عليها كل الأنشطة الخاصة بهذا المجال وقد تم في عام 1997م مواصلة إصدار هذه المجلة وتم إصدار العدد السابع عشر نأمل أن تكمل الجهود المبذولة لإصدار العدد الثامن عشر.

الجامعات الوطنية والأجنبية التي تشارك الهيئة في الأعمال الأثرية تعمل مع الهيئة عدد من الأنظمة الوطنية والأجنبية في مجال البحث والتنقيب والمسح.

الأنثي وهذا البعثة هي:

البعثات الوطنية

1/ الهيئة القومية للأثار والمتاحف - الشلال الرابع (месد مروي) الواجهة الشمالية برئاسة الأستاذ حسن حسن إدريس مدير عام الهيئة.

2/ جامعة الخرطوم - مشروع المسح الأنثي لمنطقة المحم (الشلال الثالث) برئاسة د. علي عثمان محمد صالح.

البعثات المشتركة

1/ الهيئة وجامعة دنقلا - الشلال الرابع الواجهة الشمالية ممثل الهيئة.
2/ الهيئة وجامعة الخرطوم وجامعة وادي النيل - الشلال الخامس ولاية نهر النيل - علي عثمان
3/ الهيئة والوحدة الفرنسية - الملتقى - الولاية الشمالية. فرانسيس فيبرز
4/ الهيئة ومتحف أونتاريو الملكي - الضاحقلا ولاية نهر النيل جولي أندرون - صلاح محمد أحمد
5/ الهيئة وجامعة شندي - قلعة شندي ولاية نهر النيل - صلاح عمر الصادق
6/ الهيئة وجامعة شندي والوحدة الفرنسية - ديم ديف (الحصبي) ولاية نهر النيل جامعة ليل - فانسانت روندو
7/ متحف أونتاريو الملكي وجامعة الخرطوم - المدينة الملكية (البرجرافية) ولاية نهر النيل - كروستوفر آدم جيسكي
8/ الهيئة وجامعة شندي وجامعة هامبولت الألمانية - دومة الحماداب ولاية نهر النيل - بافل وولف
9/ الهيئة ومتحف برلين - الحمام المروي ولاية نهر النيل - سيمون وولف
10/ الهيئة وجامعة الخرطوم /كلية التربية ومشروع المسمى الأثري التاريخي للنيل الأبيض - خضر آدم غيسي
11/ الهيئة وأكاديمية البعثة البولندية - بنر نوريبت الولاية الشرقية
12/ الهيئة وجامعة دنفلا والبعثة الألمانية - مؤسسة أونلا

البعثات الأجنبية
1/ البعثة الفرنسية - جزيرة صدى الولاية الشمالية - فرانسيس فيبرز
2/ البعثة 가장ية - سلام قسم (4) برجيت قراسيا
3/ جامعة ليل الفرنسية - النجارية - صادق - الولاية الشمالية - بيرجت النجار
4/ جامعة هامبولت الألمانية - المعصورات الصفراء - نهر النيل - إستيفن فينخ
5/ متحف برلين - النمط - نهر النيل - ديترش فيلدنبونج
6/ جامعة وارسو البولندية - الولاية الشمالية - إستيفان جيكولبيسي
7/ أكاديمية العلوم البولندية - النمط الرائع - الزرومة - الولاية الشمالية - بوافد زوارسكي
8/ متحف قداسك البولندي - الناحية الرابعة - الدولة - الولاية الشمالية - هينرث بانز
9/ متحف بونزان البولندي - الكرد - ولاية الخرطوم - أليغ كرزانباتك
10/ جامعة كولون الألمانية - وادي هور - ولاية شمال دارفور - برجيت كدن
11/ جامعة كاسينو الإيطالية - حلة العربع/صنم أبوودوم - الولاية الشمالية - إيرينا ليفتراني
12/ جامعة روما الإيطالية - قصر النخل أمني - جبل البرك - الولاية الشمالية - السودان
13/ مركز دراسات أثار الصحراء الشرقية لإيطاليا - الصحراء الشرقية - الفريدو كاستيليوني
14/ المعهد الإيطالي لأفريقيا والشرق - الصالة / جنوب أثيوبيا وولاية الخرطوم - دوناتيلا
15/ جامعة روما الإيطالية - الجيزي - ولاية نهر النيل - إيزابيلا كاتيفا
16/ جامعة كاليفورنيا - سانت بيراردا الأمريكية - جنكي / tầmس - الولاية الشمالية - ستوريات
17/ جمعية الآثار البريطانية - الكوثر/شمال حالفا وأدري الخوتي - الولاية الشمالية ديرك ويلسبي
18/ المتحف البريطاني - كروس - الولاية الشمالية - فيفيان ديفيس
19/ جامعة مدريد الأسبانية - الحاج يوسف/ وادي سوبا - ولاية شرق النيل - فيكتور
فيرناديز
20/ متحف أونتاريو الملكي الكندي - هميكول - الولاية الشمالية - جولي كرستوفر أدم
جنسكي
21/ جامعة جنيفا السويسرية - كرمه - الولاية الشمالية - شارلو بونييه

وسبل الله التوفيق

حسن حسين إدريس
مدير عام الهيئة القومية للآثار والمناحف