KUSH

JOURNAL

OF THE

SUDAN ANTIQUITIES SERVICE

VOLUME XII
1964

Edited by Thabit Hassan Thabit

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

ADAW – – Abhandlungen der Deutschen Akademie der Wissenschaften.
AJA – – American Journal of Archaeology.
ASAE – – Annales du Service des Antiquités d’Egypte.
ASN – – Archaeological Survey of Nubia.
BSPF – – Bulletin de la Société de Préhistoire Française
CHP – – Cuadernos de Historia Primitiva.
CIG – – Corpus of Greek Inscriptions.
CIL – – Corpus of Latin Inscriptions.
JEAO – – Journal of Egyptian Archaeology.
JSA – – Journal de la Société des Africanistes.
LAAA – – Liverpool Annals of Archaeology and Anthropology.
LD – – Lepsius: Denkmäler aus Ägypten und Äthiopien.
MDIAK – – Mitteilungen des Deutschen Instituts für Ägyptische
         Altertumskunde in Kairo.
MIO – – Mitteilungen des Instituts für Orientforschung.
OIC – – Oriental Institute Communications.
OIP – – Oriental Institute Publications.
RCK – – Royal Cemeteries of Kush.
RSE – – Rassegna di Studi Etiopici.
RT – – Recueil de Travaux.
SASOP – – Sudan Antiquities Service Occasional Papers.
SNR – – Sudan Notes and Records.
ZAS – – Zeitschrift für Ägyptische Sprache.

The Editor is not responsible for the opinions expressed by contributors.
CONTENTS

EDITORIAL NOTES

THE MUSEUM OF NEW MEXICO-COLUMBIA UNIVERSITY NUBIAN EXPEDITION: THE 1962-63 FIELD PROGRAMME
By F. Wendorf, R. D. Daugherty and J. Waechter

PRELIMINARY REPORT OF THE SCANDINAVIAN JOINT EXPEDITION: ARCHAEOLOGICAL INVESTIGATIONS BETWEEN FARAS AND GEMAI, NOVEMBER 1962-MARCH 1963
By T. Säve-Söderbergh

PRELIMINARY NOTE ON THE EPIGRAPHIC EXPEDITION TO SUDANESE NUBIA, 1963
By F. Hintze

EGYPT EXPLORATION SOCIETY: PRELIMINARY REPORT ON THE WORK AT BUEHN, 1962-63
By W. B. Emery

PRELIMINARY REPORT ON THE EXCAVATIONS BY THE UNIVERSITY OF CALIFORNIA AT ASKUT (FIRST SEASON, OCTOBER 1962-JANUARY 1963)
By A. Badawy

PRELIMINARY REPORT OF THE UNIVERSITY OF CALIFORNIA EXPEDITION TO DABNARTI, 1963
By J. W. Ruby

EXCAVATIONS AT MIRGISSA—I (OCTOBER-DECEMBER 1962)
By J. Vercoutter

A PROPOS DES BUCRANES A CORNE DÉFORMÉE DE FARAS (WITH ENGLISH SUMMARY)
By P. Huard

SURVEYING SEMNA GHARBI
By R. A. Caminos

SOLEB—CAMPAGNES 1961-63 (WITH ENGLISH SUMMARY)
By M. Schiff-Giorgini

PRELIMINARY REPORT ON THE EXCAVATIONS AT AKSHA BY THE FRANCO-ARGENTINE EXPEDITION, 1962-63
By A. Rosenvasser

LE SOUS-SOL DU TEMPLE D’AKSHA (WITH ENGLISH SUMMARY)
By J. de Heinzelin

continued overleaf
CONTENTS—continued

REPORT ON THE DISMANTLING AND REMOVAL OF ENDANGERED MONUMENTS IN SUDANESE NUBIA, 1962–63
By F. Hinkel 111

A SANDSTONE STATUE OF AN AULETES FROM MEROE
By D. M. Dixon and K. P. Wachsman 119

AN INTRODUCTORY CLASSIFICATION OF MEREOITIC POTTERY
By W. Y. Adams 126

By G. W. Hewes 174

MEROEITIC AND EASTERN SUDANIC: A LINGUISTIC RELATIONSHIP?
By B. G. Trigger 188

POLISH EXCAVATIONS AT FARAS, 1962–63
By K. Michalowski 195

THE UNIVERSITY OF GHANA EXCAVATION AT DEBEIRA WEST, 1963
By P. L. Shinnie 208

SUDAN ANTIQUITIES SERVICE EXCAVATIONS IN NUBIA: FOURTH SEASON, 1962–63
By W. Y. Adams, with a note on the Arabic Inscriptions from Meinarti by Nigm ed Din Mohammed Sherif 216

SOME ZANDE TEXTS—PART 3
By E. E. Evans-Pritchard 251

PRELIMINARY REPORT ON THE ANTHROPOLOGICAL FIELD-WORK IN SUDANESE NUBIA, 1962–63
By A. and W. Kronenberg 282

NOTES
A Prehistoric Site at Salvador, Near Tummo, between Hoggar and Tibesti. By A. J. Arkell 291

Drei Meroitische Opfertafeln aus Qustul (with English Summary). By Mohammed Bakr 293

The Latin Inscription from Musawwarat es Sufra. By F. Hintze 296

REVIEW
Comparative Outline-Grammar of Ndogo-Sere-Tagbu-Bai-Bviri. By S. Santandrea 299

CORRESPONDENCE 300
<table>
<thead>
<tr>
<th>PLATE</th>
<th>Description</th>
<th>facing page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Hand Axes from site ARW-8</td>
<td>16</td>
</tr>
<tr>
<td>II</td>
<td>Implements and Artifact from site ARW-8</td>
<td>16</td>
</tr>
<tr>
<td>III</td>
<td>A-Group Pottery and a Cylinder Seal</td>
<td>24</td>
</tr>
<tr>
<td>IV</td>
<td>A-Group Tomb at Kashkush, Ashkeit</td>
<td>24</td>
</tr>
<tr>
<td>V</td>
<td>Scarabs, Earrings, Amulets and Plaque Seal</td>
<td>24</td>
</tr>
<tr>
<td>VI</td>
<td>Vessels and a Dish from New Kingdom</td>
<td>24</td>
</tr>
<tr>
<td>VII</td>
<td>Islamic Stelae</td>
<td>24</td>
</tr>
<tr>
<td>VIII</td>
<td>Inscriptions from Middle and New Kingdom</td>
<td>42</td>
</tr>
<tr>
<td>IX</td>
<td>Rock Pictures</td>
<td>42</td>
</tr>
<tr>
<td>X</td>
<td>Dismantling the Temple of Queen Hatshepsut</td>
<td>46</td>
</tr>
<tr>
<td>XI</td>
<td>The Middle Kingdom Fortress</td>
<td>46</td>
</tr>
<tr>
<td>XII</td>
<td>The Conduit</td>
<td>46</td>
</tr>
<tr>
<td>XIII</td>
<td>The Fortress – Four Views</td>
<td>48</td>
</tr>
<tr>
<td>XIV</td>
<td>Chamber No. 7</td>
<td>48</td>
</tr>
<tr>
<td>XV</td>
<td>Jars and Meroitic Pottery</td>
<td>48</td>
</tr>
<tr>
<td>XVI</td>
<td>Iron Cross, Ostraca, Inscription and Sealings</td>
<td>48</td>
</tr>
<tr>
<td>XVII</td>
<td>Site M.I, Mud-Brick House</td>
<td>58</td>
</tr>
<tr>
<td>XVIII</td>
<td>Site M.III, the Kerma Cemetery</td>
<td>58</td>
</tr>
<tr>
<td>XIX</td>
<td>Site M.VII</td>
<td>58</td>
</tr>
<tr>
<td>XX</td>
<td>Site M.VIII at the End of the Dig</td>
<td>58</td>
</tr>
<tr>
<td>XXI</td>
<td>Cornages</td>
<td>72</td>
</tr>
<tr>
<td>XXII</td>
<td>Cornages déformés gravés du Sahara tchadien</td>
<td>72</td>
</tr>
<tr>
<td>XXIII</td>
<td>Air View of Semna-Kumma</td>
<td>84</td>
</tr>
<tr>
<td>XXIV</td>
<td>Semna, Temple of Dedwen and Sesostris III</td>
<td>84</td>
</tr>
<tr>
<td>XXV</td>
<td>Le temple, vu de l'Ouest</td>
<td>94</td>
</tr>
<tr>
<td>XXVI</td>
<td>La salle hypostyle, après les travaux de restauration</td>
<td>94</td>
</tr>
<tr>
<td>XXVII</td>
<td>Vestiges des stalles du dromos</td>
<td>94</td>
</tr>
<tr>
<td>XXVIII</td>
<td>Lintels and Chapels</td>
<td>98</td>
</tr>
<tr>
<td>XXIX</td>
<td>Door Jamb of Seti I</td>
<td>98</td>
</tr>
<tr>
<td>XXX</td>
<td>The Pillar Bases after Digging</td>
<td>98</td>
</tr>
<tr>
<td>XXXI</td>
<td>Figure of Viceroy Hekanakhte and inscriptions</td>
<td>98</td>
</tr>
<tr>
<td>XXXII</td>
<td>Cutting Stones</td>
<td>114</td>
</tr>
<tr>
<td>XXXIII</td>
<td>Preparation and Package of Antiquities in Aksha</td>
<td>114</td>
</tr>
<tr>
<td>XXXIV</td>
<td>Packing Stones at Buhen</td>
<td>114</td>
</tr>
</tbody>
</table>

continued overleaf
<table>
<thead>
<tr>
<th>PLATE</th>
<th>Title</th>
<th>facing page</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXXV</td>
<td>More Packages at Buhen</td>
<td>114</td>
</tr>
<tr>
<td>XXXVI</td>
<td>Sandstone Statue of Auletes from Meroe</td>
<td>120</td>
</tr>
<tr>
<td>XXXVII</td>
<td>Sandstone Statue of Auletes from Meroe</td>
<td>120</td>
</tr>
<tr>
<td>XXXVIII</td>
<td>The Cathedral and the Bishop’s Palace</td>
<td>200</td>
</tr>
<tr>
<td>XXXIX</td>
<td>The Chalice and Greek Dedication Stone of Paulos</td>
<td>200</td>
</tr>
<tr>
<td>XL</td>
<td>Angels with the Virgin</td>
<td>200</td>
</tr>
<tr>
<td>XLI</td>
<td>Archbishop Ignatios of Antioch and Bishop Petros</td>
<td>200</td>
</tr>
<tr>
<td>XLIJI</td>
<td>A Portrait, the Virgin and Martha the Queen Mother</td>
<td>200</td>
</tr>
<tr>
<td>XLIJI</td>
<td>The Big Mural of the Nativity</td>
<td>200</td>
</tr>
<tr>
<td>XLIV</td>
<td>Madonna and a Wooden Cross</td>
<td>200</td>
</tr>
<tr>
<td>XLV</td>
<td>Site R.8</td>
<td>212</td>
</tr>
<tr>
<td>XLVI</td>
<td>Room 109a of Site R.8</td>
<td>212</td>
</tr>
<tr>
<td>XLVII</td>
<td>Church and Cemetery in Site R.44</td>
<td>212</td>
</tr>
<tr>
<td>XLVIII</td>
<td>Site R.60</td>
<td>212</td>
</tr>
<tr>
<td>XLIX</td>
<td>Kasanarti</td>
<td>222</td>
</tr>
<tr>
<td>L</td>
<td>Meinarti</td>
<td>222</td>
</tr>
<tr>
<td>LI</td>
<td>Meinarti - Monastery of Period 5</td>
<td>222</td>
</tr>
<tr>
<td>LII</td>
<td>Meinarti - A ‘Unit House’ and the Closure of the first Season</td>
<td>222</td>
</tr>
<tr>
<td>LIII</td>
<td>Arabic Tombstone from Meinarti</td>
<td>250</td>
</tr>
<tr>
<td>LIV</td>
<td>Meinarti Arabic Tombstone</td>
<td>250</td>
</tr>
<tr>
<td>LV</td>
<td>Three Meroitic Offering Tables</td>
<td>294</td>
</tr>
<tr>
<td>LVI</td>
<td>Paper-squeeze of the Latin Inscription from Musawwarat es Sufra</td>
<td>297</td>
</tr>
</tbody>
</table>
Editorial Notes

As usual it is my primary duty to report on the progress of the Nubian Campaign and I am happy to be able to state that the 1963/64 season, now drawing to a close, has yielded most gratifying results. Below you will find more details of the previous season in the reports of the different expeditions who have been working in the field, but here I shall try to bring the reader up-to-date in brief outline.

1963/64 being the last season for the area between Faras and Gemai, the work continued to be concentrated in that region. The Scandinavian Joint Expedition and the Antiquities Service, having finished their survey work on the East and West Banks respectively (as a result of which the number of sites increased from 74 to over 700) turned their attention entirely to excavation this season. The German Academy of Sciences, Berlin, proceeded with their Epigraphic Survey, which has now been completed up to the end of the endangered area at the Dal Cataract and a good number of inscriptions and rock pictures which were hitherto unknown have been discovered and recorded.

The New Mexico Museum (U.S.A.) came into the field with a large staff and put in a lot of work throughout their concession on both banks of the Nile. They also carried out extensive excavations in some of the sites they had discovered and as a result they have accumulated a large collection of tools representing all stages of the Stone Age. They will return next season when their efforts will be concentrated in the area south of Gemai.

Professor R. Caminos, on behalf of Brown University (U.S.A.) completed his definitive Epigraphic Survey of the New Kingdom Temple of Semna East (Kumma) and thus the epigraphic work has now been completed for all the monuments scheduled for removal.

The Polish Expedition continued their work in the Great Church of Faras. Thanks to expert handling by the Polish technicians, all the frescoes have now been dismantled and divided between the Expedition and the Antiquities Service. We were able to keep outside the division the Nativity and the Three Hebrews in the Furnace, which are unique and unparalleled, and they will adorn the walls
KUSH

of our National Museum together with the rest of our share. The National Museum of Warsaw will also have a good representative collection of these most interesting frescoes. We hope to have the services of Mr Gazi, the Polish expert who has been dealing with the paintings, to work in Khartoum for us and prepare them for exhibition here.

As this is the last season for work in the area and since the site at Faras is so enormous, it will be impossible for the Expedition to dismantle the Church completely and excavate beneath it, as they would certainly wish to do if time permitted; but this would be the work of several years. Accordingly, they have made sondages in different parts of the site so as to learn something of the earlier occupations. At the time of writing, this investigation was still in progress and the Polish mission were expected to be the last to leave the area.

The Ghana University Expedition came for a very short season to wind up their work on the Christian site of Debeira West and prepare their notes for publication.

The Spanish Committee for Cooperation with UNESCO also finished their work completely in both their concessions—the cemeteries of Argin and the Christian site of Abkanarti.

The University of Colorado (U.S.A.) have finished their excavation of the X-Group and Christian village sites in Gezira Dabarosa. The ruins turned out to be low walls standing on sand and nothing of importance was found. However, the Expedition discovered some very important prehistoric sites within their concession. About twenty fossilized human skulls were found in addition to the human mandible which was discovered last season. These important finds are now under investigation and the British Museum (Natural History) is carrying out fluorine, nitrogen and uranium tests on the mandible. When the study of these finds has been completed, I am sure they will shed light on the history of fossil man in this country, knowledge of which is so far negligible.

The Egypt Exploration Society excavated beneath the site of the New Kingdom Temple of Hatshepsut at Buhen, which had already been removed to Khartoum, and found, as expected, traces of a Middle Kingdom Temple. By the end of the season they had completely finished work in this part of their concession. They will return, if circumstances permit, to investigate the cemeteries of Kor.

The French Expedition came early into the field and resumed their excavation of Mirgissa, which has turned out most unexpectedly to be one of the largest and most important sites ever found in this country. Work was carried out in the Fort on top of the hill, in the town site below, and in the cemeteries. A hieroglyphic inscription found in one of the tombs has proved that Mirgissa is actually the important Fort of Iken, which was previously believed to have been situated at Kor. The cemeteries yielded quite a number of invaluable inscriptions and objects, amongst which were included some very fine Middle Kingdom funerary statuettes. A skull was found with an arrowhead still sticking in its eye.
EDITORIAL NOTES

The arrowhead in itself was interesting as it was one of the stone crescents (lunettes) which were thought by prehistorians to have been used as cutting blades. The season is now coming to a close and there is no sign of the work being finished, so the Field Director intends to come for two further seasons and concentrate his activities inside the Fort at the top of the hill. It has been made clear to him that he is likely to encounter many difficulties, but of course the Antiquities Service will give him whatever aid they can.

The Scandinavian Expedition have completely cleared all the sites which they discovered during their Survey. These are mostly cemeteries ranging in period from A-Group to Christian, and as a result of their work they have found a great many objects and amassed much information regarding all these periods. Thanks to their efforts, the museums in the Sudan as well as those in the Scandinavian countries will have a good representative collection of objects from all periods of Sudanese history. Now that they have completely finished their field work, Professor Säve-Söderbergh, the Head of the Mission, will turn his attention to the publication of the results of their four seasons’ work. We hope that the resulting volumes will be available in the shortest possible time as it is expected that they will fill a number of important gaps in the ancient history of this country.

The Oriental Institute of Chicago (U.S.A.) fulfilled their promise and came this season to work simultaneously at their two sites of Serra East and Dorginarti. At the time of writing, Serra East had been completely finished, but the question of putting a date to the Fort—as to whether it is Middle or New Kingdom—was still unsettled. This may be decided when a close study has been made of the pottery and mud-seals found on the site. On first impressions the latter resemble the xiii Dynasty seals found at Uronarti and published by Reisner.

Dorginarti, on the other hand, has turned out to be much more intricate than was hitherto thought. Quite a number of rooms with inscribed sandstone jambs and lintels were discovered, and signs that the Fort was occupied in both Meroitic and Christian times were revealed. At the time of writing work was still in progress on the site and it was expected that this Expedition would be one of the last to leave the area.

At Askut the University of California (U.S.A.) completely finished their work on the Middle Kingdom Fort. Much of the plan of the site was regained and we hope that the results will be published shortly.

The Antiquities Service continued its excavation of the important Christian site on the Island of Meinarti. At the time of writing the work was still in progress. The eleventh level of occupation had been reached and in most parts the area had been cleared to virgin soil, but nothing earlier than the X-Group period was found. The few frescoes which were discovered earlier have now been dismantled and packed thanks to the help of the Technical Expert who was kindly loaned to us by the Polish Expedition. The excavation, which has yielded excellent results will come to a close very shortly.
KUSH

The Italian Schiff-Giorgini Mission occupied themselves at Soleb this season with preparing material for publication and winding up their work there. At the same time they started excavation of their new concession at Seddenga, where they were given a licence to restore the Temple of Queen Tiyi and to excavate the area surrounding it. They started with the cemeteries where they made a most spectacular discovery which will have a resounding impact on the ancient history of this country. They found a tomb which, though it had been completely disturbed by robbers, contained the cartouche of King Taharqa of the xxvth Dynasty, and scattered bones that the Excavators claim to be the skeleton of the King himself. Hence, in their opinion, this must be his place of burial, while his pyramid at Nuri is only a cenotaph. A report of this startling discovery will appear in the next volume of KUSH.

The German Expedition, having finished their Epigraphic Survey in Nubia, resumed work at Musawwarat es Sufra in Shendi District, where they began to clear the big enclosure, work on which is expected to continue for at least two more seasons. This enclosure still remains a mystery, as so far no inscriptions have been discovered to indicate its nature. According to the excavator the lower levels in some parts suggest that the enclosure might have been contemporary with, or even earlier than, the Lion Temple. We hope that future investigation will provide a solution as to the purpose of the buildings as well as fixing their date.

I am glad to say that the Yugoslavian Government Mission duly arrived and began to remove the frescoes in the church at the village of Sheikh Abdel Gadir. At the time of writing they were still working very hard and they will not leave the country until these frescoes have finally been treated and made ready for exhibition.

The Antiquities Service is most grateful for the grant of £700 which has been donated by the Gulbenkian Foundation through the medium of Mr L. P. Kirwan, director and secretary of the Royal Geographical Society of London, to be used to defray some of the costs of preserving and housing the Sudan Government’s share of the christian frescoes and wall paintings from Faras.

Turning to the removal of monuments, I am happy to state that we have had most generous offers from the Netherlands Government and the Belgian Government to remove the temples of Kumma and Semna respectively. However, in view of the experience gained by the Antiquities Service in removing the temples of Aksha and Buhen and the tomb of Djehuty-hotep last season, it has now been agreed that we should undertake the work and they will meet the costs. Thanks to the efforts of Mr Friedrich Hinkel, the architect in charge of the operation (kindly loaned to us by the German Academy of Sciences, Berlin), the Temple of Semna has been completely dismantled and part of it has already arrived in Khartoum. Work is now in progress in the Temple of Kumma and we hope that in a month’s time both these monuments will be safely stored in the
EDITORIAL NOTES

premises of the new Museum in Khartoum, and thus all the endangered monu-
ments scheduled for removal will have been saved in good time. Re-erection is
planned to begin immediately after the rainy season.

Work henceforth will be concentrated in the area between Gemai and the
Dal Cataract. In order to be ready to allocate sites in the new area for work to
start next season, the Antiquities Service has carried out a reconnaissance of the
region and a brochure containing information about the sites available will soon
be prepared and distributed to all the institutions which may be interested.

THABIT HASSAN THABIT

April, 1964
The Museum of New Mexico–Columbia University Nubian Expedition
The 1962–63 Field Programme

by Fred Wendorf, R. D. Daugherty and John Waechter*

In mid-April of 1963, the Museum of New Mexico–Columbia University Nubian Expedition completed its first season in the field. It still is too early for a complete evaluation of the results, but a statement of what was attempted and a preliminary assessment of the accomplishments definitely is in order.

Acknowledgment is gratefully made to the Unesco Nubian Monuments Campaign, to the Sudan Antiquities Service, and particularly its director, Sayed Thabit Hassan Thabit, to the United States State Department, to the National Science Foundation, and to the board of directors of the Museum of New Mexico for their cooperation and support.

The principal goal of the expedition was salvage of prehistoric archaeological remains which will be flooded by waters of the reservoir behind the new High Aswan Dam. Basic to the approach employed was the recognition that for these archaeological remains to be thoroughly understood, a full programme of geological, paleontological, and palynological research must accompany the archaeological studies. No satisfactory dating of the archaeological remains, nor any adequate understanding of changing Pleistocene and post-Pleistocene environments which affected the succession of human cultures in the area, could be gained without this approach.

Field work of the past season involved a thorough assessment of the archaeological resources in an area of the northern Sudan, which will be the first portion of the reservoir to be flooded. This area lies between the Second Cataract of the Nile and the Egyptian border. Also planned was a continuation of geological and paleontological studies begun the previous year.

Locating and Evaluating Archaeological Sites

Nearly two hundred prehistoric archaeological sites have now been located in that section of the reservoir lying within the 180-metre contour from the Egyptian border south to the Second Cataract (FIG. 1). The locations of some

* Dr Fred Wendorf, of the Museum of New Mexico, is the organizer and Director of the programme. Dr Richard D. Daugherty, Professor of Anthropology, Washington State University, served as Field Director during the period 1 February to 15 April 1963. Dr John Waechter, Archaeologist, University of London, was the Field Director from 1 October 1962 to 31 January 1963.
of the sites were graciously provided by the Scandinavian, Ghanaian, and Spanish expeditions, and a number of others had been located the previous year by the Columbia University expedition.

Systematic reconnaissance for the purpose of locating and evaluating archaeological sites was under the direction of Professor Daugherty, who was assisted by Mr H. S. Rice of the University of Oregon; all members of the expedition participated in this work incidental to their other and more specific research projects.

The first step in the site survey was to record the locations of known sites on maps, and to give proper designations to all sites previously located. Systematic field surveys then were begun. Because of the large size of territory to be covered and the time limitation imposed by the flooding schedule for the reservoir, a method had to be devised which was both rapid and thorough. The following procedure was found to satisfy both conditions: two men in a Land Rover drove slowly back and forth across the desert, examining the tops and slopes of jebels, the margins and bottoms of the wadis, and any rocky exposures that occurred in the broad, flat expanses of sand; tracks left by the vehicle indicated areas previously traversed, so that no area was covered more than once.

When a site was located, its position would be indicated on a map, a site survey form listing all important data would then be filled out, a sketch map would be drawn indicating important features, and both coloured and black-and-white pictures taken. Each site was carefully examined for implements, artifacts, debitage, and paleontological materials, and samples of this material collected. A test excavation also was made to determine whether any cultural stratigraphy remained, and to examine the nature of geological deposits. Since the area to be covered was vast, the total number and nature of sites to be discovered unknown, and the time to complete the entire salvage programme short, each site was evaluated, tested, and collections made as if this might be the only time the site would be visited. On the basis of these data certain sites then could be selected for future excavation.

During the 1962–63 season, these field surveys resulted in locating and evaluating previously unknown prehistoric sites, including quarry sites, manufacturing sites, and camp sites. These sites range in cultural affiliation from early Acheulean to early Neolithic, and with the exception of the early Acheulean, all exhibit evidence of a knowledge of the Levalloisian techniques of stone working technology.

The systematic site survey will continue during the entire field programme, for, in addition to evaluating sites for possible future excavation, the survey can be of value in providing ethnogeographic information.

**Description of the Area**

The area of the concession assigned to the Museum of New Mexico–Columbia University covers, in length, the whole of the inundation area, though
KUSH

only the west bank was available over the whole length of the river. On the east bank the area from north of Gemai to the frontier was allocated to the Joint Scandinavian Expedition, the stretch from Gemai south to the end of the inundation falling to New Mexico—Columbia University. During the season the Scandinavian Expedition made the southern part of their concession available to us, so that the stretch from the Cairo road to Gemai was added to our east bank area.

Taking the inundation area as a whole, i.e. both banks from the Egyptian frontier to Dal, a distance of over 150 km., two major geological areas are present, producing very different landscapes as well as different archaeological problems. From a little north of Gemai to the Egyptian frontier the country, on both sides of the river, consists of Nubian sandstone, a geological formation which extends northwards over the Egyptian frontier towards the First Cataract. This Nubian sandstone consists of yellow sandstone ranging from fine to pea size grains with bands of quartzite heavily impregnated with iron; in certain zones there are trunks of fossil wood, much of it coarse grained but some extremely homogeneous.

The characteristic landscape in this area consists of flat steep-sided hills, often standing isolated, the result of extensive erosion. These hills are capped by resistant bands of iron impregnated quartzite. In many instances, particularly the hills running parallel to the river, there are level platforms having the appearance of terraces. Between the hills, generally at right angles to the river, are flat valleys, the bottoms of which usually have a shallow wadi bed running through them. Although both sides of the river are essentially the same, the hills on the west bank are more eroded and in appearance the landscape is less sharp. Many of these west bank hills up to the 200 m. contour are covered with coarse gravel, suggesting river origin; and, as one would expect, the valleys are filled to a greater depth with sand. Along both banks of the river, above the modern flood plain, are two clearly visible terraces composed of silt, and about 10 m. apart; these terraces are rather eroded on the east bank but on the west they are well defined and run almost unbroken throughout the sandstone area. While these terraces can be clearly seen, excavation has shown that there are, in fact, more terraces which are not discernible from the surface.

The water supply in this area is now entirely dependent on the Nile and the drainage on both sides of the river is not active; in view of the sparsity of the local rainfall, this is hardly surprising.

It is obvious that a region as arid as this produces little fauna or flora, and except along the margins of the river the vegetation is confined to sparse scrub in the bottoms of some of the wadis, but even this is uncommon. The fauna is typically desert with gazelle, jackal, fox and small rodents, as well as sand snakes, horned vipers and lizards.

In the southern part of the concession, from Gemai to Dal, the landscape is completely different. The whole area consists of pre-Cambrian igneous rocks,
granite, mica-schist with veins of white quartz and intrusions of fine-grained basalt. In very restricted areas, such as Jebel Brinikol, 1,547 ft., thin deposits of Nubian Sandstone lie unconformably on the older series, and the same situation occurs on the west bank at Abu Sir. Unlike the Nubian sandstone area, this part of the concession is extremely rugged and cut by deep ravines which greatly restrict the use of vehicles. The wadis are better developed with substantial terraces extending a considerable distance up-stream, and, as in the north, there are low terraces running parallel to the river, but owing to the river having cut back to the rock they are very discontinuous.

One of the critical problems that is emerging from the analysis of materials collected thus far is the identification of the various phases of what, for lack of a more precise term, we are calling 'Pebble-Levallois' cultures. The term 'Pebble-Levallois' is derived from the fact that small pebbles of cryptocrystalline material, usually ranging in size from 5 to 10 cm. in diameter, were used to prepare the cores from which the flakes and blades were detached.

During the time that Upper Palaeolithic cultures were flourishing in western Europe, a microlithic stone technology was in vogue in northeast Africa. In the earliest phases of its development, this technology was thoroughly mixed with implements and artifacts of larger size; in other words, it cannot be designated a pure microlithic tradition. But with the passage of time the larger materials were abandoned and this microlithic tradition, which utilizes excellent Levallois techniques, continued into the early Neolithic. It is now evident that the picture of cultural succession traditionally reported for this area has been highly over-simplified. The identification and definition of these microlithic cultures undoubtedly will prove to be one of the most difficult problems to solve because of the great amount of work necessary to study carefully the tremendous quantities of very tiny artifacts and implements.

Then, a major difficulty encountered in attempting to understand the prehistoric cultural sequence in the reservoir area is the lack of stratified and undisturbed sites. It is clear from geological evidence that the Nubian Desert has undergone a number of periods of desiccation, including the present one. Prolonged deflation of the surface has left nearly all remaining cultural material lying on the surface of the ground. Consequently, where there has been a succession of occupations, material representing several cultural periods now lies thoroughly mixed on the desert surface. Two techniques have been devised to deal with this problem. One is the employment of statistical techniques for sampling each site, and the other is to attempt to locate and collect from very small sites which appear to be the result of a single occupation. After a number of these single component sites have been studied and compared, these data can be used to separate out the obviously mixed industries of larger sites which have been occupied repeatedly.

As cultural complexes are defined, an attempt is being made to relate them to the Nile and its terrace system, and to the surrounding desert. It is still too
early for positive results to be reported, but certain preliminary observations can be made. In the vicinity of Wadi Halfa the level of the Nile at low water is approximately 120 m. above sea level. No Acheulean sites have been located below the terrace, which is 30 m. above the present Nile. The Acheulean sites appear to bear no direct geographic relationship to the Nile, but continue indefinitely into the desert both east and west of the river. On an exploratory trip into the desert to the west of the Nile, Acheulean sites were found 70 km. from the river and no doubt occur all across north Africa. The 'Pebble-Levallois' sites, on the other hand, appear to show a definite relationship to the Nile valley.

Archaeological Excavations

Dr Waldemar Chmielewski, Muzeum Archeologiczne, W. Lodz, Poland, excavated three sites near Debeira on the west bank of the Nile. Site DIW-3 is situated on the 20 m. terrace above the river and appears to have been a habitation site. Chert pebbles are abundant in the vicinity of the site, which is surrounded by a number of workshops showing abundant evidence of stone flaking activities. This stratified site, which is approximately 60 m. in diameter, contains three components within a maximum depth from surface of 70 cm. The lowermost stratum, which may be of Middle Palaeolithic age, contained only a few flakes. Above this stratum was an Upper Palaeolithic component which contained a number of blades and cores. The uppermost stratum was a Mesolithic component and exhibited a large number of chert artifacts and implements which had been eroded, polished, and redeposited by water action. A sufficiently large collection of materials was obtained from this site so that no further excavation is planned.

Dr Chmielewski also excavated site DIW-4, located near the above-mentioned site and situated on the first and second terraces above the contemporary flood plain. Three stratified horizons of Neolithic material occur in situ within a maximum depth from surface of 120 cm. The abundant artifacts and implements (mainly microliths) were made of chert, quartz, quartzite, and chalcedony. Included in the inventory of implements were backed blades, crescents, transversal points, and many concave scrapers. A few fragments of pottery occurred on the surface of the site. About 6,000 artifacts were collected from the surface. Fireplaces and ovens were found in the buried occupation layers.

Further excavations at this site are planned for the current field season.

The third site excavated by Dr Chmielewski was site DIW-5. This site, located near DIW-3 and DIW-4, is situated along the edge of a terrace with an elevation of approximately 30 m. above the Nile. The site appears to have been a small village with individual areas of habitation marked by fireplaces and concentrations of stone artifacts. Most of the material is concentrated at or near the surface. Although the site is mainly of Neolithic age, a few upper
Palaeolithic artifacts occur mixed in with the younger materials. Chert, quartz, and quartzite artifacts and implements occurred in a considerable concentration. The artifacts and implements recovered included tanged and leaf-shaped points, cores, blades, ostrich egg beads and shell fragments and a few pottery fragments. Burins of upper Palaeolithic appearance were found outside the area of Neolithic concentration. More surface exploration and test trenching is planned at this site during the current field season.

Dr John Waechter conducted excavations at several sites in the vicinity of Buhen. The first of them, near Abu el Qada, south of Buhen, yielded over 3,000 artifacts, all from the surface of the 20 m. terrace. The industry consisted mostly of Levallois flakes with marked signs of use. A number of test trenches were dug, but in no instance were artifacts recovered in situ.

Farther north, near the village of Buhen, another series of tests disclosed artifacts and hearths located in fill and along the slopes and bottom of natural depressions and gulleys in the 20 m. terrace. The industry differs significantly from that at Abu el Qada. Non-Levallois flakes predominate. Associated fauna included a large Bos, an Equid, a Hippopotamus, and a small antelope.

An intensive study into the typology and technology of lower and middle Palaeolithic industries is being conducted by Mr Jean Guichard and his wife, Genevieve, of the Laboratory of Prehistory, University of Bordeaux. By careful and detailed sampling techniques at a number of sites, statistics on the detailed characteristics of over 20,000 implements and artifacts have now been accumulated. Implement form and association alone are often not sufficient to discriminate the various cultural phases within the major Palaeolithic periods. Studies of the technological processes involved in the production of the implements indicate that although the gross shape and appearance of the implements may not vary greatly, the techniques employed in arriving at the finished product do change, and can be extremely useful in identifying subtle cultural changes.

**Geochronological Studies**

Geological studies, begun the previous year by Professor Jean de Heinzelin and his assistant Mr Roland Paepe, were continued. Considerable progress was made in defining the Nile terrace system and its relationship to the prehistoric cultures of the Pleistocene and post-Pleistocene period. To date, four major conclusions have been reached, as follows:

1. Old fluviatile formations along the Nubian Nile are absent. The so-called ‘old terraces’ are no more than structural platforms, pedimentation surfaces, or wadi gravels.
2. The course of the Nile in this region is not older than the Upper Pleistocene; it must have joined two formerly independent basins very recently.
3. Four stages may be distinguished in the development of the Nile terraces, at 30 m., 20 m., 12 m., and 5 m., respectively, above the present flood plain.
4. The course of the Nile is tectonically controlled, and
KUSH

several tectonic disturbances and faults may be relatively late, of Pleistocene age.*

Summary

The expedition has made considerable progress in certain areas of investigation. It has been determined that the region is rich in prehistoric archaeological remains, and a large number of sites have been located which represent most of the cultural periods from mid-Pleistocene times to the beginning of the historic period. Considerable progress has been made in the perplexing problem of the definition and age of the various terraces of the Nile and their relationship to the succession of prehistoric cultural periods. Much is being learned from the studies of toolmaking technology which will help in the identification of the various phases of Lower and Middle Palaeolithic cultures.

Identification of the fossil pollens in the samples collected is proceeding satisfactorily, and it may be that these identifications will provide the best data for the interpretation of the sequence of Pleistocene and post-Pleistocene climates.

Much is being learned about the prehistory of the northern Sudan, but it is clear that we have made only a substantial beginning. A great deal of intensive work remains if a substantial picture of the region’s prehistory is to be drawn before the rising water of the Nile destroys much of the evidence for ever.

Preliminary Report of the Scandinavian Joint Expedition

ARCHAEOLOGICAL INVESTIGATIONS BETWEEN FARAS AND GAMAI,
November 1962–March 1963

by T. SÄVE-SÖDERBERGH

THE third season of the Scandinavian Joint Expedition to Sudanese Nubia continued the work of the second campaign and was organized on the same scale. Thus we employed about 150 workers and five Quftis and our own staff varied between ten and fifteen members.

During this season we had the great pleasure and honour to have H.R.H. Princess Margrethe of Denmark as a working member of the expedition from 11 November to 14 December. She was accompanied by Countess Wawa Armfelt and Major Fleming Koch. The Sudanese authorities showed her an overwhelming hospitality and at the same time tactfully respected her wish to be treated as an ordinary working member of the expedition. As field director of the expedition during the visit of Her Royal Highness I wish to express the gratitude of the expedition both to her and to the Sudanese authorities for this unforgettable time during the campaign.

The expedition worked from 30 October 1963, when the members arrived in Wadi Halfa, to 27 March 1963. During the first part of the campaign, from 30 October to 14 December, I was Field Director. Mr B. Schön bäck took over after me until the arrival on 5 January of Professor J. Laessöe, who was Field Director until 6 February. The expedition lost one of their most effective and indefatigable supporters in Denmark when Professor C. E. Sander Hansen died on 31 January. In 1961 he accompanied me during one of the reconnoitring visits to the area where the Scandinavian Joint Expedition has now worked for three years, but his health did not permit him to take part in the field work. In his capacity of Professor of Egyptology at the University of Copenhagen and as a member of the Danish Nubia Committee and of the Scandinavian Action Committee for the expedition to the Sudan he gave our joint enterprise all his support. Owing to this great loss and to urgent affairs in Copenhagen, Professor Laessöe had to leave the expedition on 6 February. Mr B. Schön bäck was nominated Field Director by the Scandinavian Action Committee and directed the investigations with his usual skill and efficiency until the end of the campaign. He stayed on in Nubia and in Khartoum until 16 April to settle different questions which were outstanding.

The osteological material discovered by the expedition during the first three seasons was taken care of by Dr J. Balslev Jørgensen assisted by Mr V. Holm (20.2–7.3). They conserved the skulls and bones when necessary and had all the material shipped to Copenhagen where it will be scientifically treated in the anthropological laboratory of the university.

We also had the assistance of Mr S. Giversen and his wife who visited the expedition from 18 December to 24 January and started a preliminary investigation of some of the churches in the concession area.

Once more we are greatly indebted to our Sudanese friends who have, as usual, shown us an unfailing hospitality and within their different spheres and capacities have assisted us and given us many facilities without which our work would not have been possible.

THE SURVEY AND GENERAL OUTLINE OF THE WORK

During the second season the survey of the whole concession from Faras to Gamai had been more or less finished, at least in its general outlines, and the district down to Debeira had been intensively investigated. The number of sites (in the widest sense of the word—see previous report, KUSH XI, p. 48) amounted to 292 when we started the third campaign. As stressed in the previous reports the sites are often extremely difficult to discover owing to wind erosion, sand drift and to the fact that they are covered with decomposed silt mixed with sand. The search for sherds on the surface, the probing of the ground with iron rods and numerous trial excavations have proved the best methods to locate the cemeteries, houses and traces of settlements, but however scrupulously these methods are applied, some smaller sites will undoubtedly always escape us. Thus, e.g. the very large and rather rich N.K. cemetery No. 185 at Fadrus (previous report, pp. 59 f.) was entirely invisible and no tombs at all could be located there until the top layer of hard packed gravel had been removed.

Sometimes larger areas of special interest such as the environments of site No. 185 on the old ‘island’ of Komangana and Fadrus on the border line between Debeira and Ashkeit, have been systematically covered with a close grid of trial pits, in order to ascertain every possible even isolated tomb.

Under these circumstances it is only natural that we should find still more sites even in the northern sector of our concession, which had been so closely
examined during the first two seasons that we regarded it as practically finished. The number of sites registered by us now amounts to 364, but in some cases this is due to a subdivision of some sites for practical reasons.

Of the new sites about a dozen are Palaeolithic workshops or concentrations of implements on the higher terraces where more or less extensive sampling has been made.

In all well over a hundred sites have been closely investigated this season, fifty-three have been totally excavated and about thirty-five have been partly excavated. Smaller test excavations were made at a great number of places.

Palaeolithic and Mesolithic remains have been investigated on some twenty sites, fifteen sites were of A-Group type, partly cemeteries, partly settlements; on some thirty sites we examined C-Group tombs or houses, New Kingdom tombs on fourteen sites, and the later periods were represented by about twenty-five sites.

In addition to several settlements of different dates, in all about 1290 tombs have been excavated during the third campaign.

From Faras in the north and down to Gebel Sahaba (c. 8 km. north of Wadi Halfa) we have tried to excavate partly or totally everything which can be of any interest, including also very plundered cemeteries, in order to have as complete and detailed a picture as possible of the cultural development of this area, disregarding the value of the single finds from the museum point of view. This in toto investigation of an area which is restricted but nevertheless large and varied enough to reflect the average conditions of this part of Nubia is of special interest as a kind of statistical random sampling.

**Rock Pictures**

During the previous seasons a considerable number of rock-drawings had been located by the expedition not only in the southern part of our concession which includes the well-known concentrations of pictures in Abka, but also from Faras down to Wadi Halfa, where the rock is less suitable and very much eroded by the winds.

This season a systematic recording of the rock drawings was started, including general description, photography, and latex prints. This work covered the districts of Faras, Debeira, and part of Ashkeit and will be continued next season.

In an attempt to establish the date of some rock pictures of outstanding interest on site 89 (see map, FIG. 1) an area in the immediate neighbourhood was excavated. Surface finds indicated the presence of a dwelling place or, possibly, a cult place.

The drawings are carved on large sandstone rocks fallen from an isolated hill which is situated in a broad wadi at a distance of about 4 km. from the Nile and c. 185 m. above sea-level. The motifs are rather common in this district—cows, isolated or in groups, sometimes standing, as it seems, in a simple boat.
Fig. 1. MAP OF DISTRIBUTION OF NEOLITHIC AND A-GROUP SITES
Other drawings show the same type of boats with square sails and a man with a big steering oar. The boats recall those depicted, e.g. in the ceramic art of Predynastic Egypt, as well as in the rock drawings of upper Egypt. The same characteristic way of drawing an ox with long horns occurs on a Predynastic vase from the A-Group cemetery No. 308 (tomb 63:1) (Plate III, a). It is therefore interesting to find that all the artifacts found in the excavations indicated a Neolithic to Predynastic date. The potsherds were of the coarse brown, sometimes micaceous ware decorated with an impressed basket work pattern which we found, e.g. in the settlement on site No. 18. It has a clear affinity to Early Khartoum and Shaheinab (cf. below), but seems to be contemporaneous also with the Predynastic period and the early A-Group, and the flint industry also indicates a Neolithic to Predynastic date. These are the only Neolithic-Predynastic remains of a settlement found so far out in the desert, and in combination with the parallels to the rock-drawings this indicates a Neolithic-Predynastic date for the drawings and a connexion between the traces of a dwelling place with the rock pictures.

The same type of stone industry also occurred in the immediate neighbourhood of another rock-drawing, in the Serra district (to the south-east of the southern church of Serra East), which can therefore with some probability be assigned to the Neolithic period.

PALAEOLITHIC AND MESOLITHIC

Extensive sampling was undertaken on many sites of Palaeolithic and Mesolithic date and our collections will, after a closer study, undoubtedly give a detailed picture of these periods. Mr Siiriäinen who devoted much of his time to these investigations located many of the newly discovered sites, one of which (No. 322 just east of our headquarters in Debeira) is of special interest as it is of the same type as No. 182 where Dr Luho found a stratification last year (see previous report, pp. 49 f.). The same strata occurred on site No. 322, which is situated about 2 km. to the north-west of No. 182 and on a much lower level (No. 182 200 m. above sea level, No. 322 165 m.). Here a flake industry of Levalloisian type occurred in a red layer under the surface, but the finds from the harder lower stratum still require further analysis. The implements were found in situ and not eroded by the wind like those usually found on the surface of practically all the upper terraces. Because of the great number of flakes and cores found on the site it is probably better characterized as a workshop than as a dwelling place.

During the second season site No. 205 was excavated in collaboration with the Columbia University Expedition. Here a Mesolithic 'Sebilian' industry was investigated in a section through the so-called Upper Unio shell terrace (about 23 m. above the river). On approximately the same level and further

---

¹ Winckler, Rock-drawings of Southern Upper Egypt, i, pp. 35 f.
² See now Kush xi, pp. 84 ff., 99 f.
south (not very far from the site where, during the second season, some fossilized human bones were collected on site No. 113) an interesting complex was investigated on the slope between two terraces. Just above this slope and probably connected with the Upper Unio terrace, an area is densely scattered with Levalloisian flakes of ferricrete sandstone (quartzite). To the south-east of this area a different, microlithic technique was found with a concentration in a limited area. This was probably a workshop, with a dwelling place further to the south-east, where the microlithic flint technique is partly mixed with the Levalloisian technique in quartzite. It is possible that this Levalloisian technique is contemporary with the flints and that it survived because the coarse quartzite is not suitable for microliths. The same combination of the two techniques could also be observed on some other sites. Still further down on the slope another technique which is probably Neolithic occurred.

A similar ‘Sebilian’ industry of microliths (lunates, crescents and truncated forms) was examined on a dwelling place near the Egyptian border in Faras (site No. 320) also combined with the Unio terrace and on site No. 296, on the lower Unio terrace just west of site No. 205 of 1961–62.

Neolithic and A-Group

Both earlier and later stages of the A-Group were represented in the finds of the first two seasons (see previous reports), but our collections were nevertheless not very representative of this culture.

These lacunae were amply filled during the third campaign and some of the most interesting discoveries of this season concerned the Neolithic and A-Group periods (see map, FIG. 1).

On several sites workshops (Nos. 355, 357, 361) or dwelling places (Nos. 18, 89, 352, 360) a stone industry which seems to be of Neolithic character has been found—partly a debased microlithic flint industry, partly a quartzite industry with some ancient traits (cf. above).

On one site (No. 309, Amintobirki) a New Kingdom tomb (309/1) had been cut through the silt down to the underlying rock, and here the contact between the silt layer and the rock could be studied. On the rock there was a thin layer of coarse sand and loose pebbles of sandstone and limestone, and in this layer—well isolated from the silt above and from the surface of the ground—some flakes of flint, in general rolled but sometimes also sharp-edged were found. According to Mr Siiräinen, who was responsible for this test excavation, they show great similarities to the industry of Abka. The same type of finds also occurred in some test pits in the neighbourhood.

In the same silt bank but further south (Site No. 332; Kashkush), where an X-Group tomb (332/62) had been cut through the silt, the same layer of

---

3 Kush xi, pp. 86 f. 4 Kush vi, pp. 142 f.; viii, pp. 182 ff.
a. A-GROUP POTTERY. *From left to right*: rippled ware with milled rim (No. 332/44/7), Egyptian wares (Nos. 308/63/1 and 332/42/14), incised ware (No. 332/44/8). In centre: stone lamp (No. 298/9/44)

b. A-GROUP POTTERY. *From left to right*: red incised wares (Nos. 332/53B/13 and 332/42/8), haematitic ware (No. 332/53B/14), and black incised ware (No. 298/9/10)

c. CYLINDER SEAL [NO. 303/A2/46] FROM A-GROUP SETTLEMENT, AND IMPRESSION OF IT
a. SCARABS, EARRINGS AND AMULETS (MOSTLY FROM NEW KINGDOM TOMBS)


b. PLAQUE SEAL (NO. 172/1:2)
a. NEW KINGDOM BRONZE VESSELS (NOS. 185/541:3, AND 2, 185/481:3)

b. NEW KINGDOM TWIN VESSEL (NO. 185/402:1) AND IMITATION OF A MYCENAEAN STIRRUP VASE (NO. 218/12:01 ; HANDLES AND SPOUT RECONSTRUCTED)

c. ALABASTER DISH FROM FADRUS (NO. 185/219:3)
coarse sand could be noticed on the underlying rock. The investigation disclosed a fireplace on the coarse sand and covered with a layer of 120 cm. of silt. Only a worked piece of agate and a rimsherd, to judge from the ware probably of early A-Group date, were found in connexion with the fireplace, which lies about 5.7 m. above the present (20.3.1963) level of the Nile. The fireplace seems to be the remains of a temporary camp on the shore of the Nile.

In the silt and not very far from the bonfire several A-Group graves have been cut, some of which can be dated with some certainty to Early Dynastic times to judge from the imported Egyptian pottery (e.g. a wavy-handled cylindrical jar and vases of class D with painted wave lines, one of which was sealed with an Early Dynastic or, possibly, late Predynastic cylinder seal; FIG. 2—see below). Thus, some time between the Early A-Group and the Late A-Group the level of the Nile must have risen (about 7 m. above the present level) and deposited more than a metre of silt.

Several habitation areas of A-Group date were excavated this season (sites Nos. 18, 303, 310, 316, 327, 340), and others which we have located to the south of Wadi Halfa will be investigated next season. No remains of houses were found, though there were sometimes traces of huts (arakusas) and often well preserved fireplaces (especially Nos. 316 and 18 in the Faras district not far from the Egyptian border). On several of these dwelling places the same types of ceramic wares were found as those of the cemetery No. 291 (see previous report, pp. 52 ff.), types which closely resemble Early Khartoum and Shaheinab. They have also been found by Nordström on the habitation site 6–F–3 just north of Buhen on the west shore.⁵

The sherd{s} are of a brownish or grey coarse ware, often micaceous, and the most typical decorations are patterns either of a basketwork type impressed with a square stamp, cordlike impressions, or curved zig-zag lines (‘wolf-tooth’ pattern). They differ from the ordinary A-Group types, but sometimes recall the incised or impressed coarse Nubian ware of Early Dynastic or late Predynastic date.⁶ These latter (and presumably later) types which also occur, e.g. in our cemeteries Nos. 277/1 (test excavated 1962; see previous report) and 332 (tomb 44:8) (PLATE III, a), are sometimes decorated with the same ‘wolf-tooth’ pattern which is typical also of Early Khartoum and Shaheinab. They are perhaps to be regarded as a survival of the earlier Neolithic (?) tradition, as represented by Early Khartoum and its direct counterparts in Lower Nubia. These very close parallels to Early Khartoum and Shaheinab (and with the same variations of patterns as there) occurred, e.g. on sites Nos. 18,⁷ 316⁸ and 303.⁹

---

⁵ Kush x, p. 49, pl. xiii, a.
⁶ Firth, i, pl. 44 b iii ; Firth, ii, pl. 27b ; Griffith, LAAA, VIII, pl. v, 1, 2, 9 ; Steindorff, Aniba, i, pl. 77, 1–5.
⁷ Parallels to Early Khartoum, pls. 29 (lower), 63 (2), 75 (3), 76 (1), 77 (1), 87 (1, 2) and to Shaheinab, pl. 30 (3).
⁸ Parallels to Early Khartoum, pls. 83 (3, 4), 87 (1), and Shaheinab, pls. 31 (4), 32 (6).
⁹ Parallels to Early Khartoum, pls. 83 (3), 88 (2), 75 (3).
KUSH

That these types are earlier than the ‘classical’ A-Group is probable, but a definite proof is difficult to establish. On site No. 316 they occur together with the rippled ware and the ordinary black-mouthed ware, and on No. 303 they were found in the same context as black-mouthed ware and imported Egyptian wares, as well as a seal cylinder (FIG. 2, PLATE III, c) depicting a standing man combined with a simple pattern of straight lines; on this dwelling place a figurine of burnt clay was found, too.

As already mentioned vases with impressed ‘wolf-tooth’ pattern occurred together with the classical A-Group in some cemeteries (No. 298, 308, and 332), but they rather belong to the class of later Nubian coarse ware of the A-Group.

In the A-Group cemeteries excavated this year all the ordinary classes and types of A-Group pottery are represented (PLATE III), including such ‘luxury’ wares as the ‘variegated haematitic ware’ (Aniba G; Nordström Class 4) and rippled ware with milled rim of the highest possible quality. The proportions between the fabrics vary from site to site, not only regarding the predominance of incised decorated wares (as e.g. on site No. 298) in comparison to the occurrence of undecorated pottery (partly of Egyptian origin), but also in the proportions between Nubian wares and Egyptian wares as groups. But only a closer analysis can ascertain whether this is due to local variations or to chronological differences. In addition to the seal cylinder of burnt clay from the settlement on site No. 303 impressions of seal cylinders were found in cemeteries Nos. 308 and 332 (FIG. 2).

In tomb 308/56 there was a big jar (No. 2) of hard pink ware of the comparatively rare type Griffith, LAAA, VIII, p. 7 shape 4 (pl. iii, upper row), decorated with vertical wavy lines in the form of a fork-like tree. On this jar was a lid of clay sealed with a simple zigzag pattern (308/56:3). In the same cemetery a more elaborate pattern occurred on the clay covering a potsherd lid of a jar of hard grey ware with a light grey surface. This jar is engraved with the picture of an ox or cow with big horns (PLATE III, a). The seal impressions show a walking man, a goat or gazelle (?) and a dog or a hyena under a bird (or just an ornament). I know of no exact parallel, but the general style recalls some Early Dynastic cylinder seals, a date which would be well comparable with the type of the jar, (according to Griffith) characteristic of the Early First Dynasty and the period immediately preceding it. Cemetery No. 308 is badly plundered but, to judge from the variety of potsherds, we have no reason to assume that these tombs were Egyptian rather than Nubian, as has been proposed

---

10 As it has been classified by Nordström in KUSH x, pp. 51 ff.
11 Cf. Reisner, Report, p. 332, fig. 288; late Predynastic.
12 For this pattern, cf. Brunton, Matmar, pl. xxi, 17.
13 Cf. Griffith, op. cit., p. 10, pl. ii—The jar is of Griffith’s shape 2.
14 Petrie, Royal Tombs, I, pl. xix; II, pl. xiv.
Fig. 2. SEAL AND SEAL IMPRESSIONS. A-GROUP

27
by Vercouetter for some tombs near Aksha where also some seal impressions were found together with Egyptian pottery.\(^{16}\)

The quantity of Nubian utility ware in cemetery No. 332 as well as the presence of several typical A-Group bowls (Nordström type A III a and b) prevent any such conclusions for this site, where a rather primitive pattern of a seal cylinder occurs on the lid of a jar (332/42:9) of the same type as 308/63:5,

**Fig. 3.** A-GROUP TOMB NO. 332/42. KASHKUSH, ASHKEIT

but again of hard pink ware. This pattern resembles that of the seal cylinder from the dwelling place No. 303. There can be little doubt about the date of the tomb (No. 332/42; see FIG. 3, PLATE IV); in the same tomb were found several jars (42:2–4, 9) of hard pink ware of the types Griffith shapes 1–3 (Nordström Type A VIII b; Reisner E. D., Type VIII), all characteristic of the transition from Predynastic to Early Dynastic; two of these jars are decorated one with painted horizontal (42:2), the other with vertical (42:4) wavy lines. Another jar with flat bottom (42:6) is equally decorated with vertical wavy lines (cf. Reisner L. D., Type IV, no. 4). There was also a cylindrical ‘wavy-handled’ jar (42:14)

PRELIMINARY REPORT—SCANDINAVIAN JOINT EXPEDITION

(Reisner E. D., Type IX, no. 19) with painted straight lines (Plate III, a). Five similar specimens of this type were found by Griffith at Faras (op. cit., p. 7, pl. iii, form 12), but they seem to be rather rare in the Sudan; none was found in the Gezira Dabarosa region (Nordström, op. cit., p. 53) or on any of our A-Group sites. From this tomb (No. 332/42) came a very nice collection of Nubian bowls (42:7, 8, 10–13), one of them with an incised decoration on dark red polished surface (42:8), others are pebble-polished, or of the type ‘variegated haematitic ware’, often very thin and well burnt (Plate III, b). There was also a dagger blade of copper (42:31), a couple of armlets, the usual palettes of quartz, some grinding stones and a flat dish of porous stone.

Among the other A-Group finds of this season a rare form of lamp or censer may be mentioned (Plate III, a). They closely resemble two objects of sandstone from the rich Faras grave No. 14716 pronounced by Mr Firth to be censers. One of them, made of porous chalk or gypsum, comes from a tomb (332/17:3) in which a small ‘alabaster’ pendant in the form of an Egyptian Early Dynastic (332/17:1) falcon was found.17 Another specimen (298/9:4) has a simple decoration of incised lines, and was found in a tomb with an exquisite collection of Nubian bowls with rich incised decorations, representing some new types. These lamps or censers are burnt black on the upper, slightly hollow side.

After a proper analysis in detail, our finds will undoubtedly throw new light on the early A-Group and the prehistoric interrelations between Egypt in the north and the Central Sudan in the south, as it is represented by the sites Early Khartoum and Shaheinab. The transition from Neolithic to Predynastic A-Group will also be illustrated by our collections.

The end of the A-Group is, however, still connected with difficult problems. Our intensive investigations over the large area from Faras to Wadi Halfa have not revealed any traces of B-Group, nor has, to my knowledge, any other expedition recorded any typical B-Group sites in the Sudan. This fact as well as the presence of typical A-Group pottery in the Old Kingdom town near Buhen (to judge from sherds I have seen on the spot)18 may indicate that the A-Group lasted longer in this part of Nubia than has generally been assumed and that it was in general directly supplanted by the C-Group without any transitional B-Group phase. The B-Group may, after all, only represent a poorer social stratum of the A-Group.

C-GROUP AND NEW KINGDOM

During the third campaign a comparatively large proportion of the sites excavated, partly or totally, belong to the C-Group (some twenty-four cemeteries and five habitation areas or houses), but the cemeteries were as a rule heavily

16 Griffith, op. cit., p. 9, pl. iv, 3.
17 Practically identical with Firth, 1, pl. 37a 18, but without the incised lines.
18 See now, however, Emery, KUSH xi, pp. 116 ff., noting, in addition to A-Group sherds, ‘the presence of fragments of unmistakable Nubian B-Group pottery’ (proof addition).
plundered and the houses badly destroyed. Generally, the finds add only details to our knowledge about the C-Group, which has already been so well illustrated by our results in the first two campaigns.

The earlier phase was very little represented in the finds of this year, and most of the sites can be dated to the Hyksos period or to the beginning of the New Kingdom. The interesting variation in the attitude of the Nubians towards the impact of Egyptian civilization during these periods and especially in the early reigns of the xviii Dynasty (cf. previous report, pp. 57 ff.) can be noticed also in the cemeteries investigated this year, and the striking affinity, if not identity of some of these Nubian groups with the group or perhaps rather groups in Egypt called the Pan-grave people has been re-affirmed. Moreover, it seems as if the cemeteries with Pan-grave affinities (often rather barbaric tombs with superstructures in the form of rough stone circles of ‘ironstone’ and with a kind of scratched rather than incised pottery, closely resembling Pan-grave types) are found higher up on the slope of the jebel, whereas the more ‘classical’ C-Group occurs lower down near the cultivated area. This indicates perhaps that the former belong to a desert tribe, such as that alluded to in Egyptian texts by the term medjayu, which again as I have shown elsewhere, was at least sometimes used for the Pan-grave people, whereas the latter cemeteries would belong to the ordinary nehesyu of the valley. The contrast between the higher and the lower cemeteries can be clearly observed, but these identifications with ethnical terms are, of course, more problematic.

The other ethnical and cultural problem often discussed in connexion with the C-Group—its relationship to the Kerma Group and the geographical limit between the two cultural groups—was not clarified by our excavations. As was pointed out in our previous reports the area to the north of Wadi Halfa seems to have belonged entirely to the sphere of the C-Group and Kerma finds, even isolated potsherds, are very rare.

As to the absolute dates a number of scarabs give termini post quem. In a cemetery with Pan-grave affinities some very simple Hyksos scarabs occurred (99/11:5), and in cemetery 220 with rather well preserved superstructures resembling the types of cemetery 35, partly with standing slabs, there were scarabs of Hyksos type (220/28:1) in addition to a scarab bearing the title and name of the Viceroy Turo (Tweri) who was in active service under Amenophis I and Tuthmosis I (PLATE V, a). In this cemetery some very good Egyptian pottery was found, especially decorated carinated vases, whereas the local ware was represented by black-topped pottery of a rather inferior quality. For offering purposes the incised so-called ‘nubischer Krug’ was used. Finally, in a secondary tomb in the C-Group cemetery No. 184, there was a Thuthmosis III scarab.

---

19 Ägypten und Nubien, pp. 129 ff.  
20 See KUSH x, pp. 92 ff.  
21 See Labib Habachi, KUSH vii, pp. 57 ff. The specimen is very similar to Newberry, Scarabs, pl. xxvi, no. 35.
Our investigations have shown that the C-Group in the area from Faras to Wadi Halfa lived on well into the xviii
th Dynasty, and a very interesting find from a C-Group cemetery (No. 218), unfortunately heavily plundered, seems to
indicate a still later date for the last phase of this Nubian group. The tombs consist of rectangular shafts chiselled in the hard stony silt, and the superstruc
tures, which are often destroyed by plunderers, were of the ordinary type of
rough stone rings, sometimes with indications of an offering niche on the east side.
The shafts were covered with flat slabs, and vertical slabs were placed against the
walls of the shafts. The burial customs are thus typical of the C-Group, but no
C-Group pottery was found, and only Egyptian New Kingdom ceramic occurred.
Among the stones of one of the best preserved superstructures (FIG. 4) several
fragments of a fayence vessel, imitating the form and decoration of a Mycenaean
stirrup vase, were found (PLATE VI, b). A rather similar stirrup vase was found in
Soleb (tomb 17—T—24) in a tomb dated by the excavators to the reign of
Tuthmosis III (scarabs). But Professor Furumark kindly informs me that our
specimen must be of a much later date. The form has parallels in Myc. III c
(i.e. after 1230) and the decoration clearly indicates the same period.

The fact that C-Group cemeteries are often situated in the neighbourhood
of New Kingdom sites (i.e. sites representing probably the entirely Egyptianized
Nubian population of the New Kingdom rather than Egyptian immigrants to
Nubia), could be observed in the new sites of this campaign, too. One instance
is site No. 172 where, in addition to the usual New Kingdom shafts, with or
without a side niche, there were several shallow round graves resembling Pan-
graves, sometimes with the walls of the shafts covered with flat slabs. The
ceramic in these latter tombs was of the scratched type (cf. above, p. 30), whereas
the rectangular shafts contained the ordinary New Kingdom pottery. In one
of these simple New Kingdom shafts was a very beautiful plaque seal showing on
one side the King as an archer and a seated enemy with a feather on his head, and
on the other side a sphinx flanked by ankh-signs (PLATE V, b). From the same
tomb came a scaraboid with a picture of Re-Harakhte and ankh-signs.

Our most important New Kingdom finds came, as usual, from the big
cemetery No. 185 at Fadrus (or Quadrus). It has already been described in the
report on last season (pp. 59 ff.), and this year's results did not change the
general impression of the cemetery, but added many finds of interest. The
tombs in the eastern part of the necropolis were rather poor and the best objects
came from richer and bigger tombs in the south-western part, where we have
not yet reached the end of the area. We had hoped to finish the whole cemetery
this year, but owing to the very hard gravel covering the tombs, the excavation

22 Kush IX, pl. xxv; Leclant, Orentalia, vol. 32, p. 204, note 1. Fragments also
from the temple of Soleb and from the rock tomb of Bedier.
23 For rather similar poor graves of the New Kingdom see Verwers, Kush IX,
pp. 26 ff. with ref.
Fig. 4. C-GROUP TOMB NO. 218/12. NAG BABA, DEBEIRA
takes an unusually long time. We have good hope, however, of being able to excavate the rest next season.

In all we have now examined 590 tombs which are of four types (FIG. 5): (1) simple shaft (2) shaft with side niche or side chamber, either with the floor on the same level as the bottom of the shaft or slightly deeper, and shut off from the shaft with an adobe wall, (3) shaft with one or two end chambers constructed in the same way as the side chambers, and, finally, (4) big tombs with remains of sarcophagi, a vault of adobe and a superstructure, which as a rule is only preserved in its lowermost parts.

One of the richest tombs of this latter category is No. 511 of which a drawing is here reproduced (FIG. 6). The burial chambers are two rectangular rooms roofed with barrel vaults. Two corridors lead down to the entrances, one to each, and the fact that the outer parts of these walls are left rough, whereas they are plastered with mud in the corridor, shows that the corridors were left open for some time, probably in connexion with burial, and the rest of the lower parts of the construction was buried in loose sand. The door to the southern chamber was still closed with bricks plastered with mud, but the room had been plundered by tomb robbers who had broken through the vault of the roof. They had only left some vases under the fallen part of the vault. The other chamber was unplundered despite the fact that the door filling had been broken in order to insert a secondary burial. The first burial was rich in finds. The painted sarcophagi were badly damaged and consisted mainly of fragments of painted stucco. Near the face of the man (northern skeleton) was a heart scarab (185/511:190, FIG. 7, PLATE, v a) of a rather good quality. The stucco surrounding his head showed a pattern in blue, yellow, red and black, and these fragments continued to the elbows. Similar stucco cartonnages enclosing the head and the shoulders have been found in several tombs, but are as a rule very deteriorated and are difficult to rescue other than in fragments. The stucco mask of the woman was painted in blue only. The chamber contained a great quantity of pottery, and the collection from the tomb as a whole amounted to more than 150 vessels, partly broken or fragmentary, but many in a good state of preservation. There were also a lot of pendants, scaraboids, amulets, and so forth (PLATE v, a).

In view of the square plan of the superstructure this may have been a pyramid of the same type as those of e.g. Aniba and Deir el Medineh, as well as the tomb of Amenemhet at Sheikh Oweis el Qurani, but it is doubtful whether the pyramidal piece of sandstone found in the northern corridor was really the pyramidion of the brick pyramid. It seems to be too pointed for this purpose, and this is the case also with some similar stones found in the cemetery—in tomb No. 238; no less than five of them occurred in the antechamber in front of the entrance door, and this fact in combination with the form seems to speak

24 See Kush xi, pp. 159 ff.
Fig. 5. PART OF NEW KINGDOM CEMETERY NO. 185. FADRUS, DEBEIRA
(Oriented north—south)
Fig. 6. NEW KINGDOM TOMB NO. 185/511. FADRUS
against the interpretation of pyramidion. They recall rather the upper part of the 'obelisks', placed in the forecourt at the entrance of the tomb of Mekhu at Assuan.\textsuperscript{25}

The very rich collection of all sorts of pottery is similar to the finds at Aniba, but sometimes there are also new forms, as for example a double vessel consisting of a so-called pilgrim bottle with two handles combined with Aniba form 36a (but without handle) (185/402:1) (\textit{Plate vi}, b). This year, too, there was practically no Nubian pottery, only three debased black-topped bowls.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{heart-scarab.png}
\caption{Heart Scarab from Tomb No. 185/511. Fadrus}
\end{figure}

In addition to the ceramic there were some vessels of bronze (185/372:2 and 481:3—open bowls\textsuperscript{28}—185/507:39 Aniba ceramic type 9b), \textit{inter alia} a beautiful jug of an elegant form (185/541:2) (\textit{Plate vi}, a). In the same tomb a hoard of arrowheads of bronze were found. Weapons are otherwise rather rare, only a few axes (475:18 and 544:7) and a collection of arrow-heads (in 185/541). Stone vessels are as a rule either kohl pots of the usual form or of the type Aniba I Taf. 95, 19 with several variations. Rather unusual is a dish of alabaster in the form of a fish (219:3) (\textit{Plate vi}, c).

In addition to other adornments, amulets (e.g. a Toeris of gold 185/545:1) etc. we found a great quantity of scarabs (\textit{Plate v}, a). They represent the more or less usual types of the late Hyksos times and early \textit{xviii}th Dynasty. The royal names are Amenhotep, Tuthmosis, \textit{Mn-hpr-r\textsuperscript{c}}, which are rather common. Of great interest is a scarab with the name of Amenophis III (\textit{Nb-m3t-r\textsuperscript{c}}) (185/356:13), which shows that the cemetery was in use later in the \textit{xviii}th Dynasty than we had hitherto supposed. Finds of this later date are very rare, not only in our cemeteries but apparently in Nubia as a whole. Private names and titles are also rare (see 545:2), and this in addition to the scarcity of weapons, in my opinion, speaks against the interpretation of the cemetery as the burial place of Egyptian members of the Nubian colony. Only two jars (of Aniba I type 23) were inscribed with hieratic texts in ink—in fact the first we have found

\textsuperscript{25} Cf. e.g. von Bissing, \textit{RT}, vol. 34, pp. 21 f. \textsuperscript{26} Cf. Aniba, 1, taf. 98.
in our concession. One of them mentions an artist (ṣḥ kdwt), the other a wakil (ḥdnw). No other texts were found with the exception of a fragment of a relief mentioning Amun (FIG. 8).

This cemetery gives a very detailed picture of an Egyptianized Nubian population who have entirely left their own traditions behind, and it is of special interest as they do not seem to have lived in the immediate neighbourhood of an Egyptian fortress or town.

![Relief Fragment from Cemetery No. 185, Fadrus](image)

**FIG. 8. RELIEF FRAGMENT FROM CEMETERY NO. 185. FADRUS**

**THE LATER PERIODS**

No finds were made during this campaign to fill the gap between the New Kingdom, or rather the xixth Dynasty, and the late Meroitic period. Nor did our investigations give any clue or explanation for this very strange absence of any remains from so long a period.

In an attempt to find more Meroitic material some supplementary diggings were executed in the neighbourhood of, and within, the big cemetery of Shirfadiq (No. 25 north of Serra; see Kush xi, pp. 65 ff.), which gave finds from the A-Group, but nothing of interest for the later periods.

The X-Group had, it seems, been more or less exhausted in the northern parts of our concession during the previous season, when several big cemeteries of this date were excavated. However, near the southern church of Serra we found in an X-Group cemetery a tomb containing inter alia the remains of an arch and a decorated quiver in embossed leatherwork (350/8:d).

More interesting results came from the Christian period, which was so far very little represented in our finds. A number of Christian tombs of the same types as those found, e.g. by Junker at Ermenne,²⁷ were excavated on different sites, the most interesting being on site No. 178 on the 'island' of Komangana about 1 km. to the north of the New Kingdom cemetery of Fadrus (No. 185).

²⁷ See Junker, Ermenne, taf. 8 and 9.
KUSH

The tombs are partly big vaulted mud-brick constructions, partly simple shafts of the ordinary Christian type. In the big tombs there were no finds other than several well preserved bodies, but some stelae had been used secondarily to close the entrance of the burial chamber, with the texts in all cases but one turned inside and always upside down. One of them (178/17:1) has a crude drawing and a short Greek text mentioning Abba Mesa ////?// (?). Two Greek stelae contain the usual formulae studied by Junker. One of them (178/8:8) is the tombstone of a man called Stauroforos (FIG. 9, b). To the Greek text is added in Coptic the information that 'he died on Friday Khoiak 8th in the year of the Martyrs 786 (=A.D. 1069–70)'. Here the Greek is rather correctly written, but on the other stela (178/18:1) (FIG. 9, a) the orthography is very barbaric despite the fact that the stone had once been written for the 'bishop Martyroforos, the son of Goassi, the son of Marian(?)'. This stela is dated to the year 875 of the Martyrs, i.e. A.D. 1158/9. Martyroforos was presumably

---

bishop of Faras, to which diocese the site undoubtedly belonged. He does not seem to be mentioned in any of the texts published so far on the bishops of Faras but may occur in the texts discovered there by the Polish expedition. The name of his father, Ġoassi (written with the Nubian letter for ġ), is found in a text from Meinarti where a man with this name, 'son of Sentikol', is said to have died in the year 878 of the Martyrs (A.D. 1161/2). Whether the two Ġoassi are identical is difficult to say, but in view of the dates and the fact that the name is rare, it is by no means improbable.

Together with the tombstone of the bishop there was an Islamic stela in Arabic writing (178/18:2) which came from the 'tomb of Ishaq Ibn Ahmad who died in the year (from the Hejra) 367' (A.D. 978). In tomb No. 16 another Islamic stela of Mahmuda Bint Muhamad Ibn Yusuf was found, who 'died on Saturday, Safar 1st, in the year 301' (from the Hejra; i.e. A.D. 913) (PLATE VII).

Arabic texts on ostraca were found to the east of tomb No. 8, hidden under a brick wall.

The ordinary Christian shaft tombs yielded a lot of nicely decorated pottery of the so-called Early Dongola ware, and many fragments of such pots were scattered over the surface of the tombs, presumably as a kind of offering. The types of vases are as a rule big jars. If this decorated ceramic can be combined with the dated stelae, it will yield valuable absolute dates for the chronology of the Christian pottery, which has been studied so successfully by Dr Adams, but in which one of the difficulties is the scarcity of indications of the absolute chronology.

Towards the end of the season the mud-brick walls of the fortress of Jebel Sahaba were cleared of later heaps of stone, but the excavation work proper will start next season together with a supplementary architectural recording of the churches in the concession area, especially the church of Jebel Sahaba. So far only preliminary work has been done by the expedition on these interesting remains from the Christian period.

---

30 Monneret de Villard, La Nubia medioevale, p. 218.
31 I am indebted to Dr F. Rundgren for the reading of the Arabic texts, and Sayed Nigm ed Din Sheriff solved the riddle of the proper names on 178/16:2.
32 Kush x, pp. 245 ff.
Preliminary Note on the Epigraphic Expedition to Sudanese Nubia, 1963

by Fritz Hintze

The Epigraphic Expedition of the German Academy of Sciences, Berlin, continued their fieldwork in Nubia with the second season,¹ which lasted from 18 January to 5 April 1963.² The party was composed of Dr Ursula Hintze, Walter Friedrich Reineke, and myself (rock inscriptions); Dr Gisela Buschendorf-Otto, and Bernhard Gramsch (rock pictures).³

Both groups carried out their work from Abd el Qadir village on the west bank, where we hired a house as our base: the rock picture group changed later (on 2 March) to the east bank and took the Sarras resthouse as their base for the work in Sarras and Murshid.

ROCK INSCRIPTIONS

The distribution and number of rock inscriptions, which where copied by us during this season, according to districts (omodiyas) and sites,⁴ is:

**Serra West** (24–H–2): 1;

**Halfa Degheim West**: (5–O–4, 5, 20, 21)⁵: 42;

**Abka West** (5–N–1; 5–T–10, 12, 15, 16, 17, 23, 64, 65: 5–S–23)⁶: 296;

**Sarras** (11–L–7)⁷: 4;

**Semna West** (16–E–6)⁸: 11.

---

² Fieldwork from 28 January to 27 March 1963.
³ Unfortunately Prof. K. H. Otto was ill and therefore unable to work with us.
⁴ An invaluable help for our work on the west bank up to Gemai was the Archaeological Survey of the Sudan Antiquities Service, whose files were liberally put at our disposal by Dr Adams and Mr Nordstöm. In addition to this we discovered the following sites: 5–T–64, 65, and 5–S–35. The site 5–N–1, Arkell's so-called 'Hieroglyph Hill,' was found with the assistance of Sheikh Ali Osman of Halfa-Degheim-East.
⁵ These sites are near Abd el Qadir.
⁶ The site 5–N–1 is the so-called 'Hieroglyph Hill'; its inscriptions were published by Arkell, 'Varia Sudanica,' *JEA*, vol. 36, pp. 28–31, pls. ix, x. The sites 5–T–10, 12, 15, 16, 17, 64, 65 are located at Abu Sir rock. The site 5–T–23 is north of Murgissa, its inscriptions are published by Wheeler, *Kush* IX (1961), pp. 104–5. 5–S–23 is a new site north-west of Murgissa, near the desert route.
⁷ This is the Island of Kagnarti, south of Askut.
⁸ This is south of the fortresses, in Saidnambi.
Altogether they total 354 inscriptions; 336 of them are from the Middle Kingdom; only sixteen are from the New Kingdom, one at site 24-H-2, three at site 5-O-21, and twelve at site 5-T-17.

One inscription (5-O-20/1) is in Meroitic, but unfortunately almost illegible. Another (5-O-20/1) is in Greek letters, giving the names of (Saint) Gabriel, Michael, and Raphael.

The Middle Kingdom inscriptions are mostly very short, containing only names and some titles (cf. plate viii, a). The most frequent title is ‘nh n niwt ‘citizen’ (twenty-five times); fourteen inscriptions were made by šmsw ‘followers.’ The title sš ‘scribe’ occurs four times without addition, only one sš msš ‘scribe of the army’ (5-O-20/5) and one sš n ḏḏḏšš ‘scribe of the magistrates’ (5-O-20/16) are mentioned. Also the titles shḏ msš ‘inspector of the army’ (5-N-1/2), and mr niwt ‘overseer of a city’ (5-T-16/17) occur only once each. Dated inscriptions are 11-E-6/5 (year 14), 5-T-16/31 (year 21), and 5-T-16/81 (year 31), but no king’s name is mentioned. The most frequent name is Intf, which occurs more than forty times. Next come Mnšw-htp and S-n-Wsr, which occur more than twenty times each. The names Shbk-htp and Imnnjḥ occur more than ten times.

Four of the New Kingdom inscriptions are somewhat longer and they begin with the formula htp dj nsw ... n kš n ... (5-T-17/1, 3, 7, 11), and one of these 5-T-17/3 is also dated: ‘year 16 of Thutmosis III’ (see plate viii, b). Most of the New Kingdom inscriptions were made by ‘scribes’ (sš), one by a ‘scribe of the treasury’ (sš pr-hḏ) (5-T-17/7), another by a ‘draughtsman’ (sš-ḥḏ) (5-O-21/1). One man has the titles ḥḏṣṭjḥ ‘mayor’ and ḥm-nṯr ‘priest’ (5-O-21). One official is sš ḥtp-nṯr ‘scribe of the offerings,’ and sš ḥš ṭb ‘scribe-reckoner of gold’ in inscription 5-T-17/7, and sš ḥš Wḏwšt ‘scribe-reckoner of Wawat’ in inscription 5-T-17/1; so he is a scribe-reckoner of the gold of Wawat. He is of the title sš pr-hḏ ‘scribe of the treasury’ has the name Smš-hḏṣṭjḥ (5-T-17/7), which is the name of the fortress of Napata, and not known to me as a personal name.

**Rock Pictures**

The number of rock pictures, which were collected during this season, is also very great: 41 sites with 271 groups have been worked up. The distribution is:

Serra West (24-H-2, 3; 24-I-15): 3 sites, 7 groups;
Halfa Degheim West (5-O-4, 21, 22): 3 sites, 11 groups;
Abka West (5-T-15, 16, 17, 23, 36, 66; 5-S-12): 7 sites, 22 groups;

---

KUSH

Murshid East (11-H-1, 6; 11-I-1 to 5, 7 to 11): 12 sites, 60 groups; Sarras East (11-Q-15 to 28; 11-L-7, 8): 16 sites, 171 groups.\(^{12}\)

At all sites pictures of cattle are the most frequent; some of them have bell-like pendants at their necks (cf. PLATE IX, a). Giraffes are represented at Murshid and Sarras-Amtuka (11-I-1, 11-Q-25), and an elephant in Serra (24-H-2). Pictures of boats are rather frequent at Serra,\(^{13}\) Abd el Qadir, Abu Sir and Sarras-Amtuka (11-Q-25, 11-I-4, 24-H-2, 5-O-21, 5-T-15). Camels are represented only at one site (11-L-7). Christian engravings occur at one site (24-I-15).\(^{14}\) Completely unique among these rock pictures is a labyrinth-like spiral line (see PLATE IX, b) at Abu Sir (5-T-17).\(^{15}\)

---

\(^{12}\) Sarras-East seems to be the principal district of Sudanese Nubia as regards rock pictures.

\(^{13}\) Cf. Kush x (1962), pl. iii, b.

\(^{14}\) They are partly published by G. J. Verwers, Kush IX (1961), p. 29.

\(^{15}\) It resembles somewhat the spirals, which Winkler attributes to the ‘Earliest Hunters,’ see H. Winkler, Rock-drawings of Southern Upper Egypt (London, 1939), p. 32, pl. lx, 1. Similar spirals were found by Kohl-Larsen in Tanganyika, see L. Kohl-Larsen, Die Bilderstrasse Ostafrikas (\(^{2}\)1958), Abb. 53, 54.
PLATE VIII

a. INSCRIPTIONS AT SITE 5-T-16; MIDDLE KINGDOM

b. INSCRIPTION 5-T-17/3; NEW KINGDOM
a. ROCK PICTURE AT SITE 11-Q-19/241

b. THE 'SPIRAL' AT SITE 5-T-17/170
Egypt Exploration Society:
by W. B. Emery

THE activities of the Egypt Exploration Society’s expedition to Buhen this year were centred on the task of dismantling the temple of Hatshepsut in co-operation with the Sudan Antiquities Service, who have transferred it to Khartoum, where it will be re-erected in the grounds of the new museum. This project is under the direction of Mr Hinkel, whose report on these operations is given elsewhere in the Journal.

During inevitable intervals in the work on the temple, advantage was taken to excavate both in the fortress and in adjacent areas. Work was started on 13 November 1962, and concentrated until the end of the month, on the construction of two great earth ramps; one on the south side of the temple leading down to the river, and the other connecting the temple with the big sand dump which had accumulated from the 1959–60 excavations in the north-west corner of the fortress. The purpose of the first ramp was to facilitate the transport of the dismantled stones of the temple down to the river, where they would be loaded onto a barge for transfer to the railhead at Wadi Halfa. The second ramp was built for the light railway which would bring the sand from the dump into the temple, where it was to form a cushion floor of varying depths as the stone blocks of each layer of the building were removed. To obtain sand, rubble and stone for these ramps, it was decided to excavate the denuded area inside the fortress, which we had hitherto considered unworthy of clearance. This led to unexpected results, for although the upper structures of the buildings had disappeared, we found, by digging below the ancient ground level, that traces of much of their foundations were still preserved. From these remains, the general plan of this part of the Middle Kingdom town was ascertainable, so that even when sufficient earth and rubble for the ramps had been removed, we continued these excavations with varying success until 16 January 1963. By this time an area of more than 3,000 square metres had been examined in detail. A considerable number of inscribed stone fragments were recovered, most of them of New Kingdom date and belonging to door structures of buildings which, built above the Middle Kingdom remains, had long since disappeared. Although most of these inscribed fragments were badly broken up and of little value, there were some of historical interest, such as a door lintel bearing the Horus name and the prenomen of Senusret I. Another lintel part was found in the temple area, showing the kneeling figures of Hori, Viceroy of Kush, and Hor-mes, Governor of Buhen before the cartouches of Rameses III. But certainly the most outstanding object found in this seemingly barren area was the face of a small male statue of red quartzite. This almost undamaged fragment of Middle Kingdom sculpture is a work of considerable merit.
KUSH

While the main body of our workmen were engaged on these excavations, another group was employed on the removal of part of the temple enclosure walls and the modern roofing built more than sixty years ago to protect the sanctuary.

After some delay because of the non-arrival of chemicals from Europe, work on the preservation of the painted reliefs and strengthening of the temple stonework necessary prior to the dismantling of the structure was commenced on 1 January 1963, under the direction of Dr H. J. Plenderleith, Director of the International Centre for the Study of the Preservation of Cultural Property, Rome. The following procedure was adopted:

1. Encrustations of hornets’ nests, bird lime, modern cement and other deposits on the wall surfaces were carefully removed with sharp knives, and the joints between the blocks were cleaned out as far as possible.
2. All carved and painted surfaces were covered with a 5 per cent solution of white flake shellac in alcohol. This solution was just brushed on.
3. Cotton voile was then applied to all weak plastered and painted wall surfaces. The adhesive used was ‘Cellofas B’, which was applied by brush in a fairly thick solution. The shellac was allowed twenty-four hours to harden before the application of the cloth.
4. When the cloth was dry, the joints between each block were cut with a sharp knife and the edges were stuck down with a further light application of shellac.

The chemical treatment of the walls was completed by the 7 January, and the blocks ascribed to Taharka, which had been inset (for their protection) by our predecessors in the reconstructed south enclosure wall, were removed and packed. In connexion with these remains, which, if not belonging to Taharka, certainly are to be dated to the Ethiopian period, we made some very interesting discoveries. For more than sixty years the sanctuary of the temple had been protected by a wooden roof which was supported on square pillars built partly of brick and blocks of stone which the builders had found lying on the floor of the partly excavated structure. These pillars had been faced with white painted stucco, so that the fact that some of the stone blocks were inscribed was not apparent until we dismantled them in removing the wooden roof. Most of the inscribed blocks certainly are identical both in style and execution to the so-called Taharka material, and it became obvious that they belonged to some additional structure of the original temple. Their original location and function was later revealed when the pavement in front of the sanctuary was cleaned preparatory to the removal of the colonnade in front of it. There can be little doubt that they formed part of a screen wall built between the columns; for they fit in the grooves cut in these columns and in trench cuts in the paving.

Other fragments of inscribed stone from the dismantled piers of the modern roof were also of considerable interest. There was part of a large historical stele of Akhenaton, pieces of which were found by Woolley and MacIver in 1910.
in the forecourt of the North Temple, which was probably its original location. It records the crushing of a revolt by the Viceroy of Kush, which had broken out in the land of Ikayta.

After the preliminary work of chemical protection and the dismantling of the modern protective structures, a breach was made in the west wall, and through it sand was brought to raise the floor level of the temple to the bottom of the top course of stone. This task was finished in a few days, and on 20 January the dismantling of the temple was commenced in earnest, to be carried on, without serious interruptions, until 10 April, when the work was brought to a successful conclusion, with the stone blocks packed and delivered safely to the new museum at Khartoum.

On the excavations, the clearance of the town area being completed, we turned our attention to a feature of the fortress defences which had long puzzled us. At the bottom of the brick wall which blocks the end of the north ditch is the mouth of a stone-built conduit opening out at a level 70 cm. above the floor level. It is as yet impossible to say if it was to drain water from the ditch or to let water into it, and with a view to a solution of this question we commenced a series of pits in an attempt to find its outlet. This has proved a much bigger undertaking than had been anticipated, and although we have traced the conduit in a northerly direction parallel to the river for a distance of more than 130 m. we have not yet discovered any sign of its source, nor any indication of its turning towards the river. Further investigation of this puzzling feature will be made next season.

During an interval of a few days early in December 1962, we explored the large cemetery situated south-east of Gebel Turob. This proved to be late X-Group bordering on the Christian period. But it was so completely plundered that only 35 graves were excavated; they were of two types, the lateral niche and the barrel vault. All had originally been covered with circular earthen tumuli, but all had been reduced to ground level by plundering and wind erosion.
a. BRICK STRUCTURES BETWEEN THE TEMPLE OF HATSHEPSUT AND THE NORTH WALL OF THE MIDDLE KINGDOM FORTRESS

b. OPENING OF THE CONDUIT AT THE END OF THE NORTH DITCH OF THE FORTRESS
a. Clearing the roofing of the conduit behind the retaining wall of the North Ditch

b. Excavation of the area above the conduit. Note the brick retaining walls above the stone roofing
Preliminary Report on the Excavations by the University of California at Askut (First Season, October 1962—January 1963)

by Alexander Badawy

The excavations at Askut were financed by a grant from the State Department of the Federal Government of the United States at Washington and sponsored by the University of California at Los Angeles. The season started on 8 October 1962 with fourteen local workmen who had to be trained. An average of fifty workmen was the figure for the whole season.

Askut (Askuta) is a small island of the Nile in the Batn el Ḥagar (Belly of Rock), c. 35 km. south of Wadi Halfa as measured along the river. It is c. 17 km. north of Semna-Kumma. Adjacent to it to the south is another larger island, Kagenarti, ‘Island of the asses’, which geologically forms part of Askut. To the natives the name reminds of Askurta ‘That of the wild rushes’, a local etymology paralleled by that of Kagenarti. The significance of Askut was known to Egyptologists at least as early as 1941 when T. Säve-Söderbergh mentioned that its fort could not be identified with the Egyptian 'Ikn.' The latter is one of the fourteen names of Egyptian forts in Nubia listed in topographical order in a papyrus from the Second Intermediate Period, about a century (1680 B.C.) before the rise of the XVIIIth Dynasty. The first eight names have been identified as those of the forts excavated in the Batn el Ḥagar between Semna and Buhen. None occurs in the list between Ṣf Ḥṣwt ‘Uronarti’ and Dr-wjw ‘Mirgissa’, a distance of c. 32 km.

The structures on Askut are located in the north-west corner of the island following a spur of the bedrock. It is pan-shaped and the eroded walls follow this outline, featuring the highest level along the north edge of the island. On account of the prevailing north winds the various stages of the excavation started as much as possible from the north, proceeding south.

A visit to the site before the start of the excavation showed a dense but superficial litter of pottery sherds with orange or red slip, many of them painted

---

KUSH

and datable to the Late Christian periods of Nubia. The traces of huge walls of Egyptian brickwork appeared on the east and west while in the north-west corner a gaping hole left by earlier explorers showed a mass of broken walls and pottery. Numerous blocks of black stone covered considerable areas especially near the edges of the site. It is also along these edges that several superstructures built of large brick stood, one still retaining remains of catenary vaults (north-west corner). The native bedrock appeared at various places, especially to the south-west of the site, at a higher level than the remaining area. The huge spur-wall built of dry masonry of black stone blocks running north-south at the north-east corner of the site was an unmistakable feature of an island fortress from the Middle Kingdom.

Work started with the clearing of the northern superstructures overlooking a steep slope. The best preserved one in the north-west corner showed at least three chambers and evidence of two others, all once roofed over with catenary vaults, one still standing (Plate XIII, a and Fig. 1). Between two contiguous vaults springing from the same wall was a filling of brickwork. The brick was of large moulds $39.5 \times 18 \times 5.5$ cm. with plenty of chaff and brushwood mixed with the clay. Joints were large both horizontally between the courses and vertically (1–1.5 cm.). No find came to light but the architecture featuring the use of a triangular niche for lamps and a postern running west surmounted by a deep vaulted shelf proved to be rewarding enough. Abutting the superstructure to the north were simpler rooms with walls c. ·6 m. high of dry stone masonry of black undressed blocks. They were perhaps later quarters attached to the superstructure. Nearby to the east were two other superstructures built on the north girdle wall (north-west stretch and north-east stretch) with the same type of brickwork, both overlooking the steep slope on the northern edge of the island. Their walls were only preserved to a small height and showed a small aperture spanned over by a stone slab at a low level above the floor. There were two cellars at different levels on the upper and lower edges of the superstructure North B and three cellars at the same level along the lower edge of superstructure North C. These cellars, rectangular in plan always oriented east-west, had no means of access (one had a window-like aperture) and were too small for living accommodation or for a burial. The contents did not shed any light on their purpose (lower cellar North B: small greasy pot, date pits, cake of yellow pigment, dom fruits; upper cellar North B: animal hide and bones). The western group of four superstructures, though cleared later (18–20 December 1962), is mentioned here since it pertains to the same level of occupation. The brickwork was of different moulds:

A northernmost structure $48 \times 23 \times 8$ cm.
B west ,, $37 \times 19 \times (7–8)$ cm.
C east ,, $37 \times 19 \times (7–8)$ cm.
D south ,, $39 \times 15 \times 7$ cm.
a. REINFORCING BEAM IN NORTH WALL OF NORTH-EAST POMOERIUM

b. CHAMBER NO. 7 WITH VAULTED ACOVE AND STAIRS (North-west Sector) COURSE OF EXCAVATION

c. BUTTRESSES AND RECESSES ON OUTER FACE OF GIRDLE WALL (east stretch)
a. LARGE JAR INTACT WITH ITS LID (red slip, North-east chamber, floor level)
b. HUGE JAR FOUND BROKEN AND BOUND AROUND ITS RIM (North-west room No. 1)
c. MEROITIC POTTERY FOUND IN RECESS NO. 3 TRANSFORMED INTO A LIVING ROOM
   (outer face of east girdle wall)
d. BURNISHED RED SLIP BEAKER WITH PAINTED DECORATION (surface North-west Sector)
a. IRON CROSS, INCISED (surface North-west Sector)
b. TWO HIERATIC OSTRACA FOUND EMBEDDED IN WALL (Centre west)
c. INSCRIBED SANDSTONE BLOCK OF AN OFFICIAL FOUND IN NORTH WALL OF WATER STAIRWAY
d. SEALINGS ON FUNNEL CLAY STOPPER
The walls were set on a course of bricks on edge (A) or a socle of irregular blocks of stone (C). The springing of a vault (1 brick thick) showed slanting rings starting from the stepped ends of the side walls (D). The vault of superstructure B had fallen on the fill and could not be rescued. From its west end wall which fell during the excavation came a piece of textile with coloured stripes.

These superstructures must be studied in conjunction with the surface finds which covered the whole site. These consisted of sherds of orange or red polished ware, many painted with simple decorative patterns in black or purple, of types dating from the Christian Periods of Nubia (A.D. VII-XI). One sherd showed a small cross in the pattern. There were also numbers of sherds of brownish ware with mat impressions or with lipped rims and handles. Other surface finds along the western edge featured an iron cross incised (PLATE XVI, a), an intact conical cup of painted orange ware (PLATE XV, d) and a Nubian letter on parchment.

Beneath the superficial litter of sherds excavation removed a layer .3 m. thick characterized by abundant goats excrement, primitive hearths of stone or brick and ashes. The finds, mostly of coarse pottery, hides and bones of animals and fish, point to a primitive civilization. At the lowest stage of this layer emerged the tops of thin walls half a brick or one brick thick, curving irregularly, which later proved to be the partitions of cellars built within the fill of the rooms of the Egyptian fortress or scooped out of its thick walls. In the central area the upper layer .3 m. thick proved to be of sterile sand. Pots of baked clay mostly hand-made and black with soot, some also cylindrical of unbaked clay, were found in situ still covered with stone slabs or clay lids. Hearths and ashes were found nearby. Hides of cows, goats and sheep, shreds of textiles of undyed brown wool, mats and mysterious clay figurines featured a primitive civilization. Large grinding stones, deposits of dom fruits and lupins (Lupinus termis) as well as bones of sheep and fish gave a clue to the diet. These surface dwellings were probably connected to the cellars built at a lower level in the fill. The earliest ones were rectangular in plan, better constructed in half brick or brick on edge walls on the floors of the rooms of the fortress (E-3, E-5). Sometimes they abutted the corners of the rooms. In one case two walls crossing at right angles in the centre of the room divided it into four compartments. Cellars of later date were of poorer design and construction, usually circular built on fill (PLATE XIII, c) or even scooped out of a wall totally or in part (E-6, E-5), or blocking a doorway. Some cellars had their floor sloping from the entrance down to the rear or featured a subsidiary bin adjacent to the main one containing a jar set slanting with its rim flush with the face of the partition wall and opening in the main cellar (E-15, A). The problem of the squatter’s origins, neither Christian nor Egyptian, is still under study. It is significant that the cellars occur mostly in the eastern part of the fortress while the western part, most exposed to the sandy winds, was filled in earlier and not invaded by the squatters. Earlier settlers, probably Egyptians from the New Kingdom, had remodelled some rooms
in the northern quarters of the fortress, subdivided them and occasionally set against a wall a huge jar, found broken and bound around the neck with a rope (PLATE III, b). Cellars have been reported at Soleb, Buhen and Semna.

In the later stage of the excavation the fortress assumed the aspect of a monstrous honeycomb built by a rather undisciplined pack of human bees (PLATE I, d). The third stage of the excavation aimed at clearing the original floor of the fortress, but very often progress was hampered by the cellars. As the process, which had started from the east, neared the western edge it became imperative to demolish the intrusive structures. This was started (2 January 1963) from the east after securing essential data, drawings, photographs as well as making a detailed plan with levels. The cellars in some of the north-east chambers were left as specimens.

The fortress is built of uniform regular brickwork characteristic of Middle Kingdom architecture (32 \times (15-16) \times (8-9) \text{ cm}) of light-coloured clay without chaff and deep parallel impressions of the five fingers swept along the moulds. No seal impressions were found on any brick. Horizontal joints are thinner (1 \text{ cm}) than vertical ones (1.5-2.5 \text{ cm}). Baulks of wood (10 \times 7 - 10 \times 10 \text{ cm}) are inserted horizontally both along the face of the girdle wall and transversely, set at regular intervals (c. 45 \text{ cm}), running inside the wall to varying depths (1.6-1.5 \text{ m}). The main inner walls are usually 1.05 \text{ m} thick (two cubits), some 1.85 \text{ m} thick. The layout features a girdle wall (c. 6.8 \text{ m} thick) recalling the outline of a kite, oriented north-east—south-west, its broadest dimension along the northern edge while Main Street running north-east—south-west would form the backbone of the design (FIG. 1). A street or ‘pomoerium’ follows the inner side of the girdle wall, except at one point in its north-east stretch where a knoll of bedrock jutting out on its course seems to interrupt it. It is in this vicinity that graffiti in the mud plaster of the pomoerium wall representing a boat with sails and oars were found. The eastern stretch of the north-east pomoerium slants down eastward and was covered with a layer of ashes .3 \text{ m} thick.

Square buttresses project from the eastern side of the girdle wall (PLATE XIV, c) and larger ones from the west side. They are reinforced with wooden baulks (PLATE XIV, a) and their bottom part is faced with a slanting glacis of carefully laid stone blocks. No trace of any dry ditch and outer enclosure was found—a device used in the forts built on flatter ground on the Nile banks (Buhen, Mirgissa, Semna). Every recess between the eastern buttresses was transformed into a chamber by a later wall of mixed masonry (stone and brick) blocking its east side, with a doorway at one of its ends. The objects found in situ (grinding stones, hides, set of five pots) point to a late period of occupation, Meroitic or later (PLATE XV, c). It is in a hole scooped out of the third buttress from the north that the fragmentary statuette in limestone of a certain Sebe(k\ldots), ‘director of the plowings’ was found. A cartouche, possibly that of Sesostris III, on the back of this statuette would ascribe it to those dedicated to the cult of that deified pharaoh at Semna. Two elements project eastward at right angles from the
uncovered east side of the fortress and can be interpreted as a broad quay with rooms and a long bastion reinforced at its base by a stone glacis.

The inner layout adapts an orthogonal system of rooms to the irregular lozenge outline, with a clever arrangement of triangles along the border. East of Main Street stretch the characteristic storerooms, square in plan (10 x 10 cubits) interconnected by central doorways. Since the structure follows the pan-shaped profile (north-south) of the bedrock, the northern rooms are terraced, with small stairways of three steps flanked by parapets fronting their doorways. Besides the central wooden post set on a stone slab forming a base, there are also in most of the storerooms subsidiary thinner posts erected at irregular locations. In the eastern pomoerium were broken jars along the west and east walls, seven of which contained still-born babies, a feature known at Semna and Mirgissa. No doorway opens on the east pomoerium.

West of Main Street there are contiguous units, on the traditional tripartite plan, in the northern area (1-15 December), probably residential quarters and workshops. The latter interpretation is based on the huge quantities of Egyptian pottery discovered, especially in the north-west corner rooms, embedded in thick ash. In one room (7) a stairway rises to the extrados of a vaulted alcove (PLATE XIV, b). Behind this alcove in the adjacent room (5a) an arched recess found full of ashes and layers of pots seems to have been a kiln. It is here that a few terra-cotta crocodile figurines and crocodiles modelled on spouts were found, a concrete aspect of the local cult of Sebek-'shaty 'Sebek-the-numerous' mentioned in one of the rock inscriptions of the island. Layers of pottery features pertaining to the Middle Kingdom and to the New Kingdom are probably a proof of the re-occupation of the fortress during the xviiith Dynasty. This is corroborated by the discovery of a gold-mounted scarab of Thutmose I (Room south of 14) and a faience scarab of Seti I, as well as a few pots of the typical painted red slip ware with lozenge outline. In the upper layers of occupation of these north-eastern rooms mats, rushes and deposits of dom fruits were found.

In Main Street (north stretch) a rich deposit of several species of fruit (nabq, carrob, sycamore fig, dom, dates) was found, proving the eclectic menu of the garrison. Clay figurines of no little artistic significance, perhaps dolls, seals of the official and private types (xiii Dynasty), a necklace, terra-cotta loom-weights and an unfinished stone bust of a woman gave an insight into the life of the soldiers. A flint blade, a copper razor with recurving handle and abundant lumps of black curly hair (room 10) indicated the barbers' quarters. In the south rooms cakes of yellow pigment and haematite and two grinding-stones still daubed with these vivid colours point to the activities of painters. Two hieratic ostraca with red script were found embedded in a wall (PLATE XVI, b).

A transverse street connects Main Street mid-way along with the western pomoerium. It borders the north side of the south-west block identified as the 'commandant's quarters' on account of its large painted columned hall, its staircases rising west to an upper floor and the ramparts and the two corridors
which run along its eastern and western edges. Six column bases in carved limestone are still in situ, partly embodied in a later platform built over them. Remains of a ribbed plaster ceiling were found fallen on the floor. The painted dado in bluish grey topped with a white band and the gamboge yellow wall above are similar to the mural decoration in the west gate of the fortress of the Middle Kingdom at Buhen. In the threshold of the east entrance to the ablution room of the quarters a vertical cylinder in terra-cotta surrounded with tiling of the same material forms the drain, probably connected beneath a terra-cotta pavement in the east corridor to another system. Similar ablution drains are known at Mirgissa. It is in this drain that numerous fragments of clay seals were found. The western corridor which runs at a higher level outside the west wall of the hall is connected to it by a stairway which descends in the south-west corner. At its foot the dado is broken by a white panel framed with a triple band red-black-red (FIG. 2). At Mirgissa a similar panel is painted above a platform at the small end of a columnned hall. The platform has been interpreted as an altar. No trace of such platform exists in the hall at Askut.

While clearing the western pomoerium in the vicinity of the area transformed into red brick by a raging fire, just near the commandant’s quarters, a burnt wooden lintel still hanging loosely from the west wall indicated a doorway (1 January 1963). This was cleared and a large stone socket, remnants of the wooden door-jamb and the upper steps of what proved to be the water-stairway were uncovered. After a flight of seven steps the stairway features a landing beyond which the main flight proceeds south-west at an angle, still flanked by its thick walls. The change in direction was to let the stairway follow closely the bedrock cliff. Of the original ceiling of large red granite blocks only a few remained in situ, hanging precariously on the crumbling burnt masonry of the lateral walls. It is in the north wall of the stairway that a burnt inscribed stone was found embedded (PLATE XVI, c). The offering text may prove interesting for it mentions a god Hnt-hty, originally a crocodile god.

The season came to an end before the discovery of the gateway(s) of the fortress. A trial trench in the south-eastern area of the island uncovered brick walls of a late period. Some clearing made to the south proved the existence of extensive structures with large walls beneath the sand. At the southern end of the eastern half of the fortress thick walls were found built on a fill and were lining the existing walls, perhaps as a reinforcing device.

The finds: Christian sherds, Egyptian pottery from the Middle Kingdom and the New Kingdom, clay figurines, clay seals (PLATE XVI, d) and various objects of daily use will have to be studied comparatively. The names occurring on the private seals are characteristic for the Middle Kingdom: ‘Lady of the House, ëty’, ‘Seal-bearer of the god, Senusertankh’, ‘Khety’.

On a stone bordering a pathway to the south is a hieroglyphic inscription with an offering formula to Ptah. Of the three rock inscriptions all in the south-west district, one is a Nile inundation level dated Year 3 under Pharaoh
PRELIMINARY REPORT ON THE EXCAVATIONS AT ASKUT

Sekhemkare and another is an offering formula to Sebekshaty with the cartouche of Pharaoh Nwb(?).kawre. The inundation inscription is important for its very high level and because it proves that inundations were still recorded under Pharaoh Sekhemkare, the second of the xiii Dynasty, and that Upper Nubia still obeyed his rule.

Fig. 2. PAINTED PANEL ON SOUTH WALL OF COLUMNE HALL AT FOOT OF STAIRS

The significance of this first season of excavation at Askut cannot be fully ascertained before the whole site is uncovered. Yet, besides the intrinsic value of the Egyptian fortress as a major architectural monument from the Middle Kingdom, it will contribute information as to its role in the context of the chain of Egyptian fortresses built to guard the routes to the mining district and trade outposts in Upper Nubia. It will also shed some light on the art and civilization of Late Christian Nubia.
Preliminary Report of the University of California Expedition to Dabnarti, 1963

by Jay W. Ruby

The University of California Archaeological Expedition to Sudanese Nubia acquired a concession from the Sudan Antiquities Service to conduct investigations on the island of Dabnarti. This work constitutes one portion of the University's contribution to the Save the Nubian Monuments Campaign. The expedition was under the field directorship of Jay W. Ruby with Ernest Chandonet serving as architect. Work commenced on 4 February and was concluded on 23 February 1963.

The island of Dabnarti is located in the Second Cataract about 25 km. south of Wadi Halfa. The island is composed of the pre-Cambrian granite which is characteristic of the formations comprising the Second Cataract. The size of the island is directly dependent upon the height of the river. The present vegetation consists of some tall grasses and large bushes in a marsh on the east side. None of the vegetation could be used for food and the available wood would provide only a nominal amount of firewood. In short, the island by itself could not sustain life.

Dabnarti is situated in the western half of the Second Cataract with one island between it and the West Bank. The channel of the Nile between Dabnarti and this island contains one of the worst rapids on the Cataract. This rapid is so dangerous that it can only be crossed when the Nile is low today. It was in this channel that Wheeler lost one of his men. On the east side there are many small channels and innumerable islands before one reaches the East Bank.

Upon this barren rock of granite an Egyptian fortress was constructed directly east of the fortress of Mirgissa. Somers Clark has previously described the site and island and Gardner and Wheeler both mention it. The work of the expedition was conducted in three sections; first an intensive survey of the entire island was made, then a contour map and site map were drawn, finally test excavations were made within the walls of the fortress and in two later habitation sites located in the survey.

The fortress consists simply of the eroded remains of the girdle and spur walls, no interior construction is visible. The somewhat irregular rectangle measures approximately 230 m. long by 60 m. wide. The girdle wall varies from 3 to 5 m. in thickness, while the spur walls are extremely irregular in length and thickness. (See map for exact dimensions.) Some of the spur walls have a rubble stone foundation as does the south-west section of the girdle wall.

---

1 Kush IX, p. 87. 2 JEA, III, p. 167. 3 Ibid. p. 190. 4 op. cit.
KUSH

On the east wall near the southern end of the fortress, there appears to be a break in the wall where the covered waterway characteristic of these forts was to be constructed. On the middle of the western wall, the entrance to the fortress was built. Utilizing the natural contours of the island two ramps were constructed which ran parallel to the girdle wall to a central opening. The position of this entrance is somewhat puzzling because it is now directly in front of the rapid. It must be assumed that the level of the Nile was different during Pharaonic times.

Four 3 m. x 3 m. pits were excavated in the interior of the fortress, revealing no evidence of human occupation. A systematic collection of sherds and lithic material was made from the interior of the fortress as well as from the areas immediately adjacent. A preliminary examination of the sherds indicates that most of them are Late Christian.

The survey of the areas outside of the fortress revealed a giraffe petroglyph (about 80 cm. high and 20 cm. wide) which was pecked into the rock near some rubble stone enclosures. These enclosures were test trenched and were discovered to be contemporary goat pens that had been filled in with wind blown sand. Two further rubble stone structures located in the northern end of the island were also test trenched. One of them contained a fire pit and some Late Christian sherds. It was probably the result of a single camping of some Christian nomads.

From the artifactual and architectural evidence we can say that the fortress was never finished and probably never occupied. It seems reasonable to assume that this fortress was started during the New Kingdom, instead of the previously assumed Middle Kingdom. For if it were started in the Middle Kingdom, and then abandoned, surely it would have been completed when Nubia was re-occupied during the New Kingdom or at least occupied temporarily.

The most puzzling aspect of this fortress is its very existence. Why did the Egyptians plan to build such a large fortress directly across from Mirgissa? It has been suggested that Dabnarti was to be used as a strategic retreat during the siege of Mirgissa. It has also been postulated that Dabnarti and Mirgissa together were to have been a means of controlling and safeguarding river transport in the Cataract, similar to the two fortresses at Semna and Kumma. Perhaps both of these hypotheses are correct or even another as yet unventured explanation is to be sought. However with the meagre information obtainable, no definite conclusions can be drawn.
Excavations at Mirgissa—I
(October—December 1962)

by J. Vercoutter

From 8 October to 9 December work was in progress in the Mirgissa Concession. The party consisted of myself as Field-Director, M. André Vila, Assistant Field-Director and Mrs Elizabeth Vila, Recorder. Owing to the imminent danger of the water level rising in the coming year, it was decided to explore and record first all those ancient sites within the concession which were situated below the 170 m. contour level.

According to our agreement with the Sudan Antiquities Service, the Mirgissa concession consists of a roughly triangular area covering approximately 4 square km. and including the fortress of Mirgissa and its associated cemeteries. Its limits are: North, 904 000 grid line (Egypt red belt grid); South-east, west bank of the Nile; West, 633 000 grid line (references are to the photogrammetric map, 1/25,000, sheet 21°45'/31°10', 'Abka', Sudan Survey Department, April 1960). Most of the area within these limits is high desert terrain with hills towering above the Nile Valley to about 40 m. so that it was not in immediate danger of being inundated by the waters of the High Dam Reservoir, at least in the first stage of its construction, and we could limit ourselves this year to the exploration of the somewhat triangular plain, whose apex is just below the fort of Mirgissa, the west side following the granite hills of the desert just above the 150 contour line, the east side being along the river, and the base following the northern limit of the concession on the 904 000 grid line. Within this limited space eight sites were partially excavated during the two months of our first campaign (see Fig. 1).

I shall describe them in the order of their exploration, which is followed by our record numbering.

M.I (=site 5–S–9 of Dr Adams’s Survey). This is a very large site which covers approximately 16,000 square metres. Two large strips running east-west were excavated, one 32 m. long on the southern part of the site, the other about 40 m. long in the middle. It is an occupation site with two kinds of dwellings: (a) stone huts (see Plate XVII, left side of the photograph) which are generally circular, though some of them are roughly rectangular. They were full of pots, belonging to a limited number of types, viz. spherical jars, hemispherical vases, large dishes with or without spouts, small bowls and plates; in addition, there

---

1 Reference is to the Preliminary Survey undertaken by the Sudan Antiquities Service under the direction of Dr W. Y. Adams, Unesco Expert.
were a great number of 'bodegas'. The pottery is of Middle Kingdom type. The huts are not arranged in any definite order. They are composed either of a single room or two, rarely three (once four). There is definite evidence of extensive rebuilding of the dry stone partitions, and of several occupation layers. However the pottery types are constant at all levels. (b) mud-brick houses (see Plate XVII), consisting of four to five rooms, surrounded by a wavy enclosure wall of mud brick. Entrance to the house itself is on the north side and to the enclosure on the east. Four buildings of this type were excavated. Two of them were eroded by the wind practically down to ground level. There is evidence of more structures of this kind on the site. Unlike the stone huts, the mud-brick houses contained but little material, chiefly small pots and all of them broken.

Towards the middle of the site is a road about 4 m. wide, paved with mud bricks and running north-west to south-east. Work will be resumed on this site next season.
SITE M.I, A MUD-BRICK HOUSE
SITE M.VII, IN THE BACKGROUND SITES M.I, M.II, M.IV, M.V AND M.VI
M.II (=site 5–S–15 of Dr Adams’s Survey). This is a very small site quite near to the river and due south from M.I. It consisted of a few mud bricks and a rather thick stone wall (2 m.) running for some 6 m. down to the Nile. Nothing was found besides a few sherds of very coarse pharaonic pottery. There was nothing to show what might have been the purpose of this structure. However, owing to its position, I should tentatively suggest that it might have been some sort of landing quay, possibly connected with the river by way of a short canal.

M.III (=site 5–S–3 of Dr Adams’s Survey. See Plate XVIII). This site lies north of the fort (see fig. 1), and west-north-west from M.I. It consisted of twenty-two round mound-graves with stone rings. One of them had been excavated by Dr W. Y. Adams in December 1961. From the finds it is certain that the cemetery belongs to the Kerma culture; this is shown by (a) the dimensions and shape of the tumuli, which are bigger than C-Group graves and have sloping sides of loose stones, whereas in C-Group graves the sides are usually perpendicular and built of dry stones carefully laid; (b) the position of the bodies, in contracted position, head to the east, faces to the north; (c) the type of bed-burial which was observed in three instances, and at least one case of human sacrifice inside the grave; (d) the interment of sheep, goats and particularly rams in human graves; (e) the pottery types, both as regards shape, viz. the spouted beaker, and manufacture—the black-topped red pottery with a metallic band in its middle—all well-known since Reisner’s excavations at Kerma; (f) the characteristic Kerma dagger with trapezoidal ivory handle, of which two specimens were found still on the bodies.

The graves were very poor and frequently plundered. However, they have yielded a number of objects, among which, besides the Kerma pots and daggers already mentioned, were alabaster jars and vases, ‘flies’ of gold, a small crescent-shaped pendant adorned with lotus flowers, a bronze mirror, and scarabs, beads and amulets made of carnelian, amethyst, blue faience, silver or gold—all of Egyptian workmanship. One of the scarabs was inscribed with the name of Nub-kheper-Re, Antef VII. Accordingly, the cemetery M.III may be dated to the end of the Second Intermediate Period. This dating is confirmed by the other scarabs. As far as I know this is the first Kerma cemetery found north of Sai.

M.IV. This site lies on the top of a small hill of granite boulders quite near to the river and exactly opposite the eastern end of Dabenarti, 400 m. due east from M.I. New Kingdom sherds were spread over the surface of the area which proved to be a small occupation site, covering about 900 square metres altogether. We discovered the scanty remains of a square or rectangular structure of mud brick, almost entirely eroded on the south side. Within what was left of the enclosure there were just a few traces of fires and domestic refuse, showing that the site must only have been occupied temporarily, not permanently. One is
tempted to link it with Dabenarti Fort, M.IV possibly being a New Kingdom watch post of some kind. No objects were found besides a few sherds and one bead. A trial sounding showed that 60 cm. below the level of the foundations of the mud-brick walls, which were laid on pure sand, was another occupation level, possibly of the Middle Kingdom.

M.V. This site is on the top of a sandhill, 160 m. west of M.IV. It is a natural sand-drift and rather big granite blocks have been artificially arranged on top of it, roughly in a straight line running east-west, with a return angle on the north side. Some of the blocks have slidden along the sand-drift. It proved to be a very small Christian occupation site of late date, and produced a few sherds typical of that period. The actual mud-brick structures which must have been built on top of the remaining coarse granite foundations had been entirely destroyed and only a layer of decayed bricks, silt mixed with stones and sherds, proved the existence of these walls. A very late burial (body in extended position on its right side, head to the north-west, face to the south-east) was found near the Christian settlement at a slightly lower level. There was no evidence either of an external structure to the grave or of any funerary furniture. About 5 m. east of the burial a slave’s iron was found.

M.VI (=site 5–S–10 of Dr Adams’s Survey). This site lies about 150 m. south-east from M.I and about 60 m. from the river. It includes a large rectangular building (18.40 m. × 15 m.) of mud brick. Only the lower layers of the walls are preserved and even some of them have been destroyed by wind erosion from place to place. Typical Christian sherds, an Arabic ostracon and seal impressions stamped on a wall have been recorded.

Some trial diggings were done north of M.VI, over an area 10 m. wide by 20 m. long, running down to the Nile. Four different levels of occupation were recorded, each one lying on a layer of pure sand. All these levels are badly eroded by wind and only 10–20 cm. thickness of each is left. Traces of vegetation and remains of small partitions of mud brick were recorded. Sherds, rather rare, were all of ancient Egyptian type, mostly of the New Kingdom.

M.VII (see Plate XIX). This site lies 200 m. west of M.VI. Excavations started from the foot of the Jebel and proceeded eastwards in the direction of the Nile. Just a few hours after the beginning of the work, we found a great wall of mud brick, 5 m. wide, running east-west. It was flanked on its north side by a stairway of mud brick protected by a parapet. Two metres north of the main girdle wall a second defensive wall was found; 55 cm. thick, it consisted of round bastions and straight walls running parallel or at right angles to the main wall. The walls are preserved up to a height of 4 to 5 m. and the northern one has two rows of loop-holes. There is definite evidence that the north-western bastion (see Plate XIX) had an upper storey. Traces of the upper floor, which
was supported by wooden joists, are clearly visible. The defensive complex so discovered looks very impressive. It seems to belong to the same system of fortifications as the Fort on the top of the hill. South of the main wall other structures appear, such as a wavy partition 2 m. high, similar to the enclosure walls of the houses of M.I (see Plate XVII). Work was stopped at M.VII on 4 December and will be resumed in October 1963.

M.VIII. Having completed the excavations at M.III (see p. 59 above), Mr Vila proceeded southwards surveying the area. At a certain point (see Fig. 1) an isolated grave was found and about 5 m. north of it was a pit dug into the jebel (see Plate XX) and filled with sherds, some of them inscribed with hieratic texts. The ostraca are very small but very numerous (about 3000). They had been inscribed on vases and dishes of various types which were purposely broken after the inscription had been scribbled on them. South of the pit was a human skull laid on a dish, beside which had been deposited a small flint knife and an inscribed pot, completely broken. North-west of the ostraca pit two broken statuettes of limestone had been buried in the sand, together with fragments of two others. The statuettes are prisoners of the type well-known from G. Posener’s publications;² the inscriptions on the sherds are ‘Execkration Texts’ similar to those published by Kurt Sethe.³ Thanks to the generosity of the Sudan Antiquities Service and the Commissioner for Archaeology, Sayed Thabit Hassan, the ostraca and the statuettes have been deposited on loan in the Collège de France, Paris, where they are now under repair in the laboratories. Professor G. Posener has agreed to study the inscriptions and as soon as his work has been completed the find will be returned to Khartoum Museum.

*     *     *

Considering the limited period of time we were able to devote to the excavation of Mirgissa in 1962, the results were most rewarding. The find of the Execkration Text deposit is of outstanding importance not only because of the texts themselves (lists of foreign countries and peoples from Africa and Asia) but also for the other objects which were intermingled with the ostraca: mud figurines of human beings, animals and objects, or parts of men and animals (heads, legs, arms, etc.). Thanks to the Mirgissa find, the magical rites which involved the foundation of such deposits can now be studied and compared with the few texts which mention them.

² See, for instance, G. Posener, Princes et Pays d’Asie et de Nubie, Textes hiératiques sur des figurines d’envoûtement du Moyen-Empire, Bruxelles, 1940.
KUSH

The discovery of (a) the town in the open plain, and (b) what can now be called the Lower Fort, to distinguish it from the Upper Fort on the top of the hill, renew the problem of the identification of the various place-names for the Middle Kingdom forts between Buhen and Semna. So far, it has been assumed that Iken, the market place mentioned in the Semna Stella and in the list of forts from the Ramesseum, could not be Mirgissa, chiefly because of its position on the top of a hill—a most unsuitable place for marketing. We know now that below the Upper Fort Mirgissa had ample facilities perfectly suited for a market, since they are (a) near to the river; (b) on a branch of the Nile which is easily navigable when one comes from the south; and (c) on a crossing of the land routes leading to Buhen in the north and direct to Semna and beyond in the south, avoiding the rocky passages between Uronarti and Semna. Such being the case, the location of Iken will have to be reconsidered in the light of the recent discoveries and of further excavation at Mirgissa.

Lille.

October 1963.

---

A propos des bucrânes à corne déformée de Faras
par Paul Huard

La découverte faite par H. Nordström, près de tombes du Groupe C du grand cimetière de Faras, des trois premiers bucrânes connus dont la corne gauche a été artificiellement recourbée en avant et vers le bas,1 présente, pour l'étude des rapports entre la Nubie et le Sahara tchadien à l'époque pastorale, une importance dont cette note a pour but d'apprécier la valeur. C'est en effet un fait nouveau et O. H. Myers, qui a dégagé à Armant de nombreuses tombes de boeufs (cf. Mond et Myers, *Cemeteries of Armant et An Archaic Nubian Cemetery*, en préparation), nous précise qu'il n'y a pas remarqué de cornages déformés.

H. T. B. Hall2 a décrit ces bucrânes en rappelant deux ordres de faits connus :

(a) la figuration de boeufs à corne déformée sur des monuments égyptiens, ses exemples cités des V°, VI°, XI°, XXV° dynasties et de l'époque méroïtique pouvant d'ailleurs être considérablement accrus, notamment au Nouvel Empire.3,4

(b) la pratique actuelle des déformations de cornages par des Nilotes pasteurs du Soudan méridional.5

Mais il faut se représenter que ces indices culturels parallèles s'étalent dans le bassin du Nil sur des milliers de kilomètres et d'années, avec de vastes hiatus dans l'espace et dans le temps (Voir FIG. 1). Aussi, sur le plan égyptologique, s'est-on généralement borné à constater les faits, comme E. Naville6 à propos du ‘boeuf de Koasch’ du temple d'Abydos, ou bien l'on a envisagé, comme Blackmann et Apted,7 des explications à courte portée : ces boeufs ont pu provenir de raids au delà des frontières dont les Égyptiens étaient coutumiers, ou avoir été obtenus

---

Fig. 1. CARTE POUR L’ÉTUDE DES CORNES DÉFORMÉES

par voie d’échange. On rappellera aussi qu’ils se voient dans des scènes de présentation du tribut du Sud ornant des tombes de dignitaires.

Cependant, des théories générales, reliant les indices extrêmes observés, ont été émises par des ethnologues. Seligman a vu dans les déformations de cornes par les Nilotes la trace d’une influence de l’ancienne Égypte sur l’Afrique Noire et Baumann a considéré les cornes déformées comme un trait culturel des pasteurs ‘Chamites (Hamites) orientaux’, pratiqué par les anciens Egyptiens, ce qui n’est pas, à notre connaissance, prouvé. Cet auteur est rejoint par H. Frankfort dans sa théorie sur le fondement africain de la civilisation égyptienne.

Postérieurement à ces prises de positions, des faits nouveaux, établis en particulier au Sahara tchadien, invitent à rassembler les termes divers d’un problème complexe, dont nous envisagerons ensuite les aspects qui se rapportent au champ de nos recherches.

I. POSITION ET ÉCLAIRAGE DU PROBLÈME DES CORNES DÉFORMÉES (FIGS. 1 ET 2)

Plusieurs facteurs sont à examiner. Ce sont :

(a) l’incertitude sur la nature exacte des déformations : représentées en Égypte et sur les rochers du désert, trouvées à Faras ou observables chez les Nilotes.

— Pour ces derniers : chez les Nuer, Seligman fait état du ‘retournement de la corne gauche sur l’avant de la tête’; Evans Pritchard (The Nuer, 1949) note que les cornes des jeunes taureaux sont coupées obliquement avec une lance, de telle sorte qu’elles repoussent contre la section dans une forme qui plaie à leur maître ; chez les Dinka, selon Seligman, ‘les cornes sont tirées de sorte que l’une pousse vers l’avant et l’autre vers l’arrière’ ; chez les Longarim du Soudan équatorial, Kronenberg décrit plusieurs types de déformations ; enfin, selon Baumann (op. cit., p. 255), les Souk et les Nandi de la région du Lac Victoria ‘s’arrangent pour que l’une des cornes paraisse se diriger vers le sol, transformation pratiquée aussi par les Nilotes et les anciens Egyptiens’. Une monographie illustrée définissant les formes et les techniques conditionne de nouveaux progrès de la question.

Par ces pratiques, les pasteurs Nilotes, en symbiose avec leurs troupeaux continuent, pensons-nous à symboliser ou à concentrer magiquement la puissance

11 Au Tchad, nous avons remarqué exceptionnellement des troupeaux de zébus (qui conservent le cornage en lyre ou en demi-lune du bœuf africain), conduits par un taureau ayant une corne ‘flottante’, utilisation occasionnelle, aux fins d’identification à distance, d’une anomalie qui peut être pathologique ou accidentelle. S’il y a survivance, elle est inconsciente.
KUSH

du taureau incarnant la force vitale de la communauté. Ces conceptions pourraient se retrouver respectivement chez le danseur nilote appelant son taureau favori en mimant avec les bras la déformation du cornage, et sur les figurines schématiques de taureaux accusant la même particularité.
— A Faras, la détérioration des cornes ne permet pas de se faire une idée nette de la position que pouvait avoir leur pointe.

---

**Fig. 2. REPRÉSENTATIONS DE CORNAGES DÉFORMÉS SUR DES MONUMENTS ÉGYPTIENS**

(1) Tombe de Ti, Saqqara, Ancien Empire; (2) Louxor, fête d'Opet; (3) Moyen Empire;
(4) Abydos, Nouvel Empire; (5) Kush.

---

— En Egypte, les représentations de cornes déformées (généralement la corne gauche), sont nécessairement en partie conventionnelles (FIG. 2). En effet, les canons de l'art animalier égyptien (corps de profil au cornage vu de front) ne permettent pas de représenter avec exactitude la traitement subi par des cornes écartées dans des plans divergents. Quand le bétail défile vers la droite, on ne devrait voir que partiellement la corne rabattue ; si le bétail est tourné vers la gauche, la projection réelle de la corne modifiée risque d'oblitérer la tête. C'est vraisemblablement\(^\text{12}\) pour éviter ces inconvénients que les cornes déformées représentées ne sont généralement pas réalistes (FIG. 2, n° 4), si on les compare avec des photographies des pratiques modernes, et elles sont parfois exagérées (FIG. 2, n° 3).

\(^{12}\) Pour l'un des cas (tombe d'Amenemhât), A. Mekhitarian a voulu voir "un essai de perspective : l'une des cornes de la bête fuit dans le mur" ([La peinture égyptienne, 1954], p. 44); mais ceci n'est que simple hypothèse ([Leclant, MDAIK, vol. 14 (1956), p. 131, n. 5]).
Dans ces conditions et en l’absence d’un bon catalogue critique tenant compte des données ethnographiques (tâche que L. Keimer avait entreprise), on ne peut lever le doute sur le point de savoir si les Égyptiens ont représenté avec des variantes la déformation qui est majoritaire (fig. 2, n° 1), ou voulu matérialiser différentes pratiques.13

(b) L’existence dans toute la moitié orientale du désert, de la mer Rouge au sud du Tassili, de quelque 150 figurations rupestres de cornages déformés, la plupart gravées, reproduisant les types 1, 2, 3 et 4 de la figure 2, et dont il sera question plus loin ;

(c) L’échelonnement dans le temps des documents gravés, qui pourraient remonter en Haute Égypte aux ‘Autochthonous mountain dwellers’.14 Au Sahara tchadien, ils s’étendent vraisemblablement sur près de trois millénaires, compris entre le cours de la phase pastorale ancienne et l’âge du fer ;

(d) au Sahara oriental, l’analyse des figurations de bovins porteurs de disques frontaux et autres attributs céphaliques révèle15 l’existence d’un complexe culturel et rituel, qui s’est élargi au sud de l’erg libyque parmi des populations de pasteurs aux affinités marquées, ayant assimilé des pratiques touchant principalement au bœuf africain ;

(e) des recherches récentes ont mis en évidence en Ennedi et au Djourab des influences directes ou dérivées de la culture du Groupe C, dans le domaine rupestre et sur la céramique. Les indices recueillis appellent des études particulières et nous indiquons seulement ici, à titre provisionnel, les principales concordances déjà enregistrées dans des publications analytiques :

La plus ancienne est l’association en Ennedi (Guirchi Nialadoia, fig. 3, n° 8 et 9) de deux grands bœufs, l’un à cornage déformé, l’autre à robe ornée de bandes16 suivant une formule du décor mobilier du Groupe C.17 Ils sont en relation, dans le site, avec de grands personnages au corps ornementé de chevrons imbriqués18 et avec des femmes stéatopyges portant des robes rayées analogues à celles relevées par Emery et Kirwan dans le Groupe C.17 Signalons que des femmes stéatopyges à robes ornées, gravées dans la région de Dakhla ont

14 Winkler, Rock Drawings of Southern Upper Egypt, I, pl. xvii, 2.

D’autres parallèles concernent la céramique du Djourab récoltée sur des sites de l’âge du fer :
— 'supports' cylindriques de Toungour et de Maledinga, ajourés de rangs de triangles ou de losanges découpés ;
— récipients hémisphériques de Toungour à surface couverte du motif en losanges alternés, unis et incisés, commun dans la céramique du Groupe C ;
— grands gobelets noirs ou rouges de Maledinga ;
— poterie rouge à décor noir peint à Toungour, attestée à divers niveaux dans la vallée du Nil.

Enumérons encore des sujets sur lesquels des études comparatives entre le Groupe C ou ses dérivés et le Sahara tchadien ont été entreprises :
— pendeloques jugulaires des bovins, qui apparaissent en nombre avec ce groupe et sont fréquentes sur les gravures pastorales du Tchad ;
— haches à gorge, abondantes dans les plaines entre l’Ennedi et le Ténéré, mais dont les types variés ne sont généralement pas identiques à ceux du Groupe C ;
— baudriers croisés qui apparaissent au Sahara tchadien (Ennedi) sur des peintures dans le 1er millénaire avant J. C. et ne sont pas, au Tibesti, antérieurs à l’âge du fer ; ce trait culturel était connu du Groupe C ou à son niveau.

Il apparaît donc que le problème des cornes déformées ne concerne pas la seule vallée du Nil, mais tout le Sahara oriental pendant une longue période liée principalement au bœuf africain. C’est dans cet éclairage que les découvertes récentes, zooarchéologiques et rupestres, prennent leur signification.

21 Junker, Toschke, n° 315–19.
22 Firth, ASN (1909–10), pl. xxviii, supports à losanges incisés.
23 Steindorff, Aniba, II, pl. 72 et 73.
24 MacAdam, Kawa, II, fig. 51.
25 Downs Dunham, RCK, IV, fig. 122.
26 Garstang, Méroé, pl. lxiv, n° 22.
27 Firth, ASN (1908–9), pl. 40.
28 Junker, Toschke, pl. cxcii, 67.
29 LAAA, XIII (1926), pl. lixii, 4.
29 bis Mauny, ‘Poteries engobées et peintes de tradition nilotique dans la région de Koro Toro (Tchad)’, BIFAN, xxv, B, no. 1–2 (1963), fig. 4.
33 Oric Bates, The Eastern Libyans, fig. 93.
II. ENSEIGNEMENTS LIVRÉS PAR LES BUCRâNES DE FARAS

Nordström a mis en évidence :

(a) la liaison directe du Groupe C avec les races de boeufs Hamitic Longhorn et Bos africanus, que Hall (p. 61) assimile raisonnablement, dans le cas considéré ;

(b) le rôle éminent réservé au bétail au sein du Groupe C, déjà attesté par les stèles funéraires à images de bovins, les tombes et le décor de la céramique.

L'auteur considère que le Groupe C fut, au moins en partie, composé à l'origine, de pasteurs nomades des vastes régions au sud de la Nubie, où leur culture a pu se développer jusqu'à un certain point.

Les bucânes de Faras apparaissent encore, pour la première fois, la preuve que la déformation des cornes a été effective dans le Groupe, que cette pratique ait été acquise ou soit originale.

D'autre part, il existe des liens qui restent à préciser, allant de l'identité à la transmission culturelle différée, entre le Groupe C et les pasteurs à qui l'on doit, au Sahara oriental et tchadien, des figurations de bovins que nous allons examiner.

III. LES FIGURATIONS RUPESTRES DES CORNES DÉFORMÉES

Ayant entrepris leur recherche au Tchad depuis 1949, nous avons montré dès 1953 et en 1959 que des déformations, dans l'ensemble semblables à celles des monuments égyptiens, sont représentées depuis le désert oriental d'Égypte et la Nubie jusqu'au nord-ouest du bassin du Tchad et, en 1961, qu'elles sont associées à des cornages ayant plus de deux branches, déformées ou non, figurations de caractère magique ayant vraisemblablement pour but d'amplifier les vertus attribuées aux cornes des taureaux par les pasteurs orientaux.

(A) Pour la région du Nil, nous avons donné (1959, fig. 3, 4, 5 et 1961, fig. 2) diverses figurations de cornages déformés ou à plusieurs branches provenant de la zone comprise entre l'Est d'Assouan, Karora, l'ouadi Haouar et Ouénat. C'est un aperçu d'un recensement qui reste à faire d'après les publications de Dunbar, Frobenius, Micheli, Newbold, Parker et Burkitt, Rhotert, Shaw, Weigall, Winkler etc., en tenant compte des relevés anciens restés inédits (notamment de Winkler et de Myers) et des découvertes récentes ou actuelles.

Les documents nouveaux parvenus à notre connaissance depuis 1960 sont :

(a) pour les cornages déformés, un petit ruminant gravé (Fig. 3, n° 1), photographié par J. Leclant dans le région de Tômas ; son corps rappelle celui d'un ovin au dessus de laquelle paraît imposé, presque sans contact, un cornage

---

Fig. 3. CORNAGES DÉFORMÉS ET À PLUSIEURS BRANCHES DU BASSIN DU NIL, D’OUÉNAT ET DE L’ENNEDI

Gravures. 
déformé de bœuf, fait que nous avons relevé au Tibesti (1953, pl. vii, no 3; 1957, fig. 13, no 8; 1961, fig. 10, no 10 et en Erdi, pl. ii, 1). L’animal porte une pendeloque sous la mâchoire, attribut courant dans le décor animalier mobilier du Groupe C.

Parmi les peintures, très étalées dans le temps, de l’abri sous roche de Khor Nashriya près de Sayala (Nubie), publiées par M. Bietak et R. Engelmayer36bis, nous comptons une quinzaine de bovins à cornage nettement déformé (en particulier pl. xxx), la plupart suivant le type 1 de notre figure 2. Au moins l’un de ces bovins porte sous le cou une pendeloque.

Ces bovins se trouvent dans les trois styles, naturaliste ou plus ou moins schématiques, distingués par les auteurs (pl. xxxiv). Rappelons que des chameaux montés et un homme à bouclier rond figurent parmi ces peintures. Les auteurs estiment que les plus anciennes sont à rapporter au Groupe A. Tenant compte de la pauvreté du site en vestiges industriels à rapporter au Groupe A, ainsi que de l’ensemble des représentations de bœufs à cornage déformé au Sahara oriental, nous pensons que les plus anciens sont du niveau du Groupe C et couvrent ensuite une longue durée. La découverte de Sayala est très importante non seulement en ce qui concerne notre sujet, mais parce que les peintures rupestres connues sont encore très rares en Nubie.

(b) pour les cornages à plusieurs branches, un bovin, photographié par J. Leclant à Tinaré (plate xxii, 1) est à mettre en parallèle avec des documents du bassin du Nil publiés par Weigall,37 Parker et Burkitt,38 Winkler,39 Rhotert,40 et du Tibesti (plate xxii, 2 et fig. 3 et 4). Le bœuf, dont le cornage paraît superposé à une corne plongeant en avant, domine un ensemble de bovins, de dimensions modestes et de style semi-naturaliste, parmi lesquels les antilopes ne sont pas absentes, ensemble à pendeloques, que nous pensons référable au Groupe C, après avoir vu les relevés inédits d’Abka que Myers nous communiqua en 1950.41

Ces deux genres de représentations culturelles se continuent au Sahara tchadien.

B. Sahara tchadien. Avant d’indiquer les nouvelles attestations de cornes déformées ou à plusieurs branches parvenues à notre connaissance depuis 1958,

39 Winkler, Rock Drawings of Southern Upper Egypt, II, pl. xxxvi, 1 et xxxvii, 2.
40 Rhotert, Libysche Felsbilder, pl. xlv, 3.
41 En haut et à droite de la planche 1, 1, on voit un quadrupède vertical probablement un bœuf, dont le cornage est fermé en anneau, trait culturel répandu au Sahara oriental et tchadien.
il est nécessaire de montrer le système de rattachement de documents rupestres qui s’étendent d’époques pastorales anciennes jusqu’à l’âge du fer.

Deux classifications rupestres pastorales ont été établies indépendamment l’une de l’autre :

(a) l’une au Tibesti, basée sur l’observation de milliers de gravures, part de témoignages rattachés à la phase pastorale archaïque du Sahara central et suit l’évolution des techniques et des conceptions artistiques, le dosage des races de bovins, ovins et caprins et des espèces sauvages représentées, l’apparition des attributs culturels et rituels liés au bétail, ainsi que les modifications des genres de vie, jalonnés par les particularités de l’armement, de l’équipement, de l’habillement et des techniques jusqu’à l’âge du fer ;

(b) l’autre en Ennedi, où les gravures pastorales anciennes sont rares, basée sur la superposition des styles de peintures très nombreuses, débutant par une période archaïque prébovidienne, et qui s’appuie également sur l’étude de la céramique.

Nous mettons ci-dessous en regard les deux échelles de référence, avec les datations conjecturales proposées, en remarquant que l’on ne constate pas de discordance, en ce qui concerne les déformations de cornages.

<table>
<thead>
<tr>
<th>Tibesti (gravures, Huard)</th>
<th>Ennedi (peintures, Bailloud)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase pastorale archaïque</strong> (autochtone et de rattachement septentrional)</td>
<td>IV° millénaire</td>
</tr>
<tr>
<td><strong>Phase pastorale ancienne</strong> apparition de bos africanus premières cornes déformées</td>
<td>III° millénaire</td>
</tr>
<tr>
<td><strong>Phase pastorale moyenne</strong> nombreuses déformations</td>
<td>du II° millénaire jusque vers -500</td>
</tr>
<tr>
<td><strong>Phase pastorale tardive</strong> (englobant l’âge du fer) … persistance des déformations</td>
<td>à partir de -500 env. et début de l’ère</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>à partir de 3500 ou plus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peintures archaïques prébovidiennes</strong></td>
<td>III° millén</td>
</tr>
<tr>
<td><strong>Bovidien ancien</strong> bos africanus premières déformations (gravées)</td>
<td>II° millén</td>
</tr>
<tr>
<td><strong>Bovidien moyen</strong> déformations gravées et peintes</td>
<td>de -1000 aux derniers siècles av.J.C.</td>
</tr>
<tr>
<td><strong>Bovidien récent</strong> déformations</td>
<td>derniers siècles av.J.C.</td>
</tr>
<tr>
<td><strong>Bovidien final</strong> (âge du fer) déformations</td>
<td></td>
</tr>
</tbody>
</table>

---


CORNAGES A PLUSIEURS BRANCHES

(1) Nubie, Tinari, Leclant Orientali, vol. 32, 1965, fig. 42. (2) Tiberi, phase pastorale moyenne, Bardaï, Massip, inédit.
Les deux animaux portent une perle dorée sous la mâchoire.

facing p. 72
CORNAGES DÉFORMÉS GRAVÉS DU SAHARA TCHADIEN

Dans l’optique des gravures du Tibesti, les bovins gravés d’Ouénat se situaient dans la phase pastorale ancienne et dans la phase pastorale moyenne. Rappelons que, comme au Fezzan et au Tassili, on trouve au Tibesti les témoignages gravés, très antérieurs, d’une phase pastorale archaïque, grands boeufs avec ou sans cornes, portant parfois des pendeloques, en partie contemporains des chasseurs locaux; ils sont suivis par des boeufs ayant le cornage recourbé en avant, toujours représenté de profil (bos ibericus ou brachyceros).

Passons maintenant en revue, de l’est à l’ouest, les documents récemment découverts:

(a) Pour l’Ennedi et les Erdis, des figurations inédites nous ont été communiquées par G. Bailloud et le Capitaine Courtet (voir plate xxii, n° 1, 2, 3 et fig. 3, n° 7 à 19). Elles permettent de porter à 27 le nombre des cornages déformés répertoriés, répartis en 16 sites de gravures et de peintures. C’est au bovidien ancien de Bailloud que remontent les premières en date, très peu nombreuses et gravées (fig. 3, n° 7). Ces œuvres sont localisées dans les parties N.NE. et S. du massif. Le ruminant n° 1 de la plate xxii, lié à un personnage qui le domine à gauche, est de petite taille ; ce peut être un caprin ou un ovin pourvu d’un cornage rituel.

D’autres déformations sont peintes ; elles appartiennent aux phases du bovidien moyen et du bovidien récent, quelques-unes à l’âge du fer et même au camelin ancien (début de notre ère), attestant la longue persistance locale de ces pratiques. Leurs introducteurs auraient abordé le Sahara tchadien par le nord et le sud de l’Ennedi, à partir du III° millénaire, par vagues lentes successives. Des mouvements secondaires ont dû correspondre au retrait vers le sud, devant l’aridité, des pasteurs d’Ouénat, dont G. W. Murray (Desiccation in Egypt, 1940) situe le terme ultime vers le milieu du II° millénaire.43bis

(b) au Borkou, quelques cornages déformés ou à plusieurs branches, du bovidien ancien ou moyen, ont été découverts à Billy près de Largeau (Mgr. P. Dalmais, 1963) et à Onnour, au pied du Tibesti méridional.44 Une peinture schématique tardive appartient au même secteur (voir fig. 4, n° 1 et 2 et plate xxii, n° 4).

(c) Au Tibesti (voir plate xxii, n° 5 et 6 et fig. 4, n° 3 à 10), la corne NE. du massif présente à l’Wadi Zirmei (550 km E.NE. d’Ouénat) des gravures pastorales d’une importance particulière, publiées par Arkell.45 On y voit un boeuf à double cornage et un autre à cornage retouché, particularités qui, jointes à leur style rigide (membres tendus et obliques), rattachent à Ouénat ces figurations,

---

43bis Huard, Observations écologiques au Sahara nigéro-tchadien entre l’âge des Chasseurs et l’âge du fer, à paraître.
45 Arkell, Petroglyphs of Wadi Zirmei in North-Eastern Tibesti, Actes IV° Congrès Panafr. de Préhistoire (1962); (a) pls. iv, i et vi, 2, (b) pl. iv, 2.
attestant une influence culturelle directe, sinon une migration, suivant une trajectoire Est-Ouest, d’Ouénat vers le seuil situé au nord du Tibesti.

Il est vrai que la prospection rupestre sur le versant oriental du massif d’accès difficile, est seulement en cours. En 1963, le Capitaine Le Masson a découvert de grands bovins gravés, probablement anciens, et on peut attendre de cette région des documents révélateurs. Actuellement, un seul bovin à cornage déformé y est connu,⁴⁸ peint dans un style naturaliste polychrome qui rappelle l’art pastoral du Sahara central (Tassili, Acacus, Hoggar).

Par contre, les versants occidental et septentrional du Tibesti, maintenant bien connus, offrent de très nombreux cornages déformés et à plusieurs branches, que nous publions depuis 1953.⁴⁷, ⁴⁷bis. Ils s’échelonnent de la fin de la phase pastorale ancienne locale jusqu’à l’âge du fer. La majorité des témoignages est groupée dans une quinzaine de stations aux abords de l’axe Zouar-Bardai, auquel correspond une piste traversant le massif, fréquentée depuis l’époque des Chasseurs. La découverte récente de gravures et de peintures pastorales au coeur du massif et sur les lignes de faîte jusqu’à 3000 m. d’altitude est d’ailleurs de nature à modifier sensiblement les données de notre répertoire de 1953,⁴⁸ de même que la découverte de nombreuses stations de peintures entre le Borkou-Tibesti et le Tadrart, avancée sud-est du Tassili.⁴⁹

Parmi les illustrations de ce travail, le n° 6 de la plate xxii retient l’attention : ce boeuf africain, dont le cornage en lyre est déformé suivant le type 3 de la figure 2 a été l’objet d’une rectification postérieure.

(d) Dans les Confins nigéro-tchadiens, les documents deviennent très rares. Quelques cas nouveaux ont été relevés par la mission Berliet⁵⁰ et le Dr Vedy⁵¹ (voir fig. 4, n° 11 à 13).

(e) Pour le Fezzan, (où certains boeufs archaïques à colliers ou pendeloques sont associés aux gravures naturalistes des Chasseurs), nous avons reproduit (1959, fig. 8), d’après Frobenius⁵² et Graziosi,⁵³ quelques documents se rapportant à des cornages déformés ou à plusieurs branches, certains peu nets (voir fig. 4, n° 14 et 15).

⁴⁷ Huard et Lopatinsky, ‘Gravures rupestres de Gona et de Bardai (N. Tibesti)’, BSPF, lxx (1962), pp. 9-10, fig. 3.
⁵¹ Huard et Massip, ‘Nouveaux centres de peintures rupestres au Sahara nigéro-tchadien’, à paraître BSPF.
⁵⁴ Frobenius, Ekade Ektab. Station de Telizzaghen.
⁵⁷ Graziosi, L’arte rupestre della Libia (Naples, 1942), pls. 55 et 75.
A PROPOS DES BUCRÂNES A CORNE DÉFORMÉE DE FARAS

Fig. 4. CORNAGES DÉFORMÉS ET A PLUSIEURS BRANCHES DU BORKOU, DU TIBESTI DU FEZZAN ET DU TASSILI


75
Dans l’Acacus, prolongement oriental du Tassili dans les domaines orographique et rupestre, aucun cornage déformé n’est représenté. Les troupeaux peints y sont composés de *bos macroceros*, sous-espèce du *bos primigenius*, figuré sur les gravures archaïques.

(f) Au Tassili, les deux espèces représentées sur les peintures bovidiennes sont, selon Lhote, *bos africanus* et *bos brachyceros*. Cet auteur considère les pasteurs comme venus du Haut Nil et a proposé pour leur arrivée une date moyenne de 3500. L’analyse par le C.14 de la couche archéologique d’un abri à peintures de Sefar contenant des vestiges osseux de boeufs a donné 3070 ± 150 av. J.C.

Parmi les bovins peints au Tassili, au nombre de plus de 5000, couvrant trois millénaires, on ne connaissait jusque présent qu’un seul cas de cornage déformé correspondant aux représentations d’Egypte.

Les recherches faites aimablement pour nous par H. Lhote dans sa très importante et remarquable documentation inédite ont produit seulement trois cornages déformés et un à trois branches, peints dans les deux stations méridionales de Tissoukai et de Rhardès (voir FIG. 4, n° 16 à 21) ; il est intéressant de noter que le boeuf au cornage à trois branches porte une double pendeloque jugulaire, alors que cet attribut est absolument exceptionnel sur les peintures du Tassili. A ces quelques documents s’ajoute un petit boeuf à trois cornes, tardif, peint à Ido près de Tissoukai.

Pour les gravures, deux boeufs d’un remarquable naturalisme stylisé, portant des cornages déformés, sont figurés au sud de la lisière méridionale du Tassili, près de Djanel, dans les deux sites voisins d’In Debiren et de Tirarart (voir FIG. 4, n° 22 et 23). Au delà, vers le sud et l’ouest, quelques cas sporadiques et tardifs peuvent être mentionnés en lisière nord de l’Air (Huard, 1961, fig. 11, n° 16) et au Hoggar.

---

60 *Courrier de l’Unesco* (Mai 1962), p. 16, d’après D. Lajoux.

76
A PROPOS DES BUCRâNES A CORNE DÉFORMÉE DE FARAS

Le nombre infime des cornages déformés ou à plusieurs branches relevés au Fezzan, au Tassili et dans le Hoggar souligne l'imperméabilité presque totale des pasteurs du Sahara central aux pratiques culturelles, originaires de l'est ou du sud-est, au niveau du Groupe C. Mais il est à retenir que quelques-uns de ces cornages déformés du Sahara central peuvent, d'après leur style naturaliste, être antérieurs aux plus anciens actuellement connus au Tibesti.

IV. BOEUF AFRICAIN ET GROUPE C

Les questions qui concernent l'âge pastoral en Nubie au niveau du Groupe C et au Sahara à partir du milieu du IIIᵉ millénaire sont moins complexes que celles, non résolues, touchant à l'origine des peintres-pasteurs du Tassili, de l'Acacus et du Hoggar, dans l'iconographie desquels on a tendance à reconnaître des traits ethnographiques, culturels et technologiques que l'on retrouve actuellement chez les Peuls, racialement des Ethiopiens (Pr. L. Pales), ces particularités étant jusqu'à présent absentes sur les figurations rupestres connues au Sahara tchadien.

Les théories examinées ci-après ne sont considérées que sous l'angle régional et au niveau archéologique du Groupe C.

(A) C. A. Reed⁶⁴ a écrit que, bien que l'on admette en Égypte la présence de bétail domestique, probablement dérivé de *bos primigenius* (qui a pu être domestiqué indépendamment en Égypte et dans le Proche Orient), chez les Badariens, au IVᵉ millénaire, il n'y a pas de preuve à ce sujet avant 3000.

Rhotert (1952, pl xi et xiii et p. 119) a pris position en faveur d'une provenance méridionale du bétail d'Ouénat. Il considère que ses représentations gravées sont préDynastiques ou de l'Égypte ancienne, les peintures étant vraisemblablement un peu plus récentes. Nous remarquons que si le bétail gravé, composé presque exclusivement de bovins, exprime les pratiques culturelles étudiées ici, celles-ci font presque totalement défaut parmi le cheptel peint, qui avec ses robes bigarrées, ses cornages désordonnés, ses chèvres et ses moutons, dénote les effets d'un élevage prolongé.

K. W. Butzer⁶⁵ délimite sur une carte l'expansion des pasteurs Hamites Orientaux, aux environs de 4000, au sud d'une ligne joignant la Nubie du nord-est de Napata au sud de l'Ennedi et au Borkou.

La théorie qui voit dans les déformations artificielles de cornes un trait culturel caractéristique d'une antique culture des ' Hamites Orientaux ', expression consacrée par un usage ancien pour désigner les éleveurs auxquels est


attribuée la diffusion du boeuf africain, vers le Sahara comme vers l’ouest africain, postule un centre originel d’élevage et de diffusion de cette espèce, ainsi que des zones de relais.

Nous avions estimé, dans notre étude de 1959, que cette théorie, à condition de rajeunir l’arrivée dans le nord du Tchad de pasteurs venus du sud-est, cadrant avec la répartition alors connue des cornes déformées figurées, qui comportait une lacune considérable entre l’Ennedi et Ouénat ainsi qu’au Borkou, zone où aucune influence culturelle du Groupe C ou de ses successeurs n’était alors attestée. On a vu qu’il n’en est plus de même actuellement.


Par ailleurs, il y a lieu de noter que la théorie hamitique orientale manque d’un support rupestre ancien, car en Éthiopie, dans la Corne de l’Afrique et au Soudan, les cornes déformées sont exceptionnelles ou leur caractère artificiel douteux, dans l’état actuel de la documentation. Au retour de sa campagne rupestre en Éthiopie (1962–63), G. Bailloud nous a confirmé qu’il n’y avait certainement pas de cornage déformé à Sourré et un seul ancien (du type I de la figure 2) à Karora, d’après un relevé inédit de cette station effectué par Graziosi et dont la photographie se trouve au musée d’Addis Abéba. De même source est une vache martelée rigide et probablement assez peu ancienne d’Adi Quanza, dans l’Érythrée centrale, paraissant porter deux cornages superposés. Les deux bovins à cornage déformé découverts par Bailloud à Laga-Oda (blanc cerné de rouge) et à Awallé (rouge uni) sont d’époque pré-zébu et douteux quant à leur sens culturel. Le cornage à trois branches peint à Yavello66 appartient vraisemblablement à une phase pastorale peu ancienne. Quant aux deux ruminants d’Érythrée centrale à cornage anormal, publiés par Ricci,67 ils sont très récents, post-islamiques.


67 Ricci, RSE, xvi (1960), pl. 19, d.
A PROPOS DES BUCRANES A CORNE DÉFORMÉE DE FARAS

(B) Il convient maintenant de voir comment les faits, indices et arguments présentés ci-dessus peuvent permettre de concevoir les rapports du Groupe C avec les zones pastorales qui sont devenues le Sahara tchadien. On admet que le Groupe C était formé, à l’origine, de pasteurs non-blancs (repoussés du Sahara vers le Nil par l’assèchement selon Arkell68 ou venus des régions au sud de la Nubie, pour Nordström), apparus sur le Nil nubien au début de la 1ère Période Intermédiaire (vers 2250), l’apogée de leur culture étant située vers 1800. Ces pasteurs, qui auraient donné à la Nubie sa plus forte culture pastorale, seraient par ailleurs les auteurs d’une série de gravures rupestres semi-naturalistes, importante dans la région de Wadi Halfa, notamment à Abka.

A la lumière des données réunies au Sahara tchadien, l’arrivée par l’est, en Ennedi et au Tibesti, pendant le cours du IIIe millénaire, de pasteurs, rattachés à la culture du Groupe C, ayant amené avec eux le bœuf africain, est, sur le plan régional, la seule hypothèse qui s’adapte tant aux indices rupestres et culturels réunis qu’aux conditions écologiques69 et à la chronologie présumées.

Une de leurs vagues, méridionale, passant aux abords N. et S. de l’Ennedi et laissant quelques traces dans ce massif, semble avoir poussé jusqu’au Tibesti N.W., où les témoignages rupestres montrent que les immigrants ont imposé leur bœuf (et les pratiques s’y rattachant) aux éleveurs autochtones, dont le bétail dominant semble avoir été alors bos ibericus (brachyceros). Une autre vague, de latitude septentrionale, qui ne peut actuellement être située chronologiquement par rapport à la précitée, aurait fait route vers le nord du Tibesti par Ouénat.

Vu du Tchad et dans l’état des connaissances globales et encore lacunaires réunies dans le bassin du Nil et au Sahara, le Groupe C paraît avoir élaboré les éléments pastoraux de sa culture dans une aire située au Soudan, au nord du 16e degré, et ayant englobé Ouénat. Mais le fait que l’on retrouve dans le décor animalier de la céramique du Groupe C les formules d’ornementation de la faune sauvage propres aux Libyens Orientaux pré- et protodynastiques, donne à penser que le Groupe C a pu s’étendre au nord du parallèle d’Ouénat et les quelques cornages déformés anciens figurés au Fezzan et au Tassili sud-oriental montrent que sa culture a pu venir anciennement au contact de celles du Sahara central.

On peut espérer que, faisant suite aux découvertes de Faras et de Zirmei, les recherches en cours sur les lisières Nord et Est du Tibesti, de part et d’autre du point crucial qu’est le saillant N.E. du massif, éclaireront de nouvelles lumières les problèmes, délimités dans le temps et dans l’espace, abordés dans le présent travail.

68 Arkell, A History of the Sudan, pp. 46 sq.
69 Huard, 'Observations écologiques au Sahara nigéro-tchadien entre l’âge des Chasseurs et l’âge du fer', à paraître.
KUSH

ENGLISH SUMMARY

1. Nordström's discovery, in connexion with C-Group graves at Faras, of *bucrania* of *bos africanus* whose horns have been artificially bent forwards and downwards, proves that this custom was practised by a pastoral people in whose culture 'African Cattle' held a position of some importance. Such deformations are depicted in dynastic tombs from the beginning of the Old Kingdom, particularly in scenes showing the Tribute from the South, and at first they were thought to illustrate the influence of Ancient Egypt on African culture (Seligman). Later they were regarded as illustrating a cultural trait of the Eastern Hamites (Baumann).

2. Many rock pictures of cattle, mainly *bos africanus*, discovered in the Chad Sahara and dating from the pastoral phase of the Iron Age, depict the same horn deformations. On the other hand, indications of the cultural influence of the C-Group (or its derivatives) are to be found in this same region on the rocks of Ennedi (cattle with their coats ornamented with stripes in association with deformed horns, and humans with chevron decorations on their bodies), and at Djourab in the pottery from Iron Age sites (pierced pot stands, vessels decorated with alternate smooth and incised lozenges, large red or black goblets, and red pottery decorated in black). It seems, therefore, that in the C-Group period deformation of horns was not restricted to the Nile Valley but extended also to the whole Eastern Sahara south of the Libyan Desert.

3. Although more than 150 rock pictures showing cattle with deformed horns in association with many-branched horns (probably of magical significance) are scattered between the Nubian Nile and the Niger-Chad frontier, only a few of doubtful interpretation are to be found in the Fezzan, while among 5000 unpublished paintings of cattle discovered by Lhote in Tassili only five are depicted with deformed horns. These figures indicate that in C-Group times the pastoral people of the Central Sahara were almost entirely impervious to cultural influences from the East.

4. The birth and dissemination of the practice of deformation of horns presupposes a centre for the breeding and domestication of 'African Cattle'. The Eastern Hamite theory has been refuted on the grounds that the Nilotes and the Hamites of the Horn of Africa were slow to become herdsmen (Murdock, 1959). Moreover, the research of Bailloud in Ethiopia (1962) has shown that the deformed horns depicted in that area are nearly all of late date. Finally, it should be noted that early rock pictures dealing with pastoral subjects are not found in Chad south of latitude 16°, which may perhaps have been the limit reached by trypanosome in Neolithic times.

5. The theory that the C-Group herdsmen introduced 'African Cattle' into the Chad Sahara both from the north and from the south of Ennedi and across from Uweinat to Northern Tibesti is the only one which fits all the evidence and the regional chronology. Looking at the matter from Chad, and taking into
account the present state of documentation, it seems that the C-Group people must have developed the pastoral side of their culture in the Sudan to the north of latitude 16° and the herdsmen-engravers of Uweinat must have been included among them.

6. The persistence in the ornamentation of C-Group pottery of certain animal forms which were used by the Eastern Libyans in predynastic and protodynastic times leads one to suppose that the territory of the C-Group people must have extended to the north of Uweinat. At the same time, the antiquity of the pictures of deformed, or many-branched, horns in the Fezzan and Southern Tassili suggests that there must have been direct contact between the culture of the C-Group and those of the Central Sahara.
IN the heart of Sudanese Nubia, some 60 miles or about 96 km. upriver from Wadi Halfa lie on the Nile the twin sites of Semna and Kumma. They face one another across the stream in the middle of that most desolate of regions, the tract which the Arabs appositely call Bātîn el-Ḥāgar, the Belly of Rock. Semna is on the west bank and is, accordingly, also known as Semna Sharqi. Kumma, on the east bank, is often referred to as Semna Gharbi. The place marks the south end of the Second Cataract and is conspicuous for a barrier of hard crystalline rocks which stretches clear across the Nile. In time of flood the waters of the swollen river tumble over the barrier in furious turbulence and cover it almost entirely. At low Nile the whole mighty stream gushes through a single middle breach barely 30 m. or 100 ft. wide and of unknown, though surely enormous, depth. The perennial steady roar of the cataract is perhaps the most lasting memory one keeps of the place; the striking changing colours of rock and sand and water come next. It is a place unmatched in its impressiveness in the entire course of the Nile proper, a spot of great natural beauty, very rugged, utterly barren and utterly remote. The aerial photograph on Plate XXIII was taken in mid-December 1959 and gives a fair idea of the lay-out of land and river. The upper part is the east bank where Kumma lies. The west or Semna bank is shown at the bottom. The dark bend in the middle is the Nile, which flows from right to left.

Probably in the 19th century B.C., sometime during the xith Dynasty at all events, two huge fortresses were erected there by the Egyptian conquerors: one at Semna, the other at Kumma. At once military camps and trading posts, they were vast structures of thick crude brick walls capacious enough to provide habitation for many officials and clerks in addition to garrisons of perhaps as many as 100 men at Kumma and 300 at Semna. The two forts were in use during the New Kingdom also, particularly under the xviiith Dynasty. In the 16th century B.C. Tuthmosis I erected in each of them a small sanctuary partly in brick, partly in stone. They did not last long. A generation or two later they were replaced by fine temples of sandstone which have survived to this day in very good condition. Just when the fortresses fell into disuse is not known; in any case, Semna Gharbi at least was again active as a military station in the 7th century B.C., at the time of the xxvth Dynasty, when the Ethiopian Taharqa built within it a large temple, mostly of mud brick, which is no longer extant.

The double site of Semna-Kumma and its antiquities have long been known to travellers and scholars. The first European to visit the locality and to write a description of its appears to have been the Swiss John Lewis Burckhardt, who
rode through it in March 1813. Copying and recording began as early as 1820–22 with the labours of Frédéric Cailliaud and Linant de Bellefonds, while the first modern excavation at Semna-Kumma of which there is notice was conducted by Somers Clarke in 1898. Those were the pioneers in exploring, recording and excavating the site. Others followed in their steps at various times and engaged in further surveying and epigraphic and archaeological work. The elaborate excavations of George Andrew Reisner between 1924 and 1928 may be said to have exhausted the site from the strictly archaeological standpoint. Quite different, however, was the situation from the epigraphic point of view: despite much copying of inscriptions and reliefs, particularly by the great Prussian expedition under Richard Lepsius which worked at Semna-Kumma for 12 days in July 1844, the site continued until very recently to offer vast scope for epigraphic endeavour.¹

The epigraphic possibilities of the place were brought home to the writer in the course of an exploratory journey to the site which he was privileged to make in the company of Miss Margaret S. Drower (Mrs Hackforth-Jones), the enterprising Honorary Secretary of the Egypt Exploration Society, in the early part of 1961. Apart from countless rock inscriptions of great significance there were the two xviith Dynasty temples already referred to. Tantalizing monuments, these, to the epigraphist: both self-contained, well preserved, exceptional in plan, and embellished with finely executed reliefs and important hieroglyphic texts, the intrinsic interest and documentary value of these buildings being further enhanced by inscriptions added on to them by viceroys of Nubia and other personages at various times. Of all that varied and important material nothing had up to that time been adequately put on record, that is to say, copied exhaustively and in facsimile with a view to a full, definitive epigraphic publication, the sort of publication which present scholarship demands and which modern epigraphic techniques give one the right to expect. That the work of recording had better be done promptly and in full final form was obvious because of the impending fate of the site threatened with permanent flooding by the waters of the new High Dam at Aswan.

Preliminary inquiries disclosed that the important rock inscriptions and graffiti were to be dealt with by a German expedition under the leadership of Professor Fritz Hintze, a scholar of outstanding epigraphic ability and experience. The temples, however, were uncommitted. The Egypt Exploration Society and Brown University decided to undertake them jointly, and application was

¹ Concerning archaeological and epigraphic work done at Semna-Kumma all necessary references will be found in Porter and Moss, Topographical Bibliography, vii, pp. 144–56, published in 1951. The only significant additions to the bibliography of Semna-Kumma since that year are Linant de Bellefonds, Journal d'un voyage à Méroé dans les années 1821 et 1822, p. 198 s.v. Semna; Dunham and Janssen, Semna Kumma, passim; De Wit and Mertens, Kush x, pp. 118–49.
KUSH

accordingly made to the pertinent Sudanese authorities for permission to survey them thoroughly architecturally as well as epigraphically.

The specific aim of the proposed survey was to produce, for the purpose of publication, detailed plans, sections and elevations of the monuments concerned, and above all accurate facsimile copies in line drawings of all the texts and scenes and surfaces in any way inscribed, however small or fragmentary, still preserved in the two temples. The procedure anticipated for the making of facsimile copies of the walls was not novel; it was and remains a well proven method of copying long employed by the leading epigraphic expeditions at work in the Nile Valley. Essentially it consists in subjecting hand drawings made in the presence of the originals upon mechanically accurate backgrounds (such as photographs or rubbings of the walls) to a rigorous system of checking and correction. Typical of this checking system is the use of 'collation sheets', each of which reproduces only a tiny portion of the inscribed area under examination and has, moreover, ample margin room for the insertion of additions, corrections and notes of all sorts. The checking or collation is exhaustive and repeated many times under different light conditions by day and at night with lamps, and always at the closest range. Film processing and inking-in of the drawings alone are done away from the wall; all other operations are carried out right in front of the original scene or text which is being recorded. The method also makes a point of giving careful consideration to all relevant work done in the past: an exhaustive compilation of previous published and unpublished copies and records of the monuments concerned is prepared in advance and then taken to the field, so that the epigraphist is always able to check the work of his predecessors in the site. In other words, the final facsimile drawings are made with full knowledge of what previous copyists saw, or thought they saw, or failed to see, upon the walls.

Permission for the undertaking outlined above was readily granted. Plans were made for three seasons of work, the first being devoted to recording the temple in the fortress at Semna Gharbi.

The expedition reached Semna Gharbi on 15 October 1962 and set up camp forthwith among the ruins of the ancient fort, beside the temple which it was its business to record. Dedicated to the Nubian god Dedwen and to the deified Sesostris III, the temple was built, or at least finished, by Tuthmosis III (c. 1450 B.C.). The photograph on PLATE XXIV shows the west side of it and on the right, at a slant, the façade, which faces south. The unidentified person on the left or north end will help the reader to visualize the size of the building. It is a rather small structure about 9 m. or nearly 30 ft. long; the façade is 4.85 m. or 16 ft. wide, the rear wall only 3.20 m. or 10½ ft. wide, and the top of the roof is approximately 3.30 m. or nearly 11 ft. from the ground—these

---

2 Taken by Mr Horst Schliephack in February 1907 and published here by courtesy of the Oriental Institute of the University of Chicago.
are all outside measurements. The photograph is somewhat misleading in that in it the building appears to be much more damaged and ruinous than it actually is. In fact the Semna temple, which is made of sandstone blocks throughout, ranks among the best preserved free-standing temples of pre-Ptolemaic date in the entire Nile Valley. Even the roof is virtually intact. It is, moreover, a very crowded monument from the epigraphic standpoint. With the exception of the narrow outer face of the north wall and the upside of the roof blocks, practically every inch of it is covered with scenes in relief, hieroglyphic inscriptions and paint work. In their design, execution and finish the texts and scenes bear comparison to the best specimens of carving on Tuthmoside temple walls anywhere. They are undoubtedly the work of first-rate craftsmen. Apart from their artistic and palaeographic value the walls of the Semna temple show evidence, in the form of erasures, alterations and substitutions of figures and textual matter, of the persecution of Queen Hatshepsut’s memory on the part of Tuthmosis III in the 15th century B.C. and of the execution of the god Amun by the Atenists a hundred years later. Still far more interesting and significant as documental evidence is, however, the thorough erasure of a huge portion of the original façade to provide a surface for the scene and text of Queen Katimala or Karimala, that enigmatic sovereign of unknown, but doubtlessly late, date, perhaps of Ethiopian extraction or, more likely, Meroitic, who, like Hatshepsut, called herself King of Upper and Lower Egypt. No mention of her appears to have been found elsewhere. The only evidence we possess of her existence is then this strange record cut in the façade of the Semna temple and consisting essentially of a large representation of her in converse with Isis and a long hieroglyphic inscription in thirteen crowded columns in addition to the label-texts to the scene.

The expedition remained at Semna Gharbi for three full months, working uninterruptedly until its departure on 15 January 1963. In the course of this period the temple was fully investigated and the proposed epigraphic-architectural survey of it entirely finished. The method of work or recording technique summarily described above was strictly adhered to. All previous copies, published and unpublished, of the inscriptions and reliefs were collated against the originals; rubbings were taken of all surfaces bearing the least trace of carving, and accurate facsimile copies in the form of natural-size drawings were made of all texts and scenes without exception. In addition, copious notes and all necessary measurements were taken for the production of detailed plans, sections and elevations of the temple and its annexes. These materials the expedition brought home for study and eventual publication under the imprint of the Egypt Exploration Society in a volume of the Archaeological Survey series. Like similar previous epigraphic undertakings at Gebel es-Silsilah, Buhen and Kašr Ibrim, the Semna-Kumma expedition too is a joint enterprise of the Egypt Exploration Society and Brown University. Members of the just-described 1962–63 mission to Semna Gharbi were Messrs Mahmud
KUSH

Hussein Hussein Ali, Sayed Mohammed Shellal, Salah Gureni, and Ricardo A. Caminos. Also expedition members, but not throughout the season, were Messrs Muzzamel Giad Abdulahi and Ahmed Selim Abdu’l Haggag.

Grateful acknowledgment must be made of aid received from the American Government in the form of a grant administered by the U.S. Department of State under U.S. Public Law 87–332. A special word of thanks is reserved for Sayed Thabit Hassan Thabit and all his fellow workers in the Sudan Antiquities Service for their splendid cooperation and assistance in all manner of ways.

Two more seasons of work have been planned. In view of what was accomplished in the first season there is every reason to expect that they should suffice to complete the epigraphic and architectural survey of the other temple, namely that on the east bank at Kumma.
Soleb
Campagnes 1961–63
par Michela Schiff Giorgini


Notre recherche s'est portée surtout sur les salles de l'Ouest, c'est-à-dire la salle hypostyle et les sanctuaires ; d'importantes fouilles ont été également faites dans les autres secteurs du monument, en particulier près du grand pylône et dans les remblais d'anciens bassins, où il a fallu descendre jusqu'à environ dix mètres de profondeur.

Dans les rapports précédents, publiés dans Kush au fur et à mesure de la fouille, nous avions déjà donné des aperçus sur l'architecture du temple. Rappelons que son édification a été faite en plusieurs phases, repérées surtout grâce à des restes de pavements en terre battue, bien aplanis et blanchis au lait de chaux. Ces sols, correspondant aux cérémonies qui ont marqué les diverses étapes de la construction, ont permis de déterminer, d'une façon absolument certaine, la progression de l'édification du temple et la chronologie de ses éléments. Par leur étude, on avait pu comprendre que le temple actuel a pour origine un premier monument d'Aménophis III, érigé dans l'angle Sud-Ouest d'une enceinte à couloir, de plan quadrangulaire. Cette enceinte était constituée d'une épaisse muraille en briques crues, entourée d'un mur extérieur également en briques crues. La muraille était percée de nombreuses portes, probablement seize, à raison de quatre par côté ; le mur extérieur n'avait que deux portes, en façade. Du côté Est, cette double enceinte était précédée d'un terre-plein, donnant sur un bassin relié au Nil.

Les données nouvelles, acquises avec ces dernières études, concernent principalement ce premier monument d'Aménophis III, avec l'ancien terre-plein et son bassin, ainsi que les fondations du grand pylône, celles de l'avant-salle, et, enfin, l'établissement du dromos.

---

1 Fouilles patronnées par l'Université de Pise ; chef de la mission, Michela Schiff Giorgini ; directeur des fouilles, Clément Robichon ; épigraphiste, Jean Leclant.
KUSH

LE PREMIER MONUMENT D'AMÉNOPHIS III (FIG. 1)

Le premier monument était un édifice périphtère monté sur socle et comportant une chapelle entourée d'une rangée de seize colonnes cannelées. La chapelle, qui était orientée Est-Ouest, comprenait un 'saint des saints' précédé d'un reposoir de barque. Elle était décorée, tant à l'intérieur qu'à l'extérieur,

Fig. 1. LE PREMIER MONUMENT D'AMÉNOPHIS III.

de scènes en relief. À l'intérieur, sur les parois du reposoir de barque, le roi était représenté dans une scène d'offrande, face à la barque posée sur un autel. Dans le 'saint des saints', les parois latérales montraient le roi devant une divinité assise; la paroi du fond n'était pas décorée; devant cette dernière se trouvaient sans doute soit un tabernacle, soit une ou plusieurs statues.

88
SOLEB, CAMPAGNES 1961–63

Par la suite, cet édifice a été transformé ; il a été en partie démonté, englobé ou remployé dans les sanctuaires du grand temple. C’est ainsi que nous avons pu retrouver les divers vestiges qui ont permis sa reconstitution théorique.


A partir de ces structures premières, le développement de l’édification du temple s’est fait d’abord autour de l’édifice périptère, ensuite vers l’Est, jusqu’à atteindre l’ancien terre-plein, qui a été alors englobé dans le sous-sol d’une avant-salle à quatre colonnes. L’avant-salle était adossée au grand pylône ; du côté Est, elle était précédée d’un dromos de béliers en granit, établi au-dessus du remblai qui avait comblé le bassin sinuexs.

Cette construction s’est faite en plusieurs phases, de 28 à 32, annuelles sans doute, et toutes sous le règne d’Aménophis III.

LES FONDATIONS DU GRAND PYLÔNE (FIG. 2)

Le grand pylône a cinq assises et demi de fondation, qui ont été mises en terre à deux reprises.

Fig. 2. LES FONDATIONS DU GRAND PYLÔNE.

89
KUSH

Les trois premières assises de chacun des mûles ont été enfoncées dans un fossé de fondation à une époque antérieure à la première enceinte et à l'édifice périptère. La méthode employée pour leur mise en terre était la bascule des blocs dans le fossé, les uns devant les autres. Les pierres, laissées sur leur taille de carrière, étaient amenées à pied d'œuvre sur des sortes de traîneaux en bois, au fond courbe, que l'on faisait glisser sur une couche de limon ; les restes de cette couche gardent encore l'empreinte du passage des traîneaux.

Ce soubassement a été ensuite recouvert par la surélévation progressive de l'ensemble du terrain, lors de l'édification de plusieurs parties du temple ; nous savons même que le mur extérieur de la première enceinte passait au-dessus de ces blocs enfouis.

La reprise des fondations du pylône s'est faite à la huitième phase de la construction. De nouveaux fossés ont été creusés dans le terrain surélevé, coupant verticalement en plusieurs points le mur extérieur de la première enceinte. Dans ces fossés ont été alors établies les assises supérieures de la fondation, posées à 0 m. 10 au-dessus de l'ancien soubassement.

Nous voyons donc ainsi que le grand pylône, première fondation du site, n'a été érigé, en réalité, qu'à partir de la huitième phase de l'édification du temple.

LES FONDATIONS DE L'AVANT-SALLE ET LE FOND DU BASSIN SINUEUX (FIG. 3)

Le secteur sur lequel passait le dromos, à l'Est immédiat de l'avant-salle, a été l'objet d'une fouille en profondeur, jusqu'au fond de l'ancien bassin sinueux. Cette étude a permis, entre autres choses, de constater que les fondations de l'avant-salle ont été mises en terre à trois reprises différentes. Le premier
groupe, comprenant six assises, a été établi dans le fond du bassin au moment de son remblayage, c'est-à-dire à la fin de la construction du grand pylône ; les blocs de ce premier soubassement sont entourés de sable. Pour le second groupe, également de six assises, une tranchée a été creusée dans le remblai supérieur du bassin ; c'est au-dessus de ces fondations, noyées dans de la terre, que passait la longue avenue conduisant au temple. Le troisième groupe, enfin, n'a été superposé aux autres qu'au moment de l'édification de l'avant-salle.

Le fond du bassin sinueux a été atteint à 9 m. 53 au-dessous du niveau du sol de l'avant-salle, au nu de sa façade, et à 9 m. 87 de profondeur à 11 m. à l'Est de la même façade. Ce fond, le bed-rock, a une surface grossière, qui descend en pente douce vers le Nil. Lors de cette fouille, le 25 Février 1963, la nappe d'eau souterraine se trouvait à environ 0 m. 60 au-dessus du roc. Ceci nous a entraînés à étudier les niveaux extrêmes des eaux du Nil et à les comparer aux niveaux de diverses substructions du temple, tels que puits, escalier voûté s'enfonçant dans le sol et fondements divers. Cette première étude semble montrer que le niveau du Nil, à Soleb, est aujourd'hui le même qu'à l'époque d'Aménophis III.

LE DROMOS (FIGS. 4 ET 5 ; PLATE XXVII)

La longue avenue Est-Ouest par laquelle on accédait au temple a été aménagée sur le remblai de l'ancien bassin sinueux, à la fin de l'édification du grand pylône. Malgré l'état si endommagé du secteur, la fouille a mis au jour d'importants vestiges de cette allée, surélevée et modifiée à plusieurs reprises avant l'établissement de ses béliers en granit.

Du dromos orné de béliers en granit, il ne subsiste sur place que des fragments érodés de deux des béliers et les fondations d'une porte en pierre, percée primitivement dans l'un des murs qui bordaient cette avenue.

A un niveau inférieur à celui du dromos mentionné et à 22 m. à l'Est du grand pylône, nous avons retrouvé les restes de trois stalles bordant une allée centrale en terre battue, blanchie au lait de chaux et large de 5 m. 50. Une stalle est au Nord, au niveau de l'allée ; les deux autres sont au Sud, espacées de 0 m. 65 et en contrebas, l'une d'elles en face de celle du Nord. Ces stalles, limitées par des murets de briques crues, sont larges de 1 m., longues de 5 m.; elles sont orientées Nord-Sud et comportent, du côté de l'allée, une case de 1 m. sur 0 m. 40. Dans l'une de ces cases ont été recueillis les restes de deux petites bottes de fourrage, attaquées par les termites et gardant encore le fil métallique qui les avait liées.

L'allée centrale et les stalles que nous venons de décrire recouvraient les vestiges d'une avenue plus ancienne, avec plate-bandes latérales. Cette allée était elle-aussi en terre battue et blanchie à la chaux. Les restes des plate-bandes qui la bordaient sont constitués d'un fond de boue durcie parsemé d'humus et d'empreintes diverses. En les étudiant de près, nous avons reconnu les empreintes d'un pied humain et de pattes d'un oviné, ainsi qu'un grand nombre de traces, de couleur noirâtre, laissées par des brins d'herbe piétinés. Dans le
limon, on a pu déceler également de petites cavités ne contenant plus qu’une matière décomposée, de couleur brunâtre ; ces cavités, sans aucun doute, sont les empreintes de fiente d’ovinés.

Signalons que, parmi les restes d’une rampe faisant partie de cet ensemble, on avait trouvé précédemment deux briques crues estampillées, avec mention des troupeaux de béliers de Nebmaâtrê (FIG. 5).

Au-dessous de cette avenue, il subsiste les vestiges de la première allée qui a été aménagée directement sur le remblai du bassin sinueux ; il s’agit d’un sol en terre battue, blanchi et bordé de murets, au delà desquels se dressaient jadis les deux rangées d’arbres qui avaient orné les terrasses de l’ancien bassin.

En résumé, l’avenue par laquelle on accédait au grand pylône et au temple a d’abord été une simple allée, flanquée de murets bordés d’arbres. Ensuite, il y a eu en cet endroit une allée bordée de prés, dans lesquels devaient paître des béliers en liberté. Plus tard, on a placé ces animaux à l’intérieur de stalles individuelles ; l’emplacement des petites cases, ou mangeoires, montre que les animaux faisaient face à l’allée centrale. Enfin, cet ensemble a été remplacé par un nouveau dromos, orné cette fois de béliers en granit placés au-dessus des vestiges des anciennes stalles, désormais enfouis dans du sable.

* * *

Pendant ces deux campagnes, la consolidation et la restauration partielle des ruines du temple ont été poursuivies. Dans la salle hypostyle, nous avons terminé l’établissement d’une plateforme d’ensemble, ainsi que la réfection de nombreuses fondations et bases de la colonnade. Les tambours inférieurs des
KUSH

colonnes renversées, sur lesquels est gravée la liste des ' peuples étrangers ', ont été remontés sur ces nouvelles bases ; plus d'une centaine d'éclats de la décora-
tion ont été fixés à leurs emplacements primitifs (PLATES XXV et XXVI).

Dans les divers travaux de consolidation et d'aménagement, nous nous sommes efforcés de laisser à la ruine son aspect romantique, tout en facilitant
au visiteur la compréhension des vestiges du temple.

L'étude épigraphique et les dessins des bas-reliefs et des inscriptions se poursuivent avec ardeur, mais ils sont loin d'être terminés.

La rédaction du rapport définitif est commencée ; elle est même très
avancée. Ce rapport comprendra six volumes : le premier se rapportera aux
documents des anciens explorateurs et archéologues passés à Soleb ; le deuxième
sera consacré à l'étude des nécropoles et le troisième à l'étude du temple ;
le quatrième sera un volume de planches architecturales ; le cinquième donnera
les dessins de tous les bas-reliefs et inscriptions ; le sixième, enfin, comprendra
un ensemble d'index commentés.


SOLEB

1961–63 Seasons

SUMMARY

The new data obtained during these two seasons concern :

THE FIRST MONUMENT OF AMENOPHIS III

The earliest temple of Soleb was a monument standing on a raised founda-
tion and comprising a chapel surrounded by one row of sixteen protodoric
columns ; the chapel contained the ' Holy of Holies ' and a naos barque. This
monument was constructed in the south-west corner of a double mud-brick
enclosure, whose interior wall contained sixteen gates. In front of the enclosure
was a quay supporting a small building and giving on to a pool of water with
curving banks, like the representation of the Buto lake. The quay and the pool
were bordered with trees.

From these structures the subsequent extension of the temple developed,
at first around the early monument, then towards the east as far as the ancient
quay, over which was built a square vestibule hall with four columns.

THE FOUNDATIONS OF THE BIG PYLON

The foundations of the big pylon were constructed in two different stages.
The lower layers are the first substructure of the temple, while the upper ones
and the pylon itself were built much later.
LE TEMPLE, VU DE L'OUEST

facing p. 94
PLATE XXVI

LA SALLE HYPOSTYLE, APRÈS LES TRAVAUX DE RESTAURATION
Les arasements en briques crues de la stalle du Nord

Les restes de deux bottes de fourrage

VESTIGES DES STALLÉS DU DROMOS
SOLEB, CAMPAGNES 1961-63

THE FOUNDATIONS OF THE VESTIBULE HALL AND THE ANCIENT POOL

Part of the eastern area, in front of the vestibule hall, has been cleared down to the bottom of the ancient pool. This excavation has revealed that the foundations of the vestibule hall were made in three different stages; the first six layers were laid in the pool at the time when it was filled in.

The bottom of the ancient pool, bed-rock, was reached at 9.53 m. below the level of the pavement of the vestibule hall and 0.60 m. below the subterranean water level.

A comparison between the extreme levels of the Nile waters and those of the various substructures of the temple shows that the present levels of the Nile at Soleb are the same as they were in the time of Amenophis III.

THE DROMOS

The dromos leading to the temple was, at first, a simple avenue bounded by low walls bordered with trees. Then it was changed to an avenue bordered with meadows, in which rams grazed freely. Later, these rams were placed in individual stalls, bordering the avenue. Finally the real dromos was established; it was bordered with granite rams, placed on the remains of the earlier stalls.

* * *

During these two seasons the consolidation of the temple ruins was resumed, as well as their partial restoration. In the hypostyle hall we rebuilt many foundations and bases, on which we raised again the lower blocks of the columns bearing the inscriptions of the ‘foreign countries’.

The epigraphic study and the copying of the decorations and inscriptions proceeded satisfactorily, but they are far from being finished.

The writing of the final report, which will appear in six volumes, has been started and is making good progress.

by A. Rosenvasser

This campaign started on 1 December 1962, and the excavations were carried on until 31 January 1963. The writer acted as Field Director. Messrs A. Vila and P. Krapovickas worked on the excavation of the cemeteries of Serra Gharb (additional licence). S. Domicelj was responsible for the drawing of the plans. Mrs P. Rosenvasser was recorder.

Excavation at the Temple and in the Temple Area

The plan of the excavations was determined mainly by the discoveries we made at the end of last year's campaign: the landing-place or quay and the large adjoining terrace on its southern side, and, especially, the buildings of Seti I on the south-west side of the temple. To explore the town area lying to the south of the temple, we drew up the following schedule: first, to excavate the area we have called 'Section of Seti I', to the south-west of the temple, as far as the hill on the west; and if possible the hill was to be partly cleared by cutting a deep trench into it; (we were unable, however, to get a bulldozer); then to excavate the girdle wall in order to determine the perimeter of the town, or at least the length of the east wall. (In the last campaign we were only able to trace the north girdle wall, a few metres of the west wall until it disappears under the big sandhill, and about 40 m. of the east girdle wall in front of the temple.) As a complementary task we intended to excavate the inner part of the temple to virgin soil, so as to complete last year's search for foundation deposits, and to investigate the construction of the temple.

Section of Seti I

We started digging a space about 25 m. square towards the south and the west, between the temple, the doorway where the lintel of Seti I was found last year, and the big west sandhill. Several rooms belonging to Seti I were found there, as was proved by the discovery of jambs and lintels bearing the king's name. The first find of the campaign was an oval lintel (1.44 x 0.64 x 0.14 m.) lying between its two jambs (1.85 x 0.34 x 0.16 m.). The poor condition of the lintel made it impossible to read the inscription of the king's protocol, but the jambs bore the prenomen and nomen of Seti I with the epithet 'Beloved of Horus, Lord of Buhet'. (See Plate xxviii, a). Further on, the excavation yielded three more lintels with fragments of their respective jambs, also belonging to Seti I. Each of them was broken into two pieces. In only one was the inscription with the king's names (of Horus, of King of Upper and Lower Egypt,
and of Son of Ra) wholly preserved and in good condition (see Plate XXVIII, b). All three lintels are the same size (1.40 x 0.64 x 0.16 m.) and the inscription with the king’s names is arranged in the same rectangular form (0.43 x 0.33 m.). The inscriptions on the jambs show that the rooms were chapels dedicated to the gods Horus of Buhen, Atum or Tum (see Plate XXIX, b, c), Thoth (see Plate XXIX, a) and Ptah. We did not find the jambs of the door belonging to the first chapel [the lintel we found last year] and therefore do not know to which god it was consecrated. On one of the jambs the king is called ‘the good god, the golden mountain’ (which name for the king—presumably Ramesses II—also appears on one of the pillars of the temple forecourt); on another he is referred to as ‘the good god that expels the Nine Bows’ (see Plate XXIX, a) in a third, as ‘the good god, the valiant over the foreign countries, the warrior, lion . . .’; in a fourth, as ‘the good god, brave with his strong arm’. All these chapels were facing north.

Opposite to the Seti I chapels and separated from them by a corridor 6.50 m. wide, we dug the foundations of five rooms; their doors looked south, viz. towards the chapels of Seti I, and their back walls leaned against the small wall (2 m. away from the temple) that separates the temple from the town (see Fig. 1, plan). In two of these rooms (those lying furthest west) we found a cornice and a lintel showing in relief, in the centre, the cartouches of Ramesses II, and, on the right and left of the cartouches, the seated figure of the Viceroy of Kush, Ḥekanakhte (s3 nsw n K(3)s Ḥk3nhtw), his hand uplifted towards the cartouche in reverence to the king’s name (see Plate XXXI, b). We may surmise that the other three rooms were also consecrated to Ramesses II by the Viceroy of Kush. The only remaining fragments of jambs belong to the fourth door (counting from east to west). There Ramesses is called ‘the good God, Lord of the Two Lands, Lord of Ceremonies’, ‘Lord of Joy and Appearings, Ruler of the Nine Bows’. On the lintels Ḥekanakhte is only referred to as Viceroy of Kush. The other titles mentioned in the Cairo statuette from Kūbān (such as ‘Overseer of the Southern lands’, ‘Fan-bearer on the King’s right’, ‘Messenger to every land’ do not appear here. The fact that the inscription of the stela of Kūbān was reproduced in the temple of Aksha (on the north side wall of the entrance, see Kush x, p. 112 in fine) gives support to Reisner’s idea that Ḥekanakhte is the viceroy of the stela, i.e. the viceroy who opened the well in Akita, following the king’s orders, and who erected the memorial monument at Kūbān—later reproducing it in Aksha when he came to build there.1

1 Quibell, ‘Statue and Steles given by Professor Sayce to the Museum’, ASAE, iii, pp. 240–1; and G. A. Reisner, ‘The Viceroy of Ethiopia’, JEA, vi, pp. 40–1.

2 Curiously enough the only viceroy, except Thuwre, whose records have been found at Kūbān is Ḥekanakht, a viceroy of Ramesses II (see no. 12, b and c). This piece of evidence is almost imponderable yet it has almost unconsciously influenced me in identifying Ḥekanakht with the viceroy of the Kūbān stela . . .’ (Reisner, op. cit., p. 45). Reisner places Ḥekanakhte and Paser II between the years 3—the date of the stela—and 38 of Ramesses II. Between these years, we must now add a third viceroy: Ḥuy, as shown by Labib Habachi, ‘The Graffiti and work of the Viceroy of Kush in the Region of Aswan’, Kush v, pp. 13 ff., and ‘Four Objects belonging to the Viceroy of Kush’, Kush ix, pp. 210 ff.
KUSH

The excavation established that the chapels of Seti and Ramesses communicate through the adjoining corridor with a big court. A number of doorways and corridors lead from this court to the large south doorway that leads to the terrace and the quay. On the west side the chapels leaned against the girdle wall itself. This discovery was the result of hard work, for a large part of the big sandhill had to be cleared by digging a wide trench into it. (See plate xxx, a). After three weeks we were able to uncover the section of the west girdle wall on which the chapels rest. The wall—6 m. thick—consisted of two parallel walls (1 and 2 m. thick) filled with mud bricks set on edge. We do not know whether the structure was the same for the full height of the wall, or if only the lower part was filled leaving the space between the walls to serve as rooms or casemates (see plate xxviii, c and plan, fig. 1).

The Contour and perimeter of the town

This year’s work enabled us to complete the excavation of most of the east girdle wall, following its course until we reached the junction with the south girdle wall. We also uncovered the foundation of the south girdle wall and its connexion with the west girdle wall, which emerged here from under the sandhill. The south-east angle of the girdle wall is marked by the foundations of a big square tower (5.85 x 5.85 m.). The east girdle wall was 120 m. long; the south wall, like the parallel north wall, had a total length of 82 m. Within this great rectangle of 120 x 82 m. we excavated the foundations of a narrower wall—the small south wall which divided the officials’ town from the commoners’ town (a rectangle 40 x 80 m.). There were at least three gates communicating between the officials’ town and the commoners’ town. In the middle one we found two jambs, each 1.95 m. high, with no inscriptions. The threshold was 1.72 x 0.56 m. and had a pivot hole. The third door was close by the west girdle wall at the foot of the sandhill (see plan, fig. 1). The commoners’ town had an independent gate in the east wall which led out towards the river. A trial digging in the centre of this town yielded two rooms with very thin walls (0.25 m.). In one of them was found a fragment of a jamb with the cartouche of Ramesses II (Römss-mry-'Imn) and the name of the goddess Renenet. In the other room, upon the remains of one of the walls, lay two small cosmetic jars, apparently of a much later date.

Several partition walls start from the small south wall in the direction of the temple (north) and seem to belong to a previous or successive plan of buildings for government officials. The central part of the area (g/I-I/IV) was excavated and we were able to establish the connexion of this part of the officials' town with the court in front of the rooms of Seti I. (The east wall of the court is one of the partition walls that start from the small south wall.) We obtained the layout of six rooms and what was apparently a court. No new specimens of pottery were added to the two or three belonging to the New Kingdom which we found last year in this area.

We were better rewarded with the excavation of the south-east area of the officials’ town. There were found, leaning against the small south wall, two
a. LINTEL, DOOR JAMBS AND THRESHOLD OF THE SECOND CHAPEL OF SETI I, *in situ*

b. LINTEL OF SETI I (protocol)

c. CHAPELS OF SETI I AND RAMESSES II DURING EXCAVATION

*Facing p. 98*
a. DOOR JAMB OF MAHY
(‘Chief of the Harim of Isis the Great’)

b. LINTEL OF RAMESSES II WITH FIGURE OF VICEROY HEKANAKHTE

c. REUSED BLOCK WITH RELIEF (from the south-west pillar of the Forecourt)
rooms of the house belonging to the ‘Chief of the harim of Isis’, Mahy ‘the revered’ (see Plates XXIX, D, XXXI, A and plan, FIG. 1). Thus reads the inscription on the jambs of one of the doors. Although the formula is that of the funerary offering (‘A boon which the King gives to Isis the Great that she may give food... in her temple to the Ka of...’) I consider that the jambs were not brought from a tomb and reused here, but were used originally in the house. Apparently the case is similar to those that have been pointed out in doors at El-Amarneh and Deir el-Medineh.³

Excavations inside the temple

The excavation to virgin soil gave the following results: no foundation deposits were found in the forecourt or in the sanctuary and its vestibule. A Christian capital different from those found in the first campaign (smaller, and made of granite, with no leaf decorations) was discovered in the forecourt. The structure of the entrance door was determined: three rows of stones superposed and separated by layers of sand laid on chipped stone 1 m. deep, the chipped stone resting on the river silt. The structure of the pillar at the southwest angle of the forecourt was examined. It was apparent that this pillar was larger than the others, almost double the size, and had been remade or belonged to a former stage of building. When removed, two of the stones belonging to the level of the inscription around the pillar showed reliefs on their lower face. One was a fragment of a beautiful relief (probably dating from the time of Seti I), apparently a scene showing prisoners as they are led to be sacrificed (see Plate XXXI, c). The other stone is a fragment of a door jamb with the remains of an inscription: ‘Beloved of Thot, Lord of Khmunu’. Nothing was found in the cells of the sanctuary, nor in the two rooms or ‘treasury’ lying on its southern side. But in the vestibule, under the flagging, we discovered two big square bases (1.70 x 1.70 m.) made of coarse blocks of sandstone. Including the sand on which they rest, they are also 1.70 m. high. (The floor level was on top of the column bases.) They stand on either side of the door that leads from the forecourt to the sanctuary. A low mud-brick wall, preserved as new, linked both pillars and also connected them to the north and south lateral walls of the temple. These facts suggest that the vestibule was intended as a hypostyle and the bases were to support the columns (see FIG. 2 and Plate XXX, b).

Excavation of the Cemeteries of Serra Gharb

Mr Vila completed the excavation of the mixed cemetery (A-Group and C-Group, site 24-M-6 in the SAS). In this campaign seventy-nine A-Group

³ M. Cramer, ‘Die Inschriften der Berliner Amarnatur 20376 im Zusammenhang der Amarnatexte’, MDIAK, vol. 9 (1940); P. Bruyère, Rapport des fouilles de Deir el-Medineh, 1934-5 (1940), 3ème partie, Fouilles de l’Institut Français du Caire. I am grateful to J. Yoyotte for calling my attention to these cases.
tombs (all but five were intact) and seventy-one C-Group (all severely plundered) were excavated. The C-Group tombs yielded only potsherds, ostrich egg-shell and ceramic beads. In the A-Group tombs 122 vases were found, most of them red on buff ware, some black-topped and many black-mouthed. Some were decorated. Forms and dimensions varied greatly. There were also cosmetic palettes (some of alabaster, others of quartzite), grindstones, ostrich egg-shells, copper and bronze awls, piercers, and a bronze axe. A description of the characteristics of this cemetery was made by J. Vercoutter in his Preliminary Report on the Second Campaign (1961–62) in KUSH XI, pp. 137–9.
Excavations were undertaken by Dr Krapovickas at the ‘Meroitic and X-Group Cemetery’ (referred to in SAS as 24–1–3), which lies to the north and east of the last five houses of Serra Gharb near Aksha. We excavated fifty tombs, all of them rectangular (except for one which was circular) with a lateral chamber, a partition wall of unbaked bricks or stones protecting the recess. The bodies found lay in an outstretched position, the head turned south-west or west. All the tombs had been thoroughly plundered. The pottery consisted of goblets, amphorae cups, cylindrical, spherical, ovoid, globular, and narrow-necked vases (bottles), most of them red coloured and undecorated; a few show splash designs in parallel bands across the body of the vase, or incisions at the neck. Judging by the types of certain vessels (globular vases and goblets) and the splash decoration, these tombs belong to the X-Group, or are close to it. We have also found in these tombs ceramic and glass beads, wooden knife-handles, several types of sacks, leather sandals and a number of woven fabrics, clothes or wrappings made of wool, some of which were decorated.

* * *

Postscriptum

The following corrections should be made to my ‘Notes relating to inscriptions found at Aksha’, Kush x, p. 116, II. *hnhmt*. . . . Line 3, insert *sɔ* after *hnhmt mi*. (The break in the place of *sɔ* shows traces of the egg; the stroke-determinative is clear.) Line 5, insert ‘the son of’ after ‘roaring like’. p. 117, line 3, insert ‘*sɔ*’ after *hnhmt mi*. 
Le sous-sol du temple d’Aksha

par J. DE HEINZELIN*

L’temple d’Aksha ou Akcheh a été bati par Ramses II sur la rive gauche du Nil entre Faras et Debeira, en Nubie soudanaise. La date de construction est voisine de 1250 B.C.

La situation du temple est unique par sa proximité du Nil, posé sur la plaine alluviale. Elle permet, mieux que nulle part ailleurs, d’étudier les relations entre les formations récentes de la Vallée du Nil, l’implantation d’un monument et ses occupations successives.


Cinq coupes particulièrement typiques ont été choisies pour une étude détaillée. Cfr. fig. 1. La coupe 1 se situe au coin extérieur nord de la salle principale, au pied d’un seuil d’entrée latéral. Les coupes 2 et 3 sont respectivement situées à l’intérieur et à l’extérieur du mur d’enceinte en briques crues, à quelques dizaines de mètres au nord de la coupe 1. La coupe 4 est située au coin extérieur ouest de la salle principale. La coupe 5 se situe contre le mur extérieur en briques crues à l’extrême ouest, à l’arrière du temple lui-même.

Chacune de ces coupes a été plus ou moins librement interprétée de manière à concentrer en une colonne les observations apportées par les fouilles dans le voisinage immédiat. Pour la description de ces coupes de détail, on se reporterà au commentaire explicatif de la coupe d’ensemble. Cfr. fig. 2. Celle-ci est demi-schématique, en direction approchée NW-SE, passant entre les constructions de pierre et le mur d’enceinte en briques crues. On a toutefois figuré en avant plan la position de trois murs principaux de la construction en pierre, de manière à montrer leur relation altimétrique avec les différentes couches. Les murs de brique crue de la partie arrière sont indiqués au jugé. Les hauteurs de la coupe d’ensemble sont exagérées 4 fois. La cote O est au seuil d’entrée du temple. Les résultats des analyses granulométriques ont été portés dans un graphique triangulaire dit des ‘Classes texturales’. Cfr. fig. 3.

Explication des coupes

DUNES RECÉNTES = D.R.: Dunes de sable modernes, en cours de progression, soit nues soit plus ou moins retenues par une végétation de tamaris ; elles contiennent en ce

* Fonds National de la Recherche Scientifique de Belgique et Combined Nubian Prehistory and Geological Campaign. Le travail de recherches a été subventionné par le Fonds National.
Fig. 1. COUPES DE DÉTAIL DU SOUS-SOL DU TEMPLE D'AKSHA

Fig. 2. COUPE SCHÉMATIQUE D'ENSEMBLE DU SOUS-SOL

Fig. 3. TEMPLE D'AKSHA. CLASSES TEXTURALES DES ÉCHANTILLONS ANALYSES
KUSH

dernier cas des cordons et lentilles d’aiguilles végétales. Elles recouvrent en plusieurs endroits des chenaux d’irrigation de cultures. De petits sols temporaires très légèrement humiques sont coupés par l’actuelle topographie du Nil.

**CANAL D’IRRIGATION**—Restes plus ou moins démantelés d’un canal d’irrigation de cultures, à la cote +1,50 m. Age approximatif 50 ans.

**CONCR.**—Ligne de concrétions légèrement ondulée le long des murs du temple, suivant la limite du recouvrement sableux qui existait au début de ce siècle. Le concrétionnement a été causé par l’évaporation de l’eau du sous-sol à la ligne de contact, sans doute amplifié par le relèvement de la nappe phréatique sous l’effet de l’irrigation. C’est une croûte d’exsudation et il n’est pas nécessaire de postuler un relèvement général du niveau du Nil pour l’expliquer.

Analyse d’une portion de la croûte **CONCR.**:
Seulement 0,45% de calcaire ; peu de sulfates mais grande quantité de chlorure de sodium.

**DÉPÔT DE CRUE**—Les formations dunaires et les petits sols temporaires qu’elles contiennent sont coupés par une érosion relativement récente. Sur cette surface d’érosion très oblique s’est déposé un limon fin sableux qui est probablement un limon de crue. Il est très jeune car on n’y observe aucune formation de sol ni enrichissement organique.

Analyse de dépôt de crue (échantillon 6 prélevé à 70 m de l’entrée du temple). Couleur 10 YR 6/3 à sec ; 10 YR 5/3 humide.
Non calcaire.


Calcaire : 5,15%.
Granulométrie : 7,9% >47 μ; 10,00% de 47 à 297 ; 21% de 297 à 208 ; 19,50% de 208 à 147 ; 12,05% de 147 à 104 ; 7,10% de 104 à 74 ; 4,30% de 74 à 53 ; 10,16% de 53 à 20 ; 2% de 20 à 10 ; 2,70% de 10 à 2 ; 3,35% <2 μ. Sable limoneux.

**DUNES ANCIENNES**—D.A.—Ancienne formation dunaire relativement homogène d’aspect, de teinte orangée et sans traces de sols temporaires ni de végétation. Elle noie les débris du temple abandonné, les fosses artificielles et l’ancienne rampe d’accès au Nil et s’est étendue plus loin sur l’emplacement actuel de la rivière.

Analyse de l’échantillon 9 situé à la cote –0,20 m, à 50 m de l’entrée du temple : Couleur : 7,5 YR 7/4 à sec ; 7,5 YR 5,4 humide.
Très légèrement calcaire (proximité du sol chrétien) ; 3,2%. Granulométrie : 23,20% >47 μ ; 14,00% de 47 à 297 ; 17,20% de 297 à 208 ; 15,80% de 208 à 147 ; 11,30% de 147 à 104 ; 8,30% de 104 à 74 ; 6% de 74 à 53 ; 4,20% de 53 à <2 μ. Sable.
LE SOUS-SOL DU TEMPLE D’AKSHA

Analyse de l’échantillon 7 situé à la cote -2,00 m, à 70 m de l’entrée du temple :
Couleur : 7,5 YR 7/6.
Calcaire et sels : 1,7%.
Granulométrie : 9,20% <417µ ; 23,00% de 417 à 297 ; 29,60% de 297 à 208 ;
22,10% de 208 à 147 ; 7,10% de 147 à 104 ; 3,10% de 104 à 74 ; 2% de 74 à 53 ;
3,90% de 53 à <2µ. Sable.

FOSSE=Plusieurs fosses artificielles sont creusées aux abords du temple jusqu’à une
profondeur de 2,60 m environ. Elles sont en forme de poche, une ouverture
étroite perçant les couches supérieures pour donner accès à l’alluvium inférieur, qui
était sans doute exploité pour son contenu en sel. Les efflorescences salines sont en
effet bien visibles le long des parois. Il est probable que plusieurs fosses étaient en
usage simultanément, le récule de terre enrichie se faisant le long des parois à
certains intervalles de temps. Les fosses devaient donc rester ouvertes pour
permettre l’évaporation, ce qui explique le choix de l’emplacement sous le sol
durci et non sableux des abords du temple effondré.

Les fosses sont remplies d’un sable orangé d’aspect homogène, analogue à celui
des dunes anciennes. Le colmatage a pu avoir lieu soit de façon naturelle par
l’avancée des dunes anciennes soit par l’homme en empruntant le sable des dunes
préexistantes. L’absence d’éboulissement et de traces de végétation, l’uniformité du
remplissage indiquent que les fosses ont été colmatées peu de temps après avoir été
désaffaillées.

Analyse de l’échantillon 3 provenant de la fosse 1 :
Couleur : 7,5 YR 6/6 à sec.
Très légèrement calcaire, surtout au sommet sous l’influence du sol chrétien lui-
même très calcaire : 1,4%.
Granulométrie : 13,20% <417µ ; 16,70% de 417 à 297 ; 24,10% de 297 à 208 ;
21% de 208 à 147 ; 12,20% de 147 à 104 ; 5,50% de 104 à 74 ; 2,50% de 74 à 53 ;
4,80% de 53 à <2µ. Sable.

IND. SEL.=Industrie du sel qui s’est installée dans la partie du temple construite en
briques crues et à ses abords (bâtiments nord-ouest). La coupe 5 montre un détail
des superpositions observées au point de plus grande épaisseur. Sous la dune
récente à tamaris reposent près de 50 cm. de débris cendreux à la base desquels se
sont cristallisés des chlorures (SEL 1). Les débris cendreux recèlent un grand
nombre de fragments de petites poteries coniques qui ont du intervenir à quelque
stage de la préparation du sel (SEL 2).

L’accumulation de débris repose soit directement sur l’alluvium soit sur les
éboulis des constructions égyptiennes déjà fortement arasées.

La relation avec les dunes anciennes n’apparaît nulle part aux abords de la
coupe 5 ; toutefois, dans la coupe 3, il est un coin colmâté de débris cendreux
nettement creusé dans les débris égyptiens et recouvert en discordance par une
faible épaisseur de dunes anciennes.

Un ensemble cohérent d’observations stratigraphiques situe donc les différents
indices de l’industrie du sel peu avant l’extension des dunes anciennes, loin après
l’abandon du temple égyptien mais avant l’occupation chrétienne.

ÉBOULIS=E.= Étalement de débris du temple abandonné, riche en argile et limon lourd
provenant de l’effritement des briques crues, en fragments de grès nubien et débris
variés.

105
KUSH

**Sol Égyptien**—Z.E.—Sol léger, poudreux, à hauteur quasi constante au pourtour du temple. La structure travaillée, homogénéisée artificiellement montre que le sol a été jardiné et entretenu.

Analyse de l'échantillon 2 provenant de la coupe 2.
Couleur : 10 YR 5/3.
Très calcaire.
Granulométrie : 2,10% > 417μ; 1,50% de 417 à 297; 1,90% de 297 à 208; 3,70% de 208 à 147; 6,10% de 147 à 104; 9,90% de 104 à 74; 14,00% de 74 à 53; 35,85% de 53 à 20; 9,85% 20 à 10; 7,90% de 10 à 2; 7,30% < 2μ. Limon sableux.

**Constr. Briques**—C.B.—Constructions égyptiennes en briques crues, avec fondations de 1 m à 0,50 m de profondeur reposant directement sur l'alluvium.

**Constr. Pierre**—C.P.—Constructions égyptiennes en grès nubien avec fondations reposant sur sable apporté et tassé. L'aire du temple a été creusée jusqu'à la cote -0,85 à -0,90 m, niveau sur lequel s'étale Z.E. entre le temple et l'enceinte extérieure. Le pavement du temple lui-même a été rétabli après-coup au voisinage de la cote O ou un peu plus haut.
Le sommet de l'alluvium se situait primitivement à la cote +0,20 à +0,25 m environ; le creusement préliminaire fut de 1 m à 1,25 m.

**Fondations**—Fondations des constructions en pierre, sur sable tassé légèrement calcaire. Il semble que les fondations de la partie arrière du temple ont été relevées à plusieurs reprises en cours de construction, réajustements qui tinrent peut-être compte de certaines crues du Nil.
Analyse d'un échantillon 4 du sable de fondations de la coupe 1, cote -1,40 m.
Très légèrement calcaire.
Granulométrie : 19,60% > 417μ; 18,60% de 417 à 297; 19,90% de 297 à 208; 15,80% de 208 à 147; 9,60% de 147 à 104; 5,20% de 104 à 74; 2,70% de 74 à 53; 8,60% de 53 à < 2μ. Sable.

**Quai**—Construction verticale au début de la rampe d'accès du temple. Le bord était probablement à hauteur des plus hautes crues.

**Alluvium**—A.—Dépôt de la plaine alluviale du Nil, limon lourd, stratifié, salin, non ou très légèrement calcaire, parcouru d'horizons humiques.
Analyse de l'échantillon 1 de la coupe 2, cote -1,20 m.
Couleur : 10 YR 4/2.
Non ou très légèrement calcaire.
Granulométrie : 9,20% de > 417 à 53μ; 44,95% de 53 à 20; 20,45% de 20 à 10; 18,20% de 10 à 2; 7,20% < 2μ. Limon.
Analyse de l'échantillon 5 de la coupe 4, cote -1,20 m.
Couleur : 10 YR 4/2.
Non ou très légèrement calcaire.
Granulométrie : 9,70% de > 417 à 53μ; 40,85% de 53 à 20; 20,15% de 20 à 10; 18,80% de 10 à 2; 10,50% < 2μ. Limon.

106
Discussion

Le temple d’Aksha a été bati vers 1250 B.C. sur une plaine alluviale de 3 m au dessus de la cote d’hiver actuelle du Nil. La cote d’hiver est en principe la plus basse de l’année mais la comparaison exacte de la situation actuelle avec la situation ancienne est rendue difficile par l’incidence du barrage d’Assouan.

Il est certain que les plus hautes crues du Nouvel-Empire coïncidaient à peu près avec les plus hautes crues actuelles, si l’on compare les positions du dépôt de crue, du quai et des fondations du temple : environ 2 mètres au-dessus de la cote d’hiver.

L’alluvium est un limon et non pas une argile (ech. 1 et 5).

On ne trouve pas trace localement de formations dunaires à l’époque pharaonique et on peut s’imaginer, sans preuves parfaitement définitives, que de larges surfaces de limons qui sont aujourd’hui couvertes de dunes étaient à ce moment disponibles pour la culture. Cette condition justifie peut-être la ‘recolonisation’ du Nouvel-Empire.

Toutefois, le sable utilisé pour les fondations du temple était probablement dunaire ; il diffère de celui des dunes anciennes étant plus riche en partie fines (ech. 4). Le sol égyptien est constitué par le limon de l’alluvium artificiellement enrichi en sable (ech. 2).

Le temple fut entretenu pendant un temps indéterminé. Après qu’il fut déjà largement tombé en pièces, une population d’affinités inconnues en exploita les abords pour l’industrie du sel. Une datation C14 des débris charbonneux permettrait d’en fixer l’âge. Il s’agit sans doute de populations méroitiqnes ou du groupe X au sens large.

Cette occupation fut immédiatement suivie d’une première extension dunaire, celle des dunes anciennes, sur l’emplacement actuel du Nil.

Le sable des dunes anciennes et celui qui colmata les fosses à sel abandonnées sont identiques (ech. 3, 7, 9).

L’occupation chrétienne, entre +800 et +1000 a.d. environ s’établit à la fois dans le temple pharaonique et sur les dunes anciennes. La haute teneur en calcaire et en limon du sol chrétien ne peut-être que d’origine allochone, par l’éparpillement de briques crues faites en limons anciens riches en kunkar (ech. 8).

Après un laps de temps inconnu, le sol chrétien abandonné fut envahi par une nouvelle extension dunaire, régime encore en grande partie actif soit sous forme de dunes vives soit sous forme de dunes à tamaris. Toutefois, à l’intérieur même du temple, les apports éoliens furent stabilisés avant le début de ce siècle, à hauteur de la ligne onduléeuse de concrétions. Cette stabilisation alla sans doute de pair avec l’installation de cultures et d’irrigations et avec le démantèlement de plus en plus poussé du temple pour la construction des fondations de shagias.

En résumé, les traits principaux de l’évolution du paysage depuis l’époque pharaonique sont les suivants.
La hauteur actuelle des eaux du Nil ne diffère pas sensiblement de celle du Nil pharaonique.

C’est le recouvrement dunaire qui a plus que tout autre facteur modifié l’aspect des lieux. Il n’apparaît que relativement tardivement, bien après que le temple soit tombé en pièces et après l’installation de l’industrie du sel d’époque méroïtique ou du groupe-X.

Les dunes anciennes préchrétiennes ont une coloration orangée dans la gamme des 7,5 YR et une texture qui les différentie des dunes récentes. Plus riches en éléments fins et oxydés, elles évoquent des conditions moins désertiques qu’actuellement.

Après un temps d’arrêt lors de l’occupation chrétienne, les accumulations dunaire reprirent avec un faciès plus proprement désertique, amenant des sables plus vannés, moins oxydés. Ces dunes se présentent sous deux aspects : les dunes à tamaris partiellement fixées, certaines même en voie de démantèlement et les dunes vives, mouvantes. À l’intérieur du temple, l’aggradation s’était stabilisée depuis assez longtemps pour occasionner une ligne de concrétions à hauteur du remplissage, par exsudation.

Quelles ont pu être les causes de ces variations de l’ambiance locale ? Peut-être multiples : changements climatiques réels, intervention de l’homme détruisant la végétation locale et introduisant des cultures.

La part d’un changement climatique est très plausible, ainsi qu’a tenté de le démontrer K. Butzer (1) en Égypte. On peut rappeler ici les indices fournis par les fresques de la tombe de Djehuti-hetep à Debeira (2), où l’on voit figurés l’acacia, le caroubier, le dattier et l’Hyphaene thebaica (palmier doum) ainsi qu’un babouin à l’époque de Hatshepsut. Ces indices ne sont malheureusement pas conclusifs puisqu’il s’agit d’un ensemble cultivé.

La part des changements écologiques dus à l’homme ne doit pas être sous-estimée. Actuellement, le maintien d’une ligne de dunes le long de la berge occidentale du Nil suit l’implanation des arbres et arbustes ; à l’arrière de ceux-ci, les plaines limoneuses sont actuellement sèches et dénudées. Qu’une ligne de végétation plus intérieure ait autrefois disparu suffirait à expliquer la mise en mouvement des dunes d’ouest en est.


LE SOUS-SOL DU TEMPLE D’AKSHA

ENGLISH SUMMARY

THE SUB-SOIL OF AKSHA TEMPLE

Aksha Temple, which was built by Ramesses II about 1250 B.C., is unique in its location on the alluvial plain close to the Nile. For this reason, it presents unusually good source material for a study of the relationship between the recent formations of the Nile Valley, the siting of a monument and its successive periods of occupation. In January 1962 we were able to study there the excavations of the Franco-Argentine Mission and our research was assisted by the Fonds National de la Recherche Scientifique de Belgique.

Five typical cuttings were chosen for detailed study, outside the northern and western corners of the main room of the temple, on either side of the mud-brick enclosure wall, and close to the mud-brick wall behind the temple. Our observations are shown in diagrammatic form in Figs. 1–3 and may be summarized as follows.

The temple was built on the alluvial plain 3 m. above the present winter (in theory the lowest) level of the Nile. Comparison of present river levels with those of ancient times is complicated by the presence of the Aswan Dam, but a study of the flood deposits indicates that there has been little variation since pharaonic times.

The alluvium consists of silt not clay.

There are no traces in this area of dune formations of the pharaonic period and, although we have no definite proof, it seems likely that in New Kingdom times large areas of cultivable land were accessible, which today are covered by sand. Nevertheless the sand used in the foundations of the temple probably originated from dunes, though it differs from that of the ‘ancient dunes’ containing a higher proportion of fine particles. The ‘Egyptian Soil’ consists of alluvial silt artificially enriched with sand.

After much of the temple had collapsed, a salt industry was developed in the area by the Meroitic or X-Group people. The date of this could be determined by C14 examination of the carbon debris.

After this period of reoccupation there came the first extension of the sand ‘the ancient dunes’. They are orange in colour and different in texture from the more recent dunes. Being richer in fine particles and oxides, they seem to suggest less arid conditions than those prevailing at the present day. The same sand is also found in the abandoned salt workings.

Between A.D. 800 and 1000 the temple and the ancient dunes were reoccupied by the Christian people. The soil of this period has a high lime and silt content, emanating from burnt brick refuse rich in silt and kunkar.

After a lapse of time of unknown duration, the abandoned Christian soil was again invaded by dune sand, a process which is still incomplete. Some of the dunes on which there is tamarisk vegetation are semi-fixed, while others
KUSH

may be called 'living dunes' since the sand is still moving. At the same time, the deposits of wind-blown sand inside the temple became stabilized. This took place long enough ago to have left its mark on the stones of the temple and was certainly before the beginning of this century.

This stabilization no doubt coincided with the development in the area of agriculture by irrigation, as a result of which the temple was gradually dismantled to provide stone for the construction of sagias.

The reasons for the alterations in the local environment were probably various: climatic change and the intervention of man. That the climate of the region may have changed is suggested by the paintings in the tomb of Djehuty-hotepe at Debeira, which depict acacia and carob trees, date and dom palms, and also monkeys at the time of Hatshepsut. Unfortunately this evidence is not conclusive since the whole scene illustrates cultivation activities.

The part played by man in the ecological change should not be underestimated. Indeed the line of dunes along the steep west bank of the Nile follows the planting of trees and shrubs, behind which the silt plains are arid and denuded. The fact that cultivation has ceased further away from the river is perhaps sufficient to explain the movement of the dunes from west to east.