KUS H

JOURNAL
OF THE
SUDAN ANTIQUITIES SERVICE

VOLUME XIII
1965

Edited by THABIT HASSAN THABIT

Published annually by the Sudan Antiquities Service, Khartoum
ABBREVIATIONS USED IN THIS JOURNAL

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>AjSL</td>
<td>American Journal of Semitic Languages and Literatures.</td>
</tr>
<tr>
<td>AR</td>
<td>Ancient Records.</td>
</tr>
<tr>
<td>ASAE</td>
<td>Annales du Service des Antiquités d’Egypte.</td>
</tr>
<tr>
<td>ASN</td>
<td>Archaeological Survey of Nubia.</td>
</tr>
<tr>
<td>BIFAO</td>
<td>Bulletin de l’Institut Français d’Archéologie Orientale.</td>
</tr>
<tr>
<td>CPN</td>
<td>Contributions to the Prehistory of Nubia.</td>
</tr>
<tr>
<td>HAS</td>
<td>Harvard African Studies.</td>
</tr>
<tr>
<td>ILN</td>
<td>Illustrated London News.</td>
</tr>
<tr>
<td>JEA</td>
<td>Journal of Egyptian Archaeology.</td>
</tr>
<tr>
<td>LAAA</td>
<td>Liverpool Annals of Archaeology and Anthropology.</td>
</tr>
<tr>
<td>LD</td>
<td>Lepsius: Denkmäler aus Ägypten und Äthiopiien.</td>
</tr>
<tr>
<td>NZZ</td>
<td>Neue Züriche Zeitung.</td>
</tr>
<tr>
<td>PM</td>
<td>Porter and Moss: Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings.</td>
</tr>
<tr>
<td>PN</td>
<td>Ranke: Die Ägyptischen Personennamen.</td>
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<tr>
<td>PSBA</td>
<td>Proceedings of the Society of Biblical Archaeology.</td>
</tr>
<tr>
<td>RCK</td>
<td>Royal Cemeteries of Kush.</td>
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<tr>
<td>SASOP</td>
<td>Sudan Antiquities Service Occasional Papers.</td>
</tr>
<tr>
<td>SNR</td>
<td>Sudan Notes and Records.</td>
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<tr>
<td>Urk.</td>
<td>Urkunden des Ägyptischen Altertums.</td>
</tr>
<tr>
<td>Wb.</td>
<td>Wörterbuch der Ägyptischen Sprache.</td>
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<tr>
<td>ZAS</td>
<td>Zeitschrift für Ägyptische Sprache.</td>
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The Editor is not responsible for the opinions expressed by contributors.
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Editorial Notes

It is my pleasure to give the reader briefly, as usual, an up-to-date account of the archaeological activities in the Republic of the Sudan since the last issue of KUSH and I begin with the progress of the Nubian Campaign.

I mentioned before that the 1963–64 season yielded most gratifying results and you will find in this number detailed reports of the various expeditions who worked in the field during that period.

The Antiquities Service team under the leadership of Mr A. J. Mills, the UNESCO expert, at the time of writing, completed the survey of both banks of the river up to Saras and is preparing to move southwards.

It is appropriate to mention here that the international help, as far as excavations are concerned, which we have had and which enabled us to clear completely the several hundreds of sites in the area between the U.A.R. boundaries in the north and Gemai in the south, has now waned. As a result of an exhaustive survey up to Saras and a rapid reconnaissance southwards up to the end of the endangered area, about 300 sites were listed. The information was communicated to the Nubia Office of UNESCO who, in their turn, released the data but unfortunately without response. This may be due to the fact that two-thirds of the sites in question are of late periods (i.e. not earlier than about A.D. 400) that is to say they are of X Group and Christian times and very few archaeological institutions are interested in these periods. It is not, however, too late to hope for help either in the shape of expeditions for excavation or money to enable us to clear the remaining sites in good time before the information they contain, which may be of extreme value, is lost for ever.

The University of Colorado Expedition for prehistoric survey have again taken the field in Nubia and will shortly finish their work in that region. They will then turn their attention to deal with the rich palaeolithic site of Khor Abu Anga in Omdurman. Both this expedition and the Southern Methodist (formerly New Mexico) Expedition met with extreme success during their work in Nubia; physical anthropologists and archaeologists belonging to the respective teams are now hard at work on the important finds discovered and when they finish, it is hoped that a good light will be shed on prehistoric man in the Sudan.
The French Expedition continued their work at the most important site of Mirgissa and it is envisaged that they may have to work for another two more full seasons before they close down the excavation in this enormous site. Work was carried out in the upper fort, the western cemetery, and the low plain. In the upper fort, a number of magazines were cleared. In one of these, a cache of flint spears with wooden handles in addition to five wooden boxes containing arrows, were found. In another, a box containing arrows as well as a limestone weight bearing the cartouche of Sesostis III, were discovered.

One of the more interesting discoveries of the French Expedition at Mirgissa was a small cemetery situated to the east of the upper fort, containing mainly children’s graves. Here, a scarab with the pre-nomen of Piankhi and another scarab with the pre-nomen of Shabaka were found and hence this cemetery was dated to the xxth Dynasty.

A Finnish archaeological expedition was granted a licence to work in an area between Gemai and Murshid in Sudanese Nubia. By the end of the season, the expeditions explored the area in question fully and excavated a good number of sites some of which date back to the A-group, C-group and Kerma periods. The Director of the mission, Mr. G. Donner thinks that he found a link between Early Khartoum and A-group as well as a link between A-group and C-group but this remains to be seen when the full results of this work are published.

Mr. Harry Smith came to Nubia in January 1965 on behalf of the Egypt Exploration Society to wind up the work of the Society in Sudanese Nubia. He excavated the cemeteries at Khor and replanned the fort at this site which was previously wrongly planned by other scholars. He also copied and photographed the Middle Kingdom hieratic graffiti at Gebel Turob and another hill in the vicinity.

The licences for work at the sites of Soleb and Seddenga were both renewed for the Italian Schiff-Giorgini mission but very little excavation was done. The expedition occupied their time mainly at Soleb preparing material for publication of this site which will appear in four volumes. Volume I has already appeared in a magnificent shape and the expedition deserves warm congratulations on it.

The University of Humboldt Expedition, Berlin, continued with the excavation of the big enclosure at Musawwarat es Sufra. It was found to be much more intricate than was previously thought. The expedition revealed a good many walls hitherto unknown and a good number more is expected to be found. This unexpected discovery has made it difficult for the expedition to close down the work at this site at the time they thought. They will have to continue now till the full plan of the site is regained. The Antiquities Service hopes and prays that the excavation budget of this expedition will now be replenished in order to enable them to bring the work at this important site to a successful end.
EDITORIAL NOTES

The Polish Expedition, having been forced by the approaching waters of the High Dam to bring their investigations at the important site at Faras in Sudanese Nubia to an end, wished to follow up the History of the Sudan during the Christian period; a licence to excavate the site of Old Dongola was readily granted to this expedition when they asked for it. They opened their first season there by planning the site and actual excavation will be taken up next season.

The University of Ghana Expedition was granted a licence for two years to excavate at Meroë. They have also started by planning the site and actual excavation is hoped to start in the season 1966–67.

Dr W. Y. Adams the Chief of the UNESCO Mission to the Antiquities Service who excavated the site of Meinarti on behalf of the Service is now fully occupied in writing up the results of his investigations. Dr Adams who worked with us since the beginning of the Nubian Campaign and contributed to a very great extent to make it a success, I have now learnt will be leaving the Sudan in June 1966 to take the position of a Professor in the Department of Anthropology in the University of Kentucky in the United States of America. I congratulate him warmly on his new position but it is with great sorrow I shall see him go.

The Frescoes in the church at the village of Shaikh abdel Gadir were removed, treated and made ready for exhibition by the Yugoslavian Government Mission. The mission met all expenses entirely out of their own resources and not only that, but, at the successful completion of their work, they presented the Antiquities Service with most of their equipment, including a vehicle. The Antiquities Service is greatly indebted to the Yugoslavian Government for sending this mission who spared no effort to accomplish this excellent piece of work, and also for the gifts which helped a great deal in promoting the Nubian Campaign.

The Antiquities Service, through the kind help of Professor K. Michałowski, secured the service of Mr Jozef Gazy, a former member of his expedition, to prepare the Sudan share from the Faras frescoes for exhibition. A special laboratory for this purpose has been fitted in the new National Museum and Mr Gazy has already got to grips with his work.

The Antiquities Service completed the dismantling and transport of Semna East temple to Khartoum in July 1964. This marks the completion of the salvage operation of all the scheduled monuments for removal from the endangered area in Sudanese Nubia. Work has now started in the new Sudan National Museum in Khartoum to prepare the ground for the re-erection of the rescued monuments. In connexion with this operation, a lot of additional work has to be done in order to secure the safety of these monuments after rebuilding them as they have come from an area where there is no rain. The effect of humidity on the sandstone blocks in Khartoum has, therefore, to be
cut down to a minimum. Foundations of red-bricks and concrete were built in order that the temples' blocks should rest on them to guard against seepage of moisture from the ground. Again in order to shelter them from the rain, movable structures of steel and glass had to be made. The foundations for Semna, Kumma and Buhen temples have already been completed. The movable structures to house Kumma and Semna temples have also been completed. The re-erection operation will now be started.

Five big granite columns which were rescued from the church at Faras have now been re-erected in the grounds of the Sudan National Museum.

To conclude, I am happy to say that the Nubian Campaign, thanks to the international help we got, was a great success, not only in the excavation of sites or removal of monuments operations, but mainly in the results of the campaign in the shape of the many historical facts hitherto unknown and the huge mass of objects obtained which will be a most welcome addition to the national collection in this country and many countries in the world, being part of the common heritage of mankind.

THABIT HASSAN THABIT
The Reconnaissance Survey from Gemai to Dal: A Preliminary Report for 1963–64

by A. J. Mills

With the virtual completion of archaeological work in the area of Sudanese Nubia to be flooded by the first stage of the Sadd el Ali at Aswan it is now our task to look to that area which will be inundated by the second and third stages of this enormous new dam. It was decided that the best way to facilitate the archaeological exploration and excavation of this region was first to conduct a reconnaissance of the area. This work has been carried out by the Sudan Antiquities Service. The author, who is employed by UNESCO, is extremely grateful for the help given him by both Sayed Thabit Hassan Thabit, the Commissioner for Archaeology, and Sayed Nigm ed Din Mohammed Sheriff, the Senior Inspector of Antiquities at Wadi Halfa.

The area under consideration extends from Gemai, 25 km. south of Wadi Halfa, to the Dal Cataract, about 140 km. south of Wadi Halfa. The geological formation of granitic and allied rocks produces a beautiful but rugged terrain and a river with many small islands and several rapids. It is not possible to traverse the length of either bank of the river here except on foot. Local transportation is by donkey and small, hand-made sailing boats. There is a local bus service along the east bank, but this runs a good 10 km. away from the river through most of the area. Habitation, compared with that further north, is sparse—small villages of mud or stone houses close to the river, separated by barren stretches of rock or sand. There is little cultivable land, most of this being only the high mud river bank. In places there is some irrigation with the ancient water wheel, but generally the plots are small. Some trees, usually date or dom palm and acacia, are to be found close to the river. The climate is virtually rainless and the temperature varies from the high 50s during the winter months to well over 100 degrees during the remaining eight or nine months of the year.

Because of the barren nature and inaccessibility of this part of Nubia it has been little visited by archaeologists in the past. Various travellers have passed through the area during the last century and a half and have mentioned in their diaries what ancient sites they have seen.¹ Excavation began in 1915 when Bates and Dunham worked at Gemai. The greatest task undertaken in the area so far was by the Harvard–Boston expedition under the direction of Dr G. A. Reisner

¹ Among these early travellers, the works of Linant de Bellefonds, Cailliaud and J. Burckhardt are important. They all passed through the area in the first half of the 19th century.
when, beginning in 1923, the Pharaonic fortresses at Semna, Kumma, Uronarti and Shelfak were excavated. More recently, the fortress on Askut Island has been excavated by a University of California expedition. But no systematic survey of the antiquities, such as has been done both in Egyptian Nubia and in Sudanese Nubia north of Gemai, has ever been made here.

Such a survey will now be undertaken. It is standard practice to take a preliminary look at any archaeological area or site to be excavated, so we formed a small party, consisting of myself and six labourers, to scout the region. Our method was to traverse the area on foot noting, as we came across them, each ancient site and briefly recording such information as the location, date, apparent extent, condition and the estimated time and manpower required for excavation. Where necessary, small test pits or trenches were quickly dug and usually one grave was dug in each cemetery.

Needless to say, the results of such a quick plunge into a relatively unknown region will be most tentative and our remarks on any site must never be interpreted as being in any way definitive. However, the results do look promising and it would seem that several seasons’ work will be necessary before we can say that we really know what is there.

For the sake of continuity it was decided to follow the site-numbering system initiated by Dr W. Y. Adams in his survey of the west bank of the Nile between Faras and Gemai. Sheet 35–I (Wadi Halfa) of the 1 : 250,000 series maps of the Sudan is divided into a 15-minute grid, the squares of which are numbered consecutively from east to west beginning at the top of the map. The area to be covered by the reconnaissance survey includes squares 10, 11, 15, 16 and 21 (Fig. 1). These squares are further divided into a 3-minute grid with squares lettered consecutively in a similar fashion. The actual sites are numbered within this system in the order of their discovery. Thus, the ancient Egyptian fort at Semna West is numbered 16–E–1, i.e. 15-minute square 16 – 3-minute square E – first site. It will be noticed that some of the site numbers published here duplicate those of the Epigraphic Expedition of the German Academy of Sciences as published by Professor Hintze in Kush xi, pp. 93–5, Kush xii, pp. 40–2, and Kush xiii, pp. 13–16. This unfortunate occurrence is due to a delay in the correlation of the results of the two expeditions. It should be recognized that Professor Hintze’s sites are only epigraphical—rock pictures and inscriptions. No archaeological site has been given two numbers, nor have epigraphical sites been given more than one number.

We have listed as a site every area containing any trace of ancient occupation. The majority of those sites described below as ‘town’ or ‘settlement’ consist in reality of a scattering of potsherds on the surface of the ground. Occasionally, there are the remnants of mud brick or stone walls, but even these are generally not very great. Where a site has a considerable part of its structures remaining or where there is monumental architecture, it will receive full attention during
ARCHAEOLOGICAL MAP
OF
THE AREA OF SUDANESE NUBIA TO BE
FLOODED BY THE SECOND AND THIRD
STAGES OF THE SADD EL ALI DAM

REFERENCE
- River Nile.
- 180 meter contour above
  sea level at Alexandria.
- D.A.L. Village name.
- Village boundary line

ARCHAEOLOGICAL SITES
- Rock Pictures.
- C - Group.
- P - Pharaonic.
- D - Nubian.
- X - Group.
- Christian.
- Uncertain date.
the progress of the survey. Those sites that have lost all structural remains will be dated as accurately as possible and their extent determined by the existing pottery. All the cemeteries predating the Christian period which we found this season were badly plundered and although we will make more extensive tests during the coming campaign, it seems improbable that the amount of new light shed on these ancient cultures will be sufficient to repay complete excavation. The only information of possible value to be obtained from cemeteries of the Christian era would be anatomical data derived from datable and stratified graves, a phenomenon we did not encounter this season.

The survey area is divided into thirteen villages. Beginning with Gemai in the north, these will now be taken in geographical order and the sites we have recorded briefly described.

**Gemai.** In this first village there are twenty-four sites in all. On the east bank:

- **11-E-1,** a few graves dating to the Christian period;
- **11-E-2,** a Christian cemetery of about 150 graves;
- **11-E-3,** several rubbish pits of Christian date;
- **11-D-3,** a denuded settlement site of X-Group/Christian date;
- **11-D-4,** a plundered Meroitic—Christian cemetery of seventy-five graves;
- **11-D-5,** a few graves of uncertain date;
- **11-D-6,** a small, denuded Christian village site;
- **11-D-7,** a small, plundered X-Group cemetery;
- **11-D-8,** three large mud brick Christian tombs;
- **11-I-3,** an extensive, but denuded X-Group/Christian town site;
- **11-I-4,** a plundered X-Group/Christian cemetery;
- **11-I-5,** a plundered cemetery of about fifty graves belonging to the Kerma and Meroitic cultures;
- **11-I-6,** a small, denuded Christian settlement site;
- **11-I-7,** a cemetery of 200 plundered Kerma, Meroitic and Christian graves.

On the west bank:

- **11-D-9,** a Christian cemetery of forty to fifty graves;
- **11-D-1,** a small, mud brick church with some Christian graves nearby. One of the rooms still has its vaulted ceiling intact, but most of the walls have fallen, one of them in the last two years;
- **11-D-10,** a Christian cemetery mostly destroyed by cultivation;
- **11-D-11,** a completely plundered C-Group cemetery;
- **11-D-12,** a denuded Christian town site;
- **11-D-13,** a small Christian settlement site with the remains of some mud-brick and stone walls and a few graves;

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2 As the graves of the C-Group and the Kerma cultures when plundered are often indistinguishable, we have, for the purposes of this preliminary survey, only dated as Kerma those in which there is definite evidence of a Kerma burial; otherwise, graves belonging to the general period are called C-Group.

3 For more recent documentation on this site see: Somers Clarke, *Christian Antiquities in the Nile Valley* (Oxford, 1912), p. 50, pl. vi; and Monneret de Villard, *La Nubia Medioevale* (Cairo, 1935), I, p. 227, fig. 218.
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11-I-9, a small Christian town with the remains of a few walls;
11-I-1, a fairly extensive Christian town built of mud brick with about fifty rooms remaining, many of them with vaulted roofs intact and filled with stratified deposit. There is also a fairly large Christian cemetery nearby.4

Sites were also noted on two islands in this area:
11-D-2, a denuded Christian settlement overbuilt with a later watchtower on Abu Dom Island;
11-I-8, a small Christian settlement with a number of brick walls standing up to 2 m. high on Ushinarti.

SARAS. In the rather larger village of Saras fifty-four sites have been recorded to date. The bulk of these are on the east bank:
11-M-1, a Christian cemetery of some twenty graves;
11-M-2, a cemetery of twenty plundered X-Group and ten Christian graves;
11-M-3, a small Christian settlement site with the remains of one or two brick walls;
11-M-4, a small Christian cemetery;
11-L-9, some Christian rock pictures;
11-L-10, a small, denuded A-Group settlement site;
11-L-11, a Christian cemetery of forty graves;
11-L-12, a plundered C-Group cemetery of about 30 graves;
11-L-13, a fairly large, denuded Christian settlement;
11-L-14, two small denuded C-Group settlements some 150 m. apart;
11-L-15, a cemetery of sixty Christian and plundered X-Group graves;
11-Q-2, a plundered Kerma cemetery of about twenty graves;
11-Q-3, a plundered Kerma cemetery of about fifteen graves;
11-Q-4, a ruined C-Group habitation site;
11-Q-5, a small plundered C-Group cemetery;
11-Q-6, a small plundered cemetery of the X-Group period;
11-Q-7, a denuded Christian settlement site;
11-Q-8, a Christian cemetery of about forty graves;
11-Q-9, a Pharaonic stone-walled enclosure;
11-Q-10, a denuded Pharaonic occupation site;
11-Q-11, a plundered C-Group cemetery of about twenty-five graves;
11-Q-1, rock pictures dating to several periods;5
11-Q-12, a plundered X-Group/Christian cemetery of 200 graves;
11-Q-13, a denuded X-Group/Christian settlement site;
11-Q-14, a Christian cemetery of twenty graves;
11-U-2, a plundered X-Group/Christian cemetery of thirty graves;
11-U-3, a small, denuded Christian habitation site;
11-U-4, an X-Group cemetery of twenty plundered graves.

On the west bank of Saras we recorded the following:
11-H-1, a denuded Christian settlement site;
11-H-2, a plundered X-Group cemetery of thirty graves;
11-H-3, a single plundered Pharaonic rock-cut tomb;

5 Originally mentioned by K. S. Sandford and W. J. Arkell, Paleolithic Man and the Nile Valley in Nubia and Upper Egypt (Chicago, 1933), pp. 64–5.
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11-M-5, fifteen completely plundered C-Group graves;
11-M-6, three small, plundered graves of pharaonic date;
11-L-17, a denuded X-Group/Christian settlement site;
11-L-18, a few plundered graves of uncertain date;
11-L-19, a Christian cemetery of about forty graves;
11-Q-15, a small Christian village with the remains of some walls of stone and brick standing six or seven courses;
11-P-2, a few Christian graves;
11-U-1, the Pharaonic fortress of Shelfak, excavated by the Harvard–Boston expedition in 1931.\(^6\)

There are a number of sites on the larger islands in the Sarais area:
11-L-1, a Pharaonic fortress with Christian overbuilding on Askut, excavated by the University of California;\(^7\)
11-L-2, a Christian citadel on Mugufil;
11-L-3, some Christian stone houses on Mugufil;
11-L-4, Christian pottery kilns on Mugufil;
11-L-5, some Christian rock drawings on Mugufil;
11-L-6, a short hieroglyphic inscription on Askut;
11-L-7, Pharaonic and Christian rock inscriptions on Kagnarti;
11-L-8, a Christian settlement and church on Kagnarti;
11-L-16, a small Christian settlement on Farkeit Is.;
11-P-1, extensive remains of a Christian village including a small chapel on Diffnarti. There are about fifty rooms with mud brick walls standing up to 3 m. high;\(^8\)
10-Y-1, the Pharaonic fortress and chapel on Uronarti, excavated by the Harvard–Boston expedition;\(^9\)
10-Y-2, a large Middle Kingdom 'administration building', excavated at the same time as 10-Y-1, on Uronarti;
10-Y-3, rock inscription of the vizier *twrti* (Amenophis I) on Uronarti;
10-Y-4, a denuded X-Group/Christian village on Uronarti;
10-Y-5, a small Christian town site, with a number of stone walls standing on Uronarti.

SEMNA. Here there are twenty-six sites, most of them being found in the northern half of the village. The east bank sites are:
10-Y-6, a Christian cemetery of about twenty graves;
16-E-2, the Pharaonic fortress and temple of Kumma, excavated by the Harvard–Boston expedition.\(^10\) The temple was copied by Dr R. A. Caminos in 1963 and early in 1964 dismantled and removed to Khartoum by the Sudan Antiquities Service;

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\(^6\) The final publication of this excavation has not yet appeared. Preliminary reports by N. F. Wheeler, op. cit., pp. 251–6 and *BMFAB*, xix (1931), pp. 66–70.

\(^7\) Preliminary report by A. Badawy in *Kush* xii (1964), pp. 47–53.


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16–E–4, a few graves of uncertain date;
16–E–5, a large, denuded X-Group/Christian settlement site;
16–E–6, a few Christian graves;
16–E–7, a plundered X-Group/Christian cemetery of thirty graves;
16–E–8, a small, partly ruined, mud-brick church, at present being used as a grain store by the local people;
16–E–9, thirty graves of uncertain date;
16–E–10, a Christian cemetery of about a dozen graves;
16–E–11, a denuded Christian settlement site;
16–E–12, a denuded settlement and a few graves of the Christian period;
16–E–14, a cemetery of forty graves of uncertain date;
16–J–2, a denuded Christian settlement site;
16–J–3, a Christian cemetery of sixty graves;

The following sites are on the west bank of Semna:

16–E–1, the Pharaonic fortress of Semna West, excavated by the Harvard–Boston expedition. The temple here was copied by Dr Caminos in 1962 and the Sudan Antiquities Service has now removed it to Khartoum;
16–E–15, a Christian cemetery of forty graves;
16–E–3, the Pharaonic fortress of Semna South. This is a large kom consisting of a large Pharaonic mud-brick ruin overbuilt with Christian structures including a church;
16–E–16, a small church, destroyed to the stone foundations;
16–E–17, a Christian cemetery of forty graves;
16–E–18, a Christian cemetery of thirty graves;
16–E–19, a brick-built Christian town site, mostly denuded, but remaining structures include a church with walls standing about 2 m. high;
16–E–20, a Christian cemetery of about fifty graves;
16–J–4, a Christian cemetery of twenty graves;

Three islands in the Semna area have sites on them:

16–Y–7, a denuded Christian settlement on Kajinjera;
16–E–13, a denuded Christian town overbuilt with a Turkish fort on Miskenarti;
16–J–5, a large Christian settlement with some walls remaining on Tila Is.

ATTIRI. Only twelve sites were recorded in the village of Attiri. On the east bank:

16–J–15, a denuded X-Group/Christian settlement site;
16–J–16, a Christian cemetery of twenty graves;
16–J–17, about ten Christian graves;
16–J–14, four large, plundered X-Group graves;
16–J–13, a denuded X-Group/Christian settlement site;
16–J–12, a Christian cemetery of seventy-five graves.

The five sites on the west bank at Attiri are:

16–J–7, a Christian cemetery of twenty-five graves;
16–J–8, a Christian cemetery of twenty-five graves;

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PLATE 1

a. 16-N-6. A CHRISTIAN VILLAGE AT DUWEISHAT WEST. SOME OF THE STONE DWELLINGS

b. 21-N-19. THE CHRISTIAN SETTLEMENT ON ABIMULGUM IS., AKASHA, SEEN FROM THE EAST BANK OF THE NILE

facing p. 6
THE RECONNAISSANCE SURVEY FROM GEMAI TO DAL

16–J–9, a Christian cemetery of thirty graves;
16–J–10, a plundered and denuded X-Group cemetery of 125 graves;
16–J–11, a large, denuded X-Group/Christian town site.

The remaining site, 16–J–6, is a Christian village covering Attiri Is. There are a number of buildings including a small chapel in a fair state of preservation.  

DUWEISHAT. In Duweishat, one of the rockier and more forbidding areas in this part of Nubia, twenty-two sites were recorded. The east bank sites are:

16–N–1, the site of ancient Egyptian gold mining activities. There are several galleries and workshops within an area of more than a square kilometre at some distance from the river and at the very north end of the village. This site is not plotted on the map;

16–O–2, a small Pharaonic workshop near the river bank for the final crushing and washing of the gold ore from 16–N–1;

16–O–3, about ten Christian graves;

16–O–4, a Christian cemetery of twenty-five graves;

16–O–5, a denuded town site of the Christian period;

16–O–6, a Christian cemetery of fifteen graves;

16–N–2, a Christian cemetery of twelve graves;

16–N–3, a Christian cemetery of fifteen graves;

16–S–1, a small, ruined Christian building;

16–S–2, a Pharaonic workshop similar to 16–O–2.

On the west bank of Duweishat we found:

16–O–7, a denuded X-Group/Christian settlement site;

16–O–8, a plundered X-Group/Christian cemetery of 100 graves;

16–O–9, forty plundered X-Group and Christian graves;

16–O–10, a denuded X-Group/Christian settlement site;

16–N–4, a Christian cemetery of twenty graves;

16–N–5, a Christian cemetery of fifteen graves;

16–N–6, a Christian village consisting of about twenty-five one- and two-roomed houses built of rough stones and a mud brick church. The walls of the houses are generally standing over 1 m. and the church walls up to 2½ m. (see PLATE I, a);

16–N–7, a ruined Christian ?watchtower;

16–N–8, ten Christian graves;

16–N–9, a plundered X-Group/Christian cemetery of thirty-five graves;

16–N–10, a Christian cemetery of about twelve graves.

On Kumuki Is. is 16–S–5, a small Christian settlement site with a few mud brick and stone walls standing about a metre.

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13 Noted in Chittick, op. cit., pp. 47–8, pl. xi.
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AMBIKOL. The total number of sites discovered in the village of Ambikol is sixteen. Those on the east bank are:

16–S–3, a denuded Christian settlement site;
16–S–4, a Christian cemetery of twenty-five graves;
16–R–1, a Christian cemetery of forty-five graves;
16–R–2, a denuded Christian settlement site;
16–R–3, twelve Christian graves;
16–R–4, a plundered X-Group cemetery of forty-five graves;
16–R–5, fifteen denuded graves of uncertain date;
16–W–2, a denuded X-Group/Christian settlement site;
16–V–2, twenty plundered graves of uncertain date.

There are only two sites on the west bank.

16–R–6, a small Christian cemetery;
16–R–7, about fifteen plundered X-Group graves.

The island sites at Ambikol are:

16–R–8, a small Christian settlement with the remains of a few stone walls on Gushum Is.;
16–R–9, a few ruined small stone Christian houses on Ambikol Is.;
16–R–10, a largely denuded Christian settlement on Ambikol Is.;
16–R–11, a Christian cemetery of 100 graves on Ambikol Is.;
16–W–1, a Christian fortress on Sunararti. The defensive walls are built of stone and stand over 3 m. in height. The interior contains the remains of about twenty stone and brick rooms (see Plate II, a).14

MELIK EL NASR. Twenty-one sites are now known in the sparsely-populated village of Melik el Nasr. Those on the east bank are:

16–V–3, a Christian cemetery of about twenty graves;
16–V–4, a denuded X-Group/Christian settlement site;
16–U–2, a denuded X-Group/Christian settlement site;
16–U–3, a Christian cemetery of about twenty-five graves;
16–U–4, a Christian cemetery of about fifty graves;
16–U–5, about fifteen Christian graves;
15–Y–3, a small Christian cemetery.

The west bank sites here are:

16–U–6, a cemetery of fifteen plundered X-Group and Christian graves;
16–U–7, a ruined Christian pottery kiln;
15–Y–8, a small cemetery of uncertain date;
15–Y–9, a few Christian graves.

The rest of the Melik el Nasr sites are on the two large islands there:

16–V–5, a mostly denuded Christian habitation site on Turmuki;
16–V–6, a small denuded Christian settlement site on Turmuki;
16–V–7, a Christian cemetery of about thirty graves on Turmuki;
16–V–8, the remains of several, ruined, Christian stone houses on Turmuki;

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14 Chittick, op. cit., pp. 45–7, pl. x.
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16-U-1, a ruined ?Turkish fort on Turmuki;
15-Y-1, a stone-built Christian fort, largely destroyed, on Tangur Island. The outer walls stand about 1.50 m., but little remains of the interior;
15-Y-4, a Christian cemetery of about 100 graves on Tangur;
15-Y-5, a small Christian settlement with some structural remains on Tangur;
15-Y-6, a denuded Christian settlement site on Tangur;
15-Y-7, a small Christian habitation with the remains of seven or eight small rooms on Tangur.

SONGI. There are thirteen sites in Songi. Those on the east bank are:
21-E-1, a plundered X-Group/Christian cemetery of fifty graves;
21-D-1, a denuded X-Group/Christian settlement site;
21-D-2, a few graves of uncertain date;
21-D-3, a mostly destroyed Christian settlement site with one mud-brick building still largely intact;
21-D-4, a small Christian settlement with a number of walls standing a few courses high;
21-D-7, a plundered X-Group cemetery of thirty-five graves;
21-I-5, a small, partly ruined, mud-brick church. Some of the walls stand to roof height, but others are completely destroyed;
21-I-6, a Christian cemetery of fifteen graves;
21-I-7, a few graves of uncertain date.

The remainder of the sites in this village are on the west bank:
21-D-5, a small mud-brick church. The rooms are preserved to roof level, filled with clean drift sand, and the walls are decorated with well preserved and brightly coloured paintings (see PLATE II, b);
21-D-6, a small Christian settlement site with the remains of a few mud-brick and stone walls;
21-D-8, a very large mud-brick Christian tomb;
21-I-1, five small, partly preserved, Christian buildings.

UKMA. At Ukma, where a wider plain allows rather more cultivation than is possible further north, we found twenty-five sites. On the east bank:
21-I-8, a plundered Meroitic cemetery of sixty graves;
21-I-9, a Christian cemetery of fifteen graves;
21-I-10, a small church, mostly ruined, but with one brick wall standing 3 m. high and several stone walls standing about 50 cm. high;
21-I-11, six Christian graves;
21-I-12, a plundered X-Group cemetery of twenty graves;
21-I-13, a Christian cemetery of forty graves;
21-N-13, a Christian cemetery of twenty-five graves;
21-N-14, an X-Group/Christian settlement site with a few mud-brick walls preserved to a metre in height;
21-N-15, a plundered X-Group/Christian cemetery of 100 graves;
21-N-16, a dozen Christian graves;
21-N-17, a Christian cemetery of fifteen graves.

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<sup>16</sup>This site was previously mentioned by J. H. Breasted, 'The Monuments of Sudanese Nubia' in <i>AJSL</i>, 25-1 (1908), pp. 104-5; and Chittick, op. cit., p. 45.
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The sites on the west bank are:

21-H-1, a Christian cemetery of thirty graves;
21-H-2, about fifteen ruined, stone-built Christian houses;
21-H-3, a Christian cemetery of fifty graves;
21-I-3, a denuded Christian settlement site;
21-N-2, a Christian cemetery of forty graves;
21-N-3, a Christian cemetery of forty graves;
21-N-4, a ruined Christian pottery kiln;
21-N-5, a plundered X-Group/Christian cemetery of thirty graves;
21-N-6, about fifteen Christian graves;
21-N-7, a small, stone-built Christian fort. The interior is filled with fallen debris and the outer wall stands as high as 2 m. in places;
21-N-8, a largely ruined Christian settlement consisting of some twenty stone-built rooms;
21-N-9, a Christian fort slightly larger, but similar to 21-N-7;
21-I-4, a large, completely denuded Christian settlement site.

There is one site on an island at Ukma:

21-I-2, a small Christian settlement site with the remnants of a few rough stone walls.

AKASHA. The village of Akasha was found to contain fourteen sites, most of them on the west bank, which is now uninhabited. The sites on the east bank are:

21-N-1, a fortified church, built of mud brick with a surrounding wall of stone. The church is the largest of those in the area and has been much ruined by rain. There are a number of destroyed small stone rooms within the enclosure. The outer wall is 1.50 m. thick and stands about 2 m. high;¹⁶
21-N-18, a small cemetery of uncertain date;
21-O-2, a Christian cemetery of thirty graves;
21-T-2, a Christian cemetery of fifteen graves;
21-T-3, a Christian cemetery of twenty graves.

On the west bank at Akasha are:

21-N-10, slight remains of about twenty stone-built dwellings of the Christian period;
21-N-11, a third stone-built Christian fort, similar to 21-N-7 and 21-N-9;
21-N-12, a Christian cemetery of twenty-five graves;
21-S-4, a Christian settlement site with the slight remains of a number of rough stone houses;
21-S-5, a Christian cemetery of twenty graves;
21-S-6, a Christian cemetery of twenty-five graves;
21-S-7, six small, stone-built Christian houses, mostly ruined;
21-S-8, a large Christian town site with the remains of about twenty mud-brick and stone buildings.

¹⁶ Chittick, op. cit., pp. 42-5, fig. 1, pl. ix.
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There is one island site at Akasha:

21-N-19, a Christian settlement with the remains of some twenty buildings in a fair state of preservation, on Abumulgum Island (see Plate I, b).

KULB. In Kulb there are ten sites. Only one of them is on the east bank:

21-X-1, a small, denuded Christian settlement site.

Six sites were found on the west bank:

21-S-11, a Christian cemetry of seventy graves;
21-S-1, a small, mostly destroyed, mud-brick church. Part of two rooms is preserved to the vaulted roofs and faint traces of paintings can be seen on the walls;¹⁷
21-S-12, a small Christian settlement with slight structural remains;
21-R-1, a mud-brick church with a number of the walls standing to a height of 3 m.;¹⁸
21-R-2, a Christian cemetry of 100 graves;
21-R-3, the largest of the Christian forts we found. The outer wall generally stands to about 3 m. and there are a number of brick and stone structures on the inside.

The island sites of Kulb are:

21-S-10, a Christian settlement with ?Turkish overbuilding and reconstruction on Erbenarti;
21-S-9, a small Christian village with the remains of about twenty brick and stone dwellings on Jebel Agurjai Is.;
21-S-2, a very large Christian town site with thirty or more buildings of mud brick remaining, several of them preserved to the second storey, and including a small church with the remains of at least two layers of paintings on the walls, on Kulbnarti.¹⁹

DAKKI. Only three sites were found at Dakki, all of them on the east bank:

21-X-2, about six Christian graves;
21-W-3, a Christian cemetry of fifty graves;
21-W-4, a Christian cemetry of twenty graves.

DAL. Only the northern half of Dal lies within the flood area and thus within the boundaries of our survey. Here a total of seven sites were recorded. On the east bank there were two:

21-V-5, a denuded Christian habitation site;
21-V-6, a Christian cemetry of thirty-five graves.

¹⁸ Somers Clarke, ibid.; Monneret de Villard, op. cit., pp. 234-5.
KUSH

The west bank sites at Dal are:

21-V-2, a small Christian settlement with the remains of three brick-built rooms;
21-V-1, a small, denuded Christian settlement site;
21-V-2, a plundered X-Group cemetery of twenty-five graves;
21-V-3, a Christian cemetery of fifty graves.

The one island site here is 21-V-4, a few graves of uncertain date on Tina Is.

Thus, in this doomed area, there are now approximately 240 known archaeological sites, more than half of them Christian in date. Our results would indicate that, except during the Christian era, there has always been a rather small population in the region. The A-Group culture is hardly represented at all and the Pharaonic and C-Group occupation appears virtually to cease at the ancient frontier at Semna and is not found again until one is well south of the Dal Cataract. There is no trace of settlement during the enigmatic Napatan period and that of the Meroites seems to have been slight. Habitation begins to increase during the X-Group period and then in the succeeding Christian era there appear to have been even more inhabitants than there are today. Archaeological conclusions can only be based on the data available and it must be borne in mind that our evidence is as yet incomplete, so any conclusions drawn from this report must be tentative.
Preliminary Note on the Epigraphic Expedition to Sudanese Nubia, 1963

by Fritz Hintze

The Epigraphic Expedition of the German Academy of Sciences, Berlin, concluded their fieldwork in Nubia with a third season,\(^1\) which lasted from 30 October to 19 December 1963.\(^2\) As in the first season the party was composed of Dr Ursula Hintze, Walter Friedrich Reineke, and myself (rock inscriptions); Professor Dr Karl Heinz Otto, Dr Gisela Buschendorf-Otto, and Dr Bernhard Gramsch (rock pictures). At first the Rock Picture Group used the resthouse at Gemai as their base, moving on to Saras, and finally to Attiri; the Rock Inscription Group worked throughout from Tangur village.

Rock Inscriptions

The distribution and number of rock inscriptions according to districts (omodiyas) and sites is as follows:

- Askut (11-L-1)\(^3\)-10
- Saras West (11-U-2)\(^4\)-3
- Melik el Nasir (Makanasir) (16-U-3, 4)-6
- Tangur East (21-E-1 to 4)\(^5\)-35
- Tangur West (21-D-1)\(^6\)-2
- Sonki (21-D-3, 21-E-6)-5
- Kulb (21-X-1, 2)-4
- Dal (21-W-4)-10

Altogether seventy-five inscriptions were recorded. Perhaps the most interesting are the three from the Old Kingdom at site 21-X-1, which are up to

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2 Actual field work was carried out between 10 November and 14 December 1963.
3 Prof. Alexander Badawy, head of the University of California Expedition at Askut, kindly invited us to copy the rock inscriptions on Askut Island; but as they belong to that concession they will be published in the final report of the excavations there.
4 This site is less than 1 km. south of the fortress of Shaffak; the place is called 'Dudora'.
5 Site 21-E-4 had already been found by Breasted, cf. PM, vii, p. 157; Breasted photo 3276-7.
now the most southerly Old Kingdom inscriptions to be discovered.\footnote{Apart from the viith Dynasty alabaster fragments from Kerma, which are no proof of the presence of Egyptians at Kerma during the Old Kingdom; cf. my paper “Das Kerma-Problem”, ZAS, vol. 91 (1964), pp. 79–86.} They were made by a ‘scribe of the prospectors’ and two ‘overseers of the prospectors’ (ss, and imr snmtjw respectively).\footnote{Cf. Goyon, Nouvelles inscriptions rupestres du Wadi Hammamat (1957), p. 42.} Obviously these prospectors were looking for minerals in the jebels of the Second Cataract.

Two of the inscriptions at Askut are from the Middle Kingdom. 11–L–1/1 is a Nile level mark made in year 3 of king Sekhem-ka-Re, and is worthy of note not only because it belongs to the xiith Dynasty, but also for its height, which seems to bear the same relationship to the present high water level as the inscriptions at Kumma.\footnote{Cf. Leclant, Orientalia, vol. 33 (1964), p. 382.} Inscription 11–L–1/8 commemorates an ‘inspection tour’ (phrt) in ‘year 15 under the majesty of this god’, but it does not give the name of the king.

The rest of the inscriptions are of New Kingdom date. 21–D–1/1 is from year 2 of Thutmose I\footnote{Cf. note 6 above; Säve-Söderbergh, Ägypten und Nubien (1941), p. 147. It seems probable that \textit{tj pn\textsuperscript{ij}}, “The Turn-over-place” (Urk., iv, 8) was the very difficult cartouche at Targur, where the ‘scribe of the army, Ahmose, counted the ships’.} and 21–D–1/2 is identical with RIK 129, which was wrongly supposed to be at Kumma.\footnote{Cf. KUSH XI, p. 94, n. 5 and note 6 above. Breasted said that this inscription is ‘dated on the 10th of the sixth month in the fifteenth year of the joint reign of Hatshepsut and Thutmose III, the queen being placed first’. Janssen in his edition of the rock inscriptions of Kumma (Second Cataract Forts, i, p. 169) read year 23 (?) and remarked: ‘The first cartouche probably contains the name of Amenemhat III, although the feather looks like a white crown. If the second cartouche is to be read \textit{hc-hpr-r\textsuperscript{t}}, it is Sesostris II’. I believe that Breasted’s reading of this, unfortunately very badly preserved, inscription was right.}

The most important inscriptions are 11–U–2/1 and 11–U–2/2 from Shelfak (see PLATE III, a). The first is dated ‘year 18 IV Shomu, day 16, under the majesty of the King of Upper and Lower Egypt, Mn-hpr-R\textsuperscript{t} (i.e. Thutmose III), given life like Re, beloved of the King of Upper and Lower Egypt H\textsuperscript{t}-k3w-R\textsuperscript{t} (i.e. Sesostris III). Made by the scribe of the King’s son [Imn-m-n\textsuperscript{hw}], Imn-htp [. . .].’ .

Inscription 11–U–2/2 begins: ‘King’s son, overseer of the southern lands [Imn-m-n\textsuperscript{hw}]. . . .’. The name of the viceroy, Amenemnekh, has been erased from both inscriptions, but is still clearly legible. The erasure of his name in year 15 of Thutmose III together with those of the viceroys Seni, Nehi and Ini\footnote{Inscription from Tumbos: PM, vii, p. 175; Säve-Söderbergh, Ägypten und Nubien, pp. 175–6, 208–9. Prof. Edel visited the Tumbos inscription in December 1963; according to his collation, the name in line 5 is most probably Ini. In any case it cannot be Imn-m-n\textsuperscript{hw}, so that between years 18 and 20 of Thutmose III another change in the viceroyalty must have taken place.} from certain inscriptions may perhaps have some bearing on the ‘Hatshepsut
problem'; at least the succession of these viceroy seems to be as complicated
as that of Thutmose II, Thutmose III, and Hatshepsut, and must in some way
be comparable.13 The viceroy Amenemnekhau was not previously known, but there
are two other inscriptions which refer to him at Tangur—21-E-3/1 and 21-E-4/2
(see Plate III, b).14 The scribe of the viceroy Amenemnekhau (in 11-U-2/1) is,
according to the filiation,15 that same Amenhotep who made the inscription
5-T-17/3 at Abu Sir in year 16 of Thutmose III.16

The most frequent title is ss 'scribe' (12 times). Six inscriptions were
made by ss ms3 'scribes of the army', two by ss nsw 'scribes of the king', and
one by a ss s3 nsw 'scribe of the king's son'. The inscription 21-E-4/7 was
made by the 'scribe of the treasury' (ss pr-hdj) Sm3-h3stjw, who is also mentioned
in inscription 5-T-17/7 at Abu Sir.17 The title h3ty-j 'mayor' occurs three
times and hrj mdjj 'captain of the police' once. The personal name in inscription
21-E-4/21 is worth noting—Tbw-nsw-m-스j, which is to be translated
'the sandal of the King is my fate'. The Nile level mark from Askut (11-L-1/1)
refers to a 'commander of the fortress' Shk-wr-ib, whose title is snsw n h33
'follower of the ruler'.

Rock Pictures

During the third season the Rock Picture Group documented forty-eight
sites with a total of 327 groups of pictures.

<table>
<thead>
<tr>
<th>Site</th>
<th>5-S-26, 27, 28; 11-D-3 to 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARAS</td>
<td>11-I-11 to 24; 11-L-5; 11-Q-29 to 33; 11-U-2</td>
</tr>
<tr>
<td>SEMNA</td>
<td>16-E-15, 16</td>
</tr>
<tr>
<td>ATTIRI</td>
<td>16-J-2 to 5; 16-O-2 to 5</td>
</tr>
<tr>
<td>DOSHAT</td>
<td>16-E-15, 16</td>
</tr>
<tr>
<td>KULB</td>
<td>21-X-1, 2</td>
</tr>
<tr>
<td>DAKKI</td>
<td>21-W-1, 2, 3</td>
</tr>
</tbody>
</table>

In the southern part of our concession the Inscription Group also noted the
rock picture sites they found and photographed the more important pictures as
completely as possible. They were as follows:

<table>
<thead>
<tr>
<th>Site</th>
<th>16-W-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMBIKOL</td>
<td>16-U-2, 3, 5</td>
</tr>
<tr>
<td>MELIK EN NASIR</td>
<td>16-U-2, 3, 5</td>
</tr>
<tr>
<td>TANGUR</td>
<td>15-Y-2, 3; 21-E-2, 3</td>
</tr>
</tbody>
</table>

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14 See note 5 above.
15 The filiation in both inscriptions is: ir n im3bj hrj Dhwjt p3-n-Nbn, ms n nbt pr
Wz3d(j)t.
16 See KUSH XII, pl. viii, b. His title in this inscription from year 16 is only ss
'scribe'.
17 Cf. KUSH XII, p. 41.
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Tangurnarti — 15–Y–4, 7
Sonki — 21–E–5, 6; 21–D–2 to 5
Akasha — 21–S–4

Approximately 10 per cent of the rock pictures represent wild animals such as giraffe (see Plate IV, a), elephant, ostrich, gazelle, and hippopotamus. More than 60 per cent are pictures of domesticated animals, mostly cattle (80 per cent) and goats or sheep, camels, dogs, donkeys and horses. The remaining 30 per cent are various compositions (see Plate IV, b), including hunting scenes or men and women dancing, and symbolic signs (e.g. the Cross), or riders on camel or horseback; most of the latter belong to the Christian and Arab periods.

The distribution of rock pictures, rock inscriptions, occupation sites and burial grounds shows clearly that the Batn el Hagar from Saras to Akasha was inhabited by permanent settlers, as a place of refuge, only in the late Christian period. Most of these settlements are strongly fortified and they are built in hidden or inaccessible places. The region north of Shelfak, on the other hand, is rich in sites of all periods, and especially at Saras and Murshid there are striking concentrations of rock pictures.

\[18\] Cf. Chittick, Kush v, p. 48.
a. INSCRIPTIONS 11-U-2/1, 2 (SHELFAK-DUDORA)

b. INSCRIPTIONS 21-E-4/1, 2 (TANGUR)
a. ROCK PICTURES AT SITE 21-X-1 (KULB)

b. ROCK PICTURES AT SITE 21-X-1 (KULB)
Report of the Palaeolithic Section
University of Colorado Nubian Expedition*

by Henry T. Irwin and Joe Ben Wheat

During the 1962-63 season a number of locations on the Colorado Concession yielded artifacts and debris of a late Palaeolithic and Epi-
Palaeolithic character. Surface collections were made from these localities and shipped to the University at Boulder, Colorado. In addition, limited subsurface testing was carried out at several key stations.

The 1963-64 season began in September at Boulder, Colorado, where a preliminary attempt was made to sort out the great quantity of material gathered the previous year. A working typology was created at this time. A representative selection of this material was then shipped back to Wadi Halfa according to the University’s agreement with the Sudanese Antiquities Service.

The work both here and later in the field was carried out by field assistants Harry Scheele, Robert Campbell, and James Haug under the direction of Joe Ben Wheat and Henry Irwin. The latter’s wife, Lee Irwin, both worked in the field and was in charge of the laboratory.

The field season itself began on 1 November in Wadi Halfa. After checking all of the field locations, preliminary excavation was begun at three of these sites. They are designated according to the Antiquities Service’s system, 6-B-27, 6-B-28, and 6-B-29. All three were erosional remnants of a series of silts and alluvial sands laid down sometime prior to 7000 B.C.

Extensive excavation was then carried out at 6-B-27 and 6-B-28. 6-B-29 proved too unproductive to warrant further investigation. Samples of charcoal for radiocarbon analysis were gathered from all three localities. Excavation of these three sites was concluded on 1 January and subsequently work was carried out at several other sites discovered in the previous season. These sites are numbered 6-G-27, 6-G-29, 6-G-30, 6-B-32, and 6-B-35. In addition, another survey of the Concession was made and two further sites which warranted excavation were discovered. These are numbered 6-G-31 and 6-G-36. Finally, two locations lying just outside the Colorado Concession were tested after an agreement with the Antiquities Service. These are numbered 6-G-32 and 6-G-33.

Field procedure was as follows: excavation was carried out until a statistically significant sample, several hundred tools, was gathered, or until the site was virtually exhausted. Depending on the site, a one- or two-metre grid system

*This and the following paper were supported by grants of the United States National Science Foundation and the U.S. Department of State, under Public Law 480.
KUSH

was used to locate artifacts horizontally, while all sites were excavated following natural and cultural levels. Where features such as hearths were present these were mapped in extensive detail and carefully excavated with all artifacts and other debris left in position until a final map and photographs could be made. All material was either excavated with trowel and paintbrush, or sieved through \( \frac{1}{2} \) in. mesh screen. Samples for pollen analysis were taken from all localities excavated and, where possible, sufficient charcoal for several radiocarbon dates was secured.

An effort was made by observation and supplementary testing to match all the complexes stratigraphically. Three locations, 6–B–27, 6–B–28, and 6–G–30 contained more than one cultural level. At 6–B–28 and at 6–G–30 the material from the separate levels appeared significantly different. However, the two levels at 6–B–27 did not individually yield enough tools to assess similarities and differences between them.

Our geological investigations were aided by the kind advice of Professor Jean de Heinzelin and Dr Roland Paepe, both of the Columbia-New Mexico field party. Our interpretation does not necessarily coincide with theirs, however.

Analysis of the materials was undertaken at Wadi Halfa as a daily routine. In addition, the last month of the season all members worked on analysis. We were thus able to quit the field with a final typology, a complete tool count for each of the sites, and preliminary line drawings of about 800 artifacts.

<table>
<thead>
<tr>
<th>6–G–33*</th>
<th>Neolithic</th>
</tr>
</thead>
<tbody>
<tr>
<td>6–G–32*</td>
<td>E</td>
</tr>
<tr>
<td>6–G–31*</td>
<td>D</td>
</tr>
<tr>
<td>6–B–29* 6–B–27* 6–B–33</td>
<td>C</td>
</tr>
<tr>
<td>6–G–30* Lower 6–G–30* Upper 6–G–27*</td>
<td>A</td>
</tr>
</tbody>
</table>

* Excavated Sites

The above diagram presents a general picture of the complexes recognized, the sites belonging to each complex and their chronological ordering. In the diagram, the vertical lines isolate distinct sub-varieties of the complexes represented. Chronological ordering within complexes is suggested by placement, earliest to latest, left to right.

A brief description of each complex follows. No effort is made at this point to present full tool inventories or to do more than outline a few significant features of the assemblages.
A. *Sites 6–G–30, 6–G–27.* Both assemblages are characterized by extensive use of the Levallois technique. The technique was applied to all of the materials used, ranging from white quartz to chert. The majority of the tools and flakes are of ferricrete. Most of the artifact inventory consists of Levallois flakes and pointed Levallois flakes, often slightly retouched. At both sites there were burins, but at 6–G–27 they were quite numerous and of varied form, often made on Levallois flakes. Commonly flakes have faceted butts, generally convex. Scrapers are rare but present; denticulates, perforators, and notches occur in small numbers.

B. *Sites 6–B–32, 6–B–35, 6–B–28 Lower, 6–B–28 Upper, 6–G–29.* The characteristic feature of the assemblages of this complex is the presence of a special type of Levallois flake and a modified Levallois technique used to produce it. A core was first prepared, generally of small size, often no larger than two centimetres in diameter. The dorsal surface preparation was particular in that there was a concentration of preparatory removals at the edge opposite the intended striking platform. Then, one or two spalls were shot from the striking platform leaving a concave area on the upper surface. Then the core was faceted and the major flake struck off. These little flakes, which we refer to as Halfa flakes, were then used, and a number show other modifications. One of the commonest examples of the latter is the presence of retouch along the basal edge.

Both sites 6–B–35 and 6–B–32 have a relatively high presence of burins. Sites 6–B–28 (upper and lower) and 6–G–29 have backed or retouched microblades and flakes. There are a few such specimens at 6–B–32 and 6–B–35, and at all sites microblades and cores are common. The type of retouch or backing is particular, always running from the ventral surface to the dorsal. The retouch or backing is not steep; and most commonly it is continuous. There appears to be no particular division between microblades and flakes, but the former are somewhat more common. These artifacts were occasionally further modified by truncation, denticulation, etc.

C. *Sites 6–B–27, 6–B–29, 6–B–33.* This complex is characterized by a special production technique. Blades and flakes were driven off cores from two directions; a ridge created by the first flake becomes the guide line for the second flake taken from the opposite end. This might be described as a double-ended core technique. These flakes or blades are generally faceted. A certain number undoubtedly served as points, while others were cutting implements. Many show retouch either at the point or base. The remainder of the complex includes notches, denticulates, a few burins, scrapers, and perforators. As an industrial by-product, there are numerous ridge flakes (*pièce à crête*). These rarely show use or retouch scars.
D. *Site 6-G-31*. We have but one assemblage from this complex, the site 6-G-31. The main artifact types are curvate-backed flakes or blades.

![Diagram of selected artifact types](image)

**Fig. 1. SELECTED ARTIFACT TYPES, COLORADO NUBIAN EXPEDITION PALAEOLITHIC-MESOLITHIC SITES**

All artifacts shown actual size.

- a. Halfa flake, retouched, 6-B-28
- b. Halfa core, 6-B-35
- c. Retouched or backed microblade, denticulate, 6-B-28
- d. Retouched or backed microflake, 6-B-28
- e. Burin on straight truncation, 6-B-35
- f. Retouched point from double-ended core, 6-B-27
- g. Double-ended core, 6-B-27
- h. Retouched flake from double-ended core, 6-B-27
- i. Backed flake, arc with peak, 6-G-31
- j. Pointed flake, curvate backing continuous around base, 6-G-32
- k. Retouched end scraper, 6-G-32
- l. Backed side scraper, 6-G-31
- m. Battered flake (*pilos equus*), 6-G-32
Included in this general class are true segments. Triangles occur but rarely. A peculiar form of crude triangle has a peak at the juncture of the backed sides. The backing is often steep and from two directions. Several varieties of end scrapers are also common, and points and blades from double-ended cores occur, generally similar to those from Complex C. Tiny ellipsoid scrapers are characteristic.

E. Site 6-G-32. This complex is represented by sites 6-G-32 and 6-G-36, the latter excavated by another section of the University’s Expedition. The assemblage is noticeably crude in production. Double-ended core technique is rare and the common core type is a disc or sub-disc from which flakes were driven. The most typical tools consist of pointed, curvate-backed pieces, but true segments occur only very rarely. Side scrapers, often well made, are common. Battered flakes (pièce esquillée) occur in some frequency. Flat gridding stones (both hand stones and nether stones or grinding slabs) are present. Materials from the last site, 6-G-33, a Neolithic site, have not yet been analysed. This analysis will be undertaken by Scheele, Campbell, and Haug this winter.

Stratigraphy

It is deemed premature to present a full geological interpretation of these sites. As the area of the Concession is limited, the larger geologic picture of the Halfa area will come from the work of geologists de Heinzelen and Paepe of the Columbia University-Museum of New Mexico field party. When this is presented, the authors will attempt to integrate the Colorado sites into the general prehistoric picture. However, there are several well developed soil zones at these sites which suggest major periods of stability and should aid in climatic interpretation. General profiles of some of the sites are presented in the accompanying diagram. (Fig. 2)

Chronology

Four radiocarbon determinations have been made for the Colorado sites and several others will be measured in the near future.

<table>
<thead>
<tr>
<th>Site</th>
<th>Laboratory</th>
<th>Number</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-B-27</td>
<td>Isotopes, Incorporated</td>
<td>I-863</td>
<td>18105 ± 1200 (16142 B.C.)</td>
</tr>
<tr>
<td>6-B-27</td>
<td>Isotopes, Incorporated</td>
<td>I-864</td>
<td>6150 ± 300 (4187 B.C.)</td>
</tr>
<tr>
<td>6-B-27</td>
<td>Geochron Laboratories, Inc.</td>
<td>GXO122</td>
<td>9275 ± 600 (7325 B.C.)</td>
</tr>
<tr>
<td>6-B-29</td>
<td>Geochron Laboratories, Inc.</td>
<td>GXO120</td>
<td>15100 ± 750 (13150 B.C.)</td>
</tr>
</tbody>
</table>
KUSH

The third date on 6-B-27 is deemed to be the most correct one in that it was collected in an area well isolated from possible contamination. The suggested, relative chronology of the other sites has been presented earlier and no absolute

Fig. 2. THE STRATIGRAPHY OF SOME OF THE COLORADO NUBIAN EXPEDITION PALEOLITHIC-MESOLITHIC SITES

6-G-30 — Adapted from profile drawn by Roland Paepe.
6-B-27 — Adapted from profile drawn by Jean de Heinzelin and Roland Paepe.
The presentation of all of these profiles is schematic.
figures for these are yet available. We would suspect, however, that site 6-G-30 dates sometime prior to 20000 B.C. and site 6-G-32 between 7000 and 5000 B.C.

In conclusion, we might say that these complexes represent a large part of the local inhabitation from about 20000 B.C. until the Neolithic. There are distinct gaps that will undoubtedly be partially filled by the research of other expeditions in the area. On the other hand, there appear to be distinct links in certain artifact types between certain of the complexes. In addition, all of the complexes partake to a greater or lesser extent in pan East and North African developments. Strong and late continuation in the area of the Levallois technique is one of these. The introduction of composite tool elements such as backed blades is another, while the arced-backed tools found in Complex D, a third. There are specific tools and types which seem to be largely local in character. Such are the Halfa flakes, of 6-B-28, or the pointed-backed pieces of 6-G-32.
During the 1963–64 field season, the Colorado Nubian Expedition supported a research project in physical anthropology on the Colorado concession and adjacent areas. A physical anthropology team, consisting of George J. Armelagos, George H. Ewing, David L. Greene and Kathleen K. Greene, was organized to recover and analyse physical remains from cemetery sites on the concession. The team was specifically interested in analysing remains of Meroitic, X-Group and Christian populations in the Wadi Halfa area, but during the course of the field season, the investigation was extended to include C-Group, X-Group and Christian samples from other concessions and the fossilized skeletal material from a pre-pottery lithic site within the Colorado concession.

Following is a list of the skeletal material studied:

Mesolithic: The mineralized remains of a total of thirty-nine individuals were excavated from the pre-pottery lithic site, 6–B–36 on the Colorado concession by the physical anthropology team (Hewes et al. 1964). No attempt was made to analyse this material in the field, and it has been removed to the University of Colorado for detailed study through the courtesy of Sayed Thabit Hassan Thabit, Commissioner for Archaeology for the Republic of the Sudan.

C-Group: Seventeen skeletons were made available for study by Prof. R. Blanco y Caro of the Spanish Expedition from the C-Group cemetery 6–B–26 at Argin which was excavated during the 1963–64 season. Prof. P. L. Shinnie of the University of Ghana Expedition made available ten C-Group skeletons from Cemetery R-17. (Shinnie, 1963: 263).

Meroitic: A sample of 129 individuals represented by partial or complete skeletons was obtained by the University of Colorado team from the Meroitic cemetery 6–B–16 in south Argin. Thirteen skulls of this period were also presented for study by Prof. Blanco of the Spanish Expedition from the Meroitic cemetery Nag Shayeg in Argin. (Almagro, 1963: 182).
X-Group: An X-Group tumulus, adjacent to 6-B-16 was excavated by the University of Colorado team in south Argin, but only one partial skeleton was recovered from this badly disturbed structure. After intensive survey of the Colorado concession failed to reveal further X-Group material on the concession, it became necessary for the team to look further afield. At the suggestion of W. Y. Adams, UNESCO archaeologist with the Sudan Antiquities Service, and with the kind permission of A. Villa of the French Expedition, it was decided to excavate a portion of the X-Group cemetery 24-I-3 at Serra West on the original Franco-Argentine concession. This cemetery had been excavated by Hans-Åke Nordström during the Antiquities Service Survey of the west bank. Fifty-four skeletons were recovered from this cemetery. An additional 143 X-Group skeletons were studied through the courtesy of Prof. Almagro from the X-Group cemetery, NAX in north Argin. (Almagro, 1963: 183.) This material had been excavated by members of the Spanish Expedition during the 1961-62 season and had been stored in the museum at Wadi Halfa.

Christian: The University of Colorado team excavated two Christian cemeteries on their concession: from the cemetery 6-G-8 at Dabarosa West thirty-three skeletons were obtained, and thirty-seven were excavated from cemetery 6-B-13 in south Argin. The team also undertook to analyse skeletal material from the Christian cemetery 6-K-3 on the island of Meinarti being excavated by W. Y. Adams. This site was of particular interest since the cemetery itself was stratified and associated with a Christian church. Unfortunately the skeletal material was in poor condition due to repeated inundation but partial data was obtained from 342 skeletons from which it is felt that important inferences can be made apparent regarding the population.

Essential to the cultural identification of the various cemeteries excavated was an analysis of the pottery found in association with the burials. This analysis was performed by Mrs Florence C. Lister of the expedition staff who is engaged in a study of all the pottery found in the University of Colorado excavations. The Christian cemetery sites 6-G-8 at Dabarosa West and 6-B-13 at Argin produced very little pottery other than random sherds. The majority of graves at these sites had been opened and, presumably, any pottery present had been removed with little or no disturbance of the human remains. Of the few sherds found in the graves, the majority were Imported Egyptian Pink Ware.

The X-Group cemetery 24-I-3 at Serra produced a sizeable quantity of both whole and incomplete vessels. Classic X-Group Red Ware (Type I, R1) was found in 75 per cent of the graves at this site; and lesser percentages of the
following types were found: Meroitic Ware Group IV, Plain (Egyptian Import); Unnamed X-Group Thin White Ware; X-Group Thin Corrugated Qulla Ware (X, U9); Imported Pink Amphora Ware (II, U2); and X-Group Brown Utility Ware (I, U9).

6-B-35, the single X-Group tumulus on the Colorado concession, had been thoroughly plundered with only a few sherds and partially restorable vessels remaining. The types represented were: Classic X-Group Red Ware (I, R1), X-Group Utility Ware (U1), and X-Group Hand-Made (U7).

The Meroitic cemetery site 6-B-16 at Argin also produced a quantity of pottery even though the site had been very thoroughly plundered with extensive disturbance of the burials. Relatively few complete vessels were found although many broken pieces and random sherds were still present. Approximately 25 per cent of the graves in the cemetery contained Meroitic Utility (Ware Group II), and another 25 per cent contained Burnished Utility (Ware Group III); the balance of pottery at this site was made up of Imported Pink Ware (Ware Group IV), Handmade Domestic (Ware Group V), and Eggshell (Ware Group I).

Insofar as possible, the basic measurements and observations on the skeletal material were made in the field due to the problems involved in shipment of so large a sample. Approximately 500 measurements and observations were made on each complete skeleton; the skulls were photographed, and samples of bone-sections and hair and tissue where available. A collection was also made of skeletal pathologies, and an extensive dentition sample was obtained. The analyses of this material will be forthcoming as individual studies are completed. Mr Ewing will undertake a descriptive-comparative analysis of the populations represented in the sample; Mr Greene is engaged in a detailed analysis of the dentition of the populations; and Mr Armelagos is in the process of studying the pathological characteristics present. In addition, microscopic analyses will be run on hair, bone and tissue samples, and Dr Donald Rucknagel of the Department of Human Genetics, University of Michigan, will attempt to extract haemoglobin from specimens of desiccated cranial contents obtained from a number of the individuals in the total sample. Studies will be made on the limited number of dermatoglyphics obtained from skeletons with mummified tissue. As a result, it is proposed to produce a complete description of the subject archaeological populations of the Wadi Halfa area of the northern Sudan and to determine the presence or absence of significant differences between successive populations.

The reconstruction of the mineralized skeletons from the pre-pottery site, 6-B-36 is now in process, and at this writing four nearly complete skulls together with the post-cranial skeletons have been reconstructed. The morphological characteristics of the skulls are quite distinct (PLATE V). All the skulls studied are dolichocephalic and possess a pronounced supra-orbital development concentrated in the glabellar region. The malars are flared, the orbits are rectangular,
and there is a moderate to pronounced degree of alveolar prognathism. The mandibles are quite massive in all dimensions, and are characterized by broad bi-gonial dimensions, with markedly inverted gonial angles, heavy mandibular bodies, great symphyseal height, and broad, nearly vertical ascending rami. Interestingly, the mandibular fragment found on site 6-B-27 on the Colorado concession during the 1961-62 season (Armelagos, 1964: 12-13) appears to be morphologically similar to the material from 6-B-36. The cephalic indices from the three specimens from which accurate measurements have been obtained fall well within the dolichocephalic range, being 70.9, 71.9 and 72.8 respectively. Tentative stature reconstructions made on two of the male specimens indicate statures of 171.4 cm. (67.4 in.) and 172.3 cm. (67.8 in.). The stature of the single female studied is placed at 158 cm. (62.2 in.).

All of the four mandibles studied reveal a high degree of tooth wear as might be anticipated of a population having a quantity of abrasive material in the foodstuff. All of the mandibles also show evidence of osteo-arthritis involvement of the temporal mandibular joint.

As work progresses, comparisons will be made with the Khartoum Mesolithic remains as well as comparable populations from North and East Africa in an effort to determine the biological affinities of this population.

BIBLIOGRAPHY
The Combined Prehistoric Expedition: Summary of 1963–64 Field Season

by Fred Wendorf, Joel L. Shiner,
Anthony E. Marks, Jean de Heinzelin and Waldemar Chmielewski

The Combined Prehistoric Expedition, initially under the sponsorship of Columbia University and the Museum of New Mexico, and now sponsored by Southern Methodist University, has excavated or intensively studied eighty sites in the Aswan Reservoir area. The data obtained has substantially altered our previous conclusions concerning the prehistory of this section of the Nile. The most important new information is as follows:

THE GEOLOGICAL SEQUENCE

As defined for Egyptian and Sudanese Nubia (de Heinzelin and Paepe, 1965; Said and Issiwa, 1965; and as modified by later data) the geologic sequence includes the following eight major groups of events, from early to late:

I. A pre-Nile sequence of oxisols, pediments, gravels, dune sands, and vertisols, divisible into several units;

II. The first series of true Nile silts, soils, fluvial sands, interbedded dune deposits, and gravels to a maximum elevation of 157 m., some 36 m. above the modern flood plain (the Dibeira Unit);1

III. A period of desiccation when the Nile channel was incised 20 m. or more, to an elevation of 130 m.; in some localities a non-calcareous brown soil formed over this eroded surface;

IV. A second interval of Nile sedimentation recorded by a series of silts, soils, sands, and gravels to a maximum level of 141 m., or 20 m. above the modern flood plain (the Sahaba Unit);

V. A period of desiccation, again with the Nile channel incised at least 20 m., to an elevation of 120 m.

VI. A third interval of Nile aggradation of sands and silts to a maximum elevation of 134 m., or 13 m. above the flood plain (the Arkin Unit);

VII. A period of desiccation, with erosion of the channel 11 m. to an elevation of 123 m.;

VIII. A fourth, and final interval of aggradation of Nile silts and sands to a maximum of 5 m. above the flood plain, or an elevation of 126 m. (the Qadrus Unit), with a subsequent and significant interval of erosion, followed by aggradation of the modern flood plain.

1 Informal names are employed here to designate the major stratigraphic units recognized in the Nubian sequence. These units will be fully described and type localities designated in a forthcoming report by de Heinzelin.
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Each of these clusters of major geologic events is associated with one or more archaeological industries. These industries, and their related radiocarbon dates, provided a major basis for correlating and dating the geologic events. In the following discussion we shall present first a correlation of the archaeological and geological data in a somewhat idealized section without regard for certain problems and disharmonies which are now evident. The final section will consider the data which cannot be reconciled with the broad interpretation of events as now seen. It should be noted, however, that the idealized sequence is supported by a firm body of data consisting of observed stratigraphic arrangements, a series of ‘marker’ soils, a logical sequence of cultural development, and a number of associated radiocarbon dates (FIG. 2).
Industries with the Pre-Nile System

The Combined Prehistoric Expedition has conducted excavations or made intensive studies at thirty-six sites where archaeological industries were found associated with pre-Nile deposits. Twenty-five of these sites are in Sudan, and eleven are in Egypt. They include an Early Palaeolithic pebble tool industry, as well as developed Acheulean and Mousterian.

There are four geologic units recognizable within the pre-Nile Pleistocene in Nubia. Stratigraphically the oldest of these is a series of red soils and pediments which may be identified as the Ashkeat Unit. Within the Ashkeat are recognized two upland soil horizons, both reddish in colour, but distinguishable colorometrically. It is evident that the Ashkeat represents a prolonged interval of time and includes several climatic episodes. Archaeological industries associated with these pediments and soils occur at a number of sites. Despite the long time span indicated and the geologic complexity, it has not been possible to define a detailed regional sequence for the pre-Nile deposits.

Typologically the oldest industries associated with the deposits are quartz pebble-tools which were found at three excavated sites, two in Sudan and one in Egypt. In all instances the tools occur within a complicated net of wadi gravel deposits stratigraphically between the two pediment soils, the older characterized by a dark red, 2.5 yr. soil, and the younger, a lighter red, 5 yr. soil.

Possibly of more recent age, and typologically more evolved, are the Acheulean and Mousterian industries. A number of these were excavated and key data were recorded at Sites 400 and 622, both of which are stratified. Information from these sites was obtained from excavations supervised by Jean and Genevieve Guichard and geological studies by Roland Paepe.

Industries with the Dibeira Unit (30 m. Terrace)

The aggradation of the first true Nile sediments, as reflected in the Dibeira unit, incorporated archaeological industries at four localities which have been excavated in Sudan.

Typologically, the oldest material is from Site 34 at El Ikhtyiaria. Here a Khormusan assemblage, which might be grossly identified as early ‘Upper Palaeolithic’, occurs on and within the upper part of an aeolian dune which in turn underlies fluvial sand and silts of the Dibeira unit. This stratigraphic

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2 The term ‘Upper Palaeolithic’ and ‘Mesolithic’ are employed here only to convey to the reader an impression of the general level of technical development and probable chronological position of the industries in question. It is not intended to suggest specific similarities with Upper Palaeolithic and Mesolithic of Europe, although there are some similarities in tool types between the two areas. Specific industry names employed here, such as Khormusan, Halfan and Qadan, refer to a series of distinct tool traditions which apparently persist through extended periods of time in Nubia. The definition of each tradition is based on a number of sites.
position of an 'Upper Palaeolithic' industry under the first Nile silts is a convincing argument that the formation of the present Nile occurred in Late Pleistocene times.

A slightly more evolved Khormusan industry has been found within the Dibeira silts at Site 1017. There are two radiocarbon dates from this site; the first, because the sample was too small, could not be dated more precisely than 'more than 16000 B.P.'; the second, on charcoal, dated \(20750 \pm 280\) B.C. (WSU-203).

Another excavated locality where several occupations occurred within the first interval of Nile deposition is Site 440, near Wadi Halfa airport. This important stratified site has several Upper Palaeolithic occupations each separated from the other by Nile silts, and finally, overlain by a non-calcareous brown soil which formed on the eroded surface of the Dibeira during the succeeding interval of erosion. As we shall see, this soil is an important stratigraphic marker. No radiocarbon dates are available as yet for Site 440, but the earliest industry here appears to be typologically roughly equivalent to that from Site 1017 discussed earlier, and which is dated around \(21000\) B.C.

*Industries with the Dibeira Desiccation Interval*

There are several excavated sites with occupations which appear to date immediately after the completion of the Dibeira deposition, during the period when the Nile incised its channel 20 m. or more, and before the deposition of the Sahaba silts. At Site ANW-3, on the west bank near Buhen, another Khormusan industry was recovered from the eroded surface of Dibeira silts which in turn had been covered by dune sand and fluvial deposits of the Sahaba Unit (20 m.). A sample of charcoal from this site is dated \(15850 \pm 500\) B.C. (WSU-215).

In Egypt there are two localities (possibly part of the same occupation), Sites 8898 and 8899, where typical Sebilian tools on ferruginous sandstone occur between two deep and extensive vertisols (a distinctive swamp soil), and stratigraphically below the Sahaba silts. These sites are the earliest known occurrences of the Sebilian in Nubia. The occupation layer is within a dune sand on which had developed a non-calcareous brown soil possibly of the same age as the similar non-calcareous brown soil from Site 440 mentioned above.

A similar non-calcareous brown soil also occurs in Sudan at Site 278, where an as yet undefined (but not Khormusan) late Upper Palaeolithic industry was recovered from the surface of the soil, and below a vertisol, as at Sites 8898 and 8899. The similarity between the two localities continues in later events for in both areas the vertisols were subsequently eroded, then covered by silts of the Sahaba unit.

Some 2,000 m. south-east of Site 278, are Sites 1018 and 443, both of which are tentatively placed during this desiccation interval. These two sites occur on sand dunes which had banked up against the eroded surface of the Dibeira Unit. A vertisol had formed in the lower portion of the dune during the final
phase of its development. This was capped by a thin crust. Artifacts from Site 1018 were incorporated within the crust, while those from the nearby Site 443 are above the crust. Thus, Site 443 is believed to be the later of the two, but both are typologically very similar, definitely microlithic, and assigned to what we have named the 'Halfan' tradition. At these sites this Halfan tradition shows an evolution from a microlithic, prepared core technology related to Levallois, to a true microblade industry. A radiocarbon date of 14550 ± 500 B.C. (WSU–201) on charcoal from Site 443 not only dates the occupation of this site, and establishes the presence of microlithic industry in Nubia at this early date, but also places the erosion of the Dibeira silts at sometime between 14000 and 20000 B.C. Within this six thousand year interval, the deposition of the 30 m. Terrace was completed, the Nile channel eroded, the surrounding land surface was altered by the development of the non-calcareous brown soil, Sites 889, 8899, and lower 278 were occupied and abandoned, the dune sand under Sites 1018 and 443 was deposited, and finally, the adjacent water level was raised and then lowered to permit the formation of the vertisols and the terminating crust.

Industries with the Sahaba Unit (20 m. Terrace)

There are four excavated sites which contain occupation levels within the Sahaba unit. At Site 278 artifacts from a second occupation occur about midway in the silts of the 20 m. Terrace. This upper industry, not yet adequately defined, is regarded as terminal Upper Palaeolithic or early Mesolithic in character. It contains a high frequency of microlithic tools, but the tool inventory so far is too meagre to permit assignment to any of the defined Mesolithic traditions in the Halfa area.

The other three sites associated with the Sahaba unit are numbered 81, 83 and 8886. In addition to the ferruginous sandstone Sebilian artifacts, the top silt at Site 81 also yielded microlithic chert implements evidently representing a distinct, but almost contemporary occupation by another group. The slight weathering evident on the sandstone artifacts may indicate that the Sebilian occupation was slightly earlier at this site, but both categories of tools occurred mixed together in the same deposit. The non-Sebilian industry at Site 81 is identifiable as part of the 'Qadan' tradition, which may be distinguished from the Halfan tradition by a series of distinctive types of tools and greater emphasis on flakes rather than blades, at least initially. The occurrence of Qadan tools in the top of the Sahaba unit indicates the presence of this tradition in Nubia before the end of this interval of deposition. It persists through the subsequent periods of erosion and deposition of the Arkin unit.

There are two radiocarbon dates available which relate to the end of the Sahaba deposition. A sample of decomposed plant remains from the upper contact between the Dibeira and Sahaba silts at Site 34, dated 10600 ± 460 B.C. (WSU–202). It relates to the upper part of the Sahaba. The second date is on Corbicula shells from the upper Sahaba on the west bank at Locality 744, and is
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10300 ± 200 B.C. (WSU-109). There is a third date, obtained by R. Fairbridge 1962, p. 5) on Unio wilcocksi shell from the top of a remnant of the Dibeira formation at Site 34. It is dated 13000 ± 300 B.C. (I-533), and may refer to the early part of the Sahaba deposition, although the geological situation at this particular spot is not too clear.

Industries with the Sahaba Desiccation Interval

A number of sites of the Sebilian, Qadan, and perhaps one other tradition are situated on the eroded surface of the Sahaba unit; however, very few of these can be specifically dated to the erosion interval separating the Sahaba and Arkin silts. One possible candidate for this period is Site 1024 containing a Sebilian industry, and situated on the surface of wadi deposits believed equivalent to the Sahaba silts. A preliminary analysis of the artifacts indicates that the Sebilian assemblage at this site is slightly more evolved than the Sebilian industry at Sites 81 and 83, both of which occur within the top of the Sahaba unit and are stratigraphically earlier. Two radiocarbon dates, both on charcoal from hearths at Site 1024, are 9050 ± 120 B.C. (WSU-144), and 8975 ± 140 B.C. (WSU-188). Another date which may refer to this general period was obtained by R. Fairbridge (1962, p. 5). This sample consisted of freshwater oyster (Etheria) shells found encrusted on rocks near Halfa at an elevation of 132 m., or 10 m. above the modern flood plain. It is dated 9250 ± 285 B.C. (I-531).

Industries with the Arkin Unit (13 m. Terrace)

The microlithic industries associated with the Arkin deposition included DIW-6, DIW-1, DIW-50, DIW-51, DIW-53, all excavated by Chmielewski and Schild, and 8859, excavated by Eddy and Hobler near Ballana in Egypt. These sites apparently represent a third, unnamed, tradition distinct from both the Halfan and Qadan developments. They are located on a series of regressive beaches and are partially covered by silts which comprise the Arkin Unit. No dates are available on the oldest sites in this series, DIW-6 and 8859, which contain artifacts below the oldest Arkin silts. The somewhat later DIW-1 was occupied after the first phase of Arkin silts had been deposited, and was partially covered by slightly later silts of the same unit. Charcoal from DIW-1 is dated 7400 ± 180 B.C. (WSU-175).

In the same sequence of regressive beaches of the Arkin silts, Site DIW-51 is typologically later than DIW-1, and the tools here are covered by a still later phase of Arkin silts. Charcoal from this site is dated 5750 ± 120 B.C. (WSU-176). The latest site in this series is DIW-50, which contains an early Neolithic assemblage lying on the erosion surface separating the Arkin and the overlying Qadrus (5 m. Terrace) silts. Charcoal from this layer is dated 3650 ± 200 B.C.

Fairbridge (1962, p. 5) has reported another date which probably refers to Arkin deposits. This is sample I-534 on Celopatra shell, from a gravel lens within the 'younger silts', 12 m. above the flood plain near Halfa. It is dated 7375 ± 250 B.C.

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As a group this series of four dates indicate that the Arkin deposition began before 7500 B.C., and if the 1024 and I–531 dates refer to this interval, perhaps as early as 9000 B.C., and was completed by 3650 B.C. During this period of 3000 to 5000 years the Mesolithic, as defined by the presence of microlithic tools, and which had begun before 14000 B.C., reached its full development, and the Nubian Neolithic was initiated.

Industries with the Qadrus Unit (4–5 m. Terrace)

Industries associated with the Qadrus silts are late Neolithic and early Historic (A and C-Group). Several other expeditions have excavated a large number of sites occupied during this interval.

Sites with Discordant Data

The broad development sequence outlined in the preceding pages seems internally consistent, not only from the view of the stratigraphic data, but also the inferences regarding typological development indicated for the archaeological industries. There are, however, data from two important sites, and five radiocarbon dates, which cannot be reconciled with this broad developmental sequence.

The first problem is presented at sites ARW–8 and ARW–14 both of which contain an Acheulean industry within a pediment of the broad Ashkeit group. Over the pediment are silts of the Dibeira unit. Toward the river, however, the pediment, with its developed soil, appears to interfinger with lower silts or pond deposits which contain fresh Acheulean tools. Chmielewski believes these lower deposits are true Nile silts and record an earlier phase of the Nile. If so, they will require major revision of our concepts regarding the origin of the Nile. An alternative interpretation has been offered by de Heinzelin, who suggests that the silts may have accumulated in the pre-Nile basin, and thus are not of true Nile origin. Unfortunately, these stratigraphic problems did not emerge until the final week of the 1963–64 season and further excavation will be required before they can be resolved.

The second problem occurs at Site 34, where, in addition to the early Upper Palaeolithic Khormusan industry ‘A’ on the dune sand below the silts and fluvial sands of the Dibeira formation, there are two other industries termed ‘B’ and ‘C’, in slab gravel and pea gravel filling shallow braided channels cut into the top of the Dibeira silts. The most plausible geological interpretation is that these slab and pea gravels represent the final deposits of the Dibeira deposition. The included artifacts, however, argue for a more recent age. Both ‘B’ and ‘C’ assemblages are obviously and expectably mixed, but those in the pea gravel (which is stratigraphically the later unit) are predominantly a chert industry characterized by lunates, small backed micro-flakes and blades, and truncations typical of the Qada tradition. As a group, the closest typological relative occurs at Site 81, where the industry occurs in the upper unit of the Sahaba, and Site 605 which is post-Sahaba.
Industry ‘B’, from the slab gravel, also contains a high frequency of chert tools closely similar to those from the pea gravel, together with rolled ferruginous sandstone Khormusan tools like those from Industry ‘A’, but with different weathering. Both the pea and slab gravel also contain several typical Sebilian tools with truncations. Two radiocarbon dates are available on the shell from these channels. They are $9460 \pm 270$ B.C. (WSU-189), and $9250 \pm 150$ B.C. (WSU-106). These dates are in agreement with our estimates of the age of the associated Qada tools, and other dates for the Sebilian industry (Site 1024).

In the light of the associated typology and the radiocarbon dates, it is difficult to accept the geological interpretation of the pea and slab gravels of Site 34 as being part of the Dibeira unit. Some other explanation must be sought which could account for the cutting of the channels and deposition of these gravels. Unfortunately, the geomorphic situation makes it difficult to offer any explanation other than contemporaneity with the top of the Dibeira. Possibly these channels originated with a series of unusually high floods which mixed the artifacts from several nearby occupations, but additional excavations are needed to clarify the problem.

The final problem posed by conflicting data concerns a series of three radiocarbon dates which appear to be too recent for their observed stratigraphic position and other radiocarbon dates from this area. All three are associated with the Dibeira Unit, and are thus related to the problem at Site 34 discussed above, but they lack associated archaeological material. All are dates obtained from shell. The first, at Site 235 near Buhen, is closely similar to Site 34; that is a gravel deposit at the very top of the Dibeira sands and silts. The geologic position would indicate an age of about 20000 B.C., however, the sample is dated $3170 \pm 100$ B.C. (WSU-110). The second date is from Site 280, also at the top of the Dibeira Unit, and had a radiocarbon age of $4040 \pm 100$ B.C. (WSU-108). The third date is from Site 319, and is from a west bank exposure of Dibeira at the point of its highest aggradation. This sample of shell is dated $12750 \pm 100$ B.C. It is rejected as too recent because the date conflicts with the dates on charcoal from Site ANW-3 of $15850 \pm 500$ B.C. and from Site 443 of $14550 \pm 500$ B.C., both of which clearly are stratigraphically post-Dibeira and would, therefore, have to be more recent than the sample from Site 319.

The Middle Palaeolithic, ‘Upper Palaeolithic’ and Sebilian

During the 1963–64 season of the Combined Prehistoric Expedition, intensive work was carried out by American teams at Middle Palaeolithic, ‘Upper Palaeolithic’, and Sebilian sites. Two Middle Palaeolithic sites were excavated and fifteen surface concentrations were systematically collected. Four ‘Upper Palaeolithic’ sites were extensively excavated; two Sebilian sites were excavated and two surface concentrations of Sebilian material were systematically collected (FIG. 3).
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As the analysis of the collections has just begun, this report is only a very preliminary survey of last season's work and all conclusions must be viewed as tentative.

The Middle Palaeolithic

In broad terms, the Middle Palaeolithic in the Northern Sudan contains tools and flaking techniques which are comparable to those found in the Mousterian of Europe, the Near East, and North Africa. It is still too soon to refer to these similarities as anything more than affinities but there is the possibility that certain assemblages are very close to some found in Europe.

Middle Palaeolithic sites have been found in two distinct situations; on the tops of inselbergs in the Eastern and Western Deserts to a distance of 10 km. from the Nile, and, in situ, in a 5 yellow/red colluvium near the Nile, but well above the highest Nile siltation. With few exceptions, the raw material used during the Middle Palaeolithic was a ferrocrete sandstone, available on the tops of the numerous inselbergs in both the Eastern and Western Desert. Also, during the Middle Palaeolithic, a small amount of fossil wood was employed, its source being mostly near Dibeira East and some 5 km. west of Buhen, in the Western Desert.

During the 1961–62 field season of the Combined Prehistoric Expedition (then the Columbia University Expedition), initial survey and some test excavations were carried out on Palaeolithic sites (Solecki, 1963). Again during the 1962–63 field season, Mr and Mrs Guichard, of the Combined Prehistoric Expedition, did extensive work at Acheulean and Middle Palaeolithic sites far out in the Eastern Desert. They concentrated on sites with handaxes and foliate biface pieces, and defined a Nubian Middle Palaeolithic (Guichard, 1964).

In order not to duplicate the Guichards’ work, we undertook the examination of a select number of Middle Palaeolithic sites which appeared to be free of handaxes and which appeared to have a high number of finished tools. For the most part, we concentrated on sites near the Nile. We visited many, but systematically collected only fifteen sites. Of these, nine were surface sites within 2 km. of the Nile, four were in the area of the Guichards’ studies, and two were, in situ, in 5 yellow/red colluvium.

The Middle Palaeolithic sites excavated and collected this season do not form a single unit. It appears at this time that there are more or less four groups of assemblages.

Technologically, these sites have low Levallois indices. The Faceting Index for all sites studied is rather uniform, under 50 per cent. Blades form a more important element at these sites than those studied by the Guichards. In short, these sites, while certainly not uniform typologically within themselves, show unified technological differences from the Nubian Middle Palaeolithic.
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Typologically, there are a number of groups represented. All share certain features in common as compared to the Nubian Middle Palaeolithic. At no surface site did we find any biface foliate objects; Nubian cores were present at only one site and these were diminutive. Handaxes were present at only one site and, again, they were quite small and highly evolved. Thus, the surface sites we studied were not Nubian Middle Palaeolithic. Within terms of strict typology, we can see three main groups of assemblages. Briefly, they may be described as follows:

1. Two sites, 1000 and 118, are very similar to the European Denticulate Mousterian (fig. 4). Typical Mousterian sidescrapers are rare, accounting for less than 15 per cent of all retouched tools. Upper Palaeolithic tool types are equally rare, while denticulates account for between 35 and 50 per cent. Combined with simple and double notches, they account for between 58 and 73 per cent of all retouched tools.

2. Five sites, 121, 6, 1037, 1038, 1010–8, seem to fall within a general Mousterian tradition but exactly where is still unknown. Sidescrapers account for between 17 and 22 per cent of all retouched tools, but Upper Palaeolithic types are in equal number. Denticulates vary greatly, between 11 and 26 per cent.

3. One of the excavated sites, 1034, appears to be Nubian Middle Palaeolithic. Few tools were found, but Nubian Cores and foliate bifaces were present.

The remaining five Middle Palaeolithic sites have not received even preliminary study.

The 'Upper Palaeolithic'

The term 'Upper Palaeolithic' needs some explanation. It is not used here to describe blade industries as found in the Levant and Europe. Blades are as rare in the 'Upper Palaeolithic' of the Northern Sudan as they are in the Middle Palaeolithic. The technology of the 'Upper Palaeolithic' is only a continuation and an improvement of Middle Palaeolithic techniques. The term 'Upper Palaeolithic' is used here to describe industries which are post-Middle Palaeolithic, but pre-Mesolithic.

The 'Upper Palaeolithic' differs from the Middle Palaeolithic in a number of ways. First, all 'Upper Palaeolithic' sites are found associated with Dibeira formation deposits. Occasional surface finds of 'Upper Palaeolithic' material have been made but, in all cases, this material is in topographic position within the Dibeira limits in areas where there has been heavy terrace erosion. In no case has any Upper Palaeolithic-like material been found above the limits of the Dibeira formation deposits nor has any fresh Middle Palaeolithic ever been found within its limits.

Technologically, the 'Upper Palaeolithic' shows an important difference from the Middle Palaeolithic in that there is a progressive change in the choice of raw material, from ferrocrote sandstone, through pre-Cambrian rocks, to Nile pebble.

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Fig. 4. SITE 1000
Denticulate Mousterian: 1, Convergent concave-denticulate scraper; 2–3, borers; 5, Convex sidescraper; 6–7, Levallois flakes. 8–10, Denticulates. 3/4 natural size.
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Typologically, the ‘Upper Palaeolithic’ introduces a number of new tool types on a Middle Palaeolithic base. There is corresponding loss, through time, of the typical Middle Palaeolithic tools. The ‘Upper Palaeolithic’ has a large and highly evolved Levallois element, larger and more regular than any Levallois found in the Middle Palaeolithic.

Four ‘Upper Palaeolithic’ sites were found in situ: 440, 1017, ANW-3, and 34A. Site 440 is still in the process of excavation so only a brief outline of current results can be given. The other three sites have received final excavation, but only preliminary analysis.

Stratigraphically and typologically, the oldest ‘Upper Palaeolithic’ Site, 34A, is situated east of Nag el-Ekhtiariaya in a deep dune sand deposit, in places covered by Dibeira formation silts. Unlike later ‘Upper Palaeolithic’ there are scrapers—eleven types in all. These, however, only account for a small percentage of all tools. The unique ‘Upper Palaeolithic’ element found here is the strangled blade. These pieces may be as long as 20 cm., with deep retouched notches. Another element is the number of large, deeply retouched lateral notches. While the notch occurs in the Middle Palaeolithic, none show the size and workmanship found here.

In short, while this assemblage is close to the Middle Palaeolithic in certain aspects, there are new tool forms and an extreme heightening of the Levallois technique.

Site 440 lies on the eastern edge of Khor Musa. It is still in the process of excavation but deserves mention as it is one of the few stratified sites found. To date, three cultural layers have been reached. Only one, however, has received sufficient excavation to justify comment. The upper layer consists of a living floor with a scattering of tools, cores, debitage, and fish bones. The upper layer shows a mixture of material, including quartz, pre-Cambrian rocks, ferrocrete sandstone, and a small amount of Nile pebble. Tools include large, rough denticulates, sidescrapers, converging denticulates, and a few Levallois flakes and blades (FIG. 5). The Levallois element is extremely low and poorly made.

Site 1017 also lies in Khor Musa, 2½ km. south-west of Site 440. The site extends in a thin east-west line for 250 m. Excavation uncovered a living floor rich in both fish and mammal bones. A large carbon sample gave a date of 22700 ± 280 B.P.

A total of 153 finished tools, including Levallois flakes and blades, were removed from the living floor. There are relatively few general types but there is a great elaboration of them. There are really only three well represented tool

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3 This site was surveyed and test excavated during the 1961–62 season of the Columbia Expedition. The industry referred to here as 34A is the same as that found in Layer C (Solecki, 1963, p. 85). It should also be noted that the elevations for this site, as reported in the preliminary report, are incorrect (Solecki, 1963, p. 85).
Fig. 5. SITE 440

Upper Palaeolithic: 1, Denticulate rabot; 2-3, Denticulates on flakes; 4, Denticulate on core; Levainois flake.
types; Levallois flakes and blades, denticulates, and burins (FIG. 6). Other artifacts include a very few scrapers, notches, cortex backed knives, hammerstones, and ground hæmatite.

Material distribution of tools shows that less than 30 per cent were made on ferrocrete sandstone. The dominant material is pre-Cambrian rock, but sandstone, fossil wood, exotic quartzites of southern origin and Nile pebble were also used. The Nile pebble is of particular interest as this is the earliest site which contains this material.

Although a relatively small sample was recovered, this assemblage represents a totally new industry.

The final ‘Upper Palaeolithic’ Site, ANW–3, was situated on the West bank behind the village of Anqash. Stratigraphically, it was deposited during the erosion of the Dibeira formation and was dated to 17800 ± 500 B.P.

It is of great interest not only because of the large number of finished tools, over 400, but also because of its obvious connexions with Site 1017. Again three basic tool types prevail: Levallois flakes, blades and points, burins and denticulates (FIG. 7). Denticulates, however, become less numerous, while scrapers on Nile pebble begin to appear. Burins retain their importance and even increase in elaboration.

There are two distinct technological developments in this industry since Site 1017. There is a decrease in size and a further change in the proportion of types of raw materials used. Nile pebble accounts for over 50 per cent and quartz, fossil wood, agate, and a very little ferrocrete sandstone are also present.

In short, we have two sites which show a development of a new lithic industry through the aggradation and erosion of the Dibeira formation. We suggest the name Khormusan for this industry.

The Sebilian

Four Sebilian sites were located in the area of Wadi Halfa: 81, 83, 1024, and 1042. Their stratigraphic position shows that none is earlier than the Sahaba formation and all appear to fall between a late stage of the Sahaba and just post-Sahaba.

Technologically, we may discuss, as a single unit, the three Sebilian sites studied so far. Two of these sites, 83 and 81, appear to be in top of the Sahaba formation, while Site 1024 is stratigraphically somewhat younger, and is dated to 11000 ± 200 B.P. Technologically, however, they are very similar. The Levallois indices vary less than 3 per cent. The Blade indices are also very uniform. The Faceting Index does show a decrease from the Sahaba formation assemblages to the slightly later material at Site 1024.

Typologically we find a few major differences between Sites 83 and 81 when compared to Site 1024. Site 1024 possesses a large number of microburins while they are totally absent from Site 83 and only two occur at Site 81.
Fig. 6. SITE 1017
Khormusan Sequence: 1-4, Burins; 5-7, Levallois flakes and blades; 8-9, Denticulates. 3/4 natural size.
Fig. 7. SITE ANW-3
Khormusan Sequence: 1-4, Burins; 5, Converging denticulate with burin tip; 6 and 8, Denticulates; 7, End scrapers; 9-12, Levallois flakes. 3/4 natural size.
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Broadly, this places Site 1024 into what Vignard called Middle Sebilian and makes Site 81 possibly transitional between Sites 83 and 1024.

At all three sites, typical Sebilian forms account for between 70 and 80 per cent of all tools. Also, there is essentially no difference between assemblages as to side preference for truncation and backing. Retouch on the left side is by far the most common, occurring over 80 per cent at each site. There is, however, a decided improvement in the quality of the retouch of the truncations between Sites 83 and 1024, from very rough, irregular backing to fine careful backing.

Comparing Sebilian tools from Sites 83 and 1024, we find that the same types occur but there is a decided shift in proportions. There is a significant increase in the number of simple basally truncated flakes from Site 83 to Site 1024. At 1024 we see a corresponding reduction of all other Sebilian tool types, although none totally disappear.

Aside from the typical Sebilian tool types, Sebilian sites contain as much as 30 per cent normal tools. These include end scrapers, denticulates, notches, borers, pseudo-Levallois points, and of particular note, burins. Vignard clearly states that he did not find one burin at any of his Sebilian localities (Vignard, 1923). Our experience was quite different. Although burins are relatively unimportant in the Sebilian sites near Wadi Halfa—never exceeding one per cent of the total assemblage—they are present.

These sites represent the first major find of Sebilian material outside the Kom Ombo plain. To what extent these sites correspond to those at Kom Ombo cannot, as yet, be stated with any certainty. They do, however, appear to be very similar.

THE MESOLITHIC AND EARLY NEOLITHIC OF SUDANESE NUBIA

In order to define the time span of the late prehistoric periods in Sudanese Nubia, it is necessary to borrow terminology from elsewhere. The word Mesolithic has been in use for a long time, but has come more and more to be restricted in use to Northern Europe. However, it is still probably the best term to use as a temporary designation in a general sense. The term Neolithic is not so restricted geographically, but has so many varying definitions that it will be employed only in preliminary discussion.

Preliminary analyses have been made on some thirty-five site collections that are late in the prehistoric developments. They are readily divisible into two groups, roughly equating to a Mesolithic age and a Neolithic age. The former, at this early stage of study, can be defined only on typological and technological grounds. There are important changes in the material culture that mark the beginning of the Mesolithic age. Among these are:

1. A reduction in tool size to Microlithic;
2. A shift from the use of ferrocretes and pre-Cambrian rocks to Nile River pebbles;
3. Use of new types of tools produced from new types of cores.
All of these changes appear at about the same time, but none of them are sudden developments. All are trends which begin in the latter part of the 'Upper Palaeolithic' and increase in frequency.

There are at least three expressions of the Mesolithic Period in Central Nubia. While it may be possible eventually to speak of these expressions as cultures, the present progress of our studies requires that we refer to them as series or sequences. The first of these is the Halfan Sequence, named after the town of Wadi Halfa.

The Halfan Sequence is characterized by a very specific type of flake tool, by the high frequency of backed flakes and microblades, and especially by the consistent and regular changes that took place over a period of time. The material culture analysis is based on more than 3,500 finished stone tools (see Fig. 9). Early stages of the Halfan Sequence show very high frequencies of a very specialized flake which is rarely found elsewhere. The Halfan flake is produced from a complex core worked somewhat like the traditional Levallois core, but with the emphasis on the preparation of two opposed striking platforms. The face of the distal end of the core is trimmed by removing parallel microblades, a channel flake is struck from the opposite platform, and then the desired flake is struck off the core. There are intermediate steps in the preparation that are too technical to describe in this paper. By the middle of the Halfan Sequence, the Halfa flake had disappeared.

After an initial increase, the production of small backed flakes begins to decline, and there is a shift over to the use of backed microblades. The latter are exceptionally small and thin, first with straight backing and later with convex backing. About midway through the Halfan Sequence there is an elaboration of the backed microblades. Large numbers of these microliths are notched, truncated, retouched, made into denticulates, or made into borers. At one point, tools made on backed microblades reached 40 per cent of all specimens. After this high point, the use of backed blades and the tools made on them begins to decline. All blades become smaller, and those that were larger than the desired size were truncated. The mean blade size at this time is under 18 mm., the most microlithic of any assemblage in the Wadi Halfa region. Another development occurring about the middle of the Halfan Sequence is a new core type. It is wedge-shaped with an acute angle between two flaking surfaces. The angle usually is between 30 and 40 degrees as compared with a more commonly observed angle of around 80 degrees. The wedge-shaped core lasts only a short while and then disappears. No bone tools have been found in the sites of the Halfan Sequence, nor at any other Mesolithic sites. It is not a matter of preservation since many of these sites yield large samples of animal bones in good condition.

One C-14 date has been reported for the Halfan Sequence. It is from Site 443, about the middle of the line of development, and is 16000 B.P. or approximately 14000 B.C. The Halfan group at this time consists of only six
Fig. 9. SITE 1018

Halfan Sequence: 1–4, Backed microblades; 5 and 11, Burins; 6–10, Denticulates; 12, Inverse scraper; 13–16, Halfa flakes
3/4 natural size.
sites, but there is a possibility of more being added. These sites are located along some 30 km. of the Nile and are on both sides of the river.

A second Mesolithic line of development is tentatively called the Qadan Sequence, and is named after Jebel Abd el Qada, near which the first sites of this series were found. Approximately 3,400 finished stone tools were processed from sites within this group. The characteristic tools of the sequence include scrapers made on cortex back flakes, lunates, geometrics which probably have the same function as the lunates, backed points and burins on truncated flakes. Lunates, according to definition, are pointed at both ends. The similar geometrics have one end pointed and one end rounded. We are considering the use of the term J-shaped geometric.

Since none of the Qadan sites are stratified, it is difficult to determine the direction of typological changes that took place during the sequence. Only preliminary studies have been made, and all of the sites appear to be close to the same age. Thus, statements on the development within the series are hypothetical.

It would appear that there was an initial increase in the frequency of lunates followed by a later decrease. At one point, approximately 55 per cent of all tools are lunates or similar geometrics. The opposite trend may have occurred with side and end scrapers, an initial decrease followed by a later increase. Scrapers, at one time, attain a frequency of 50 per cent of the tools. Burins are more frequent throughout the Qadan Sequence than they are in the Halfan, but backed microblades and tools made on them are much rarer.

There are eleven sites included within the Qada Sequence, and the site distribution is similar to that of the Halfan sites, that is along both sides of some 30 km. of the Nile. Although the Halfan Sites are surely older than the Qadan sites, there is no evidence that one series leads into the other. The differences between the two series are basic and the trends of typological change have nothing in common. Halfan sites showed progress toward more and smaller blades while the Qadan Sequence begins with tools made on flakes.

A third Mesolithic expression appears to be confined to the general vicinity of Hillet el Arab on the west bank. It is characterized by a high frequency of geometrics, especially scalene triangles. Although studies of the several sites are only preliminary, there is almost certainly a continuous development into the Neolithic period. No relationship to Halfan or Qadan materials can be seen at this time.

Here and there in the reservoir are a small number of Mesolithic sites that are as yet unclassified. Some are of different age, some have an insufficient number of tools, and some of them may be culturally unrelated. Further studies and additional collections will probably clarify their position.

There are several generalizations that may be made concerning the Mesolithic Period in Nubia:

1. The transition from Upper Palaeolithic to Mesolithic is apparently gradual, a slow development and not an abrupt change.
KUSH

2. The Mesolithic Period is relatively stable except for internal changes in material culture.

3. Developments during the Mesolithic Period are apparently due to gradually changing needs rather than to sudden events, population shifts or direct outside influence.

4. There were at least two lines of cultural development which had little influence on each other.

5. Sites of the late Mesolithic are more frequent, perhaps indicating a higher population.

Development from the Mesolithic into the Neolithic is usually defined as a stage wherein some combination of the following traits begin to appear: ceramics, polished stone, agriculture, herding, or some other economic basis for sedentary life. However, this theoretical approach is based on the presumption that the Neolithic appears as a direct development out of the local Mesolithic. In Nubia there is every reason to believe that the Neolithic is an introduction rather than a development. The evolution of the Neolithic may have occurred near Khartoum or in Middle Egypt, but there is no evidence of true Neolithic development in Nubia.

Collections from a dozen sites with ceramics have been analysed in a preliminary way. Since studies of the pottery have not been made as yet, there is nothing that we can report at this time. There are, however, a number of observations regarding the stone typology and technology:

1. There is a marked shift away from the use of Nile River pebbles as raw material and a great increase in the use of quartz.

2. Many of the sites show huge quantities of flaking debris but a low frequency of tools.

3. There is a deterioration of technique in working stone. Cores are poorly prepared or not prepared at all, and stone tools tend to be larger and more crudely finished than they were during the Mesolithic.

4. The majority of the tool types that were frequent in the Mesolithic do not appear at all.

At least two explanations of these phenomena may be possible. New people may have moved into the Wadi Halfa region and more or less replaced the indigenous population. On the other hand, a new basis of economy may have been introduced thus making the traditional material culture obsolete. Whatever the means of introduction, the Neolithic comes in as an impact with sudden and radical changes in the material culture.

We can make a preliminary division of the Neolithic sites into two groups. The first group has been called, tentatively, the Abkan and has the following characteristics: relatively high frequency of Nile pebble material, high incidence of groovers and borers, scrapers and retouched flakes. On the other hand, such tools as points, lunates and backed microliths as well as burins are scarce to
Qadan Sequence: 1, Side notch; 2–3, Burins; 4–5, Backed points; 6, Basal truncation; 7, Micro-poinçon; 8, Oblique truncation; 9, J-shaped geometric; 10, Backed scraper; 11, Concave-convex backed geometric; 12, Lunate; 13, Side-end scraper; 14, End scraper; 15, Side scraper; 16, Denticulate.
Neolithic, 'Abka' type: 1–2, Lunates; 3 and 8, Groovers; 4, Backed flake; 5 and 7, Borers; 6, Multi-point groover; 9, End scraper; 10, Side scraper; 11, Notch; 12, Polished axe; 13, Denticulate; 14, Concave scraper on core.
Fig. 12. SITE DIW-5

Neolithic 'High Qom' Type: 1, Truncated blade; 2 and 3, Lunates; 4, Geometrics; 5 and 6, Scrapers of Egyptian style; 7, Geometric; 8, Poiçon; 9, End scraper; 10, Groover; 11, Denticulate scraper; 12, Retouched blade.
absent. This group of sites may possibly derive from the Qada Sequence, but a
great many changes would have to take place in a relatively short time.

A second group of Neolithic sites features a high frequency of pottery with
surface impressed decorations, ostrich egg shell beads, large exotic tools made on
Egyptian flint together with some of the same tools found in the Abkan Series.
Only a small amount of this material has been studied and it is impossible to
comment on its relationship to the Abkan material. One point is quite inter-
esting. Some of the sites of this last or non-Abkan series are far out into the
desert where it would be impossible to live under the climatic conditions that
prevail today. There can be no question but what there existed a period of
increased rainfall. The only other sites in that environment are those of the
lower and middle Palaeolithic Periods. Further studies of the Neolithic must
entail local traditions, intrusive traits, intrusive populations and climatic change.

**General Conclusions**

In broad terms, the work of the 1963–64 season vastly expanded the amount
of data available concerning Nubian prehistory. In terms of stratigraphic data,
the following correlation of archaeological and geological sequences is indicated:

1. Early and Middle Palaeolithic industries (pebble-tools, Acheulean, Mousteroid)
occur with pre-Nile sediments, wadi deposits and soils, and presumably are
pre-Nile in age, although precise stratigraphic arrangements within the pre-Nile
sequence has not been defined as yet;

2. Upper Palaeolithic Khormusan industries occur under or within the earliest
identified Nile silts at three sites;

3. The typological transition from Upper Palaeolithic to Mesolithic (characterized
by the appearance of small, often geometric, and composite tools) began before
14000 B.C., during the erosion interval separating the first and second periods of
Nile siltation;

4. The Upper Palaeolithic-like Sebilian industry occurs in datable contexts at both
the base and in the upper unit of the second (Sahaba) Nile silts, and on the eroded
surface of the Sahaba, and the latest known expression dates around 9000 B.C.

5. Several traditions of Mesolithic industries occur in Nubia during the period when
the silts of the third (Arkin) phase of Nile deposition was occurring, and there are
radiocarbon dates ranging from 7400 to 5750 B.C. for this period;

6. The earliest Neolithic occurs on the eroded surface (or at the very top) of the
Arkin silts, around 3600 B.C.

While we do not have an answer to the chronological problems of the evolu-
tion of the Mousteroid industries, we do have data from twenty-five sites and the
hope of attaining more this coming season.

‘Upper Palaeolithic’ material is rare in Nubia; however, it may offer a
major contribution to the understanding of the transition between the Middle
Palaeolithic and the microlithic industries of the terminal Pleistocene and early
Holocene. In Nubia, at least, it seems that there is a smooth development
THE COMBINED PREHISTORIC EXPEDITION

into and out of the ‘Upper Palaeolithic’. It appears that only a relatively short period of the Sebilian is represented in the Wadi Halfa area, although earlier manifestations may occur in the adjacent part of Egyptian Nubia. The obtaining of radiocarbon dates, however, gives the first clear indication of absolute age for any Sebilian assemblage and the size and richness of the Sebilian collections makes possible a full and detailed typology from sites which are, without question, pure.

A working definition of the beginning of the Mesolithic period includes a reduction in tool size, a change to the use of tools in compound haftings, and the almost exclusive use of Nile River pebbles as raw material. The transition from the Upper Palaeolithic is gradual and progressive, and the Mesolithic itself is a continuation of these slow progressive changes. There are several lines of development evident in Nubia at this time.

The close of the Mesolithic period is marked by rapid and revolutionary changes in the material culture. Stone tools are proportionally fewer, larger and are poorly made. Ceramics come in already well developed, and Egyptian flint is brought in first as finished tools and later as raw material. The late sites are sometimes exceptionally large and show enormous quantities of chipping debris as well as sherds of utility pottery.

The Mesolithic period appears to begin at a quite early date in Nubia, but the Neolithic seems to appear relatively late. Neolithic influences probably came from outside the area, and may come in as a result of improved climatic conditions.

Finally, the materials and information recovered to date need considerably more study before the position given here can be fully verified. Enough work has already been done, however, to give a reasonable insight into the early prehistory of Sudanese Nubia.

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Three Faunal Assemblages from Sudanese Nubia

by Dexter Perkins, Jr.

There have been few reports on faunal remains from archaeological sites in the Nile valley between Kom Ombo in Egypt and Khartoum in the Sudan despite the many excavations made along this portion of the river. One of the objectives of the Columbia–New Mexico Museum expeditions in Nubia was the recovery of such material, particularly from Pleistocene deposits. A small collection was recovered from the Upper Pleistocene silts during the 1961–62 and 1962–63 seasons. In addition, two assemblages—one from an A-Group occupation site and the other from a series of C-Group cemeteries—were made available to me by other expeditions in the Sudan. These collections shed considerable light on the economy of the A- and C-Group peoples in Nubia and the degree of Egyptian influence there.

The Upper Pleistocene Material

A 40 m. deposit of silts was built up in the middle sector of the Nile valley during the Upper Pleistocene. Scattered fossil faunal material was found in the middle layers of these silts, which are characterized by the presence of *Unio wilcoeksi*, a large edible clam. The C14 date for these beds is 14950 ± 300 B.P. (Fairbridge (1962), p. 5). The following species were represented:

- Catfish (*Clarias lazera*): represented by one skull from the 23-24 m. terrace opposite Wadi Halfa. In addition there was a small number of spines and vertebrae, presumably *Clarias* sp., but possibly *Synodontis* sp. or *Clarotes* sp.
- Nile Perch (*Lates niloticus*): vertebrae of the Nile Perch were fairly common.
- Crocodile (*Crocodylus niloticus*): skull fragments were fairly common.
- Gazelle (*Gazella dorcas* spp.): several long bone fragments of a small bovid were found, presumably from a gazelle of the *dorcas* group.

Wild Cattle (*Bos* sp.): a small number of long horn cores of the *Bos primigenius* type and a few long bones of a large bovid were recovered, and they would be assigned unhesitatingly to *Bos primigenius* but for the presence of a single poorly preserved skull from Ichtiarirki, north of Wadi Halfa on the east bank. Although the horn cores of this specimen were not preserved for their full length, they also are clearly of the *primigenius* type. On the other hand, there is a bulge on the frontal ridge that is diagnostic for *Bos brachyceros*, a smaller shorter horned species thought to be ancestral to many domestic races showing a similar configuration of the frontal ridge. Few wild specimens of *Bos brachyceros* have been described and its taxonomic position has been much
THREE FAUNAL ASSEMBLAGES FROM SUDANESE NUBIA

debated, but a *Bos brachyceros* skull from Kom Ombo of purported Upper Pleistocene date has been described by Gaillard (1934, p. 31). The specimen from Ichtiairiki is much larger:

<table>
<thead>
<tr>
<th>Ichtiairiki specimen</th>
<th>Kom Ombo specimen</th>
</tr>
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<tbody>
<tr>
<td>Diameter of frontal between horn cores</td>
<td>240 mm.</td>
</tr>
<tr>
<td>Maximum diameter of horn cores</td>
<td>126 mm.</td>
</tr>
</tbody>
</table>

The Ichtiairiki specimen undoubtedly is a male and the specimen from Kom Ombo a female of the same form, but the question arises: do they represent a species distinct from *Bos primigenius*? Gaillard postulated the presence of *Bos brachyceros* on the basis of a single skull, but it is unlikely that two species of wild cattle occupied the Nile valley at the same time. Zeuner has suggested that *Bos brachyceros* is merely the female of *Bos primigenius*, which occasionally has the characteristic *brachyceros* configuration of the frontal (Zeuner (1963), p. 222). The Ichtiairiki specimen indicates that *brachyceros* skull characteristics may appear in the male *Bos primigenius* as well.

Hartebeest (*Alcelaphus buselaphus*): represented by two horn cores from the 23–24 m. terrace opposite Wadi Halfa. The Hartebeest is found in the savannas and acacia forests of the southern and south-eastern Sudan, and therefore indicates that the climate in the Middle Nile valley was somewhat wetter during the Upper Pleistocene than it is today.

Wart Hog (*Phacochoerus aethiopicus*): represented by a single poorly preserved mandible from the 23–24 m. terrace at Debeira West. The Wart Hog is a forest dweller, and, like the Hartebeest, indicates a wetter climate during the Upper Pleistocene.

Hippopotamus (*Hippopotamus amphibius*): several tooth fragments were found, and an almost complete mandible was found at the 23–24 m. level on the west bank near Buhén.

Ass (*Equus asinus africanus*): represented by a single upper molar from Debeira East.

Deer (*Cervus sp.*): no identifiable specimens of *Cervus* were found. Many years ago Lydekker described some animal remains from Wadi Halfa and some remains of *Cervus*, including antler fragments, were mentioned (Lydekker (1887), p. 163). He suggested that the finds were of Villafranchian age, but this is unlikely, since the only known fossil-bearing deposits in the Wadi Halfa area are the Upper Pleistocene silts. Unfortunately the *Cervus* material was inadequately described and the specimens have been lost. Deer are essentially a forest dwelling group of the Northern Hemisphere, although they did arrive in North
Africa during the Pleistocene and are found in Mousterian and Upper Palaeolithic deposits there (Romer (1928), p. 108). Deer were not found in the Pleistocene deposits at Qau, a site between Luxor and Assiut (Sandford (1929)) or at Kom Ombo. The presence of deer in the narrow confines of the Middle Nile valley would be most surprising, and must be regarded as tentative until better documented finds are reported.

All of the species were also found in the Upper Pleistocene fauna from Kom Ombo described by Gaillard (1934), with the exception of the Wart Hog. The presence of the Wart Hog and the Hartebeest, both of which are forest dwellers, indicate that the climate in the Middle Nile valley was moister during the Upper Pleistocene. All of the other species, with the exception of the Hippo and the Wild Ox, are found in Nubia today. Both of these species survived in the Nile valley until historic times, when presumably they were hunted to extinction.

The A-Group Material

A small collection of animal bones was recovered by Hans-Åke Nordström of the UNESCO staff from an early A-Group site on the west bank of the Nile opposite Wadi Halfa. The A-Group peoples were the indigenous population of Nubia encountered by the Egyptians as they extended their rule along the Upper Nile during the Old Kingdom. The site is dated somewhat earlier than the classic A-Group sites, i.e. earlier than 3000 B.C. The following species were represented:

Catfish (Clarias sp., and possibly Synodontis sp. or Clarotes sp.): very common. The specimens were chiefly skull bones, spines and vertebrae. The material was too fragmentary to be identified specifically.

Nile Perch (Lates niloticus): skull fragments and vertebrae were very common.

Ostrich (Struthio camelus): ostrich eggshell was very common.

In addition there were several small bird bones, including those of the Egyptian Goose (Alopochen aegyptiacus).

Hare (Lepus aegyptus): represented by two tibiae.

Gazelle (Gazella dorcas spp.): represented by a single horn core and a few longbone fragments, presumably from a gazelle of the dorcas group.

Large bovid (Bos sp.): represented by a few tooth fragments and a large bovid scapula, probably from Bos primigenius.

Domestic goat (Capra hircus): represented by a single distal epiphysis of a metapodial, too small to be from the Nubian Ibex (Capra ibex nubiana), and therefore almost certainly from a domestic goat.

Ass (Equus asinus africanus): a single well preserved mandible was recovered. The length of the tooth row (molars and premolars) was 160 mm., which is somewhat longer than that of a male specimen of the Nubian Wild Ass in the British Museum (147 mm.). Undoubtedly the specimen is from the Nubian Wild Ass, and not from a domestic animal.
THREE FAUNAL ASSEMBLAGES FROM SUDANESE NUBIA

The fauna is essentially modern, and all of the species present have been recorded in historic times. However, the sample is interesting in another connexion—the almost total lack of domestic animals. This parallels the situation at Shaheinab, a Neolithic site near Khartoum, where 98 per cent of animal remains were those of wild animals (Bate, in Arkell (1953)). Like Shaheinab, the only domestic animal represented was the goat. Apparently animal husbandry was not an important part of the economy of the early A-Group peoples in the Wadi Halfa area, and the economy was based on fishing and fowling, as is shown by the relatively large number of fish and bird bones. By this time (3000 B.C.) a sophisticated economy based on agriculture and animal husbandry had developed in Egypt, but apparently it had had little effect on the A-Group people in Nubia.

The C-Group Material

The C-Group peoples entered Nubia from the south between the end of the 11th and the beginning of the 12th Dynasty (the First Intermediate Period of Egyptologists: 2240–2150 B.C.), and their period of occupation ends approximately at the end of the 18th Dynasty (1300 B.C.) (Arkell (1955), p. 46, pp. 78–9). A common practice was the ceremonial burial of painted skulls of cattle, sheep and goats outside their graves, and occasionally mortuary offerings of these animals also were included. The Scandinavian Joint Expedition in Nubia recovered large numbers of these specimens in the 1961–62 and 1962–63 seasons, and kindly gave me permission to examine them. The specimens are from several C-Group cemeteries in the Debeira–Wadi Halfa area, dating from the close of the C-Group occupation period. With rare exceptions (as noted below) the populations of all three animals were homogeneous. The sample included 263 goat skulls and one complete skeleton, seventy-two sheep skulls and four complete skeletons, and the skulls of thirty-four cattle.

Goats: all of the male and the majority of the female skulls are from a twisted-horn form, but a few of the smaller female skulls have horn cores with very little twist, and the horn cores from two specimens compare in size with those of the Dwarf Goat from Shaheinab (Bate, in Arkell (1953), p. 15):

Length, 2 Shaheinab horn cores: 68, 59 mm.
,, 2 C-Group ,, ,, 60, 58 mm.

There is no justification for assigning these specimens to a separate breed, since no male straight-horned specimens were found. Twisted-horned goats were found at Shaheinab as well, and it is possible that the ‘Dwarf Goat’ from Shaheinab does not represent a distinct breed but is merely the female of that form. Presumably the twisted-horn goat was introduced from Egypt, where it had been known since the Old Kingdom (Zeuner (1963), p. 137).

Sheep: all of the specimens are from the so-called ‘Ammon’ type (Ovis aries platyura-egyptiaca), characterized in the males by massive horns curving
downward as in wild sheep, and familiar from Egyptian painting and sculpture. The Ammon sheep first appeared in Egypt during the xiith Dynasty (2000–1788 B.C.), gradually replacing the Long-legged Sheep (Ovis aries longipes), which disappeared soon after the beginning of the New Kingdom, about 1580 B.C. (McLeroy 1961, p. 22). Apparently the latter breed, which has left descendants in Southern Sudan, was replaced in Nubia soon thereafter.

_Cattle:_ Few of the skulls were well preserved, but it was possible to take measurements on nine specimens. One skull with the frontal portion preserved is obviously from a long-horned *primigenius* form, but shows a slight *brachyceros* bulge on the frontal ridge. It is identical to the C-Group cattle skulls from Faras described by Hall (1962, pp. 48–52), except that it does not show the forward curvature of the left horn core that is characteristic of the Faras specimens. In two other specimens enough of the frontal was preserved to show the typical *brachyceros* ridge. There are two distinct size classifications, based on measurements of the maximum diameter of the horn cores, length of the horn cores, and the diameter across the frontal ridge:

- **Maximum diameter of horn core**, five small specimens:
  - 40.1, 59.8, 54.3, 50.0, 53.8; Average = 51.6 mm.
- **Maximum diameter of horn core**, four large specimens:
  - 87.4, 76.3, 74.1, 94.2; Average = 83.0 mm.
- **Length of horn core**, one small specimen = 250 mm.
  - **large** = 524 mm.
- **Diameter across frontal ridge**, one small specimen = 154 mm.
  - **large** = 200 mm.

Such a size differentiation does not necessarily indicate two distinct breeds. It is more likely that they represent males and females of the long-horned race shown in C-Group pictographs and pottery (Arkell 1955, p. 48), and depicted in Egyptian reliefs and models dating back to pre-dynastic times (Zeuner 1963, p. 222). Such a striking sexual dimorphism in the skull characteristics apparently was typical of the wild cattle of the Nile valley (see above, p. 57), and probably was characteristic of *Bos primigenius* and its domestic descendants (Zeuner 1963, pp. 207–8).

Clearly, stock raising among the C-Group peoples was but an extension of the animal husbandry of the New Kingdom in Egypt. All three domestic animals are of Egyptian origin, presumably acquired soon after the C-Group peoples occupied Nubia. The wild ancestors of domestic sheep and goats are found only in the Near East and Asia Minor, and therefore domestic sheep and goats must have been introduced from outside the Nile valley. On the other hand, the sample of domestic cattle from the C-Group graves shows obvious affinities with the wild cattle of the Nile valley, and it is quite possible that the Egyptian and C-Group cattle were descended from an indigenous race of *Bos primigenius.*
THREE FAUNAL ASSEMBLAGES FROM SUDANESE NUBIA

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Excavations at Mirgissa—II
(October 1963—March 1964)

by Jean Vercoutter

THE French Archaeological Mission resumed its work at Mirgissa on 24 October 1963 and excavation stopped on 8 March 1964. Besides myself as Director of the Mission and my wife, the party was composed of Mr André Vila, field director, Mr Jean-Luc Despagne, topographer, Mrs Elisabeth Vila, recorder, Miss Claudine Moinot, archaeologist, and Mrs Catherine Fourot, recorder.

More than four months were devoted to the exploration of various parts of the concession (see Kush xii, pp. 57–62). These can be classified under six different centres of interest, which I shall examine one by one.

I. The Link between the Upper and the Lower Systems of Fortifications

The previous campaign, which lasted for about two months, had given us the main outlines of the history of the site. As a result, we now knew that the Upper Fort, rectangular in plan and most impressive with its treble line of defences, was but a part of the general fortification system at Mirgissa. Another great girdle wall, previously undetected, lay to the north of the Upper Fort. Following the slopes of the granite heights and turning sharply to the east (see fig. 1) it then ran down towards the river. This fortification system also occupied a large part of the plain in the valley below.

One of the main problems, and the first to be tackled, was to determine the link, if any, between the upper fortress and the fortification complex in the plain (M.VII—Kush xii, p. 60). Accordingly, we excavated that part of the site to the north of the Upper Fort. Wind erosion had practically destroyed the remains of the fortifications, but enough mud bricks were left to enable us to draw an accurate plan of the wall (see fig. 1 opposite). From the north-western spur, which is in fact a fortified gate, to the Upper Fort (see Wheeler’s Diary, Kush ix, pp. 100–102 and fig. 14) a double girdle wall ran northwards. It consisted of a thick wall 5 m. wide, and, parallel to it, another wall 1 m. thick with round bastions at intervals (see Plate vi, 2).

In other words, it was a structure identical to the one we had found in 1962 in the plain, and we were able to follow it all the way down from the Upper Fort to the lower complex discovered during the previous campaign. The wall even followed the steep slopes of the jebel as can be seen from the remains of a bastion built upon the granite hillside. Unfortunately, the part of this double wall near the gate of the Upper Fort was entirely eroded for a few metres so that it was not possible to study how the two systems were actually linked together, and to
decide with certainty whether the complex with the round bastions was built prior to the Upper Fort, at the same time, or later. However, considering its eroded condition in comparison with the huge remains of the Upper Fort, it seems probable that the round-bastioned system of fortification may be the older, since it was already practically destroyed, at least at the top of the hill, when the Upper Fort was built.

Fig. 2. THE NORTH-WESTERN POSTERN

The important feature of this newly discovered section of the girdle wall was that it was entirely closed on its northern side, the only entrance being a small postern opening to the west (see Figs. 1 and 2). This postern led to a gateway cut into the main wall and a much worn stair. This was the way into the Fort, through both walls, from the desert.
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At some later time, when the wall was already mostly ruined, a new structure was built over it, which extended further to the north and then, turning to the east, descended the slope of the granite hill to rejoin the fortification system in the plain. On top of the hill and some 65 m. from the outer gate of the Upper Fort, a similar structure ran down to the river in a straight line east-west (see Fig. 1). This structure consisted of two walls running parallel to each other, the space between them being filled with rubble, broken bricks, stones, sherds and earth. It was provided with two entrances, one at the top of the hill to the west, the other in the plain to the south. These entrances were protected by a bend in the wall so that there was no direct access to the fortified area. One had to turn right or left to enter. It has been impossible to ascertain the date of this small girdle wall. It was certainly later than the main girdle wall, since it is built over it in places and covers the remains of houses in its south-western part—not to mention the fact that it is partly built from rubbish which must have accumulated over quite a long period of time.

II. Trial Diggings in the Upper Fort

Since we were, for the time being, unable to give a precise date to the external girdle wall, we tried to determine when the Upper Fort had been built. If we could do this we should then have a terminus ante quem, since the building of the girdle wall with round bastions preceded the construction of the upper fortress (see above). The most likely place to find chronological data was inside the fort itself in the north-west corner near the place where in 1892 Major Lyons discovered two stelae in the name of Sesostris III, one of clay and the other of sandstone.¹

As often happens in archaeological research we did not find what we were looking for, but we found instead a small sanctuary dedicated to the goddess Hathor. It was, in fact, a very poor building of mud brick built in New Kingdom times on the ruins of a Middle Kingdom structure. It is rectangular in plan (see Fig. 3 and Plate VI, 1—to the left of the circular structures) and very simple. To the east, there is an ante-room, where we found two basins—one rectangular, the other round—leading to the sanctuary which occupies less than four square metres. Two flights of steps gave access to a small recess which was literally packed with small objects: beads, scarabs, amulets of glazed faience, broken vases, worked wood, basketry, stones of curious shapes and, most important, four stelae which seemed to be still in situ when we discovered them. However, the main stela, or statue, or relief of the divinity, which must have stood once in the shrine, had been removed. The stelae we found were not in a very good state of preservation.

¹ See PM, vii, p. 142.
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The bigger one informed us that during the New Kingdom the inhabitants of Mirgissa adored a 'triad' consisting of (1) a divinized King wearing the white crown of Upper Egypt—his name was illegible but was most probably Sesostris III, or possibly Sesostris I;² (2) the falcon god Montu; and (3) the goddess Hathor in human form. The other stelae are dedicated to the goddess Hathor alone, either in the form of a woman wearing cows' horns enclosing a disk

on the top of her head, or in the form of a cow among the papyrus marshes of the Delta. On one of the stelae can be seen a Nubian woman playing a tambourine and maybe dancing in front of the goddess. The number of small monuments representing Hathor alone showed that the shrine had once been dedicated to this goddess. This was further vindicated by the objects found during the clearing of the shrine, such as beads, amulets—a number of them in the shape of Bes the companion of Hathor—wooden counterpoises for menit necklaces, as well as small faience statuettes of 'concubines', one of them in sandstone. This last type of object, whose connexion with Hathor-worship is well-known, confirmed us in assigning the small sanctuary to the cult of Hathor. When we reached the original ground level we found among the remains of baskets and pots a small wooden stela, which seems originally to have been quite near to the place where the cult image of Hathor stood. Nearby was a vase of coarse pottery filled with small votive objects: beads, amulets, parts of necklaces, rings, earrings, bracelets, scarabs, small statuettes, nearly all of them of blue faience, but some of yellow and one red. A few of these objects were inscribed with the name of Amenophis III, Neb-maat-Rê. However, the wooden stela proved to be the most important object so far recovered from the fort. Above and in front of the goddess Hathor was inscribed the short text: Hathor, Lady of Iukan, which is in the so-called syllabic orthography the name of Iken, the important emporium which, according to the stela of the 8th year of Sesosiris III found at Semna, was the only place where the Sudanese of the Middle Kingdom were allowed by the Egyptian garrisons to come and trade their goods with the Egyptians. This discovery was a further proof of what we had already guessed after excavating the town along the river bank: Mirgissa was not Dr-wtyw(?) as was generally believed, but Iken. Its position at the southern end of the most difficult rapids of the Second Cataract enabled the garrison troops effectively to control the traffic to Egypt both by river and by land, since the fort was built on a high hill, higher even than Semna itself, and from the top of its walls the sentries could watch the desert roads as easily as the river channels. Furthermore, the development of the town in the plain near a natural harbour indicated that the place was ideal for commercial purposes.

III. Excavation of the Northern Girdle Wall

In 1962 we were obliged to stop the excavation of the great girdle wall at the point where the first houses inside the town began to appear. During the

3 See J. Vercoutter, 'La stèle de Mirgissa, IM.209, et la localisation d'Iken', R.d’Eg., vol. 16, in the press. This stela belongs now to the Khartoum Museum.
4 For instance the scarabs IM.196, 200 and 201.
5 See PM, vii, p. 151, first para. of 'Miscellaneous'.
6 Cf. Kush xii, p. 62, and n. 3 above.
7 Cf. PM, vii, p. 142, and particularly Gardiner, Onomastica, 1, p. 10; and II, p. 266.*
8 Cf. Kush xii, p. 61.
1. TRIAL DIGGING IN THE INNER FORT (M.F.)

2. THE LOWER MAIN-GIRDLE WALL (M.VII)

3. A GRAVE IN M.X.

facing page 66
1. 'TELL-EL-YAHUDYEH' WARE

2. ALABASTER VASES

3. ALABASTER VASES FOR 'KOHL'
1-4 STATUETTES (GRANITE & SERPENTINE), FROM THE WESTERN CEMETERY (M.N.)
last campaign we continued to clear this part of the concession, trying in particular to follow the girdle wall itself. This proved to be more complex than we had at first thought. The enormous amount of sand to be removed slowed down this work considerably. In some places we had to remove up to 7 m. of sand to reach the Middle Kingdom level.

We had supposed that the girdle wall went straight down from the mountain to the river, but such was not the case. Some 30 m. from the first round bastion in the plain the wall makes a right-angle bend to the north and then runs parallel to the Nile. That is to say that the area covered by the fortified town was even bigger than we had expected (see FIG. 1). We tried to find the northern corner of the wall where it must turn down to the Nile, but so far we have been unable to do so. A wadi cuts through it some 200 m. from the northern gate and trial soundings up to now have been negative. This is one of the major points we hope to tackle during the coming season.

The fortified town is so extensive that in the limited time at our disposal before the flooding of the site, it will be impossible to clear it entirely; so we are, and shall be, obliged to limit ourselves to trial diggings from place to place—a most unsatisfactory solution, but one which cannot be avoided. It seems that the entire area surrounded by the outer girdle wall was covered with buildings. The houses cleared so far are all of the same type as those which were found during the previous campaign\(^9\) in what we shall now call the ‘open town’ \((M.I.—Kush\text{ xii}, pp. 57–8)\), to distinguish it from the ‘fortified town’ inside the girdle wall. The houses are of a rectangular plan, and surrounded by the same curious wavy enclosure walls; the main difference being that in the fortified town there are none of the stone huts found in the open one. The houses seem to have been bigger, with more space devoted to domestic activities: kilns and storerooms for instance. Whereas in the open town the mud-brick houses gave the impression of having been occupied for only a short time, the buildings of the fortified town look as if they had been inhabited over a long period.

IV. Excavation in the Open Town \((M.I.—Kush\text{ xii})\)

This part of the site is on the top of a low terrace in the north-eastern corner of the concession. In 1962, being fully occupied with the excavation of the deposit of execration texts and the Kerma cemetery and the survey of the lower girdle wall,\(^10\) we were obliged to stop work here. During this campaign too work in the Upper Fort and at the girdle wall (see sections II and III above), and the digging of the western cemetery (see below) took much more time than we had expected and we were again unable to devote more than a few days to the excavation of the open town. This short period, however, was sufficient to show that we had once more underestimated the area involved. The houses extend

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\(^9\) Ibid., p. 58 and pl. xvii.

\(^10\) Ibid., pp. 59–61.
KUSH

to the north and north-east over a very large area. The structures found this
year are of the same type as those discovered during the last campaign. Dry-
stone huts cluster closely round the more widely separated mud-brick houses.
The pottery is very plentiful and of the same types as that found previously:
large round water jars, moulds for bread (bodegas), very large spouted bowls,
small hemispherical cups, etc., all of undecorated Middle Kingdom type.
The chief interest of this part of the site is the possibility it affords to study
the disposition of a Middle Kingdom settlement in the South, and we shall try
to excavate it entirely, if enough time is available, so as to enable us to get a
complete map of it.

V. The ‘Slipway’ for Boats

The plain to the north of the open town lies about 5 m. below the level of
the terrace upon which the houses are built. Accordingly, it had to be surveyed
without delay, since it is below the 150 m. contour level and scheduled to be
flooded in 1965–66 by the waters of the new reservoir. During the survey we
discovered a very peculiar structure which, as far as I know, is something new in
Egyptian archaeology. Just under the wind-blown sand we found a thick layer
of Nile silt, 2 m. wide, running roughly SSE–NNW in a straight line for more
than 2 km. It was slightly curved in section, the highest parts being at the
sides and the lowest in the middle. About every 50 cm. one could still see
traces in the dry mud of wooden logs which had acted as cross-pieces, long since
eaten by the white ants but clearly imprinted in the silt.\footnote{See now The UNESCO Courier (December 1964), pp. 36–7.}

A similar structure—wooden logs encased in silt—is known in Egypt.
This was a road which had been used for dragging stones from a quarry to the
Nile Valley and it was found by Petrie many years ago at Lahun in Middle
Egypt\footnote{Cf. Petrie, Brunton & Murray, Lahun, ii, pl. xv.} where the Pyramid of Sesosiris III was built. The only difference is
that while the Lahun road winds along the side of a hill, that at Mirgissa is
straight and was used for dragging boats along. The silt still shows long tracks
where either the sledge or the boat itself rubbed on the west silt, and the foot-
prints of the last man who followed that way centuries ago.

One might wonder why the Egyptians took the trouble to drag their boats
along such a slipway for 3 or 4 km. The answer is to be found in the nature
of the river between Abusir Rock and Mirgissa. This stretch of the Nile can be—and has been—navigated from time to time by boats going up or down
stream, but only when the river is high, that is to say from the end of July to the
end of November at the most—less than half the year. During the remainder
of the time the rapids cannot be passed by ordinary boats and from December
to July the Egyptians had to leave their boats at Mirgissa if they were going
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north, or at Abusir if they wished to go south, and pursue their journey by
land. The only alternative was to drag the boat over land so as to avoid the
rapids. This was not so difficult as one might imagine: there is nothing more
slippery than Nile silt once it is wet.

Everyone knows the famous wall painting of El Bersheh, which shows a
colossus being dragged by manpower only. The huge statue, over 20 ft.
in height, had been placed upright on a wooden sledge on the front of which a
man is standing pouring water ahead of it. This act was interpreted as a kind of
libation until the real explanation was guessed a few years ago: a path had been
cut in the desert sand and filled with silt, and the foreman, by watering the way,
wet the silt so that the heavy sledge could slip easily on it. Experiments have
been made at Karnak with an architrave weighing hundreds of tons. Once it
was laid on a path of wet silt the problem was not to move it but to prevent its
moving too fast. Thus some twelve centuries before the Greeks had the idea
of the diolkos which crossed the Isthmus of Corinth, the Egyptians of the Middle
Kingdom, using the same method as that used for the transport of colossi, were
able to pass their boats safely through a most difficult tract of the Nile.

The position of the slipway has been cleverly selected. It starts from the
natural harbour near the fort of Mirgissa-Iken, and runs directly to a point below
Matuka, not very far from Abusir, thus avoiding the numerous impassable rapids
between Dabenarti and the island of Matuka. We know, thanks to a text from
Uronarti of year 19 of Sesostris III, that travelling was practically impossible
in the cataracts between March and the new flood, even when there were no
such rapids as those at the northern end of the Second Cataract. In case of
need, the Mirgissa slipway enabled an expedition’s boats to pass rapidly from
north to south and vice-versa. In this way the forts of the Cataract region could
quickly be provided with food or reinforcements, and if attacked could be
rapidly helped whatever the height of the Nile.

VI. The Western Cemetery (M.X)

The last part of the site where excavations were undertaken last season is the
great necropolis on a high plateau of decayed granite to the west of the Upper
Fort (see FIG. 4). Over 130 tombs were excavated during the winter 1963–64.
They belong to two different types. In the first, the body was simply laid, with
or without a coffin, in a rectangular narrow pit dug in the sand or the decayed
rock. The skeletons are usually in extended position, though the contracted
position is still found from time to time. These small pits are unmarked on the
surface, and some of the graves have not been plundered, but even then funerary

13 Cf. Griffith, Newberry, El-Bersheh, i, pl. xv and p. 19.
14 From my friend M. Henri Chevrier, once Chief Architect of the Egyptian
Antiquities Service at Karnak, who told me about it.
16 PM, vii, p. 144 s.v. ‘Quay’.
objects are scarce and very poor: some personal ornaments, earrings, scarabs, sometimes a small alabaster kohl vase, much worn and looking as if it had been handed down from generation to generation (see Plate VII, 3); finally a few coarse utility pots.

The second type of burial is much more elaborate. On the surface one can see a circle of rubble, varying in size, in the middle of which a slight hollow marks the opening of the vertical shaft leading to the underground chamber, or chambers, cut in the rock. The depth of the shaft varies from 1.50 m. to 3 m. The funerary chambers may be simple, opening directly at the bottom of the shaft and with the same orientation, or they may be double, each one opening off the small sides of the shaft. Sometimes there are two or more chambers communicating one with the other. In a few cases the shaft led to a kind of ante-room giving access to one or more rooms. In one case only the vestibule had been decorated with a horizontal ‘band’ of red ochre running all round the chamber. At the present time there is no evidence of any superstructure. From time to time, however, rows of mud brick are seen at the opening of the pit, and in a few cases there was evidence of the existence of a vault above the pit, so there is still a possibility that there had once been some kind of chapel built over the grave which is now entirely destroyed. No stelae or offering tables have been found so it remains uncertain whether or not there was a funerary cult which continued at regular intervals after the interment.

Practically all the graves had been robbed, as is usually the case in the Sudan where plundering seems to go back to a very early time. However, towards the end of the campaign two graves were found in a better state of preservation, but, if the robbers had overlooked them, the white ants had not: nearly all the wooden objects had been reduced to a sticky powder of decayed wood. However, thanks to these two graves we have been able to ascertain that the inhabitants of Mirgissa utilized for their burials large heavy rectangular coffins of the same type as those used in Egypt during the Middle Kingdom (see Plate VI, 3). The inside of the coffins was covered with funerary hieroglyphic texts written in black and red on a very thin layer of white stucco. The body was wrapped in linen and over the upper part of it was laid a funerary mask of painted stucco. Only one of these masks has been found in a fairly good state of preservation, but a number of others were found smashed into tiny fragments by the robbers and we recovered them among the debris of a great number of graves. Thanks to the unwearying patience of Mr and Mrs Vila some of them have been restored (see Plate IX). One feature of interest is that they are practically all different, as if they were real portraits of the deceased. However, if such were the case it is difficult to explain why, in the only instance we have of a coffin linked with a mask, the name and titles inscribed on the coffin differ entirely from those given on the mask. So one cannot rule out the possibility that, fragile as they were, the masks were imported from Egypt and accordingly are not portraits in the true sense of the word.
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MIRGISSA

PLAN de situation

Cimetière

Oued

Forteresse

Echelle

0 25 50 75 100 m

Fig. 4. THE WESTERN CEMETERY IN RELATION TO THE UPPER FORT
KUSH

Among the objects recovered from the smaller graves as well as from the shaft graves are a number of scarabs, mostly of faience. All of them belong either to the xiiiith Dynasty, the Second Intermediate Period or Hyksos times. They indicate that the Necropolis as a whole belongs to the period when the Sudan was an independent kingdom. The pottery confirms the dates given by the scarabs, either because there are an appreciable number of Kerma vases—frequent at this period—or because there are a few samples of the so-called ‘Tell-el-Yahudyeh’ ware typical of Hyksos times (see plate vii, 1). The statuary too belongs stylistically to the Second Intermediate Period and the rough inscriptions engraved on the four statuettes which were found also confirm this dating (see plate viii).

It is worth noting that so far the Mirgissa cemeteries—with the exception of the small Kerma necropolis found and excavated during the last campaign—have only yielded graves from the end of the Middle Kingdom, and the Second Intermediate and Hyksos periods. The inhabitants of Mirgissa at this time seem to have been highly Egyptianized; one might even query whether they were not Egyptians. This is of the utmost importance for the history of the Sudan and of the interrelations between Egypt and Nubia during this period. If the fort retained its Egyptian garrison during all this time, it would mean that Egypt and the newly established kingdom of Kush had reached some kind of agreement, but, if such were the case, it is difficult to explain why the Egyptians stationed in the Sudan should have lost most of their native funerary customs. For instance, the absence of funerary stelae and offering tables in the cemetery is striking. On the other hand, if the inhabitants of Mirgissa were pure Sudanese, or Egyptians Sudanized in the course of time by intercourse with Sudanese, one must emphasize the importance of the links between Egypt and the Sudan during this period: most of the funerary objects found in the graves are of Egyptian origin and not all of them can be heirlooms from the time when the Egyptians occupied the fortress ‘en force’. So trade between Egypt and the South must have continued during the Second Intermediate Period, notwithstanding political events in Egypt itself. Whatever the answer to this problem, one can see the importance of the facts noted. In order to elucidate the problems involved we have asked the assistance of other specialists. Some three hundred skulls found in the cemetery have already been sent to France for study at the University of Paris. The physical anthropologists ought to be able to give us, if not a definite answer, at least a hint as to the nature of the population of Mirgissa.

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One can see from the results of the 1963–64 campaign at Mirgissa how much remains to be done on the site. Less than half of the ‘Open Town’ has

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17 See Kush xii, p. 59, under M.III.
been excavated and no more than a tenth of the inner Upper Fort. In the cemeteries only graves of the Second Intermediate Period have so far been discovered, but we know from previous finds in the Fort\textsuperscript{18} that the site was occupied during the Middle Kingdom and our own work has shown that it was inhabited during the New Kingdom too, so there ought somewhere in the vicinity to be other cemeteries than the one which has been excavated. If it was not for the fact that the waters of the new Aswan Reservoir are going to cover the site, there would be plenty of work for years at Mirgissa. As the matter stands, we are obliged to finish the excavations in a very limited time, but we still hope that, with the promised help of the Sudan Antiquities Service we shall not have to abandon the site until it has yielded, if not all the information it contains, at least the most important part of it. The withdrawal from Faras before the excavations could be completed is a tragedy for the history of the Sudan and of ancient Africa in general; let us hope a similar tragedy will not occur at Mirgissa.

\textsuperscript{18} See \textit{PM}, \textit{vii}, p. 142.
Surveying Kumma

by Ricardo A. Caminos

In the autumn of 1963 the joint expedition of the Egypt Exploration Society and Brown University returned to Sudanese Nubia for its second season's work at Semna-Kumma. The origin, scope and operational methods of the expedition have already been described in detail in the report of its first campaign and need not be repeated here. Suffice it to say that the sole aim of the undertaking was to carry out with a view to publication a thorough and exhaustive survey, epigraphic as well as architectural, of the two Pharaonic temples still extant at Semna-Kumma, and that one of these monuments, namely the temple erected during the xviii Dynasties in honour of Dedwen and Sesostris III in the fortress at Semna West, was completely recorded by the expedition in the course of its first season's work, which extended from 15 October 1962 through 15 January 1963.¹

The objective of the second campaign was the investigation and recording of the temple situated within the fortress of Kumma or Semna Sharqi on the eastern bank of the Nile at the upper end of the Second Cataract.² The temple was dedicated to the ram-headed god Khnum, the chief deity of the First Cataract area, whose cult was widespread in Nubia. Whether its construction was actually started by order of Tuthmosis II is and will probably remain an open question. At all events there can be no doubt that the temple, as it stands today, is the work of Hatshepsut's, Tuthmosis III's and Amenophis II's artists and architects, and therefore its construction must have stretched throughout a period of perhaps some fifty to sixty years but no less than thirty-five, falling somewhere between 1490 and 1410 B.C.

The temple lies in the north-west corner of the fort and occupies a slightly irregular rectangular area about 20 m. or nearly 22 yds. long from south to north and 10 m. or almost 11 yds. wide from east to west in terms of the conventional northward flow of the Nile. In the accompanying sketch-plan (Fig. 1) the light line indicates mud-brick, while the hatched areas enclosed in a heavy line represent stonework. Apart from a few floor slabs made of local fissile gneiss, no other stone appears to have been used in the building but sandstone, and this was brought, in part at least, as asserted no less than five times in the temple

¹ Cf. the report on the first season by Caminos, Kush xii, pp. 82–6; see also [James], JEA, vol. 49, p. 4; Egypt Exploration Society, Report of the Seventy-Sixth Ordinary General Meeting (1962), pp. 9 f.; Leclant, Orientalia, N.S. vol. 33, p. 383 (22).
² Cf. Porter and Moss, Topographical Bibliography, vii, pp. 152 f., and additional literature quoted by Caminos, Kush xii, p. 83, n. 1.
FIG. 1. SKETCH-PLAN OF THE TEMPLE OF KHNUM AT KUMMA
inscriptions, from a locality called Sha‘t, namely the quarries in the island of Sai some 112 km. or 70 miles upriver from the site. The mud-brick wall which in ancient times bounded the temple on all sides has been much worn all round and at a few points is now almost levelled with the ground; it is quite easily traceable throughout, nevertheless.

Little remains of the open Forecourt A: the bottom of the surrounding brick wall, the badly weathered jambs of the entrance gate, the lower end of a pink sandstone stela recessed in the north wall and bearing the remnants of the closing lines of a boundary inscription, and two column-bases, one of which was found obviously dislodged from its original position. Court B is also much ruined: its mud-brick walls are better preserved, but the two jambs of its entrance gate are now reduced to a number of small, powdery and rapidly disintegrating fragments; then there are the remains of a colonnade consisting of two free-standing monolithic middle columns and two square pillars half-embedded in the side brick walls. Two doorways lead through the north wall of Court B into the temple proper. Hall C was initially a capacious room that stretched clear across the whole width of the building; this was changed when Amenophis II’s architects put up a screen wall near the west end of it and thus formed Room D at the expense of the breadth of the hall. The walls of C and D are whole except for the narrow east wall of the hall, which is preserved up to a height of 152 cm. (59.69 in.) from the floor or slightly less than half the original height; the above-mentioned screen wall has also lost a few blocks. The roofing of C and D is gone except for two slabs still in situ at the west end of Room D. The rear portion of the temple is reached through a doorway at the east end of the north wall of Hall C. There one enters a small squarish Court E only partly open to the sky; in antiquity its entire west side was taken up by a loggia or veranda supported by a single column; at present the loggia lacks about half of its roofing slabs, whereas the architrave is almost entirely preserved. The innermost chambers of the temple lie west of Court E, beyond the loggia, and are marked F, G and H on the sketch-plan. These three rooms are in very good condition, only one roof block being missing from the north or rear end of H. Both G and H are cell-like and very small, averaging 130 cm. (51.18 in.) in width and 150 cm. (59.05 in.) in depth; furthermore, they are only 180 cm. (70.86 in.) high, their ceilings being at a lower level than that of Room F and their floors raised 30 cm. (11.81 in.) above the floor level of Room F. It will scarcely be doubted that G and H are the penetralia of the temple, and although their precise function yet remains to be determined, surely one cannot be very wide of the mark in calling them shrines or chapels.

The temple is, upon the whole, very full epigraphically. Only the surviving roof slabs in D and F-H and the fragmentary column-bases in Forecourt A are wholly blank; the rest of the stonework exhibits throughout a wealth of carved hieroglyphic texts and scenes, or else, occasionally, a mere incised coloured
ornamental pattern. Texts and scenes are, needless to say, largely of a religious nature, though some strictly historical inscriptions and representations are also to be found. Traces of colour still remain upon the screen wall between Hall C and Room D, on the cavetto cornice that crowns the west wall of the loggia in Court E, and in Shrines G and H; no paint is to be seen elsewhere, though patches of background whitewash can be detected here and there. The standard of workmanship is high, but not uniformly so. The sandstone blocks that make up the east, north and west walls of the temple proper are, on the outer side of the building, crudely cut, undressed and blank. It must not be thought, however, that the work was clumsily done or the temple left unfinished. In ancient times the rough outside of those walls was not exposed to view but was covered up by the all-surrounding brick wall which, hugging the stone structure, formed a shell or outer casing of brick, and this casing was daubed smooth with mud and coated with a wash of white. The temple must have offered a neat, tidy appearance from without in its day.

The expedition established its camp within the precincts of the fortress of Kumma on 25 September 1963 and remained there working without a single day’s interruption until 15 January 1964. Detailed plans, sections and elevations of the temple were made. All recording work ever done in the temple, beginning with the verbal descriptions, copies and plans by early 19th-century travellers, was checked and collated against the actual monument. A complete set of rubbings of the inscriptions and reliefs was taken. All texts and scenes were copied in life-size facsimile drawings. In short, the projected architectural-epigraphic survey of the Khnum temple at Semna East was entirely carried through.

The staff of the joint expedition of the Egypt Exploration Society and Brown University in its second season’s work at Semna-Kumma was made up by Messrs Hassan Mohammed Abdul Rahman, Mohammed Faguir Osman, Sayed Mohammed Shellal, and Ricardo A. Caminos.

Thanks are due to the American Government for a generous grant awarded to the expedition through the Bureau of Educational and Cultural Affairs, U.S. Department of State.

The help and cooperation received from all quarters in the Republic of the Sudan was beyond all praise. Special gratitude must be tendered to the enlightened Commissioner for Archaeology Sayed Thabit Hassan Thabit, to his representative at Wadi Halfa, Nigm ed Din Mohammed Sherif, and to all and sundry in the Sudan Antiquities Service for the immense, fundamental assistance which they gave the expedition all the time.
Excavations by the Spanish Archaeological Mission in the Sudan, 1962–63 and 1963–64

by M. Almagro, R. Blanco Caro, M. A. García-Guinea, F. Presedo Velo, M. Pellicer Catalan, and J. Teixidor

During the 1962–63 season our work at Argin was concentrated on the excavation of the X-Group and Christian cemeteries of Nag-El-Arab and a large group of New Kingdom tumuli located in the desert nearby. We give here a summary of the results obtained at each of these sites, together with an account of the intensive excavations that were carried out in the village of Abkanartí in the Second Cataract. Our study of the latter has now been concluded and a monograph prepared. During 1963–64 work continued in the area of South Argin at the rich and extensive C-Group cemetery of Sakoh. The excavation which began there in 1962 had been interrupted, but we have now been able to complete our investigation of the site. We also excavated an important Meroitic cemetery at Nelluah (South Argin) and two Christian sites at Ad-Donga (North Argin).

All these excavations were under the direction of Professor M. Almagro, Director of the Archaeological Mission in Nubia, and we give in the following pages a detailed account of our discoveries, taking the various sites in chronological order according to their culture.

I. The C-Group Cemetery, Argin South

There is no doubt that this cemetery to the south of Argin formed an addition or continuation of the other cemeteries of the same epoch and culture about which we have written formerly.\(^1\) The earliest tombs are to be found at the eastern border of the village of Argin, on the edge of the desert beyond the last houses of the quarter called Nag Sâkoh. This sector comprised twenty-three tumuli which were carefully excavated in January 1962, and was designated 6–B–4 by the Sudan Antiquities Service. The second and larger part of the necropolis was found in an area free from buildings between Nag Sâkoh and the hamlet of Mirmad, and was registered by the Sudan Antiquities Service as 6–B–26.\(^2\) During the campaigns of 1961–62 and 1963–64 we excavated a total of 160 graves in this part of the cemetery—seventy-five of them during the first campaign, and the rest—nos. 76 to 160—during the second. In amongst these, but clearly distinguishable from them, we found some tombs of a transition

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\(^1\) See the previous reports of the Spanish Archaeological Mission in Nubia, \textit{Kush} x, pp. 211–19; \textit{Kush} xi, pp. 175–95.

\(^2\) A short reference to both cemeteries was given in \textit{Kush} xi, pp. 175–80.
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period which were described with part of this cemetery in our last report. In our opinion these three groups of burials form a single whole and we are preparing a monograph\(^3\) about them so as to publish comprehensively the results of our work in this area.

**General Characteristics.** In our previous report we mentioned the various structures, equipment and furniture of the tombs in this cemetery and noted their peculiarities. It is only necessary to add that the tombs numbered 1 to 160 now under discussion are absolutely uniform. They consist of a circle of uncarved stone, no more than three courses high, and the grave proper lies in the centre, oriented east-west.

In most cases there is a sort of oval pit, almost touching the stone circle, in which the body was placed in contracted position with the knees at the level of the breast or a little lower, according to the height of the deceased and the size of the pit. The body lies on its right side, with the head to the south. The hands, of which we have carefully made drawings and photographs, are generally placed to the right as if supporting the face. We often found the right hand under the right cheek and the left sometimes looks as if it were covering the face. In other cases the left hand points downwards, and there was one instance where it was placed under the right elbow as if supporting it.

During this campaign we had the great good fortune to find thirty-nine undisturbed tombs among the eighty-four we investigated. Thus we have got sufficient material to judge the position of the bodies.

In tombs 114 and 108 we found a sort of mat made of palm leaves enwrapping the body, but we could not save any fragments as they crumbled to dust.

**Funerary Equipment.** The objects are, like the tombs in which they were found, of great uniformity. On the outside and close to the stone circle on the north-east side, or sometimes amongst the rubble, we found pottery which, with but few exceptions, is of three types (Tomb no. 122 is an example, PLATE X, b):

(a) Bowls of different sizes of C-Group black-topped red-polished ware.

(b) Black ware bowls with incised geometrical designs which, in spite of the monotony of rhombi, triangles and stripes, offer an enormous variety in the arrangement of the patterns. In some of them we find traces of polychrome—red, yellow or white. (During the first campaign we found some specimens here with well preserved polychrome, which are now in the Sudan Museum in Khartoum.)

(c) We generally found one, and occasionally two, big yellow vessels of Qena ware.

In addition to these three types we found four small globular pots of coarse earthenware, which were very likely used to hold kohl or some kind of oil.

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Beads. We found a great number of these of cylindrical, globular and discoidal type, and six in the shape of a figure made of carnelian. We noted that strings of beads were sometimes used as a sash or belt, for some loose beads are frequently found over the belly, and fragments of the strings and links are to be seen on the abdomen of the deceased.

Amulets. We registered six very small amulets representing an animal sitting in the attitude of a sphinx (perhaps a roughly made lion or a jackal). Others were in the form of an eye or a frog.

Stone Objects. A large stone bracelet was found round the wrist of one skeleton.

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Table 2

Bone Ornaments. Several bone rings were found, some semi-circular in cross section and some concave. There were also three triangular sticks, perforated at one end, which had probably been used to apply kohl. We also found bone bracelets around the arms of some of the skeletons, as for instance in tomb 124 (see Plate XI, a).

Shell Ornaments. The shells used for the manufacture of ornaments were probably the same as those which are still found in the Second Cataract.

We found too a sort of stud in the shape of a spherical button attached to a disk by means of a small stem. It might, perhaps, have been used as a nose ornament.
Conclusions. The second and last stage of the excavation of the necropolis 6–B–26 has revealed that it was a burial ground for poorer people than those interred in the seventy-five tombs previously excavated. Perhaps this is why they had not been plundered like the others. No valuable object at all has been found here—only ornaments of stone or bone. It should be remembered that during the first stage of the excavation many more beads were found, in addition to a magic stick or wand of hippopotamus ivory, a steatopygous Venus and fragments of two others, plus several polychrome bowls and three cups. No such pieces have appeared in this second stage, although the number of tombs excavated was greater and thirty-nine of them were undisturbed.

Another important fact should also be noted: during the last campaign only six bull crania were found outside the tombs, while during the first stage a single tomb (no. 30) yielded no less than twelve.

II. Pharaonic Tombs in the Desert

(a) At the northern limit of our concession we located a series of tumuli, to which we gave the designation ED (Excavations in the Desert). They are sometimes difficult to distinguish because they are mixed up with the remains of quarries, but ED–8, ED–9, ED–10 (plate xv, b), ED–11, ED–12, ED–18 and ED–21 were excavated with positive results.

The tumuli are oval in shape, varying between 3 and 15 m. in length, and they appear on the surface as a heap of stones and sand. Situated on low ridges in the desert, generally on the edge of the third terrace, they consist of between five and sixteen cists 1½ to 2½ m. long constructed from rough stones and placed arbitrarily. The skeletons are in different positions, lying horizontally on the back or on the right side somewhat contracted, according to the shape of the cist.

As far as objects are concerned, they yielded glass beads, anklets and different kinds of pottery of reddish clay, vessels of whitish clay with pointed bottoms, a narrow necked globular vessel with handles and other different fragments of pottery.

Other tumuli, ED–4, ED–5, ED–6 (doubtful), ED–14, ED–15, ED–17, ED–19, ED–20, ED–22, ED–23, ED–24, ED–25, ED–26 and ED–27 were also located but not excavated. ED–1 and ED–2 yielded fragmentary indications of human habitation, but there was insufficient evidence to determine their date.

(b) In the southern part of our concession another group of about thirty tumuli has been located, which we believe to be of the New Kingdom period.

III. Meroitic Cemetery at Nelluah (South Argin)

During December 1963 sixty graves were excavated in the Meroitic cemetery at Nelluah to the south of Argin. The direction of this excavation was undertaken by Dr Garcia-Guinea and Dr Teixidor in collaboration with Angel Coronado, topographer, José Fernandez, draughtsman, and Luis Mora Figueroa. Ahmed Abubakr worked as Reis.

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Fig. 1. PLAN OF THE MERiotic CEMETERY OF NELLIANH
Most of the graves had been robbed, although it was possible to collect various pottery. Nos. 5, 10 and 15, however, appeared to be almost intact and yielded numerous complete vessels of considerable interest. The tombs correspond to the forms classified by Griffith, although some appear with slight variations. Among the most frequent types we can mention the 'lateral niche grave', the 'lateral foot niche grave' and the 'cave grave'. In three cases (nos. 23, 29 and 45) the tomb has a lateral niche and another at its foot, and some were found with a descending ramp.
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We have classified all the forms found into four groups (A, B, C and D) with their variations (see FIG. 2). Apart from these general types, mastabas were also found. One enclosed tomb No. 1, which was constructed with a mud-brick vault (FIG. 1, no. 1 and PLATE XII, a) and two others (nos. 26 and 27) surrounded normal tombs (FIG. 2 and PLATE XII, b). All the tombs appear to be oriented towards the east, but the position of the bodies is west-east. In spite of the large number of plundered tombs, the Nelluah necropolis has provided a very

![Diagram of pottery from tombs](image)

**Fig. 4.** MEROITIC CEMETERY OF NELLUAH—POTTERY FROM TOMBS NO. 15, 51 AND 5

complete collection of Meroitic pottery. Rounded vessels with necks of varying height abound, frequently covered by decorated cylindrical vessels (PLATE XIII, b) in the undisturbed tombs. No. 10 (PLATE XIII, a) contained in situ in the western niche a collection of more than fifteen vases of different sizes, many of them decorated. An outstanding example is a large amphora (FIG. 3, a) of Hellenistic type, painted with parallel lines and garlands, which was covered with a silver bowl. It seems certain that this group of pottery had been covered with a cloth, the remains of which were still to be seen.
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Although it had been entered by thieves, tomb no. 15 yielded more than ten vessels, including a small mushroom shaped one little known in the tables of Meroitic types (FIG. 4, a), and a round bowl painted with devils’ heads (PLATE XIII, b).

![Diagram of pottery](image)

**FIG. 5. MEROITIC CEMETERY OF NELLUH—POTTERY FROM TOMBS NOS. 6 AND 8**

The most outstanding examples in our collection of pottery are a small cup of green faience (tomb 15), a small bowl (tomb 5—FIG. 4, c), various cups with stamped decoration (tombs 7 and 10), two round hand-made vessels with engraved decoration of giraffes (tombs 6 and 51—FIG. 4, b) and various others including high necked jugs and bottles with varied decorations (FIG. 5, a, b).

Among the silver objects were two bowls; the one which covered the amphora in tomb no. 10 was very flat (PLATE XIII, a).
Sculptured objects were few, but the body and feet of a 'Ba' in sandstone may be mentioned.

Between mastabas 26 and 27 (Plate XII, b) was found the head of a young Nubian, which is possibly one of the finest known pieces of Meroitic sculpture (Plate XIV, a, b). It is of medium size (35 cm. high) and was found very near the surface. The face must have been painted with ochre and the eyes and diadem with white. The purity of line and style show clear Greco-Roman influence although the method of carving the lips is reminiscent of African sculpture.

The general dating of this necropolis might be about the 2nd and 3rd centuries A.D.

IV. THE MERORITIC, X-GROUP AND CHRISTIAN CEMETERY OF NAG-EL-ARAB

This cemetery is situated at the northern limit of the Spanish concession in Argin in the quarter known as Nag-El-Arab, approximately 1 km. west of the Nile at the edge of the desert. It was designated 24-V-I by Verwers in 1961. We located 1,150 tombs, of which 450 graves have been totally excavated and 300 Christian graves partially excavated. The team consisted of Dr M. Pellicer, the Field Director in charge of the Spanish concession at Argin, assisted by Messrs E. Aguirre and J. Altuna (anthropologists), M. Longuere, J. Zozaya and I. Vazquez de Acuña. Also working for us at this site were Reis Barak Umbarak, the Qufi Ahmed Abubakr and twenty workmen from Argin.

Work began in the southern sector. First the zone to be excavated was cleared of sand so that we could locate the tombs and draw the general plan. A sketch of the ground plan and sections to scale were made for each tomb, showing the position of the body, the location of the funeral objects and other data, and detailed notes were made in the excavation diary. All the ceramic fragments and some of the anthropological remains were collected.

The cemetery is very long and narrow, running for about 650 m. from north to south parallel to the Nile and varying in width up to a maximum of about 100 m. Of the total of 1,150 graves, 335 in the north-west part of the necropolis were 'cave graves' of the later Meroitic period and ninety-five of them were excavated. 'Lateral niche' graves with tumuli are to be found throughout the whole necropolis, though those with clearly visible tumuli are mainly concentrated in the east and south parts and those with eroded tumuli in the central and west sectors. Three hundred and twenty-five of the 495 X-Group graves were excavated. Christian 'box graves' are to be found in small groups between the earlier X-Group ones. There are four such groups, one to the south-west, two in the centre and another to the north. There were 330 Christian graves. The superstructures were excavated in all cases and thirty were completely cleared so that we could obtain skeletal material and data for the typology and characteristics of the tombs.

Cave Graves. The Meroitic cave graves had been thoroughly plundered and grave goods were very scarce and fragmentary. The graves consist of a
rectangular chamber with a trapezoidal entrance-way to the east. The chamber is closed by a mud-brick or rough stone wall, or sometimes even a single large stone. The length of the entrance-way varies between 2 and 6 m. with a depth of from 1 to 3 m., and the chamber is from 1½ to 3 m. deep. Although generally the tombs are oriented east west, in a small part of the western cemetery they had to be oriented towards the east on account of the sloping ground.

The corpses, which were well mumified and covered with shrouds inside coffins made of hollowed-out tree trunks, were lying in extended position on their backs with the hands on the pelvis. Sometimes, however, they were found simply covered with a shroud which was tied in place.

Beads of glass and ostrich eggshell and bracelets of iron, bronze, giraffe hair or beads were frequently found. The adult bodies, especially those of women, still had hair and nails stained with henna. The women’s bodies also had heavy, engraved, bronze or iron anklets. They belong to a non-negroid racial group, related rather to the peoples of the Arabian desert.

As a result of robbing, the pottery is in very small fragments. Only the following complete pieces were found: a hand-made, round, black vessel with a narrow neck with stamped decoration in geometrical patterns and outlines of animals; a small jug with incised decoration; two qadus and a bottle. Among the pottery we have fragments of a round vessel with a narrow neck and deep orange slip painted with discs between parallels on the upper part—a classic motif in the Meroitic period. Much more frequent are the fragments of ordinary pottery of compact clay with a greyish inside and reddish outside, treated with a spatula before being baked and presenting a shiny red surface: these vessels have high sides. Other fragments indicate the beginnings of the X-Group.

Graves with a tumulus and lateral niche. The X-Group graves, whether or not the tumuli remained, had not been so thoroughly robbed. The tumuli are circular, composed of sand and small rounded pebbles, and vary in diameter from 2½ to 15 m. From the centre of the tumulus there opens a rectangular pit, oriented from east to west and from 1 to 3½ m. deep. Almost all of them have a lateral niche opening on the northern side, though there were some exceptions where the tombs were oriented north to south. The lateral niche is walled off with rough stones.

The corpses lie in an extended position on their backs, with the hands on the pelvis, and covered with a shroud which is sometimes tied in place. A few others lie on the right side with the legs bent. As a general rule there is no coffin.

There were great numbers of beads of carnelian, granite, glass, ostrich eggshell and other materials which formed necklaces and bracelets. There were very few scarabs. In the men’s graves there were archers’ looses of granite and horn, iron arrow heads with a single barb, a phallic pendant, bracelets of decorated leather and knives, while in the women’s graves were found silver, iron and bronze bracelets, a large number of beads and toilet requisites such as tweezers and hair pins.
a. TOMB NO. 130, BEFORE EXCAVATION

b. TYPICAL GROUP OF POTTERY VESSELS OUTSIDE A TOMB
a. THREE BONE BRACELETS CAN BE SEEN AROUND THE ARM OF A SKELETON WHICH IS IN THE RITUAL POSITION

b. THIS SKELETON IS UNUSUAL SINCE IT FACES SOUTH
a. MASTABA WITH A BARREL VAULT BUILT INSIDE IT

b. MASTABA NO. 27

MEROITIC CEMETERY OF NELLUAH
PLATE XIII

a. POTTERY IN TOMB NO. 10

b. POTTERY IN TOMB NO. 15

MEROITIC CEMETERY OF NELLUAH
a. MEROITIC CEMETERY OF NELLUAH—SANDSTONE HEAD

b. POTTERY FROM DESERT TOMB
a. THE PHARAONIC CEMETERY IN THE DESERT

b. TUMULUS ED-10
a, b, d. THE CHRISTIAN CEMETERY OF NAG-EL-ARB

c. POTTERY FROM NAG-EL-ARB
a. THE CHURCH FROM THE WEST

b. THE TRIBUNE IN THE CHURCH

ABKANARTI
ABKANARTI: a. FRAGMENT OF A FRESCO  b. PARCHMENT IN OLD NUBIAN  c, d. POTTERY
THE CHRISTIAN SETTLEMENT OF AD-DONGA, AREA II
PLATE XXI

a.

AREA II—THE SHEPHERD’S POUCH

b.

c.

AREA III—STELA WITH FUNERARY TEXT IN GREEK

THE CHRISTIAN SETTLEMENT OF AD-DONGA
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The pottery presented a good selection of X-Group types. There were a great number of bottles, reddish clay vessels, painted cups decorated with bands and other motifs in white and black, qadus, amphorae of different types, ointment containers, plates and remains of glass vessels. The discovery of a lamp amongst the grave goods in an X-Group tomb was unusual.

Box Graves. Finally, through the whole length of the necropolis there are groups of 'box graves' of the early Christian period. The superstructures are closely grouped together, made of mud brick or stone and white-washed with lime. They are rectangular and stand as high as half a metre. The graves are oriented towards the west and on the western side of some there is a low platform on which is a box of clay or stones containing a lamp, a lamp holder and a hollow for charcoal. The superstructures vary in length between 1 and 3½ m. One brick superstructure was shaped like a cross and in the case of two graves circular tumuli of X-Group type covered rectangular Christian superstructures. Beneath the superstructure there is generally a deep rectangular pit with a lateral niche at the northern side. In other cases, however, there is a deep circular pit at the western end of the superstructure which gives access to a chamber lying to the east beneath the superstructure and containing multiple burials.

The bodies lie in an extended position on their backs with the hands on the pelvis and always placed towards the west. They are covered by shrouds and sometimes by blankets. The only object ever found was a single lamp. There were also children buried in amphorae in simple shallow pits or in small lateral niches.

The discoveries of an inscription in Coptic on a rectangular tablet of sandstone and a censer with a painted decoration are interesting.

We hope to complete our study of this necropolis in the near future as it will shed much light on the X-Group and its connexions with the Meroitic period on the one hand and the Christian era on the other.

V. THE CHRISTIAN SITE OF AFBANARTI

The second season of excavations on the island of Abkanarti lasted from 15 November 1962 to 20 February 1963. The staff was composed of Francisco Presedo Velo (Field Director) assisted by Luis Monreal Agustí, Isidoro Vazquez de Acuña and Eugenio de la Vega Pidal (photographer). The labour force consisted of two Quftis and forty local workers under the supervision of Berberi Mahmoud Muhammad.

The object of this campaign was to complete as far as possible the excavations begun in the previous season (vide Kush xi, pp. 175–95). The work was mainly concentrated in the lower part of the Christian village, starting at the point where excavation had stopped previously. Thus, we continued clearing and digging until we reached the point where the exterior wall borders the slope overlooking
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the Nile on the western side of the village. While we were working inside the walled precinct, a small team began to explore a little mound located outside the walled enclosure near the modern village of Abkanarti. Here they discovered the ‘Church beyond the Walls’.

The Excavation (fig. 6). As is the case in the majority of Nubian Christian villages built of mud brick and ruined through the action of time and of men in search of marog, the archaeological remains at Abkanarti are very badly preserved, and the identification of walls and other details is very difficult, if not impossible. This destructive process has been increased by the great stones which have fallen down from the citadel upon the lower parts of the site where work was carried out. After removing the stones we had also to remove modern houses and other obstacles. In the main our work consisted of the careful clearing of rooms and streets in the hope of establishing the stratigraphy, but in this we were unsuccessful. Indeed it should be stated that the village of Abkanarti was built directly on rock and we were unable to discover any trace of previous human occupation. All the rooms were numbered individually to facilitate the location of the finds. In this preliminary report only rooms are mentioned, but it should be noted that included in the numbering are open spaces (streets, small squares, etc.) which are referred to in our description.

General description of the site. After excavation the Christian village appears to be very irregular in its distribution. The area excavated last year (the large buildings to the east, rooms 1–20) was completed with the clearing of rooms 22, 23, 24, 25 and 38, and towards the west with rooms 26, 27 and 28. The complex in this quarter is very intricate.

Beyond an open square, numbered 30, which was not fully excavated, we come to the centre of the village—the church, which forms a separate unit. Four streets can clearly be seen: one of them, number 32, runs north-south with another, no. 36, at right angles to it. On the south side of the church runs street no. 49 bis, separating it from the group of rooms against the rocks (nos. 48, 49, 41 and 42) and finally there is another street, or square, between the church (no. 39) and the unidentified building (no. 68). The group of rooms leaning against the western slope shows the same labyrinthine character as the eastern group. We can see the vaulted passage between rooms 53 and 57 leading to a doorway in the wall towards the Nile. There is another passage (64) which was not excavated, but which runs towards the upper part of the citadel, and probably gave access to it. We also discovered the outer rooms on the slope overlooking the Nile (82, 83, 84 and 85). Therefore, after the second season two major areas remain unexcavated; one of them the continuation of rooms 61, 62 and 80 towards the south, and the other in the middle of the eastern slope. In both places many sherds were scattered on the surface, and walls are abundant. Nevertheless, we believe that the whole area is of the same date as the excavated part, since the sherds and other remains do not differ.

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The Church. The most interesting building excavated in the 1962–63 season was the Church, numbered 39 on the plan. In this area there was an Arab house, built about fifteen years ago, and a lime kiln, which have unfortunately ruined the south-east corner of the Church. Once we had removed the house and the kiln, we began to see pieces of mud brick covered by a layer of stucco and painting in black, yellow and red. The excavation of the church was our main task this season (Plates XVIII, XIX, a). The Abkanarti church is typical of the small Christian churches of Nubia. It is all built of mud brick and its construction suggests the work of unskilled masons. The walls are not straight, and we believe that there is evidence of rebuilding in the southern wall. The Church is 12 m. long, 8.50 m. wide in the apse and 9 m. wide at the west end. Like all the Nubian churches it is oriented approximately to the east, but deviates by 13 degrees to the south. The whole of the southern side of the church was in ruins.

In all probability the apse was similar to other Nubian churches with two rooms and the tribune, but today only the northern room and the tribune are preserved. The tribune has three steps, and in front of it is the altar, of which only the lower part is preserved. The nave was separated from the aisles by arcades. Only four pillars remain, but we can assume that the nave was divided into three parts with a dome in the centre of the church, similar to the south-west church at Kasar-ico (vide Kush, loc. cit.). In the nave we found a jar covered with a bowl. Between two pillars some stone slabs were found. The aisles are of different widths, the south aisle being narrower than the north. At the end of each aisle there is a room. The northern one was entered from the nave and it is quite plain. The room in the south-west corner is typical of all the Nubian churches. It was a little vaulted room, full of pottery of different sorts, with a staircase leading most probably to a tower. Perhaps the pulpit was there since it does not seem to have been inside the church. The building was entered by vaulted doors in the north and the south walls.

No objects of any great interest were found in the church, although we have a good collection of amphorae from the little vaulted room, and a small piece of painted parchment is worthy of mention. After cleaning, it was found to show two human figures.

The ‘Church beyond the Walls’. Near the modern settlement of Abkanarti, 100 m. from the outer wall of the ancient village, was a small mound conspicuously covered with sherds, and all the indications pointed to the presence of a Christian building. A small team investigated the site, and discovered a little church, or, to be more accurate, the apse and two pillars of a church which had otherwise completely disappeared. Some pieces of plaster were recovered as evidence that once the walls had been painted. The sherds collected are datable to the classic period of the Christian age.

The Objects. As expected, this season has produced a great deal of pottery, amongst which that of the late period predominated. When studied, this will
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give us evidence of the history and economic relations of this Christian community. Some pieces were made in Faras and others were perhaps imported from Egypt. Specimens of the early Christian types are completely lacking. Two examples are shown in Plate XIX, c, d.

Amongst other finds, we must mention a parchment written in Old Nubian, the deciphering of which will throw some light on the history of Christian Nubia (Plate XIX, b).

Chronological Conclusions. In the present state of our knowledge, we can assume that this walled village with its church and citadel belongs to the late period of Christian Nubia. Its foundation can be dated to the 8th century and its final decline to the Arab conquest in the late 13th century A.D.

VI. THE CHRISTIAN SETTLEMENT OF AD-DONGA

The 'tell' of Ad-Donga (North Argin) lies 11 km. north of Wadi Halfa on the west bank of the Nile. Pottery was plentiful on the surface. We worked there from 28 December 1963 until 3 February 1964. Unfortunately the tell itself is still inhabited, which made work difficult, and the existence of a house on the top limited our research. Three areas, designated A–I, A–II and A–III, were investigated. A–I was opened on the western side of the tell, that is the desert side. A–II was in the centre of the tell, and A–III was located beyond the tell and nearly half a kilometre from the Nile.

In A–I two rooms were excavated. The remains of the walls are of sun-dried bricks. In a few sections four superimposed layers of bricks laid horizontally are visible. A brick-on-edge course is utilized for the construction of the foundations. This building method is widespread in all three sectors of the site.

In A–II a group of rooms was explored (Plates XX, a, b, and XXI, a). The rooms were divided by a corridor running east-west. Those of the southern section have walls whose structure is clearly discernible. We were thus able to establish that the rooms had been roofed with vaults of brick. The walls rest on a layer of darkened sand which led us to conclude that an earlier settlement had existed on this same site. These early inhabitants left no traces behind them except for a few samples of unpainted or undecorated pottery. According to our stratigraphic study two periods of construction are noted in the Christian epoch. The second period consisted in merely readapting the buildings of the first. Thus, it would appear that these two periods followed closely upon each other. In fact, pottery of both periods follows the well-known Christian Nubian tradition. We were able to trace a later settlement built over the ashes of the Christian buildings. In all probability a fire terminated the Christian occupation here, as the later pottery does not exhibit the painted Christian themes.

92
Collar Bands and continuous Wall Friezes

Panelled Wall Frieze

Framing Bands

FIG. 7. CHRISTIAN POTTERY

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In A–III remains of walls were to be found. A number of scattered buildings could be seen, but it was not possible to draw up a plan of the rooms. In this area the hand-made ceramic is not so abundant, nor is the painted pottery so well represented as in A–II. In the corner of a room, near the surface, a stela was found. It is a funerary text written in Greek and composed of twenty-six lines (PLATE XXI, b, c). At the top, we read the date 809 of the Era of the Martyrs, i.e. A.D. 1093. At the moment, it is difficult to ascertain whether the buildings in A–III are chronologically subsequent to the buildings in A–II. However, after further study of the pottery we may be able to substantiate the supposition of a later settlement.

FIG. 8. CHRISTIAN POTTERY
(a) Central zoomorphic form. (b) and (c) Radial Patterns. (d) Emblem centrepiece

Pottery. For the typology of Ad-Donga pottery we have followed closely the valuable work of W. Y. Adams (‘An Introductory Classification of Christian Nubian Pottery’, Kush x, pp. 245–88). Below the level of ashes referred to above, the wares ‘decorated in white and in red’ were abundant, and we excavated them from homogeneous levels in the four rooms we were able to investigate stratigraphically (A–II). The fragments of hard, polished red ware so abundant in ‘Classic’ Christian Nubia run into hundreds. The excavations also yielded a fair representation of the well-known white ware. It is hard,
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polished and varying in colour from light grey to cream, as Dr Adams was able to ascertain on other sites. Fine ware with a yellow slip is also frequently found. The style of the decorated fragments (FIGS. 7 and 8) can be classified as 'Classic Christian' (from A.D. 850 to A.D. 1100, cf. pp. 252, 282–4). The date on the stela leads one to opt for the later centuries. The impressed centre seals are elaborate, and according to Dr Adams they appear in late Christian times. These pottery seals could be contemporary with the medallions found by P. L. Shinnie and H. N. Chittick in Ghazali Monastery (SASOP, vol. 5: Ghazali, pl. xx), which flourished about A.D. 1080.

Other Finds. These include a pilgrim bottle whose shape and size are very common in Christian Nubia; a large broken basin, the sides of which had been carefully used to consolidate the walls of a room; a leather bag; a small copper cross; and twenty-eight stone balls of an average diameter of 8 cm. All these objects come from A–II. Lamps of the usual Christian types were found in all three areas. In A–III was found the stela, mentioned above, which was incorporated in a thin wall (PLATE XXI, a, b). It is probable that it originally came from the nearby Christian cemetery. Such was the case with the Ghazali stelae (op. cit. p. 69). This type of stela is well known (see G. Lefebvre, Recueil des Inscriptions grecques-chrétiennes d'Egypte, no. 665, A.D. 1007, and no. 666, A.D. 1173). Both texts are almost identical to ours. Two ostraca were also found written in cursive Greek, the reverses of which are in Arabic.

From August 1963 to August 1964

by Friedrich Hinkel¹

GeMai is the southern limit of the flood area of the first stage of the Sadd El Ali Dam (Fig. 1). Our most important task in the 1963–64 season was to complete the salvage of ancient monuments north of Gemai, as this area will be inundated in the coming autumn. Last year we transferred the Tuthmosis III temple from Buhen, the temple of Ramses II from Aksha, and the rock tomb of Djehuty-Hotep from Debeira-East to Khartoum,² and this season’s work consisted only of the removal of a number of smaller monuments.

It was felt that after Wadi Halfa was evacuated next year problems of supply, transportation and labour would become increasingly great and so it was decided to extend our activities into the area south of Gemai, where a survey in 1962 showed that the temples of Semna and Kumma were to be flooded, although they were not in immediate danger.

The rest of our time this season has been spent in Khartoum making some preparations for the re-erection of the various Nubian Monuments in the garden of the new Sudan National Museum.

Throughout this season, as in the previous one, I have been seconded from the Deutsche Akademie der Wissenschaften zu Berlin to the Sudan Antiquities Service to continue the work begun in 1962 when I made the estimates for these removals.

The Antiquities Service, in its turn, has been most generous with its support. Once again this year I have had the capable help of the technical assistants Osman Effendi Hassan and Khalid Effendi Ahmed. All the Antiquities Service lorries were placed at my disposal for the transfer to Wadi Halfa of the Semna temples. The Commissioner for Archaeology, Sayed Thabit Hassan Thabit and his Senior Inspector Sayed Nigm ed Din M. Sherif have most willingly given of their time in helping to arrange for supplies, transportation and labour and generally to facilitate the expedition of the work.

¹ Translated into English by A. J. Mills.
DISMANTLING AND REMOVAL OF ENDANGERED MONUMENTS

Our activities in the area north of Gemai were concentrated on four sites. The first of these was BUHEN. From the Tuthmosis III temple we took four large column bases and a part of the threshold of the main entrance as samples of Pharaonic foundations. These blocks, with a total weight of 15 tons, were shipped to Wadi Halfa on 7 December and thence to Khartoum. A second task at Buhen was the removal of three pillar blocks from the ruined temple of Isis built by Amenophis II. The total weight of these blocks is 5 tons and they were removed from the site on 21–26 December 1963.

On JEBEL SHEIKH SULEIMAN, our second location, there was the inscription of King Jer depicting Egyptians overthieving the Nubians. This was incised on a huge boulder near the top of the hill, some 30 m. above the surrounding plain. In order to remove the inscription we first had to build a ramp of stone and earth on which a wooden slide was laid. After chemical treatment the inscribed part of the boulder was cut away in one piece measuring $2.75 \times 0.80 \times 0.80$ m. and weighing $3\frac{1}{2}$ tons. It was then placed on a sledge and lowered down the slide to a lorry which moved it to Wadi Halfa station (PLATE XXII, a). This work took us from 9–24 December to complete.

The third site in our agenda was a Pharaonic rock inscription high on a cliff near the Nile about half a kilometre north of the rock of ABU SIR. Although this double line of hieroglyphs was removed on a block measuring $1.60 \times 0.40 \times 0.40$ m. and weighing 500 kg., it was first necessary to cut away about 8 tons of sandstone lying above it (PLATE XXII, b). This occupied us for six days and on 5 January the block was taken to Wadi Halfa by lorry.

Next we turned our attention to FARAS WEST. From 7–13 January we were engaged in the extraction of a rock-cut stele of the Viceroy Setau (temp. Ramses II) from the Hathor-rock which stands 500 m. from the river bank. The piece that we finally shipped to Khartoum was $0.90 \times 0.70 \times 0.45$ m. (PLATE XXIII, a).

In mid-June after the Polish Mission had completed its work for this season we returned to Faras to pack for transport those architectural pieces retained by the Sudan in the division of objects found during the course of the excavation of the Coptic cathedral there. This included five monolithic granite columns, and their capitals and bases, and a number of sandstone capitals, lintels and a complete door frame, 30 tons in all.

Due to the fact that the river was receding rapidly at that time great difficulties were encountered in finding a suitable landing place for unloading the stones at Wadi Halfa. A spot was eventually found some kilometres south of the railway station (PLATE XXIII, b) whence they were transported by lorry. At that time we also packed for shipment to Poland two more granite columns with their capitals and bases.

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For the technical details of removal, packing and shipping of heavy temple blocks, cf. Kush xii, pp. 114, 117.
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Concurrently we prepared the objects in the Wadi Halfa Museum for their transfer to the Museum in Khartoum. This involved the construction of 116 boxes and cases and the loading of approximately 40 tons.

Having finished as much as possible of the work in the area of the first flooding by mid-January we extended our operations, for the reasons mentioned above in our introductory remarks, to the temples at Semna.

In Khartoum in the autumn of 1963 we had already assembled all the necessary equipment and materials for the removal of the SEMNA Temple. This was shipped to Wadi Halfa by the end of November. The decision to begin the work there was taken on 12 January and the materials were then moved to the east bank at Semna, just to the north of the Kumma fort. It was found to be impossible to drive the heavy lorries to Semna on the west bank from Wadi Halfa and so our line of transport had to follow the existing road along the east bank and cross the river at the site.

The river transport at Semna was quite inadequate for our purposes and so our first task was to build a pontoon ferry. The heaviest single block in the Semna West temple weighed 4 tons. We felt that a safety margin of 50 per cent was necessary and the pontoon thus had to be designed to carry 6 tons. It also had to be made as economically as possible because it was to be written off at the end of this operation. It was constructed by first laying down five $10 \times 10$ cm. mahogany beams 6 m. long. On these were laid 220-litre oil drums in five rows of ten each. Then another five mahogany beams were placed on top of the barrels and bolted to the bottom beams with 16 mm. diameter steel rods.

Over this construction was built a platform, measuring $6 \times 4$ m., of 5 cm. mahogany planks and finally a pair of 6 m. Decauville rails fixed on this to facilitate the loading and unloading of the temple blocks (FIG. 2). The pontoon ferry was launched on 29 January. It was to be pulled across the 400 m. from east to west by means of a 16 mm. steel cable. To lay the cable we rowed the pontoon across the river, taking with us a heavy manilla rope, one end of which was fixed to the east bank. The other end of the rope was soon fixed to the west bank and pulling the pontoon on this rope we then strung the cable between the two banks at water level. The cable was passed over two rollers on the deck of the pontoon and when loaded it took twelve minutes for five men using special wooden handles to pull themselves across the river.

We began, on 2 February, to transport the 70 tons of our equipment to the west bank. Due to the rocky nature of the terrain close to the temple, our landing place on the west bank had to be some 500 m. further north (FIG. 3). To connect this with the actual temple it was necessary to construct a plank causeway. At the same time we began the chemical treatment of the stones and started to assemble the debris and sand needed to fill the temple and the surroundings to facilitate our dismantling work on the upper layers of the building. Most of the fill we used was taken from the mud-brick walls of the fortress nearby.
PONTOON BUILT FROM 50 EMPTY 220-LITRE DRUMS FOR TRANSPORT OF SEMNA TEMPLE OVER THE NILE

F. HINKEL, Architect
SKETCH SHOWING THE PREPARATIONS FOR REMOVAL OF BOTH SEMNA TEMPLES

FORTRESS OF SEMNA WITH TEMPLE OF OEDWEN AND SESOSTRIS III

ISLAND OF GINDIKOL

FORTRESS OF KUMMA WITH TEMPLE OF KHNUM

STEEL WIRE ROPE ø 16 mm

PONTOON

NEW BUILT ROADS

ORIGINAL ROAD TO WADI MALA

SCALE

0  25  50  100  200 Metres

NILE
Dismantling and Removal of Endangered Monuments

(Plate XXIV, a). On 18 February the first block was removed from the temple. This was one of nineteen large roofing stones, whose average weight was 3.5 tons (Plate XXIV, b). In twenty-eight days the temple was completely dismantled and packed. In all, 146 blocks with a total weight of 130 tons, were handled at a daily average of more than five stones. Because of their poor condition only six of the foundation blocks were taken—three from the west wall of the sanctuary and three others from the eastern row of pillars. Of our labour force of ninety men, seventy were constantly occupied in pulling the packed stones from the temple to the landing place (Plate XXV, a).

We made several improvements over last year in this part of the work. The plank causeway was made narrower so that the steel pipes between the sleepers of the sledges ran on the boards, while the sleepers themselves hung over the edges and acted as guides. This considerably reduced the friction which was yet further cut by lubricating the planks with water.

By 28 March, after fifty-three crossings of the loaded pontoon, the entire temple had been taken across to the east bank (Plate XXV, b). From there the stones were transferred to Wadi Halfa by lorry. Although the distance from the river bank at Kumma to Halfa station is only 82 km, the road is extremely bad and each lorry took at least five hours to make the journey so as to minimize the danger of damage to the stones.

The last block arrived at Wadi Halfa on 10 April. Ten railway waggon were needed to bring the temple to Khartoum, where it is now stored awaiting re-erection.

On the advice of Mr A. J. Mills we visited the fortress on Uronarti, 5 km. north of Semna on 11 February. Here there is a small Pharaonic sandstone chapel in a ruined state. Later in the month we returned with a small labour force to clear the structure of sand and replaced a number of fallen blocks so that we could properly evaluate the condition of the building. The project was abandoned before its completion because of the small number of decorated pieces remaining.

Having seen the rapidity with which the dismantling of the Semna temple was progressing, it was decided to prolong our season and remove the temple of Kumma as well. Therefore additional supplies were ordered from Khartoum. On 29 March we transferred the left-over materials and equipment from Semna to Kumma and immediately began work there. The blocks were consolidated chemically and the temple area filled with sand and debris from the fortress walls.

To enable us to move the blocks to the lorries for transport to Wadi Halfa we had to build a road for 200 m. over drift sand to the foot of the hill to connect the new loading platform with the work site, and build a causeway 130 m. long similar to that at Semna.

With the unused materials from the western temple we were able to dismantle the east wall, forty-two blocks in all. Then on 16 April the work was
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interrupted while we waited for the rest of the necessary supplies to come. We resumed the work on 5 May and for the next forty days an average of twelve stones were packed each day (Plate xxvi, a, b). The last of the 480 pieces arrived in Wadi Halfa on 7 July and the whole of the 185 tons of this temple was in Khartoum by 20 July (Plate xxvii, a).

During the dismantling of the temple we discovered that a large number of the blocks in the foundation and the first layer (Plate xxvii, b) erected by Amenophis II had previously been used in the construction of a temple or temples built on this site by Hatshepsut and Tuthmosis III. The original reliefs on these re-used blocks were not utilized by Amenophis II for the decoration of his building, and many of them are extremely well preserved. The figures are not worn and much of the paint is still bright (Plate xxviii, a, b). Upon removing the foundations we found nine foundation deposits. Six of these were evenly spaced under the earliest floor of the sanctuary. These were all similar and each contained a large number of miniature pottery vessels—saucers, vases and bottles, a few model tools—copper chisels and knives and a wooden hoe—and an assortment of animal bones, seeds and the remains of baskets (Plate xxix, b). A seventh similar deposit was discovered under the south wall. Two other deposits, one containing fifty-six small pottery bottles, the other consisting of twenty pottery vases and some faience disc beads, were found under the courtyard in a niche between the rocks and under the floor of one of the inner rooms respectively (Plate xxix, a).

These discoveries will be extremely helpful in reconstructing the history of the building, a task reserved for the future when an exhaustive study of the re-used blocks is made after they are unpacked in Khartoum.

The New Museum in Khartoum will be surrounded by a large garden. It is there that we propose to re-erect the Nubian temples. The initial sketch plan of the lay-out has been published in Kush XII, page 112, figure 1. In October and November 1963 we worked out more details for the last stage of the plan—the landscaping and positioning of the temples, and the surrounding wall. In March 1964 the western boundary of the Museum was extended by 35 m. and this was incorporated in the plan. In mid-August the work on the surrounding wall began.

In a small public garden beside the present Archaeological Museum there was the north wall of the chapel of pyramid N 11 from Kabushiya which had been brought to Khartoum in the 1930’s. This garden had been taken over by the University of Khartoum for building extensions and so in the autumn of 1963 we dismantled and stored the blocks of this wall.

The total cost of this season’s work was £S24,055 which was spent in the following manner:
a. JEBEL SHEIKH SULEIMAN: PULLING DOWN THE PACKED SANDSTONE BLOCK FOR LOADING ON THE LORRY

b. ABU SIR: WORK IN PROGRESS—REMOVAL OF THE UPPER PART OF THE ROCK ABOVE THE HIEROGLYPHIC INSCRIPTION
a. FARAS WEST/HATHOR ROCK: THE STELE OF THE VICEROY SETAU READY FOR TRANSPORT

b. FARAS WEST/COPTIC CATHEDRAL: ONE OF THE FIVE GREAT GRANITE COLUMNS PACKED AND WAITING FOR SHIPMENT
a. SEMNA WEST: FILLING THE TEMPLE AND ITS SURROUNDINGS WITH DEBRIS AND SAND TO FACILITATE DISMANTLING

b. SEMNA WEST: THE FIRST OF THE LARGE ROOFING STONES IS PACKED AND BEGINS ITS JOURNEY ON THE PLANK CAUSEWAY
a. SEMNA WEST: PACKED SANDSTONE BLOCKS, THE SIDES NOT YET COVERED, WAITING ON THE PLANK CAUSEWAY LEADING TO THE PONTOON

b. SEMNA WEST: OFF-LOADING ONE OF THE 4-TON ROOF BLOCKS FROM THE PONTOON
KUMMA TEMPLE: PACKING AND LOWERING ONE OF THE SANDSTONE PILLARS
a. KUMMA TEMPLE: THREE OF THE LORRIES LOADED WITH STONES AND BOXES ON THE ROAD OVER THE DRIFT SAND

a. KUMMA TEMPLE: RE-USED BLOCK REMOVED FROM THE WALL SHOWING IMPRINT OF RELIEF IN THE MORTAR

b. KUMMA TEMPLE: THE SAME BLOCK AFTER CLEANING
a. KUMMA TEMPLE: FOUNDATION DEPOSIT OF 56 SMALL POTTERY BOTTLES IN A NICHE BETWEEN THE ROCKS UNDER THE COURTYARD

b. KUMMA TEMPLE: FOUNDATION DEPOSIT OF 30 SAUCERS, TWO VASES, ONE BOTTLE AND OTHER OBJECTS AFTER CLEANING AND REPAIR
DISMANTLING AND REMOVAL OF ENDANGERED MONUMENTS

BUHEN, Tuthmosis III temple £S. 415
BUHEN, Amenophis II temple £S. 190
JEBEL SHEIKH SULEIMAN, rock-inscription £S. 195
ABU SR, rock-inscription £S. 70
FARAS WEST, Hathor-rock £S. 65
FARAS WEST, Coptic cathedral £S. 580
WADI HALFA, museum £S. 1,710
SEMNA WEST, temple £S. 10,470
KUMMA, temple (Semna East) £S. 10,100
KHARTOUM, preparation of ground at the Sudan National Museum £S. 110
KHARTOUM, north wall of the chapel of pyramid N 11 of Kabushiya £S. 100
Miscellaneous £S. 50

Total £S. 24,055

The average cost for dismantling, packing and transportation, per ton from Kumma was £S. 55. At Semna West where conditions were more difficult, the average cost was £S. 80 per ton. (The Sudan Railways charge of £S. 21 per ton is included in these figures.)

I am glad to be able to report once again that we made a considerable saving (amounting to 20 per cent at Semna West and 35 per cent at Kumma) over the original estimates as a result of the improvements we were able to make in our methods of work, and the reduced quantities of materials, especially timber, which were required, in spite of the fact that labour costs rose by 15 per cent this season.

During the season we removed about 570 tons in thirty-three railway trucks. There are now 1,200 stones and blocks, with a total weight of more than 1,200 tons, stored in Khartoum as a result of the two seasons’ work.

The only mishaps that occurred throughout this long season were the disintegration of one of the roofing blocks at Semna and the splitting of one of the granite columns from the Coptic cathedral at Faras. Both these stones already showed cracks before handling and this damage was not due to negligence on the part of our labourers who were always most careful. The lorry drivers covered a total of 90,000 km during the removal of the Semna temples without breakage. Nor were there any casualties among our workmen.

All the four major ancient Nubian temples and many other smaller objects which were threatened with destruction, have now been safely removed to Khartoum where the preparation for their re-erection will begin in the winter 1964/1965.
The Location of \textit{Hnt-hn-nfr}

by Hans Goedicke

The term \textit{Hnt-hn-nfr} occurs first in the reign of Ahmose and continues to be used into Roman times. There is general agreement about the nature of the expression but considerable uncertainty about its specific geographical implication. According to the more recent views it denotes ‘das nördliche Nubien’ (\textit{Wb.}, III, 306, 12), ‘Upper Nubia’ (Gardiner, \textit{The Tomb of Huy}, p. 11), or ‘la Nubie’ (Loret, \textit{L’inscription d’Ahmes}, p. 18). Steindorff\textsuperscript{1} presumed that the term is ‘nicht eng auf einen kleinen Teil des nubischen Landes beschränkt’, but he is nevertheless inclined to apply it ‘wenn nicht auf das ganze, so doch sicher auf das obere nubische Niltal’, in which he is followed by Säve-Söderbergh (\textit{Ägypten und Nubien}, p. 144). Gauthier (\textit{Dictionnaire géographique}, IV, p. 183), justly emphasized the arbitrariness of any identification and summarized that ‘le nom a désigné à l’origine une région proche de l’Égypte et située sur le rive droite du Nil, habité par un rameau des Aubtiou Sti, mais que peu à peu il perdit toute signification précise et s’applique sans distinction à toutes les régions de la vallée du Nil comprises entre l’Égypte et le pays de Kouch’.

Among the occurrences of the term, two might seem particularly indicative about the location of \textit{Hnt-hn-nfr}. First, the inscription of Thutmosis II from his first year (\textit{Urk.}, IV, 138–15–139, 1) concerning the fortresses which Thutmosis I had built pr hsw hswt bštw `Twntyw Sti nyw Hnt-hn-nfr ‘ in order to check the revolting countries and the Nubian bedouins of \textit{Hnt-hn-nfr}’. Since Thutmosis I undoubtedly reached and in all probability passed the Third Cataract,\textsuperscript{2} it would seem logical to deduce that \textit{Hnt-hn-nfr} denoted this very region, as Steindorff proposed. However, when Thutmosis I conquered and fortified the region as far as the Third Cataract, \textit{Hnt-hn-nfr} would have denoted at least the latter or the region south of it.

Such a location is difficult to reconcile with the report of Ahmose, son of Ebana, about his participation in the campaign of Thutmosis I (\textit{Urk.}, IV, 8, 4–7): ‘I sailed the king 5-j-hpr-k3-r5, the justified, while he travelled south to \textit{Hnt-hn-nfr} in order to punish the unrest among the foreign countries and to repel the intruder from the desert’. From this statement it does not seem that Thutmosis I set out for a thrust into unconquered territory, but rather that he conducted a punitive expedition to establish and secure order in already subdued

\textsuperscript{1} \textit{Studies presented to F. Ll. Griffith}, p. 361.
\textsuperscript{2} See below pp. 105–7.
THE LOCATION OF ḤNT-ḤN-NFR

territories. The character of Thutmosis I's action becomes obvious by a comparison with the description of the military deeds of his predecessor Amenhotep I in the same biography (Urk., iv, 6, 17–7, 2): 'I sailed the king ḫfr-k3-r2, the justified, while he travelled south to Kush in order to extend the frontiers of Egypt'. There can be no doubt that the intention of Amenhotep I was a territorial expansion which is not indicated for Thutmosis I, not even in his inscription in Tombos (Urk., iv, 82 ff.). 3 The difference in the geographical terms is likewise indicative. If one would assume that Thutmosis I advanced beyond the point reached by Amenhotep I this would presuppose that Thutmosis I passed through Kush in his assault of Ḥnt-ḥn-nfr, which is as impossible to reconcile with the historical facts as is a location of Ḥnt-ḥn-nfr south of Kush. To smooth over these improbabilities by postulating an ambiguous application of the terms appears an untenable point of view and is in opposition to the obviously careful choice of terminology of the inscriptions.

Following the words faithfully unrolls the following course of events. Amenhotep I set out to extend by conquest the previous Egyptian holdings in Nubia. This implies that the predecessors of Amenhotep I had already re-established Egypt's position in Nubia which had collapsed in the xiiith Dynasty. The names of Kamose and Ahmose are attested south of Tomás, 4 but this fact alone does not reveal the nature of their activity in the region.

Some insight can be gained from the biography of Ahmose, son of Ebana, about his service under king Ahmose. According to it, Ahmose went to Ḥnt-ḥn-nfr 'in order to destroy (sksk) the Nubian bedouins ('Twntyw Sti)'. This is confirmed by Ahmose's own stela at Karnak (Urk., iv, 18, 5): 'his terror (śt) is among the (people of) Ḥnt-ḥn-nfr'. According to the biography of the king's follower, the presence of the king was necessary on account of a certain 3ntyw 'who had come to the South country' and who 'was found by the king at Ṣnt-nc'. Similarly in the second event, it is a 'rebel' (ḥr) with his 'conspirators' (ḥṣkw-ib) who is exterminated by Ahmose. For one to be a 'rebel' it is necessary that there exist some kind of jurisdiction against which rebellion is made. This in turn implies that Ahmose had a legal claim to the region in which he was campaigning and that his action was for the maintenance and strengthening of an already existing political domination. Such a dominion need not necessarily take the form of a political integration, but could also have

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3 The passage (Urk., iv, p. 83, 3) 'he has assumed the seat of Horus in order to extend the boundaries of Thebes' is a eulogy and as such lacks political significance.

4 Weigall, Antiquities of Lower Nubia, pl. lxv, 4; Simpson, Expedition 4 (1962), pp. 42 ff. According to the newly found stela of king Kamose, the latter had attacked his neighbour in the South before he turned against Avaris; cf. Gardiner, Egypt of the Pharaohs, pp. 167 f.; Säve-Söderbergh, Kush iv (1956), pp. 54 ff. How far this first action penetrated into Nubia is not indicated; it is, however, tempting to consider the inscription in Tomás as marking the boundary.
been the recognition of the Egyptian king as political overlord while maintaining territorial autonomy. Ḥnt-hn-nfr thus refers to a political dominion of Egypt in the South, which is not administratively integrated. That territory, which is legally part of Egypt, is clearly distinguished and is to be identified in Ahmose's report with rsw 'South (land)' (Urk., iv, 5, 16), into which ȝntyw apparently had penetrated. That rsw in this context is to be taken as belonging to Egypt is reflected in the following invocation of the 'gods of Upper Egypt' (nfrw šmśw) as the divine protectors of the region in question.

With this in mind, it seems possible to venture a suggestion for דיי which I am inclined to read tnt-֞. Since we know that only under Thutmose I, and after a conquest by Amenhotep I, the Third Cataract became the frontier, the limits of the political dominion of Ahmose must have lain further north. In the Middle Kingdom the border was at Semna, guarded by two fortresses there. After the collapse in the beginning of the xiii Dynasty, two steps must be distinguished in the recovery of power in this region: the establishing of political supremacy, and the administrative integration. It seems that already under Kamose the Egyptian dominion was acknowledged anew, but this does not imply that all of Lower Nubia (including the Second Cataract) had already been placed under Egyptian administration as an integral part of Egypt. It rather appears that the southernmost part of the region only acknowledged the Egyptian king as lord; where the border between dominion and possession is to be assumed remains obscure, but it seems quite certain that the Second Cataract was not yet again incorporated. ⁵ Such an evaluation of the situation is corroborated by the building of a temple at Uronarti in the reign of Amenhotep I, ⁶ as the founding of an Egyptian temple is the manifestation of the integration of a region into the spiritual and administrative domain of Egypt.

When we now return to the problem of locating the scene of action of king Ahmose, Loret ⁷ read דיי ta nt a a 'celle du pays du district de l'eau(?) '; Sethe ⁸ followed this view by rendering it 'die des Landes ḍ', which he explains as a well in the desert. Breasted ⁹ proposed to connect it with the First Cataract and read it 'she of the land of the water-supply'. Säve-Söderbergh ¹⁰ finally resorts to the reading Ṭntṣ ḍ and leaves the question of localization entirely open. The construction ṭṣ-nt-, which was evidently in the mind of Loret, Sethe and Breasted, is restricted to the forming of feminine

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⁶ PM, vii, p. 143.
⁷ L'inscription d'Ahime fils d'Abana , Bibl. d'Étude, III, p. 22.
⁸ Urk., iv, deutsch S. 3.
⁹ AR, ii, § 15e.
¹⁰ Ägypten und Nubien, p. 143.
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proper names\textsuperscript{11} with which the geographical term has nothing in common. In the compound, the word \textsuperscript{12} 'water-course' can be singled out, thus leaving us with the group \textsuperscript{13} This could be divided into an obscure undetermined word \textsuperscript{14} and \textsuperscript{15} 'land' as has been done previously. This leads to connecting \textsuperscript{16} as genitive, which step, however, produces a rather incongruent pair. The alternative is to consider \textsuperscript{17} one word with \textsuperscript{18} as its determinative. The reading would be \textsuperscript{19} which I propose to identify with \textsuperscript{20} 'boundary, limit' (Wb., v, 372, 3 ff.).\textsuperscript{21} The entire expression thus reads \textsuperscript{22} 'limit of the water-course' which should be a suitable name for the Second Cataract. Applying this identification to the description of the activity of king Ahmose means that he found the rebellious \textsuperscript{23} in the Second Cataract and that his journey to \textsuperscript{24} could not have led him any further south.

Ahmose's successor Amenhotep I obviously pushed further south. The already mentioned building of a temple on the island of Uronarti indicates that at this time the Second Cataract was administratively integrated and presumably the frontier was re-established at Semna.\textsuperscript{25} Though the administrative frontier of Egypt was at Semna, this does not exclude that the people south of this point recognized the dominion of the Egyptian king. Thus the campaign of Thutmose I need not necessarily be considered a new conquest, but may be an action in a region which was already connected with Egypt.

Two forms of activity can be distinguished for Thutmose I. First, the 'overthrowing of the vile Kush' (or 'the enemies') which is mentioned in two inscriptions from the First Cataract commemorating the king's victorious return in the year 3.\textsuperscript{26} The 'overthrowing of Kush', 'the conquest (\textit{nhm}) of the land X' and 'the smiting of the \textit{Nhsyw}' are mentioned in three small inscriptions

\textsuperscript{12} \textit{Wb.}, I, p. 159, 7.
\textsuperscript{14} Two inscriptions of the contemporary vice-roy \textit{Twri} from the year 7 (\textit{AJSL}, vol. 25 (1908), p. 108; cf. Habachi, \textit{Kush VII}, pp. 57 ff.) and year 8 (\textit{Urk.}, iv, p. 78, 8 ff.) at the two banks of Semna have to be mentioned in this connexion. The building of a temple on the Island of Saï by Amenhotep I is not corroborated and uncertain.
\textsuperscript{15} \textit{Urk.}, iv, pp. 88–9.
\textsuperscript{16} Sethe's suggestion \textit{tj tp tj} as reading of the place-name is not convincing. The element following \textit{tj} should in one form or another specify it, while the last sign (\textit{\textdagger}) is presumably a determinative.
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near Tombos\textsuperscript{17} and in the biography of Ahmose-P\textsuperscript{3}-n-N\textsuperscript{h}bt.\textsuperscript{18} Second, the description in the biography of Ahmose, son of Ebana,\textsuperscript{19} about Thutmosis I's journey to \textit{Hnt-hn-nfr} 'in order to punish the quarrel among the foreign countries and to repel the intruder from the desert' which apparently refers to a different event. An indication about its setting can be derived from the following \textit{m p\textsuperscript{3} mw b\textit{n} m p\textsuperscript{3} s\textit{ss} p\textsuperscript{3} 'h\textit{sw} hr t\textsuperscript{3} p\textit{n} t\textit{y} at the bad waters during the attack of the fleet at the capsize-place'. There can be no doubt that this refers to a Cataract, which can only be the Third, since the Second was administratively integrated by Amenhotep I and is not navigable at all. According to this description the aim of Thutmosis I was not conquest but pacifying and protecting an affiliated region.\textsuperscript{20} The same goal is mentioned in the large stela of Thutmosis I at Tombos from year 2 as 'he consolidated the borders on both sides; it could not happen that some of evil intentions could come to rob him, not even one'.\textsuperscript{21} While the intention of the expedition was originally limited, it seems that it was expanded to a full-blown military attack after the recognition of an aggression from outside the Egyptian dominion. In Ahmose's biography this event follows the fighting in the region of the Third Cataract and ends with a victory of the Egyptian king.\textsuperscript{22} In the royal stela this development is reflected in \textit{shr.n.f wr Styw N\textit{hsy} he felled the chief of the Styw N\textit{hsy}' which occurs before the above discussed passage about the consolidation of the region. Combining the two versions of Thutmosis I's activity in the South, one seems entitled to assume

\textsuperscript{17} Urk., iv, p. 87. The fourth inscription (\textit{Urk.}, iv, p. 88, 1–4) is presumably later than year 4 according to the form of the royal name. There is no need to consider it as a reflection of a second later campaign, as Sethe, \textit{Urk.}, iv, deutsch 45, Anm. 1, suggested, and which view Säve-Söderbergh, op. cit., p. 149, justly rejected. The inscription does not mention any military activity, but rather describes the king as 'lord of Nubia' (\textit{nb T\textsuperscript{3}-Sti}) and thus indicates the administrative incorporation of Nubia. The use of the term \textit{t\textsuperscript{3}-Sti} is indicative; since the early Old Kingdom it denotes that part of Nubia which is part of Egypt. \textit{T\textsuperscript{3}-Sti} denotes thus the First Upper Egyptian nome, a relatively late conquest; cf. Goedicke, \textit{ZAS}, vol. 81 (1956), p. 24. It also refers to any territory further south, when it is considered part of Egypt, specifically of Upper Egypt. From the mention it can be derived that \textit{t\textsuperscript{3}-Sti} under Thutmosis I extended at least as far as Tombos. The inscription possibly marks the final boundary between Egypt and \textit{Hnt-hn-nfr}.

\textsuperscript{18} Urk., iv, p. 36, 5–8.

\textsuperscript{19} Urk., iv, p. 8, 5–9.

\textsuperscript{20} \textit{H\textit{st}} 'strife, rebellion' (\textit{Wb.}, iii, p. 30, 1 ff.) presupposes a preceding domination, otherwise it would be an 'agression'. It does not seem that the action is primarily directed against Egypt, but rather is local quarrelling among the different territories or principalities, which Egypt suppressed.

\textsuperscript{21} For \textit{nbdw-kd} I follow \textit{Wb.}, ii, p. 247, 5 and Gardiner, \textit{Ancient Egyptian Onomastica}, i, p. 134.\textsuperscript{*}

\textsuperscript{22} Urk., iv, pp. 8, 11–9, 2. Unfortunately the line opening the description is missing, which fact limits our appreciation of the details of the event.
that the king originally set out to Hnt-hn-nfr to stabilize the conditions there and that he conducted from there a thrust into Kush. The difference between the geographical terms lies in the relation to Egypt of the region concerned. Kush lies outside the Egyptian dominion while Hnt-hn-nfr refers to the region which recognizes the Egyptian dominion without being administratively part of Egypt. Even at the beginning of his campaign Hnt-hn-nfr refers to a different region than this term indicated in the reign of Ahmose. At the end of the reign of Thutmosis I Hnt-hn-nfr included the Third Cataract, the limit of the jurisdiction being the point where the stela was erected.\textsuperscript{23}

Thutmosis I's expansion beyond the Third Cataract does not \textit{a priori} imply that the newly conquered region was immediately administratively integrated. From the stela of his successor\textsuperscript{24} we learn that Thutmosis I erected fortresses 'in order to check the rebellious foreign countries and the 'Iwntyw Sti of Hnt-hn-nfr'. Again, the use of the qualification 'rebellious' (bšt) indicates that these foreign countries, or probably better 'territories' (ḥšswt) were already under Egyptian supervision. However, no building activity of Thutmosis I is attested south of Semna and it is in all probability correct to assume that Semna was the limit of the Egyptian territory while south of this point and including the Third Cataract was a region which was Egyptian dominion and which was denoted in the contemporary inscriptions as Hnt-hn-nfr.

That Hnt-hn-nfr is a region related to Egypt seems also evident in an occurrence of the term in the time of Hatshepsut (\textit{Urk.}, iv, 331, 7–8) where the 'Iwntyw Sti nyw Hnt-hn-nfr are listed parallel to hšswt nbt rs(t) nyw Kmt 'every southern (foreign) territory of Egypt'. In the same sense of referring to Egypt's southern dominion, Hnt-hn-nfr occurs in the heading of the list of subjugated territories and people of Thutmosis III at Karnak (\textit{Urk.}, iv, 795, 7): hšswt rsrw 'Iwntyw Sti nyw Hnt-hn-nfr 'southern (foreign) territories and 'Iwntyw Sti of Hnt-hn-nfr'. That a legal supremacy existed over these regions is underlined by the statement (\textit{Urk.}, iv, 795, 13–14): 'truly all the foreign territories are property (ny-ḥt) of his majesty as his father Amun has decreed'. The long list apparently reflects the conquest of Thutmosis III as far as Jebel Barkal, which became border-point in his reign (\textit{Urk.}, iv, 1230, 17) and where a granite stela was erected in the year 47. Although it might seem tempting to so assume, it is not at all certain whether or not Thutmosis III had already secured this achievement with the building of a fortress. The mention of an otherwise unknown fortress Smz-hṣtyw with a shrine of Amun of Karnak in the Jebel-Barkal stela (\textit{Urk.}, iv, 1228, 12 f.) is not decisive and might very well refer

\textsuperscript{23} Cf. \textit{Urk.}, iv, p. 85, 13 'his southern border goes as far down as this region'. Vercouter, \textit{Kush} iv, p. 68, conjectured that Thutmosis I reached the Fourth Cataract, but the evidence for it does not seem conclusive.

\textsuperscript{24} \textit{Urk.}, iv, pp. 138, 16–139, 1.
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to a place further north where a shrine already existed.\textsuperscript{25} No building activity of Thutmosis III has so far been proven south of Jebel Dosha, while the oldest temple in Jebel Barkal is by Thutmosis IV. Hnt-hn-nfr in the list of Thutmosis III thus denotes the foreland of the Egyptian possessions in the south where an Egyptian dominion had been established.

Under the successors of Thutmosis III the advance to Jebel Barkal was consolidated and the entire region gradually integrated into the Egyptian administration.\textsuperscript{26} Such a procedure would eliminate the foreland, which we have recognized as Hnt-hn-nfr in the inscriptions since Ahmose. Chronologically the next occurrence of the term dates to the reign of Tutankhamun and is contained in a passage about the appointment of the vice-roy and over-seer of the southern territories Hewy:\textsuperscript{27} sip n.f Hnt-hn-nfr tj-Śmε jr f hr st-hr.f. Gardiner translates this ‘Khenthannufer (Upper Nubia) having been entrusted to him, and Upper Egypt being bound together under his supervision’ while Helck\textsuperscript{28} renders ‘Zugerechnet ist ihm Nubien (Hnt-hn-nfr); Oberägypten ist seiner Aufsicht unterstellt’.

According to the specification of the appointment\textsuperscript{29} the extent of jurisdiction for the ‘king’s son of Kush’ was from Hieraconpolis to Jebel Barkal, thus

\textsuperscript{25} Säve-Söderbergh, op. cit. p. 154, sees in Smj-shtw the nucleus of the later town of Napata. While such an explanation of the term seems possible to me, I find it difficult to assume that Thutmosis III had already built a shrine for Amun, when the text of the stela was composed. The problem depends largely on the explanation of the form which Reisner (ZAS, vol. 69 (1933), p. 26) read ir-t n-f ‘making for him . . .’ while Säve-Söderbergh translated ‘indem er ihm eine Ruhestatte machte’, in which he is followed by Helck (Urkunden der 18. Dynastie Übersetzung, S. 6). However, in view of the writing it seems preferable to see here a sdmt.f-form with following dative and to render it as a royal promise ‘I will make for him a chapel’, an intention which Thutmosis III apparently did not carry out.

\textsuperscript{26} The title of the administrator of the Nubian territory is most indicative in this connexion. It is only in the reign of Amenhotep III that the title s3-nswt n Kḥ appears which can be taken as an indication for the administrative separation of the South as an independent administrative district. Previously, the governors bear the title imy-r tsw ṣry ‘overseer of the Southern lands’ with the indication of rank as s3-nswt. As ‘Southern lands’ the South forms part of the Egyptian administration and is not as detached as after the forming of the administration of Kush. For the vice-roys of Kush, cf. Reisner, JEA, vol. 6 (1920), pp. 28 ff.; Gauthier, RT, vol. 39 (1921), pp. 179 ff.; Säve-Söderbergh, op. cit., pp. 175 ff.; Habachi, KUSH VII, pp. 45 ff.

\textsuperscript{27} Davies and Gardiner, The Tomb of Huy, pl. vi; p. 11; Urk., IV, p. 2065, 4–5.

\textsuperscript{28} Op cit. p. 383.

\textsuperscript{29} Urk., IV, p. 2064, 7–8: ‘Sealed was this in the palace, l.p.h., which entrusts to you (the region) from Hieraconpolis to Jebel Barkal’, referring to the document handed over to Huy. It is not necessary to assume a misspelling *hr.f mi nj m ‘he speaks like this, namely Pharaoh’ as Gardiner does, nor does Helck’s ‘Ein Siegel ist das von Pharaoh (L.H.G.)’ correspond to the wording of the text.
including a region which is traditionally considered part of Upper Egypt. This view apparently influenced Gardiner in his translation in which he emphasized the mention of Upper Egypt. However, we have no more reason to assume that the Egyptians saw in the particular case a curtailing of the extent of Upper Egypt, than we have to presume that the region south of El-Kab-Hieraconpolis was considered all of Upper Egypt. Under these circumstances it seems improper to assume that Hwyy was given charge of Upper Egypt, as this term is reserved for the southern administrative region of Egypt itself. The mention of tj-Šm' in the passage under discussion thus can only specify the preceding Hnt-hn-nfr. Such an indication is needed, since the term itself is not bound to a specific region but is, as we have seen, a relative term denoting the 'dominion' beyond the actual possessions of Egypt. Consequently it seems necessary to read the passage about Hwyy's appointment 'entrusted to him is Hnt-hn-nfr of Upper Egypt altogether under his supervision in order that he administers it for the Lord of the Two Lands as well as all servants of his majesty'. Hnt-hn-nfr denotes here clearly the entire extent of jurisdiction of the newly appointed King's son of Kush which covers all of Nubia as far as Jebel Barkal. At the time of Hwyy's appointment the entire Nubian district was administratively integrated and there was no longer a distinction between 'dominion' and administered province. However, the separation of the southern region from Egypt proper and the establishing of a separate administration for it brought a situation comparable to that of the early New Kingdom. Again, a region existed which lay outside the administrative domain of Egypt proper, although it was closely associated with it. Thus from the point of view of Egypt proper the realm under the supervision of the vice-roy of Kush was again a separate 'dominion' with which there was no joint administration.

It is in this sense that Hnt-hn-nfr continues to be used, namely in reference to the entire South as far as it was under the control of Egypt by the king's son of Kush. Even after this institution collapsed Hnt-hn-nfr continued to be

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30 The mention of El Kab in Urk., iv, p. 125, 11 suggests that it was the southern limit of Upper Egypt.

31 There is a clear distinction between the administration of the territories and the jurisdiction over the subjects of the king. There is also a legal difference between the land and the people. While the former are described as belonging to the nb-tswy 'lord of the two lands', the people are related with the majesty (hm), i.e., the living king. This seems to imply that the subjects were bound in loyalty only to an individual ruler, while the land belonged to the institution of kingship, so that Egypt's supervision was irrevocable.

32 Tresson, 'La Stèle de Kouban', Bibl. d'Etude, vol. 9, p. 4, 1.5; Piehl, Inscr. hierogl., i, pl. 113; 145 A; Caminos, The Chronicle of Prince Osorkon, §. 196, 11. 8–9.
used for the region south of the First Cataract as far as some kind of control was maintained.\textsuperscript{33}

We thus were able to demonstrate a consistent use of the term \textit{Hnt-hn-nfr}. It denotes throughout that region which adjoins the realm of Egyptian administration and over which a control of some kind was exercised. Due to this nature of the term it can at different times be applied to different regions, as the Egyptian conquest in the south advanced during the earlier part of the xviii\textsuperscript{th} Dynasty, until with the reign of Thutmose III the consolidation and administrative separation of the South took place. From then on the use of \textit{Hnt-hn-nfr} remained a reference to the South in general as far as control was exercised over it.

It remains to establish the actual meaning of the term. Except for W. M. Müller\textsuperscript{34} no attempt has been made to establish the literal meaning of the expression. There can be no doubt that \textit{Hnt-hn-nfr} is not an aboriginal place-name but that it is a philologically construed designation. As such we can \textit{a priori} postulate that the term is a compound of different elements, three of which can be distinguished: \textit{hnt - hn - nfr}. According to grammar, the first has to refer directly to the region concerned and to relate it to another indication \textit{*hn-nfr}. Again, since this \textit{hn-nfr} is not attested in reference to a particular place,\textsuperscript{35} the two words can be approached purely for their lexigraphical meaning. No difficulties arise with \textit{nfr}, which is an adjective. The reading \textit{hn} of the other word is ascertained by the spelling \textit{\sigma\nu\tau\iota\tau\iota} in \textit{Urk.}, iv, 18, 5 and Griffith, \textit{Siut and Der Rifeh}, pl. 17, 1.44. The word, which has to be a noun with the implication of a locality, can only be identified with the word \textit{hn} (\textit{Wb.}, iii, 100, 12) known from the Old Kingdom in a magical procedure, where it denotes a ‘fortified tower’ into which a disease is being banished.\textsuperscript{36} The word is also known as verb ‘to block’ a path (Peasant 7). There is also the word \textit{hnt} ‘limit, boundary’ (\textit{Wb.}, iii, 105 f.) which is probably related. The connected \textit{nfr} is not so much a quality of beauty but of finality, as we find \textit{nfr} in the frequent expression \textit{w3t nfrt} ‘last way’.\textsuperscript{37} Accordingly, \textit{hn nfr} is to be understood as ‘last blockade’, ‘last fortification’, i.e. the last stronghold of administration. What is beyond it is the ‘outside’ the ‘frontier-region’ (\textit{hnt}). \textit{Hnt} as ‘frontier-region’


\textsuperscript{34} \textit{Asien und Europa}, 22, Anm. 2 ‘Anfang des guten Geschäftes’, which is maintained in \textit{Egyptological Researches}, ii, pp. 86 f., cf. also Farina, \textit{Aegyptus}, vol. 6, pp. 41 f.

\textsuperscript{35} This could not be the case; otherwise the expression could not be used for different regions.

\textsuperscript{36} \textit{Urk.}, i, p. 152, 15–17; Junker, \textit{Giza}, ix, p. 52; for the type of architecture, cf. Badawi, \textit{Le dessin architectural}.

occurs in several combinations, as ħnt-nfr,\textsuperscript{38} ħnt-‘Iḥbt, ħnt-n-ḏw-dšr, ħnt-n-Tṣr. In all these combinations it denotes the region adjoining an established district.

Summing up, Ḥnt-hn-nfr is ‘the frontier-region of the last fortification’ which literal meaning of the term corresponds exactly with its use to denote the region which was outside the Egyptian administration, but over which a dominion was already established. According to the movements of the Egyptian holdings in the South to which its use is restricted, Ḥnt-hn-nfr cannot be specifically located in general, but its meaning varies according to the date of the context of its mentioning.

\textsuperscript{38} Discussed by Hamza in *Melanges Maspero*, i, pp. 647–55 and Gardiner, *Ancient Egyptian Onomastica*, ii, pp. 120 ff.* It seems to me, that in the two discussions two different terms are compared. The entry in the Onomastican, which occurs also in Pap. Wilbour 40, 31 (cf. Gardiner, *The Papyrus Wilbour*, ii, pp. 140 f.) is apparently to be read ħnt-nfr pr-‘Imn m Mn-nfr ‘final boundary of the realm of Amun in Memphis’ and as such indicated the limits of Upper Egypt. The ħnt-nfr ḫry-ḥb mentioned by Hamza does not seem to be in any form related with Memphis but rather seems to denote the ‘central (part) of the last boundary’ and thus very well can refer to the isthmus of Qantir. Cf. in this connexion also the name ħnt-tṣ ‘end of the country’ used for Elephantine (Gauthier, *Dict. geogr.*, iv, p. 184).