KUSH

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## ABBREVIATIONS USED IN THIS JOURNAL

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<tr>
<td>ADAW</td>
<td>Abhandlungen der Deutschen Akademie der Wissenschaften.</td>
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<tr>
<td>AJO</td>
<td>Archiv für Orientforschung.</td>
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<tr>
<td>AJA</td>
<td>American Journal of Archaeology</td>
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<tr>
<td>ASAE</td>
<td>Annales du Service des Antiquités d’Égypte.</td>
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<tr>
<td>ASN</td>
<td>Archaeological Survey of Nubia.</td>
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<tr>
<td>BIFAO</td>
<td>Bulletin de l’Institut Français d’Archéologie Orientale.</td>
</tr>
<tr>
<td>BMFAB</td>
<td>Bulletin of the Museum of Fine Arts, Boston</td>
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<tr>
<td>HAS</td>
<td>Harvard African Studies</td>
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<tr>
<td>ILN</td>
<td>Illustrated London News</td>
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<td>JEA</td>
<td>Journal of Egyptian Archaeology.</td>
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<tr>
<td>LAAA</td>
<td>Liverpool Annals of Archaeology and Anthropology.</td>
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<tr>
<td>LD</td>
<td>Lepsius: Denkmäler aus Ägypten und Äthiopien.</td>
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<tr>
<td>MDIAK</td>
<td>Mitteilungen des Deutschen Instituts für Ägyptische Altertumskunde.</td>
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<tr>
<td>MIFAO</td>
<td>Mémoires publiés par les Membres de l’Institut Français d’Archéologie Orientale.</td>
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<tr>
<td>OIP</td>
<td>Oriental Institute Publications.</td>
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<td>PM</td>
<td>Porter and Moss: Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings.</td>
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<td>PN</td>
<td>Ranke: Die Ägyptischen Personennamen</td>
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<td>PSBA</td>
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<td>RCK</td>
<td>The Royal Cemeteries of Kush</td>
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<td>Rd'Eg</td>
<td>Revue d’Égyptologie.</td>
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<td>RT</td>
<td>Recueil de Travaux.</td>
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<td>SASOP</td>
<td>Sudan Antiquities Service Occasional Papers.</td>
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<td>SNR</td>
<td>Sudan Notes and Records.</td>
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<tr>
<td>Urk</td>
<td>Urkunden des Ägyptischen Altertums.</td>
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<tr>
<td>Wb</td>
<td>Wörterbuch des Ägyptischen Sprache.</td>
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<tr>
<td>WZHU</td>
<td>Wissenschaftliche Zeitschrift des Humboldt Universität zu Berlin.</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

Once again it is my pleasure to report that the Nubian Campaign for the last season, 1962–63, was extremely successful. In this volume you will find preliminary reports from the different missions working in the field in the 1961–62 season and I will endeavour to give below a brief summary of what has been achieved subsequently.

The work continued to be concentrated in the area which is in imminent danger of flooding, i.e. between Faras in the north and Gemai in the south. The two teams, the Scandinavian Joint Expedition and the Sudan Antiquities Service, which have been dealing with archaeological survey, finished their work on the east and west banks respectively last season. Other expeditions which were engaged on special types of survey continued to work in the region. The New Mexico Museum joined forces with the Columbia University expedition in doing the prehistoric survey. They have been working simultaneously on both banks of the Nile. The survey was carried out very systematically and as a result a good number of new rich palaeolithic sites were found. In agreement with the Scandinavian Joint Expedition, this mission also dealt with the prehistoric material which lies within their concession. It is hoped that the area under investigation will be completely covered by the end of the coming season.

The German Academy of Sciences continued their epigraphic survey north of Gemai and they particularly concentrated on recording the vast number of rock inscriptions which had been discovered at the rock of Abu Sir by the Antiquities Service survey party.

Brown University (U.S.A.) was given a licence to carry out a definitive epigraphic survey of the temples of Semna and Kumna. The work was undertaken by Professor R. Caminos, who concentrated on the New Kingdom temple of Dedwen and Sesostiris III at Semna West. The inscriptions and scenes on the walls have been copied and checked against the originals. They were also fully collated and facsimile copies at natural size have been made. The work on this temple is entirely finished and Dr Caminos will turn his attention to the temple on the east bank next season.
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It is also a pleasure to mention that in connexion with the excavation work the number of parties working in the area has increased from seven to ten, as two new American institutions, namely the Universities of Colorado and California, in addition to the Sudan Antiquities Service party have taken the field.

The Polish Expedition excavating at Faras continued to make important discoveries and the number of frescoes enormously increased. There are now more or less a hundred of them, among which are the Madonna sitting on a throne, the Madonna and Child, a cross with the symbols of the four Evangelists, the Archangel Michael, the Archangel Gabriel, the Holy Trinity, the Nativity, etc., and most of them are in an excellent state of preservation. During this season a good number of the frescoes were dismantled and the remainder should be completed by next season. One of the most important discoveries is a copy of the list of Bishops of Faras ending in A.D. 1169. While removing the sand on the south side of the Church, a sandstone lintel, most probably belonging to the north entrance, was found, decorated with a Maltese cross and bearing an inscription in Coptic regarding the foundation of ‘this Holy Place’ by the Eparch of Nobadia, Iesou, in the tenth year of the reign of King Zacharia, son of Georgios, 646 A.M. = A.D. 930. Next season will see the complete dismantling of the church and the investigation of the remains of earlier periods which no doubt are to be found beneath it.

The Franco-Argentine mission spent last season working partly in Aksha and partly in Mirgissa. The former was completely finished, while at Mirgissa, which proved to be much more intricate than was hitherto thought, work was concentrated at the foot of the hill and in its vicinity. Next season being the final one for the first stage, the expedition will have a very difficult task to ensure that, if the site is not completely finished, at least the greatest part of it is excavated.

The Ghana expedition continued their excavation of the extensive Christian site of Debeira West. The buildings were found to be very elaborate and intricate. It was also ascertained that there had been different periods of construction. The earliest buildings are thought by the excavator to be 7th century, but he will be able to assign a more accurate date when he has completed his study of the pottery and established the chronology of the site as a whole. By the end of the season this site was more or less finished and only a little more needs to be done next season to ensure that nothing has been left out.

The Spanish Committee for Cooperation with UNESCO continued their excavations in both their concessions, namely the cemeteries of Argin and the Christian site of Abkanarti. Steady progress was made and next season will definitely see the completion of both sites.

The University of Colorado (U.S.A.) who took the field for the first time last season, were excavating X-Group and Christian village sites in Gezira Dabarosa, opposite Halfa town. They have also discovered prehistoric sites approximately 1 km. further north. Very little progress was made owing to
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dethe heavy sand which must first be shifted and, as the site is scheduled to be under water next year, efforts will have to be redoubled to ensure the completion of the concession by that time.

The Egypt Exploration Society continued to work steadily in their concession which is one of the largest among the foreign expeditions. Owing to the fact that only one more season is left before it will become impossible to do any archaeological work in the region between Faras and Gemai, the Antiquities Service has come to an agreement with them to relinquish their rights to the important site of Meinart in order that work might begin there immediately, as it is not possible that it could be finished in one season. This has saved the Egypt Exploration Society a lot of time and trouble. The expedition still have to excavate completely the Old Kingdom site, which was discovered last year, and the Meroitic site, and to investigate beneath the Hatshepsut Temple in Buhen, in addition to the cemeteries at Kor by the end of next season. We are promised that this will be done and we are sure that the expedition will keep its word.

The Scandinavian Joint Expedition worked mainly on the excavation of cemeteries on the East Bank north of Wadi Halfa which covered a long period of time ranging from A-Group to Christian. During the five months the expedition spent in the field they excavated hundreds of tombs, most of which had been robbed, but many were intact, and as a result they found much interesting material. C-Group and X-Group cemeteries were particularly abundant. They also found a good number of graves of New Kingdom date. At Fadros alone they cleared about 600. One of their most interesting sites, No. 178, which lies north of Fadros, was a cemetery composed of big vaulted mudbrick tombs which yielded five tombstones with inscriptions, three in Greek and two in Arabic. One of the Greek stelae mentions a man called Stauroforos from Pachoras (ancient Faras) and the year A.D. 1070. Another mentions a Bishop Martyroforos. In brief, the Scandinavian Joint Expedition did good work and amassed much information which throws light on so many of the periods which have been little known. Next season this mission will return to bring the work within their concession to a close; no doubt with good results.

Well before the beginning of last season, the Oriental Institute of Chicago (U.S.A.), in accordance with their request, were given a licence to excavate the important Middle Kingdom site of Dorginarti in addition to the concession of Serra East, which they have already started. It was a great disappointment that the expedition never came during the whole season, but we now have their word that they will put in more time and men to dig both sites simultaneously and it is hoped that they will finish in good time.

Excavation at the important Christian site of Meinart which, as I have hitherto mentioned, was yielded up to the Antiquities Service by the Egypt Exploration Society, was started on a large scale with Dr W. Y. Adams, the UNESCO specialist, as field director. By the close of the season, at the end of
April, six Christian levels had been found. In spite of the fact that there is a lot of sand to be moved, there is no doubt that next season will see the completion of the work. A good number of Christian mural paintings were found, but they were reburied, awaiting a specialist hand to deal with them next season.

The University of California (U.S.A.) were given a licence to excavate the two Middle Kingdom forts of Askut and Dabenarti. At Askut a lot of work was carried out on the site and no doubt next season will see its completion. The work so far done revealed that the site was reused after the Middle Kingdom period as layers of several subsequent settlements were found superimposed on the earliest walls. At Dabenarti the previous idea that the fort was unfinished and perhaps never occupied was confirmed, and the work done there was purely architectural and was completely finished.

It is not amiss to mention that the work which has been carried out by the Italian Schiff-Giorgini mission at Soleb, though outside the endangered area, is of the utmost importance and for that reason it has been allowed to continue. We have at Soleb the most beautiful temple in this Country and this mission has undertaken to consolidate and rebuild parts of it besides carrying out scientific research in the vicinity. They have been doing this for the last five years and the results achieved are excellent. The excavation is virtually finished and they are now preparing the material for publication. The mission has also kindly offered to rebuild and consolidate the New Kingdom temple at the neighbouring site of Sedenga which has been a heap of stones for centuries. This offer has been gratefully accepted.

We have now definite word that the Yugoslavian Government’s mission, which is long overdue, will be coming next season to deal with the solidification and dismantling of the frescoes at the church of Abdel Gadir.

I am happy to report that the tentative offers of financial help for removing the temples have now been realized. The British Government has kindly agreed to pay for the dismantling of Buhen, while the French Government has undertaken to finance the dismantling, transportation and re-erection of that part of Aksha Temple which could be moved. Advance payments have already been made.

It is my pleasure to mention that the whole of the temple of Buhen, and what could be moved of the temple of Aksha, in addition to those parts of the rock-hewn tomb of Djeuty-hotep containing inscriptions and paintings, have all been dismantled and brought safely to Khartoum, where they will be re-ereected in the near future in the grounds of the new Sudan Museum. This has been achieved, thanks to the loan by the Academy of Sciences of the German Democratic Republic of one of their most able architects, Mr Friedrich Hinkel, to the advice and assistance of Dr H. J. Plenderleith, Director of the Rome International Centre and to the invaluable help of the Egypt Exploration Society and the French Government. This marks the end of the removal of monuments which will be affected in the first stage of inundation.
EDITORIAL NOTES

Next season the Belgian Government have kindly offered to send once more their able photogrammetrists to make maquettes of those monuments built of mudbrick which cannot be moved, e.g. the Middle Kingdom fortress of Buhen. There are now only two more temples scheduled for removal, namely Semna and Kumna. These will not be affected until 1968, but arrangements are now well in hand and we hope to complete the work there in good time. The Netherlands Government has kindly offered to undertake the removal and re-erection of Semna East (Kumna) and failing the receipt of any offer to handle the temple of Semna West, the Sudan Antiquities Service will have to do it out of their meagre resources.

The Commissioner for Archaeology attended the meeting of UNESCO'S Executive Committee for Nubia which took place in Paris in April and he managed to convince the committee that the generous contribution of the U.S.A. of approximately $120,000 should be handed over to the Sudan Government to help in the transportation and re-erection of the temple of Buhen. With the British Government's help in dismantling, the American contribution, and our own contribution, the future of Buhen is now secure.

*     *     *

I am happy to say that steps are being taken to reprint volumes I and II of KUSH and Occasional Paper No. 1, The Old Stone Age in the Sudan, by A. J. Arkell, all of which are out of print.

*     *     *

A lot of delay and confusion has been caused by material being sent direct to the printers by contributors to KUSH. In future, may I ask authors to send all their material and any suggestions they may wish to make to me.

THABIT HASSAN THABIT

May, 1963
The Archaeological Survey on the West Bank of the Nile: Third Season, 1961–62

by William Y. Adams and Hans-Åke Nordström

INTRODUCTION

Archaeological survey on the west bank of the Nile, in the Wadi Halfa district, has been undertaken by the Sudan Antiquities Service as a contribution to the International Campaign to Save the Antiquities of Nubia. Field work was begun in the village of Faras West, immediately south of the Egyptian frontier, in January 1960. In April 1961, at the end of the second field season, the survey had progressed as far southward as Gezira Dabarosa, opposite the town of Wadi Halfa—a total distance of 39 km. from the starting point. One hundred and forty-three sites were investigated and recorded during the first two campaigns. Results of these investigations have been published in previous numbers of KUSH.¹

The third field season on the west bank got under way on 21 October 1961, in the village of Abd el Qadir, some 8 km. south of Gezira Dabarosa.² Thereafter the excavation party remained continuously in the field until 19 April 1962, by which time the survey had reached the outskirts of the village of Gemai West. The season’s work covered 18 km. along the west bank of the Nile³ and also more than a score of islands, large and small, in the Second Cataract.⁴

The primary purpose of the west bank survey has been to determine the location, character, extent, and condition of all archaeological remains encountered, and to carry out as much test excavation as was necessary to obtain this information. However, in the course of survey it has frequently been found desirable to follow through to completion the excavation of certain minor sites, rather than to leave them in a partially exposed condition for later attention.

¹ Kush ix, pp. 7-43; Kush x, pp. 10-75.
² The area between Gezira Dabarosa and Abd el Qadir lies within the Buhen concession of the Egypt Exploration Society, and was therefore not investigated by the Sudan Antiquities Service survey.
³ At the request of Prof. Jean Vercoutter, the survey was carried on within the Mirgissa concession of the Franco-Argentine Mission. However, with a few minor exceptions the work was confined to surface observation, and no excavation was undertaken.
⁴ By prior agreement the Antiquities Service explored the islands lying west of the main channel of the Nile, leaving to the Scandinavian Joint Expedition the islands to the east of it. The Scandinavian expedition is concurrently surveying the east bank of the river between Faras and Gemai.
ARCHAEOLOGICAL SURVEY ON THE WEST BANK OF THE NILE

This procedure was followed in the 1961-62 season as in both previous campaigns. Of the total of 119 sites recorded during the third season, 87 were excavated either fully or in part.\(^5\)

Field work throughout the third season was under the direction of the present writers,\(^6\) both archaeologists supplied to the Sudan Antiquities Service through the co-operation of UNESCO. The working party during most of the season consisted of nine Quftis, under Reis Youssef Mohammed Youssef, and about thirty local labourers. Field headquarters were in the village of Abd el Qadir until 1 February, and thereafter at Mirgissa fortress, at the south end of the Second Cataract.\(^7\)

The region surveyed in 1961-62 differs markedly from that covered during the previous campaigns, comprising as it does the Second Cataract of the Nile and the northern limit of the formidable Batn el Hajar, or 'Belly of Rock.' Here the broad floodplain and low sandstone scarp of the Halfa reach give place to a region of much higher relief, with rocky promontories, steep banks and bluffs, and only occasional, residual patches of alluvium. The predominant geological formation is black granite and allied igneous and metamorphic deposits.

Because of the nature of the terrain south of Wadi Halfa it was expected that archaeological remains here would be considerably more scarce than is true further to the north. In this respect the season's work provided a surprise, for the total number of sites discovered was slightly higher than in the preceding season. However, the great majority of the sites were small. Moreover, like the modern habitations in the same area, they are heavily concentrated in a few favoured spots. The very barrenness of the Second Cataract region has undoubtedly been responsible for the survival of minor remains which would long since have disappeared had they been situated in more populous areas.

In general, the islands of the Second Cataract proved less rewarding than the mainland. About half of the islands investigated are inhabited today, and nearly all of them bear evidence of extensive occupation at the end of the Christian era, but remains of earlier periods are scarce. This circumstance must undoubtedly be traced to a succession of very high river levels during the late Christian period (see below), which either swept away the remains of earlier occupation or buried them so deeply in mud that no trace remains on the surface.

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\(^5\) The sites which received the least attention during the season were inscriptions and rock pictures. The full study of all such remains has been undertaken by the German Academy of Sciences Expedition under Prof. F. Hintze, and the survey party of 1961-62 therefore confined itself to recording the locations of these sites.

\(^6\) In this report the sections dealing with Prehistoric, A-Group, C-Group, and Pharaonic material have been prepared by Mr Nordström, and the remaining sections by Dr Adams.

\(^7\) The writers are much indebted to the Franco-Argentine Mission for the loan of the very comfortable field house at Mirgissa.
KUSH

The discovery of the important Meroitic houses at Gaminarti (5-T-48) was made possible only by the appearance of a handful of Meroitic sherds on the surface; how many more such sites may lie buried among the Second Cataract islands can only be conjectured. On many islands scattered sherds from epochs as far back as the proto-dynastic have been collected from protected crevices in the rock, while the more exposed surfaces have been swept entirely clear of them.

In the 1961-62 campaign 119 sites were recorded, of which only eleven had been previously known. Fig. 1 shows the area surveyed and the locations of the sites. Table I gives an abbreviated descriptive list of the sites, and a summary by culture period and type of site is given in Table II. 8 The more important remains of each period are described in the pages that follow.

TABLE I

LIST OF SITES RECORDED, 1961-62 SEASON

<table>
<thead>
<tr>
<th>Site no.</th>
<th>Locality</th>
<th>Type of site</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Abd el Qadir</td>
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</tr>
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<td>Shamnarti</td>
<td>Rock pictures</td>
</tr>
<tr>
<td>5-T-13</td>
<td>Abu Sir</td>
<td>Stone implements</td>
</tr>
<tr>
<td></td>
<td>A-Group</td>
<td></td>
</tr>
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<td>5-S-6</td>
<td>Mirgissa</td>
<td>Graves</td>
</tr>
<tr>
<td>5-S-25</td>
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<td>Habitation refuse</td>
</tr>
<tr>
<td>5-T-18</td>
<td>Abu Sir</td>
<td>Habitation refuse</td>
</tr>
<tr>
<td>5-T-25</td>
<td>Abu Sir</td>
<td>Graves and refuse</td>
</tr>
<tr>
<td>5-T-35</td>
<td>Mirgissa</td>
<td>Graves</td>
</tr>
<tr>
<td>5-T-38</td>
<td>Matuga</td>
<td>Campsite and graves</td>
</tr>
<tr>
<td></td>
<td>C-Group</td>
<td></td>
</tr>
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<td>Mirgissa</td>
<td>Cemetery</td>
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<td>5-S-20</td>
<td>Mirgissa</td>
<td>Graves</td>
</tr>
<tr>
<td>5-S-27</td>
<td>Shamnarti</td>
<td>Rock pictures</td>
</tr>
<tr>
<td>5-T-26</td>
<td>Abu Sir</td>
<td>Cemetery</td>
</tr>
<tr>
<td>5-T-31</td>
<td>Abu Sir</td>
<td>Grave</td>
</tr>
<tr>
<td>5-X-28</td>
<td>Gemai</td>
<td>Campsite</td>
</tr>
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<td>5-X-38</td>
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<td>Graves</td>
</tr>
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<td></td>
<td>Pharaonic</td>
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<td>5-O-5</td>
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<td>Inscription</td>
</tr>
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<td>Abd el Qadir</td>
<td>Quarry</td>
</tr>
<tr>
<td>5-O-11</td>
<td>Abd el Qadir</td>
<td>Grave</td>
</tr>
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</table>

8 Discrepancies in the totals shown in Table II are due to the fact that some sites fall into more than one category or belong to more than one period, and have therefore been entered more than once in the table.
<table>
<thead>
<tr>
<th>Site no.</th>
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<th>Type of site</th>
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<td>Habitation refuse</td>
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<td>Abd el Qadir</td>
<td>Inscriptions</td>
</tr>
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<td>5-O-21</td>
<td>Abd el Qadir</td>
<td>Inscriptions</td>
</tr>
<tr>
<td>5-S-4</td>
<td>Mirgissa</td>
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<td>5-S-6</td>
<td>Mirgissa</td>
<td>Huts</td>
</tr>
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<td>5-S-8</td>
<td>Mirgissa</td>
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</tr>
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<td>Mirgissa</td>
<td>Quarry ?</td>
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<td>Mirgissa</td>
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<td>5-S-14</td>
<td>Mirgissa</td>
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</tr>
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<td>5-S-16</td>
<td>Mirgissa</td>
<td>Habitation refuse and graves</td>
</tr>
<tr>
<td>5-S-17</td>
<td>Mirgissa</td>
<td>Grave</td>
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<tr>
<td>5-S-18</td>
<td>Mirgissa</td>
<td>Graves</td>
</tr>
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<td>5-T-8</td>
<td>Abu Sir</td>
<td>Inscription</td>
</tr>
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<td>Abu Sir</td>
<td>Inscriptions</td>
</tr>
<tr>
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<td>Abu Sir</td>
<td>Inscriptions</td>
</tr>
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</tr>
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<td>Abu Sir</td>
<td>Inscriptions</td>
</tr>
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<td>Abu Sir</td>
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**Meroitic**

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</tr>
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</tr>
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<td>Abu Sir</td>
<td>Huts</td>
</tr>
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<td>Abu Sir</td>
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<td>Matuga</td>
<td>Cemetery</td>
</tr>
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</tr>
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</tr>
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</tr>
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**X-Group**

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<td>Shargait I</td>
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<td>Grave</td>
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<td>Structure</td>
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<td>5-X-31</td>
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</table>


**TABLE I**—continued

<table>
<thead>
<tr>
<th>Site no.</th>
<th>Locality</th>
<th>Type of site</th>
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<tbody>
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</tr>
<tr>
<td>5-X-36</td>
<td>Gemai</td>
<td>Cemetery</td>
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**Undetermined**

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</tr>
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</tr>
<tr>
<td>5-S-19</td>
<td>Mirgissa</td>
<td>Graves</td>
</tr>
<tr>
<td>5-S-21</td>
<td>Mirgissa</td>
<td>Grave</td>
</tr>
<tr>
<td>5-S-22</td>
<td>Mirgissa</td>
<td>Refuse and graves</td>
</tr>
<tr>
<td>5-T-9</td>
<td>Abu Sir</td>
<td>Quarry and graves</td>
</tr>
<tr>
<td>5-T-24</td>
<td>Abu Sir</td>
<td>Graves ?</td>
</tr>
<tr>
<td>5-X-35</td>
<td>Gemai</td>
<td></td>
</tr>
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</table>

**TABLE II**

Numerical Summary of Sites Recorded, 1961–62 Season

<table>
<thead>
<tr>
<th>Period</th>
<th>Monumental Structures</th>
<th>Domestic Structures</th>
<th>Refuse Areas</th>
<th>Cemeteries</th>
<th>Rock pictures, Inscriptions</th>
<th>Miscellaneous</th>
<th>Totals</th>
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<td>Prehistoric</td>
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<td>A-Group</td>
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<td>Meroitic</td>
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<td>57</td>
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</table>

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PREHISTORIC AND A-GROUP SITES

A few sites only were discovered which yielded information about the earliest inhabitants in this district. One of those, a Palaeolithic locale at Abd el Qadir (5-0-3), has previously been noted by Arkell. Another group of implements of Palaeolithic types was recorded near Abu Sir (5-T-13). Microliths of Sebilian types were collected on the narrow alluvial flat at Gemai West in connexion with excavations of later sites. They are normally of light or dark brown flint, unevenly trimmed from one or both sides along the edges, mostly consisting of arrow heads of pointed triangular form. They are all rolled and probably washed down from the lower spurs of the desert plateau.

A fairly large number of rock pictures, some probably of Prehistoric date (5-S-26), were found on the island of Shamnarti, some 1 1/2 km. east-south-east of Mirkissa. On this site a variety of geometric symbols are represented among a few animal forms—one apparently an elephant.

As to the ceramic sites from the Predynastic and Early Dynastic periods the distribution pattern known from Lower Nubia changes distinctly in the Cataract itself and on the river banks west of it. A few small groups of very denuded graves without datable objects but of possible A-Group origin, were registered north of Mirkissa. Cemeteries with unmistakable A-Group pottery, so abundant on the west bank between Buhen and Faras, are completely lacking within the rather extensive area between Abd el Qadir and Gemai West. This is true even where the ground conditions are relatively undisturbed by erosion or high floods and unmarked graves of A-Group types could be spotted easily if they existed. However, more important than graves, a small group of occupation sites was found and investigated, each of which displayed interesting early pottery, different in many aspects from the Predynastic and Early Dynastic material of Lower Nubia.

One of those sites was a fishing camp on Shagir Island in the heart of the Cataract (5-S-25). Shagir is a fairly high and rocky islet, not more than 500 m. across, divided from the Kisinarti-Serrat block by a narrow channel. There are several series of spectacular rapids around the island which is split into two halves during the flood season. South-west of the island the main water of the Nile downstream of Dabenarti fortress runs through a mighty rapid called Kabuka by the local people. The smaller streams in this part of the Cataract are good for fishing during parts of the year. The ancient site is located at the summit of the island, around 15-20 m. above the river at low water. It comprises an area of some 10x40 m. The most important part is situated in a

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9 Arkell, 'The Old Stone Age in the Anglo-Egyptian Sudan', SASOP, no. 1, p. 45.
11 See note 5 above.
narrow crevice between rock outcrops, fairly well protected against the northwesternly winds. The bottom part of this *khor* is formed by occupation refuse, about 150 cm. thick, above the rocky ground (Fig. 2). The top layer was covered by two very crude stone walls, overlying a layer of carbon coloured sand, 15–20 cm. thick, with a heavy concentration of fish bones and potsherds. The stone walls were definitely later than the main part of the refuse, possibly of Christian or Muslim date, like most of the huts in the Cataract region. In connexion with the fish bones there was a thick ash layer towards one side of the crevice. The rest of the debris consisted of greyish sand with a few fish bones and occasional sherds. This part of the site has evidently been used during a fairly long period—or more probably repeatedly—for smoking the fish caught in the rapids nearby. There are also traces of ordinary human occupation—a few potsherds and remains of simple hearths—found at different levels in other parts of the site. It should be noted that not a single implement used by fishermen, e.g. netsinkers, was discovered during the excavation, nor were there any flint tools or shells in the refuse.

Another camp site to be reported here was excavated on Matuga Island near the west bank (5-T-38), situated like the Shagir camp among outcrops and crevices some 15 m. above low water. The ground here was very much disturbed by later human activities and no stratification could be worked out. The refuse was limited to a thin, slightly carbon coloured layer near the undisturbed ground and there were a few traces of hearths.

The sherd material from both these sites comprises a variety of fabrics and wares. Most common is a crude paste in which the main component is Nile mud mixed with sand in different degrees. The surfaces are grey, greyish brown, dark brown, reddish brown or light red. The core is normally of the same colour as the surface or slightly darker and occasionally black streaked. The surfaces are usually striped as if they had been smoothed before firing with a
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potsherd or a wooden tool. Many sherds are slightly burnished or irregularly polished with a pebble.\textsuperscript{13} This sandy mud ware in its different variants is probably similar to the pottery from Myers' Site IX at Abka.\textsuperscript{14} It occurs there in Levels 5 and 4, which are carbon dated to the period between 4000–2500 B.C.\textsuperscript{15} Black mouthed red polished rimsherds are rather common, too, in the two camp sites investigated. They are normally rippled on the outside. The rim tops are often milled in different ways: with transverse, diagonal and criss-cross lines, with zig-zag patterns, etc.\textsuperscript{16} Interesting decorated sherds occurred in the Matuga site: the decoration consists of incised or impressed zig-zag lines on both rim sherds and body sherds of black mouthed and sandy mud ware, sometimes in combination with simple stamp marks as well as milled rims like the Neolithic pottery from Esh Shaheinab (Plate 1, a).\textsuperscript{17}

The chronological problems regarding those sites will not be taken up for discussion here. One statement can, however, be made: similarity in decoration of some of the pottery between, for example, two so widely separated sites as Matuga and Shaheinab does not \textit{a priori} mean synchronism or direct cultural relationship. Patterns of that simple kind might be developed independently by tribes and communities living under similar conditions. Nevertheless, if more complex material from this period comes to light in the course of the Nubian campaign, it might eventually be possible to establish a direct connexion along the Nile valley between Prehistoric Nubia and the Neolithic cultures in the central Sudan.

The impression is that the cultural stage represented by the sites reported here is Neolithic,\textsuperscript{18} but whether they are entirely pre-dated or partially contemporary with the firmly fixed Early Dynastic A-Group in Lower Nubia must remain an open question for the time being. More important in this context is the general nature and the lay-out of the camp sites themselves. There is no evidence that people have lived on any of those sites continuously for long periods. Many facts apart from the almost total lack of remains of stone industry lead to the conclusion that they were seasonal camps, used for short spells only. In this respect they differ distinctly from the sites at Abka which were excavated by Myers.\textsuperscript{19}

C-GROUP AND KERMA SITES

The search for a southward extension of the C-Group culture found in Lower Nubia gave on the whole a negative result in the Second Cataract district.

\textsuperscript{13} For the burnishing technique, see Arkell, \textit{Shaheinab}, p. 69.
\textsuperscript{14} Myers, 'Abka Again', \textit{Kush} VIII, 1960, pp. 176 f.
\textsuperscript{15} Ibid., pp. 180 f.
\textsuperscript{16} Arkell, op. cit., pl. 37: 1, 7, 22, 30-1.
\textsuperscript{17} Ibid., pl. 32: 5-6.
\textsuperscript{18} Even if the sites represent a Neolithic stage, they are designated here as (early) A-Group, since they presumably form an older part of a continuous development during this Nubian period.
\textsuperscript{19} Myers, 'Abka Re-excavated', \textit{Kush} VI, 1958; op. cit., \textit{Kush} VIII, 1960.
ARCHAEOLOGICAL SURVEY ON THE WEST BANK OF THE NILE

A small camp site in Gemai West (5-X-28) with black topped C-Group pottery had the same lay-out as the A-Group sites reported above. Rock pictures of long-horned cattle, presumably *Bos Africanus*, usually assigned to the C-Group culture²⁰ were among other sites discovered on Shamnarti (5-S-27) and in the desert about 3 km. west-south-west of Abd el Qadir (5-O-20).

About 1 km. north-east of Mirgissa Fortress there is a small cemetery comprising some twenty superstructures visible in the surface sand, lying in a shallow *khor* which cuts through the gravel terraces above the river plain (5-S-3). The superstructures are circular and of different sizes, built of sandstone slabs and normally disturbed by erosion and plundering. Only one grave was excavated during the survey²¹ and found to be thoroughly plundered.

Another very small cemetery, about 1 km. due west of Abu Sir village, was totally excavated (5-T-26). The graves were found buried some 100–140 cm. beneath the surface in a sand hill below the sandstone ridges. They numbered seven, most of them unplundered. No remains of superstructures could be traced on the surface. The burials were all in contracted position, on either left or right side, but not regularly orientated. In one of the graves a goat (or sheep) was offered with the dead. At its neck a number of small amulet beads of blue faience²² were discovered.

Apart from these two cemeteries a few single burials in contracted position, some with pottery, were recorded and excavated (among others 5-T-31 and 5-O-11).

The small pottery collection from the sites reported above is more typical of the Kerma group and the Pharaonic period in Nubia than of the pure Nubian C-Group. In fact, the well-known pattern of pottery forms, wares and decoration representing the classic C-Group culture north of the Second Cataract²³ does not appear in the Cataract itself.

A common ceramic form in these cemeteries is a deep bowl of small or medium size, made of rather thick, black topped red polished ware. The black top is usually restricted to a narrow, slightly projected band beneath the rim.²⁴ Beakers of different Kerma types make up another part of the finds. One beaker with very thin sides, from site 5-T-26, has a smooth S-shaped section, with rim curving outwards and base slightly dimpled (PLATE 1, b).²⁵ Two other beakers

²⁰ Cf. Sandford and Arkell, op. cit., fig. 14–15, Cf. note 5 above.
²¹ Since this site is located within the concession allotted to the Franco-Argentine Expedition, only test excavation was carried out to confirm dating. See note 3 above.
²² Similar to Steindorff, *Aniba*, i, pl. 26 : i.
are of thicker ware than the former, the bodies are fairly straight and the bottom part broad and nearly flat.28 Of those one was from 5–T–26, and the other was found together with a small egg-shaped jar of coarse, red-brown wheel-made ware in a single grave at Abd el Qadir (5–O–11) (PLATE I, c). This jar originates probably from the Hyksos period or the New Kingdom.27 The same kind of combinations of Kerma pottery and Pharaonic vessels occur in the cemeteries at Buhen and Aniba.28

One vessel of a type which is uncommon in Nubia and probably of Egyptian provenience29 was found in 5–T–26. It is a medium size jar of light red, rather hard ware with a grey-streaked core, polished dark red on the outside. It has a small, slightly hollow base and S-shaped body, the neck is short and narrow and the mouth curving outwards (PLATE I, b). This type appears in one example only at Kerma.30

On the whole the finds, as implied above, may be dated to the Second Intermediate period or even later, to the transitional stage between that and the New Kingdom. Some of the pottery forms mentioned here might be referable to the Pan-grave people in Egypt and Lower Nubia.31

Perhaps the sites in this district are just an indication, like other finds in Nubia associated with the Kerma civilization, of a movement of people towards Egypt at the time of the xviii th Dynasty, a suggestion put forward by Säve-Söderbergh.32 It is yet too early to confirm Posener’s assumption that the border between C-Group and Kerma—and between Wawat and Kush—is to be found in the Second Cataract area,33 although this seems reasonable in view of the results of survey and excavations to date, indicating that the classic C-Group is not represented in the Cataract itself. However, there might be several other explanations for this latter fact.

Furthermore, this is still a problem which concerns more than the mere geographical distribution of the two groups. It will be necessary to define thoroughly their cultural differences and similarities. It is even more important to make clear the chronological interconnection between them and the intricate political correlation between Nubia, Hyksos, the Pan-grave people and the

28 Similar to Reisner, op. cit., Type Bkt. vi–viii. For the relative chronology of those types, see ibid., pp. 502 ff.
28 Randall-MacIver-Woolley, Buhen, pl. 48, S lviii; Steindorff, op. cit., 2, pl. 84.
29 Cf. Reisner, op. cit., p. 390. The ware is more typical of Egyptian than of Nubian products.
30 Ibid., Type R.P. xix : 1, fig. 278: form 76.
31 See note 24 above. Cf. the black topped pottery from Pan-grave sites in Egypt: Brunton, op. cit., pl. lxxii; Wainwright, Balabish, pl. xiv.
expanding Egyptian civilization during the xviith Dynasty. The archaeological material will certainly give us support, and more problems too, in dealing with these subjects. The question is, firstly, whether Reisner’s chronological scheme which is worked out entirely from the material found in the cemeteries at Kerma, also covers all the pottery associated with the Kerma group throughout Nubia. Secondly, even if such a conformity can be proved, especially when the late Kerma material has been classified and published, it is doubtful whether single vessels found in Nubia corresponding to certain types in the classification of the Kerma beakers, can be used as evidence for dating. It will be necessary to base such comparisons on several representative collections of pottery and other finds of chronological value, of both C-Group, Egyptian and Kerma provenience, comprehensive enough to allow a statistical interpretation of well differentiated type groups.

Pharaonic Sites

A large number of different sites from the Pharaonic periods were discovered on the west bank within the Second Cataract region. The bulk of these sites are situated in the district around Mirgissa and Abu Sir, while no traces of Egyptian habitation or activities were found on the islands in the Cataract apart from the two already well-known fortresses on Dabenarti and Darginarti.

The Pharaonic sites, of which few were excavated, divide themselves into four main categories: inscriptions, habitation sites, sentinel huts and graves.

Inscriptions

Some of the Pharaonic graffiti distributed in the region were already recorded by Wheeler in 1931 in the area north of Mirgissa fortress.

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34 This question has been discussed several times by Säve-Söderbergh: in Ägypten und Nubien; in op. cit. KUSH IV, 1956.
35 An example: two different beaker forms, KERMA Bkt. II and Bkt. VI (or VIII), given a separate chronological position by Reisner, op. cit., pp. 502 ff., occur in the same group of graves in site 5-T-26. It is reasonable to assume that those graves, seven in number, represent a relatively limited period, which might be shorter than the difference in time between Reisner’s two type groups mentioned above. Reisner’s relative chronology is based mainly on a statistical interpretation of minutely divided beaker forms of finer wares and coarse local wares respectively. Dating of single vessels can not, however, be made with such a degree of probability as stated by Reisner, op. cit. p. 341, since the possible margins of uncertainty may be wider than the relative periods in time of each type or type group.
36 The concession around Mirgissa fortress, allotted to the Franco-Argentine Expedition, comprises most of the more important sites of Pharaonic date. For this reason test pits only were dug to confirm dating. See note 3 above.
37 All inscriptions in this region will be fully recorded and interpreted by the German Expedition under Professor Hintze. See note 5 above.
38 Wheeler, ‘Diary of the Excavation of Mirgissa Fort’, KUSH IX, 1961, pp. 104-6, inscriptions nos. 1-3 (site 5-T-23), and nos. 4-5 (site 5-T-34).
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The most important among the inscriptions not previously registered were found near the famous Rock of Abu Sir. On both sides of this rock there is a distinct scarp of Nubian sandstone which rests upon the igneous and metamorphic complex which forms the Second Cataract. The scarp is nearly 1 km. long and cut through at several points by crevices and khors. Its highest point, c. 45 m. above the low water level, consists of the Rock of Abu Sir itself. A large number of modern graffiti, mostly names and dates of visitors, are to be seen around its summit, but no ancient inscriptions have, surprisingly enough, been found among them. During the course of the survey inscriptions were discovered beneath the rock and the scarp, close to the river bank, usually scattered on smooth patinated sandstone surfaces and on loose blocks near the water. They divide themselves into three large groups, one located slightly to the south of the rock and two situated to the north of it. The southern and the middle groups consist mainly of graffiti of Middle Kingdom and possibly of Old Kingdom date (5-T-16 and 5-T-15 respectively). The northern group is formed by several well preserved hieroglyphic inscriptions from the Middle and New Kingdom (5-T-17). In connexion with these graffiti there are, too, a considerable number of rock drawings, mostly of animals, probably originating from different periods.

Habitation sites

Most of the habitation remains are located on the broad sandy plain to the north of Mirgissa Fortress and beneath the igneous rocks on which the fortress itself is constructed. The largest of those sites is named locally 'The Dervish Camp' and was thought by Wheeler to be a cemetery (5-S-9).\(^39\) It is situated on one of the higher terraces of the plain overlooking the river bank. On the surface there are evidences of a fairly modern occupation, presumably of a small Dervish force, but the basic structure is definitely of older date. It consists of rectangular and square alignments of stone boulders as well as remains of heavy stone masonry, visible in the surface sand. Judging from the great amount of potsherds scattered all over the site\(^40\) and from the test pits which were dug at different points among the structural remains, this site originates mainly from the Middle and New Kingdom periods. Only an extensive excavation can make clear the complex nature and the stratigraphy within the site.

Another site of interest was excavated at Abd el Qadir (5-O-13). It consisted of a partially denuded cooking area below a sandstone ledge near the river bank. A few circular ovens, 50–90 cm. in diameter, were found in connexion with a thin carbon streaked refuse layer beneath the wind-blown sand.

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\(^{39}\) Ibid., p. 103.

\(^{40}\) A common pottery form in this site consists of 'bread forms', cylindrical or conical pipes of the same kind which is often found in the Nubian forts, among others in Kuban. See Emery-Kirwan, op. cit., pl. 14, Type xvi.
ARCHAEOLOGICAL SURVEY ON THE WEST BANK OF THE NILE

The walls of the ovens, of which only the lower parts were preserved, were made of coarse, fired clay, resting on sand or on mud bricks and potsherds, strengthened from the outside by mud bricks or mud. The sherd material from this site is composed of pottery which can be related to all the Pharaonic periods.\(^{41}\)

**Sentinel huts**

Near the Rock of Abu Sir several crude, small huts were found scattered in different groups on the slopes and terraces beneath the sandstone ridges (5-T-11, 5-T-22). The same kind of huts were discovered on the top of the high igneous rock edges south of Mirgissa fortress and at Gemai West (5-X-25, 5-X-33). They are usually rectangular and 2-3×3-4 m. in size, built of rough stones from the terraces and rocks on which they are located. Some of them are joined together to form units of two or three rooms. Judging from the fallen stone material found during the clearance of the preserved masonry, the walls were originally not more than 50-100 cm. high.

In each hut there were enough potsherds to allow a general dating to the Pharaonic period. The most common fabrics are thick, red-brown ware and soft, brown, wheel-made ware, sometimes painted red. Qena ware was present in a few of the sites. Some sherds of this fairly hard fabric had been re-used as scrapers.

The distribution of these huts at very high points along the bank, their small size and crude construction lead one to suppose that they were used not for normal habitation but as a kind of sentinel hut in connexion with the big fortresses in the region, primarily Buhen and Mirgissa. They are all situated at points or near points which allow a very good view over the main channels of the Cataract as well as the fortresses themselves. It is reasonable to assume that their main function was as communication links between the forts and watch points overlooking the navigable parts of the Cataract.

**Graves**

Apart from a few scattered graves of New Kingdom date or small groups of graves which might be referable to the Pharaonic periods, only one tomb of interest was discovered and excavated (5-T-32).

It is a large chamber tomb situated on the west bank close to Matuga Island, nearly 3 km. north of Mirgissa. The tomb is dug into a hard silt bank close to a few rocky outcrops. It was almost totally rifled, probably in ancient times, like most tombs in Nubia of the same type and size. Furthermore, there

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\(^{41}\) A few rimsherds of light red, rather hard ware are of the same form as Emery-Kirwan, op. cit., pl. 14, Type xx, from Kuban. Other sherds, of red-brown, thick ware, pebble polished outside, are more likely to be of New Kingdom date.
were evidences of recent plundering at one end of the burial chamber, probably as a result of sebbakh digging.\(^\text{42}\)

The tomb is divided into three parts: entrance, outer chamber (A) and burial chamber (B) (see Plan FIG. 3 and PLATE II, a). The entrance is from the north-east, built in line with chamber A and consists of a simple, nearly rectangular shaft, \(c. 170 \times 300\) cm. in size and \(110\) cm. deep, with steep walls. Chambers A and B are both rectangular, \(320 \times 530\) and \(200 \times 360\) cm. in outer size respectively and somewhat deeper than the entrance. The chamber walls are lined with mud bricks standing up to a height of some \(120\) cm. (FIG. 3, sections). They were originally vaulted; the springing of the vaults was preserved partially in chamber A. Near the centre of this chamber there is a pillar of mud bricks, probably a support for the vault. Between the three parts of the tomb there are two doorways, each \(60\) cm. broad and \(65\) cm. high and with a nearly triangular upper part. The passage leading to chamber B was closed by mud plaster and broken pieces of bricks.

In the fill of the two chambers there was a large quantity of human bones. Altogether remains of thirty-eight skeletons were registered. In the bottom part of chamber B eleven skeletons were found undisturbed or partially in their original position, lying in two layers, one on top of the other. The burials were extended on their backs or lying on their sides, heads in the north-west. Potsherds, a few whole pieces of pottery,\(^\text{43}\) a finger ring of bronze\(^\text{44}\) and six scarabs (PLATE II, b) comprise the finds from the excavation. The scarabs originate from different periods: one has a cartouche of Thotmes IV, another of Thotmes III (PLATE II, b: nos. 2 and 3 respectively).\(^\text{45}\)

The great number of burials in this tomb is evidence that it was used as a family grave, presumably during more than one generation contemporary with the xviiiith Dynasty.

**MEROITIC SITES**

*Structures*

Scattered pottery indicative of Meroitic occupation was encountered at several places in the course of the 1961–62 survey. However, structural remains were found at only four sites. The most significant of these was 5–T–48, comprising two substantial mud brick houses on the island of Gaminarti, near

\(^{42}\) This recent attempt to plunder the tomb is not visible on the low level aerial photographs taken over this region in 1959–60.

\(^{43}\) Four jars of grey, coarse ware, Steindorff, op. cit., 2, pl. 72: 1ib; one piece of a pilgrim bottle, ibid., pl. 85: 44b.

\(^{44}\) Ibid., pl. 57: 21.

\(^{45}\) One scarab with a cartouche of Thotmes II was sold to the Antiquities Service in 1962 and was said to come from 'the Matuga region'. This scarab, no. 1 on PLATE II, b, possibly originates from this tomb. I want to express my gratitude to Sayed Nigm ed Din Mohammed Sherif who helped me with the dating of these scarabs.
Fig. 3. 5-T-32. NEW KINGDOM CHAMBER TOMB, MIRGISSA. PLAN AND SECTIONS
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the middle of the Second Cataract (FIG. 4, a and PLATE III, a). These structures are among the first Meroitic domestic remains to be investigated in Sudanese Nubia, and are of considerable interest both for their design and for the material which they yielded.

The two Gaminarti houses consist of eleven and twenty-one rooms respectively, and are separated by a distance of only a few metres.\textsuperscript{46} They are built entirely of mud brick, with walls consistently 35 cm. thick, comprised of headers only, and heavily plastered. Fallen walls indicated clearly that the original height of the buildings was well over 2 m. A notable feature of both houses is the repeated combination of one long and one short room, and the common absence of any interior communication between such pairs of rooms. In every case the fireplace and cooking pots were found in the larger room, while the presence of large numbers of utility vessels suggests that the smaller room was used chiefly for food storage.

The size, layout, and substantial construction of the Meroitic houses stands in marked contrast to those of the succeeding X-Group and early Christian periods (see below), and points to a basic social unit larger than the simple biological family. However, a close inspection of the wall joints shows that both houses on Gaminarti grew by accretion from a small original nucleus of rooms. This phenomenon may reflect the acquisition of additional wives in a polygamous household, or the building of additional quarters to accommodate married children of the original family. The latter practice is not uncommon in modern Nubia. In most respects the Meroitic houses of Gaminarti adhere closely to the pattern previously found at Karanog, some 100 km. further north.\textsuperscript{47}

The Gaminarti houses had clearly been evacuated in the face of a flood, for the inhabitants had not only blocked all the exterior doors solidly with brick, but had built rude stone diversions to deflect the water away from them. The stratagem was unsuccessful, however, for several walls collapsed directly upon the underlying floors. Excavation revealed that the buildings had also been inundated on previous occasions, for three consistent occupation levels were found throughout the site, and the material separating them was clearly riverborne mud rather than occupation debris. Perhaps because of the hasty and impromptu departure of the inhabitants, the houses contained an abundance of domestic implements of stone and bone as well as enormous quantities of pottery and ceramic refuse.

The Gaminarti houses yielded most of the vessel forms and wares which are well known from Meroitic cemeteries, including an abundance of the famous decorated cups.\textsuperscript{48} There were in addition a number of pottery types which are

\textsuperscript{46} Fig. 4, a, shows the larger house only.
\textsuperscript{47} Woolley, \textit{Karanog, the Town}, pp. 26–40, pls. 24–30.
\textsuperscript{48} Woolley and MacIver, \textit{Karanog, the Romano-Nubian Cemetery}, pls. 50–2, 87–95; Griffith, \textit{LAAA}, xi, pls. xlix-1; Emery and Kirwan, \textit{Survey and Excavations between Wadi es-Sebua and Adindan}, pls. 30–1.
Fig. 4. DOMESTIC ARCHITECTURE

a. 5-T-48. MEROITIC HOUSE, GAMINARTI  
b. 5-S-24. X-GROUP HOUSE, MIRGISSA  
c. 5-S-30. LATE CHRISTIAN HOUSE, SHAMNARTI
rarely if ever found in cemeteries. The most common pottery form throughout the site was a plain cylindrical vessel with straight sides and a flat bottom, usually 15–20 cm. in diameter and about the same height. Decoration is generally confined to black and red bands on a white slip, but occasionally assumes more elaborate patterns. It seems probable that this vessel form, which does not appear in any published corpus of Meroitic pottery, represents the common domestic eating bowl of late Meroitic times.

Another Meroitic dwelling (5-X-46) with a rather complex architectural history was found on the island of Meili, opposite Gemai (FIG. 7). The earliest buildings at this site were two small rectangular houses, each composed of one large and one small room. These were at some time destroyed by a flood, and a much larger house very similar to those at Gaminarti was built upon their ruins. This house in turn was damaged by floods, and was considerably enlarged and modified in the course of occupation. Long after its abandonment the same site was chosen for a Christian church (5-X-44) which itself underwent several architectural mutations (see below). Counting remains of all periods, six different occupation levels were found in this one small site. 49

At Meili Island, only the two small original houses yielded pottery comparable to that found at Gaminarti. The large later house, despite its marked architectural similarity to the Gaminarti dwellings, was associated with quite a different ceramic complex from which both decorated cups and white slipped larger vessels were absent. Instead, the material found clearly marks a transition toward the X-Group complex, and in fact substantial numbers of purely X-Group sherds were found on the uppermost floor level. It is safe to assume, therefore, that the bulk of the occupation at Meili Island post-dates that at Gaminarti.

Two other Meroitic structures deserve brief mention. Near the top of the rock of Abu Sir were the foundations of a rude stone hut (5-T-14), in and around which were found Meroitic sherds. The structure itself is not unlike those of the Pharaonic period (5-T-11; see above) which are found in large numbers nearby, and may in fact merely be a case of Meroitic re-occupation of a Pharaonic hut. At any rate it suggests that the Meroitic people also found it desirable to maintain a lookout at this strategic vantage point, for no other reason can be advanced for the occupation of such a locality.

A short distance to the north of Abu Sir, a single cylindrical kiln (5-O-19) was found which is identical in design to the one found during the previous season at Argen. 50 Once again not enough of the structure remained to reconstruct its upper features. The sole product seems to have been heavy utility ware.

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49 Fig. 7 has been simplified for the sake of clarity, to show only three levels. The later Meroitic levels have been combined, and the earliest Christian level is omitted.
50 See Kush x, p. 64.
Cemeteries

Two important Meroitic cemeteries were located during the third season's survey. The large island of Matuga, lying close to the west bank near the middle of the Second Cataract, is the site of a vast necropolis (5–T–36) which has quite probably been in continuous use from Meroitic to modern times. The portion which was mapped in 1961 contained about 50 Meroitic, 20 X-Group, 200 Christian, and perhaps 200 Moslem graves, but this represents only a fraction of the original extent of the cemetery, for large areas have been entirely channelled out by floods, and other areas are occupied by modern houses. Even in the area excavated it is clear that at least 1 m. of topsoil has been carried away since the earlier graves were dug, for many of the burials are encountered just below the surface, and even the crowns of the brick vault tombs have been destroyed. Consequently no superstructures are to be found anywhere on the site, with the exception of a single small X-Group tumulus.

The Meroitic graves at 5–T–36 were of several forms, corresponding closely to the types previously known from Faras, Karanog, and elsewhere. Rectangular vaulted chambers, with or without brick side walls, were most common. In two cases the brick structure stood entirely free of the sides of the pit in which it was built, and in each of these cases lateral niche graves were found outside the chamber but within the same pit. There were a few other lateral niche graves which were quite indistinguishable from Christian graves of the same type except that they contained fragments of Meroitic pottery. Dug-out end-chamber graves, entered either from the east or from the west, were also common. At Faras, Griffith proposed a developmental sequence for the different types of Meroitic graves, but no such chronology could be inferred at Matuga from the random distribution of the grave types or from the objects they contained.

Like all Meroitic cemeteries, 5–T–36 had been thoroughly plundered, and no intact graves were found. Residual finds included a few fragmentary cups and pots, a faience bowl, a stela of six lines, and a single painted ba head.

A larger and better preserved Meroitic cemetery (5–X–40) was located on the west bank of the Nile a short distance north of Gemai. Here 79 graves were excavated, representing about half of the total number in the site. Curiously enough, the grave types showed none of the variability found at Matuga: 73 of the 79 graves were end-chambers entered from the east, and three others were

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51 The Geziret Thêt Matuga of Somers Clarke (Christian Antiquities in the Nile Valley, p. 52) and Geziret Têt of Monneret de Villard (La Nubia Medioevale, 1, p. 222). The Christian ruins mentioned by them (Clarke, op. cit., pl. viii) have entirely vanished.
52 First reported in Wheeler's ' Mirogissa Diary', KUSH IX, p. 111.
53 Griffith, LAAA, xi, pp. 144–6.
54 Woolley and MacIver, op. cit., pp. 22–5.
entered from the west. The remaining three graves had side-chambers, but it was clear in each case that they had been intended as end-chamber graves and had been modified when it was discovered that further forward tunnelling would disturb earlier interments.

Thirteen graves at 5-X-40 had superstructures, consisting in each case of a simple rectangle of mud brick without external appendages. The original number may have been larger, as the surface was considerably denuded. In two cases remains of superstructures were superimposed on one another.

Several graves at 5-X-40 had not been fully plundered, and one had been overlooked entirely. Finds, in addition to the usual pottery, included a pair of heavy bronze anklets, a small bronze cup, and a coiled basket which contained miniature vessels of glass, pottery, and faience (Plate III, b).

A considerable portion of the Meroitic cemetery had been re-used in Christian times, and Christian interments were found within several Meroitic tomb chambers and entry shafts, as well as between them. In contrast to Matuga, there was no evidence of X-Group burials in the same area.

X-GROUP SITES

Structures

Remains of X-Group dwellings were found at three sites (5-S-24, 5-X-29, 5-X-42). By comparison to Meroitic houses they are decidedly small and crude, comprising random clusters of from three to eight small rooms. Walls are either of mud brick or coarse stone masonry, or very commonly both (cf. Fig. 4, b; Plate IV, a), and rarely exceed 30 cm. in thickness. There is very little indication that these walls were ever over 50 or 75 cm. high; in all probability they served only as foundations for a superstructure of wood, brush, or straw.

A curious feature of all of the X-Group houses investigated is their situation on somewhat sloping ground, resulting in a series of staggered floor levels. This feature may have affected the choice of building materials, for it will be noted in the case of 5-S-24 (Fig. 4, b) that the downhill walls, which presumably took the greatest strain, were built of stone, and the others of brick. In another case (5-X-29), however, the whole house was built of stone. In this latter site a heavy deposit of manure made it apparent that cattle had been kept in one of the outside rooms. In both sites numbers of coarse hand-made cooking pots were found imbedded in the floors, a feature common also in early Christian sites. The X-Group house sites yielded an abundance of potsherds—mostly coarse brown utility vessels, but also decorated redware cups and goblets of the types well known from X-Group graves.

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58 Emery-Kirwan type W.5 (op. cit., p. 490).
a. 5-T-38. A-GROUP CAMP SITE, MATUGA ISLAND. INCISED SHERDS FROM REFUSE
b. 5-T-26. KERMA BEAKER AND EGYPTIAN JAR FROM DIFFERENT GRAVES, ABU SIR
c. 5-O-11. KERMA BEAKER AND PHARAOIC JAR FROM A SINGLE GRAVE, ABD EL QADIR
a. 5-T-32. NEW KINGDOM CHAMBER TOMB, MIRGISSA. GENERAL VIEW AFTER EXCAVATION

b. SCARABS. OBVERSE (left) AND REVERSE (right).

1: FROM MATUGA REGION; 2-7: FROM 5-T-32, CHAMBER B
a. 5-T-48. MEROITIC HOUSES, GAMINARTI

b. 5-X-40. OBJECTS FOUND IN MEROITIC GRAVE, GEMAI
a. 5-X-29. X-GROUP HOUSE, GEMAI

b. 5-T-27. CACHE OF BASKETS IN X-GROUP CEMETERY, ABU SIR
a. 5-T-1. CHURCH, KISINARTI

b. 5-X-1. INTERIOR DETAIL OF CHURCH, GENDAL IRKI
a. 5-O-16. EARLY CHRISTIAN 'TAVERN', ABD EL QĀDIR

b. 5-T-29. CHRISTIAN TOWER, ABU SIR
Cemeteries

Three X-Group cemeteries were investigated in 1961-62. In the large Matuga necropolis (5-T-36) twenty X-Group graves were excavated. All were of the lateral-niche type, but they differ markedly from both Meroitic and Christian lateral-niche graves in having relatively shorter and wider grave shafts, as required for the introduction of contracted rather than extended burials. Only one grave at Matuga had a circular stone tumulus, the others, if any, having been entirely eroded away. All of the graves were thoroughly plundered, and only a very few objects were recovered.

A cemetery (5-T-27) in the Abu Sir district proved to be of special interest. The site included several large circular stone tumuli and a larger number of graves marked by a rectangular paving of stones, and was therefore presumed to be of both X-Group and Christian date. About one-third of the total area was excavated, comprising three tumuli, one deep end-chamber grave, and nine smaller graves. Upon excavation it was discovered that only two of the graves, both with tumuli, belonged to the X-Group period. The third tumulus, the end-chamber grave, and all of the smaller graves contained typical dorsally extended Christian burials without offerings. There is no evidence, as at 5-X-40, that the tumulus and end-chamber contained intruded Christian burials, for no disturbed bones or spoil were found in the shafts, and the grave chambers themselves were of the slot-like Christian form which could only accommodate an extended burial. It is apparent, therefore, that in this case earlier grave forms survived into the beginning of the Christian period.

The two genuinely X-Group graves at 5-T-27 had been plundered, but yielded a number of interesting objects nevertheless. One grave contained a pair of decorated coiled baskets, the legs of a crude angareeb which hardly differ from those found on the native beds of today, and several small round loaves of dura bread similar to modern shamsi. The second X-Group grave contained a leather quiver and harness of the type previously found at Ballana.

A discovery of outstanding interest at 5-T-27 was a group of 34 utility baskets, which had presumably been used to carry earth in the process of grave-digging and filling. They had been nested together after the fashion of modern guffas and cached in a borrow pit at the edge of the site (PLATE IV, b), where they were eventually covered by sand. The baskets are plaited from split palm leaves like the guffas of today, but are only about half as large. Only two specimens have loop handles.

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60 Reisner’s ‘Byz’ type IV (ASN, 1907-1908, i, p. 307).
61 Originally noted by Wheeler; see Kush IX, p. 104.
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CHRISTIAN SITES

More than one-third of the sites recorded during the 1961–62 season belong to the Christian era, and of these the majority apparently date from the latter part of the period, after about A.D. 1000.63 Christian sites include churches and chapels, fortifications, domestic structures, pottery kilns, cemeteries, and a single rock picture site.

Churches

Six buildings investigated during the 1961–62 campaign appear to be churches or chapels. Four of these (5–T–1, 5–T–2, 5–T–4, 5–X–44) are of the conventional basilican or dromos plan,64 consisting of nave with parallel aisles north and south, semi-circular apse (haikal), and small rectangular rooms at each corner. As is usual in this area65 there was in each case a narrow passage behind the apse connecting the northeast and southeast corner rooms. Only in one case (5–T–4) was there a stairway within the southwest corner room leading to upper galleries or to the roof.66

The church at Abu Sir (5–T–2; FIG. 5, b) was clearly an elegant structure in its day, for remnants of brightly coloured frescoes can be seen at several points in the building, and a few fragments of ornamental stone grillwork were found in the fill. The walls are comprised of stone masonry up to a height of 160 cm. surmounted by brick. The building was largely intact when visited by Cailliaud in 1822;67 his sketch68 shows a dome covering the central bay of the nave. The church has since been severely damaged by use as a goat pen. On the basis of associated potsherds it can be readily dated to the early Christian period.

The church at Kisintari, 5–T–1 (FIG. 5, a and PLATE V, a), stands on the summit of a rocky promontory visible from a considerable distance, and has given its name to the island on which it is located.69 It is almost identical in

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63 For descriptive purposes Christian sites are here designated as Early (c. A.D. 550–850), Classic (c. 850–1100), and Late (c. 1100–1350). Unless otherwise noted dates are based on pottery, in accordance with the chronology published in KUSH X, pp. 276–85. Habitation sites are readily dated by associated refuse, but the dating of churches must often depend upon sherds built into the walls or found beneath floors. In general, therefore, dates for churches must be read as post quem.
64 See Mileham, Churches in Lower Nubia, pp. 11–12; Clarke, op. cit., p. 31; Monneret de Villard, op. cit., III, pp. 1–41.
65 Cf., Mileham, op. cit., p. 12; Clarke, op. cit., p. 32. See also Monneret de Villard, op. cit., III, pp. 7–8.
66 Cf., Mileham, op. cit., p. 12; Clarke, op. cit., p. 31.
67 Voyage à Meroë, III, pp. 260–1. See also Ampère, Voyage en Égypte, p. 519.
69 Nubian kisse, church, + n, connective, + arti, island. The church is listed in the Schedule of Historical Monuments (Legislative Supplement to Sudan Government Gazette, No. 840, dated 15 March 1952), but has not otherwise been published.
Fig. 5. BASILICAN CHURCHES

a. 5-T-1. KISINARTI
b. 5-T-2. ABU SIR
c. 5-T-4. GAMINARTI
d. 5-X-44. MEILI ISLAND
KUSH

plan to the Abu Sir church, and like it was surmounted by a central dome, part of which remains intact. The church and a few rude stone houses nearby are enclosed within a heavy fortification wall (see below). The whole Kisinarti complex belongs to the late Christian era.

On the island of Gaminarti is another late Christian church of the basilican plan (5–T–4; fig. 5, c), again occupying a high rocky outcrop. As at Abu Sir, the lower main walls were built of stone. The Gaminarti church is very much ruined, but enough remains to reconstruct the floor plan accurately. There is nothing to suggest that either this church or that at Kisinarti was ever decorated in the manner of earlier churches.

The small church on Meili Island,\(^70\) 5–X–44 (figs. 5, d, 7), made use of an artificial kom to gain elevation, much as did one of the churches excavated by Griffith at Faras.\(^71\) The location selected was a small mound containing the ruins of Meroitic houses (5–X–44; see above) which happened to furnish the highest point on this low and flood-swept island. In order to provide a suitable footing for the church a level rectangular platform, surrounded by a heavy stone retaining wall, was built on top of the mound. At a later date the entire surface of the mound was faced with mud bricks set on edge in heavy mortar, and this sloping pavement was continued upward over the earlier platform until it abutted against the outer walls of the church itself. The building was thus surrounded by a glacis or apron which sloped away in all directions for at least 5 m.

The Meili Island church was plain and conventional in design, and was finished throughout in plain tan plaster. However, before abandonment it had been subjected to a series of rather bizarre alterations. Several interior partitions were built which had the effect of dividing up the aisles into separate small rectangular rooms, and also of separating the first bay from the remainder of the nave, making it instead either an extension of the apse or a second sanctuary. Similar modifications were observed during the preceding season in the church at Gezira Dabarosa (6–G–7).\(^72\)

The whole church was of fairly late date, but excavation revealed that it had been preceded by an earlier and slightly smaller church, parts of whose foundations were re-used in the later building. The earlier church had been elaborately decorated in red and blue on white plaster. It had also, apparently, contained a considerable quantity of ornamental stonework, for many carved and decorated blocks, a piece of grillework, and fragments of a haikal pillar were found scattered about the site or buried in the floor fill of the late church. One detached block found near the church bore the graffito ἹΣΑϹΧΑ\.\(^73\)

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\(^{70}\) Noted by Caillaud (op. cit., i, p. 332) and Monneret de Villard (op. cit., i, p. 228), together with the ruins on two neighbouring islands, under the collective name Abdoum. See note 90 below.

\(^{71}\) LAAA, xiv, p. 57.

\(^{72}\) KUSH x, pp. 32–3 and Plate VII.

\(^{73}\) Suggesting a possible origin for the name of the island. The same explanation was offered by Griffith (LAAA, xiv, p. 103) for the name of Meinarti, some 20 km. further north. According to Bates and Dunham (Excavations at Gammai, p. 3) Meili Island is named for its first owner.
At Gendal Irki, a short distance north of Gemai, is a rather elaborate church, 5–X–1 (FIG. 6, a; PLATE V, b), which departs considerably from the conventional basilican plan and has been cited several times as a deviant form of Nubian church. The nave is considerably foreshortened, and the parallel aisles are replaced by rectangular rooms vaulted at right angles to the main axis, thus forming a transept and giving the main body of the church a cruciform plan. As in other Nubian churches, four corner rooms and a narrow passage behind the apse complete the layout.

Apart from its unusual plan, the Gendal Irki church manifests two architectural peculiarities which deserve special notice. One is the absence of the conventional semi-circular apse. That the building never included such a feature is shown by traces of painting on the flat east wall of the *haikal*, and by a continuous flagging of fired brick at the base of the same wall. The other peculiarity is the absence of a foundation course of upright brick under any of the walls.

There is of course no necessary functional relationship between these two aberrations. It is a striking fact, however, that they occur in combination also at the desert church at Faras East (Adindan), the Serra East churches, and Abd el Qadir, whereas there is hardly a known case of either occurring separately. Moreover, all of the churches in question depart from the conventional basilican plan, and those at Faras East and Serra East bear a considerable resemblance to 5–X–1. It seems, therefore, that Gendal Irki belongs to a special group of churches, deviating in many particulars from local tradition, which may have been the work of imported artisans, or perhaps a group of immigrants to Nubia.

The Gendal Irki church has been well known since the beginning of the present century, and appears in several published accounts. It has been fully excavated at some time in the past, perhaps by Crowfoot. The edifice is unusually well preserved, with most of the exterior wall standing to its original height of 4.5 m. The west wall of the nave bears portions of a large fresco in typical elongate Coptic style (PLATE V, b) and other remains of decoration are

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74 e.g. Mileham, op. cit., pp. 12–13; Clarke, op. cit., p. 32 ('Type B'); Monneret de Villard, op. cit., III, pp. 44–9.
75 See Monneret de Villard, op. cit., III, p. 112.
76 Ibid., pp. 185–8.
77 Ibid., pp. 200–5.
78 The site has been called by a bewildering variety of names, among them Figiranton (Mileham, op. cit., p. 12), Figir'antawu (Monneret de Villard, op. cit., I, p. 223), Gendal Irki (Clarke, op. cit., p. 50), and Melli (Borchardt, *Altägyptische Festungen*, p. 3). According to a local informant the ruins themselves should be called Figir Antawu, while Gendal Irki is the name of the neighbouring modern hamlet.
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found throughout the building. Also on the west wall of the nave are two substantial Coptic graffiti, one of which has been published by Griffith.\(^{81}\) The inscriptions are believed by Monneret de Villard to date from the middle of the 9th century.\(^{82}\)

The Gendal Irki church is accompanied by a complex of other buildings, most of which are clearly of somewhat later date (see below).\(^{83}\)

At Abd el Qadir, about 2 km. south of the famous decorated chapel (5-O-1),\(^{84}\) a small mud brick building (5-O-14) in a very ruined condition was excavated. The floor plan (fig. 6, c) shows none of the conventional features of a Nubian church, but the central room contains a well built pulpit or tribune of dressed stone surmounted by somewhat cruder masonry. In the refuse fill of an adjoining room was found an iron pendant in the form of a cross. (An identical pendant was found in one of the buildings at Gendal Irki.) The building at Abu Sir, be it church or chapel, dates from the very early Christian era.

Fortifications

Heavy fortification walls of the Christian period were encountered at three places in the Second Cataract. Two walled sites were located on the tiny, now uninhabited island of Nabash, immediately east of Mirgissa fortress at the head of the cataract. At the east end of the island, an irregular area about 200 m. long and 50 m. wide was enclosed by a wall (5-S-32), while at the west end an area four or five times as large was enclosed (5-S-31). The two walled areas together occupied about a third of the total surface area of the island.

The western site has been very much destroyed by flooding, but its eastern neighbour is fairly well preserved. In both cases the girdle wall follows a winding course from one promontory to the next, enclosing within it an elevated area of rocky hillocks. The walls are of heavy, dry stone masonry with a rubble core. The wall of 5-S-32, which is intact at many places, has a very prominent batter, diminishing in thickness from about 3.5 m. at the base to 2 m. at the top. This wall stands to a height of 4 m. in places, and to 3 m. along much of its length. The girdle wall of each of the two areas appears to have been breached by one land gate and one water gate.

\(^{81}\) Griffith, *Abhandlung*, p. 68; see also Zylahrz, op. cit., p. 187.

\(^{82}\) Op. cit., i, p. 224; iii, p. 45.

\(^{83}\) The eastern church at Gendal Irki, shown in a plan by Clarke (op. cit., pl. vii, fig. 2) and a photograph by Monneret de Villard (op. cit., II, pl. xcvii) has disappeared. The whole neighbourhood was intensively excavated in the course of the 1962 campaign, but no trace of such a building was encountered.


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Fig. 6. MISCELLANEOUS CHRISTIAN STRUCTURES

a. 5-X-1. CHURCH, GENDAL IRKI  
b. 5-O-16. ‘TAVERN’, ABD EL QADIR  
c. 5-O-14. CHAPEL (?), ABD EL QADIR  
d. 5-T-29. TOWER, ABU SIR
The two fortified areas enclosed a number of typical rude stone huts of the late Christian period. The larger, westerly site (5–S–31) apparently supported a considerable population, as indicated by the number of domestic structures and the accumulation of refuse within. There are also indications of an earlier Meroitic and X-Group settlement here, and it is possible that the girdle wall itself may pre-date the late Christian occupation. The easterly enclosure, although far better preserved, contains only a few huts and very little occupation refuse. This structure may have been laid out at a later date as a replacement for 5–S–31 when the latter was rendered uninhabitable by repeated flooding.

Why the late Christians should have been at such pains to fortify this tiny and unproductive island remains a mystery. Larger and more numerous hut settlements are found on most of the neighbouring islands, but nowhere else is there any similar defensive arrangement except at Kisinarti, where a much smaller area (5–T–1) surrounding the church and a few huts is also enclosed by a heavy stone wall. In this case the wall at least serves to protect the church, whereas on Nabash Island, and particularly at 5–S–32, there appears to be nothing worth defending within the enclosure.

It is possible that the importance of Nabash was strategic. The island lies midway in a direct line between the fortresses of Abkanarti and Mirgissa, and is so situated that it commands the point of divergence of the two principal channels at the head of the Second Cataract. It may, therefore, have served as a check point to control any traffic on the river which could not effectively be controlled from either bank.

Not far from the church of Abu Sir is a curious structure, 5–T–29 (Fig. 6, d; Plate vi, b) which may have served some military purpose. It is a round tower 7 m. in diameter and 6 m. high. The lower half of the structure is formed of a heavy rubble-filled stone wall, 1 m. in thickness, entered by a single narrow doorway at the east side. The lower storey was rather unevenly divided into three rooms by interior partitions of stone masonry, and the whole was covered by vaulting or a dome of mud brick. The upper half of the building, extending 3 m. above the stone masonry, was built entirely of mud brick, of which only the southern half of the outer wall remains standing. It was apparently pierced by a narrow embrasure or slot window on this side. The tower and adjoining surfaces yielded an abundance of pottery of the early Christian period, which would perhaps make it contemporaneous with the neighbouring Abu Sir church (5–T–2).

At first glance 5–T–29 suggests a fortified watch-tower. However, its situation appears to have no strategic value. It occupies the southern tip of a small island which is separated from the western shore only at the extreme high Nile, and the rocky outcrop on which it stands is by no means the highest one.

85 There is, however, nothing to suggest that this Pharaonic fortress was re-occupied in Christian times.
on the island. Moreover, it does not command any important arm of the river. Its function therefore remains as much of a mystery as that of the fortifications on Nabash Island.

Settlements

The whole of the Second Cataract area was obviously well populated during parts of the Christian era (see below). However, a few readily identifiable villages or colonies deserve individual mention.

South of Abd el Qadir, the small church or chapel previously mentioned (5-O-14) is surrounded by a group of early Christian habitations (5-O-15). These structures are hardly different from those of the preceding X-Group period (see above). They are detached dwellings of from three to six small rooms, built either of mud brick, very coarse stone masonry, or both. A very characteristic feature is the occasional use of a course of masonry composed of thin slabs of stone set at a diagonal to the plumb of the wall. Sometimes courses of slabs slanting in opposite directions are juxtaposed, giving the masonry a herring-bone effect. Such courses may alternate either with mud brick or with more conventional stone masonry. House walls are characteristically thin (average 25 cm.) and probably never stood much over 1 m. high, so that they must have been surmounted by some other, more perishable material.

One building at Abd el Qadir (5-O-16), made entirely of stone, was considerably larger than its neighbours, comprising some eight rooms and an enclosed courtyard (FIG. 6, b; PLATE VI, a). This structure was remarkable for the refuse found within and around it: thousands of fragments of imported wine amphorae,86 together with globular drinking cups and bowls. The building would seem to have been an inn or tavern.

The settlement, comprised of 5-O-14 (the chapel), 5-O-15 (the houses), and 5-O-16 (the tavern), is scattered along a rocky, barren hillside overlooking the river (cf. PLATE VI, a). Small as it is, it is the only recognizable habitation site for a considerable distance in either direction, and is of special interest as being the nearest known settlement to the mysterious decorated chapel of Abd el Qadir,87 which lies about 2 km. to the north, on a similar hillside.

The Abd el Qadir colony is even more remarkable as the only early Christian village site which was found during the entire third season’s survey on the west bank. Elsewhere an occasional individual house was found, or a scattering of sherds on a denuded surface, but nowhere was there any concentration of

86 These vessels belong entirely to two wares, Ware 22 and Ware 24, both of which were imported from Egypt in the early Christian period (see KUSH x, p. 275). They serve to fix the limits of occupation at 5-O-16 quite accurately within the period A.D. 600-750.

87 See, e.g. Clarke, op. cit., p. 54; Griffith, LAAA, xv, pp. 65-6.
remains. Apparently early Christian sites, like those of the preceding X-Group and Meroitic periods, have been largely destroyed by the floods of later centuries.

At Gandal Irki, a large complex of late Christian buildings (5–X–1) is located about 100 m. north of the church (see above). The nucleus of the group is a small but substantial mud brick building, perhaps part of a monastery, which may, like the church, date from the classic period. Ranged around it on three sides are a large number of crude structures which apparently belong to a later date. They are rather jerry-built of very coarse stone masonry surmounted by low mud brick vaults, and have a slightly different orientation from the central brick building. A notable feature of all the later structures is that their lower walls employ as chinking thousands of potsherds, representing for the most part wares of the classic and late Christian periods.

Although very much denuded, the colony at Gandal Irki certainly comprised at least one hundred rooms in total. It is probable that there were originally only two or three very large contiguous structures, of which some parts are now entirely missing. The very close grouping around a monumental central building suggests a monastic colony.

Directly opposite Gandal Irki, on a small island known as Kasanarti, is another substantial late Christian building of forty or more rooms (5–X–32), with some two-storey brick construction at the south end. This site was discovered too late for excavation during the 1961–62 season, and will be investigated during a later campaign.

Between the villages of Gemai East and Gemai West is a line of three small islands, all of which bear traces of Christian habitation. The most easterly of the three was not investigated, as it lies close to the east bank of the river. Extensive settlement remains were found on both of the westerly islands, Meili (5–X–43) and Amashkeit (5–X–12). The type of construction found here is the same as in the late houses at Gandal Irki: lower courses of rough stone surmounted by heavy walls of brick. The buildings, as usual, are irregularly clustered and adapted to the contours of the rock upon which they are built. A common feature of the structures is their small rooms and extremely low vaults—sometimes no more than 1·25 m. above the floor.

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88 Which, however, is definitely not the missing eastern church at Gandal Irki. See note 83.
89 This site is not the Kassa of Cailliaud (op. cit., i, p. 333; Monneret de Villard, op. cit., i, p. 228).
90 Collectively called Abdoum by Cailliaud (op. cit., i, p. 332), presumably because they stand opposite the mouth of the Khor Abu Dom. The easterly island, usually known as Diffi (for the prominent ruined church on its summit), is also sometimes called Um Dom. See also Monneret de Villard, op. cit., i, p. 228.
91 Called Abzarnarti both by Bates and Dunham (op. cit., p. 3) and by Monneret de Villard (op. cit., i, p. 228), but now locally known as Amashkeit. The ruins here were recorded in 1956 (Vercoutter, Report of the Antiquities Service and Museums, 1955–6, p. 4).
Fig. 7. 5-X-44 and 5-X-46. SUPERPOSITION OF CHRISTIAN AND MEROITIC REMAINS, MEILI ISLAND
KUSH

On the island of Dukule in the Second Cataract, two cylindrical pottery kilns (5-T-46) of the now familiar type were excavated. They differed in no significant detail from those investigated in previous seasons.\textsuperscript{92} The associated refuse suggested that they had been devoted exclusively to the manufacture of qadus (saqia pots).

Late Christian Settlement in the Second Cataract

Thirteen sites involving structures and refuse of the late Christian period were recorded among the various islands of the Second Cataract. However, any such individual numbering is necessarily arbitrary, for the whole region could as well be designated as a single enormous Christian town. There is hardly an islet, no matter how small or barren, which does not bear its share of rude stone huts of this period, and the sites that have been individually numbered (5-S-30/33, 5-T-1, 5-T-39/42, 5-T-45, 5-T-47, 5-T-52/53) merely indicate areas of especially concentrated settlement. So distinctive and so widespread is this pattern of late Christian occupation, not only in the Second Cataract but throughout the Batn el Hajar, that it merits a few words of special discussion.

The late Christian habitations are remarkable both for their character and for their location. They are built not on or adjacent to the alluvial flats, but all over the summits and slopes of the rocky hills and promontories which crown most of the islands. Often they occupy very uneven ground, resulting in irregular and sloping floors. The structures comprise very simple huts, built largely or entirely of rude stone masonry. A few are free-standing, more or less rectangular houses of from two to six rooms (e.g. FIG. 4, c), but by far the greater number are rectangular or semicircular huts built against rock ledges or outcrops, either singly or in connected series. The rooms in either case are always small, rarely exceeding $2 \times 3$ m., and are usually not internally connected. Floors are in most cases native rock, sometimes partially levelled with a filling of hard mud.

The larger huts generally have heavy, rubble-filled walls 50 to 60 cm. thick, but many huts are walled merely with dry-piled slabs and a little chinking. An outstanding and universal feature of the more substantial huts is the enormous quantity of sherds, usually from the classic period but also to some extent from earlier times, which are used as filler in the walls.\textsuperscript{93} In marked contrast, the interiors of the rooms have yielded virtually nothing on excavation, and the few sherds which they contain have belonged definitely to the late Christian period. A few rooms have had hand-made cooking pots\textsuperscript{94} buried in the floor, as is

\textsuperscript{92} Kush x, pp. 62–75.

\textsuperscript{93} The excavation of the late rooms at Gendal Irki (5-X-1), which were similarly constructed, yielded something like 40,000 sherds, of which the great majority came from the collapsed walls.

\textsuperscript{94} Ware 27; see Kush x, p. 276.
common in earlier Christian houses, but the practice seems to have been uncommon. Partly because of extremely haphazard construction, the late Christian huts are nearly always found in dilapidated condition, with standing walls seldom reaching 75 cm. Nothing remains to indicate how the structures were roofed. However, mud brick is conspicuously absent from all these buildings, and it therefore seems unlikely that they were vaulted. More probably they were covered by small timber, matting, and straw, in the manner of modern Nubian houses.

Late Christian huts are widely scattered among all the islands, and there is hardly a hill or boulder without its hut. The structures are generally clustered in groups of at least half a dozen, and some of the larger villages comprise as many as fifty huts within a radius of 100 m. Examples of such concentrated communities are 5-S-30, 5-T-42, 5-T-45, and the large walled community, 5-S-31, on Nabash Island. In general, the huts themselves have been found to be so poorly preserved and so devoid of internal features that their excavation has not been considered worth-while. By way of sampling, about thirty rooms at various sites\textsuperscript{85} were fully or partially excavated during the 1961–62 season.

Features constantly found in association with late Christian settlements are soil retaining walls. The whole of the cataract region and in fact the valley of the Nile throughout the Batn el Hajar is intersected with such walls, running from hill to hill across most of the high-water channels and alluvial flats close to the river. They are always heavy and massive, 1 m. or more in thickness, and built throughout of heavy stones without rubble or mortar. In a few places such walls run for more than 100 m., but the majority are much shorter. Their height seldom exceeds 1 m.

The whole pattern of late Christian occupation in the cataract region points clearly to a very high level of the river at this time, which had the effect of driving the inhabitants from the flood plain and at the same time destroyed most of the traces of their earlier settlements. That such settlements did indeed exist is attested by the quantities of classic and early Christian sherds which are employed in the walls of the hillside huts. Many of the structures give evidence of hasty and improvised construction, and it is probable that the builders deliberately raided the refuse dumps of their earlier homes as a ready source of rubble fill. Considering the inferior nature of many of the dwellings, they would appear to be no more than high-water refuges; during most of the year the inhabitants probably continued to live on the alluvial flats, in temporary dwellings of matting and straw, as do the modern inhabitants of some of the low islands further north.

Additional evidence for the very high Nile of late Christian times is offered by the elevated locations selected for the churches at Kisinarti, Gaminarti, and

\textsuperscript{85} Excluding 5-X-1, which was excavated in \textit{toto}.
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Meili Island (see above). By contrast, the earlier churches of Abu Sir and Mrgissa stand on or immediately adjacent to the flood plain, and both appear to have been damaged by floods. Soil retaining walls in their turn reflect the efforts of the Christian inhabitants to salvage what cultivable land they could from the ravages of the high Nile. It is notable that some of these walls are found at levels which the river has probably not reached for centuries, for in places along the west bank they are deeply buried in desert sand.

The settlement at Gendal Irki (5–X–1) seems to tell a complex story of the retreat of its inhabitants in the face of the rising river. The whole community, consisting of a church, another substantial mud brick building, and a cluster of crude houses (see above) occupies an elevated terrace some 4 or 5 m. above the present flood plain, which lies immediately to the east. The church and perhaps also the neighbouring mud brick building belong apparently to the beginning of the classic period. By contrast, all of the surrounding houses are markedly different in construction and clearly date from a later period, although their walls contain tens of thousands of classic sherds as filling. It would seem, then, that the builders of the church originally occupied the alluvial plain beneath it, but were later driven up onto the same terrace, where they hastily constructed new homes utilizing trash from their abandoned village as wall bonding. This jerry-built sub-division in the end surrounded and nearly engulfed the older buildings.

Cemeteries

Twenty Christian cemeteries were recorded during the third season’s survey, varying in size from perhaps a dozen to several hundred graves. The number of individual burials involved probably exceeds the total for all other periods, including post-Christian, combined, and indeed it is a rare Meroitic, X-Group, or Moslem cemetery which does not also contain Christian interments. Parts of several Christian cemeteries were mapped, but only enough graves were excavated to establish the identity and the grave types present.

A majority of the Christian graves had no superstructure or other marking at the surface. This was particularly true among the islands of the Second Cataract, whose surfaces have been subject to repeated flooding. Where present, a wide variety of surface markings was found, with a general though not entirely consistent evolutionary tendency from more elaborate toward simpler forms. As previously noted, the earliest Christian burials in the large X-Group cemetery 5–T–27 were associated in one case with an X-Group tumulus and in another with a deep end-chamber, although in each instance the shape of the grave pit itself showed that it had been prepared for an extended (i.e. Christian) interment. Another Christian grave surrounded by a tumulus of the X-Group type was found near Mrgissa (5–S–23).

Other early\textsuperscript{97} Christian graves are marked at the surface by a solid rectangular paving of mud bricks on edge, a hollow rectangle of bricks on edge, a rectangular paving of flat stones, or a rectangle of stone masonry set in mortar and covered with white plaster. Graves of the latter type often have a flat mud paving extending along the base at the west end, with a small ‘lamp box’ of upright slabs or bricks built upon it and separated by a few centimetres from the main body of the grave covering. In all other types of graves the lamp box, if any, directly adjoins the remainder of the superstructure, at the centre of the west end. However, many Christian graves of all types do not have lamp boxes.

The grave with brick superstructure remained in use throughout the Christian era with little modification. It was always formed entirely of bricks set on edge, usually comprising two outer rows of bricks at right angles to the axis of the grave and two inner rows parallel to the axis of the grave. The lamp box when present formed an extension of the inner rows of bricks to the west of the superstructure. Apart from this more or less constant form, the only superstructure commonly found on later Christian graves was a line of upright stones outlining the grave pit itself, or sometimes a rough covering of stones over the grave pit.

The Christian grave pit is always a narrow, slot-like shaft 1.5 m. or more deep. At the bottom it may have a small lateral recess, a vertical recess at the side of the floor, or a vertical recess in the centre of the floor,\textsuperscript{98} the body in each case being ‘roofed over’ with slabs or bricks resting on the edges of the recess. However, a great many Christian graves have no recess at all, and no effort to protect the body except perhaps for a couple of bricks propped across the face. Curiously enough there does not appear to be any definite sequential relationship among the different types of grave pits. The side-chamber grave, although always in the minority, continued in use from the Meroitic through the X-Group and Christian periods, and remained the common type of early Moslem\textsuperscript{99} grave as well. The plain grave without a niche or recess is a purely Christian development, but certainly began almost at the outset of the era and continued throughout.

Vaulted family tombs would also appear to have been in use during the whole of the Christian period, although they were never very common. Those found by Griffith at Faras\textsuperscript{100} certainly date from earliest Christian times. During the 1961-62 season vaulted tombs of the classic period were found at Gaminarti (5-T-49), and very late vaulted tombs were found at Meiili Island (5-X-45).

\textsuperscript{97} The dating of Christian graves is based partly on the pottery type of the lamps and cups found in them, partly on the known age of some of the churches and settlements with which they are associated, and partly on their relative level above the Nile.
\textsuperscript{98} Reisner’s Byz. types vi–viii (\textit{ASN}, 1907–1908, I, p. 307).
\textsuperscript{99} A number of early Moslem graves in Christian cemeteries were opened by mistake, and all proved to be of the lateral-niche type. \textsuperscript{100} \textit{LAAA}, xiv, pp. 67–81.
The use of mortuary lamps in conjunction with Christian burials remained common at all times. The lamps themselves show a clear-cut developmental sequence which is of considerable value for dating the graves in which they are found. Early Christian lamps are of the 'Aladdin' type: small, bottle-like affairs with two orifices in the upper surface, one in the centre for filling and one at the edge for the wick. The finest of these lamps, imported from Egypt, are slightly elongate in form, made in moulds, and are covered with elaborate relief decoration. Locally made lamps of the same period are wheel-made and symmetrical. In either case the handle is a small curl of clay, never a loop, at one edge. Such lamps are sometimes accompanied by small cups or bowls which apparently served as censers. In classic Christian times the typical lamp was an open, saucer-like affair closely resembling a candle-holder, with a loop handle at one edge. Late Christian lamps were simple hemispherical cups without handles, often extremely crude and hand-made.

At the end of the Christian period, as at the beginning, an era of transition can be discerned. Most of the late Christian cemeteries in the Second Cataract region also contain Moslem graves, a phenomenon which is hardly surprising in view of the scarcity of arable land on many of the islands. What is of interest is that there is in some cases a definite 'transition zone' in which Christian and Moslem graves are quite carefully interspersed, in a conscious effort to avoid intrusion upon earlier remains. This practice undoubtedly marks the threshold of conversion to Islam, when respect for the recent dead was still strong enough to override religious animosity or indifference.

**Unidentified Sites**

During the course of the survey a fairly large number of sites was recorded which could not with certainty be assigned to any definite period. They consist usually of single empty graves scattered throughout the region in question, some on the gravel terraces around Mirgissa fortress, some among the flat-topped sandstone ridges between Abd el Qadir and Abu Sir. The graves were unmarked and sometimes located in crevices. On one site west of Gendal Irki human bones were discovered in a disturbed state inside a natural cave (5-X-35). The burials were, when preserved, normally extended on their backs. In a few cases potsherds, possibly of Pharaonic date, were found together with the burials. Most of the graves may, however, originate from travellers, soldiers and nomads passing through the region at any time in antiquity.
THE fieldwork in the second season was on a far larger scale than during the first year. As a rule we had between 100 and 150 workers and five Quftis, and the staff varied between 10 and 15 members.

The expedition arrived in Wadi Halfa on 4 November and left on 20 March. Mr B. Schönbäck was Field Director during the first half of the season and left Wadi Halfa on 3 March, and I took over from 17 January, when part of the personnel was exchanged. The other members of the expedition were: from Denmark: H. Baumann (8.1–20.3), J. Å. Jensen (25.1–20.3), E. Oldenburg (4.11–1.3), K. Steffensen (4.1–20.3), F. Visti (8.11–20.3); from Finland: G. Donner (4.11–10.1), R. Holthoer (17.1–20.3), V. Luho (17.1–20.3), I. Ojamaa-Koskinen (11.11–20.3), J. Voionmaa (4.11–10.1); from Norway: S. Bjerke (17.1–20.3), T. Eikhom (4.11–10.1), S. Marstrander (17.1–20.3), O. Möllerop (4.11–14.12), R. Utne (4.11–18.1); from Sweden: B. Allard (4.11–10.1), J. P. Lamm (17.1–20.3), C. G. Widstrand (22.1–20.3), G. Widstrand (4.11–8.2).

As in the first season our headquarters were at Nag’ el Leithi in Debeira East, but for photographic work and as a base for the survey of the district south of Wadi Halfa we also had a house in the town.

For much help, many facilities and an unfailing hospitality we are greatly indebted to all the Sudanese with whom we came in contact. We wish to express our special thanks both to Sayed Thabit Hassan Thabit, Commissioner for Archaeology, for his very capable assistance and collaboration, as well as for all his personal friendliness, and to his staff in the Antiquities Service, the Senior Inspector in Wadi Halfa, Sayed Nigm ed Din Mohammed Sherif, the Keeper of the Khartum Museum, Sayed Sadik Nur, and the Chief Clerk in the Halfa Office, Hagg Gemal. Our indebtedness to the District Commissioner and Political Officer, H. E. Sayed Hassan Dafallah, is gratefully acknowledged for all his personal kindness and effective helpfulness. It is impossible to enumerate all the other Sudanese authorities which have given us so many facilities (the Government Workshop, the Customs Authorities, the staff of the Sudan Airways and of the aerodrome at Wadi Halfa and many others). We also wish to express our satisfaction with the local workers who showed great interest, application and
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quick willingness to learn more specialized work, and the fieldwork was also facilitated by the skilled assistance of our Quftis. Last, but not least, the hospitality and readiness to cooperate shown to us by the population of our district was of decisive importance both for our work and for our personal comfort.

THE SURVEY

Our main task was to complete the archaeological survey of the concession area from Faras at the Egyptian border in the north to Gemai in the cataract region in the south.

During the first season this territory was preliminarily surveyed and a general description has been given in the first report. Some 170 sites were noted, that is places with traces of human activity in ancient times such as graves, houses, rock-carvings, etc. but also loose finds of objects, these latter being included in our list of sites as they have often given valuable indications of the existence of more substantial remains of archaeological and historical interest in the neighbourhood. We have thus noted all places which can be of archaeological interest in the widest sense of the word. As a consequence, some of these sites will never deserve excavation, but may nevertheless be of importance historically and for the general outline of the archaeology of the area.

Further investigations this season showed that we had been right in our assumption that many more sites would be located during a more detailed survey. Owing to wind erosion and sand drift on the higher levels and the fact that the silt banks are covered with decomposed silt mixed with sand, the tombs and other ancient remains very often do not show on the ground and can be located only with the aid of trial digging or probing with an iron rod. We have now walked over all the ground again, but this time with a line of men probing the ground systematically with iron rods and making trial excavations on all suspected points. This method has been applied from Faras to Gemai, a distance of some 55 km., with the exception of the town district (inhabited areas not being included in our concession), parts of the vast plains around the aerodrome, and some higher areas which were reconnoitred by car only. Mr Donner was in charge of these operations from Faras to Jebel Sahaba and Dr Widstrand from Jebel Sahaba to Gemai.

As a result the number of sites registered by us now amounts to 292. Out of this total number, 16 are probably modern, 17 are places of loose finds, some 48 are undatable or so far undated cairns, five are undated tumuli (presumably some of them are X-Group) and 12 sites are pits or graves, which have also not been dated. Very often such tombs or cairns, in so far as we have examined them, are entirely plundered and empty and can only in some cases be approximately dated thanks to their form and general type.

1 Kush x, pp. 76.
THE SCANDINAVIAN JOINT EXPEDITION

Of the rest, 47 sites are Palaeolithic to Neolithic, 33 are rock carvings of different dates from prehistoric to Christian times, and 14 sites have A-Group remains (three of them noted already by Oric Bates). C-Group has been found in some 40 places, New Kingdom remains in 22, Meriotic to X-Group in 21 and Christian in 26.\(^2\) Eight sites denote churches within the territory, and there are the same number of fortified areas and three so-called ‘gold washing basins’.\(^3\)

In addition to small trial pits in many different places excavations were executed during the second season at about 60 sites. In all nearly 1,800 tombs were examined, three C-Group houses and some prehistoric sites. Moreover, the expedition excavated the tomb of Amenemhet at Sidi Oweis el Qurani on the west shore (see special report).

ROCK PICTURES

Many more rock pictures were located during the second season especially in the northern district and on higher levels which we had not had time to inspect more closely during the first campaign. Some of these pictures have been photographed and copied with the aid of latex prints and similar procedures, but a systematic recording has been postponed to the next season. A few rock carvings show Egyptian influence, but no more hieroglyphic texts were found this year.

PALAEOLITHIC AND MESOLITHIC

Some important discoveries were made concerning the oldest cultural stages of the area.

On site No. 182, about 4 km. to the east of the Nile and some 2.5 km. southeast of our headquarters in Debeira (near the Debeira railway station) excavations were executed by Dr Luho on a terrace approximately 200 m. above sea level. Here an area of at least 500 \(\times\) 750 m. shows such a concentration of stone implements and chips that practically all the loose stones on the surface seem to have been worked. Most of the implements are made of the usual brown and compact quartzite-like sandstone (redstone or ferricrete sandstone). The southernmost part of this area had been somewhat better protected against wind erosion than is generally the rule. Here trial excavations were made and it was possible to distinguish a stratification.

Under a very thin surface layer of 1–2 cm. of yellow sand there was a stratum of bright grey, sometimes yellowish, sometimes slightly reddish soil with shells, varying in thickness from 5 to 10 cm. Shells also occur in the upper part of the next stratum of reddish soil which is almost compact in its lowermost

\(^2\) The numbers are approximate as the dating of plundered sites is often rather uncertain. \(^3\) See Kush X, p. 103, with references.
part. The thickness of this reddish stratum varies from 10 to 40 cm. Between this layer and the solid sandstone rock there is sometimes, but not always, a yellow, compact stratum of decayed sandstone.

Whereas the implements from the two uppermost layers are all much eroded by the wind and lack sharp edges, those from the reddish stratum were all found *in situ* in an excellent state of preservation and with fresh edges.

According to the report of Dr Luho, one could notice that different types of implements are found in different strata. Thus the *coup de poing* of the late Acheulean type occur in the compact part of the reddish layer; Levalloisian-Mousterian implements come from the upper looser part of this reddish layer; and the types of the later Palaeolithic are found only in the bright-grey stratum and in the surface level of yellow sand. This later Palaeolithic is represented by some burins, flake-scrapers and flakes and by tanged points of Aterian type.

Such a stratification on the higher terraces has, to my knowledge, never been observed in the Nubian part of the Nile valley before and not only gives an indication of the relative chronology but also explains why we usually find a mixture of implements from different ages on sites of this type (cf. preceding report, p. 85). The investigation shows that the thickness of the layers varies to a great extent, and when the top layers are eroded by the wind, the implements will of course sink lower and lower and get mixed up with those of the lower layers. Finally, when the soil has been entirely removed by the wind, all the implements of different ages will remain on the decayed rock forming the basis of the stratification. This explanation, which undoubtedly holds true for this site, does not, however, necessarily apply to all other similar sites, some of which can have been workshops accessible and used during several periods.4

Two sites were investigated in collaboration with the Columbia University Expedition, and the results will be worked up by the members of that group.

Site 205 is behind the village Ikhtiarya in the Debeira district, not far from a place where we had found microliths during the first survey. Here a section was made in the so-called second or upper Unio shell terrace (23–24 m. above the river, c. 145 m. above sea level) and a geological profile was ascertained. Artifacts of an Upper Palaeolithic industry were found below the surface, probably associated with shells and therefore datable by the C14 method. These artifacts are of the same type as those found on the surface, where, to quote Dr Stigler’s report, there were also ‘worked stones of the industry loosely called Sebilian in this region but which, I believe, are more commonly associated with the lower, or first, Unio shell terrace of the Nile, although their presence on the second terrace is not unusual’.

On the surface fossilized animal bones were collected, including large buffalo, hippopotamus, gazelle and crocodile. Of greater interest, however, are fossilized human bones from another site, No. 113, south of Jebel Sahaba.

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4 Cf. Kush x, p. 85.
Fig. 1. A-Group sites north of Wadi Halfa
(Filled circles = intact tombs)
KUSH

They come from two individuals and are possibly associated with artifacts of the Upper Palaeolithic. If that is so, they would be the oldest human remains found in the Sudan so far.

A-GROUP

Of the two A-Group sites located during the first season one (No. 95 at Amintobirki—see first report, fig. 4) was entirely excavated. In this cemetery there was a mixture of A-Group and C-Group. Practically all the C-Group tombs were plundered, but some of the A-Group burials were still intact. They were of the ordinary type—round or oblong pits with the skeleton in 'hocker-position', on the left side with head in south or west—and again we found that some graves had been used on several occasions. In two of the richer tombs (Nos. 34 and 42) there were thus two layers, with one skeleton in the upper layer and two individuals placed side by side in the lower one. The finds included palettes of quartzite of the same type as those found last year. The ceramics were also of the ordinary Early Dynastic types, including a wine jar with a graffito of two birds, and deep bowls of rippled ware with milled rim.

The same types of ceramic were found also in other intact A-Group burials excavated at different sites from Faras in the north to an A-Group cemetery in the south near the Turkish fortress at Halfa Degheim (site No. 277), and in some more cases we found several burials in the same grave. Children's tombs were not rare (many of them occurred on site No. 292 on the plain to the south of Wadi Serra) and in one case (187/2) there was an adult skeleton in an upper layer, and three children, two of them new-born, underneath. One of these children was wrapped in a cloth. In this tomb there was quite a collection of beads of different materials—bone, fayence, and carnelian. A woman and a small child were also buried, e.g. in tomb No. 277/3. Objects of metal were comparatively rare, but on site No. 292 (FIG. 2) we found some copper chisels and an armlet of copper wire. From this site comes an ivory spoon, too (292/1:9), and from a site further north in Faras (No. 195) a stone mace-head covered with leather.

The majority of these tombs belong to the Early Dynastic period. An earlier stage was represented on a site (No. 291) immediately to the south of the wadi at Nag Shifadiq to the north of the Serra fortress. In this neighbourhood both on the site No. 25, which is mainly X-Group and Christian, and in the

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5 Kush x, p. 88; cf. Reisner, ASN, 1907–8, p. 325.

6 The following A-Group sites are recorded in our site list (with coordinates according to the AM map printed by the Sudan Survey Department in 1960) (see fig. 1): No. 25 (940–660) (pits only), No. 90 (see previous report), No. 95 (927–653) (see previous report), No. 187 (925.7–652.5), No. 179 (940.8–660.7) (loose finds only), No. 195 (944–663.4), No. 230 (?926.4–652.6), No. 277 (907.7–643), No. 291 (940.6–660.3), No. 292 (937.6–657.6).
C-Group cemetery No. 179 (see below, p. 56) there were traces of plundered Early Dynastic A-Group tombs in the form of empty circular or oblong pits and stray finds of A-Group vases (especially so-called 'wine jars'). The equally plundered cemetery No. 291 showed that the A-Group had used this burial-place already at an earlier date. Here we found some sherds of the same type as those published by Arkell in this journal—a grey polished ware with impressed patterns of zigzag-lines with several variants. Sherds with impressed zigzag curved continuous lines also occurred in a tomb near Halfa Degheim (No. 277/1) together with black-mouthed rippled ware of a type common in the Early Dynastic (e.g. in tomb 292/23), but the sherds from No. 291 are of a different ware.

C-Group

Since we have found C-Group remains on about 40 sites during the two seasons and have excavated some 1,100 C-Group tombs, it is impossible in a short report to give an exhaustive description of even the most important finds. I shall have to restrict myself to a few sites and aspects.

The distribution of the C-Group remains in the northern part of our concession is marked on Fig. 3. Further to the south there are a few plundered stone-rings (Nos. 108, 109) just south of Jebel Sahaba which may be C-Group.

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7 Kush III, pp. 95 f., pl. xi.
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Not far from the Turkish fortress at Halfa Degheim, there is a cemetery (No. 281) on a low sandy silt hill. The graves are difficult to distinguish because of the sand layer, but some black-topped ware was found in the test excavation. To the west of the road to Abka there is a disturbed area (No. 246) with stone-rings of C-Group date (coordinates 904.600–640.100). Finally, in the immediate neighbourhood of the village of Abka there are four cemeteries (Nos. 262, 264, 266 and 270), all of the same type. The surface is covered with badly disturbed rings of irregular stones, and many of these rings are connected with one another and have common sides. Examination of the surface and test excavations have yielded potsherds of black-topped and black incised wares of the ordinary C-Group types. Thus there is no doubt about the fact that these cemeteries belong to the C-Group even if the superstructures seem to differ from those found further north.

No traces of increasing Kerma influence towards the south could be noticed, but before these southern cemeteries have been properly examined it is impossible to pass a final judgment. In any case the territory surveyed by us seems to be all within the area of the C-Group. Just as further north, in Egyptian Nubia, we had occasional finds of Kerma ware and of tombs which could perhaps be styled as Kerma Group (e.g. our tomb 170/37, which contained four Kerma beakers, a vase of Egyptian ware, a bronze razor of Egyptian type—also occurring in Kerma—an arm-ring of bone, bone plaques decorated with simple geometrical designs, beads of fayence, and no less than 17 Hyksos scarabs; see PLATE VII, a, b). But no tombs of the classical Kerma type have been found so far in our district, and e.g. the ware of the Kerma beakers, so easily distinguishable also in sherds, is comparatively rare and even sherds of the ‘teapots’ are non-existent.

Whereas our finds do not, as yet, seem to throw much new light on the problem concerning the connexion between C-Group and Kerma Group, the interrelations between the late C-Group and the Pangrave people will have to be reconsidered. Black-topped bowls with set off rim, and some incised wares closely resembling, if not identical with the Pangrave ceramic, as well as burial customs such as the custom of placing painted animal skulls around the graves, and many other details in our material illustrate the affinities between some of our late cemeteries with the Pangraves in Egypt.

The distribution of the C-Group cemeteries in the northern part of our concession (FIG. 3) in my opinion explains the location of the Middle Kingdom fortress at Serra. I have already long ago stressed the connexion between the Egyptian fortresses and the concentrations of C-Group population, as visible from the distribution of their cemeteries, and have suggested that the fortresses of Faras and Serra were built to supervise the C-Group population. That it

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8 Cf. my Ägypten und Nubien, p. 129. 9 op. cit., p. 85.
Fig. 3. DISTRIBUTION OF C-GROUP AND NEW KINGDOM SITES NORTH OF WADI HALFA
(Filled circles=C-Group cemeteries, squares=C-Group houses)
PLATE VII

a
THE KERMA INFLUENCE. TOMB NO. 170/37. DEBEIRA

b

Weapons from C-Group Tombs. (Battle-axe from site No. 47; dagger from site No. 65)

facing p. 54
PLATE VIII

a

FAVENCE BOWL WITH DANCING BES. FROM C-GROUP TOMB NO. 176/39, DEBEIRA

b

FAVENCE BOWL. FROM NEW KINGDOM TOMB NO. 183/210. QUADRUS
a. SACRIFICE OF PAINTED OX-SKULLS IN TRENCH AROUND C-GROUP TOMB. SITE NO. 47. DEBEIRA

b. SACRIFICE OF PAINTED OX-SKULLS IN TRENCH AROUND C-GROUP TOMB. SITE NO. 47. DEBEIRA

c. SUPERSTRUCTURES OF C-GROUP TOMBS. SITE NO. 179. SHIRFAQIQ, SERRA

d. SUPERSTRUCTURES OF C-GROUP TOMBS. SITE NO. 178. DEBEIRA
a. PAINTED STUCCO MASK FROM NEW KINGDOM TOMB NO. 280/245. SHIRFADIQ, SERRA

b. BATTLE-AXE FROM NEW KINGDOM TOMB NO. 185/108. QUADRUS
SCARABS FROM C-GROUP CEMETERY NO. 170 (and row No. 1; 4th row Nos. 1 and 3; 5th row No. 3; 6th row No. 5) AND FROM NEW KINGDOM CEMETERIES NOS. 177 (3rd row No. 3) AND 185 (the rest)
was a supervision rather than a protection seems plausible from many facts, on
which I shall not enter here.\textsuperscript{10} Suffice it to stress that we have found weapons
in C-Group tombs this season (daggers on site No. 65, a battle-axe on site
No. 47; \textit{Plate VII}, c, d), and that the alleged absence of weapons in the C-Group
is no argument for the hypothesis that the fortresses should protect the C-Group
from more warlike tribes.

The fortress of Serra is situated on a barren plateau which goes down to the
Nile and follows it for a distance of about 3 km. This plateau is a natural glacis
to the fortress and protects it from assaults from the population centres to the
north and to the south, far more effectively than if it had been situated in the
cultivated areas. The fact that there was an ancient population concentration
to the north of the fortress is illustrated by the C-Group cemeteries Nos. 179
(238 tombs at least), 193 (unknown number of tombs because of plundering),
197 (some 30 tombs) and the remains of a house on site No. 194. To the south
of the fortress the C-Group cemeteries begin immediately to the south of Wadi
Serra with No. 38 (excavated by the Chicago Oriental Institute Expedition), a
group of smaller cemeteries on the plain south of the wadi—Nos. 201 (c. 26
tombs), 202, 203, 204, and 207—and then follows the big group in the neighbour-
hood of our headquarters—Nos. 35 (80 tombs), 47 (159 tombs), 176 (95), 170
(47), and C-Group house No. 147. Further south C-Group cemeteries of
different sizes occur all the way down to Jebel Sahaba (see \textit{Fig. 3}).

In the first season's work cemetery No. 65 at Kom Sahaba seemed to
represent the oldest stage of the C-Group to judge from some button seals found
there. This very extensive cemetery was fully excavated, but proved to be
almost entirely plundered. Nevertheless, it yielded some interesting finds such
as a dagger with ivory handle and rivets covered with gold (\textit{Plate VII}, d), a mace
head and an anklet of stone, a bronze mirror, and amulets of carnelian. The
superstructures were much damaged, and consisted partly of stone-rings, partly
of rectangular constructions of mudbrick oriented north–south.

The earlier C-Group was also found on cemetery No. 179. The majority
of the tombs have well preserved superstructures of the ordinary type—large
rings of horizontal sandstone slabs (\textit{Plate IX}, c). A few tombs have a mud-
brick vault of the type found towards the end of the C-Group. Most of these
more conspicuous tombs were badly plundered. Between and partly under the
superstructures of the larger tombs were a lot of tombs with very small stone
superstructures or no covering at all. Thus the tombs in this cemetery can be
dated not only by means of the finds, but also by means of the stratigraphy of the
tombs. Some stelae of the ordinary C-Group type were found in a fragmentary
state of preservation. Most of the ceramic occurred on the surface as offerings
outside the superstructures. One pot had an incised design with figures of
animals and men in the typical C-Group style. A female idol and a clay sculpture

\textsuperscript{10} Cf. op. cit., pp. 40 f.
of an ox were also found outside one of the tombs. Some A-Group jars had been re-used here, and the black-topped and incised wares are of a good quality spanning over a fairly large period.

Among the objects giving a chronological outline are a very beautiful button seal of First Intermediate date on one hand and some Hyksos objects on the other. Only a few pots or objects were found in the tombs even in the few cases where the shaft was intact, but among the stratigraphically older tombs four small children’s tombs yielded a nice collection of objects. In two of them there was a bronze mirror, in the third tomb the child had one gold and two silver necklaces, three silver arm-rings, gold beads and a loin-cloth with bead embroidery (a similar loin-cloth also occurred, e.g. in cemetery No. 65). The fourth individual had a solid golden ring around the neck. In a similar tomb an unusually large mirror with a wooden handle was found.

Under one of the C-Group shafts a Meroitic tomb had been inserted. It had escaped plundering and yielded well preserved ceramic.

Already the cemetery No. 35 (near the tomb of Djehty-hetep), which was excavated last season, was of interest for the study of the last phase of the C-Group and its transition into the Egyptian New Kingdom civilization. A group of cemeteries in the neighbourhood excavated this year bear on the same problems, and all date from the Hyksos period and the beginning of the xviiith Dynasty.

One of them, No. 170, was tested last season and has now been entirely excavated. To judge from the tomb mentioned above (p. 54) and from other finds, the tombs of No. 170 date from Hyksos times and are slightly earlier than No. 35. The superstructures and the tombs which are badly damaged are of different types. Sometimes the shaft is covered with mud brick and has a small offering niche on the north side. Many offerings in the form of vases, especially black-topped bowls, were found outside the tombs. In a small trench there were four skulls of gazelles painted with dots in different colours.

Such trenches with rows of skulls of various horned animals, decorated with painted designs in the form of dots, eyes or geometrical patterns, as a rule surrounded the burial shafts on cemetery No. 47, on a jebel slope just north-east of No. 35 (Plate IX, a, b). Offering pits packed with animal horns also occurred without being connected with any special tomb. Only one tomb was intact. The skeleton, in ‘hocker-position’ on the left side with head in the east facing south, had armlets of the ordinary rectangular plaques of mother-of-pearl, and a large number of beads belonged to a head-dress. Among the pots in this tomb was a small black-polished jug of Tell el Yahudieh type. There were also several Egyptian ring-stands, one with an incised fish and a star. Some bronze implements such as a battle-axe (Plate VII, c) and a pair of tweezers were also among the

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11 See Aniba, i, p. 45 with references in note 5.
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finds. The Kerma influence was here represented by some sherds of beakers as well as possibly in a rectangular shaft tomb with a hole in each corner, perhaps for an angareeb.\textsuperscript{12}

On No. 35 we found a new type of C-Group superstructure during the first season, consisting of standing slabs around a core of rubble over the shaft which was covered with horizontal slabs. The same type occurred in a small cemetery, No. 201, where the tombs were plundered, but a nice canopic jar of white fayence had escaped the robbers. This cemetery is presumably contemporary with No. 35, i.e. early xviii\textsuperscript{th} Dynasty.

Together with the type with standing slabs another type with rough, irregular rings constructed of dark, hard 'ironstone' over a central shaft occurs both at No. 35 and at No. 201. This type entirely dominates cemetery No. 176 to the south of the tomb of Djehuty-hetep (\textit{Plate IX}, d). The stone-rings are often not very well defined. A lot of pottery was found outside the tombs, as a rule placed in a small offering niche built of slabs against the east side of the superstructure. The pottery is mainly of two types, rather large dark grey bowls decorated with parallel, impressed lines covering large parts of the surface\textsuperscript{13} and Egyptian ware, especially pilgrim flasks, and occasionally carinated vases with brimmed neck. This latter type dominated the Egyptian pottery of No. 35, but here the pilgrim flask is more common instead. There is also another striking difference between the two cemeteries, which are contemporary. Whereas the ordinary black-topped bowls were common in No. 35 this ware is rare in No. 176.

The very rough and barbaric tombs of cemetery No. 176 yielded some of the finest objects found in C-Group context. Beside a small pendant of fayence, picturing the goddess Hathor, and a bowl of blue paste of a very good quality, the most interesting finds came from a tomb with an exceedingly beautiful light blue fayence bowl decorated with a dancing Bes-figure (see \textit{Plate VIII}, a). Together with this bowl were six New Kingdom scarabs and a nice collection of amulets.

Thanks to these cemeteries the gradual disappearance of the C-Group civilization can be studied in detail, and a closer analysis will undoubtedly yield many interesting results concerning this acculturation phenomenon. Every cemetery differs from the other. In my opinion, this cannot be satisfactorily explained as resulting from a chronological difference, but rather indicates a division of the C-Group population into tribes and/or social groups who reacted to the advancing Egyptian civilization in individually different ways. Some groups kept traditional items which other contemporary groups had rejected and \textit{vice versa}—one group would still use black-topped bowls but not incised pottery, another would adhere to incised pottery in a later development but not to the

\textsuperscript{12} Cf. Firth, \textit{ASN}, iii, p. 39; Emery-Kirwan, p. 256.

\textsuperscript{13} A few similar sherds were found in No. 35; cf. first report, \textit{Kush X}, p. 94.

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black-topped ware still used by their neighbours. In the choice of Egyptian
wares one group would show a predilection for the carinated vases with brimmed
neck, another would prefer the pilgrim flask.

Another noticeable fact with regard to the use of the native pottery is the
absence of the ‘egg-cups’ with multicoloured incised patterns—a ware in other
places typical of the latest phase of the C-Group and found on the west shore at
Argin in a C-Group cemetery excavated by the Spanish Expedition.

As to the type of superstructure, the same rich variety from cemetery to
cemetery, all more or less contemporary, stresses the individuality of the groups.

The same acculturation phenomenon seems also to be discernible in the
settlements. Three C-Group houses were excavated this season. One
(No. 194) in the district of Faras was very damaged, but seemed to be of the
ordinary type with walls of standing slabs and the rounded form of rooms. This
is the type found, e.g. at Aniba and Amada.

Another house (No. 228; FIG. 4) further south in Nag Baba near the border-
line between the districts of Askheit and Debeira was comparatively well
preserved, especially the part of it which was built in the more traditional
C-Group technique with standing slabs. It is an oblong room with rounded
corners and is of special interest as the upper parts of the walls are intact, showing
the construction above the standing slabs at the base. This is very rare to find,
and in the parallels published so far, the upper parts of the walls are as a rule
destroyed. Next to this room are brick constructions—a rectangular room with
straight walls and a store in the form of a cupola, a type well known from Egyptian
pictures of grain stores and similar buildings. In these rooms the bricks are
used in the same way as the standing slabs, and are not laid horizontally, as if
the builder was not yet familiar with the proper way to use bricks. In narrow
walls separating departments in a store-room similar constructions occur in
Egyptian architecture, but to my knowledge hardly in the way it is used here.
The finds were all of C-Group types, but they contained nothing sensational.

The third C-Group house (No. 147) excavated by the expedition was built
exactly like an Egyptian house to judge from what is left. The rooms are
square and have ordinary mudbrick walls on foundations of stone. Had it not
been for the C-Group ceramic the house could well have been taken for an
Egyptian building. It is situated not far from the tomb of Djehuty-hetep and
the group of cemeteries in that neighbourhood, but it would be too daring to say
that these remains are part of the residence of the Prince of Teh-khet, which was,
however, probably somewhere not too far from his tomb.

**New Kingdom**

In the concession area there are quite a number of so-called New Kingdom
tombs, that is tombs dating from the beginning of the xviiith Dynasty and of an
entirely Egyptian type both with regard to their construction and their contents.
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As stressed in the previous report\textsuperscript{14} they are roughly contemporary with the latest C-Group tombs, which continue to exist at least to the reign of Tuthmosis III. It was also suggested that these burials do not belong to the Egyptian conquerors, but to Egyptianized Nubians less conservative than their contemporaries who still preferred to be buried in the traditional C-Group manner.

This hypothesis is now substantiated by some more facts. That Nubians in this neighbourhood and at this time could be buried exactly like Egyptians is clearly demonstrated not only by the tomb of Djehuty-hetep, known and published previously, but also by the pyramid tomb of his brother Amenemhet on the opposite shore (see below, pp. 159 ff).

The New Kingdom tombs in our concession are found in the immediate neighbourhood of the C-Group cemeteries, as if they were a continuation of them (see FIG. 3). Thus the New Kingdom sites Nos. 36, 37, 64, 146 and 174 (cf. previous report, p. 98), are connected with the C-Group cemeteries Nos. 35, 46, 47, 48, 170, 176 and 184. The New Kingdom cemetery No. 177 is a direct continuation of the vast C-Group necropolis No. 65, which again is not far from the largest New Kingdom site known so far, No. 185 at Quadrus, and the New Kingdom tombs of No. 280 are in the immediate neighbourhood of the C-Group site No. 179.

It is true that Nubian wares are rare in these tombs, but they are not very common in such C-Group cemeteries as No. 176 either. Nubian pots do sometimes occur in New Kingdom tombs\textsuperscript{15} and it seems \textit{a priori} more plausible that a Nubian should sometimes stick to his traditional pottery, than that a pure Egyptian would care to be buried with such wares.

The cemeteries Nos. 64 and 146 which were partly excavated in the first season have now been entirely examined. A new chamber tomb was emptied in No. 64 and some more tombs excavated in No. 146 without any conspicuous results. Nor were there any sensational finds in the few tombs of No. 177, all robbed and with a scaraboid bearing the name of Tuthmosis III as the only datable object (PLATE XI).

We had, however, a very rich collection of New Kingdom objects from site No. 185.

This cemetery is situated on the open square of the village Quadrus (or Fadrus as it is sometimes called) and is about 150 × 170 m. in extent. This season we excavated 63 × 90 m. and made trial excavations outside this area to ascertain the limits of the cemetery. The ground is covered with a layer of gravel 40 cm. thick from an unusually high inundation, and this layer has concealed the tombs entirely so that no traces whatsoever are visible on the

\textsuperscript{14} Kush x, p. 96.
\textsuperscript{15} e.g. a very debased, thick black-topped bowl in 185/69 and in 185/74, and a Kerma beaker in 185/84—the latter a tomb with a rich variety of Egyptian burial outfit.
surface. Thanks to this circumstance many of the tombs have escaped the tomb-robbers—in fact out of 218 tombs only 25 have been plundered. The tombs are cut in a layer of hard packed gravel mixed with sand, which is about 1.2 m. thick and rests on pure sand. As a rule the shafts go down to this bottom layer.

Most of the tombs have no superstructures but in some cases (see tomb No. 122; FIG. 5) a square built of mudbrick walls marks the burial place. The tomb itself is either a simple rectangular shaft or a shaft with a side chamber or rather a niche in the northern or southern long side of the shaft. Such a niche was as a rule closed with a brick wall. In 20 tombs the shaft is lined with brick and covered with a vault. They are orientated east-west, there is an entrance blocked with bricks at the west end of the burial chamber under the vault, and outside the entrance is a short dromos or an antechamber (see tomb No. 122; FIG. 5).

These vaulted tombs are as a rule plundered, but nevertheless contain many objects of interest. In one case (tomb No. 3; FIG. 6) the burial chamber is divided into three separate rooms. In each room a young girl had been buried, one of them had earrings of thick gold wire—a type very often found in these tombs—a kohl pot of ‘alabaster’, two bigger jars, a dish and a small beer bottle; the girl in the central chamber had three vessels—a jar, a dish, and a beer bottle—and the third girl was partly covered with ceramic vessels of different New Kingdom types, and had the usual gold earrings of wire spirals, some gold beads and fragments of a golden diadem. In all there were no less than 19 pots in this tripartite tomb.

As a rule the deceased is stretched out on his back or on his right or left side. ‘Hocker-position’ occurs in five cases only—two of which are children. The face was sometimes (perhaps even as a rule) covered with a mask of stucco, of which traces were found in quite a few tombs. Two such masks were in a good state of preservation and were still covered with gold leaf. The faces are very small but fragments show that the whole head and perhaps part of the chest were covered with painted stucco. Similar painted stucco masks were also found in cemetery No. 280 (see PLATE X, a) in the New Kingdom tombs Nos. 244 and 245, both of the type with a dromos-like shaft leading to an end-chamber. No. 244 was plundered and yielded nothing but the mask, but No. 245 was intact. It contained the ordinary New Kingdom pottery and two burials, one in the shaft and one in the chamber. The mask belonged to the latter, and numerous fragments showed that here, too, at least the chest of the body had been covered with stucco.16

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16 A well preserved mummy mask of this type with a very small face and a stucco cover decorated with feather patterns enclosing the head, the shoulders and the chest is exhibited in the Cairo Museum. It has the number 1 46, comes from el Asasif and dates to the Second Intermediate Period.
Fig. 5. NEW KINGDOM TOMB. SITE NO. 185. QUADRUS
Fig. 6. NEW KINGDOM TOMB. SITE NO. 185. QUADRUS
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One of the gold-covered masks of cemetery No. 185 comes from the very rich tomb No. 84 (see fig. 7), an ordinary shaft with side-chamber, where two individuals were buried. The elder one of these had two very nice, rather thick earrings and, in addition to the gold mask, an 'alabaster' kohl pot, and a very large collection of pottery, among which was also a Kerma beaker.

Fragments of a painted mask were found in the intact tomb No. 122 (see fig. 5), which yielded many New Kingdom ceramic vessels and some weapons—a dagger and an axe.

Weapons occurred in other tombs, too, mostly battle-axe heads of the ordinary heavy, compact type, but one has an openwork design of a running dog (plate x, b). A long dagger or rather small sword of the type usually called 'Hyksos sword' from tomb No. 68, with wood from the inlaid handle still preserved, and some tanged arrow or javelin heads of bronze should also be mentioned.

Among other bronze implements tweezers were fairly common, and a few razors also occurred.

Scarabs and scaraboids were frequent, sometimes even mounted in gold (plate xi). They are all of late Hyksos and early New Kingdom types and show a great variety. A few of them bear the names of well known individuals. Thus there is a scarab of the famous Hyksos Chancellor Hjoy, one with the title and name of the 'God's wife' Meryet-Amun, the sister and wife of Amenophis I, and the name of this king is found on several scarabs and scaraboids. Another scarab mentions the Carpenter (or Unguent-maker) of the King Redy-Ptah.

Quite a number of beads in the form of birds and insects were found, and among the personal adornments there was also a flat, round arm-ring of grey schist.

The pottery shows the whole repertoire of late Hyksos and early New Kingdom times, with the exception of canopic jars of which no single instance occurred. As is usual in this period foreign wares from the north were also present, here e.g. a Cypriote lentoid bottle of Base-ring I ware.

Among other vessels the most startling items were a light blue fayence bowl decorated with lotus flowers (plate viii, b) and a rare type of cylindrical 'alabaster' beaker of a very high quality.

As at least one third of the cemetery remains to be examined we have good hopes of more finds illustrating the civilization of this entirely Egyptianized group of the population dating from the late Hyksos period and the beginning of the New Kingdom.

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17 Cf. Petrie, Tools and Weapons, pl. v, pp. 135-6; see also Widstrand, African Axes, p. 155 with references.
18 See e.g. Hayes, The Scepter of Egypt, 11, p. 68, fig. 36.
20 JEA, xxxvii, p. 65 with references.
21 Cf. first report, Kush x, p. 92.
22 Cf. e.g. Sjöqvist, Problems of the Late Cypriot Bronze Age, pp. 35 f., type 3.
Fig. 7. NEW KINGDOM TOMB. SITE NO. 185. QUADRUS

1-32 ceramic; 32 Kerma beaker; 33 alabaster kohl pot; 34 golden stucco mask; 35 gold ear-rings

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MEROITIC

Immediately to the south of the big C-Group cemetery No. 179 (see Fig. 3) a number of Meroitic tombs were found mixed with New Kingdom tombs (see above, p. 56). Some of them were of the simple type, shaft with end-chamber, two (Nos. 239, 241) of the more elaborate brick built type (Emery-Kirwan, type W5).

In tomb No. 188 there was a pewter cup of the same form as Firth, ASN, 1910–11, 29d, 2, dated to Meroitic times by the pottery found in the same tomb (Emery-Kirwan, W-types IVb, Xe, XXXVI). A very similar cup of thin silver came from tomb No. 241 together with three Meroitic jars (types: Emery-Kirwan, p. 88, fig. 68, 2; p. 96, fig. 76, 1; p. 437, fig. 418, 3) and an offering table with an illegible, quite destroyed text (possibly Greek). The other tombs did not contain anything of special interest.

Fig. 8. MEROITIC (?) ANKLET OF BRONZE. SITE NO. 25. SHIRFADIQ. SERRA

To the north and north-west of this cemetery is the vast necropolis No. 25, which was test excavated during the first season and entirely examined this year. As mentioned above (pp. 52–3) there were traces of A-Group here, and quite a number of Moslem and Christian tombs mixed with the X-Group, which constitute the majority of the tombs. In an X-Group tomb we found a pair of heavy bronze rings around the legs of the buried individual (presumably a woman), which, to judge from the parallel in Firth, ASN, 1910–11, pl. 29, e 1–2, may be of Meroitic date (Fig. 8). They are decorated with a simple geometrical pattern.23

23 A very similar ring was delivered to the Antiquities Service and was said to have been found in a well on site No. 84 (Amintoberki); KUSH x, p. 104.
KUSH

A group of Meroitic tombs marked the southern end of this cemetery. They were of a very simple type with a roughly cut chamber at the bottom of an irregular shaft, and several chambers were connected with one another, partly because the separating parts of sandy silt, in which the chambers are cut, have decayed and disappeared. All these tombs, a dozen or so, were plundered, but the finds, especially in the form of painted pottery, were nevertheless of great interest. One tomb, No. 245, contained among other painted ceramic vases a large narrow-necked amphora with a Meroitic and a Demotic inscription painted in black on the shoulders (Plate XII, a), a fine globular vase of yellow clay with yellow slip with black-painted bands and fish-scale design on the body, a few cups of the so-called egg-shell ware (Emery-Kirwan, pl. 38, type No. xxxb), a 'water-drawer' of red clay (Emery-Kirwan, pl. 38, type No. xxviii), and—the most sensational of the finds—two beakers of transparent light green glass. One of them, which is more fragmentary, is a simple cup widening towards the rim in an elegant curve and is decorated with cut horizontal lines. The same simple decoration occurs on a glass from Karanog and among the finds of Professor Abu Bakr at Aniba. The other beaker (Plate XII, b) has a decoration in relief, the vessel having probably been blown in a mould; near the bottom there is a laurel wreath, and above that a Greek text, rather blurred, and therefore next to illegible, of the traditional type KATAKAIPE KAI EYΦPAIINOY. Just under the rim is a vine twig.

X-GROUP AND CHRISTIAN REMAINS

The majority of our X-Group finds, which form a fairly complete collection of the X-Group pottery, come from the vast cemetery No. 25 at Shirfadiq. The tombs are mainly of three different types, the first one closely related to the Meroitic pattern with a deep shaft and a rampart descending to a chamber; the second is the common X-Group type with a deep, oblong shaft and a somewhat deeper niche at the bottom along the longer side of the shaft. The third type is a relatively small tomb with a shaft having another, narrower shaft in the bottom. There are sometimes superstructures of mudbrick. In detail the tombs show a great variety and the cemetery is of interest for the typology of tombs of this period. They also illustrate the transition to the Christian and Moslem tombs, the former having sometimes a brick superstructure, in the west end of which there is a niche with an oil lamp. One of these lamps mentions the name of an anchorite (ABBA ONOΦPIOC). Some white-slip Christian

24 Both monochrome and multicoloured jars as well as sherds of barbotine ware with knobs of white paste (cf. Emery-Kirwan, pl. 38, no. xxxiii).
25 Woolley-Maciver, Karanog, pl. 39.
26 A far more elaborate design adorns the magnificent glass found by the Swiss Expedition at Kalabsha (see Neue Züricher Zeitung, 13 Okt. 1962).
27 See The Swedish Cyprus Expedition, iv, 3, pp. 137 f. with references.
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ceramic with a simple decoration occurred, but nothing of the great variety of
the Christian sites at Faras or in the region of the Second Cataract (e.g.
Abkanarti).

The X-Group pottery was rather monotonous, and was dominated by so-
called saqia-jars (Emery-Kirwan, Type vi), 'cups decorated with white splashes,
rough amphorae of ' Rillenkeramik ', and the ordinary types of rough jars with
or without handles (see the types Firth, ASN, 1908–9, pl. 50; Emery-Kirwan,
pls. 39, 40).

The human bodies were sometimes well preserved, and our collection of
textile and leather will undoubtedly be of considerable interest when it has been
properly prepared and studied. Sandals and dresses of leather or cloth, as well
as personal adornments in the form of bead armlets and necklaces and simple
finger-rings of bronze were often found on the bodies. In one case a woman
had a cord around her neck so firmly tied as to strangle her, and the tongue had
fallen out of her mouth. The same strangulation has been observed, e.g. in the
X-Group cemetery excavated by Professor Abu Bakr at Aniba.

Metal objects are rare, presumably because the tombs have been plundered
precisely with the intention of finding metal, which was always rare and valuable
in these parts. Some iron hoes of the same form as the modern turiya, some
awls, and arrow or javelin-heads (flat, lancet-shaped with tang and one barb) had
escaped the tomb-robbers.

In one rather early tomb there was a conical bone object, presumably an
archer’s loose, just like the similar objects found in the mounds of Ballana and
Qustul.28 Arrowheads of agate were also used by this population group.
A wooden stick used for kindling fire should also be mentioned.

The test excavations during the survey have revealed the existence of
X-Group and Christian remains all over the area with a concentration in the
region immediately north of Jebel Sahaba (Kashkush–Amintoberkî) and in the
neighbourhood of Abka village down to the plain of Gemai. On the eastern
shore of the second cataract as well as on the islands and on the Gemai plain up
to Abka many more X-Group cemeteries were found than those examined by
Oric Bates (the extent of his work was also examined by the survey party in this
area).

Three types of sites in the south district are characteristic of the late
periods.29 One is a type of cemetery which we have called 141-type, after the
site No. 141 (coordinates 905.475–640.500). On this site there are three
different grave superstructures: (a) flat mounds some 4 m. in diameter, and with
an outer rough circle of stones; (b) rectangular stone settings of different orienta-
tions, and (c) ill defined heaps of stone. The same types occur on many sites
(Nos. 157, 247, 257, 258, 268, 284), and test excavations have shown that they

28 Emery-Kirwan, Royal Tombs at Ballana and Qustul, pp. 233 ff.
29 In the following I quote largely from the survey report of Dr Widstrand.

67
are X-Group. Some of the tombs may be Christian, but the main Christian type are those found on sites Nos. 271, 272, 284, etc., i.e. rectangular holes in the silt with a common orientation. These sites will be examined in more detail during the next season.

Mainly on the islands (on sites Nos. 255, 256, 273, 274) there are house foundations consisting of walls about half a metre high and made of stones set with mud mortar. They are probably of Christian date, to judge from the sherds on some of these sites.

A further stage of destruction of houses from the late period is illustrated by some sites which we may call 'Abkanarti-plains', as they occur in a typical form around the Christian fortress of Abkanarti. 30

These plains (both to the south of the fortress and on the north-eastern part of the island) are covered with potsherds of late types to such an extent as to make the ground turn pink. Some remains of houses can be seen on the plain south of the fortress in the form of mud-heaps or irregularities of the surface. The houses, which were probably to a large extent roughly contemporary with the buildings inside the fortifications, have been torn down and the mud of the bricks re-used as fertilizer. Some parts of the plain have also been irrigated. The last remnants of the houses were removed not long ago, probably during or after World War I, and local people still remember them. The 'Abkanarti-plains' in their present condition are thus the last phase in the history of settlement, the result of the combined destructive achievements of man, time, and erosion, when the original houses and constructions have been worn down to a kind of penelopean strewn with potsherds. There are many such 'Abkanarti-plains' or denudation-plains in the south district, viz. sites Nos. 255, 272, 273, 274, 256, 283. Similar plains are furthermore found on the island west of Gemai, not far from PT 147 and on the plain west of Abka village. This latter plain is strewn with stone settings and heaps very similar to graves; they are not tombs, however, but only heaps of stones thrown out of the small irrigated fields. Such plains frequently occur on the islands of the cataract which must once have been much more densely populated than they are today.

The third type of site, presumably also of the late period, in the southern district consists of large walled-in areas (site Nos. 142, 168, 244, 278, 279). The last two are the best constructed, No. 278 having a clearly defined entrance in the walls which are always built of loosely set or laid stones. These stone walls may of course be the foundations for higher walls of mudbrick, though this is by no means certain. An attempt was made to date one of these walled-in areas, where practically no pottery sherds are ever found. At the north-east corner of No. 168 were some tombs in the immediate neighbourhood of the wall.

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30 This site was turned over to the Spanish Expedition this season, as we were not sure of having the time and economic resources for a proper examination of it.
THE SCANDINAVIAN JOINT EXPEDITION

The graves were probably rather recent, in any case not earlier than the late Christian period—a coin in one of them was illegible and gave no certain date. These tombs did not, however, extend under the walls, and a cut through the wall revealed a burial inside the wall itself, probably Christian, with the body on its back and head to the east.

These walled-in areas must have served some military purpose, either as military camps or as a refuge for the population. Cartouches were found in No. 278, but whether this and the other areas were fortified in Christian times or even as late as Kitchener’s days remains uncertain.
Preliminary Statement of the Prehistoric Investigations of the Columbia University Nubian Expedition in Sudan, 1961–62

by Ralph S. Solecki (editor), Jean de Heinzelin
Robert L. Stigler, Anthony E. Marks
Roland Paepe and Jean Guichard

Introduction

In conjunction with the UNESCO Nubian Monuments Campaign and the Antiquities Service of the Republic of the Sudan, Columbia University of New York sent an expedition to the Sudan in 1961–62 to investigate the prehistory and geology of part of the area to be covered by the heightened reservoir of the new high dam at Aswan in the U.A.R. The work of this archaeological salvage programme was financed under a grant from the National Science Foundation (NSF-G17942) of Washington, D.C. A high spirit of international cooperation prevailed in the work of the expedition from the outset, to which the offices of UNESCO contributed in large measure. Indeed, international harmony marked the composition of the expedition’s complement including American, Belgian and French nationals.

The investigations of the Columbia University-sponsored expedition in the prehistory of this part of the Sudan yielded especially good results, even though all phases of the work could not be accomplished this season. Africa, noted for its riches in prehistory, did not fail us. The countryside appeared like an open-air museum, with artifacts seemingly everywhere, with exception of course in those spots where occupation or preservation was impossible. Stone Age evidence ranged from Acheulian materials found in the hills bordering the Nile, to Protohistoric and Historic data in profusion in sites hugging close to the Nile. The main stream of cultural impulses of the hunting-gathering cultures from the Early to Late Palaeolithic and Mesolithic times seems to have stemmed from Africa to the south. In a reversal of direction, following up the life-giving Nile from the North, came the food-producing Neolithic, Protohistoric and later advanced cultures.¹ The expedition advanced all phases of previous knowledge in these regards, and prepared the way for a reassessment of the prehistory in this area.

The directors of the expedition were Prof. Rhodes W. Fairbridge, of the Department of Geology, Columbia University, and Prof. Ralph S. Solecki (most

¹ With the exception of the ‘C-Group’ cattle herdsmen.
FIG. 1. MAP OF PREHISTORIC SITES IN THE BATH-EL-HAGAR.
of the time in absentia), of the Department of Anthropology of the same institution. Prof. Fairbridge was concerned primarily with climatology, his specialty, as it pertained to geological evidences. Prof. Solecki directed the prehistoric investigations.

Assisting Prof. Fairbridge was Mrs Fairbridge, and their son, Kingsley Fairbridge. Other members of the party included from Columbia University, Prof. Robert L. Stigler, archaeologist, of the Department of Anthropology, and Mr Anthony Edward Marks, assistant archaeologist and graduate student of the Department of Anthropology.

The expedition also included three European scientists, namely Prof. Jean de Heinzelin, of the University of Ghent, Belgium, his graduate student assistant, Mr Roland Paepe, and Mr Jean Guichard of the Laboratory of Prehistory, University of Bordeaux, France, who completed the roster of prehistorians on the survey. Prof. de Heinzelin and his assistant were concerned mainly with the Palaeolithic cultures, and their relations with the geological history of this region. The expedition is thankful to the University of Ghent and the National Fund for Scientific Research, Belgium, for making the services of Prof. de Heinzelin and his associate possible to the expedition.

As part of the interdisciplinary work, Dr Dexter Perkins, Jr., of the Philadelphia Academy of Sciences, Philadelphia, contributed his specialty of palaeo-zoology to the expedition.

In September 1961, the Columbia University expedition received a licence from the Antiquities Service of the Sudan Government to explore in a prescribed area on the east bank of the Nile in the Batn-el-Hagar, which in English means 'Belly of Rocks'. This licence granted to the expedition a concession area extending from Gemai in the North to Firka in the South for purposes of prehistoric research (fig. 1). The research project of the Columbia University expedition was entitled 'Prehistoric Man and His Environment in Sudanese Nubia, Aswan High Dam Project'. This was the only expedition in Sudanese Nubia in this season licensed to engage solely in prehistoric investigations.

Prof. Rhodes Fairbridge, as the advance element of the party, arrived in Wadi Halfa on 28 October 1961, with his wife, son and Mr Marks. They were joined during the month of December by Prof. de Heinzelin and Mr Paepe, Dr Perkins, Prof. Stigler, and lastly by Prof. Solecki and Mr Guichard. The various members of the expedition departed from the Sudan at different times, the last member of the expedition leaving the area of survey on 11 February 1962. The total period spent within the area of research by the expedition was about three and a half months.

The main base of operations of the expedition was at Wadi Halfa, with a subsidiary base at Akasha, at the southern end of the concession. Two four-wheel drive vehicles were used as transport in the surveys. A fairly complete map coverage was available, including detailed topographic charts and aerial photographs. With the exception of the artifacts and materials found in the few
test trenches and cuts made by the expedition, all of the specimens were collected from the surface.

Essentially, there were three field groups working in their special fields of interest. These included (1) climatological and geological studies, under the leadership of Prof. Fairbridge, (2) archaeological and zoological under the leadership in the field of Prof. Stigler, and (3) geological and archaeological (the older stone ages) under the leadership of Prof. de Heinzelin.

In the body of this report, Prof. de Heinzelin is credited with the contribution entitled 'General Geology and Prehistory', with additional data on the prehistory by Prof. Solecki and Mr Marks. Mr Marks is largely responsible for the observations on the prehistory of the Batn-el-Hagar area. The section entitled 'Test Trenches at Locality 34' was compiled largely from a report by Prof. Stigler, with supplementary observations by Mr Marks. Finally the section entitled 'Human Skeletal Remains Found Near Wadi Halfa', was a compilation of the reports of Prof. Stigler, Messrs Paepe and Guichard, with invaluable observations by Mr Marks.

As mentioned above, Prof. Fairbridge concerned himself with the palaeoclimatological aspects of the Nile basin, as reflected in the geomorphological features of the area. His findings are detailed in a separate contribution. Dr Perkins has had to postpone his findings on the zoological remains until he could process the data.

On page 92 below will be found a bibliography which provides a history of previous prehistoric and geological investigations in the area.

**The Areas of the Concession Surveyed**

The concession area, between Gemai in the North and Firka in the South, is about 110 airline km. long. Following the river, the distance is about 135 km. The villages of any note in this concession on the east bank include, from north to south, Gemai, Saras, Murshid, Semna, Ukma and Akasha, situated in the only fertile alluvial flats in the area. Taking the 180 m. contour elevation interval (full reservoir pool) as the upper limit of the survey area within the concession between Gemai and Firka, there are four important broad, flat, alluvial areas, or 'bottomlands' in American terminology. These areas are at Gemai, Saras, Semna, and Akasha. In the rest of the concession, the 180 m. interval comes very close to the present limit of the Nile, leaving only narrow, constricted areas for survey.

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2 Two manuscripts, prepared for publication by Professor Fairbridge, entitled 'New Radiocarbon Dates of Nile Sediments', and 'Radiocarbon Dates from the Nile; a New Basis for Geology of Climatology and of Ancestral Man in Africa' were received at Columbia University in New York in August 1962. The radiocarbon dates include five determinations prepared by Isotopes, Inc., Westwood, New Jersey, on shell gathered at five localities in the reservoir area.

3 See pp. 96–107 below.
COLUMBIA UNIVERSITY NUBIAN EXPEDITION IN SUDAN

About 46% of the river km. distance of the Columbia University concession has been surveyed at the close of the season. The unexamined areas were bypassed because they were difficult of access by road, or the 180 m. floodpool contour interval and the river were close together. The areas surveyed include the following, from north to south:

1. From south of Khor Abu Dom to the end of the Saras plain at the point where the road cuts inland into the mountains, a few kilometres south of Khor Ahmad Sharif. Khor Sila was not totally examined. The numerous soil profiles observed appeared to be sterile of human occupational evidence.

2. From Khor Kidinkong at Ukma North to just south of Dakki. This area was surveyed along the alluvial plains and in the abandoned Nile channels south of Kulb East and Dakki.

3. Not within the floodpool limit, the tops and slopes of Jebels Brinikol, Dal and Firka were examined. A fortuitous wayside stop revealed the existence of an extensive workshop on both sides of the road between Khor Turkuman and Khor Muratt at Km. 92.

The following areas remained to be checked in the concession area at the end of the season:

1. From the northern limit of the concession at Gemai south to the neighbourhood of Km. 29, a distance of about 1 river km.

2. From just north of Semna, to Khor Kidinkong at Ukma North, a distance of about 55 km. along the Nile. Most of this region is a prime example of 'badlands' topography in the Batn-el-Hagar area. Practically inaccessible from any point by road, the area did not present priority targets.

3. From Kulb East to the southern limit of the concession at Firka, about 7 river km. There was little which would be affected within the 180 m. floodpool contour interval there.

GENERAL GEOLOGY AND PREHISTORY

A. Discussion and Geology

The primary purpose of the initial geological-archaeological investigations of Prof. J. de Heinzelin and Mr Paepe, was to locate and identify as many prehistoric (Palaeolithic and Mesolithic) sites as possible in order to try to interpret their stratigraphic and chronological position in the geological framework of this region. In order to do this, it was first necessary for them to obtain an appreciation of the broader outlines of the geological situation towards an interpretation of the formations in the areas of their special interests. No attempt was made to do a complete survey of any given specific area. Nevertheless, as it chanced, most of their investigations were made in the environs of Wadi Halfa (FIG. 2), where Palaeolithic materials were found apparently in more abundance than elsewhere in their surveys.
KUSH

The reservoir area is divided north-south into two natural physiographic regions by a sharp geological boundary (K. S. Sandford and W. J. Arkell, 1933, fig. 7, and Map). North of Mirgissa–Abu Sir–Wadi Halfa airport, the physiography is determined by nearly horizontally layered Nubian sandstone (Plate XIII, a). South of this demarcation line, the reservoir area is characterized by a black, forbidding topography consisting of pre-Cambrian age rocks. This is the famous Batn-el-Hagar area (Plate XIII, b).

The Nubian sandstones are a regularly stratified continental deposit ranging from Jurassic to Cretaceous in age. They are composed mainly of poorly consolidated yellow sandstone containing intercalated beds of blue sandstone, limonite, haematite, and indurated quartzite. The development of a platform landscape in this rock is involved in wadi erosion. Most of these practically horizontal platforms are structural surfaces which are capped and protected by a hard quartzite layer or a strongly indurated bed.

As one retreats from the Nile Basin toward the desert, the platforms progressively increase in elevation, from step to step, eventually conforming to an extensive peneplain covered with sand dunes or pebbles.

The Nubian sandstones rest unconformably on pre-Cambrian rocks. The contrast between these series is readily seen under the cliffs between Mirgissa and Abu Sir. More to the south, the softer sandstone has been almost entirely eroded away. The exposed structure of harder granite in blue shales and micaschists, including dykes, and networks of porphyry and lavas result in a severely rough and irregular topography, especially where exfoliation of bare rock is in progress.

In limited spots, Nubian sandstone remnants act as a protective cap, forming ‘Inselbergs’ or ‘table-mountains’ such as Jebels Brinikol, Firka, and Dal (Memna).

The very distinct opposition between both types of landscape is reflected in their prehistoric and archaeological context. The more open country of Nubian Sandstones contains an abundance of material for the manufacture of stone artifacts and more genial locations for habitation sites. The tumbled masses of rocks in the Batn-el-Hagar region presented a lesser possibility of good habitation sites (at least as viewed today). There seem to be comparatively only a limited number of suitable quarry areas for the procurement of materials for stone implements.

In order to bring back a sufficient number of collections for an up-to-date typological study, Prof. de Heinzelin and his assistant devised the following sampling methodology system:

1. Occasional sampling. Very limited amount of artifacts collected, generally 25 to 50 specimens, the number dictated by either scarcity or the lack of interest in the assemblage.

2. Random sampling. Collection of some distinctive artifacts from a site plus some flake and core samples (around 100 to 200 specimens).
3. Systematic sampling. Collection of every artifact on a given surface, as many as a thousand examples if possible.

4. Mapped grid sampling. Collection of artifacts by the grid system (square metres) and a detailed mapping of the most important parts of the site.

The systematic (No. 3) and grid sampled (No. 4) collections are to be used for statistical analysis of the assemblages. Special methods have been devised by Prof. de Heinzelin for a full scale typological comparison with European and Central African industries.

B. The Prehistory of the Nubian Sandstone Area

Occupational material was found on seven types of locations, including the following, enumerated in order from the desert edge to the Nile basin:

1. The old peneplain and its border.
2. The summits of isolated jebels in the dissected landscape.
3. The 'silicified wood' localities.
4. The 'old rubble' surfaces at the foot of the jebels.
5. The 'young rubble' surfaces in front of the 'old rubble' surfaces.
7. The Nile Terraces.

These localities are described as follows:

1. The old peneplain and its border. The surface gravels contain artifacts but these are in such a worn condition, due to sand and wind abrasion, that they are generally typologically unidentifiable. They indicate, however, that the spread of Palaeolithic cultures was not geographically bound and limited to the Nile valley corridor.

2. The summits of isolated jebels in the dissected landscape. Many of these were extremely rich in artifacts. Their caps of quartzite or indurated sandstone, more or less dismantled, appear to have been a favourite source for raw material by several stone tool-making cultures. These localities seem to be workshops rather than true habitation sites. At some localities, the specimens were scarcely more than workshopdebitage (flakes and cores). At Loc. 77 they literally covered the whole jebel, including the slopes. Elsewhere, the proportion of tools to other material was somewhat similar to that of a true habitation site (Locs. 63, 41) (FIGS. 3 and 4). In several instances, some architectural features or crude stone constructions were found in close association within the sites: wind shields (?) (Loc. 36); rings of stones (Loc. 37, 63); and piles of stones. Locality 63 was of especial interest, where at least four rings of stones were noted, all close to the rim of the mountain top. One of these, for example, was a circular ring of stones, measuring $4.5 \times 4$ m., about $5$ m. from the edge of the jebel. There was an opening toward this edge, facing north. The stones were in a single course, edge to edge, or practically so, laid down on the flat side.
Fig. 3. MICOQUIAN ARTIFACTS FROM LOCALITY 63

a. Racloir simple droit.
b. Pointe Levallois.
c. Grattoir.
d. Couteau à bord abattu.
Fig. 4. MICOQUIAN ARTIFACTS FROM LOCALITY 63

a. Biface à pointe déjetée.

b. Biface Micoquan typique.

c. Biface cordiforme irrégulier.

d. Biface grossie à pointe déjetée.
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All of the stones were of portable size, such that a single person could conveniently carry. They were drawn from the neighbourhood, where such stones abounded. Worked stone artifacts occurred within and outside the enclosure. Several small fragments of ostrich(? ) shells were also observed. There was a patch of sand on the west side of the stone enclosure. We could not tell how old this feature was, but the associated stone artifacts looked Palaeolithic in character. Another surface feature, a similar circle of stones about 3.5 m. in diameter was found about 24 m. to the south of the above feature. There was an open space within the smaller feature, encircled by the stones. Flaked stone artifacts were found around it. It was decided for the future to plot these stone circles and to chart all the occurrences of the artifacts.

These features were exceptional cases, and bear thorough investigation since they hint at some kind of architectural construction at some period in the past. Frequently, however, workshop debitage and tool concentrations are associated in such a way as to suggest only transient or temporary occupation during quarrying and flint-knapping operations.

Workshop remains are interesting not only for thedebitage, the study of which can show much about knapping techniques, but also for the associated genuinely used implements found, as well as implements broken in the process of manufacture. An example is provided by Loc. 70, where several foliated bifaces broken in the course of flaking were found together on a floor of flakes and cores bearing the same patina.

According to Prof. de Heinzelin, a preliminary identification of Palaeolithic cultures in this area made by the survey may be summarized as follows:

The outstanding trait is the debitage showing Levallois technique, which is found already associated with Acheulian hand-axes. Only very few sites or isolated finds may be related to older cultures using only Clactonian, and Mousterian technique. The Acheulian cultures evolve to stages similar to that in Europe, with Micoquian and Mousterian forms of bifaces. The Mousterian is fairly diversified, leading in many cases to excellent control of the debitage of the Levallois technique. Prof. de Heinzelin feels that there is no doubt that it conforms to a stage that can be called Upper Palaeolithic in the same way as Perigordian originated in Europe. However, there is no trace of lithic cultures which can be identified similar to Aurignacian, Upper Perigordian, Magdalenian, or Aterian. Some thin foliated bifaces (Loc. 70) do recall the Developed or Upper Sangoan type (‘Tumbian’, Lupemban) and were probably a late offshoot of Acheulian cultures. They can be compared with some types of Khor Abu Anga near Khartoum (A. J. Arkell, 1949).

In many instances, on the top of a Jebel as at Loc. 63, the artifacts were found resting on a light reddish fossil soil which originated under very much different climatic conditions than are found now. The climate was more humid, and there was a forest cover (the artifacts themselves can be younger than this paleosol).
a. NUBIAN SANDSTONE TOPOGRAPHY NORTH OF WADI HALFA, LOOKING WEST TOWARDS THE NILE

b. THE BATN-EL-HAGAR AREA

facing p. 78
a. VIEW OF SILICIFIED WOOD WORKSHOP (Loc. 73) SOUTH-EAST OF WADI HALFA

b. VIEW OF JEBEL BRINIKOL FROM THE NORTH
3. Silicified wood. Large amounts of silicified wood, including large logs, were found in the Nubian Sandstones, especially at about 200 m. above the base of this formation. Several workshops of silicified wood have been located, e.g., Locs. 73–92, 127 (Plate XIV, a). The typology forced by the nature of this material is so special that a careful study is necessary to ascertain their cultural identity and to compare them with the more usual material made of conchoidally fractured stones. There are some implements of silicified wood which resemble quite closely the Early Anyathian choppers of Burma, although, of course, no connection is implied.

4. The ‘old rubble’ surfaces at the foot of the jebels. The gravelly accumulations or scree situated at the foot of the jebels were probably spread during a period of higher rill-wash. Acheulian and Micoquian artifacts were found in rolled condition (presumably ‘derived’), while the Mousterian and later Levalloisian materials looked less worn. This fact seems to be a good clue to the relative dating of the geomorphic surfaces of this area.

5. The ‘young rubble’ surfaces in front of the ‘old rubble’ surfaces. These gravelly accumulations were derived from older rubble surfaces due to lateral development of the wadis. All Palaeolithic artifacts were rolled or worn, either by wind abrasion (sand blasting) or by occasional floods, in which case they may be technically called ‘derived’ artifacts.

6. The Wadis. These features are still in the process of development. Artifacts which may be typologically assigned to all ages were noted, spread in their deposits.

7. The Nile terraces. Several phases of erosion and aggradation are identifiable, but the complete sequence of their succession is not yet worked out.

Of significant importance, we failed up to now to trace any conclusive occurrence of A. J. Arkell’s (1949, p. 45) ‘ 150 foot terrace . . . with pebble tools of Pre-Chelles–Acheul type’; K. S. Sandford and W. J. Arkell’s (1933) 100-foot ‘early and later Chellean’, nor the latter’s 50-foot ‘Acheulian terrace’. Furthermore, Prof. de Heinzelin believes that the bulk of artifacts which were considered by various authors as belonging to these early cultural stages may be identified as rejected atypical cores belonging typologically to later stages.

It is proven that the Nile reached a very high level in relatively recent times since fluvialite sands and gravels with modern fauna are to be found up to 40 m. above the floodplain. Mollusca fossils (Unio) are fairly frequent, and vertebrate skeletal remains are known from a number of localities (Locs. 34, 81, 83, 103, 105).

At Loc. 34, a test trench revealed the following sequence at about the 23–24 m. level above the floodplain: Gravel containing a Unio bed with a microlithic industry overlying a bed of river pebbles, silts, clays and sands containing an Upper Palaeolithic industry with notched blades. The later industry was made of brown quartzite (see the summary of these findings below).
KUSH

At Locs. 81–3, the following sequence was noted at about the 23 m. level above the floodplain: gravel containing Unio beds with a microlithic industry overlaying a bed of river pebbles, silts, clays and sands, containing an Upper Palaeolithic industry rich in truncated and broken blades. This industry was made of brown quartzite.

At Loc. 103, various skeletal remains of vertebrates were found on a gravelly bed with Unio and other shells at an elevation of 40 m.

C. The Prehistory of the Batn-el-Hagar

In this rocky area, site locations are much more restricted by the nature of the harsher and less hospitable terrain than in the more open Nubian sandstone area. Prehistoric sites were found in the following localities:

1. The summits and slopes of table-mountains.
2. The dykes and outcrops of lava and porphyry.
3. The ‘quartz’ localities.
4. The Nile terraces.
5. On the silt filled abandoned Nile channels, etc.

1. The summits and slopes of table-mountains. The best example is Jebel Brinikol, just west of the road between Semna and Attiri (Plate XIV, b). This mountain is surrounded by a large system of anastomosed wadis, which it dominates from a height of 250 m. The mountain is formed mainly of exfoliated granite. This rock is covered with about a 30 m. thickness of Nubian sandstone, partly conglomerate.

There was an astonishing abundance of tools found at the south-western section of the mountain. The majority of this industry is typologically classifiable as Levallois and Mousterian (seemingly typical Mousterian). Besides the usual debitage of cores and flakes, very many used or finished tools were found. These included burins, points, two-sided scrapers, etc. (Fig. 5). The artifact surfaces were chemically altered by weathering exposure, resulting in differential patina on both upper and lower surfaces. There were also some traces of more recent human occupation, including huge flakes of quartzite debitage. These may be historic Egyptian in age.

According to Prof. de Heinzelin, the jebels south of Akasha seemed to be less rich than Brinikol in Palaeolithic artifacts. However, Profs. Solecki and Stigler observed a wealth of lithic material (rather Levalloisian-like in type) on the slopes and summit of Jebel Firka (Site A41) at the southern limit of the projected reservoir area. At Site A41, on the lower forward slope of the mountain, were found some very fresh looking large spalls and cores of quartzite. These looked younger in age than the other material mentioned above.

2. The dykes and outcrops of lava and porphyry. Prof. de Heinzelin observed that the lithic material from these sources was not the very best, since the material fractured irregularly, was fragile and did not retain very sharp edges.
Fig. 5. MOUSTERIAN ARTIFACTS FROM JEBEL BRINIKOL.

a. Rasoir double convexe.
b. Burin sur éclat à bulbe enlevé.
c. Rasoir convergent asymétrique.
d. Outil complexe sur éclat Levallois.
Flakes of porphyry were collected from the surface between Gemai and Murshid but they did not occur in any significant number.

Two parallel, north-south trending reddish lava dykes were found, Site Km. 92, which began at about roadmarker km. 90 on the Wadi Halfa-Akasha road. These two dykes served as source material for a huge and amazingly rich workshop site, extending at least between roadmarkers km. 90 and km. 95, between Khor Murrat and Khor Turkuman. It is altogether possible that the true extent of this workshop has not been entirely located, since the survey was not carried south beyond km. 95. The richest area of lithic artifacts and debitage occurs along the dyke which runs parallel to the road, some 100 m. to the west. This dyke is about 1.25 m. thick. The eastern dyke, which is not as rich in lithic material, is extremely rich by normal standards. The material found along both dykes appears to be typologically homogeneous, consisting of large atypical cores, well-made Levallois tortoise cores, flakes, Levallois points, double edged scrapers, etc. It is believed that since there was a superabundance of raw material available, there was an unusually high count of rejected cores. These discards resulted from not meeting the artisan's requirements in the preliminary steps of core manufacture. For example, one of the typical artifacts found is a large core showing only a few trial flakes removed. Collections from the dyke area suggest that the site was a workshop and not extensively used for habitation. This impression was gained by the relatively few finished or utilized artifacts found. However, a high percentage of finished artifacts were found along the west dyke at km. 92.5. This suggests the presence of a habitation area. The locale is of particular interest since it is more than 10 km. east of the Nile, in the middle of the rocky desert. Undoubtedly the attraction there was the mining of the raw material for tool manufacture.

3. The 'quartz' localities. From Saras East to south of Akasha, the Batn-el-Hagar area is streaked with crumbling outcrops of white quartz. Quartz artifacts have been discovered in numerous localities. These were difficult to detect and to identify. They are, nevertheless, important to the study, especially since they may provide a link between Nubia and the Central African quartz industries. According to Prof. de Heinzelin, the use of this raw material has been very marked in Central Africa during the Late Palaeolithic and up to very late Mesolithic times.

The only quartz locality discovered, Site Sem. 2, which is definitely not associated with protohistoric 'A-Group' or historic 'C-Group' sites, was a small site found on a ridge alongside the road, just south-east of Semna. The site covers less than 50 square metres. It is situated next to a small quartz outcrop. From it a large surface collection was made. It appeared that the site was a workshop for microlithic implements, the size evidently dictated by the nature of the material. These implements included burins, pseudo-burins, lunates, convex microscrapers, finely backed blades, and borers.
Other large concentrations of worked quartz, Sites S8 and S50, were found south-west of Saras Fort in what were identified as abandoned Nile channels. These assemblages yielded artifacts which were not so finely worked as those from Semna. Most of the material seemed to be unclassifiable by accepted standards. The chronological placement of these artifacts is in some doubt. However, they appear to be similar to the quartz specimens which are numerous on both 'A-Group' and 'C-Group' habitation sites in the Batn-el-Hagar. Thus, it would appear that quartz tools were manufactured and used well into the historic period by local populations.

4. The Nile terraces. In the Batn-el-Hagar, two terraces were noted between Akasha North and Khor Kidinkong, a distance of 11 km. They lie respectively at elevations of about 15 m. and 30 m. above the present Nile River floodplain. Both terraces are gravel covered. Surface collections, Sites A1 and A31, revealed complex and not readily typed assemblages of both rolled and unrolled industries.

5. On the silt filled abandoned Nile channels, etc. Abandoned Nile channels occur at several points in the Batn-el-Hagar: Gemai, Saras, Semna (K. S. Sandford and W. J. Arkell, 1933, pp. 61–2, fig. 7). The main area is at Saras East where the channels run, three abreast, for about 9 km. The other area is south of Kulg East, where the channels meander between high rock outcrops and are mainly sand covered. Both areas are rich in late prehistoric and protohistoric remains, though they differ as to the type of sites found.

South of Kulb East, on the river-polished black rock outcrops which are found along the abandoned channels, are numerous petroglyphs (Sites A16, A17, A18, A19, A40). These are part of a complex of rock pictures already well recognized for the area of the Middle Nile (J. Vercouët and W. Y. Adams, 1961; A. J. Arkell, 1961; K. S. Sandford and W. J. Arkell, 1933). The dating of petroglyphs is particularly difficult since usually there is no other cultural material found associated with them. Style and subject matter is generally all that is available to use as dating criteria. Although the petroglyphs from this area have not as yet been studied in detail, a number of styles and subjects are evident.

The majority of the petroglyphs found in the Akasha area depict cattle. These are usually drawn in outline with one continuous pecked line (A16, A18, A23, A24, A40). In two cases the cattle are combined with human figures who appear to be holding the tails of the cattle (A18). At one site, A24, there is also a giraffe drawn in this style. Near two of the groups of petroglyphs of cattle, A23 and A18, there are small 'C-Group' cemeteries. This close proximity between these cattle drawings and 'C-Group' cemeteries suggests a cultural connexion which has been noted elsewhere (A. J. Arkell, 1961, p. 53).

Apart from the cattle drawings, there are a number of others which depict people dancing (A23) (Plate xv), elephants (A40), hippopotami (A18 and A23), giraffes (A17, A18, and A19) (Plate xvi), and in one case some boats of predynastic type (A16).
KUSH

The area directly south of Kulb East did not reveal any prehistoric stone artifacts which might have been associated with the drawings. In fact, in this area nothing earlier than ‘C-Group’ material was found.

North of Akasha, at Khor Kargas, a concentration of microlithic artifacts was found (A36). These specimens were made from chert river pebbles. The artifacts included finely made lunates, numerous borers, microblades and cores. A small test excavation failed to place them in situ, although at 1 m. below the surface a stone lined hearth and storage pit were found. Unfortunately, no artifacts were found associated with these features. This site should repay future excavation.

The second area of abandoned Nile channels is at Saras, mentioned above. These are three abandoned channels, extending almost 1 km. back from the present Nile and running 9 km. along the Nile. These channels, unlike the ones south of Kulb East, are mostly silt filled, there being very little sand deposit in the area. This area appears to have had relatively heavy occupation in all protohistoric and historic periods. Over 40 sites were noted, most of which, however, insofar as determined, fell within the historic period.

At Saras three ‘A-Group’ habitation sites were found (S5, S28, and S35). Test excavations were undertaken at two of them (S28 and S35). At S28, excavation revealed an ‘A-Group’ habitation site which had been badly pitted by a later ‘C-Group’ cemetery. At S35, however, a small undisturbed ‘A-Group’ habitation site was found with deposits of cultural material extending from 0.85 m. to 1.25 m. in depth. A small test pit at this site yielded numerous plain ware ‘A-Group’ sherds, some reddish burnished sherds, quartz artifacts, and animal bones. The third ‘A-Group’ site, S5, was not tested by excavation. A surface collection from it indicated that some ‘C-Group’ material was also present.

North of Saras, at Murshid, a large cemetery (M4) was found on a fluviatile terrace. Although the great majority of the recognizable graves were of ‘C-Group’ type, a surface collection showed that about half of all potsherds collected were typical ‘A-Group’.

In short, the late prehistoric and protohistoric occupations of the Batn-el-Hagar area appear at first glance to be divided along a line somewhere south of Saras. North of it, there is ample indication of ‘A-Group’ settlement and few petroglyphs, while south of it in the survey area there appears to be no ‘A-Group’ settlement at all and numerous petroglyphs which may well fall in the prehistoric periods. A great deal more survey and excavation must be undertaken in this area before any definitive statements can be made, but the outline of prehistoric and protohistoric settlement is already indicated.

TEST TRENCHES AT LOCALITY 34

Following an agreement made by the Columbia University Nubian Expedition with the Scandinavian Joint Expedition on 29 December 1961, and with the
very kind permission and aid of Dr Schönback, one of the leaders of the latter organization, test excavations were made from 2 January through 4 January 1962 on a site in the Scandinavian concession area. The investigations were aided by assistance from staff members of the Scandinavian expedition as well as generous provision of a labour force, which was appreciated very much.

The site, just east of the town of Debeira South, is No. 205 in the Scandinavian Joint Expedition catalogue. It has been given the designation of Locality 34 in the Columbia University Nubian Expedition series. Both before and after the period of test excavations other surface investigations and collections were made at the site by members of the Columbia expedition.

The site was of interest to us because of the combined occurrence of Palaeolithic artifacts and faunal remains on the surface in conjunction with certain land form features. It seemed possible that an association of these data could be established. The primary purpose of excavation was to obtain a geological profile and to collect soil and radiocarbon-14 measurement samples; secondarily to determine the presence or absence of associated artifacts below the earth’s surface.

In this locality the terrace is at a height of 23–24 m. above the present floodplain, or approximately 145 m. above mean low sea level at Alexandria. It is hoped that the age of this terrace may be dated by radiocarbon-14 determinations to be made on the shell collected in the excavations.

An east-west test trench, measuring 14 m. long was excavated to a maximum depth of 1 m. below the surface to Nubian sandstone bed rock. This trench was excavated in two parts. However, it was found later that this division had no archaeological or geological significance, and the material results from this investigation should be treated as a single unit.

This trench provided a cross-section of the 23–24 m. Nile terrace in this locality, consisting of a sequence of, top to bottom: (A) Surface sand; (B) Gravel layer with a large quantity of shell (principally Unio); (C) Bedded layers of river silts, clay, and sand; (D) Nubian sandstone. Generally these layers sloped down toward the Nile.

Soil samples were collected from various layers of the trench for geological study, as well as shell samples from the gravel layer (B) for radiocarbon-14 age determination.

A few artifacts were found in Layer C on the bottom of the trench, resting in situ directly on the Nubian sandstone. A fewer number were found mixed in the gravel of Layer B. According to Prof. Stigler, the artifacts from Layer C were identified as being indistinguishable from the Upper Palaeolithic industry found on the surface. Layer B contained microlithic artifacts, setting it apart from Layer C. A few artifacts of Layer B type were also found on the surface. It is the latter industry (Layer B) which may be truly dated by radiocarbon-14 age determination on the shell samples. Since this horizon was close to the terrace surface, the date obtained may be considered as that of the formation of the terrace or slightly younger.
KUSH

Prior to excavation, an intensive systematic surface collection of worked stone was made from a 10 m. square area 30 m. west of the western edge of the test trench. The surface there was particularly rich in what appeared to be an Upper Palaeolithic industry of quartzite, characterized by large 'strangled' blades, truncated blades, and evolved Levalloisian artifacts (FIG. 6). The expedition did not find this industry elsewhere in its investigations. Also found on the surface of the site, in fewer number, were artifacts of a microlithic industry. Both the 'quartzite' industry and the microlithic industry await study and identification in detail. Prof. Stigler believed that the microlithic industry is more commonly associated with the lower, or first, Unio shell terrace (8 m.) of the Nile. However, as seen here, the presence of this industry on the second terrace (23–24 m.) is not unusual.

Owing to the difficulty posed by the westward dip of the beds of silts in the test trench, an effort was made to ascertain their depth below the present surface farther to the west. Accordingly, a test cut 1 m. square was excavated 30 m. west of the western end of the test trench. The test cut reached a depth of 2.10 m. in a pit through deep surface sand in this area without encountering any artifacts or what could be identified as the terrace proper. This was peculiar especially since the surface of the site was particularly rich in artifacts there. Soil samples were taken from varying depths in this pit.

A duplicate surface collection from another 10 m. square area, adjacent to and south of the above mentioned surface collection was made in order to provide the Scandinavian expedition with a collection equal in size.

Human Skeletal Remains Found Near Wadi Halfa

The following is an account of the discovery of human skeletal remains near Wadi Halfa. This information is based upon reports of Prof. Robert Stigler and Messrs Roland Paepe and Jean Guichard, with supplementary comments by Mr Anthony Marks.

During the third week of January, Mr Roland Paepe and Dr Dexter Perkins, Jr., in the course of geological and palaeo-zoological investigations on the Nile terrace behind Wadi Halfa North, discovered on 18 January a small area bearing fossilized (mineralized) human bones on the surface. Dr Perkins recognized the nature of the remains. Since it was of archaeological significance, this information was immediately communicated to the Scandinavian Joint Expedition, in whose concession area the finds occurred. After discussions and examination of the site with the co-leader of the Scandinavian Expedition, Prof. Dr Säve-Söderbergh, the latter group with the same splendid cooperative spirit shown before, offered to permit the Columbia group to excavate and remove the human skeletal material from the site. For the remainder of the week Messrs Paepe and Guichard and Dr Perkins and Prof. Stigler, in company with Dr Marstrander of the Scandinavian group, excavated and collected the remains. The exhumation of the skeletal remains was begun 20 January, and the work was
Fig. 6. UPPER PALAEOLITHIC ARTIFACTS FROM LOCALITY 34
a. and b. Lames étranglées.
d. Couteau à bord naturel.
f. Nucleus Levallois débité.
a. Grattoir double sur lame cassé.
c. Racloir simple droit.
e. Racloir double.
g. Racloir simple converge.
finished on 23 January. A plan was made and a number of photographs for the record were taken.

The Sudan Antiquities Service was informed of the find by both verbal and written communications.

The remains consisted of two lots. The first was of scattered fragmentary bones. The second was of relatively undisturbed skeletal material in situ situated in the same immediate vicinity. The latter, the principal remains, consisted of the major portions of two skeletons, an adult and a closely associated infant. The archaeological and geological age of the human bones was tentatively assigned to no great antiquity from the associated cultural finds and setting.

The Site

The skeletal remains were found about 4 km. north of Wadi Halfa and about 800 m. east of the road to Faras (Map quadrant 920.6/65.5, Wadi Halfa, 1:25,000, Egypt-New Series, Sudan Survey Dept., April 1960). The remains were found on the highest erosional platform of the Nile River, or about 40 m. above present floodplain. This terrace belongs to a geomorphological terrace system which is similarly found at many points on the west bank of the Nile. The terrace is generally built up of a very thin cover of gravel (about 20 cm. in thickness), which consists mainly of rounded quartz and chert pebbles mixed with coarse detritus originating from the nearby hill slopes. These terraces are characterized by the presence of a large amount of fossil mollusc shells (Unio). Samples of these were taken for study and radiocarbon-14 dating. Many fossil animal bones were noted in the upper part of the terrace in which the human remains were found. Most of these mammal bone remains, like the human bones, show a considerable degree of mineralization.

The skeletal remains were found buried in a relatively fine matrix of brownish-red sandy loam, an altered deposit which reached a maximum thickness of 30 cm. According to Mr Marks' observations, the remains seemed to come from an eroded burial. The remains were extremely close to the surface. There was a fairly intact small mound of stones lying directly over the skeletal remains.

The Skeletal Remains

The primary remains found were the major portions (about 70 bones) of the adult and associated infant. These skeletons were found tightly flexed (perhaps in burial position), the infant nestled against the adult. The infant, according to Prof. Stigler, seemed to be post-natal in development, otherwise its position near the pelvis of the adult (probably female) suggests a foetus.

The major missing bones of the infant were the facial bones, vertebrae, ribs, pelvis, and extremities; missing bones of the adult were all of the skull except for a maxillary fragment and portions of the brow.
COLUMBIA UNIVERSITY NUBIAN EXPEDITION IN SUDAN

According to Prof. Stigler, ‘while the bones, or parts thereof, that were exposed above the surface were heavily mineralized, it was discovered that those beneath the surface, even portions of the same bones, were considerably less so. This, combined with the fact that Dr Perkins has observed the bones of domesticated animals (Neolithic) in the Sudan in an equally mineralized condition, leads to the assumption that these human bones are not necessarily of great (pre-Upper Palaeolithic) antiquity. It would appear that mineralization and fossilization can occur very rapidly under climatic conditions along the Nile in this region’. Actually, little is known about the local rate of mineralization under desert conditions.

No member of the Columbia group was specialized enough in human palaeontology to assess the finds accurately or finally. According to the observations of Prof. Stigler, ‘the brow of the infant appears heavy, the vault low, the suture closing advanced for an infant of this size. The adult brow fragment appears very heavy, especially if the individual is a female’. However, it was the feeling of Prof. Stigler ‘that the degree of development of these features very possibly falls within the range of Homo sapiens. But this can be determined only by more qualified examination’.

With the kind permission of the Sudan Antiquities Service and agreement with those concerned, the skeletal remains will be shipped to the U.S. National Museum, Smithsonian Institution, Washington, D.C., for study by qualified specialists in human palaeontology.

The Cultural Associations

No artifacts were found in association with the skeletons. However, a large number of chipped stone artifacts were found in the neighbourhood of the finds, as well as in the nearby wadis. Pending further study, the collection appears to be composed of a microlithic industry mixed with a rolled or worn Palaeolithic industry, the latter originating from the nearby hills. None of the sampled material can be considered, of course, as in situ artifacts associated with the skeletal finds.

Summary of the Prehistory

Prof. Stigler and Mr Marks made an intensive survey of accessible areas extending between the northern and southern limits of the concession area on the east bank of the Nile. It was found that this part of the Batn-el-Hagar area contained less numerous traces of human prehistoric occupation than the area of the Nubian Sandstone north of the concession. This was particularly so in the places where the rocks descended very close to the river, which was true over a major portion of the reservoir basin within the concession. A total of 85 sites
were recorded by Prof. Stigler and Mr Marks in the concession area. These
were identified by context and locality as follows:

<table>
<thead>
<tr>
<th>Culture</th>
<th>Workshop</th>
<th>Habitation</th>
<th>Cemetery</th>
<th>Petroglyph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palaeolithic</td>
<td>6</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Mesolithic</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neolithic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protohistoric</td>
<td></td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Historic and</td>
<td></td>
<td>42</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Recent</td>
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<tr>
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<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>9</td>
<td>49</td>
<td>18</td>
<td>9</td>
</tr>
</tbody>
</table>

Hundreds of petroglyphs were seen by this group in the Batn-el-Hagar
area, dating probably from prehistoric times to certainly the Christian period,
including animals, birds, people and such cultural materials as boats. These
were not related to any of the sites found in the vicinity.

A wide range of other occupational evidence was found, ranging from late
Christian age remains near the Nile to Old Stone Age (Levallois) debitage high
up on flat topped mountains overlooking the river. The latter stations, of course,
were well beyond the reach of the proposed reservoir level. Such an example
was the Jebel Brinikol. These mountain top sites probably were lookout
stations for game, as well as flint knapping or workshop sites. An extensive
workshop site was found at a linear outcrop of stone suitable for making chipped
stone implements in the desert wilderness 10 km. west of the Nile. Another
workshop yielded material which appears to be Mesolithic in age, and bears
resemblances to more southerly occupations. Within the range of the reservoir
basin, the survey amplified our knowledge of Protohistoric and Historic occupa-
tions. These namely concern the cultures beginning with the so-called
‘A-Group’ occupations, dating from about the 1st Dynasty in Egypt, and
later cultures, including ‘C-Group’ which were not within the licence of the
expedition to explore but which were noted since they were there.

Test soundings were made at five sites which appeared to date from the late
prehistoric (protohistoric) to later times. These tests indicated that there was

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much to be gained from excavations in the Batn-el-Hagar area, which with the exception of a few investigators such as O. H. Myers (1958), had been neglected in the past.

Prof. de Heinzelin and Mr Paepe also made reconnaissances within the concession area, although their major contributions were obtained from outlying neighbouring areas. Aided by Mr Guichard, they found the best links of the stone age prehistory with the geomorphological history of the region in the area around Wadi Halfa. This region was explored with the kind permission of the Scandinavian Joint Expedition. They catalogued 64 stations ranging from probable habitation sites to workshop and lookout stations. Their material findings will be of assistance in correlating the geological studies. Many huge Palaeolithic sites were discovered, ranging in age as based on typological evidence from Upper Acheulian to Epi-Levalloisian. Prof. de Heinzelin believes that there were no river terraces above 40 m. elevation, so far as he presently knows, in the area of investigation. Prof. de Heinzelin has observed another terrace at 23–25 m. Some additional levels are situated lower, in the neighbourhood of 10 m. He believes that they are all relatively young (Upper Pleistocene to beginning Holocene in age), and they have nothing to do with the Acheulean and Chellean terraces of Sandford and Arkell. These authors have taken erosional surfaces as terraces. The rest of the elevated highlands were, in the opinion of the present investigators, erosional remnants of plateaus and related erosional features protected by caps of hard rock. Samples for radiocarbon-14 analysis were taken from the three fossil Nile terraces for possible dating.

With the kind permission of the Scandinavian Joint Expedition, a limited survey and test sounding were made in their concession area for stone age material data. Cultural remains found ranged from Middle Palaeolithic Levallois industries; supposed 'Upper Palaeolithic' age materials; to artifactual materials, which for a better identification, is called 'Mesolithic'. Both of the latter industries, the last a minor element, came from a terrace which may be dated by the molluscs found at the same level in the occupation horizon. Dr Perkins, assisted by Mr Paepe, made some collections of fossil (mineralized) bones on the eroded terraces north of Wadi Halfa. No certain date could be ascribed to these remains in the field. The skeletons of an adult and a child were found in what seems to have been a burial in the terrace.

Finally, concerning the primary effect upon the prehistory of the region, the proposed reservoir area will take in only those sites lying within the flat bottomlands of the Nile. Since the more sedentary cultures, dependent upon food production for subsistence, lived close to the soil next to the river (a world wide phenomenon), it will be those sites which will be affected. These sites include

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4 Letter from Prof. de Heinzelin dated 6 September 1962.
historic, protohistoric, and probably Mesolithic age occupations as well. The
primarily hunting and gathering occupations of the older stone ages undoubtedly
lived near the river too, but their subsistence activities were not so closely tied to
the river as were the cultures of the food producers. The older stone age
cultures ranged far and wide, with evidence of their occupations occurring
broadcast over the hills and platforms of this area. Unfortunately, any habitation
traces of these cultures in the Nile alluvium are lost because of the subsequent
river action. However, extensions of the surveys beyond the reservoir limits
in the neighbouring heights surrounding the Nile basin have compensated for
this loss.

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Antiquities Service, Khartoum.
Preliminary Note on the Epigraphic Expedition to Sudanese Nubia, 1962

by Fritz Hintze

After finishing the third season of excavations at Musawwarat es Sufra, we went to Sudanese Nubia to carry out epigraphic work. This Expedition is financed by the German Academy of Sciences, Berlin. The staff was the same as for the excavations at Musawwarat. According to our licence, which was kindly granted by the Sudan Government Antiquities Service, we have to collect rock inscriptions and rock pictures, on the East Bank from Murshid to Dal and on the West Bank from Faras to Dal, excluding of course all the concessions of other missions. I wish to thank Sayed Thabit Hassan Thabit, Commissioner for Archaeology, and Sayed Nigm ed Din Mohammed Sherif, Senior Inspector of Antiquities, Wadi Halfa, for their help and valuable support.

The Expedition was divided into two parts: Professor Dr K. H. Otto and his wife, Dr Gisela Buschendorf-Otto, dealt with the rock pictures; Mr W. F. Reineke and myself dealt with the inscriptions. The photographic recording for both parts of the Expedition was done by my wife, Dr Ursula Hintze.

Rock Inscriptions

We began with the rock inscriptions at Semna and Kumma and thought that it would be possible to finish the work there in a relatively short time, considering the fact that they were published only two years ago. But we soon found that the amount of work was far more than we had thought. Father Janssen had available for his publication of these texts only Reisner's copies, which are sometimes not very accurate, and his photographs, which are mostly not good enough to collate the copies. However, despite these deficiencies, Father Janssen unfortunately had no opportunity to work in Semna with the originals. Most of these inscriptions are not easy and some of them are really difficult to read. In many cases they had to be read and copied by us completely anew. So we needed the whole time which we could spend in Nubia for the work in Semna and Kumma.

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1 See the report below, pp. 217-26.
2 From 21 February to 10 April 1962; fieldwork from 26 February to 29 March.
3 Dows Dunham and Jozef M. A. Janssen, Semna Kumma (Second Cataract Forts), 1, Boston, 1960, pp. 129-76.
4 This has already been stated by De Wit and Mertens in Kush IX, 1961, p. 181.
In Kumma we were unable to find two of Reisner’s 121 inscriptions. We had to correct 100 of the remaining 119, and found 13 new ones. In Semna (West) also we could not find two of Reisner’s 24 inscriptions, 18 of which are incorrectly published. Here we found 10 new inscriptions. All the inscriptions were photographed, copied and collated several times. Latex squeezes were made of 90 of them. Seven of these squeezes were made with the help of a new colour technique, which we had invented for the purpose. This technique is especially important to get impressions of rock pictures, because they are mostly only hammered and very flat, so that it is impossible to make squeezes in the ordinary way.

Perhaps the most remarkable of these inscriptions are the 29 Nile level marks, but the private inscriptions are also of considerable interest. They give many names and titles and are therefore important for prosopography, and the history of administration. Some details may be mentioned. The inscription RIS 12 turned out to be the famous inscription of Viceroy Turo from the ninth year of Amenhotep I, which Breasted had seen, but of which Reisner expressly stated that he could not find it. In RIS 14 the two last columns are of some interest. They are to be read ir gtr irn pn hi p ib rn-f, ‘as to this stone “Satisfied is the heart” is its name’. This means that this conspicuous rock had its own name. The biographical part and the invocation of this inscription may also be improved upon. In one of the inscriptions at Kumma (RIK 119 b), Kumma seems to be called ‘The Nubian Elephantine’. The last two lines are to be read ih wn rn-sn mn m 3bw t3-stj, ‘ah, may their name(s) remain in the Nubian Elephantine’. A new edition of these texts seems desirable.

A few new rock inscriptions were found just south of Semna on both banks of the Nile and in Saras East. We also made a new copy and took some photographs of the inscription of Viceroy Turo on the Island of Uronarti.

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5 I suppose that RIK 129 is not from Kumma. We looked particularly carefully for this inscription several times.
6 Some of these mistakes do not, of course, touch the meaning of the inscription concerned, but others are more serious.
7 Two new Nile level marks were found by us in Semna.
9 See Janssen, Semna Kumma, p. 130 (H).
10 This interpretation seems better than ‘. . . in Elephantine and Nubia’. In an inscription of the Semna Temple the name 3bw rsj ‘Southern Elephantine’ refers to Semna: LD, III, 53; Second Cataract Forts, 1, pl. 26B. The same name occurs on a statue of Thutmose III in the Museum of Florence, Brugsch, Thesaurus, VI, 1445. Comp. Gauthier, DG, I, 3.
11 This inscription was published by Sethe in Urk., IV, 78, after a copy made by Steindorff. But the t in the name of the viceroy is not missing, in spite of Sethe’s ‘so’.
THE EPIGRAPHIC EXPEDITION TO SUDANESE NUBIA, 1962

ROCK PICTURES

In the districts of Semna West, Semna East (Kumma, Abusira, Agri, Saidnamb, Sukator, Suratab) and Saras East (Alinfanti, Awleko-Jebel Qurab, Mashu, Oshinardje) 23 sites with 150 groups of rock pictures were found and recorded. Professor Otto made copies of all of them: they were photographed and latex squeezes were made by the colour technique of the most important pictures. They include very different types both as regards subject and method, and they obviously belong to different periods of the history of the Nile valley. But it is not easy to date them and only careful study and comparison of one with another and with examples from other sites can clarify the evidence. In any case it is important to collect these historical documents.

There are interesting representations of animals, as for instance elephant, ostrich, giraffe, antelope, gazelle, cattle, camel, and at several sites fine pictures of an animal which could be that of Seth. There are also important representations of men, together with cattle, or dancing, and some apparently performing religious ceremonies.

None of these rock pictures was previously recorded or published, except for some from Kumma. But at least Jebel Qurab is marked on the map, sheet 35-I, Wadi Halfa, as having 'Rock Pictures'.

Our epigraphic expedition will continue its work during the winter of 1962–63.

Nile Sedimentation above Wadi Halfa during the last 20,000 years

by Rhodes W. Fairbridge

The Columbia University contribution to the Nubian Monuments Campaign in the winter of 1961–62 consisted of a reconnaissance by geologists and archaeologists of the Nile sediments and Palaeolithic-Neolithic industries in the region generally upstream from Wadi Halfa. We spent some weeks in Egypt in order to follow the terrace patterns up from the sea, spent a few days around Abu Simbel, and some three months around Wadi Halfa, from Faras on the border, upstream to Akasha and Farka. In this note, I will summarize some of the geological observations as relate to the habitat of Ancient Man; my colleagues will report independently on the archaeology.

It is a great pleasure to record the warm-hearted welcome which we enjoyed at the hands of all concerned in Sudanese Nubia, especially at the Sudan Antiquities Service and the friendly and cooperative discussions with all other expeditions working in the area. During the following six months I have been working at the Sorbonne in Paris, where the helpful discussions and assistance from Dr J. K. van der Haagen, UNESCO Director for the Monuments of Nubia, are gratefully acknowledged.

Sedimentation and Erosion of the Nile Today

In considering the habitat of Man, in order to establish the physical setting, the geologist who collaborates with archaeologists, must thoroughly understand the present regime before trying to reconstruct a picture of ancient geomorphic conditions. Thus we see the Cataract section of the Nile today as a fairly vigorous stream, crossing a sequence of rapids, subject to very large annual variations in discharge, but still geologically 'youthful' to 'mature'. Its history in this area probably goes back more than 50 million years, but its regime is still largely youthful, that is to say, it is cutting a valley in bedrock. In the Cataract region there are certain broad bends and wide sectors where some sedimentation occurs, but that sedimentation is largely a dry season affair, and the next flood will wash it away once more; if not the next flood, perhaps it may be preserved by a change in the current for 10 or perhaps 100 years, but in the end most of the sediment of silt and clay dimensions will land up below Aswan and probably continue right down to the delta or get dumped into the Mediterranean. The present dam at Aswan has not silted up in half a century. At flood times the strong current carries the silt right through. The silt is a reddish brown colour, typical of humid tropical erosion.

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NILE SEDIMENTATION ABOVE WADI HALFA

'The Siltation Stage' (Sebilian Sedimentation)

It then comes as a surprise for a geologist to find extensive high terraces of old Nile silt around Wadi Halfa rising to 40 m. above the present flood level. The silts are pale brown to silvery grey in colour. They are associated with various stages of Vignard’s ‘Sebilian’ Industry, and thus from the typology must be associated with last stages of the Pleistocene Ice Age (Late Würm). I have termed it ‘The Siltation Stage’ to emphasize its character.

Prior to the Sebilian sedimentation in the middle Nile sector, there had been a long history of down-cutting, alternating with high and low levels, but progressively getting down to the present ‘thalweg’ where we can see the bed rock today. Just before the Sebilian I visualize a broad valley, up to 2–3 km. wide in places, which at times carried a very great volume of water perhaps five times the present maximum discharge, thus 300,000 to 500,000 million tons annually.

We will not discuss further the early history in this note, but concentrate on what happened after—about 25,000 or 20,000 years ago. At this stage a profound change affected the regime of the great river. The silts and other sediment that had previously been swept downstream, as today, only even more vigorously, began to be dropped along the banks and in backwaters. The next years’ floods did not carry them away. Gradually the floor of the river began to silt up, the valley becoming progressively choked up from below Aswan to above the Sixth Cataract and even far upstream of Khartoum. At flood time the river did not scour away as it does today and did formerly. Thus the bed rose higher and higher until around 11,000 years ago Nile silts were being deposited 40 m. above the present level.

Now what does all this mean? Ball (1939) found evidence of widespread sedimentation at this time far upstream: his ‘Lake Sudd’. At a critical moment, the natural dam of hard rocks about the Sixth Cataract became overwhelmed and a great gorge was cut, flooding the region downstream with a vast inundation of silt. This is a picturesque theory, but—regrettably—complete nonsense. First, a hard rock barrier is not cut down quickly; Ball’s calculations, in this respect, based on the Semna Cataract, are quite misconceived (see discussion below). Second, the Sebilian Silts are not the products of an equatorial lake; they are rich in unweathered feldspars and other soluble minerals which would be leached by humid weathering, or dissolved in acid swamp waters.

The Sebilian Silts are products of numerous flash floods in an arid to semi-arid environment; they are well sorted by fluvial transport at Wadi Halfa, so the arid source region must have lain in central or southern Sudan. They did not originate in the desert hills of the Batn-el-Hajar (of Nubia); occasionally local rains there led to floods in the usually dry wadis and streams of boulders, pebbles, and yellow sand came down to the Nile, forming distinctive, thin wedges in the grey silts.

So the idea of a great flood is out! If the equivalent silts today are carried right down to the delta and in Sebilian times only reached Wadi Halfa, the
conclusion is evident: the flow of water must have dwindled. Sandford and Arkell (1933) concluded that by late Sebilian time, the rainfall in Nubia must have dwindled and finally ceased altogether. True, but it was much more serious than this. It was not just the rainfall in Nubia; it was the rainfall of the whole Nile catchment area, the tropical rainfall, that nearly ceased. At its 40 m. level the volume of water in the Nile, even at the annual ‘flood’, must have been reduced at times to a mere trickle.

I would like readers to visualize something like the great Diamantina river in Australia, which flows from the region of tropical rains in central Queensland to debouch in Lake Eyre. We say ‘flows’, but should say ‘used to flow’, at some stages of the Pleistocene. Today, it is a great wide valley, blocked by sediments and sand bars, normally quite dry; and if the summer flood waters ever get all the way from Queensland down to South Australia, there are notices in the paper and scientists trek out to observe the phenomenon.

So this was the habitat of Sebilian man along the middle Nile, between 25,000 and 10,000 years ago. A wide, dry sediment-choked valley. Even at very dry stages there were probably water holes and semi-permanent pools, especially in the vicinity of the cataracts. Vegetation at such times would have been of the semi-arid species, palms, tamarisk and acacias, but since the alluvial fill of the valley was much more complete and continuous than today, this belt of trees may have been broader than at present. The fossil roots in the paleosol horizons of the Sebilian silt suggest periodically an abundance of low scrub. Because of the aridity, the ground water below such an alluvium may often have been more than 3–5 m. below the surface.

It seems to me that this would have been a savannah hunting habitat, but not suited to large encampments. The rather scattered nature of the Sebilian implements suggests a low population, and considerably less than existed at certain stages of the Lower and Middle Palaeolithic, when the concentration of tools and workshop sites suggest very good living conditions along the riverine belt and even quite far from the river. In places there is a good accumulation of Sebilian material, but it should be borne in mind that these flint tools are not soluble; they do not dissolve in ground water, nor do they blow away. In other words we have in these sites the concentrated accumulations of thousands of years. Viewed in this light, the number of implements does not suggest a vast population.

**Absolute dates in the Sebilian**

We were not able to bore or excavate in the Nile alluvium to reach the base of the Sebilian Silt, but it is estimated to have been initiated about 25,000 or 20,000 years ago. Higher up in the sequence I discovered layers of freshwater mollusca which are ideally suited to Carbon-14 age determination. It is a wise procedure when dating carbonate shells, to collect some living representatives of the identical species and run an age on these too. This is particularly
desirable in environments which might be super-saline, or which have extensive outcrops of ancient limestone in the area, because of the danger of the mollusca incorporating some of this old CaCO₃ in their shells and thus contaminating the ‘young’ carbonate, which is derived from atmospheric CO₂, and thus incorporates freshly generated C₁₄ from the upper atmosphere (cosmic bombardment).

In our case, we had a most favourable situation: the Nile is extraordinarily free from dissolved salts; its opaqueness is due to colloidal clays, which, when electrolyzed and flocculated, produces excellent drinking water. There are no ancient limestones in the middle sector.

And finally we have the advantage of some earlier C₁₄ studies made by the University of Michigan in dating Myers' specimens from Abka (Myers, 1958, 1960). There are three independent checks in this collection: (a) Nile 'oyster' shell (Etheria elliptica) was included, and some modern examples were also run, giving a zero date; (b) some ostrich shell and charcoal from the same horizon were run separately, giving the same dates; (c) there is a clear stratigraphic sequence at Abka, the lowest being obviously the oldest, and the C₁₄ dates, from bottom to top, were successively younger. We are thus enormously indebted to Myers and the University of Michigan for this dating sequence, the most valuable and illuminating yet obtained anywhere in Africa.

Our Sample No. RF. 11227, Lab. No. I-533: dated 14,950 ± 300 yr. B.P. (Note any reference to this sample in professional literature should be by the lab. number; samples were dated commercially by Isotopes Inc., Westwood, New Jersey, U.S.A.)

The oldest Sebilian samples which we have dated were found between Debeira and Ashkeit on the east bank of the Nile, 15 km north of Wadi Halfa. The site was 300 m. east of the village of Nag Ikhtariya (see 1/25,000 sheets of Wadi Halfa area, U.S. Army Map Service 'Egypt'). The elevation is 20 m. above the Nile flood level, which is here about 121 m. above mean sea level at Alexandria; absolute level is thus 141 m.

The dated shells are Unio wilcoeksi, a large edible fresh-water mussel, but here they are only 3 to 5 cm. in length compared with the living ones, which are 10 to 15 cm. long; conditions of existence must have been quite poor. These edible species could conceivably be of midden origin, but against this is their occurrence, where some are found in pairs (i.e., they died buried in the alluvium); and their association with numerous small inedible species: Corbicula artini (which has a height greater than length ratio, and thus distinct from Corbicula consobrina, which lives here today), and Viviparus unicolor, a somewhat rare lacustrine gastropod.

Comment: The C₁₄ date places the samples in the late Würm, that is a few thousand years after the maximum phase of the last Ice Age. The Sebilian silts at Debeira probably begin about 8 or 10 m. below the present flood plain, and continue to nearly 40 m. above it: total thickness 55–60 m. The sample was therefore two-thirds up from the base of the silts which we estimate began to
accumulate about 25,000 or 20,000 B.P. The sample occurs in the 'older silts' of the Sebilian, which are a rather hard and grey-brown in colour; the 'younger silts' are softer and a silvery grey.

**Our Sample No. RF. 12206, Lab. No. I-532**: dated $11,650 \pm 300$ yr. B.P.

This sample was collected in the silvery grey 'younger silts,' about 100 km. south-south-west of Wadi Halfa, in the Khor Kidingkong (at lat. 21° 12’ N, 30° 41’ E) 12 km. north of Akasha, some 200 m. east of the Nile and 15 m. above the flood level, therefore about 180 m. above MSL. The 'younger silt' rises to a maximum of 195 m. here. The shells consist of *Corbicula artini* in vast numbers, most of which are with both valves together, showing that they were not washed down by the flood but died where they lived. The average length is 8–15 mm. There are no other fossils in these silts, but there are considerable efflorescences of salt, suggesting extreme seasonal desiccation at the time.

**Comment**: The C$_{14}$ date puts the age of the younger silts at the very end of the Pleistocene (which, according to recent authorities, passed into the Holocene at or about 10,500 B.P.). The time was coincident with a warm oscillation of the late Würm, the so-called Alleröd of northern Europe. It is clear that the sedimentation of the 'younger silt' of the Sebilian was very rapid, being so loose and soft. The highest levels show no paleosol layers, and I would estimate that, in view of the dates of the post-Sebilian dissection phase, which began about 10,000 B.P. (see below), the accumulation of the last 15 m. of the Sebilian occupied only a few hundred years.

**Our Sample No. RF. 11252, Lab. No. I-531**: dated $11,200 \pm 285$ yr. B.P.

This sample is of the Nile 'oyster,' *Etheria elliptica* (a fresh-water species, of the same encrusting habit as the marine oyster). It is found encrusting the rocks and boulders of Nubian Sandstone from the foot of Jebel Halfa (800 m. east of the river at Wadi Halfa) and extending north for 5 km. The elevation 9–10 m. above Nile flood level, thus about 132 m. above MSL. It occurs in a silty gravel associated with rolled early Sebilian artifacts and fresh younger Sebilian microliths. The gravel also carries *Cleopatra* and a few *Viviparus, Corbicula* and *Unio*.

**Comment**: This 'oyster' horizon appears suddenly in a late-stage oscillation of the Sebilian Silts, probably the same phase marked by the *Corbicula artini* samples of I–532 (11,650 B.P.). Since the 'oysters' are channel bottom indicators and the *Corbiculas* (in large numbers) are muddy bank and flood level indicators (now 15 m. above flood level), their occurrences are quite compatible with an assumption that they were both living when the high river level was about 18 m. above the present. While the highest Sebilian beds are protected by a bend in the river at Khor Kidingkong and some other places, at Wadi Halfa all the higher beds were swept away during the 'Erosion Phase' after 10,000 B.P.

The presence of the 'oyster' bed along the eastern foothills suggests a strong swing of the river bed to the east in this sector. There is no sign of it
along the west bank today. The influence of wind control in deflecting the river course from side to side, within its alluvial bed, but restrained by the bed-rock walls, here about 2 km. apart, is worth considering. The time correlation with the important but brief Allerød warm phase (of world-wide significance) may suggest a short period during which the tropical monsoon, with its south-west winds coincident with the flood season, could have driven the river to the east.

'The Erosion Phase' (Post-Sebilian Dissection)

A fundamental change in the fluvial regime of the Nile appeared about 10,000 B.P. The volume of water increased sharply and severe dissection of the silts was initiated. Not only was the main Nile flood involved, but the side wadis, especially between the Second and Third Cataracts, showed considerable activity, in flash floods to be sure, but enough to cut down their beds to match the main stream and to bring in trails of local sands and gravels that interfinger with silts of the main stream.

As the Nile floods increased, the main bed cut deeper and deeper into the soft silts. Since a river's 'bottom load' carries the bulk of its sedimentary material (i.e. silts, sands and gravels), it is at the bottom that the main excavation takes place, until such time as the hard bed-rock is reached. At that stage the energy switches to cutting sideways into the remnants of soft banks. We see evidence of this all along the middle Nile. In many places bed-rock was reached by 9,000 B.P., but the river volume continued to swell until about 7,000 B.P., when it reached a mean annual discharge rate of at least 200,000 million tons.

Care should be taken to appreciate that there were not only general trends (thus the rise and fall of the mean discharge between 10,000 and 6,000 B.P.), but there were also very sharp oscillations, of middle and short period, superimposed on the main curve. Today, within any half century of observations one may observe high and low stages, where the latter is less than 50 per cent of the maxima. Over periods of several centuries these oscillations were even more extreme. The fossil material tends to date the lowest stages; shells accumulated at high stages tend to get undermined and washed away, while those at low stages are more likely to get buried and thus preserved. Thus, if one discovers a bank of shells overlain by a thickness of silt, that thickness represents the height of the oscillation; the water volume can be estimated by measuring the corresponding cross-section of the river and comparing with the present cross-section at flood maximum. I should emphasize that my survey was a rapid reconnaissance; there is much room for refinement in these estimates.

It was soon noticed that the Sebilian Silts were not the only alluvial formations along the middle Nile. During the post-Sebilian dissection, my 'Erosion Phase,' which lasted from about 10,000 to 3,000 B.P., there seem to have been low Niles about 9,500-9,000, 7,500, 6,000 and 4,500 B.P. In between these low discharge phases, there were high Nile phases at or about 8,500, 7,000 and 5,500 B.P. (the 'mid-Holocene Silts').
KUSH

Each successively younger phase of strong river dissection was marked by lateral cutting and filling (in the broad reaches), to be followed by a phase of low discharge during which the Nile bed shrank in dimensions, a rather passive condition because of the reduced energy and decreased sediment supply.

Critics may believe they detect a non sequitur, when we claim that the high terraces of the Sebilian Silts were due to reduced rainfall in Central Africa, and yet in the post-Sebilian phase of mid-Holocene Silts each (successively lower) intermediate silt terrace is interpreted as a high rainfall indicator.

The answer, I think, lies in the bed-rock. Generally speaking, if one increases the stream energy, one raises the volume of sediment carried; if the stream bed is soft and easily eroded, it is steadily dissected and the sediment carried downstream to the sea or to a sector where the gradient is sufficiently reduced to permit accumulation. However, if bed-rock has been reached, an increased discharge simply raises the level of the stream and in so doing greatly enlarges its cross-section; during the annual flood period, the alluvial plain is inundated and sediment accumulates.

In other words, the rock barriers and bed-rock floor convert the middle Nile into a series of 'mature' reaches. During the Sebilian 'Siltation Phase,' it was the almost total failure of run-off that caused siltation to such a degree that the river bed was choked and assumed a temporary 'old age' character. For a brief period of increased discharge (10,000–7,000 B.P.), the middle sector became rejuvenated, a 'young' stream, and since 3,000 B.P. we have the present condition: 'mature' reaches alternating with short 'youthful' interruptions, the cataracts. We write the terms 'youthful,' 'mature' and 'old age' following the useful method of W. M. Davis for classifying fluvial stages, but in quotation marks to emphasize that these are nomenclatorial terms, not really indicative of age. In point of fact, the cataracts today are the oldest features of the Nile Valley; yet they are still in the 'youthful' stage of evolution.

Absolute dates in the mid-Holocene

We have only two samples dated so far from the mid-Holocene period, but they are extremely useful ones. We are also able to use Myers' dates to fill in important details.

Our Sample No. RF. 11261, Lab. No. I–534: dated 9,325 ± 250 yr. B.P.

This is a small gastropod Cleopatra bulimoides that is found in vast numbers east and south-east of Wadi Halfa, around the foot of Jebel Halfa, in a silty gravel, 134 m. above msl., that is about 12 m. above present high Nile. This gravel is superficial to the Sebilian Silt, and is not itself overlain by more than 2–4 m. of younger deposits. Cleopatra is common enough in the Nile today and is an excellent indicator of the high Nile limit for any one year.

Comment: The sample represents a high Nile at a stage when the river must have been 2–3 km. wide at this point. It would seem to be approaching
Looking North showing "low Nile" condition in December 1911. Radiocarbon dates of sediments up and downstream prove that the high Nile flowed over the site of the fortress at various times from 11,000 to 9,000 years ago. The dark terrace of that time may be seen in the middle distance.
AIR VIEW OF THE SEMNA-KUMNA AREA, LOOKING NORTH

Photo taken during the 'high Nile' flood (7 October 1960), almost obscuring the Semna cataract in the middle of the picture. At low Nile, this is reduced to a few small rapids. Trees are growing on the alluvium of 11,000 to 9,000 years ago, when maximum Nile flow was several times larger than today.
the maximum post-Sebilian discharge rate. Since it is only covered by a few
metres of sediment at the most and all younger dates are from lower elevations,
it is evident that the dissection of the Sebilian Silts was well under way, but had
still further to go before reaching the present level.

Our Sample No. RF. 12201, Lab. No. I–530: dated 7,300 ± 250 yr. B.P.
This is a charcoal date from a small fireplace which I found on Khor
Kageras, near Ukma, 7 km. north of Akasha, and 200 m. east of the Nile. It is
almost opposite the site of the West Ukma Hammam, a hot spring, where the
water emerges at 55°C. The site is 13 m. above high Nile and is covered by
silts which rise to 20 m.

Comment: Our youngest dated sample, this charcoal clearly marks a middle
phase in the mid-Holocene Silts.

It is associated with yet another oscillation, similar in dimensions to that
dated by I–534. After the subsequent rise to 20 m. above present high Nile,
the river level dropped away sharply about 6,000 B.P. and never rose again above
10 m. (see below).

Further deductions about the ‘Erosion Stage’ (10,000–3,000 B.P.) may
be drawn from Myers’ work at Abka (1958, 1960). These sites, 20 km. south
of Wadi Halfa, are situated in ancient potholes of the Second Cataract, that have
now been abandoned owing to the successive drops in river volume.

Myers’ oldest dates (9,450 and 9,175 ± 400 yr. B.P.) at El Hani (4 km. south-
west of Abka), are of Nile ‘oyster,’ which of course requires constant sub-
mergence; normal habitat is about 8 m. below high Nile. Its position here is
about 3 m. above high Nile today, which is here 137 m. above MSL, so high Nile
then was about 148 m., a difference of 11 m.; this is comparable with the 12 m.
difference determined for Sample I–534 at Wadi Halfa, dated at 9,325 B.P.
Myers’ discovery is particularly important since it partly covers primitive
pictographs, which must have been drawn during a very low state of the Nile
not long before.

The most complete sequence near Abka is in a large pothole at Jebel
Maktub, where the lowest horizon is also an oyster bed (in fixed position of
growth) dated at 8,260 B.P. indicating a high Nile of 12 m. above the present
(130 m. above MSL). Most sophisticated pictographs are partly covered by the
Nile patina of about the same period as the oysters grew; culturally the level is
approximately Mesolithic.

The stratigraphy of this Jebel Maktub pothole shows next that the water
level dropped again, and as a rock shelter it became next occupied by Neolithic
man, whose debris includes implements, fish bones, midden oysters and charcoal.
The shell dates 5,950 B.P. Presumably the Nile was not far off, probably at
about the 138 m. level. After this stage the Nile channel through Abka became
choked with silt and the main stream has subsequently shrunk to progressively
smaller dimensions, the principal channel being now some 2 km. away to the
north-west.
KUSH

'The Stabilization Stage' (Middle Kingdom to Present)

The last 3,000 years of Nile history have been marked by a slight drop in total volume but mainly it has been a period of reduced oscillations approximating the present level. An examination of the sites of Middle and Late Kingdom temples shows that many of them were built upon the alluvial flood plains of the day. If that alluvium had been subjected to very deep inundation, it seems hardly likely that great care and painted art would have been lavished on the walls, which would have been ruined at the first flood. I would like to suggest, as a working hypothesis, for Egyptologists to check, that the low-level temples were constructed during extended periods of relatively low Nile floods. Indeed, there are numerous quotations extant concerning the damage done when unusual and excessively high flood levels occurred.

In this connexion it is worth noting the curious Nile flood mark of Amenemhat III (c. 1,850–1,800 B.C., that is, rather before our 'Stabilization Stage') at Semna, 75 km. south-west of Wadi Halfa. It was studied by Ball (1903) and again by Sandford and Arkell (1933). This Middle Kingdom inscription marks the maximum flood level at 8 m. above the present maximum.

Previous observers drew the apparently logical deduction, that 'assuming that the Nile discharge rate remained constant,' the rock barrier at Semna must have been eroded away by 8 m. during the last 3,800 years, or about 2 mm./year.

Several fallacies have crept in to this deduction unfortunately. First: the Nile discharge rate is remarkably inconstant today; there is evidence of very large variations in the past; palaeoclimatic studies of the Ice Age climates make it impossible to avoid accepting major discharge variations (Fairbridge, 1961 b). Secondly: the rock barrier is a fine-grained crystalline rock, not susceptible to rapid disintegration. This is a rock barrier, not a waterfall; the drop in the flood level here is only about 3 m. We now know of many coastal terraces subject to intensive marine erosion that have survived 100,000 years and more. The rates of fluvial erosion in arid countries (lacking chemical disintegration) have been grossly exaggerated in the past. Thirdly: the level of the pre-Selebian rock cut floor up and downstream of the barrier is very nearly the same. Thus the Sebian Silt merely filled in an existing valley, and were partly scoured out again during the 'Erosion Phase' (10,000–3,000 B.P.).

The severe constrictio of the Nile bed at Semna is thus an automatic flood control. Other Cataracts act in the same way. When an increased discharge occurs, the level rises higher on the upstream side of each such barrier and feeds the downstream sector at a somewhat moderated velocity. In short, the Amenemhat III Flood Mark is regarded as a true indicator of a higher discharge rate at about 3,800 B.P.

By the end of Middle Kingdom times we see the discharge had dropped to volumes comparable to today. The level seems to have been rather high in Ptolemaic times, low in Roman times, temporarily high in middle Christian
times (about A.D. 800), since when the record is taken over by the official ‘Nilometers’ at Rodah Island, Aswan and elsewhere.

Some difficulties have been experienced in interpreting those records, but the general pattern of oscillations is compatible with the geological conclusions.

**CLIMATIC CORRELATIONS**

A comparison between the high peaks of the Nile oscillations during the last 10,000 years and the curves of world temperature and sea-level (the latter reflects temperature because of the growth or melting of glaciers: see Fairbridge, 1961 a), suggests a positive correlation. We lack adequate precision at present, but as a working hypothesis we propose the following interpretation:

Variations in solar radiation (due to ultra-violet/ozone control, or to the attitude of the Earth in the field of celestial mechanics) lead to varying rates of evaporation from the ocean. This controls the equatorial cloud development, as well as the strength of the monsoon and trade wind (high pressure) circulations. These control rainfall in the headwaters of the Nile, and thus the Nile floods reflect world climatic patterns. The study of the long-term Nile flood patterns is therefore of enormous interest in world climatology.

On the other hand, from this pattern we can also picture something of Man’s habitat in Nubia, Egypt and the Sudan generally. Tentatively we can recognize five climatic phases during the last 20,000 years, as follows:

(a) *Late Würm Tropico-Equatorial Arid Phase* (20,000–12,000 B.P.)

Summer monsoonal rains ceased over most of North Africa, including Ethiopia. Equatorial rains in the White Nile watershed were somewhat curtailed. At certain times the middle Nile almost dried up. Scarce winter rains (a few mm.) reached 20° N latitude, creating brief ‘freshts’ in some wadis. Mean annual temperature was 2–3°C lower than at present in Nubia. Along the North African coastal strip winter rains were considerably heavier and mean temperatures 5–6°C cooler. Kordofan and bordering Equatoria became almost totally arid deserts.

(b) *Postglacial Transition Phase* (12,000–10,000 B.P.)

Marked by sharp oscillations between (a) and (c) conditions, there was an alternation between strong Nile floods and total aridity. There were brief periods of heavy rain in Ethiopia and monsoonal rains all across the Sudan, alternating with totally dry phases and winter rains in the north.

(c) *Interglacial Warm Phase* (10,000–7,000 B.P.)

An enormous increase of equatorial and monsoon rainfall resulted in a Nile discharge at least three times that of today. Owing to the size of the flood, the habitable alluvial plain became only briefly available each year, but very extensive swamps and seasonal vegetation permitted the proliferation of a very
large fauna, hippopotamus, etc., as well as savannah types in the plains. The arid zones of Africa became extensive savannahs. Former sand dunes (Qoz) became ‘fixed’ by light vegetation. The North African-Mediterranean strip lost much of its winter rain, but also often failed to receive monsoonal rain; except along rivers and at springs, it became very generally arid and hotter than today.

(d) Mid-Holocene Transition Phase (7,000–3,000 B.P.)
Modified by regular oscillations, this period is broadly marked by a steady decrease in equatorial and monsoonal rains, and a slight increase in winter rains along the North African-Mediterranean coastal strip. Lower Egypt enjoyed periods of light summer and winter rains, as well as a fairly regular Nile flooding. Nubia enjoyed summer monsoonal showers but their regularity gradually decreased. About 5,000 B.P. the rainfall at 20° N latitude may have averaged 200 mm.

(e) Modern Arid Phase (3,000–0 B.P.)
Progressive desiccation marked the last three millennia in Nubia. There is documentary evidence that in late Ptolemaic (Roman) times, stronger westerlies brought summer thunderstorms, as well as winter rains to Alexandria and the north African coastal belt (Buzer, 1958). Today the summer monsoon showers never reach north of lat. 20° N. and are poor even down to 15° N. This type of climate has been compared to an Ice Age interstadial, not a full-scale warm interglacial but an intermediate level, lacking widespread ice in the temperate latitudes; it was characterized by markedly lower temperatures there and complete aridity in the high pressure climatic zones, such as the Sahara and Nubia.

CONCLUSIONS

1. The Sebilian epoch (roughly 25,000 or 20,000–10,000 B.P.) was one of almost total aridity in Nubia, and semi-arid conditions extending into Ethiopia and Equatoria. At times the Nile flow almost ceased. A transitional phase (oscillatory) occurred in 12,000–10,000 B.P.

2. The early Holocene (10,000–7,000 B.P.), roughly the Mesolithic, was a time when rainfall in the tropics and subtropics was much higher than today, permitting widespread migration of fauna and flora, a most favourable environment for Man, across much of North Africa. The Nile flow was at least three times the normal of today.

3. The middle Holocene (7,000–3,000 B.P.), Neolithic to Middle Kingdom equivalents, was marked by progressive deterioration of living conditions in Nubia and the Sahara, but with certain favourable oscillations. Summer rains grew progressively sparser and the Nile bed dropped to its present dimensions. The Nile reverted to being the principal (almost the sole) cultural avenue.
NILE SEDIMENTATION ABOVE WADI HALFA

4. The late Holocene (3,000–0 B.P.), Middle Kingdom to Modern Times, has been a stabilization of totally arid conditions in Nubia and the Nile levels approximately the same as the present, but with periodic oscillations of a few metres.

5. Within this broad pattern there is a great deal of room for more detailed precision. Our work strongly suggests that both major and minor oscillations of Nile discharge as well as the climates of Nubia are directly related to world climates and Solar Radiation.

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Shaqadud

A new Khartoum Neolithic Site outside the Nile Valley

by K.-H. Otto

In the light of our previous knowledge, it had been assumed that the occurrence of Khartoum Neolithic (Gouge Culture) was generally limited to the Nile Valley between Jebel Aulia and the Sixth Cataract. Beyond this region, so far only two sites yielding surface finds of this culture were known, viz. Fukhakhira, nearly a hundred miles further north on the west bank of the Nile opposite Kabushiya, and Idd el Haraz, approximately ten miles west of the Nile (see A. J. Arkell, Shaheinab, 1953, pp. 106-7, fig. 57).

During the course of the archaeological work at Musawwarat es Sufra undertaken by the Humboldt University (Berlin) Expedition, directed by Professor Dr. Fritz Hintze, a new Khartoum Neolithic site was discovered early in 1961 approximately 35 miles east of the Nile (vide plate xix, a, b). The discovery of this occupation site was due to Mohammed Abdallah Ali, a member of a nomadic tribe, who had already acted as a scout during several recent excursions whilst the excavations at Musawwarat es Sufra were in progress, and who drew our attention to the many finds of sherds on the surface at Jebel Shaqadud (16°15'-33°26').

The entry in the expedition diary dated 21 February 1961, following an investigation of the place, gives the following information about the site: 'Jebel Shaqadud forms one of the sides of a broad wadi, and a steep valley, some 600 ft. long, cuts into its slope from the main wadi. At the end of this valley there is a large cave. Water falling from the terrace above during the rainy season has eroded a deep secondary groove at the end of the valley bringing down gravel. This slope is densely covered with sherds and stone implements. Such objects are also to be found inside the cave and on the terrace above the end of the valley. On the terrace itself a straight wall of packed stones is conspicuous. The full extent of the settlement could not be verified. A number of sherds and other typical artifacts were gathered at random with the result that this collection may be regarded as an average of the material to be found there.'

During a second visit remains of skeletons were observed on the terrace above the occupation site, the highly silicified bones and skulls of which had been washed out. Apparently here are the graves associated with the settlement.

The inventory of the occupation site, pottery and stone implements alike, is predominantly typical of the Khartoum Neolithic and agrees in essentials with the material excavated by A. J. Arkell at the Neolithic sites of Khartoum (Gouge Culture) and Esh Shaheinab.
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Wavy Line pottery was not found on the surface of the site and it would appear that the Wavy Line Culture is not represented here. However, unburnished sherds of Dotted Wavy Line Ware have been found which apparently represent the oldest pottery at Jebel Shaqadud (Plate XX, 1). Burnished sherds with Dotted Wavy Line pattern (Impressed Ware) have not so far been observed. Most of the burnished Khartoum Neolithic Impressed Ware at Jebel Shaqadud consists of the following varieties:

Sherds with different pattern variations of two lines of triangles (or vees) with two lines of dots (e.g. Fig. 2, nos. 22–4).
Sherds with only a single line of triangles and several lines of dots (e.g. Fig. 3, nos. 25, 27–8).
Sherds with two lines of triangles or vees with only a single line of dots between them (e.g. Fig. 1, no. 9; Fig. 2, no. 21).
Sherds with vees only (e.g. Fig. 1, nos. 10–12; Fig. 2, nos. 13–16).
Sherds with multiple lines of closely spaced dots (e.g. Fig. 3, nos. 33–6).
Sherds with close zigzag of dotted lines of different varieties (e.g. Fig. 1, nos. 1–2).
Sherds with zigzag of well-spaced out straight dotted lines (e.g. Fig. 1, nos. 3–5).
Sherds with zigzag of curved dotted lines (e.g. Fig. 1, no. 6).
Sherds with zigzag of curved continuous lines (e.g. Fig. 1, nos. 7–8).
All these sherds are brown or grey and generally break with a black, though occasionally with a brown, fracture.

Among the sherds collected there are also some belonging to the Combed Ware (e.g. Fig. 4, nos. 46–7), in one instance combined with finger-nail impressions (Fig. 4, no. 48). These sherds are brown or grey in colour and break with a black or dark brown fracture.

The Incised Ware is represented with some typical decorations. Such finds were as follows:
Sherds with a single line or with double lines of dragged dots (e.g. Fig. 4, nos. 41–2).
Sherds showing a combination of lines of dragged dots and lines of small triangular impressions (e.g. Fig. 4, no. 43).
Sherds with closely spaced incised horizontal lines (e.g. Fig. 4, no. 40).
All these sherds are burnished and brown in colour and they break with a black or brown fracture.

At Jebel Shaqadud other sherds have been found with patterns, which had been regarded as atypical at Early Khartoum (vide A. J. Arkell, 1949, pl. lxxxiii) and at Esh Shaheinab (see A. J. Arkell, 1953, pl. xxxv, 2–3). These are:
Sherds with finger-nail impressions of various kinds (e.g. Plate XX, 2).
Sherds with ‘fish-bone’ patterns of incised continuous lines (Plate XXI, 1–3).
Some of these sherds are light brown in colour and the others red, and they break with a black fracture.
Fig. 1. TYPES OF DECORATIVE PATTERNS FOUND ON THE SHAQADUD WARE
a. GENERAL VIEW OF THE OCCUPATION SITE NEAR JEBEL SHAQADUD

b. THE CAVE AT THE END OF THE SHAQADUD VALLEY

facing p. 110
SHERDS FROM THE SHAQADUD SITE:

1. Typical Dotted Wavy Line ware;
2, 3, 4. Atypical sherds, occurring also in Khartoum Neolithic sites, Khartoum and Esh Shabeinab;
SHERDS FROM THE SHAQADUD SITE

1-3. Atypical sherds, occurring also in Khartoum Neolithic sites, Khartoum and Esh Shaheinab; 4-5. Sherds with patterns hitherto unknown in Khartoum Neolithic. On a slightly enlarged scale.
STONE IMPLEMENTS

1. Small sandstone disk rubber;
2. Silcrete sandstone ring with a small hole of approximately 20 mm. diameter;
3-4. Sandstone ring fragments, used as half rings (3);
5. Sandstone rubber; 6. Sidescraper of gneiss
Fig. 2. TYPES OF DECORATIVE PATTERNS FOUND ON THE SHAQADUD WARE
FIG. 4. TYPES OF DECORATIVE PATTERNS FOUND ON THE SHAQADUD WARE

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Finally, on this site additional kinds of decorated sherds occur, which have not so far been found with Khartoum Neolithic. Characteristic features of these are patterns with various dotted impressions:

Sherds with rectangles only (Fig. 2, nos. 18–19); this pattern corresponds in principle with the pattern 'triangles only'.
Sherds with alternating lines of vees and rectangles (e.g. Fig. 3, no. 26).
Sherds with decorations consisting of intersecting lines of dots (Plate XX, 4); or else a pattern belonging to the Incised Ware.
Sherds decorated with continuous intersecting lines (Plate XXI, 4–5).

All these sherds are generally burnished, brown in colour, and they break with a black or dark brown fracture.

With reference to those sherds with rim decorations which were collected, the patterns on rims agree approximately with types 5, 6, 7 (in combination with 3), 11, 31, 35, 36, which were presented by A. J. Arkell as representing Esh Shaheinah (1953, pl. xxxvii). Atypical rim patterns were not observed. Apart from the many decorated sherds, there are also a few remains of undecorated ceramics.

The rim-outlines of the pottery originating from the site of Jebel Shaqadud fit in well with the general picture of what is known of Khartoum Neolithic vessels. In agreement with the classification made by A. J. Arkell for Esh Shaheinah (1953, pl. xxxvi), rim-outlines of types B, C, G, T, U, CC can be found among the sherds collected. Some rim-sherds of bowls with constricted mouth originating from Jebel Shaqadud show a more pronounced inward turn than is usual in this type of vessel.

All the stone implements strewn over the whole site (vide Plate XXII) agree with the known types of Khartoum Neolithic, even though by no means all the types and forms one would expect can actually be observed, as up to now no excavation work has been undertaken. Thus it is not yet possible to state whether the inventory of utensils at Jebel Shaqadud differs from that of the Khartoum Neolithic in the Nile Valley and, to give merely one example, whether the fact that gouges are missing from among the material collected indicates that none exist. Small sandstone disk rubbers and other sandstone rubbers were found, however, as were disk grinders, which show a regular circular depression in the centre, silcrete sandstone rings and characteristic sandstone ring fragments, obviously used as half rings. To these must be added scrapers of gneiss, fragments of polished rhyolite celts, etc.

The author is convinced that in Jebel Shaqadud a most interesting locality for collecting purposes has been discovered, which is particularly enlightening as far as Khartoum Neolithic research is concerned. This locality is not only important on account of its situation—far away from the Nile. The secondary channel eroded out of the slope at the end of the valley makes it clear that a cultural stratum, roughly 4.5 ft. thick, exists here which, in addition to sherds
SHAQADUD

and artifacts, has provided widespread remains of the fauna. The investigation of the cave will undoubtedly provide an undisturbed and enlightening stratigraphy. It will clarify the chronological relationship between the unburnished sherds of the Dotted Wavy Line Ware and the mass of other ceramics found at this occupation site, and whether those sherds classified as atypical, and/or the sherds with patterns hitherto unknown, really belong to the Khartoum Neolithic in sensu stricto or whether they are of later date.

Beyond this, well organized excavation of this site promises even more information. If it can be proved that the burial sites containing very well-preserved skeletons are of the same age as the occupation site itself, such problems as those relating to the anthropological type of the Shaqadud people could be solved. This would mean an important contribution to the clarification of the question as to whether the bearers of the Khartoum Neolithic and/or Gouge Culture belonged to the negroid population or the 'Brown Race' (i.e. the predynastic Egyptians), a complex of questions which have already been raised by A. J. Arkell when he was considering the results of his excavations at Khartoum (Early Khartoum, 1949, p. 112). It is hardly necessary to point out that in addition to all this indications might be found as to the economic factors on which the mode of living of the inhabitants of Jebel Shaqadud was based during the Neolithic Age.
HAVING completed our season of excavation in the necropolis of Kasr Ibrim, in Egyptian Nubia, the expedition returned to Buhen and re-opened the work there on 30 December 1961.

After an examination of some parts of the denuded areas of the Middle Kingdom fortress, we turned our attention to a site along the river bank north of the fortress, and midway between it and the Kanous village. This area had long been listed for investigation, for in 1960 we had noted small fragments of copper ore and sherds of an unusual type of red ware pottery in the drift sand which covered it. Test trenches soon revealed brick and rough stone walls so denuded that they rarely exceeded 0.40 m. in height. However, we were encouraged by the discovery of large quantities of copper ore and sherds of fine red ware carinated bowls, the character of which we, at that time, failed to recognize. Rough stone mortars set in the floors of cubicle type rooms, for use in the pounding of the ore, together with the remains of pottery crucibles and ingot moulds, showed that we were clearing an area of the town which was obviously a metal working factory. Charcoal and copper slag together with the droppings of pure copper from the crucibles confirmed this, but we were still uncertain of the date of this settlement, which further test pits showed was of considerable size.

The site stretching along the river bank for a distance of more than 300 m. was squared off and detailed excavation commenced on 3 January 1962.

More and more fragments of the carinated red ware were discovered, until sherds sufficiently large were found showing them to belong to the well known type of pottery vessel known as the Meydoum bowl, dated to the 11th and 9th Dynasties. Confirming this was the presence of fragments of unmistakable Nubian B-Group pottery. Other types of Egyptian Old Kingdom pottery were found and we were at last certain of the date of the town. Finally, on 5 January, at a fairly high level, we recovered an ostraca inscribed with the cartouche of Kakai (Neferirkara) the third king of the 8th Dynasty. This was followed by clay jar sealings (from papyrus, bags and jars) bearing the names of many kings of the 11th and 9th Dynasties. Since then, inscribed sealings and ostraca have been found in considerable numbers from various points over the area of the site so far cleared.

Although very denuded, the remains of the town show definite evidence of an uninterrupted occupation of a considerable period, but no pottery of later date than the Old Kingdom was found. Shallow stratified areas show various
periods of rebuilding and development but with no intervals between these changes. Excavation has revealed big defence walls of rough stone, 2 m. wide, which have been traced to the river's edge some 150 m. north of the New Kingdom perimeter of the fortress, and on the river side there is a stone lined ditch.

It is as yet too early even to guess the size of the town, for neither the north nor south ends have so far been located. But it is obviously of considerable size, and the northern extremity may well extend as far as the Kanous village.

It was at first thought that the southern area within the defence wall was denuded because trenching to more than 1 m. in depth revealed only clean drift sand. However, discoveries near the river's edge have caused us to reconsider this conclusion and it is evident that much deeper trenching will have to be undertaken before we can be certain that the area is indeed barren.

The principal reason for our change of opinion on this matter was the discovery on 26 February of brick walls partly below the rough stone lining of the so-called ditch near the river's edge. Here, under 1 m. of drift sand, we uncovered a well-built structure with walls standing 1.15 m. high (Plate XXIII, a). On each side of it, at a still lower level, we discovered three well preserved furnaces in which copper ore had been smelted (Plate XXIV and Fig. 1).

The brick building has bricks of unusually large size, similar to the large variety common in the IInd Dynasty, and an indication of its early date is shown by the fact that parts of it are overbuilt by walls of the smaller bricks which, from the evidence of clay sealings and ostraca, we may date to the Vth Dynasty. The question of an archaic date for the foundation of the town must therefore be considered, although nothing of the nature of conclusive evidence to support this has as yet been discovered. However, there are other indications in support of this theory. These indications come from two sources, jar sealings and pottery.

In cutting down to the lowest levels of the main stone built house so far cleared, we found three jar sealings of conical shape which bear much weathered impressions made by a large cylinder seal. So far the signs are indecipherable because of their worn state, but sufficient remains to show that they are quite distinct both in design and size from those previously found which belong to the IVth and Vth Dynasties. In fact they conform unmistakably to the archaic type of such objects, and they would certainly cause no comment had they been discovered in a IInd Dynasty tomb at Sakkara.

With regard to the pottery, a number of types were certainly in use during the IInd Dynasty, but these may well have continued in fashion during the Pyramid Period. Another point in this connexion is that among the limited amount of Nubian pottery recovered from the site, some fragments are of undoubted A-Group origin, although B-Group predominate.

Apart from tracing the defence walls, by 3 March an area 60 m. square was examined in detail (Fig. 3), and on 5 March, through the courtesy of the Sudan
a. Brick building found below structures of Old Kingdom date

b. Buildings of the Fourth and Fifth Dynasties

Facing p. 118
PLATE XXIV

FURNACES FOR COPPER SMELTING
Antiquities Service, air photographs were taken covering the whole of the field that had been investigated.

With a view to ascertaining the character and quantity of future work on the site, we have dug a trench 3 m. wide down to bed rock across the area from the defence wall on the west to the river bank on the east (PLATE XXV). The results of this undertaking have been most interesting and, as suggested above, there are strong indications that the town may have an older foundation than the 19th Dynasty. For example, stone revetments have been revealed 1.40 m. below the
general ground level of the Old Kingdom town near the river edge. In this stratum, great quantities of sherds of rough brown ware pots and crucibles, together with fragments of charcoal and minute pieces of ore, show that the copper working was in full progress at this earlier date, whatever it may be.

Another perplexing feature revealed by the cutting of this trench is the fact that just east of the rough stone defence wall, and 1.30 m. below its foundations, a natural hollow in the native rock has been filled with large boulders of rock so as to form an even surface. Above this curious feature is a layer, 0.90 m. thick, of clean drift sand entirely devoid of any trace of human or animal occupation. Within the limited area disclosed by the trench the part covered by the layer of boulder stone suggests the foundation prepared for some very large edifice, but of this there is not the slightest trace; only the layer of drift sand below the Old Kingdom floor level.

In all these operations, at the higher levels, more inscribed sealings have been recovered, among which are some particularly fine specimens showing the serech and cartouches of Menkaura side by side.

The excavations are only at a preliminary stage and it will take some time before a true assessment of their value can be made. It is impossible to say how long it will take to clear the whole town of Buhen, or indeed how much of it survives. But sufficient has been discovered to show that we are not dealing with just an isolated trading station, but with a site of great archaeological importance. From the evidence already gained, we may conclude that the actual Egyptian colonization of Nubia started at an earlier date than hitherto supposed, perhaps immediately following the campaign of Senefru. Some conception of the town's importance to Nubian history can be gained by considering the following facts so far revealed:

1. The town was a purely Egyptian colony, for although Nubian B-Group is present, at least 95 per cent of the pottery sherds are Egyptian.
2. Copper working was one of its industries, and so we may conclude that deposits of this metal are to be found somewhere in the northern Sudan.
3. A well organized despatch service was maintained with Egypt throughout the 11th and 5th Dynasties, to judge from the mass of papyrus and jar sealings.
4. Already the names of the following kings have been identified on sealings and ostraca:—
   Khafra, Menkaura, Userkaf, Sahura, Neferirkara, Neuserra (FIG. 2).
The first season’s work began on 17 December 1961 and continued until 18 March 1962. The chief objectives of investigation within the concession were known beforehand: the fortress, now largely occupied by Christian structures, and the rather small C-Group cemetery along the very southern boundary line of the concession. The area has yielded no other unsuspected remains of antiquity beyond one C-Group and four X-Group dwellings. Whereas the total area within the concession has been rather carefully reconnoitred during the course of the season it is possible that another one or two such minor dwellings or shelters may be found in a more systematic survey, but this seems hardly likely.

The staff whose work, records and analysis underlie this report on the first season’s work consisted of Mr Labib Habachi, formerly Chief Inspector in the Egyptian Department of Antiquities, Mr James E. Knudstad of the Oriental Institute of the University of Chicago, Professor Ronald J. Williams of the University of Toronto and Professor Louis V. Zabkar of Loyola University of Chicago.

The Shaft Tombs behind the Fortress

Simultaneously with the beginning of the work of clearing the enclosure walls of the fortress an investigation of the deep, rock-cut shaft tombs just to the east, close behind the fortress was begun. These eight irregularly arranged tombs were lying open with a ring of dump around the mouth of each. They consist of a vertical, rectangular shaft with a low chamber or two at right angles to one end of the bottom of the shaft. F. Ll. Griffith and the Oxford expedition had found them all robbed in 1910–12 and had cleared most of them according to the report.¹ Griffith reported only briefly on a few finds and identified the tombs as ‘Middle to New Kingdom’ in date. Although he referred to some of the tombs by number no sketch map is published and one cannot now determine from which tombs the objects may have come, nor were we able to find any key among Griffith’s papers in Oxford.

¹ *LAAA*, xxii, 1921, p. 98.
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We regarded it as useful to remove the dumps from the immediate surroundings of the tombs as well as the small amount of drift-sand in the shafts and chambers, at least for the purpose of making plans. Three selected tombs were completely cleared and rectangular platform-like mud-brick superstructures were uncovered above two of them. One of these had a very small, low, rectangular mud-brick enclosure on the east side of the taller superstructure (PLATE XXVI, a). It was in the superstructure of this tomb that a red-ware vase with black painted vine motif was found in a hollow made by the removal of a few bricks. There were also the very late burials of a woman and two children in or about the superstructures of two of the tombs. The woman’s body bore several strands of beads forming bracelets and a pubic girdle.

The third shaft tomb was originally surmounted by a circular sand tumulus covered with flat stones and also had a small mud-brick enclosure on its east side (PLATE XXVI, b). These small enclosures were presumably minuscule offering ‘chapels’. The latter ‘chapel’ was further surrounded at a distance by a ‘wall’ one brick high forming a kind of court. This tomb is more elaborate than any of the others, for it consists of two low-ceilinged chambers off the west end of the rectangular shaft. The first chamber is large enough to require a column to support the ceiling. In the debris and drift-sand in the shaft of this tomb we retrieved a Hyksos period scarab, one of only three scarabs found during the season. The others came from a grave in the C-Group cemetery and from the interior of the fortress.

The C-Group Cemetery (Plan I)

The C-Group cemetery lies to the south and slightly east of the fortress. It is on a north-east slope at the foot of a rocky hill. Initially at most about 35 of the circular slab-stone superstructures could be discerned above the surface of the drift-sand. The systematic clearance began on 9 January and was finished on 15 February 1962 with the use of a small labour force while work at the fortress went on.

Eventually 63 circular superstructures were uncovered in various states of preservation. The largest one was about 5 m. in diameter but the majority measured 3 m. or less. The circles varied in height from only a single course of slabs to 0.75 m. Distributed among these 63 enclosed burials were 79 more of the shallow oval pits without superstructure. Of this total of 142 burials, 27 were intact, 110 were disturbed or plundered, and seven were empty. In two cases burials were found superimposed in the same grave. Among the burials without superstructure 10 were of A-Group date.

The cemetery did not yield a particularly rich harvest of objects. Cow skulls were found beside the superstructures of 12 graves. Also, as usual, a variety of offering pottery was recovered outside the superstructures, usually on the north side. Among these were red ware pots, red polished black-topped
PLAN OF THE C-GROUP
CEMETERY AT SERRA EAST
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bowls, red and black bowls with incised decoration, some of the black incised ware bearing white paste inlay, and a Keneh ware water jar and bowl. A goodly number of the vessels were intact, many of them lying upside down, but often the unfired black ware was so fragile that a vessel, although completely present, had disintegrated in the sand into countless friable bits.

From the burial pits themselves came bone and alabaster bracelets, bone and copper rings, shell ear pendants, palettes of stone or natural shells, a stone grinder, bone needles and kohl rods, copper awls, many types of beads of gold, electrum, carnelian, shell, green and black glaze, and one scarab.

The Fortress Area (Plan II)

The major task of the expedition was the excavation of the fortress area and the bulk of the labour force was devoted to it during the entire season. The fosse that surrounds the fortress on the three extant sides (north, east and south) and the exterior of the walls on these sides have been entirely cleared on the north and south and partially cleared on the east. The south half of the interior has also been cleared except for a small area in the upper, south-east corner where fairly high-standing Christian structures exist.

The fortress is built on the slope of the bed-rock river bank with its east wall, about 80 m. in length, on the brow of the slope commanding higher ground to the east. The north and south walls break off before reaching their west ends, and we have found no evidence of the corners or of the west wall although we have found traces of the fosses in masonry to the west of the railway embankment (Plate xxvii, a) which runs north-south across the lower end of the fortress.

Most of the higher east portion of the interior is occupied by Christian structures including the so-called Central Church. The east wall of the fortress has been breached roughly in its middle and Christian buildings extend through it outside the wall. Whether an original east fortress gate existed in the area of the breach we have not been able to determine as yet. There are also two small domed churches outside the fortress walls, one about 30 m. to the north and the other on the south side so close as to encroach upon the edge of the south fosse.²

The massive mud-brick fortress walls as now cleared on the exterior (Plate xxvii, b) reveal numerous similarities to the xiiith-Dynasty fort at Mirgissa: The use of halfa grass matting, the liberal use of timber bonding, the tilted coursing of the bricks in the middle third of both north and south walls in an attempt to traverse an abrupt descent from a rock shelf in the slope to the river.

² For the location and nature of these churches with which our expedition has not yet dealt see G. S. Mileham, Churches in Lower Nubia, Philadelphia, 1910, pp. 40-7 and pls. xxix—xxxi. Mileham's photographs show the churches and other structures in a somewhat better state of preservation than they were in December 1961 and his photograph, pl. xxix (c), taken in 1908, shows a considerable expanse of relatively level dry ground between the river and the fortress area without the railway embankment cutting across it.
and the construction of the buttresses.\(^3\) The corner buttresses, especially the fairly well preserved one at the south-east corner, prove not to be angle or diagonal buttresses as has hitherto been stated, but in the nature of rectangular corner towers like those at Mirgissa,\(^4\) although the fourth corner did not project inside the fort as it does at Mirgissa. Good examples of the bases of the buttresses (Plate xxviii) show wood beams horizontally in the face of the buttress with others vertically forming the corners. The mud-brick pavement or apron extending from the wall and buttresses to the inner edge of the fosse is frequently well enough preserved to retain its white-washed mud-plaster surface, but it does not slope at such a pitch as to be regarded as an effective anti-scaling glacis.

The fosse, now cleared to its complete depth and its full extent along the north and south sides of the fort, has a marked batter to its sides. It is cut in the bed-rock for most of its extent but at the lower, west, ends of the northern and southern lengths, where the natural rock ceases, it is continued in masonry on sides and bottom as a facing for naturally bedded yellow sand. The north fosse (Plate xxix) appears relatively unfinished in comparison with the regularity and depth of the south fosse, for its sharp descent to the river degenerates into a gradual slope toward its masonry-built and paved horizontal west end.

To the north of the fortress earlier observers had noticed the beginning of a wide and deep rock-cut trench leading off at an angle northward from the fosse.\(^5\) Complete clearance of this trench reveals that it too is a U-shaped fosse which surrounded a spur or adjunct of the fortress proper (Plate xxx, a). The northern extremity of the area surrounded by this fosse widens slightly on both sides to form a square. The fosse immediately surrounding this square extremity was nearly filled with tumbled and burned mud-bricks and lengths of timber similar to those found in the fortress wall itself. This suggests that the enclosed square was once surmounted by a tower which was burned in the destruction of the fort. Access to this spur would have necessitated a bridging of the north fosse of the fort presumably at a height in the fortress wall above what is now preserved. Cuttings in the inner (south) face of the north fosse at the narrowed point at which the spur intersects it would suggest support for a bridge from the fortress wall across the fosse.

The west end of the rock-cut portion of the south fosse and the area south of it, to the east of the South Church, had become a cemetery after the natural filling of the fosse to about the ground level of the church. Some 13 bodies were rather casually buried here beside and behind the church. They lay on their backs fully extended. There were no objects or ornaments with them except for a couple of bronze rings. There were no grave stelae and only in a few cases were two or three mud bricks placed on edge about the head. Despite

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\(^4\) Cf. ibid., p. 117, fig. 33.

\(^5\) Mileham, op. cit., p. 41 and pl. xxx (b).
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the appearance of a churchyard cemetery the burials are probably of a much later period than the use of the church.

At a roughly corresponding point at the west end of the north fosse there were uncovered the bottoms of the walls of two Christian period buildings which straddled the fosse. These edifices are modest in plan and built of re-used Pharaonic bricks, stones and mud. Under each of three corners of one of the buildings (PLATE XXX, b) there was a perfectly preserved footed bowl with painted decoration on the inside below the rim. In each of the three cases the bowl was inverted over an ostracon bearing identically the same Greek text, Abba Klous Theodoros Leonitios Panigiros Phēmamon followed by a series of symbols of the type known from Coptic magical texts. Under the corner of the remains of another building in the interior of the fortress in a test trench dug along the east side of the railway embankment a similar bowl was found inverted but this one did not cover an ostracon. So also two corners of Christian edifices up on the hill straddling the east fosse of the fort yielded two more but dissimilar bowls. There were no ostraca beneath these but the sand in them showed evidence of organic matter and in one case the remains of a small fish.

The interior of the fortress, at least the south half to which the first season’s work was confined (PLATE XXXI, a), divides by the stepped nature of the rocky slope and the use made of it into an upper terrace to the east and a lower terrace to the west. Preservation of Pharaonic construction inside the fortress is extremely poor owing to the destruction in most areas down to bed-rock in the building and rebuilding even as late as the Christian occupation. However, sufficient wall remains along the south and east sides of the fort to suggest that there was an inner wall separated by a continuous paved passage from the massive outer wall, that is, that the interior complex was separated from the outer walls by a narrow street.

The west edge of the upper terrace is formed by a heavy north-south wall retaining a fill of stone chips. At the base of this retaining wall the east side of the lower terrace is cut away into the bed-rock with projecting walls of the rock left at the south end to divide the area into a group of small rooms or bins.

On the upper terrace there were in some areas a metre or more of drift-sand between the overlying level of Christian occupation and the next level. A small amount of well defined stratigraphy beneath the sand indicates at least two separate levels, Pharaonic in so far as can be told at this point, of re-use and rebuilding of walls after initial destruction of the fortress. These two levels are well spaced by burned refuse, sand and broken brick fill.

There are curious cuttings of the bed-rock on the west side of the upper terrace just a little south-west of the Central Church. Two very shallow rectangles incised in the slightly sloping rock both open at the lowest corner into a deeper circular basin of small diameter (PLATE XXXI, b). Round about this complex are smaller holes of such a nature and arrangement as to suggest that they were intended to hold poles for some sort of light superstructure or sunshade. Our
a. LOWER SIDE OF FORTRESS CROSSED BY RAILWAY EMBANKMENT

b. SOUTH WALL OF FORTRESS AND SIDE OF FOSSE IN MASONRY
a. FOSSE SURROUNDING NORTH SPUR OF FORTRESS

b. FOUNDATION DEPOSIT UNDER CORNER OF CHRISTIAN EDIFICE
a. EXCAVATED SOUTH HALF OF FORT WITH BASIN IN FOREGROUND

b. WINE PRESS(es) IN BED-ROCK OF UPPER TERRACE
SERRA EAST

only suggestion at present is that it was a wine-press with two shallow vats for the treading and the deeper basin for catching the juice.

The excavated southern half of the lower terrace is roughly cut in half by an east-west wall beginning at the north-south retaining wall between the terraces. Between this east-west wall and the paved passage or street running inside the south wall of the fortress are a range of rooms of which only the foundations of walls and a few spots of brick flooring remain.

Incidental finds include a Coptic grave stela on the lower terrace and one page of a parchment codex from the upper. The top of the stela is missing and the text is damaged at the point where the date of death should have occurred. The deceased was a Philoxenos, Eparch of the Nobatae. The formulae and the invocations are in the main not unlike those occurring in similar Coptic stelae from Nubia. The text on the parchment page is a Christian magical invocation in Greek in the midst of which occurs a series of symbols similar to those on the three foundation deposit ostraca described above.

The central section of the lower terrace was covered with a level of Christian period debris and beneath that were the eroded mud-brick walls of two small, apparently Christian, buildings, one directly above the other. The lower building and the debris around it rested upon a stratum of relatively clean sand. Beneath the sand appeared a layer of scattered stones and fragments of Nubian pottery contemporary with the Middle Kingdom. This overlay a deep deposit of earthen debris containing more of the same Nubian ware. The scattered stones proved to be the top of a crudely stacked foundation resting upon low-lying bed-rock towards west centre of the fort. This foundation continues northward into still unexcavated areas. Bits of brick work and a stone column base, probably in situ, were associated with the foundation. The earthen debris containing them exhibited no stratigraphy in a depth of a metre or more to present high water level and bed-rock, but was an intentional fill consisting of a homogeneous mixture of mud, broken mud bricks, pockets of ash, and sherds of Middle Kingdom Nubian ware. Incomplete excavation of the complex suggests that it is of later date than, and contains stone removed from, the basin-like construction within the apparent confines of which it lies.

This ‘basin’ (PLATE XXXI, a) is also as yet incompletely excavated, although most of its extant south side, its north-west corner and a part of its west side have been uncovered. These sides consist of sloping stone embankments or revetments resting at bottom on low-lying bed-rock which appears to be cut to an even surface for the bottom of the basin in those areas thus far exposed. The sloping embankments of roughly dressed stones set in mud mortar are upper facing to an underlying mud-brick revetment rising outward at a 45 degree angle. This mud-brick revetment rests in turn upon low-lying undisturbed layers of sand and silt. The upper surface of the brick revetment is smoothly finished and its stone facing rises at a slightly steeper angle than it does to form a paved platform at the top. The bricks, the brick-work and the masonry are identical
with those found elsewhere in the construction of the fort itself, and all indications thus far point to this basin having been a harbour or docking facility for the fort, usable at certain river levels. At present high water level the basin is, however, barely entered by the ground water, but the height of the silt layers into which it was built indicates a once higher water level and a water filled harbour during flood periods.⁶

As yet no outline of the career and vicissitudes of the fortress is possible. So great is the slope of the hillside that the remains which were not carried off slid or were pushed down hill in a jumble in later occupation. So thorough was the repeated destruction in later occupation also, that the present Christian buildings rest for the most part on bed-rock. The often strong west winds that cover and preserve sites on the west bank of the river with depths of drift-sand, have helped to abrade and denude Serra East, or at least to lay bare its portable contents continuously through the centuries. It is a rather remarkable circumstance that nothing was found in the way of Egyptian objects to indicate that the fortress even existed prior to the New Kingdom were it not for the evidence of the construction of the outer walls, which seem clearly to be Middle Kingdom, and the Nubian pottery generally regarded as contemporary with the Middle Kingdom. It also seems remarkable that except for one cartouche of Thutmose I and one of Thutmose III stamped on pottery, a blue-glaze scarab bearing the name 'nh-s-(n-)?Imn, and a very few small fragments of New Kingdom stelae, no writing has turned up earlier than the Greek and Coptic texts referred to above. The latter texts are probably not older than the 11th century of the Christian era.

The Pottery from the Fortress Area

The pottery at Serra East, especially in view of the sparsity of finds of other types, requires more than usual attention and our interpretation of it is as yet tentative. The task is made more difficult also by the general slippage down hill and the resultant confusion as well as by the repeated subsequent rebuilding down to bed-rock.

Among the more peculiar objects of clay are a number of the so-called 'pig's heads' or 'bat's heads' apparently used in the manufacture of pottery although their function is unknown. There was also a miniature adze head of hard clay and a similarly small mace head reminiscent of the early Egyptian heads. The material and the size of them indicate models or ceremonial usage.

There is a good collection of sherds of a predominantly black ware burnished on the inside and with a distinctive rim-band which is burnished on the outside as well. The body is incised with regular or irregular geometric designs. The fracture sometimes shows carbonized streaks of plant material. Mixed with this

⁶ Cf. the data on high water levels in antiquity in Wheeler, op. cit., pp. 95-6 and 165-6.
typically Nubian ware in the same contexts were large quantities of sherds of the red black-topped ware which occurs frequently in C-Group cemeteries.

This red black-topped ware also occurs in the same strata as the imported Egyptian New Kingdom red ware and cream-painted or cream-slipped decorated ware. This imported red ware varies in colour from buff to pink and dark red, sometimes decorated with a wavy line or lines. It is represented by footed bowls and cups while the cream-slipped ware was used for footed bowls, jars, amphorae and the so-called pilgrim bottles. This imported ware is well represented in the lower levels of the excavated area, and the best examples come from the lowest levels in the basin in about the middle of the lower terrace, although it can be found sporadically in all parts of the fort including surface layers. Particularly numerous were fragments of jars and amphorae in this ware from the lower levels, some of them bearing stamped potter's marks. The only royal names found during the season were seal impressions on this ware of the cartouches of Thutmoses I and Thutmoses III. The first is on the handle of a jar and the second on fragments of the side of an unpainted and unslipped pink ware bowl.

Kerma ware occurs only sparsely at Serra East, no examples of Meroitic pottery have been found, and X-Group pottery is not represented as yet within the fortress.

The Christian occupation of the site left a profusion of sherds not only on the surface but in the lower levels on the lower terrace. A large proportion of the sherds are of a coarse undistinguished ware, mainly of large grey and black vessels. A finer hard pink ware was employed for vessels with ring-bases. The greater part of the finer pottery shows an extensive variety of forms and is decorated with a large repertoire of painted designs. It includes bowls with straight or rounded sides with painted decoration on the outside, as well as shallow ring-base bowls with a painted frieze of geometrical design inside below the rim. A number of examples have a rosette painted on the bottom inside and rarely on the underside within the ring base.

The C-Group and X-Group Dwellings

A lone C-Group house to the south of the fortress across a ravine consisted of a single circular enclosure of standing stone slabs consolidated with smaller stones and mud. A large number of sherds of C-Group pottery was found inside. Just to the north of it there was another circle of standing stone slabs in loose sand but it showed no evidence of occupation.

Close to the C-Group house, a little to the north, nearer the ravine, an X-Group dwelling also of one room yielded several complete amphorae and bowls as well as broken storage jars lying inside and around it. There were pottery stoves and ovens on two sides of the house, and a number of beads and fragments of bronze and iron were recovered in and about it.
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To the north of the fortress three spots were observed showing numerous sherds on the surface and in one instance there were traces of some sort of structures. Two of these sites remain to be examined but the third has been cleared. It lies about 300 m. north of the fortress on the slope from the cliffs to the river. Sherds were found at the foot of the slope, but higher up in the lea of overhanging boulders were encountered the low slab-stone walls of three houses or shelters. Inside them were a few blackened cooking pots, beads and fragments of other small objects all indicating X-Group occupation.
Excavations at Aksha
September 1961—January 1962
by J. Vercoutter


* * *

During these four months the work of the Mission was concentrated on three main objectives: a. to find and clear any subsidiary buildings round about the Ramesside Temple; b. to finish the excavation of the late Meroitic cemetery north-west of the Temple (see Kush X, p. 116); and c. to explore for ancient remains the complete area allocated to the Mission under the terms of the Licence, viz. a roughly rectangular area, covering approximately 8 square km. from the west bank of the Nile to the Sudanese-Egyptian frontier, the limits of which are: on the north-east, a line running north-west from the intersection of grid line 942000 (Egypt red belt grid of the map: Egypt—New Series, 1:25,000, Aksha sheet—Army Map Service, U.S. Army, 1955), and the west bank of the Nile to the intersection of grid line 945000 and the Sudanese-Egyptian frontier; on the south-east, the west bank of the Nile; on the south-west, a line running north-west from the intersection of grid line 658000 (Egypt red belt grid), and the west bank of the Nile to the intersection of grid line 943000 and the Sudanese-Egyptian frontier; on the north-west, the Sudanese-Egyptian frontier.

Work at the Temple and in the Temple area

The Ramesside Temple had been entirely cleared during the preceding season (see Kush X, pp. 110–14), but two tasks remained to be done there: to look, wherever it was possible to do so, for the Egyptian foundation deposits and to remove the Christian remains inside the pillared forecourt which, in places, covered the Ramesside structure.

The removal of the scanty remains of the church yielded a few Egyptian decorated blocks which had been reused by the Christians. Among these a door-jamb with part of the protocol of Ramesses II, although much worn, is
worth mentioning, as well as two small funerary stelae of the same period, one complete, the other broken. Unfortunately their inscriptions are in bad condition.

The Christian church does not seem to have held any grave near the altar, as is sometimes the case in the early Christian churches of Nubia. The Arab coins found in the south-western corner of the church during the first season have been cleaned and restored by the ‘Centre de Recherches de l’Histoire de la Sidérurgie’ at Nancy, under the supervision of the Director M. A. France-Lanord; they have proved to be silver dirhems of the Ommeyad period; they were minted during the 1st century of Hegira, between A.D. 700 and 705. Since they were found inside the Church, above the floor, the building must already have existed at least at the end of the 7th century, and accordingly it must be reckoned among the very first Christian churches to be built in the Sudan. This early date for Aksha Church is entirely supported by the potsherds found in the first Christian level which all go back to the period A.D. 600–700 according to Dr W. Y. Adams’s typology of Christian pottery (see Kush x, p. 280).

A thorough search has been made for the foundation deposits at each corner of the temple, and of the pylon, as well as along the main axis of the sanctuary and of the pylon. Nothing was found and it seems that for once at least the Egyptian architects did not select the usual places in which to put the ritual deposits. However, during this research, and as a result of it, we have been able to ascertain the general lay-out of the Ramesside temple. For instance, the foundations of the Pylon, built of mud-bricks faced with white sandstone, consisted of a shallow slightly incurved trench cut into the virgin soil, which here consists of pure Nile silt. The trench had then been filled with successive layers, beginning from the bottom, of pure sand, sand mixed with chipped stones, pure sand again, a mixture of sand and chipped sandstone and so on, and the mud bricks were laid directly on to the last layer of chipped sandstone (see Fig. 1). The foundations of the western wall of the sanctuary, which closed the three ‘cellae’, consisted of a rather deep but narrow trench cut in the silt, then filled with pure sand, and the layers of sandstone blocks were laid upon it.

A number of subsidiary buildings have been found around, and at the same level as the temple proper. They belong to the Egyptian occupation of the site. The largest one was located within the enclosure of the temple, which we have been able to trace. Towards the river and on the north side, the temple enclosure was the main girdle wall of the town; on the south, a smaller wall of mud-bricks separated the temple from the town. The fine lintel found last year, showing Ramesses the Second making an offering to Amon, belonged to the gate which gave access to the temple from the town. On the west, it seems that the temple enclosure also extended to the main girdle wall. However, this is not certain: owing to the presence of sand hills over this part of the site we have been unable to clear completely the brick structures which may or may not be the north-western corner of the town enclosure.
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The main mud-brick structure with stone sills and door-jambs to the west of the temple consisted of large rooms, one hypostyle. The protocol of Ramesses II was inscribed on the door-jambs. This building was probably the house of the First Prophet of the Temple or an administrative building.

In front of the main gate of the temple, through the main girdle wall, Prof. Rosenvassser found a pathway of chipped stone and gravel gently sloping towards the river, which led to a quay built of large sandstone blocks. This is a rectangular structure, only the outer walls of which were built of stone (6.20 × 7.50 m.),

while the internal construction was of chipped stone and sand. On its eastern side the quay is 1.80 m. above the level of the water at the time of excavation, but one must not forget that the water level during the Ramesside period was lower than at present since Aksha today is in the area affected by the Aswan Dam reservoir and the level of the water rose during the excavation period. Accordingly, the Ramesside quay must have been higher above the river than it is now, although it was not possible to ascertain its original height. A stone inscribed with the name of Ramesses the Second was found in front of the quay. It has
been impossible to clear the structure entirely owing to the fact that its northern and western sides are covered with palm-trees (cf. PLATE XXXII).

Between the quay and the girdle wall, in front of the temple gate, there was a great platform of chipped stones and gravel, bordered with a row of stones. Outside the temple area, the main points to be mentioned are that south of the outer gate of the temple leading to the quay we found a second bigger gate, of which only the lower courses of sandstone blocks were preserved. It seems that for some time, possibly during the reign of Seti I, this gate was the main entrance to the town, but subsequently in the Egyptian occupation it was blocked by a mud-brick wall.

South of the enclosure of the Ramesside temple a strip, 15 m. wide, was cleared and the foundations of a number of ancient Egyptian structures were discovered. They consist of rectangular rooms of considerable size, with sills and door-jambs of stone. Near the entrance to one of these structures, fragments of an oval shaped lintel were found by Prof. Rosenvasser. It was inscribed with the names of the Pharaoh Seti the First (cf. PLATE XXXIV). This seems to be proof of the fact, already suspected, that while the temple is chiefly the work of Ramesses II, the actual foundation of the site dates back to the time of his father. South of the area so excavated which includes the whole of the northern part of the site, town and temple, two extensive trial diggings were undertaken, one approximately 30 m. south of the temple forecourt, the other about 80 m. south-south-west of the temple. In the first trial which consisted of a square 10 m. by 10 m., and at a depth of 1.30 m. below the surface, the remains of a double partition wall were found. They seem to belong to two different rooms of a single building. Some sherds of New Kingdom date were found during the excavation. The virgin soil, which here, as elsewhere, is pure silt, was reached at a depth of 1.50 m. below ground level. In the second trial—a trench 10 m. long by 4 m. wide—Prof. Rosenvasser found only a deposit of sherds and broken pots—over 50—all New Kingdom pottery. They were on the Nile silt at a depth of 0.50 m.

Above the scanty remains of mud-brick Egyptian buildings, all round the temple there was a thick layer—varying from place to place from 50 to 70 cm. in depth—of ash and broken moulds or crucibles of rough pottery. Over 2000 of these objects have been recorded. Samples of ash have been collected from different places and are now under study in the laboratory. Analysis should give a clue as to the use of these objects. The foundations of the first level of Christian houses were laid partly on this thick layer of ash, which accordingly may be dated to a period between the Egyptian occupation and the beginning of the 7th century A.D. Tentatively I might ascribe it to the very end of the Egyptian occupation (xxvth Dynasty for instance) long after the Ramesside period, since the subsidiary buildings of the temple were already in ruins when the ash level covered them, or to Meroitic times, when, as we know from the cemeteries, the site was again inhabited.
PLATE XXXIII

CHRISTIAN CISTERNS (7)
EXCAVATIONS AT AKSHA

The first level of Christian occupation was at practically the same height as the floor of the Ramesside temple. This level consisted of small mud-brick structures, either houses or annexes to the church which occupied the temple forecourt. All over the area there is definite evidence of two different levels of Christian occupation. The earlier one goes back to the beginning of the 7th century A.D., the date being firmly established both by the Arab coins found a few centimetres above the floor level of the church, and by the sherds collected. The second level could be dated by the sherds to the 9-10th century A.D. Foundations of the structures of this level are at about 30 to 40 cm. above the first. The church showed, too, definite evidence of rebuilding during the second Christian occupation. During the excavation of the Christian structures south of the temple, a cistern or tank was found (see PLATE XXXIII and FIG. 2). It had a

lion-headed stone spout. A water duct led to the tank. Five burials were found in the same area—post-Christian, since they cut through the walls of the buildings. The bodies were in extended position with heads to the west.

On the same level as the cistern or tank, to the west of the Ramesside sanctuary and about 5 m. from the girdle wall, was found a large rectangular vase (dimensions $43 \times 65 \times 60$ cm.) or basin of earthenware covered with dark red slip. A Coptic inscription runs on all four sides. In addition to sherds, a few objects of Christian date were found in both layers. Only a small decorated vase and two basins, one small and one large—the latter being possibly a baptismal font—are worthy of mention.
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From place to place the Christians had reused parts of the Egyptian buildings. None of these fragments was of any interest whatsoever, with the exception of the broken elements of a fine Egyptian cornice with uraei (dimensions 1.11 × 0.27 × 0.24 m.). The early Christian level, south of the temple, was only 35 cm. above the floor of the Egyptian remains, which were therefore almost entirely in ruins when the Christians settled on the site. The Christian repairs, in red brick, to the walls of the temple itself are further proof of the utterly decayed state of the Egyptian buildings long before the present era.

Work at the Meroitic Cemetery (W–N–W of the temple)

During the last season only five tombs had been excavated in this cemetery (see Kush X, p. 116). In the second campaign a further 87 graves were excavated, making a total of 92. With one exception they had all been robbed in ancient times. The graves consisted of a shallow vertical pit leading to a small recess cut in the Nile silt, which is the virgin soil in this part of the site. In one case only the sepulchral chamber was vaulted with mud-bricks. The recess where the body was laid can be either lateral or perpendicular to the shaft. The actual burials occupied the recess and were protected by unlinked mud-bricks, which when in situ formed a dry wall blocking the whole recess.

The funerary furniture consisted chiefly of pottery vases, jars, jugs and goblets, which were placed beside the body in the recess. A few objects, personal ornaments such as ear-rings and finger-rings—some incised with typical Meroitic designs—kohl pots, cosmetic boxes, spatulæ, bowls either of copper or bronze or of wood, were found either on the body or beside it. As already stated, the cemetery was heavily plundered and only beads of stone, glass and faience had survived the rough treatment. Most of the vases were broken and it was only by chance that some were in good condition, most of these coming from the only undisturbed burial. This is all the more to be deplored since the complete vases are of good workmanship and nicely decorated. The skeletons themselves were usually badly damaged. In some cases for instance the head was found in a different grave from the one in which the body was discovered later. Thanks to the dryness both of the climate and of the soil in which the graves were cut, the human remains, however broken and dismembered, were in perfect condition. By a natural process of mummmification they had retained their skin and hair. The skulls are at the present time under study in the laboratories of the Department of Physical Anthropology, ‘Musée de l’Homme’, Paris. Two of the torsos showed tattooed designs, and this was also the case with one head. When by chance the body was still lying in its original position, it was extended on its back, hand to the pubis, head to the west. Garments of leather and fabric were found in some cases as well as undecorated wooden coffins, unfortunately mostly eaten by termites. In three cases, at least, stones very roughly cut in the shape of offering tables were found in the shafts of the graves. Others may have been destroyed by the robbers. However, no
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inscriptions were found in the cemetery with the exception of a small scaraboid, obviously of the xviiith Egyptian Dynasty, which had been reutilized as a seal finger-ring. This was probably the result of the robbing of an ancient Egyptian grave in the vicinity, like the one at Bedier (see Kush x, p. 115) which showed evidence of Meroitic reoccupation. From the archaeological evidence, the north-western cemetery at Aksha may be ascribed to the very end of the Meroitic period.

Excavations inside and outside the concession area

With the exception of the area near the river where extensive sand-hills prevented us from searching the ground for remains, and made any archaeological work impossible, the complete area covered by the concession was tested for possible ancient sites.

With the exception of a few A-Group sherds and an isolated grave, nothing was found in the plain which lies between the sand-hills and the first slopes of the western desert. On the powdered silt terraces, just below the 130 m. contour level, a very small cemetery of the A-Group period (site reference AA-1) which had been robbed in ancient times was situated within the limits of the concession in its southwestern corner. It had already been reported and 15 graves excavated by the SAS Survey1 in 1961 (reference 24-I-22). The graves, simple circular pits in the form of beehives, were cut in the silt. We excavated seven more graves, all of which were plundered. They did not yield anything but a few sherds of A-Group pottery.

With the kind agreement of the Commissioner for Archaeology, Sayed Thabit Hassan Thabit, a slight extension was made to our concession so as to enable us to explore the cemeteries which had been established in a line along the lower Nile terrace south of the concession as far as Serra West village. As a result of this we have been able to excavate a number of interesting sites, which are, from north to south:

Site AA-2. A small A-Group cemetery spotted and partially excavated by the SAS Survey (reference: 24-I-23). Ten graves have been excavated by us as against 14 by the Survey. The site lies some 500 m. south from AA-1. Graves are of the beehive type, circular and dug in the silt. They had been robbed in antiquity, but nevertheless produced, in addition to the usual A-Group sherds of black-topped red pottery, two important relics—two very clear seal impressions on mud stoppers. These impressions can be dated by the designs on the seals to the 1st or 2nd Egyptian Dynasty.

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1 SAS Survey refers to the survey begun in 1956 by the Sudan Antiquities Service. From 1959 onwards it has received help from UNESCO. It is now under the direction of Dr W. Y. Adams, Unesco Expert, with the help of Messrs Jan Verwers (in 1960) and Hans Nordström (since 1959). I wish to express my gratitude to Dr Adams and his staff; they have always been a very great help to us.
Site AA-3. The site lies about 300 m. south of AA-2. It is an A-Group cemetery of 41 graves, of which 24 were excavated by us and 17 by the SAS Survey (reference: 24-I-24). They consisted of circular and rectangular graves dug in the silt. The skeletons, when undisturbed, were in the contracted position, head to the south. The bodies seem to have been wrapped in goat skins, remains of which were found in several graves, and one of the bodies was still covered by the skin. Although much plundered, Cemetery AA-3 has yielded a number of objects such as lozenge-shaped palettes of alabaster and quartzite; pointed jars of buff pottery; large dishes with undulating line decorations in red on buff, as well as a small four-legged cup of alabaster, a quern of quartzite; beads and a few copper implements.

Site AA-4. This site lies a little south of the preceding one and quite near to the first houses of Serra West village. It consisted of 27 circular A-Group graves, 14 of which were excavated by the SAS Survey (reference: 24-I-25) and 13 by us. All the graves had been robbed in ancient times and not a single object was found besides the usual sherds of A-Group pottery.

When the site AA-4 was reached, we were at the outskirts of Serra West village where there is an extensive C-Group cemetery, already spotted and partially excavated by the SAS Survey (reference: 24-M-6). Trial diggings in the unexcavated graves rapidly showed that we had here a mixed cemetery, with C-Group graves extending towards the east and the river, A-Group graves towards the edge of the desert, and in the middle A-Group and C-Group intermingled. Most of the C-Group graves, easily spotted thanks to the stone rings of their superstructure, had been excavated by Mr Jan Verwers in 1960. As usual they had been robbed and mainly yielded typical sherds of the black incised C-Group pottery, ostrich egg-shell beads and one scarab. One of the most interesting features of the few graves we excavated then and there was a line of 15 goat skulls which had been placed outside one of the graves along the west side of the stone circle.

On this site which we recorded as ACS (=SAS Survey 24-M-6), the A-Group graves seem to be more important than the C-Group ones. They consist of rectangular or oval shaped graves—with a few circular ones—dug into the silt. There is no evidence of any superstructure, but the strength of wind erosion in the open plain at Aksha and Serra is such that if there had been any such superstructure of soft material like sand, it would have been blown away very rapidly. Although we found a few samples of the black topped red pottery; most of the vases we discovered were of the red on buff type. They were chiefly big jars and large dishes, lozenge-shaped palettes of alabaster and quartzite, beads, a few copper implements and an ivory object. Excavation of this cemetery is not yet finished and will be continued next season.

East of the site ACS was an extensive Meroitic cemetery, spotted and partially excavated by the SAS Survey (reference: 24-M-12). Seventeen graves have been excavated by us. All of them had been plundered in ancient times, but a
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certain number of vases of plain red ware were found, together with a small lamp with a zoomorphic design on it, fragments of iron instruments and a necklace. In one of the tombs a Meroitic cursive text of seventeen lines was discovered (see below Addenda, by A. Rosenvasser and Plate xxxv).

The Meroitic tombs at Serra are shaft graves with a lateral chamber cut along the long side of the rectangular pit. The shafts are simply cut into the silt, some of them being rather deep (one reached a depth of 3 m.). In one case the pit led to an axial chamber vaulted with mud-bricks. This cemetery seems to belong to the very end of the Meroitic period. Indeed some of the graves might well belong to the X-Group period judging by the type of pottery found.

Prehistoric Survey of the Concession

During his stay at Aksha, Dr A. R. Gonzalez made a thorough survey of the concession looking for prehistoric remains. Five important palaeolithic sites were found at the 132 m. level, on the bank of a wadi. Each site was approximately circular covering an area some 100 m. in diameter. They yielded Acheulean and Mousterian biface hand-axes as well as a few Micoquian implements. The material used was quartzite. Other sites were surveyed including mesolithic and early neolithic ones which have yielded a considerable number of microliths, scrapers, borers, 'burins', arrow-heads, etc.

* * *

By the end of the 1961 campaign, most of the archaeological and historical data which could reasonably be expected from the Aksha excavations have now been collected, and the work can be considered as virtually completed. However, before we can undertake the full scale publication of the work, a few points have to be ascertained so that we can release the concession. The most important matter outstanding is the A-Group cemetery ACS. From the pottery found, it seems that it is related to the late-predynastic and/or the archaic period of Egyptian history, and accordingly it is our duty to see that it is properly and completely excavated. The second task is to try and ascertain—if it is possible—whether in fact Seti the First did any building on the temple site and, if so, its extent. Unfortunately, this is not so easy to effect as the completion of the ACS excavation. Sand-hills cover most of the Egyptian levels of the xixth Dynasty, the temple or temples as well as the town and cemeteries. Unless we can get considerable mechanical aid to remove the sand-hills, the Franco-Argentine Mission will not be able to add much to the historical and archaeological results so far obtained.

Lille University.

September, 1962.
KUSH

Addenda (concerning inscriptions mentioned in this Report)
by A. Rosenvasser

I. The lintel of Sety I (Plate XXXIV). In the centre of the oval lintel, in a rectangle which originally was 32 x 32 cm. (now reduced to 32 x 30 cm.), we have the Horus name (ḫ3 nḥt ḫt m Wȝst ṣḥn ḫwy) repeated on the right and left hand framing the nsw-bity (Mn-miṯ-Rc) and the s3 Rc name (Sty-mr-n-Pth). The whole is covered by a sky 𓊁. In our last Report of the season (Eleventh Report, 22 January 1962) I referred to this find saying: It is clear from this that Sety I has built here and we have to relate now his name to the fragments of relief showing a procession (A 169 to A 178) I found during the last season in the rooms along the southern side of the cells (Third Interim Report referred to as Last Report of the season). One of the fragments of the procession contains the remnant of an inscription with a cartouche belonging presumably to Sety I. If Sety I is not the founder of the Sanctuary or Temple it is sure at least that he did some building at Aksha.

II. The Meroitic Stela (Plate XXXV). As usual in funerary stelae of Meroitic people the inscription begins with an invocation of Isis (weš) followed by the epithet weshninya and an invocation of Osiris (šeri) followed by the epithet wettr. The deceased on behalf of whom the stela was made is the qe (honourable) Atqê. To this name is attached the suffix qewi (according to Monneret de Villard, KUSH VIII, p. 94, qewi is a compound of qe, noble, and the suffix xwi). In this inscription the formula of parentage C precedes the formula B. After the name of the deceased follows the name of the father Amerêye defined by the formula C: terikelawi, and the name of the mother Bëqêke defined by the formula B: tdhelawi. Other descriptive phrases of parentage are defined by the epithet yetmedelawi (kin) which appears repeated four times (ll. 6/7, 7/8, 8/9, 10) in this inscription (Griffith, Karanog, The Meroitic Inscriptions of Shablul and Karanog, p. 55–8): 6 kin of the mte Mklelité-Aribetli; kin of the Ateqi; kin of the Mdek-leb; kin of the belelêq of Isis (in plural: Weš-teb). Mte is interpreted by Griffith (Mer. Ins., p. 38) as meaning junior, but according to Monneret de Villard, op. cit., it is the title of a functionary: the Met of Middle Ages. Ateqi is a civil title; mdek a sacerdotal title; belelêq is probably the sacerdotal title belêlêke (Griffith, Karanog. Ins., 56, 69, 88, 23, 30, 46, etc.). The plural of Isis is strange.

There are no terminal formulas or benedictions (A–J) in the remaining lines of this inscription (10–17):

sbe: yni: bqêl: ṣ-mdes: A(?)mêqel: tr: wĕst-e mâlêk: m(?lêk:
mlê-mrs: Aliyetele.

I judge by comparison with the ‘Palaeographical Tables’ and ‘Hand Copies’ of Griffith (Karanog and Meroitic Inscriptions, 1) and the ‘Paleographische Tabelle der meroitischen Kursive’ of Hintze (Studien zur meroitischen Chronologie und zu den Opfertafeln aus den Pyramiden von Meroe, 1959) that our inscription belongs to the 4th century A.D.

2 Rectangular stela of sandstone having a small projection at the top, inscribed with 17 lines between rules. Height 56 cm. Width 30 cm. It was found lying deep in tomb number 4 of the cemetery MSA at Serra, by Prof. A. Rex Gonzales.
Le sarcophage de Ouabset de la nécropole de Soleb

par JEAN LECLANT

Dans la tombe 5 T où la Mission Michela Schiff Giorgini (sous le haut patronage de l'Université de Pise), lors de sa première campagne en 1957 dans la nécropole de Soleb, avait découvert un sarcophage en grès, anépigraphe, avec couvercle anthropoïde (5 T 1)\(^1\), la suite des travaux en 1960\(^2\) a permis de trouver un autre sarcophage (5 T 2)\(^3\) en grès blanc, rectangulaire, avec couvercle, d'un type caractéristique de la xviiième dynastie, tant par sa forme que par sa décoration.\(^4\)

La tombe 5 T comporte un puits sur lequel s'ouvre à l'Est\(^5\) une chambre\(^6\) et à l'Ouest deux chambres mitoyennes qui ont une partie commune à l'entrée ; c'est dans la plus au Sud de ces dernières qu'a été découvert le sarcophage 5 T 2 que nous étudions (fig. 1, en A). Une masse épaisse de la voûte rocheuse de cette chambre s'est abattue et a broyé tout ce qui se trouvait sous elle. Bien que bouleversée avant l'écroulement du plafond, la sépulture n'a pas été entièrement vidée et elle a gardé des restes disloqués de ses défuns et quelques objets. Près de la paroi Sud\(^7\) des résidus de poudre brunâtre semblent indiquer la présence, à époque ancienne, d'un sarcophage en bois. Le long de la paroi Nord qui la sépare de sa chambre mitoyenne, se trouvait le sarcophage en grès décoré 5 T 2. Il était orienté Ouest–Est, la tête étant à l'Ouest.\(^8\)


\(^2\) Un premier fragment correspondant à un morceau du côté droit de la cuve avait été recueilli dès 1957 à l'entrée des chambres funéraires de l'Ouest, près de la porte donnant sur le puits, dans la terre d'alluvions ; mais la fouille avait dû être provisoirement interrompue, en raison du très mauvais état du plafond de la chambre.


\(^4\) Cf. infra, p. 143, n. 13.

\(^5\) Pour les indications concernant les directions, on considère que, de façon générale, dans la nécropole de Soleb, l'orientation des puits est Est–Ouest. Ceci ne correspond pas toujours à l'orientation vraie. Ainsi, dans la présente tombe 5 T, il y a un décalage très net.

\(^6\) C'est dans cette chambre qu'a été trouvé le sarcophage en grès anépigraphe 5 T 1, cf. *supra*, n. 1.

\(^7\) Cf. *supra*, n. 5 ; en réalité la paroi est presque à l'Ouest.

\(^8\) En fait, le sarcophage est placé Nord–Sud. Son côté droit correspond à l'Est réel, son côté gauche à l'Ouest.
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Couvercle et cuve étaient brisés en de nombreux morceaux. Certaines cassures sont dues à ceux qui bouleversèrent la tombe. Mais le sarcophage a surtout souffert de l’écroulement des gros blocs de schiste du plafond. Le couvercle est fragmenté en trois morceaux ; une première cassure est due à la chute du plafond, mais une autre brisure, à la hauteur des jambes, est l’œuvre de ceux qui visitèrent la sépulture ; on note en effet des traces de coups de ciseau à la base du couvercle repoussé vers le côté Sud. C’est alors également qu’on a fait sauter le fragment du côté droit de la cuve, retrouvé près de la porte donnant dans le puits.9 Dans la cuve du sarcophage, il n’y avait plus que quelques fragments d’ossements, accumulés à l’emplacement des pieds, avec un tesson de poterie aux bords usés, et quelques éclats de schiste du plafond.

De forme rectangulaire, le sarcophage a pour dimensions extérieures moyennes une longueur de 1m, 95 et une largeur de om, 55. Avec le couvercle, il a une hauteur totale moyenne de om, 62. Il est en un grès fin, très clair—le

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9 Cf. supra, p. 141, n. 2.
même grès\textsuperscript{10} semble-t-il qui a servi à la construction du temple de Soleb, très voisin d’aspect du calcaire.\textsuperscript{11}

La bande centrale du couvercle et la cuve sont décorées de figures et de textes gravés en creux.\textsuperscript{12} Leur disposition et leur nature rappellent celles de toute une série de coffres funéraires du milieu de la xviii\superscript{e} dynastie dont le décor et les inscriptions sont comparables à ceux des sarcophages royaux de cette époque.\textsuperscript{13}

\textsuperscript{10} Une analyse d’échantillons du temple et du sarcophage faite par le Laboratoire de Géologie et de Paléontologie de l’Université de Strasbourg (Prof. G. Dunoyer de Segonzac) a montré qu’ils proviennent également de ‘grès silicoalumineux, qui représentent les variations d’un même facies’ : il s’agit d’un ‘grès blanc à gros grains de quartz’.

\textsuperscript{11} G. A. Hoskins, \textit{Travels in Ethiopia} (London, 1835), p. 249 : ‘the general colour being much whiter than that of any Egyptian or Ethiopian ruin I have seen. I was in doubt whether to consider it as arenaceous limestone, or sandstone; but the specimens I brought to England have been decided to be sandstone’; cf. également, \textit{LD, Text}, v, p. 232.

\textsuperscript{12} Il n’y a pas de traces de peinture. Des plaques noirâtres, par endroits, semblent provenir d’une sorte de moisissure.

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(I) Le couvercle, un peu débordant sur la cuve, est légèrement bombé, l'intérieur étant en courbe creuse. À l'extérieur, la partie centrale, en faible saillie, est décorée d'une longue bande d'hieroglyphes, la largeur entre les filets qui la limitent étant d'environ 0,075. Aux deux extrémités, il y a un rebord épais de 0,09, haut de 0,04 du côté de la tête, de 0,03 vers les pieds ; le rebord de tête monte du côté gauche vers le côté droit ; celui des pieds penche en sens inverse.\(^\text{15}\)

Du côté de la tête, la grande bande centrale comporte d'abord une représentation prise en partie dans le rebord et figurant un visage humain, assez sommairement ébauché, au front bas et au large menton carré. Sous ce visage se trouvent quatre bandes d'un grand collier qui déborde sur presque toute la surface du couvercle ; des deux côtés est visible l'élément de fermer en tête de faucon. Le demi-cercle du collier s'épanouit au-dessus de l'image d'un vautour\(^\text{16}\) aux ailes éployées tenant dans ses serres, de chaque côté, un anneau \(\textit{sn}\).\(^\text{17}\)

Le texte est disposé en une colonne :\(^\text{18}\)

\[
\begin{align*}
\text{(a) } & \text{Le dernier signe } \rightarrow \text{ est gravé sur le rebord vertical.}
\end{align*}
\]

Paroles à dire (a). L'Osisiris Ouabset dit : "O ma mère Nout, déploie ton aile sur moi (b) ; que je sois placé parmi les Impérissables (c) qui sont en toi ; ne doit pas mourir (d) l'Osisiris Ouabset, j.v.".


\(^{14}\) Du côté des pieds, c'est seulement à l'extrémité droite que l'extérieur du rebord du couvercle a été aplani à l'alignement de la façade de la cuve ; le reste a été laissé de taille sommaire et nettement débordant.

\(^{15}\) Ces directions correspondent au sens dans lequel est tournée respectivement chacune des déesses qui décorent les petits côtés de la cuve.

\(^{16}\) Ainsi que le montre le texte, ce vautour est l'image de la déesse Nout, et non pas de Nekhet (comme l'indique W. C. Hayes, o.c., p. 134) ; sur l'évolution de ce type de décoration, cf. A. Rusch, \textit{Die Entwicklung der Himmelsgöttin Nut} (Leipzig, 1922).

\(^{17}\) Pour des décorations comparables, cf. e.g. la déesse-vautour éteignant ses ailes et tenant les anneaux \(\textit{sn}\) sur les sarcophages de Iouya (J. E. Quibell, \textit{The Tomb of Yuua and Thuiu}, C.G.C. (1908), p. 4–5 et pl. ii), de Kha (E. Schiaparelli, \textit{Relazioni sui lavori della missione archeologica italiana in Egitto}, Anni 1903–1920, II (1927), p. 20, fig. 21 et 22). Au sarcophage de Houy (A. Badawy, \textit{ASAE}, XLIV (1944), pl. xvii), la colonne de texte est surmontée de l'image d'une déesse anthropomorphe posée sur le "collier d'or" et éteignant ses ailes, en-dessous de deux yeux-\textit{oudjat}.

\(^{18}\) Le sens de la flèche indique la disposition des signes, non pas le sens de la lecture.
LE SARCOPHAGE DE OUABSET DE LA NÉCROPOLE DE SOLEB

p. 184 (Texte 1) ; voir également A. Badawy, ASAE, XLIV, 1944, p. 186-7 ; A. Varille, ASAE, XLV, 1947, p. 6.

(b) Mot à mot : 'déploie quant à toi l'aile sur moi '. On notera dans la rédaction de notre sarcophage la présence du signe (dnh, 'l'aile'). C'est là une modification du texte qui correspond au développement du type de Nout ailée (cf. A. Rusch, Die Entwicklung der Himmelsgöttin Nut, Leipzig, 1922, p. 30). Pour cette formule, en dehors des textes indiqués dans les études que nous venons de citer, on se reporterà PT 825a (cf. K. Sethe, ÜK, IV, p. 76) et à la 'formule de Nout' (PT 580b-c et ÜK, III, p. 78 et 86) ; voir également le sarcophage en bois de Mykerinos au British Museum, no. 6647 (PM, III, p. 8 ; LD, 11, 2, e).

(c) Le développement par ce texte stellaire du texte de Nout est noté dans A. Rusch, Die Entwicklung der Himmelsgöttin Nut, Leipzig, 1922, p. 31. Pour les ihmu-šk, 'celles qui ignorent la destruction', les Etoiles circumpolaires, cf. Wb, 1, 125, 14. La graphie avec iw initial est indiquée comme fréquente au Nouvel-Empire dans les Belegstellen, 1, p. 23 ; on la trouve e.g. sur le sarcophage d'Amenemhat (Marquis of Northampton et al., Report on some Excavations, 1908, pl. viii). Le Wb, 1, 125, la signale aussi à propos de ihmu-word, avec également la mention Nouvel-Empire ; cf. la graphie de i(w)grt dans le texte du bandeau du côté droit, infra.

(d) La présente graphie de mwt est signalée comme Nouvel-Empire par Wb, 11, 165.

* * *

La cuve, en grès elle aussi, est rectangulaire ; ses côtés ont en moyenne om,07 d'épaisseur. Haute de om,50, elle a à l'extérieur om,95 sur om,55. Ses quatre faces sont décorées.

(II) Du côté de la tête (Plate XXXVI, a) est figurée l'image de Nephthys, nettement décalée par rapport à l'axe. La déesse est accroupie au dessus du 'collier d'or', les deux bras levés de part et d'autre, la tête portant les deux signes de son nom.

Disposée en deux colonnes encadrant la déesse, une légende indique :

[Diagramme]

'Paroles à dire (a) par Nephthys. J'entoure (b) (mon) frère Osiris. Ces (tiens) membres (c) ne seront pas épuisés (d) '.

(a) Sur ce texte, cf. W. C. Hayes, Royal Sarcophagi of the XVIIIth Dynasty, 1935, p. 188 (Texte 15) ; A. Badawy, ASAE, XLIV, 1944, p. 193 ; A. Varille,

19 Pour renvoyer aux Textes des Pyramides, nous utilisons l'abréviation PT ; ÜK désigne K. Sethe, Übersetzung und Kommentar.

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(b) Pour ḫḥj, cf. Wb, i, 545, 11 ; Wb, iii, 8 (pour la graphie de ḫj) et 9.
(c) Le texte de la fin de la seconde colonne est peu clair. On tiendra compte des versions citées par W. C. Hayes (l. l.), e.g. [diagram]; on comparera également A. Badawy, o. l. 
(d) Pour g(r)ḫ, cf. Wb, v, 155, 10 et infra, V, E, 3-4, rem. (d).

(III) Du côté des pieds (PLATE XXXVI, b) se trouve gravée l'image d'Isis accroupie au-dessus du 'collier d'or', les deux bras redressés de part et d'autre, la tête surmontée des signes de son nom.

La légende est disposée en deux colonnes encadrant la déesse (യ }). Le nom du défunt se lit sur une ligne supplémentaire avec une petite adjonction (←), qui est en fait la fin du bandeau gravé à la partie supérieure du côté droit (infra, IV, A).

\[
\begin{align*}
(\text{a}) & \quad \text{En bas de la première colonne, un grand cadrat a été laissé sans gravure.} \\
& \quad \text{' Paroles à dire (a) par Isis. Que tes deux bras soient autour de moi (b). Que tu brilles sur moi. Que tu ouvres [mes] yeux (c).'} \\
(b) & \quad \text{Le texte, généralement exprimé à la 3ème personne et concernant Osiris, semble ici rédigé pour la plus grande partie à la 1ère personne, donc prononcé par le défunt lui-même.} \\
(c) & \quad \text{La fin du texte est confuse : cf. les versions citées par W. C. Hayes (l. l.), e.g. [diagram].} \\
& \quad \text{(IV) Le côté droit (PLATE XXXVI, c) de la cuve présente une face fortement gauchie, dont la décoration, non limitée par un trait à la partie inférieure²⁰ et d’une hauteur uniforme de om,43, consiste en des tableaux séparés par des colonnes de légende ; à la partie supérieure se déroule un bandeau de texte ←.} \\
& \quad \text{(A) Bandeau de la partie supérieure. Le texte est coupé en petits stiches par les colonnes initiales de légende introduisant les scènes du bas. Avec quelques variantes graphiques, il se retrouve en bandeau à la partie supérieure} \\

²⁰ On note un trait de base seulement sous la porte figurée dans le tableau IV, B.
LE SARCOPHAGE DE OUABSET DE LA NÉCROPOLE DE SOLEB


\[\text{Proscynème ; l’Osiris Ouabset. C’est Horus, né d’Isis, l’héritier, régent de l’Occident (a). Tu gravis (b) l’escalier (c) de la salle centrale (d). Que te soit donnée la purification (e) dans la nécropole (f).}
\]

Cette bande de texte se poursuit sur le petit côté de la cuve face aux pieds (*supra*, III), par une très courte ligne, avec une petite adjonction en-dessous:

\[\text{‘Osiris Ouabset, vivant.’}
\]

(a) Le signe, endommagé à sa partie supérieure, est d’une forme nettement différente de celui gravé en V, A, 3; le texte, de rédaction traditionnelle, porte évidemment le signe de l’Occident.

(b) *Hnd, Wb*, III, 312, 21.


(d) La *hrt-ib* désigne aussi bien la salle principale dans la tombe royale (*Wb*, III, 138, 21) que le sanctuaire de Sokaris (*Wb*, III, 138, 20).

(e) Ce passage est restitué d’après le texte du bandeau du côté gauche (*infra*, V, A).


(B) Le premier tableau consiste en la représentation de l’œil-oudjat surmontant ce qui semble une porte, mais qui est en fait le socle d’Anubis. En effet, la plupart des sarcophages comparables (cf. *supra*, p. 143) placent ailleurs l’œil-oudjat et montrent dans le premier tableau Anubis sur son socle.

(C) La colonne initiale de la scène suivante indique

\[\text{‘Auprès d’Osiris Ouabset, j.v.’.}
\]

Les deux colonnes de texte qui précèdent le tableau offrent une formule souvent prononcée par Thot:

\[\text{(a) Le hiéroglyphe du dieu solaire est figuré vraisemblablement avec une tête de faucon (cf. IV, D, 4).}
\]

\[\text{(b) Placé sous le bec de l’oiseau, le signe a été gravé de dimensions très restreintes (cf. *Mélanges Mariette*, 1961, p. 253, n. 2).}
\]

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'Paroles à dire. Que vive Ré, que meure la tortue (a). Que soit intact celui qui est dans le sarcophage (b)'.


(b) *Nty m ḏḥt* (*Wb*, v, 561, 12) est ici répété deux fois, ce qui se produit également dans d’autres exemples.

Le tableau montre un personnage à tête d’ibis, Thot, portant devant lui des deux mains un emblème caractéristique : une perche surmontée du signe du ciel,21 avec une banderolle, et se terminant en bas par un cercle coupé d’un trait.22 Le dieu est tourné dans le même sens que les autres divinités figurées dans les tableaux suivants, alors qu’il est généralement disposé en sens inverse, par exemple sur les sarcophages de Merymès (*ASAE*, xlvi, 1947, pl. ii et iv; I. E. S. Edwards, *British Museum, Hieroglyphic Texts*, viii, 1939, pl. xvii et xix).

Au-dessus du dieu, le nom [←] C [→] [→] [→] ‘ Osiris Ouabset ’.

(D) Colonnes initiales [←] C [→] [→] [→] [→] [→] [→] [→] [→], ‘ Auprès d’Amset, Osiris Ouabset ’.

Le tableau montre l’image du dieu, à tête humaine avec barbe, figuré dans l’attitude de la marche, bras ballants.

Il est précédé de trois colonnes de texte :

(a) L’œil est figuré sans pupille.

(b) Le hiéroglyphe du dieu solaire est figuré vraisemblablement avec une tête de faucon (cf. IV, C, 2).

(γ) A la fin de la colonne, un petit cadrat a été laissé sans gravure.

‘ Paroles à dire par Amset (a). Je suis le fils d’Osiris. Je suis venu; je suis en ta garde; j’affermis ta maison, stable, sur l’ordre de Ré lui-même ’.

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(F) La scène suivante ne comporte que la colonne initiale et l'image d'Anubis, à tête animale, dans l’attitude de la marche. L'emplacement où dans les autres scènes se trouve un texte a été laissé vide; une légende accompagne en revanche l'image d'Anubis sur l'autre face (*infra*, V, E, 2-4).

'Après d'Anubis imy-wt, Osiris Ouabset, j.v. '.

(F) Colonnes initiales :  

'Après de Douamoutef, Osiris Ouabset'.

Le dieu, à tête humaine avec barbe, est dans l’attitude de la marche.

Il est précédé par trois colonnes d’un texte qui se continue par une courte ligne au-dessus du dieu.

(a) La colonne se termine par un demi-cadrat laissé non gravé.

'Paroles à dire par Douamoutef (a). Je suis ton fils, Horus, ton aimé. Je suis venu par protéger Osiris Ouabset contre son agresseur (b). Je le place sous tes pieds éternellement'.

(a) Sur ce texte, cf. W. C. Hayes, *Royal Sarcophagi of the XVIIIth Dynasty*, 1935, p. 197 (Texte 32). On se reportera aux sarcophages de Merymès (dont la bibliographie a été indiquée *supra*, p. 143, n. 13); le sarcophage médian (d’après la publication des fragments du British Museum par I. E. S. Edwards) donne le texte suivant :

pour le sarcophage intérieur, on tiendra compte des publications des deux fragments de Prague (col. 1 et 2) et de Vienne (col. 3), qui fournissent le texte suivant :


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(b) *Nd. i W. S. m-* (Wb, 11, 374, 4; cf. Wb, 11, 45, 13) *ir nkn.f* (Wb, 11, 346, 13).

(G) L'extrémité du côté droit présente un personnage de plus petite taille, anthropomorphe, dans l'attitude de la marche, précédé de la colonne initiale:

\[ \text{Figura} \]

'Après de Doun-anouy (a) Osiris Ouabset, j.v. '.


(V) Le côté gauche (PLATE XXXVI, d) de la cuve a une disposition symétrique de celle du côté droit ; ils sont tous deux décorés de tableaux séparés par des colonnes de textes. Seule, la première scène (V, B) contenant l’œil-oudjat et la porte, est limitée par un trait à la base. L'ensemble de la décoration monte des pieds, où elle atteint om.45 de hauteur, vers la tête, où elle n’a plus que om.40.

(A) A la partie supérieure se retrouve, en bandeau, un texte comparable à celui de l'autre long côté, avec quelques variantes graphiques.

\[ \text{Figura} \]

(a) Il y a ici une petite cassure qui évoque la forme d'un signe \( t \) de toute petite dimension.

'Proscynème (a); l'Osiris, le carrière (b) Ouabset. C'est Horus né d'Isis, l'héritier, régent de l'Ocident. Tu gravis l'escalier de la salle centrale. Que te soit donnée la purification (c) dans la nécropole, Osiris Ouabset '.

(a) Cf. les indications données pour le texte analogue gravé de l'autre côté, supra, IV, A.


(c) *Twr* peut être soit 'la purification' (Wb, v, 254, 17–19), soit 'la protection', 'le respect' (Wb, v, 252, 14 sq.). La présente graphie \[ \text{Figura} \] est évidemment influencée par *twrt*, le 'bâton' (Wb, v, 252, 6–7) et éventuellement *wrj*, les 'montants de porte' (Wb, 1, 332, 14).

(B) Le premier tableau montre l'œil-oudjat surmontant une porte.

(C) La colonne initiale de la scène suivante est endommagée, mais se restitue immédiatement:

\[ \text{Figura} \]

'Auprès de l'Osiris (Ouab)set j.v. '

Le tableau, comparable à celui de l'autre côté, montre la même image de Thot ibiocéphale portant devant lui des deux mains son emblème.
PLATE XXXVI

a. Côté de la tête

b. Côté des pieds

c. Côté droit de la cuve

d. Côté gauche de la cuve

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facing p. 150
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Le texte qui le précède sur trois colonnes semble débuter comme de l'autre côté (supra, IV, C, 2), mais être ensuite différent ; il est endommagé et, dans la colonne 3, seuls quelques signes peuvent être reconnus.

' Paroles à dire. Que vive Ré (a), que meure (b) la tortue . . . pour Osiris, le carriér (c) Ouabset, j.v. '.

(a) Cf. supra, à propos de IV, C, 2.
(b) Le déterminatif de mwt est l'homme se frappant la tête et s'écroulant, que l'on trouve aussi pour hftyw, ' les ennemis' (infra, V, D, 3).
(c) Pour ce titre, cf. infra, p. 153.

(D) Colonne initiale : [Image 0x-0 to 510x703] ' Auprès de Hapy, Osiris Ouabset '.

Le texte qui précède la divinité, figurée comme un homme marchant, est disposé sur trois colonnes, dont la dernière partiellement remplie.

(a) Au bas de la colonne a été laissé un demi-cadrat non gravé.

' Paroles à dire par Hapy (a). Je suis venu. Je suis en ta garde. Je lie pour toi (tes) membres. Je frappe pour toi tes ennemis (b) sous toi. Je place pour toi ta tête éternellement '.


(E) Colonne initiale :

[Image 0x-0 to 510x703] ' Auprès d'Anubis, Osiris, le carriér (a) Ouabset '.

(a) Pour ce titre, cf. infra, p. 153.

Le texte qui précède l'image d'Anubis à tête d'animal, dans l'attitude de la marche, comporte trois colonnes de texte, la dernière partiel ; le texte est endommagé.

' Paroles à dire par Anubis (a) qui préside à l'écrin. Ne seront (b) pas fatigués (c), ne seront pas épuisés (d) ces (tiens) membres '.

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(b) Pour la restitution de la fin de ce passage, cf.

(W. C. Hayes, *l.l.*

(A. Badawy, *l.l.*

(c) Pour *nnj*, cf. *Wb*, ii, 275, 2.

(d) Pour *g(r)k*, cf. *Wb*, v, 155, 10 et *supra*, ii, 2, rem. (c) et (d).

(F) Colonne initiale :

‘Auprès de Qebehsenouef, Osiris Ouabset, j.v.’.

Trois colonnes de texte, avec addition d’un cadrat, précèdent l’image divine, celle d’un homme à barbe dans l’attitude de la marche.

‘Paroles à dire par Qebehsenouef (a). Je suis venu ; je suis dans ta garde, Osiris. J’ai réuni tes os (b) ; j’ai rassemblé tes membres (c). J’ai apporté pour toi ton cœur. Je l’ai placé pour toi à sa place dans ton corps’.


(G) Colonne initiale :

‘Auprès de Geb, Osiris Ouabset, j.v.’.

(a) A la partie inférieure de la colonne, un cadrat a été laissé non gravé.

Une seule colonne de texte précède l’image du dieu, figuré sous forme humaine, d’une taille très légèrement plus petite que celle des personnages des autres tableaux de ce côté, dans l’attitude de la marche :

(a) Le hiéroglyphe * est posé sur le pied du dieu Geb qui avance dans la colonne de texte.

‘Paroles à dire par Geb, Shou, cet (a) Osiris ici (b)’.


(b) Le lapicide n’a gravé que la fin du nom ‘Set’.

Le défunt pour lequel ce sarcophage a été sculpté s’appelle Ouabset :
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(IV, A, 7 et IV, C, 4); (IV, E, 1); (IV, A, 1 et V, A, 6);
(I, début; V, A, 1; V, F, 1 et V, G, 1); (IV, D, 1);
(I, fin; IV, F, 1 et IV, G, 1); (V, D, 1 et V, E, 1), cf.
(V, C, 1); (IV, C, 1); (IV, C, 1); (V, C, 3-4), cf. (V, G, 2).

Ce nom de personne ne semble pas autrement connu.

Le titre du défunt (var. ) est, par trois fois (V, A, 1; V, C, 3; V, E, 1) intercalé entre Wsir et son nom. C'est sans doute hrty-nfr, `l'employé de la nécropole' ou `le carrier', qui est écrit généralement ou (Wb, III, 394, 14; cf. J. Černý, A. Gardiner, T. E. Peet, The Inscriptions of Sinai, II, 1955, p. 67 et 231).

L'étude du matériel recueilli dans la tombe ne fournit aucune indication plus précise sur ce Ouabset.

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24 Pour la forme du signe , cf. également en IV, D, 4 et V, F, 4; ailleurs, on rencontre la forme habituelle. Les autres particularités graphiques sont: à l'inverse de son sens habituel (IV, A, 2); inverse (V, F, 4); les 'trois morceaux de chair' inversés (II, 2; V, D, 3; V, E, 4; V, F, 4); inverse (IV, C, 2 et 3; IV, D, 1; IV, D, 2 et 3; IV, D, 4); pour (V, D, 3); pour (V, D, 4); sans pupille (III, 2; IV, D, 2); la direction de et n'est pas constante.


26 Ce matériel sera publié dans le volume consacré aux nécropoles de Soleb dans le rapport général sur les fouilles de la Mission Michela Schiff Giorgini.
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ENGLISH SUMMARY

THE SARCOPHAGUS OF WABSET FROM THE CEMETERY AT SOLEB

In tomb 5 T, where in 1957 the Schiff-Giorgini mission had discovered a sandstone sarcophagus (5 T 1) with a cover in the shape of a man, a second sarcophagus (5 T 2) was found during the 1960 season. The latter was rectangular and made of white sandstone. The cover, both in its form and its decoration, was typical of the xviiith Dynasty.

Tomb 5 T consists of a pit, from the east side of which a chamber opens, while to the west there is a chamber which divides into two. In the most southerly of these two chambers was found the sarcophagus which is the subject of this study (fig. 1, A). A heavy section of the rocky vault of the chamber had fallen and crushed everything beneath it. Although it had been disturbed before the roof fell in, the chamber had not been entirely cleared and it still contained scattered human bones and some objects. Near the south wall there was some brownish powder which seemed to indicate the presence in ancient times of a wooden coffin. Along the north wall which divides this chamber from its twin was found the decorated sandstone sarcophagus (5 T 2). It was orientated west–east, with the head in the west.

The lid and the sarcophagus itself were broken into a number of pieces. In the main it had been broken by the great blocks of schist which had fallen from the roof, but some damage had been inflicted by the robbers, the marks of whose chisels could be seen both on the lid and on the sarcophagus itself. Inside the coffin there were only some fragments of bone which had accumulated where the feet had once been, a potsherd with worn edges, and several pieces of schist from the roof.

The external measurements of the rectangular sarcophagus were, on average, 1.95 m. in length and 0.55 m. in breadth. The total height, including the lid, was about 0.62 m. It is made from fine, light sandstone—seemingly the same sandstone, very similar to limestone in appearance, which was used to build the Temple of Soleb.

The central bands of the lid and of the sarcophagus are decorated with figures and texts carved in bas-relief. Their arrangement and type recall those on a whole series of coffins of the mid-xviiith Dynasty, the decoration and inscriptions on which are comparable to the royal sarcophagi of the same period.

* * *

1. The lid, which projects slightly beyond the sarcophagus, is markedly convex, the interior being a hollow curve. On the outside, the central part, which is slightly raised, is decorated with a long band of hieroglyphs about 0.075 m. wide. At each end there is a border 0.09–0.04 m. thick at the head
and 0.03 m. at the foot; the border at the head rises from the left side to the right, while that at the foot inclines the other way.

Beginning from the head, the central band comprises a roughly sketched human face with a low forehead and broad square chin. Below this face is a great necklace in four strands, which covers almost the whole width of the lid; on each side can be seen a clasp in the form of a falcon’s head. Beneath this is the image of a vulture with outstretched wings holding in its claws, on each side, a šn ring. The text which is in one column, reads:

‘Words to be recited. Osiris Wabset says: O my mother Nut, unfold thy wings over me; that I may be placed among the Everlasting who are in thee; Osiris Wabset, true of voice, must not die’.

* * *

The sarcophagus, also of sandstone, is rectangular. The sides are, on average, 0.07 m. thick, 0.50 m. high, and the external dimensions are 1.95 x 0.55 m. The four sides are decorated.

II. At the head (Plate xxxvi, a) Nephthys is depicted clearly out of the axis. The goddess is crouching above a ‘golden necklace’ and her arms are raised on each side of her head, upon which she wears the two signs for her name. Arranged in two columns framing the goddess is a text, which reads:

‘Words to be recited by Nephthys. I encompass (my) brother Osiris. These (thy) members will not be exhausted’.

III. At the foot (Plate xxxvi, b) Isis is engraved crouching above a ‘golden necklace’ with her arms raised on each side of her head, which is surmounted by the signs for her name. The text is arranged in two columns framing the goddess. The name of the deceased can be read in a supplementary line which is actually the end of the band carved on the upper part of the right side of the sarcophagus (see below, IV, A). It reads:

‘Words to be recited by Isis. That thy two arms be around me. That thou shinest upon me. That thou openest (mine) eyes’.

This text is usually expressed in the third person and relates to Osiris, but here it seems to concern for the most part the first person and so to be spoken by the deceased himself.

IV. The right side of the sarcophagus (Plate xxxvi, c) is badly damaged. The decoration which is not delimited by a lower line, is of a uniform height of 0.43 m. and consists of scenes separated by columns of text, and a band of text runs right across the top.
(A) The band across the top. This text is divided into short sections by the
top of the columns of text introducing the scenes below. With some graphic
variations it is repeated in the band on the upper part of the left side of the
sarcophagus. The beginning is a formula known as the ‘words of Geb’ which
in the xviiith Dynasty became the ‘words of Osiris’.

‘A boon which the king gives Osiris Waset. It is
Horus, born of Isis, the heir, regent of the West.
Thou ascendest the staircase of the central room.
That thou mayest be given purification in the
necropolis’.

This band of text continues on the foot of the sarcophagus (III above) in a
short line with a brief addition below it:

‘Osiris Waset, living’.

(B) The first scene depicts the Wadjet-eye surmounting what appears to be a
doorway, but is in fact the socle of Anubis. Most of the comparable sarcophagi
have the Wadjet-eye elsewhere and the first scene shows Anubis on his socle.

(C) The first column of the following scene reads:

‘Beside Osiris Waset, true of voice’.

The two columns of text which precede the scene give a formula often spoken by
Thoth:

‘Words to be recited. That Re may live, that the
tortoise may die. That the one who is in the sarco-
phagus may be whole’.

The scene shows the ibis-headed figure of Thoth carrying in front of him his
characteristic symbol in his two hands: a perch surmounted by the sign for the
sky with a pennant, and ends at the bottom with a circle with a line through it.
The god is facing the same way as the other deities depicted in the following
scenes, although it is usual for him to face in the opposite direction. Above the
god is the name ‘Osiris Waset’.

(D) The opening column reads:

‘Beside Amset, Osiris Waset’.

The scene shows the god with a bearded human head, walking and swinging his
arms. He is preceded by three columns of text which read:

‘Words to be recited by Amset. I am the son of
Osiris. I have come; I am guarding thee; I am
strengthening thy house and stable, by the order of
Re himself’.

(E) The following scene only contains the introductory column and the animal-
headed figure of Anubis, walking. The space which in the other scenes is
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occupied by a text is here left empty. There is, however, a text accompanying the figure of Anubis on the other side (see below, V, E) which reads:

‘Beside Anubis imy-wet, Osiris Wabset, true of voice’.

(F) The introductory column reads:

‘Beside Dwamoutef, Osiris Wabset’.

The god, with a bearded human head, is shown walking. He is preceded by three columns of text which continue into a short line above the god:

‘Words to be recited by Dwamoutef. I am thy son, Horus. Thy beloved. I have come to protect Osiris Wabset against his adversary. I place him beneath thy feet for ever’.

(G) The end of the right side shows a smaller anthropomorphic figure walking and preceded by a column which reads:

‘Beside Doun-anouy Osiris Wabset, true of voice’.

V. The left side of the sarcophagus (PLATE XXXVI, d) is arranged like the right side, both being decorated with scenes separated by columns of text, except that the first scene (V, B) with the Wadjet-eye and the doorway is delimit by a line across the bottom. The decorated area decreases from the feet, where it is 0.45 m. high to the head where it is only 0.40 m.

(A) The upper part reveals a band of text comparable to that on the other long side, but with several graphic variations:

‘A boon which the king gives; Osiris, the necropolis worker Wabset. It is Horus, born of Isis, the heir, regent of the West. Thou ascendest the staircase of the central room. That thou mayest be given purification in the necropolis, Osiris Wabset’.

(B) The first scene shows the Wadjet-eye surmounting the doorway.

(C) The first column of the following scene is damaged, but it can readily be restored:

‘Beside Osiris (Wab)set, true of voice’.

The scene, like that on the other side, shows the same ibis-headed figure of Thoth carrying his emblem in front of him in his two hands. The text which precedes him in three columns seems to begin like that on the other side (see above, IV, C) but ends differently. It is damaged and in the third column only a few of the signs can be deciphered:

‘Words to be recited. That Re may live, that the tortoise may die... for Osiris, the necropolis worker Wabset, true of voice’.

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(D) The initial column reads:

'Beside Hapy, Osiris Wabset'.

The text which precedes the god, who is shown as a man walking, is arranged in three columns, the last of which is only partly filled:

'Words to be recited by Hapy. I have come. I am guarding thee. I bind for thee (thy) limbs. I smite for thee thine enemies beneath thee. I place thine head for ever'.

(E) The initial column reads:

'Beside Anubis, Osiris, the necropolis worker Wabset'.

The text which precedes the animal-headed Anubis, who is walking, consists of three columns of text, the last of which is only partly filled. The text is damaged:

'Words to be recited by Anubis who presides over the divine booth. That these thy limbs shall not be tired, that they shall not be exhausted'.

(F) The initial column reads:

'Beside Qebehsenouef, Osiris Wabset, true of voice'.

Three columns of text with the addition of a quadrat precede the divine figure, which is shown as a bearded man walking. They read:

'Words to be recited by Qebehsenouef. I have come; I am guarding thee, Osiris. I have re-united thy bones; I have reassembled thy limbs. I have brought for thee thine heart. I have put it for thee in its place in thy body'.

(G) Initial column:

'Beside Geb, Osiris Wabset, true of voice'.

A single column of text precedes the figure of the god who is shown in human form, walking. He is very slightly smaller than the figures in the other scenes on this side. The text reads:

'Words to be recited by Geb, Shou, this Osiris here'.

The deceased for whom this sarcophagus was engraved was called Wabset. This personal name does not seem to be known elsewhere. His title is included three times between W$m\text{\textsubscript{r}}$ and his name (V, A; V, C; V, E). It is undoubtedly $hrty-ntr$ 'the employee of the necropolis' or 'the quarryman'. A study of the material from the tomb has yielded no further definite information about this Wabset.