ABBREVIATIONS USED IN THIS JOURNAL

BIFAO — — — Bulletin d’Institut Français d’Archéologie Orientale.
JEA — — — Journal of Egyptian Archaeology.
LAAA — — — Liverpool Annals of Archaeology and Anthropology.
PPS — — — Proceedings of the Prehistoric Society.
Reuv. d’Eg. — — — Revue d’Égyptologie.
SASOP — — — Sudan Antiquities Service Occasional Papers.
SNR — — — Sudan Notes and Records.
ZAS — — — Zeitschrift für Aegyptische Sprache.

Contributions to this Journal are welcomed and should be sent to:—
The Editor, Kush, P.O. Box 178, Khartoum, Sudan.
Editorial Notes

THIS first number of Kush appears in a year of great significance for the Sudan, when the first parliament has been elected and the first steps towards independence taken.

By fortunate coincidence, this same year marks the 50th anniversary of the Antiquities Service; and the publication of a journal devoted to the archaeology and early history of the Sudan will, it is hoped, be a happy augury for future development and an indication of the maturity the country has now reached.

The Sudan, by its intermediate position between the near east and central Africa, has a peculiarly important position in archaeology as a link between areas of known and unknown chronology. It has served at many different periods of history as a point of contact between north and south through the Nile valley, and, by its position on what is now the pilgrim route from West Africa, it has become a meeting place of east and west African peoples.

The Sudan presents a fine field for the research worker; there are many areas as yet unexamined by the trained archaeologist, and even in the comparatively well known riverain areas there are many important problems awaiting solution. The Government Antiquities Service with its small staff cannot attempt to deal with all the questions which the archaeology of the country presents and it looks to the educated and cultured Sudanese as well as to the foreign scholar for help in elucidating the history of the country.

P.L.S.
THE Middle Nile region, for the purposes of this article, denotes the Nile valley between Atbara and Abu Hamed, a distance of about 140 miles. The term used is not perhaps a very satisfactory one but it is difficult to think of a better, and the region lies about midway between the mouth of the Nile and the southern frontier of the Sudan. Though there are motor roads of a sort along both banks and a line of railway along one, few Europeans ever visit that part which lies below the 5th cataract. Archaeologically it was almost a complete blank, for although the existence of a few ancient sites was known from the brief mention of travellers, they were undescribed and unplanned, and their age and character was for the most part unknown. The only published account of them is to be found in SNR, vol. ix, where Mr H. C. Jackson, formerly Governor of Berber Province, described a trek between the 4th and 5th cataracts. Mr Jackson’s article is a valuable record of fact and provided both the stimulus and starting-point of my own explorations; but its author would hardly claim that it was more than a guide to future explorers. It was, moreover, obvious that where so much existed, more would be revealed to a concentrated effort. There was also another motive; I wished to demonstrate that the methods of field-archaeology employed in Britain could be applied with equally good results in another and very different geographical environment. Those methods consist of observation and record (in words, plans and photographs) without any excavation. I therefore asked for and obtained a grant from the British Academy, and I wish here to acknowledge with thanks the help received, without which I could not have done the work. The Commissioner for Archaeology, Mr Peter Shinnie, F.S.A., most kindly allowed me the use of one of his trucks which proved to be indispensable. Our party consisted of myself, the driver (Mohammed Abbas) and two servants, Hassan Ibrahim, cook, and Mohammed Faqir, a Bishari, for the out-door work. All three were loyal and devoted workers; Mohammed Faqir was not only invaluable in finding the way but also acquired great skill in finding ancient sites and (later) inscriptions. Most of the former were in fact first seen by him, and he himself found practically all the inscribed fragments. He combined a marvellous aptitude for discovery with a complete indifference to the results, except in so far as they gave obvious satisfaction to his employer. He had all the qualities of an expert field-archaeologist except an interest in archaeology. ‘I am a herdsman’, he said; ‘what use are these things to me?’

The expedition also owes much to the skill of Mohammed Abbas who contrived to manoeuvre the Bedford truck over rocks and through deep sand, and to coax it into action when (as often) it began to flag. Readers who know the Sudan will not need to be told that the term ‘road’ there is often a meaningless euphemism.

The work done may be divided into five parts: (1) a rapid reconnaissance up the Atbara to Qoz Regeb (1951, Dec. 11th–17th): (2) the exploration of the Abu Hamed region and the east bank (Dec. 20th–Jan. 13th, 1952): (3) the exploration of the west bank (Jan. 16th–Feb. 9th): (4) a visit to Jakdul and El Fura in the Bayuda desert (Feb. 14th–17th): (5) three sites (Aslang Island, Jebel Umm Marrahi and Geteina) visited from Khartoum (Feb. 28th–March 3rd).
The chief work of the expedition consisted in the planning of some stone castles of the Christian period and of the red brick churches attached to them, and in the discovery at two sites of fragments of inscribed tiles. This is the subject of a special monograph, and will not therefore be dealt with here. The purpose of this article is to put on record the other ancient sites investigated and discovered. I have numbered them in the order of their discovery (1-38).

1 SASOP, No. 2.
KUSH

My interest in Qoz Regeb was first aroused by the descriptions given by Burckhardt, Werne, and Monneret de Villard\(^2\), the last of whom mentions baked bricks inscribed with geometric designs and one with the word Petros in Greek letters, now in Khartoum Museum. The earlier accounts were rather confused, and we already knew from the photographs of Hayes that Burckhardt’s ‘ruin’ was merely a natural granite formation. It was on Jebel Erebat (Werne’s Herrerem), which consists of three granite jebels in line; that on the northwest is separated from the other two by a level expanse of slatey ground traversed by several shallow rain-channels. Seen as one approaches Qoz Regeb from the northwest, Erebat has a most fantastic spikey outline which reminded me of some pine-covered mountain in Europe (PLATE 1a). There are huge blocks of granite perched precariously (as it seems) along its spine; one, seen from the rest-house (some half a mile or less distant), is a sack-like boulder capped by a small round one whitened by birds; the whole like a kneeling monk. The northern slopes are cloaked by a deep deposit of mud, once continuous but now broken into small isolated flat-topped plateaux by deep erosion channels. This mud is not merely debris from the jebel but an outlying remnant of a once continuous sheet. I estimated its thickness here as about 50 feet, and found a large Nile-oyster shell in it. On the right bank of the Atbara opposite the rest-house is a terrace of the same mud-formation covered (like the plateaux) with flat thin pebbles, and in one place are many detached lumps of pebble conglomerate (not seen in situ). The ground by the river is covered with thousands of flakes and hammerstones but there are no potsherds. The mud must be older than the present river channel.

A local guide having failed to find the rock-pictures marked on the map, Mohammed Faqir and I climbed to the top of the middle jebel and examined the rocks there and elsewhere round it but without success. (If they exist they must be on the southeast jebel). On the east part of the top is a small block (perhaps a cubic yard) of a kind of mud breccia which might have been formed in a cave, but there are none such now and no signs of human occupation except an occasional flake or hammerstone.

Below this middle jebel there are two quite distinct ancient sites, one a Christian graveyard (Site 1) and the other a neolithic habitation-site (Site 2) with graves. The Christian site is about a quarter of a mile north of the middle jebel and a mile east-southeast of the rest-house, from which it is visible (the landmark is a small detached heap of rocks). The chief object is a stone building on an eminence; across the top are the remains of a wooden beam, and on the slopes many red bricks, on some of which crosses were marked before firing. Several of these were secured. All around on every side are stone-set graves; a typical example is oval in shape and four yards long with a flat stone set on edge at each end (PLATE 1b). It is covered with round and oval white quartz pebbles. I guessed that there might be about 100 graves all together; but there are others at intervals all along the north foot of the jebels. The round stone building puzzled me at the time, but in the light of subsequent discoveries I feel sure it is the remains of a Christian gubba whose upper part perhaps was built of brick. On and around the graves are very many broken saddle-querns of granite, some placed on the graves themselves. No distinctive potsherds were found.

The neolithic site is on the plateaux (five altogether) at the northern foot of the middle jebel. It is obvious at a glance that these plateaux were continuous at the time of their occupation some 3000 years ago or more. The area of these plateaux is now quite small and erosion is proceeding rapidly so that soon there will be nothing left. The surface is quite flat but tilted slightly downwards in a northerly direction, away from the jebel.

\(^2\) See my Fung Kingdom of Sennar, p. 94.
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

The surface is covered with thin flat pebbles like those already mentioned and also with thousands of potsherds, flakes of chalcedony and other material with a similar fracture, quern-fragments and hammerstones. Both on the top of the plateaux and along its edge erosion has uncovered graves, visible by the much decayed fragments of bone. One such grave contained a small round-bottomed cup of plain black ware; it was removed in pieces, but being badly fired it disintegrated after bagging. In another grave were found many ostrich-eggshell beads. On a grave covered by a round cairn is a broken saddle-quern, and near it, on the lower ground below the plateaux, are what look like the remains of small rectangular buildings. It is the obvious place for a village, but there was nothing to show whether the buildings and cairn were contemporary with the neolithic remains or of a later date, possibly Christian. As we were leaving the site, in the direction of the Christian graveyard, Mohammed Abbas picked up a fine polished greenstone axe-head. The potsherds have affinities with those from Jebel Moya and show quite a different facies from that of the doubtless much earlier Esh Shaheinab-type sites found subsequently in the Nile valley.

Werne observed the scatter of flakes but not the potsherds—an extraordinary oversight, as they are extremely thick on the ground and nearly all of them conspicuous by reason of their incised ornament. He also describes what seems to be meant for the Christian site, as he mentions burnt bricks, though if so he must have mistaken the stone-set graves for houses and grossly overestimated the area they cover (‘town as large as Cairo’) and the distance from the jebel (a quarter of an hour). There are certainly no other remains north of the jebels to which his description could refer, for none is visible from the top of the jebel or known to the local people, whom I questioned about the matter. The settlement to which the Christian graves belonged need not have been near by; it is quite common to-day to find Moslem cemeteries far from any habitations, especially in regions mainly occupied (as this is) by nomads.

On the return journey to Atbara I stopped and inspected the ‘ruins’ marked on the map at Adarama. Those north of the houses (about a dozen, now all abandoned) at Adarama consist of mud walls eroded down to the height of a foot or two, banked up with the eroded mud on either side. I was told that the village, which is well laid out, was made by Osman Diqna. It is an instructive example of what half a century’s wind and rain can do, and for technical reasons well worth the attention of those whose business it is to excavate similar sites.

From Atbara I went by train to Abu Hamed on the night of December 19th–20th, as both driver and truck were temporarily out of action. From Abu Hamed I went on a camel to see the site called Karmel by Caillaud which is not marked on the map. It proved to be a small fortified granite jebel (Site 3, Kuweib) which will be described elsewhere. On December 24th I crossed the river to Mograt Island and established myself in a Sheikh’s house at Megal. After lunch I visited a village of stone huts (Site 4) about a mile to the west. It is situated on the brow of the higher hard ground where it approaches the left bank of the river. There are large quantities of red brick lying about as well as of fairly large broken stones, and it appears that the huts, which were round, were built of both, perhaps of brick on a base of stone. The whole site has been dug over and no

---

3 *African Wanderings*, 1852, p. 39. ‘A crowd of flints and pebbles of all colours were scattered round above (sic, for “about”) but almost all were broken in pieces’, perhaps, he suggests, ‘to discover the precious stones supposed to be hid in the coarser casket’.

4 *Voyage à Meroé*, iii, p. 189.

5 *SASOP*, No. 2.
KUSH

intact hut-plans can be seen. The potsherds are all of Christian type, including thin hard red ware and a few painted bits. The general facies is that of Kuweib. There is much wall plaster, all plain. At the foot of the scarp, and east of the village, are remains of small rectangular graves.

Jackson describes and illustrates some rock pictures at Es Sihan⁶. The site is about 7 miles west of Megal on the south or left bank of the Nile, just below the west end of Geshabi Island and almost opposite to Kuweib. I rode there on a donkey on Christmas Day. There is a group of huge round granite boulders perched on a smooth flat surface of granite; they bear the name of El Hejab (PLATE IIIa). The pictures were made by tapping the darker weathered surface, but the marks are so slight as to be imperceptible to the touch. The representations are of oxen, some with huge long wide-spread horns (PLATE IIIb); of a boat with vertical lines to represent people in it and the rudder hung over the stern (PLATE IIIb); three human figures side by side (PLATE IIIa) and what looks like an elephant. There are also some crosses and the usual Arabic formula, both later than the figures. In the underlying granite platform is embedded a lump of foliated gneiss, the sharp edges of which have been blurred and half melted by contact with the granite when it was molten. Round the edge of one boulder is a row of cupmarks.

I was anxious to visit Abba Island where, according to Jackson, a book was found during the Mahdia, buried in a pot. We saw a boat tied up at the west end of Korta (not Korti) Island, but failed to attract the attention of anyone on the island. At its west point is what looks like a small rough stone fort on a hill. As it was getting late and we had a long way to ride back I decided very reluctantly to return. The Sheikh of Es Sihan had said that there were rock-pictures and quantities of potsherds on Abba Island, and it should certainly be inspected. Accommodation can be obtained at Es Sihan in Sheikh Mohammed el Isa’s house. It would be best to avoid going on market-day (Tuesday) when there may be no one to provide a boat.

I returned to Abu Hamed on December 27th and left for El Kab at 3.0 a.m. next day. The castles there (Sites 6 and 7), both of which I planned, will be described in SASOP No. 2. On a rock below and west of the mud castle Mohammed Faqir observed two animal figures in the Es Sihan technique, a wide-horned ox and what looks like an ibex. On the opposite (left) bank a little above the castles is a small eminence surrounded by a thin wall of dry stone, with remains of a mud brick building on a rocky protuberance in the middle. The potsherds are all quite modern.

On January 4th I left Abu Hamed in the truck for Shereik. On the way I stopped to examine the remarkable white quartz rock called Hagar el Merwa (Site 9), but failed to see the best inscriptions. On a later occasion (February 1st) I revisited it and completed my photographic survey. As this rock needs to be examined by an expert, I shall confine myself to a very brief description. The rock itself is situated about 150 yards east of the railway line at Kilo. 517 north of Khartoum. It is merely a pinnacle of the long quartz dyke which runs with occasional breaks nearly as far as Abu Hamed. It is festooned on both sides with beautiful rippled sand-dunes, and being itself pure white (hence the name) it forms a striking landmark from afar. On the south side are two intact roundish grave-mounds. The rock presents a flat face on part of its east and west sides. On the west side are the remains of a cartouche and some hieroglyphs, but on the east are remains of a long hieroglyphic inscription with the seated figure of Amen Re, facing the royal falcon over the throne-name of (apparently) Tuthmosis I. Below are some lines of writing

⁶ SNR, ix, 24, figs. 1–3.

6
which seem to promise something unpleasant to ‘any Nubian who shall trespass against this monument’, so that it looks as if it were a boundary stela. Below to the right is a lion with the name of (probably) Tuthmosis I, counterbalanced on the left by a bull (Plate Iva) named Amen Ré (Bull-of-his-mother). The whole affair has afterwards been repeated by Tuthmosis III, but his version is asymmetrical because the best place had already been covered by Tuthmosis I. A little to the right (north) of this inscription on the east face are several crude drawings of cattle in the style of Es Sihan and other sites. They are made upon a part of the rock that is covered with a dark iron stain caused by rainwash from above. The Egyptian inscriptions are in red paint and it is remarkable that so much should still be visible after nearly three and a half millennia of Sudanese erosion.

North of the rock and a little further away from the river is a group of grave-mounds, which appear to be Christian. I searched in vain for the Christian site incorrectly marked on the map between the rock and the railway, but learned subsequently from local enquiries that it certainly existed and was situated right on the edge of the river a little lower down, probably at the village of El Kenisa. As always my informants were quite unable to describe the nature of the remains.

The next sites visited were the mosque (No. 10), once a church, on Artul Island, and the fortified house at Tafayya (No. 11). Both of these are mentioned in Jackson’s article, but the latter is not described and is given as Abu Hagar; actually it is in Tafayya, the boundary passing a few yards to the east of the ruins. Both will be described in SASOP, No. 2.

About a mile south of Shereik station, right on the edge of the Nile bank, is a square fort built of stone. The walls are still about 10 feet high and 6 feet thick and are of unworked lardish stones carefully laid in courses and cemented with hard mud (Plate IVb). The south wall is 106 feet long inside and has a gap 6 feet wide for an entrance near the middle. This entrance is simply a gap in the wall, without any sort of protective device. (On the west of it a large block of the wall, 6 feet long, has become detached). The east wall is 117 feet long inside and under it are the remains of mud walls laid out parallel and at right angles to it. A long wall runs parallel to the fort wall for about half its length and at a distance of 23 feet; then it curves in and there are some small rooms, one 16 by 6 feet. The north wall is 109 feet long inside. The west wall fronting the river is 104 feet long inside, and the northern part has fallen. There are no towers or bastions and the angles at the corners are right-angles. There is a fair amount of broken pottery, all of it quite plain and birm-like. The breach in the west wall has been filled by laying palm-trunks horizontally along it, so that the fort may be used as a fold for animals. (One is reminded of the term ‘studfold’ applied by our Saxon ancestors to Roman forts). Outside on the south are the remains of a large enclosure with mud walls.

Local opinion ascribes the fort to the Fung period, but in the Sudan local opinion is seldom trustworthy. The condition of the remains suggests a date in the 19th century. I observed several other forts where simple plan and method of construction resembled this one. They differ from it only in being built, not wholly of stone but of mud reinforced at intervals with courses of stone. There are two such on the west bank beside the road between ‘Atmur and Korgos, and another at Ez Zuweira opposite Dagash.

The foregoing description is taken (by permission) from a letter of Dr Macadam’s, at whose suggestion Mr A. J. Arkell had visited Hagar el Merva before the war and made a hand copy of what he could see. His drawing, with some suggestions about the interpretation by Dr Macadam, is published in the JEÄ, 36, pp. 36–9.
station. The smaller fort at Gereif opposite Abu Hashim is exactly comparable with the fort at Shereik, for it is built partly of stone and mud, partly of stone. Now this fort is plainly a later addition to the larger fort there, as can be seen where the two walls meet—they are not bonded in. The larger fort is of baked brick, and the archway proves it to have been made during the Turkiya (1822–85). The other can therefore only belong to the Mahdia. There is a similar but smaller fort (Site 22) with corner bastions at the south end of Gandeisi Island, between the castle (Site 21) and the west end of the Sabnas channel. It is about 50 feet square, with a gap for a gate (8 feet wide) in the east wall and a mud and stone room in the southwest corner. There are loop-holes for guns in the walls which are 6 feet thick and about 7 feet high.

The assignation of these sites to the Turkiya and Mahdia respectively is made on purely archaeological grounds, and it will be interesting if it is subsequently confirmed by documentary evidence. It would be interesting also to have descriptions and photographs of the known Mahdia forts at the north end of the Shabluka Gorge.

While staying at Shereik I took photographs of some ruined modern houses, to show their construction, and also of some pits outside the house in which I was living. These pits occur everywhere in the villages; they were dug to obtain mud for building the houses themselves. Though awkward obstructions, no attempt is made to fill them up, and they become the receptacles of rubbish. Such pits, when found on early sites in Britain, are probably of similar origin. Primitive man may use pits for his rubbish, but he would hardly go to the labour of digging them specially for such a purpose. Mud or clay must have formed the chief source of material for building material in stoneless regions everywhere, and I have little doubt that the famous bone-pits of Saxon Southampton originated thus.

On January 11th I left Shereik, intending to go on to Karaba, but the road led out into the desert and did not regain the river until some distance below Karaba. An attempt to reach Karaba from this point was frustrated by the absence of a road, so I decided to go on to Berber. At Artoli, a little south of the village, are the remains of a large rectangular enclosure, now consisting of an earthen bank and ditch enclosing remains of mud buildings. It is not earlier than the Fung period and may be later.

From Berber I visited Dangeil, 7 miles to the north, led there by Crowfoot’s brief but encouraging description. Scarabs, he says, are frequently found there, and during the Mahdia a man found a piece of gazelle hide covered with strange letters, which, alas, in fear of the Khalifa he threw into the river; it was, no doubt, a document like those sometimes found in Lower Nubia. On the east side of this site there are the remains of a great oblong camp with the usual mounds of pottery and plaster; and in the village itself I have seen under the present ground-level a column and bases of sandstone; but the only find of importance was a granite block bearing a cursive inscription which was being used by the women to beat their clothes on at the time of my visit: I removed it to Khartoum. The ‘oblong camp’ consists of a great bank of earth, with a ditch on the outside, immediately east of the village. All four sides are preserved; the longest sides, running from east to west are 318 paces long, and the other two 144 paces. At the southeast corner are the remains of a large bastion of mud brick; nowhere else could I

---

8 This explains the reference in Isaiah 51, 1, to ‘the rock whence ye are hewn and to the hole of the pit whence ye are digged’. The former was the source of houses of stone, the latter of those of mud.

9 Island of Meroe, p. 8, referring to Cailliud III, p. 179.

10 See Griffith, Meroitic Inscriptions, Part I, No. 74.
a. JEBEL EREMBAT FROM QOZ REGBE REST-HOUSE (see p. 4)

b. STONE SET CHRISTIAN GRAVE, EREMBAT: note white pebbles (see p. 4)
a. HUMAN FIGURES, ES SIHAN (see p. 6)

b. OX WITH TASSEL, ES SIHAN (see p. 6)
a. BULL, HAGAR EL MERWA (see p. 7)

b. WALL OF MAHDIA (?) FORT, SHEREIK (see p. 7)
a. OUTER FACE OF THE NORTH WALL OF DANGEIL SHOWING ROBBER TRENCH (see p. 9)

b. RAISED GRAVE, EL GOL (see p. 12)
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

see any remains of others. The earthen bank represents what was originally a wall of mud brick faced on the outside with red brick. This can be seen quite clearly along the north wall where the trench dug by brick-robbers (Plate va), who are still actively at work unfortunately, can plainly be seen. A few of the red bricks still remain, and all of the mud bricks backing them. There are many mounds inside the walls, and on the top of the highest is a mud brick wall. The whole area has been dug over. Outside the middle part of the north wall the ground is even more thickly strewn with pottery than the rest of the site, and some of the pieces are quite large and appear to represent whole pots. From this and other indications I think that there were kilns here. The pottery everywhere is Meroitic in character, mostly hard red ware; there is none of the burnished ware (with dotted bands) characteristic of more southerly sites such as Guteina and Abu Geili. The massive walls and the size of the area enclosed suggest that this was an important Meroitic town.

While investigating Dangeil, I observed on the otherwise level plateau of Jebel Nakharu two miles to the west on the west bank a low elevation with a gap in the middle which was obviously a fort, and I noted it for subsequent inspection (see Site 15, to be fully described in SASOP, No. 2).

In the afternoon of the same day (January 12th) I set out to visit the site of the ‘Christian remains’ marked on the map (45 K) 2 miles south of Ineibis Halt, immediately east of the railway-line. Though we examined every bit of the ground here we failed to find anything, and it must be concluded that once again, as opposite Korgos, the map is wrong. While we were hunting for it Mohammed Faqir observed a faint greyish discoloration on the brow of the valley escarpment at Shiqla (Site 14) about a mile south of Ineibis Halt, and declared positively that it indicated the presence of asarat. I knew that it could not be the ‘Christian remains’ we were in search of, but I thought it might perhaps be something else; the discoloration was an abnormality that demanded an explanation—and it is such clues that lead to discoveries. Mohammed Faqir’s intuition no doubt worked on similar lines, reinforced as it was by long experience in the desert and by the close observation of marks on the ground that is so necessary and useful there. We drove up on to the plateau and I got out; to the casual first glance there seemed to be nothing but a carpet of small smooth pebbles, but almost at once I saw some very hard lumps of calcareous concretions which reminded me of Arkell’s at Khartoum; then I found a potsherd, weathered, but with undoubted dot-ornament all over it. I beckoned to the others to come and we soon had quite a collection of sherds, including also some bits of highly mineralized bone. Some of the sherds too were almost as hard as stone. There were fragments of granite made smooth by rubbing, and a few flakes. There is another patch of discoloration a little to the east; we went there hoping to find more sherds but there was not a single one. It is plain that the discoloration is caused by the calcareous matter of which we found plenty of specimens at both spots. The former site, which yielded the human artifacts, is not level but covered with small mounds about 2 feet across in which calcareous concretions are firmly embedded. Next day I revisited the site with the District Commissioner of Berber, Mohammed Effendi Mahmoud esh Shaigi, who was keenly interested in the discovery. I found a curious perfect circle of small bluish stones about an inch long; it is three feet across. I cannot suggest any explanation of it; the site has been very heavily eroded by rainfall, which occurs annually, and it would seem impossible for such an insubstantial affair to be at all ancient. It does not, however, look modern, nor are there any traces of children having played there, as can often be found on such sites. Erosion has removed some of the relics to a lower level.
KUSH

and we found many more sherds and such like in the small gullies which traverse the western slope.

The site is the first of its kind to be found in this region. Some of the sherds had incised decoration resembling the wavy-line pottery found on the 'Early Khartoum' site, but by far the commonest kind was that with massed dot-ornament which is very abundant there and also on the Omdurman Bridge site, at El Geili Station, within the older enclosure at Jebel Umm Marrahi and at Esh Shaheinab. I found several sherds of it when inspecting burial-mounds on the edge of the desert plateau on the west bank, and it is very abundant on the site at Ed Damer, to be described later (Site 34). I even found fragments of it on the surface of the desert just outside the fort at Fura Wells, between the fort and the graves on the east, though they were hardly abundant enough to indicate more than casual occupation. It seems to be the basic ware of all the late Stone Age sites mentioned; and at six of them it is closely associated with calcareous concretions. These, as Arkell has proved, are the result of a higher Nile, and the consequent higher water-table, at the time the sites were occupied by man. The minimum height above the highest recorded Nile at Khartoum was about 4 metres, and the remains at both Ed Damer and Shiqla are at about the same level above the flat ground below, which must approximately represent the foreshore of the earlier, higher Nile. This higher Nile must surely be the result of a greater annual rainfall, and the only available period is the Atlantic. Shiqla and Ed Damer, at least, and in my opinion all the other sites mentioned, would therefore fall within this period, though it may be possible to distinguish phases within that period. The presence at Shiqla and Ed Damer of both quern-fragments and rubbing-stones seems to bring both these sites within the food-producing stage. There is a definite overlapping in the pottery styles of all the neolithic sites, from Khartoum to Jebel Moya; and it is difficult to believe that that would happen if their combined length was more than a couple of millennia at the most, if as much.

On the way from Berber to Atbara and Ed Damer on January 13th, I had intended to inspect the Meroitic site at Darmali which Crowfoot\textsuperscript{11} mentions, but neither local enquiries nor casual inspection from the road revealed it. Further on, between Darmali and Atbara, close to the east side of the road, is a biggish hillock with some bricks lying about (Site 15). There is a fair quantity of potsherds, most of them much weathered and of a kind which I could not recognize.

We left Ed Damer again on January 16th and set out to explore the west bank which I expected to have been more populous than the east bank and where accordingly more ancient sites should be found. That expectation was fully justified. Opposite Darmali we found beside the road on the edge of the desert a group of round burial mounds exactly like our Bronze Age barrows on Salisbury Plain. I got out and inspected them; there were about 50 or more, most of them about 3 feet high and from 20 to 30 feet in diameter. Most of them have a round depression at the top, covered by a thin layer of mud. At first sight one might mistake this for the work of grave-robbers, but that it is not can be inferred from several facts. In the first place the depressions are too neat and symmetrical and are all exactly alike; then there is no trace of spoil-heaps or of broken pots. If the graves had been robbed one would expect to find occasionally the broken remains of such, for grave-robbers are out to find gold and 'valuable' objects and invariably destroy any pots they may find. It is true that I did find potsherds on some of the mounds later on, near Baeqir, and that not all of the mounds have this central depression. Nevertheless I believe it to be due rather to the collapse of a tomb-chamber

\textsuperscript{11} Island of Meroe, p. 8.
or coffin, or merely caused by the natural subsidence of the soil over a hole dug in it. The mounds opposite Darmali are set close together, and beyond a small khor to the southwest is another group containing one very big one. As we proceeded we found many more; near Fahalab the road actually passes through a large group of them. Eventually I stopped marking them on the map, so common were they; they seem to line the low gravel escarpment of the desert almost continuously all the way along the west bank right down to Mograt Island. Some of them will be mentioned below; the chief groups I noted were (from south to north) north of Jebel Nakharu, west of Bauga, at Zuma a mile north of Wadi Dam et Tor and just south of the Pump, opposite the south end of Artul Island, opposite the middle of Marra Island, and at Ez Zuweira opposite Dagash Station where the road cuts across the bend and crosses a rocky desert stretch. But this list is far from complete; the mounds were observed almost continuously along the desert margin. I do not remember seeing any on the east bank except those already mentioned near Hagar el Merwa. By a curious coincidence Mr G. W. Grabham wrote to me just as I was starting my explorations reporting similar mounds observed by him on the west bank opposite and above Ed Damer. There is a fine group also immediately north of the desert road to Merowe about midway between the Ed Damer ferry and Abu Ushar; they are planted in a row along a low ridge. Already before starting I had seen from the train a long row lining the horizon on the brow of the plateau southwest of Ed Damer, but appearances in the desert are deceptive and at a distance of a mile or more I did not like to trust to appearances untested by a closer inspection. These and several large groups north of the ancient city of Meroe were the only ones I observed on the east bank. Those near Merowe had already been noticed by Lepsius who mentions a group of about 56 'looking like a group of pyramids in the distance' and others of 21 and 40 mounds. He thought that some of them 'still clearly showed their original four-cornered shape. The best grave had fifteen to eighteen feet on each side; it had been, like several others, dug in the middle, and had filled itself with pluvial earth in which a tree was growing.' Others were placed within rectangular enclosures whose foundations consisted of 'little black stones.' Yet further south is a large group at the Wadi Seidna on the west bank, all round the aerodrome, and one a little further south that has been excavated and produced Meroitic pots. There are many of the mounds in and about the ancient site at El Gereif, to be described below, and it was here that the three Meroitic pots now in Khartoum were found in 1949 or 1950. (There is now only a tiny mound on the actual site, which I was shown and which is marked by a large stone lying in the roadway).

By a process of elimination I had already arrived at the conclusion that the mounds must be Meroitic, and subsequent evidence confirms this. They seem to represent the common graves of which the pyramids are particular developments. Their abundance on the west bank may be due to the fact that it was the most populous; but it may be due, as in Egypt, to some religious belief. It is obviously desirable that some of them should be carefully and completely excavated; in view of their number no harm would be done by completely removing one or two.

Just before we reached Bauga, at the south edge of the irrigated area and on the north boundary of Et Tikkawin, on the east of the road, Mohammed Abbas observed a

12 Letters, 1853, p. 235.
13 Otherwise mud; but for these holes, see my remarks above.
14 [This has been done. See article by Marshall and Abdelrahman Adam on p. 40 of this Journal. Editor].

II
KUSH

brick site and we stopped to investigate. A large area is covered with red brick rubble and potsherds, the latter mostly rough with a red slip, but I found one piece of undoubted Meroitic ware with dotted festoon ornament. The site has been encroached upon both by cultivation and by the houses on the south, but there are still extensive remains including brick walls. When leaving Bauga the next day we found a large group of burial-mounds which I inspected. They were of the same character as those already described. Amongst them I found some small rubbers made of a porous volcanic stone, but these may well be much earlier in date; it is possible at almost any point on the desert margin to find a few weathered potsherds of the Esh Shaheinab type, if one searches long and carefully enough.

We left the cool rest-house at Bauga at 9 on the morning of January 17th, again for an unknown destination. My chief objective was the northern end of the island of El Usheir where Omda Suleiman of Shereik had told me there was an important site; but there were minor sites to be disposed of (if possible) en route, and I wished to be free to halt for the night if any site of major importance should turn up. None did, nor in fact did the minor ones. The road was very bad—we stuck several times in khors—and often difficult to follow through the lack of guiding stones; and I did not want to spend time hunting for them. In the slate country between El Gol and Jebel el Hamra, beside the road on the left (west) I found a group of 33 raised graves of a type not previously encountered (PLATE VI). They are not really graves at all but coffin-shaped tombs whose sides are formed of big stones built up to a height of some 4 feet and about 6 feet long. They are placed in rows fairly close together and are filled with slatey grit and rubble. Most of them are still as perfect as the day they were made, though a few had collapsed. I think that many graves that appear to be rough cairns may be in fact raised graves that have collapsed. There was nothing to be seen in the way of grave-goods or bones, even on the site of those most ruined. We saw another group further on, and also what appeared to be a burial-cairn set in the middle of a large round enclosure whose bank was made of small stones. The raised graves were oriented exactly east and west.

About two miles further north, immediately north of a khor—I think Umm Godima—in which we stuck (as all cars must), the road passes through the middle of a large group

15 The most promising is a reported non-Arabic inscription in the neighbourhood of Jebel en Nabati, which may be at or near the well in the Khor Abu Haraz. There are also said to be rock-pictures hereabouts, and we saw a lot of likely-looking granite boulders like those at Es Sihan, but none had any pictures.

16 [There are many graves of this type, certainly of Christian date, at Ghazali. A number of them have inscribed stelae. Editor].

17 Owing to the absence of any fixed points on the map by which one could locate oneself, it was not possible to identify the position of these sites. This would only have been possible by means of the named islands marked, but that would have involved finding someone who knew the name. There are no permanent habitations except El Gol, and very few nomad huts. Where there is an island marked one might not find anyone to ask. This typically Sudanese situation did in fact often occur; sometimes after a halt and the inevitable preliminary 'How-d’ye-do’s' and simple questions repeated several times we would learn nothing or merely what we already knew. My companions were often amazed at the ignorance of the locals about their own topography. Later on in the easier and more open country further north I used to drive to the top of one of the smooth gravel-covered hills at intervals to get my bearings. One could generally locate one's self approximately by the row of conical white roofs at a railway-station on the opposite bank.
of round burial-mounds. Some of these have remains of internal circular walls protruding, and others have a covering of large slatey stones laid over their skirts (Plate VIb). The road throughout this region is very bad and inadequately marked; it could easily be improved by grading the approach to the khors and making a causeway of rough stones across; this would have to be cleared of sand occasionally after the flowing of the wadis. More marking stones are also needed. (There are plenty on the desert road to Merowe where one could not possibly miss the road). Eventually we spotted the white roofs of Karaba station, and soon afterwards a splendid castle (Site 17) loomed up on our right. That decided the night-stop but not the accommodation. Eventually we found a house of a sort at the point opposite Karaba Station. The castle proved to be the site for which I was making; it stands on a bluff on the extreme north point of El Usheir Island; a few yards to the south are the ruins of a church built of red brick, and there are graves to the southeast. For these see SASOP, No. 2.

The older name of the island (Dricki) is still known locally. I was informed that the part of it where the castle stands was called Hogana. Possibly all these are names of parts, not of the whole.

We left Karaba Ferry at 8.0 a.m. on January 22nd for Baqir, which we reached at 10.20. Opposite the north end of Esri Island are the stone foundations of a wall enclosing a rectangular area 180 by 210 feet. The shorter side fronts the road and has an entrance gap in the middle. Right up against the wall in the northwest corner is a fine hut-circle. The only sherds found were plain and birma-like. There is a narrow strip of cultivation on the east side, separating it from the Nile, and a group of nomad huts close by to the south. The name given me sounded like Zimama (Site 18). In the absence of evidence it would be rash to suggest a date, but in the present, still quite imperfect, state of knowledge the presence of a hut-circle would appear to be a Christian feature.

At Baqir we found our old friend Omda Suleiman who took us to his charming house with its courtyard, in which was a green tree shading a well. It was a welcome change after the austerities of Karaba Ferry (though I at least was quite happy there). The objective was the castle (Site 21) on Gandeisi Island which Jackson had mentioned and published a rough diagram of. This was duly planned, and so too was the little church (Site 20), still remarkably well-preserved, which Jackson had missed—it is about half a mile north of the castle. We also found an open Christian settlement (Site 19) immediately opposite Tarfaya, just east of the debouchment of Wadi Dam et Tor. In the cemetery we found fragments of tiles inscribed in Greek letters. A little over a mile south of Baqir, on the left bank, opposite the ford to Sabnas, and the castle, I found the foundations of a small bastioned fort, and remains of pottery-kilns (Site 23). All these are described in SASOP, No. 2.

While at Baqir I walked out one day into the desert to visit a group of burial mounds (Site 24) visible on the sky-line. There were about a hundred, some quite large and surrounded by a wall of big stones and gravel on the outer margin of the encircling ditch, just like an earthen Wessex bell barrow. All round and amongst the mounds shallow pits have been dug, presumably for maraq, but it is to be observed that they never destroy the central tomb though they often encroach on it and sometimes break through the surrounding wall. There may be a practical rather than a superstitious explanation, however. I collected sherds from the vicinity and surface of the mounds; though none

\[18\] Soil from ancient sites is thought to have value as a fertiliser and is known as maraq in Sudan Arabic. Editor.
KUSH

were definitely Meroitic, they seemed more likely to belong to that period than to any other.

We left Baeir at 8.40 a.m. on January 31st intending to stay in the house of a friend of Omda Suleiman’s at Gereif. On the way we inspected the site of ‘Christian ruins’ marked on the map (45 G) at the debouchment of Wadi Absol, opposite the north end of Artul Island. There was nothing to be found there however, and we eventually found it two miles to the south, opposite the south end of Artul, just within the territory of Kuddik. The remains at Kuddik (Site 25) appear to represent a bastioned castle, but it is very ruinous. On the west is the fallen pile of a huge stone wall with bastions at the north and south ends and one in the middle. Within are large heaps of red brick in complete disorder but obviously the ruins of big buildings. Pottery was not so abundant as usual, but what there was seemed to belong to normal Christian types. The castle stands on the edge of the Nile bank, between it and the road are graves but no mortar; the graves are small round or long mounds. It did not seem necessary to plan the castle, as the walls were all so ruinous, and it would also have been difficult to find accommodation there. One of the local people said that he had found an inscribed brick or tile in a pit, which he showed me; he left it there. But it was difficult to understand whether it really was an inscription. A little digging would probably recover it; the site is quite close to the castle to the southwest of it.

As we approached Gereif the outlines of a castle wall and brick corner-towers appeared—but the problem was, how to reach it? Absurd as it may appear, a narrow strip of irrigated land may be more impassable than the sandiest khor or spikiest desert outcrop. Our road ran, as usual, along the hard ground of the desert margin, and the houses of Gereif stand right on the edge of the river bank, amongst the usual dreary rows of palms, here enlivened by a few splendid wide-spreading acacias. We managed with difficulty to find a passage across the cultivation to the castle; but beyond it on the north the way to the house of our prospective host (absent at the time of our arrival) was barred by an insurmountable water-channel. There was no other way of access; we could hardly carry all our goods across and leave the truck unprotected day and night from the mischievous boys who were already swarming round; so I decided reluctantly to look elsewhere for accommodation. I came back later and spent a day (February 2nd) inspecting Gereif, which I shall now describe here, out of the proper sequence.

There were three sites here: (1) the place where the pots had been found in the winter of 1949–50: (2) the brick castle: (3) an extensive village site on the edge of the desert. The first was the prime cause of my interest in the place, but I knew from Jackson’s article that there were other things to be investigated—their exact nature was somewhat obscure. I had not anticipated any difficulty in locating the site, imagining that a discovery like this made only two years ago, would still be remembered by all. There were labourers working in all the cultivated fields, but persistent enquiries failed to arouse their memories. At last I sent Mohammed Faqir to enquire of the occupant of one of the bigger houses. He came across the fields and himself questioned the bystanders, one of whom remembered the incident. We were guided to a place in the road marked merely by a large stone; there was nothing else to be seen, no mound or other difference in the surface. He said that the pots had been found in a pit there. The site agrees with the account given me at the time—that it was on the margin of cultivation, about

10 Jackson gives this name to the site at El Koro, but the name is unknown there, and he must have confused that site with this one.
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

500 yards from the river bank. It was rather an anticlimax, but I had at least seen the spot and confirmed the facts.

Here I should like to insert a grateful acknowledgment of the help received everywhere from the local people in locating sites. Whether Omdas or workers in the fields they were ready at all times to take endless trouble to assist me, though the nature of my quest must often have been beyond their comprehension. The help thus given, sometimes quite lengthy and considerable, was without any expectation of reward. It was part and parcel of that hospitality to strangers, whether in the form of coffee or accommodation, which graces the Sudan. One felt that here in the country districts was a society which still had a firm hold on human values.

This quest having ended, I was free to inspect the castle (Plate vii). It was obviously quite different from the Christian castles of stone at Usheir and Gandeisi, for it was constructed mainly of red brick. (Appearances were deceptive; the bricks are mud-coloured outside, being covered with a veneer of wind-blown dust, like those of Gandeisi Church. That always occurs where the building is on and surrounded by mudland; at Usheir, on rock, there is no gathering-ground for wind-blown dust and the bricks are still bright red and can be seen as a red land-mark a mile away). The west wall is 130 paces long and has a round brick tower at both ends. About the middle of the south wall is a fine archway of brick, the main entrance (Plate viiia). All the walls are pierced with loopholes for rifle-fire. Attached to the south wall is a smaller fort of different construction. The walls are of mud and large stones, like those of the forts at Shereik and elsewhere which I have suggested were built during the Mahdia. The west wall meets the south wall of the larger fort just east of the main archway but is not bonded in and is obviously later. At the southwest, southeast and northeast corners are mud-built towers. This smaller fort measures 30 paces from north to south and 50 from east to west. The east walls of both forts stand right on the edge of the Nile bank, those of the larger fort being only 2½ feet thick. Inside the larger fort are several buildings of mud and mud-brick, some ruinous, some still inhabited. The latter, though probably on old foundations, may have been reconstructed. Part of the interior has been divided up into small squares for irrigated crops but they are no longer used. Outside the west wall are some large pits and close by are the remains of two brick-kilns where the mud from the pits was baked and the bricks of which the larger fort is built were made. There are lumps of vitreous over-fired bricks lying about. All these facts, especially the archway, point to a very late date and we may confidently assign the larger fort to the Turkish period, perhaps about the middle of the 19th century, and the smaller one to the Mahdia. In view of the state of its preservation a plan could easily be made.

The third site at Gereif was beside the road opposite the castle. It had evidently once been a considerable village whose shapeless stone ruins cover the middle part of the area. There are quantities of potsherds, whose Christian character is confirmed by a fragment of a tile with an embossed cross on it, like those from El Koro. At the northern end of the village ruins are two distinct groups of graves, one under the escarpment (and on its brow), the other southeast of it beside the road. (It was near the latter that the pots were found). South of the village ruins are several small stone enclosures, perhaps for animals, and south of these yet another group of graves. I found a few bits of red-painted plaster, but little or no red brick. The site has been much confused by maroq digging, and it is difficult to interpret or describe for that reason. It would be still more difficult to plan; indeed to attempt to do so by the old-fashioned method (still quite suitable elsewhere) of plane-table and tape would be unprofitable and terribly exhausting. The only really satisfactory record would be by air-photography at a low altitude and at
KUSH
dawn or sunset. The site is low, hardly, if at all, above the level of the adjacent irrigated fields which tend to encroach on it, and may have actually done so in the past. For this reason some excavation might be advisable. The existence of three apparently distinct graveyards, and the discovery of a Meroitic burial near the middle one suggests that the occupation may have been long continued. The discovery of a tile with a cross on it encourages one to hope for inscriptions, though a careful search in the place where I found it revealed none. It would be easy to excavate a few of the grave-mounds to test this point, but, unless the site should be threatened with obliteration (which is not unlikely) I should not recommend it, for there are others that are more likely to yield good results for less labour.

I shall now resume the account of our journey from Gereif to ‘Atmur on January 31st. Frustrated in the attempt to reach the village and anticipating no difficulties at ‘Atmur, about 10 miles further on, I decided to have lunch, and stopped when we came to a shady tree. After lunch we went off the road westwards at a suitable place and climbed the low escarpment in the truck so that I might try and locate our position. This I did approximately by means of Abu Dis station and Burq el Anag, both to the northeast of us on the east bank. On the brow of the escarpment we found three small burial-mounds, the northernmost consisting entirely of red brick; though there was no plaster, I think it was the remains of a small Christian gubba; we had seen other mounds similarly placed further south. In the distance to the north I saw some big banks on a hill-top and agreed with Mohammed Faqir in thinking that they represented the works of man, not nature. Returning to the road for a short run we left it again and climbed the hill to inspect them. What we found was a most curious affair; the bank ran round the head of a steep-sided gully which debouched northwards into the debouchment of the Wadi Abu Sudeir. The bank, semi-circular in plan, had been thrown up from the inside and therefore had no ditch. At two points in its course, opposite each other, were heaps of red bricks, and there were other heaps at the bottom of the khor. The defences are directed against an enemy advancing from the south, and would seem to imply the use of rifles or muskets rather than spears. The hill is the highest in the neighbourhood but is only a little higher than the rest of the escarpment, of which it is part. The Omda of ‘Atmur recognized it as ancient and gave it the name Monasa—or should it be spelt Manassir? I found nothing else like it in my travels. We tried a short cut to regain the road, but stuck in a sand-dune and had to retrace our tracks; it was the only occasion in all the hundreds of miles when Mohammed Faqir made an error of judgment, and it was one for which I shared the responsibility.

The house of the Omda at ‘Atmur was on the edge of the river bank and the truck was just, but only just, able to stagger across the grid of cultivation-banks to it. We were now in the heart of the kunteib country—the region infested by a biting midge that raises a most irritable spot wherever it bites. But although its ravages are as unpleasant as previous victims have reported, its locale is curiously intermittent and there were none to speak of here. It seems to be most common at a short distance away from the river—which may be why the houses cling so closely to the edge of the bank.

The next day (February 1st) I visited the ancient site (No. 28) at ‘Atmur village, which is due west of Abu Dis station on the opposite bank\(^2\). Immediately south of the surgery and west of the road is a brick-site which might be all that remains of a church, though no walls are visible amongst the rubble. It is regarded locally as the site of a

\(^2\) This site is not marked on the map; the one at ‘Atmur which is marked is Site 29, described below. Site 28 is situated in the territory which on the map is incorrectly assigned to Amaki.

16
Plate VI

a. Burial-Mound, Fura (see p. 24)

b. Burial-Mound, North West of El Gol (see p. 73)

Facing p. 16
a. ARCHWAY IN TURKISH CASTLE, GEREIF (see p. 15)

b. NORTH WEST TOWER OF TURKISH CASTLE, GEREIF (see p. 15)
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

kenisa\textsuperscript{21}. West of it are the remains of a Christian village with both red and mud bricks lying about everywhere, and quantities of the usual Christian potsherds. West of this again are some graves, but no mortar; I found one brick with what may be a cross marked on it. The whole stands within a huge semi-circular earthen bank whose ends curved round to the cultivation-strip at the north and south extremities. At the north end the bank passes between the school on the north and the surgery on the south. Immediately west of the school it crosses a long outcrop of hard calcareous concretions which runs north and south and resembles (but is not of course) an intrusive igneous dyke. The top of the bank where it is best preserved is about 6 feet above the surface inside it but much more above the partially silted-up ditch outside. There is no trace of brick or stone walling to be seen in its construction which seems to have been entirely of earth dug from the ditch. The bank runs continuously with only a few gaps. The longest diameter of the whole enclosed area, measured along the modern road, is 690 paces. In a way it resembles the great Turkish bank round Old Berber (though it has no projecting earthen bastions as that has). But such earthworks naturally do resemble each other, and as it neatly encloses the Christian site and has no relation whatever to anything else—there are no ancient 19th century village remains—it is difficult not to regard it as contemporary with the Christian village. Excavation of the bank alone can decide and would do so quickly and easily.

The calcareous outcrop is presumably evidence of an old river deposit, but although well above any modern flood-level it appears to be below the level of the concretions associated elsewhere with Stone Age artifacts.

The main objective of the day was the Christian site marked on the map at the north boundary of 'Atmur (Site 29). It proved rather dull, consisting merely of two walls of a mud-brick building standing in the debris of a small undefended Christian village. The building may once have been a church, but not enough of its walls remain to restore the plan without digging. On the hill above are graves but no mortar. We were then carried off to Korgus by a passing inhabitant, for the ordeal by drinks. On the way we passed the gubba of Abu Geizan (of whom nothing is known); it is built of mud bricks corbelled, and is much weathered on the outside. The corbeling can be seen quite plainly on the inside. Having disposed so quickly of Site 29, there was plenty of time left for the next objective which was Hagar el Merwa on the opposite bank. There is a regular ferry-boat crossing, the boat being big enough to take four donkeys as well as many passengers; it starts from a point about midway between the suk of Korgus on the north and Site 29 on the south, and lands one opposite the railway halt, which is opposite the suk. The crossing takes longer for the return journey because the boat has to be rowed some distance upstream, to avoid rocks, before crossing; our return journey took half an hour. There is then a walk of 2\frac{1}{2} miles along the railway line to the Rock (for which see above p. 6). We got back to 'Atmur at 6.15. It had been an exceptionally successful day's field-work, beginning at 6.30 a.m., and the weather had been perfect, with a gentle breeze from the southeast.

The Omda of 'Atmur, our host, told me that there was an ancient site ('kenisa') on the east bank opposite that at 'Atmur, and that there are rock-pictures of cattle and such like at Burq el Anag\textsuperscript{22}. He also said that the alleged 'inscriptions' at Jebel Umm

\textsuperscript{21} [Arabic for church. Editor].

\textsuperscript{22} Which he pronounced thus, not Amag, so that my remarks about it elsewhere (Fung Kingdom, p. 52) may be incorrect. I took particular note of it for this reason.
KUSH

Sheriba in the western desert were similar, and not writings, as the Omda of Korgus had told me. There is, he said, a well at Umm Sheriba 90 feet deep.

We left 'Atmur for an uncertain destination south of Mograt on February 3rd, a day of wind-blown dust with visibility never more than a mile and often much less, but cool. The road was bad beyond Korgus, and often difficult to find, and we missed it and took the wrong one at Ez Zuweira opposite Dagash. Local enquiries soon put us right, though it took some time to find anyone to enquire of. Our objective was the 'church' at El Koro (marked on 45 C), the site wrongly called 'Kuddik' by Jackson, which I had vainly tried to reach from Abu Hamed. It proved well worth the effort, for it consisted of a fine castle and church (now used as a mosque), both of which I planned, and a gubba graveyard with many inscribed tiles (Site 31). These are described in SASOP, No. 2. Accommodation was found close to the castle, and I resisted the hospitable efforts of the young Omda to remove me to his house a mile to the south, compromising by a sumptuous and welcome repast there on the last night of our stay. On leaving I was presented by him with a couple of lambs which (later increased to three) travelled with us for several days and then mysteriously vanished. It is discreet not to probe these matters too closely if one wishes for a contented party. I should add that there are no kunteib at El Koro.

On February 7th I decided to explore northwards and westwards as far as the road and time permitted. We stopped at Ghireib for morning tea with the Omda, who told me that there were many rock-pictures on the west end of Mograt Island (Ras el Gezira) as well as those at Es Sihan, but nothing at all at Ez Zuweira except the small Mahdia fort I had already seen there. Soon after leaving the Omda's house a splendid castle (Site 32) loomed up on the southern shore of Mograt Island; it was about midway between Argat Island on the southeast and the two small islands (unnamed on the map) 3 miles to the northwest of Argat, and is situated in the southeast end of the territory of Kelesaiakal. It was a complete surprise, not being recorded by Jackson or anyone else, and I very much wished to inspect it; but when I tried to find a boat to take me across (on our way back) I was told that there was none, and I had to be content with a view, and photograph²⁴, from the southern bank of the channel. It was most tantalizing, as there might have been a church and graveyard with inscriptions; and had I known about it while staying at Megal, only 4 miles to the north, I could so easily have gone to see it. So it remains as a plum for some future traveller to pick. I could see that it was mainly of stone with some mud or mud brick, and had the usual semi-circular stone bastions. It stood on a low rocky eminence immediately above the river channel. The south wall is parallel to the river bank and set back a little from its edge.

Our next objective was the 'Christian remains', marked on the map south of Fillikol Island, and the rock-pictures reported to exist on the island by Jackson. We failed to find the 'Christian remains', nor did local enquiries help. If there were any there we could hardly have missed them, and one can only conclude that the map is wrong once more. We were told, however, that there were rock-pictures at the Stones of the Anag on the island, and Mohammed Faqir and I crossed on foot to the island and walked about half a mile eastwards to some granite boulders, accompanied by some of the inhabitants, who were anxious to help, but rather dim. We searched all over the boulders but could find no pictures, but there were many remains of ancient occupation. Close to the group of boulders on the southeast is a fine stone hut-circle (diameter about 15 feet) and little beyond on the southeast runs a ruined stone wall about 3 feet wide, touching which on the southeast are two contiguous hut-circles. The ground southeast of the

²⁴ SASOP, No. 2, Plate xxviii.
wall is covered with potsherds, but they were unornamented and of uncertain age. There are a good many stone flakes also lying about. A line of sand-dunes runs along the north bank of the channel.

Still worried about the Christian site we had failed to locate, I made persistent enquiries, at first fruitless; but when I mentioned the word ‘kenisa’ I was told that there was one further west, with red bricks lying about, and this proved to be correct. We set out once more and, picking up a guide en route, reached a place (Site 33) opposite the island of Gebaliya24 where was a mound covered with brick rubble with a few large stones, probably the lintels of doors. This may well be the site of a church; the potsherds were Christian, and there were many graves near which also seemed to be Christian; but we could find no mortar or tile-fragments.

The road here runs along a wide level plain, well adapted, it would seem, for a pump scheme, between the scarp on the south and the river channel. It had been excellent all the way from Ghireib and was still quite good when we reached Site 33. I knew, however, that it was quite unsuitable for a car opposite El Kab, and I have no doubt that it ceases to be negotiable long before that point, for beyond Mograt Island, if not before, the hard ground comes near the river. The exploration of this portion of the Nile Valley had never, except for El Kab, formed part of my programme, and it would have to be done by camel. It is worth doing, for there must be many sites, both those already recorded by Jackson and those hitherto unrecorded, especially on the south or left bank; but it is a young man’s job. I felt quite satisfied with what I had managed to do, for I had now not only completed my original programme (except for the sites in the Bayuda) but had discovered many entirely new sites as well as the inscriptions, and had hitherto been free from illness or any other serious mishaps. Even in the reach between Abu Hamed and Atbara there are still certainly many sites left to be discovered or surveyed—at Karaba and on Usheir Island, for instance. The islands everywhere are likely to provide good hunting, for thanks to their inaccessibility (even to-day) they are even less known and the remains on them less likely to have been mutilated. Abba Island in particular (where the ‘book’ was found) deserves early investigation.

We left El Koro next day (February 10th) at 8.0 a.m. and after a halt for lunch in our old quarters at Baqir, arrived at Bauga soon after dark. We set out again next morning in a terrible dust-storm. I stopped for a few minutes to take some more photographs of the rock-scribings at Nakharu, and Mohammed Faqir found a nice perforated base of Fung type on the lower slopes. We reached Ed Damer in the afternoon.

The next four days were spent in making arrangements for my next and most ambitious venture—a journey to Gakdul and El Fura in the middle of the Bayuda desert. The truck had to have its usual overhaul and minor repairs, but on Sunday evening I received a message that the next day, being King Farouk’s birthday, was a public holiday, so that the workshops at Atbara would be closed. The truck could not therefore be ready again before Wednesday. Though at first annoyed, I remembered that such frustrations had often been compensated in other ways, and I said so to a fellow guest in the rest-house, quoting an example. The remark was prophetic. Being thus immobilized there was nothing to do but go for a walk. Remembering Burckhardt’s account of the ‘hierarchical state’ I set out to see whether anything remained of the old town. Perhaps I did not look in the right quarter, but anyway I found nothing, and returning by another route I saw a low hill near the cemetery that somehow looked archaeologically attractive.

24 I did not actually see the island, but accepted local information that it was where it was pointed out, and have no reason to doubt its accuracy.
As I went up it I found the ground strewn with ornamented neolithic potsherds, stone flakes, bones and rubbing stones (Site 34). The pottery was of the Esh Shaheinab type and there was also many calcareous concretions. This was old Ed Damer indeed. The bones were highly mineralized; some were quite large, and one could hardly be anything but the femoral head of an elephant or similar large quadruped. Amongst the sherds were a few with wavy line markings, and some of a new type, with oblique incised lines round the lip and parallel horizontal rows of dots below. I revisited the site in the afternoon and again on February 21st, and brought two bags full of bones back to England, for identification. The site is close to the railway, on the northeast outskirts of the town; below it on the east is a small valley (used as a rubbish-dump) and, just as at Shiqla, the sides of the hill are coursed by small rain-gullies which have reduced its extent. The top of the hill is, at a guess, some 10 or 15 feet or a little more above the present flood level of the Nile. If, as Arkell has convincingly argued, the calcareous concretions are relics of a higher Nile and water-table, the neolithic sites here and at Shiqla must have been on the bank of the Nile. When one stands on the sites one feels convinced that this argument is correct. Both sites invite expert excavation, which would be quite easy, especially at Ed Damer.

The journey into the Bayuda was arranged and we were to start on Thursday. The route followed the trans-Bayuda road to Merowe and was controlled, that is to say, travellers had to obtain permission to travel along it and had to provide the authorities with a time-table. (This control is exercised in the interests of travellers themselves, so that if there should be a breakdown in the waterless desert stretch they may be rescued). The Governor, Mr Arber, and the Deputy Governor, Mr Buchanan, were most helpful, and a police truck was sent to accompany ours and return after our arrival with a letter from me, stating how long I proposed to remain there. We left Ed Damer at 8.20 a.m. on February 14th, and started from the west bank at the ferry at 9.15. The road across the desert was excellent, and we reached the wells of Abu Ushar at 1 p.m. and had lunch there. The motor road from there to Gakdul and El Fura is not that marked on the map, and anticipating (quite correctly, as it turned out) that both places would be difficult to find, I decided to take a guide. A volunteer was soon found from amongst the herdsmen gathered round the wells, and after arranging for the care of his animals while he was absent, he joined our party and we set off at 1.45 p.m.

The topography of the region is quite plain when one is in it but quite impossible to discover from the map. As one approaches Abu Ushar from the east one sees long before one arrives there a compact mountain massif, not high and with a fairly level summit. It looks rather like the not dissimilar massif through which runs the Shabluka Gorge, or like Dartmoor as it appears from near Exeter. This higher ground probably attracts or condenses rainfall, and certainly retains it like a sponge; consequently the water leaks out through gorges round its margin. When the rainfall was heavier and more regular—perhaps when old Ed Damer and Shiqla were inhabited—the torrents and rainwash flowing off it carried a load of gravel and silt which they deposited in great sheets all round the edge. These are now covered with grass, forming even when dry as hay excellent pasturage for cattle, sheep and goats and camels. In the neighbourhood of Abu Ushar the road to El Fura passes over a plain that is thickly covered by this grass, forming a continuous carpet with no bare soil visible. It extends for some miles. The people do not live at the wells but in the neighbourhood of the best pasture; this may be four or five miles from any water, and they have to take their animals to the wells to drink every few days. Cattle have to be watered every two days at least, but sheep and goats can manage for a day or two longer. The owners accompany their animals to the wells.
to draw water for themselves; but the animals sometimes find their own way back, feeding as they go and taking their time (perhaps 24 hours) on the journey. The landscape is quite beautiful; the big trees in the wadis and the grass and smaller trees elsewhere, and the rocky ridges, are a welcome change from the monotony of the surrounding desert. It was curious to travel 60 miles across those arid flats and find these habitable parklands in its centre; but there was something vaguely sinister about it all. A stranger from the temperate zone, accustomed to an abundance of water, feels so helpless here, and that depresses him.

My two objectives were the pools of Gakdul (Site 35) and the wells of El Fura (Site 36), both of which lay well off the road, back in the outer recesses of the massif. I decided to go first to Gakdul, and it proved to be a fortunate decision in every way. The road was excellent until we had to leave it to go to Gakdul; then it ceased to be a car road at all, and we had to crawl along a track used only by animals going to water. As we got near the pools we followed the rocky bed of a torrent, but at last we could go no further, so we stopped and camped under some trees. The pools were only a little further on. While the truck was being unloaded I went for a stroll. It was late in the afternoon and the last herdsman had departed. On the top of the rocky bluff overhanging the pool the rude stone wall of a fort could be seen, and there was another on a hill east of the main wadi, looking down on our camp-site. I climbed the gentle slope on the north where a narrow pathway led up to the fort; it was obviously made for that purpose, and its fresh condition showed that it was not old. The wall of the fort was made of biggish unshaped stones without any binding material, and was of no great thickness. There were no potsherds but I found a bit of thick greenish bottle-glass, probably part of a beer-bottle, and concluded that the fort had been built in the 19th century. That conclusion was confirmed later when I was able to consult books. In January, 1885, Gakdul was occupied and fortified by the Desert Column of Wolseley's army. Sir Charles Wilson wrote: 'Leaving the plain, we turned up a wide valley with good grass, and then swinging left, passed through a narrow opening into a sort of punch-bowl or crater-like place into which three or four ravines drained. Two stone forts had been built, the ground laid out for us to camp on, paths made and sign boards put up.'

The place was temporarily occupied by a force of about 2000 officers and men under Brigadier-General Sir Herbert Stewart; amongst them was Major Kitchener, then an Intelligence Officer 'who had established himself in a cave on the side of the hill'. After the fall of Khartoum the Desert Column, under Buller who had succeeded to its command on the death of Stewart, evacuated Gakdul and was back in Korti early in March.

The next morning (February 15th) I set out with Mohammed Faqir to inspect the other sites. We went first to see an enclosure in the west wadi where Mohammed Faqir had heard there were both 'cememt' and 'writings' at a grave-yard. We found both, but the cement was an obviously modern coping on the stone wall round the grave-yard, and the writing had been written on it while it was soft, and was Arabic!


\[28\] From previous experience we had learnt to expect inscribed tiles where 'cement' (i.e. bits of mortar) was to be found lying about near graves.
The enclosure was 72 feet long (east–west) and 47 broad with an entrance gap 3 feet wide in the east wall. There are 15 rectangular graves outlined by big stones. They vary from 9 to 10 feet in length and from 4 to 5 in width and are arranged in four parallel rows oriented east and west. In the southeast corner is a larger grave 9 feet 9 inches wide and 16 feet 4 inches long (east–west), with a tall upright headstone at the west end. I made a rough plan but can offer no suggestions about its nature except that it is unlikely to be very old.

The pool is a little east of the grave-yard (PLATES VIII, IX). Its sides are formed by the sheer rock of the narrow ravine in which the spring that feeds it rises. On the east wall are one or two modern-looking scrawls but without a closer view, which the water prohibits, I could make nothing of them, nor could I see anything resembling the usual rock-pictures that one would expect to find at such a spot. There is said to be another pool higher up the ravine, with excellent water; but access is difficult, and as we had plenty of water on the truck I did not trouble to visit it. The pool itself is probably in part artificial; below it on the south is a dam of gritty mud rising well above the level of the water and probably the result of constant cleanings of the pool itself. It looks as if the hollow in which the pool lies might once have been completely filled with this debris which the earliest users had removed. Indeed it must be continuously filling up with silt brought down by the torrent after rain. A deep trench through this dam might reveal a most instructive stratification, but it would be impossible to dig it unless the pool should be abandoned—a most unlikely occurrence. There were raised round clay drinking-troughs on the dam, but the cattle which came to drink while I was standing there (PLATE VIII) went straight into the pool to drink, followed soon after by sheep, goats and camels and their herdsmen. Across the wadi from east to west just below the dam runs the remains of a dry stone wall, and from the fort on the hill above I saw that the level bottom of the wadi was covered by remains of stone huts; there is also a large enclosure surrounded by a much decayed dry stone wall. This is evidence of permanent occupation, but there were no potsherds to give a clue to the period. On the level ground on the west side of the wadi one sees a number of parallel ridges exactly like the ridge-and-furrow of our English medieval cultivation (PLATE IX).

I then climbed to the top of the hill and inspected the fort there. It was obviously quite modern; the stones of which the walls are built have not yet had time to weather and still retain the bright yellow patina of their formerly unexposed surfaces. They are 3 or 4 feet high and about 3 feet thick, and the outline is irregular. The wall on the east side has been deliberately destroyed and the stones removed—probably rolled over the edge of the cliff. From the fort there is a fine view down the wadi, and on the tops of the surrounding hills I counted no less than eight small stone-built outposts or observation posts, apparently rectangular. Square tin plates are fairly common, no doubt relics of the 1885 camp, but I found no potsherds anywhere at Gakdul. Nomads use skins, not pots, for holding water.

The hill on which this last fort stands is a rocky plateau covered with stones, and thickly littered with flakes of all kinds. Some are of basalt, the edges much weathered and obviously very ancient; they are all quite big. One of the larger specimens looks like a core. Others, mostly much smaller, are of stones whose fracture is the same as flint. I also found half of a finely flaked blade of cherty (but probably igneous) stone; it is (in its broken state) 1½ inches long and less than half an inch thick. One surface, that originally lying uppermost, is of a dark chocolate colour and has the desert gloss, the other is of a light yellow colour and has not. Longer search would probably have yielded more implements or fragments thereof. That the big weathered flakes go back
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

to the old Stone Age is highly probable; and that the men of the old Stone Age came here is shown by my discovery of a broken and weathered but apparently authentic biface. (This last was picked up in the wadi near our camp). The surface of the plateau has doubtlessly changed little through the millennia that have gone by since men first drank the water of Gakdul; an axe or knife dropped there and lost by its owner during our northern glacial period would lie there until it was found by an archaeologist—which was what in fact happened.

On the plateau northeast of the 1883 fort are several graves of the usual stone-set kind. To some, paths have been made by clearing away the loose stones. There being nothing worth planning and no reason to remain I decided to have an early lunch and go on to El Fura Wells. It was fortunate we still had the Arab from Abu Ushar with us; without him we should never have found them. There is, I am sure, a proper approach by some sort of road that can be used by a car; our route was the only one our herdsman knew and it included specimens of every sort of obstacle encountered in this country—steep wadi-banks, sandy beds, boulder-strewn plains and rocky ridges. All were however just negotiable, and the last part was good going over a grassy fluvial plain. As we approached the massif we saw a castle in front of us—not stately walls and bastions but just huge banks of boulders. (Though probably pre-Christian it is included amongst those described in my Occasional Paper). I was very glad to see it and particularly glad to find that it was down in the plain and not perched on some inaccessible crag. I decided to camp right beside it. The wells were close by and I like to be as near as possible to my work. My interest in El Fura was of long standing; it was first aroused by a statement in Gleichena’s compendium that there was there a ‘large square fort with square flanking projections’; largely on the strength of this statement, which proved to be well founded, I suggested that El Fura Wells should be identified with the ‘Boron, in mediterraneo’ of Bion (as quoted by his contemporary Pliny). Attempts to locate and photograph it from the air by an officer of the B.O.A.C. on whose course it lay, were unsuccessful, but that merely increased my desire to solve the mystery. Though once a regular halt on one of the main Bayuda crossings, it is now of merely local importance. From the ruinous condition and rectangular bastions it seems to belong to an earlier regime than the Christian castles; this is confirmed by the potsherds, some of which are definitely Meroitic. Its purpose is evident—to guard the wells immediately outside it on the northwest.

As at Gakdul, the ground is thickly strewn with flakes, especially round the wells themselves. I picked up what seems to be an authentic biface of Chellean or Acheulian type; the point has been broken off, and though very much weathered both cutting edges are perceptible. To the north and east of the fort the ground is fairly level and here I found a few sherds with the massed dot ornament characteristic of neolithic sites at Esh Shaheinab, Shiqa and Ed Damer. There were hardly enough lying about to establish occupation, but enough to prove that these neolithic people had been there; a longer and more thorough search might well reveal more unless they are buried under the soil or have all been trampled back into dust by the hoofs of millions of animals going

27 The choice of site was, however, wrong. Where there’s water there are flocks and herds and their droppings and flies. Here and at Gakdul, but more here, the flies swarmed in countless myriads soon after dawn and just before sunset, and they infected the food and gave me a bad illness. It would have been wiser to camp a mile or more away.

28 The Anglo-Egyptian Sudan, 1905, 1, p. 316.

29 Fung Kingdom, p. 4: see fig. 3.
to water. Here, too, some 50 yards east of the fort, is a group of graves that must surely belong to it. They consist of round mounds whose composition is formed of the gritty soil around. They have stones set round them and laid on them, just as have those already described on the western bank of the Nile (Plate viia). This, too, is evidence of a Meroitic occupation. Between them and the jebel on the north runs a natural dyke that closely resembles a wall, but is not one.

The plan of the fort took only one day to make and with it my original programme had been completed. I was taken ill that night and we left at 7.30 the following morning (as we had intended to) reaching the Nile ferry at 12.0. On the way I observed a group of burial-mounds of the usual (Meroitic?) type about midway across the desert, but was in no mood to stop and inspect them, as otherwise I should have done. Three days were spent in hospital at Atbara, and after brief halts at Ed Damer and Shendi we arrived back in Khartoum at 2 p.m. on February 23rd and deposited the bags of pottery collected at the Museum.

---

---

30 A rough calculation would suggest that during the last 5000 years some 200 million animals at the least must have gone to drink there, counting each day's batch as a fresh one.
JAKDUL POOL (FROM ABOVE), THE DECAYED WALL AND (BEYOND) THE PARALLEL RIDGES (see p. 22)
THE MOSQUE OF AGIB ON ASLANG ISLAND (see p. 25)
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

There still remained a fortnight before I was due to fly back to England. The sites I had had in mind to visit were (1) Jebel Qeili, (2) Aslang Island, (3) Jebel Umm Marrahi, (4) Geteina. The first was for the purpose of obtaining if possible a good photographic record of the Meroitic pictures there; but as this would require at least one night camping there, possibly in the open, and my memory of El Fura and its flies was still fresh, I decided to cut this out, having had enough of desert wells for one expedition.

The second site, Aslang Island, is only 20 miles north of Khartoum. My interest was aroused by references to it in the Tabaqat of Wad Dayfallah (MacMichael’s D 3) and particularly by the statement (in § 126) that Sheikh Agib had built the mosque on the island for Hammad el Negid who was killed at the battle of Karkog in 1611, and that the mosque was still standing in 1805 when the Tabaqat was written. There seemed therefore to be quite a good chance that it was still there; and in view of the extreme rarity of buildings of the Fung period (apart from gubbas) that would be a most interesting discovery. It was. When we got to the point opposite the middle of Aslang Island we found that the channel was dry (February 28th), and although we stuck in the sand of its bed we were able to motor right up to the mosque. Enquiries on the island at first met with no success; eventually we were told that there were two mosques side by side, one of them in ruins. I found that the one in ruins was a modern brick structure of no interest, and that Agib’s mosque was still roofed and functioning. It is a nearly square building whose mud-plastered walls measure outside about 40 feet each way (Plate X). The south part of the original west wall has fallen and a new one has been built a little to the east of it, reducing the size of the interior. This new wall has incorporated in it the two westernmost brick pillars which support the roof. These are about 3 feet in diameter and the other four are still performing their original function. There are doors slightly west of the middle of the north and south walls, three and five feet wide respectively. In the middle of the east wall is a semi-circular projecting niche, now the mihrab, with a seat inside immediately south of it; and midway between it and the southeast corner is a door four feet wide. There are buttresses on each side of all the doors and at the two northern corners. The walls are oriented to the points of the compass. The mihrab faces due east, not to Mecca (which here is northeast)\(^{31}\). The plan closely resembles that of the Christian churches at El Usheir, Gandeisi and El Koro, except that the apse at Gandeisi is rectangular. Perhaps it would be rash to base too much upon resemblances between such very simple buildings; but it looks rather as if Agib had either taken over a Christian church and restored it, or that the plan of Christian churches had been copied. The absence of any red brick lying round about the site is against the former suggestion. But there is evidence of former buildings having stood on the ground near, especially on the south and west where the foundations of mud-walls surrounding courtyards laid out in very straight lines can still be traced, and on the west are mounds that look like house-debris, with a straight road or street between them. The potsherds are not numerous and no distinctive ones were found. The place deserves further investigation; a little excavation on the site of the houses would be easy and might be quite enlightening; there might well be some stratification.

From there we went on to Jebel Umm Marrahi (Site 37). Two years before I had seen a square fort on this hill from the air as we were approaching Khartoum. The hill is about 6 miles north of the present (temporary) aerodrome at Wadi Seidna. Topographically it is an exact replica of Jebel Nakharu, for in a long stretch it is the only

\(^{31}\) [Bearing of mihrab as taken by me is 80°. Editor].
KUSH

rocky eminence that comes right up to the river. Such places commanded the riverain traffic and were the obvious locations for forts. Jebel Umm Marrahi was a military site during the Mahdia, and even to-day it has not lost its military value, for during the 1939-45 war great holes were blasted for guns on its western slope (fortunately without doing any damage to the older defences). There are two defensive enclosures on the flat summit; one is a square fort with walls about 270 feet long on each side and (probably semi-circular) bastions. It may be Meroitic and will be described elsewhere. Immediately south of it is a large irregular enclosure whose wall of much weathered stone has completely collapsed and is more spread than that of any of the forts or castles that I have seen during these explorations. The area inside is covered with thousands of stone flakes and potsherds, all the latter being of neolithic type—mostly bits with massed dot ornament but also including quite a number with wavy line ornament. There are also many small round platforms, about 3 feet or a little more in diameter where the bigger stones have been removed and a sort of rough floor of small pebbles formed. It is difficult not to regard this as a defended neolithic habitation site; it is certainly a habitation site of the period indicated by the pottery, and it is the first site that holds out any promise of finding structural remains of this period.

The third site, Gutina, was on the east bank of the White Nile, 50 miles above Khartoum. Its archaeological fame is due to the fact that three inscribed bricks have been found there, as a result of which discovery Gutina is quoted as marking the southern limits of medieval Nubian Christianity. Another find is a perfect small bowl of fine ware with a stamped medallion of a gazelle in the centre; it certainly belongs to the Christian period. Last come some potsherds from an occupation site with large red bricks on the river bank at Fiki Mahmoud, south of Gutina. The description of the last site was clear and specific, but there was nothing to show whether the other two finds also came from it or from distinct sites.

We left Khartoum in the truck on March 1st. This, the last run of the expedition, was, like the first up the Atbara, a raid into a virtually unknown area, so far as archaeology is concerned. It would seem that only Arkell has recorded anything about it, and that on museum labels only. (No criticism is implied; one cannot publish everything, particularly in a land where there is so much to publish and so few publications interested). Next morning we set out to find Fiki Mahmoud (Site 38), which was not difficult. The name comes from the tomb of a fiki, decorated with flags and situated close to the river bank at a regular port of call of the river steamer, which was anchored in a little bay there when we arrived. The site is about 2 miles south of the town of Gutina. Here the bank consists of a low mud cliff some 15 feet high in places and capped with sand-dunes. On the bare surface between the dunes the ground is strewn with quantities of potsherds and hammerstones and rubbing stones; and in places the bones of graves are exposed.

32 Khartoum Museum, no. 3: two with MIXAH, one with KOYKOOT.
33 Ibid, no. 437; presented by Captain MacEwen.
34 Ibid, no. 5550; Lat. 14°49 N.; Long. 32°19 E. Presented by A. J. Arkell, 17.XII.47.
35 It would help future investigators if the finders would state, and museum curators record, the exact position of the site, for it is often by following up such clues that important discoveries are made. Such finds are often made by chance or by persons whose other duties preclude a leisurely and thorough inspection. Much time was wasted during this expedition in hunting, sometimes without success, for inadequately described sites. The mention of a compass bearing and distance may make all the difference; and it is just as easy to say '1 mile s.e. of the rest-house at x' as 'at the foot of the hill'.
We found bones also protruding from graves exposed on the cliff face. The surface-finds between the dunes were (as I thought) of two periods only, Meroitic and Fung; but Mr Shinnie informs me that there were many Christian sherds amongst those I collected in the bags. Descending to the foreshore, which is 50 yards or more wide, we found it thickly strewn with potsherds, nearly all Meroitic, for a distance of about half a mile north from the boat-station. In one place there is a pile of red bricks at the foot of the cliff, and above at the top of the cliff there still remain, embedded to a depth of 4 feet, the foundations of a brick structure. Immediately below this, at a depth of 7 feet 6 inches below the surface, I found half of a small round-bottomed bowl of buff-coloured burnished Meroitic ware. Below it the undisturbed surface can be detected at a depth of 11 feet; but, as so often in this land of wind-blown dust, no stratification is visible. We examined the fallen bricks thoroughly, but none had any letters on them, and there were no tiles. The date of the brick structure must therefore remain in doubt. A Meroitic date cannot be entirely excluded but seems improbable, and a Christian one more likely.

The pottery strewn along the foreshore includes quite a number of big pieces and may be derived from graves, but the site is also quite certainly an occupation-site and a big one. No structural remains (apart from the one mentioned) were found, and it seems likely that the houses were of mud or even merely straw huts, for if of mud some of the walls would surely have been seen on the cliff face, as at Abu Gelli. The sherds are of all types, but no painted ones were found and none of the creamy buff ware. One sherd had incised red-filled ornament. I found a clay spindle-whorl and part of a stone archer's loose; and in the afternoon a boy brought me a nice broken amulet of glazed faience, on which is represented a small crocodile, which, following our example, he had picked up there the same morning. Most of the sherds consist of burnished ware—black, red, brown and grey-green—with deeply incised decoration on and below the rim. There were a few sherds of hard red wheel-turned ware, perhaps imports. There are also sherds covered with large patches of incised dots and a few with wavy lines, perhaps lingering survivals of the neolithic tradition.

Parenthetically I would suggest that a new terminology is needed to distinguish the northern and southern elements in Meroitic pottery. The hard red wheel-turned pots, and those which have painted ornament are ultimately of northern origin, even if imitated locally; whereas the incised and burnished ware is indigenous in the valleys of the Blue and White Niles and has its roots far back in the neolithic period.

In the afternoon, I went down to the river-bank immediately west of Geteina in the hope of finding the Christian site which had yielded the inscribed bricks and the gazelle bowl, for it then seemed that such a site must exist and be distinct from the one just described, where (as I thought, but wrongly) no Christian ware had been found. But naturally I did not find it; the cliff I had seen at Fiki Mahmoud gets gradually lower northwards and finally ceases at a point west of Geteina, where it is replaced by a narrow strip of cultivation. I examined the shore southwards for about half a mile, along which the cliff is only a few feet high and the foreshore 70 yards wide. There were occasional sherds of both Fung and Meroitic types, the former consisting (as also further south on the main site) of birmas only.

A few concluding remarks about the prospects of field archaeology in the Nile valley. It would be a good guess that Arkell found the site at Fiki Mahmoud because the steamer happened to call there when he was on board. How many other sites like it remain yet

---

36 The neolithic painted ware of Jebel Moya is quite a distinct technique.
to be discovered because no steamer carrying an Arkell ever calls at them? How many sites are still completely unknown because they lie on a little used route? This article will have shown how much could be found beside two such roads between Atbara and Abu Hamed, and there, be it noted, I had the advantage of being able to follow up Jackson’s preliminary reconnaissance. Though I made a few original discoveries, most of my time was devoted to sites whose existence, if little more than that, had already been recorded. The investigation and planning of these occupied most of my time, and none was left for an intensive and thorough examination of other likely places. I was not even able to go and see several places where I was told that antiquities existed. The experienced field-archaeologist has a flair for finding ancient sites, because he knows the topographical preferences of primitive peoples; but he may not have time available to utilize his experience. I am sure there must still be many sites left which neither Jackson nor anyone else has seen. If that is so, how much more must there be elsewhere where not even such preliminary reconnaissances have been made, or where the road does not follow the river bank? No one has ever explored the west (left) bank of the Nile between Khartoum and Atbara. Even within a day’s excursion from Khartoum two major sites and an early Fung building remained unrecorded until this year. There must be many more. It is quite possible that there are neolithic sites of the Esh Shafeinab type at frequent intervals all along both banks of the Nile and Atbara. There must be other forts on suitable hills between Jebel Umm Marrahi and Jebel Nakharu. The islands, so seldom visited, are most promising hunting-grounds. Sites with palaeolithic axes strewn about must, as Arkell has shown, exist elsewhere; the Atbara region is a likely one, because it contains outcrops of that Hudi chert of which some of them were made. (One would expect a workshop site somewhere east of Atbara). Where so little is known, almost every site found is a new discovery, an original document of history or prehistory. Did not Arkell find the three oldest prehistoric sites within the bounds of the Three Towns themselves? ‘Go, look see’ was the slogan of this expedition, and I would commend it to others.

APPENDIX I

The following is a key to the numbering of sites. Those in square brackets are to be more fully described in SASOP, No. 2.

2. "   neolithic.
5. Es Shian, Mograt Island: rock-pictures.
7. "   mud castle.
8. "   site on left bank.
10. Artul Island: mosque-church.
FIELD ARCHAEOLOGY OF THE MIDDLE NILE REGION

[15. JEBEL NAKHARU: stone castle and rock-carvings].
[16. ET TIKKAWIN: Meroitic village.
[17. EL USHEIR: stone castle and church.
[18. ZIMAHA: rectangular mud (?) enclosure on stone foundations.
[20. GANDEESI: church.
[23. BAQIR: rectangular stone enclosure with bastions.
[25. KUDDIK: stone castle.
[27. MONASA: defended khor.
[29. KORGUS: Christian village.
[31. EL KORO: stone castle, mosque-church and grave-yard (inscriptions)]
[32. KELBASKAL: stone castle.
[33. JEBALIYA: Christian site, grave-yard, church site (?)
[34. ED DAMER: neolithic site.
[35. GAKDUL: modern forts and grave-yard: surface finds.
[36. EL FURA: stone castle and grave-mounds.
[37. JEBEL UMM MARRAH: stone castle]: neolithic (?) ring-wall.
[38. FIKI MAHMOUD, GETEINA: Meroitic site.

APPENDIX II

The following identifications of bones from the neolithic site at El Damer have been made at the British Museum (Natural History):—

PHACOCHOERUS AETHIOPICUS (Wart Hog): 3 fragmentary teeth.
Elephant: humerus fragment, phalanx.
Terminal phalanx of small ungulate about the size of PELEA or CEPHALOPHUS.
Distal and metacarpal of large ungulate, about the size of Roan Antelope—HIPPOPOTAGUS.
Tooth of large ungulate.
Part of metapodial of buffalo, probably Syncerus CAFFER AQUINOCTIALIS.
Distal end of tibia, probably of a Hartebeest, Alcelaphus BUSELAPHUS.
Part of the shell of a freshwater snail of the genus AMPULLARIA (now PILA).
The Late Acheulean of Esh Shaheinab
by A. J. Arkell

In January–February 1949 an occupation site of the Khartoum Neolithic, previously known as the Gouge Culture, was excavated by me on behalf of the Sudan Antiquities Service. Preliminary reports were published in SNR, vol. xxx, pp. 212–21 and in the PPS for 1949, pp. 42–9, and the final report was published in 1953 under the title Shaheinab.

Esh Shaheinab is on the west bank of the Nile about 30 miles north of Omdurman, and the Neolithic site is situated on a broken ridge of quartz gravel between two branches of the Wadi Abu Shush, this ridge being no doubt what remains of the west bank of the neolithic Nile. It is probable that this gravel was still being laid down during neolithic times, being presumably brought from a little way inland by spates of the Wadi Abu Shush, the small waterworn quartz pebbles having eroded out of the Nubian Sandstone, as they still do in this area.

The geological section at Esh Shaheinab is not unlike that at the Wadi Siru and Khor Abu Anga (see SASOP, No. 1, pp. 6–7 and 29). Nubian Sandstone bedrock is not far from the surface, and is exposed in places, e.g. about 200 metres northwest of the site, in a small erosion gully which passes immediately north of the Neolithic site, and part of which can be seen in Plate XIa. Overlying bedrock is a layer of gravel, mostly of small quartz pebbles with, in places, somewhat larger pebbles below them. Some, if not all, of this gravel corresponds to layers 4 and 5 at Khor Abu Anga, and contains Acheulean artifacts. Superimposed on this gravel, where protected by a cap of the later mesolithic-neolithic gravel and so not eroded away, is a deposit of black alluvial clay about 2 metres thick. This clay was no doubt deposited by the Nile, and is comparable to the black clay to be found on the edge of the modern Nile at levels 3–4 metres lower and nearer the river.

On p. 29 of SASOP, No. 1 it is stated that ‘between Wadi Siru (a west bank tributary of the Nile about 15 miles north of Omdurman) and the Sixth Cataract’—i.e. on either side of Esh Shaheinab—‘... a few handaxes of Late Acheulean type in ferricrete sandstone have been found on the surface, suggesting that natural erosion is in some places exposing deposits of Late Acheulean Age’. That is what appears to be the case at Esh Shaheinab. Towards the end of the excavation of the Neolithic site a few weatherworn handaxes of this type were found on the surface in an erosion gully (Plate XIa), which runs just northwest of the actual excavation between EE 98 and P 104 on the contour map of the site, Shaheinab, pl. 2. This gully is cut right through the black alluvial clay, and into the fine quartz gravel which underlies it. Indeed in its upper reaches Nubian Sandstone bedrock is practically on the surface, and the general similarity to conditions at Khor Abu Anga has already been noted.

The two handaxes Sh. 231 and 230 (Fig. 1, nos. 1 and 2) were found on the surface in this gully together with three other weatherworn ferricrete handaxes and an unfinished one, also the ovate Sh. 232 (Fig. 1, no. 4) and an almost circular disk chopper of 65–72

1 Mrs Leakey, whose beautiful drawings of three of these weatherworn artifacts and one other—all that she has seen—are on Fig. 1, writes that to her they look more like Fauquemart than true Acheulean, both because of the type of handaxe and also the disk choppers. But Fauresmith has not yet been recognized so far north, and in the present state of our ignorance it seems better to describe them simply as Late Acheulean. See also Plates XIII and XIV.
Fig. 1. LATE ACHEULEAN ARTIFACTS FROM ESH SHAHEINAB
mm. diameter. There was also what appears to be an unfinished example of a disk chopper similar to the one illustrated but in fossil wood; also another example in fossil wood, weathered and only 51 mm. in diameter. Three flakes with faceted butts, in ferricrete sandstone, the largest 65 mm. in length, were also found, and five cores from which such flakes had been struck, one of ferricrete sandstone, three of silcrete sandstone (comparatively unweathered) and one of rhyolite (weathered). There were also four pieces of débitage in ferricrete sandstone.

Slightly lower down the same erosion gully in square Y 100 there were found on the surface, having apparently weathered out of the same fine quartz gravel, the following:—

2 quartz hammerstones,
1 unfinished ferricrete disk chopper not unlike FIG. 1, no. 3.
1 unfinished small handaxe being made from a large side flake of ferricrete sandstone,
1 butt of a large ferricrete handaxe (or part of a large disk chopper?),
2 cores with prepared platforms (ferricrete sandstone),
1 flake of ferricrete sandstone,
1 flake of weathered rhyolite.

From the surface of a smaller erosion gully tributary to the above there were found on the surface in square V 101, having apparently weathered out of the same fine quartz gravel:

1 small handaxe made from a ferricrete flake, 73 mm. long and 62 mm. in maximum breadth, PLATE XIIIb (top centre).
1 ferricrete handaxe not unlike FIG. 1, no. 1, but broader, shorter and blunter, length 102 mm., maximum width 78 mm., PLATE XIIIb (top right). (All the above handaxes are made from slab or tabular ferricrete sandstone).
1 'Tumbian' type foliate biface with thinned and narrowed butt 97 mm. long and 48 mm. maximum width, PLATE XIIIb top left, cf. SASOP, No. 1, p. 9 and pl. 14, figs. 2, 4 and 6.
1 quartz hammerstone.
1 weathered flake of rhyolite 116 mm. long,
3 small cores of ferricrete sandstone,
1 crude flake with faceted butt of ferricrete sandstone.

In one of the small erosion gullies on the immediate riverward side of the Neolithic occupation site was found a crude point made from a flake of ferricrete sandstone with faceted butt, length 75 mm.

From the surface of another erosion gully north west of the hamlet of Aulad Masikh the Qufti, Doctör Ali Ibrahim collected a weatherworn ferricrete handaxe 141 mm. long (PLATE XIVa top left), also a crude 'pebble-chopper' in ferricrete sandstone and four ferricrete sandstone cores.

A few men were therefore set to dig a trench from P 942 about 15 metres from the edge of the Neolithic site at square M 88 across the erosion gully to the northwest (PLATE XIIb) in which the first palaeoliths had been found, with the object of disclosing the exact relation of this palaeolithic fine quartz gravel to the Neolithic site and the black soil on which it was situated, and also of discovering, if possible, tools of this Late Acheulean culture in situ. For the line of the trench see Shaheinab, pl. 2, and for the section of the trench, see FIG. 2. As time was short, it was only possible to dig a trench a metre

---

2 The actual point of commencement of the trench (at its southeast end) was 7 metres south of peg P 95 and 5 metres north of peg P 92.
a. EROSION GULLY NORTH OF NEOLITHIC SITE AT ESH SHAHEINAB

b. TRENCH BRING CUT FROM THE NEOLITHIC SITE ACROSS THE GULLY SHOWN IN a.
PLATE XIV

a. ARTIFACTS FOUND ON THE SURFACE AT ESH SHAHEINAB

b. SELECTION OF ARTIFACTS FROM EXCAVATION WEST OF PEG PP104
THE LATE ACHEULEAN OF ESH SHAHEINAB

wide, and to take it down to a depth of 50–70 cm., as circumstances demanded, but it
was carried for a distance of 68 metres across the erosion gully in question past a point
one metre west of Peg Z 104, the last nine metres being outside the grid of the contour
map. The trench showed, as can be seen on FIG. 2 (section of trench), that the black
alluvial clay which is two metres thick under the Neolithic site, thins out on the slopes of
the gully, and in it is eroded completely away.

The black clay at the southeast end of the trench was clearly the same as that a few
metres away underlying the Neolithic occupation site. A sample of this clay was taken
from the middle of the deposit, one metre below the occupation debris, from the side of a
deep Meroitic grave N 81 (10) (for which see Shaheinab, p. 92). Another sample, No. 5,
was taken from the dark clay on the far (northern) side of the gully. Both samples were
submitted to the Government Geologist, who reported on the latter that it consists of
‘dark grey clay with some pebbles. The clay contains a considerable proportion of
sand, the minerals being those usual in Nile alluvium, purple pyroxene, colourless garnet,
dark green amphibole, kyanite, pale actinolitic amphibole, staurolite, zircon, bluish-black tourmaline, brownish-plum tourmaline, magnetite, rutile, epidote, sillimanite
and zoisite’. Of the sample from the bottom of the Meroitic grave N 81 (10) he reported
that it contains a normal assembly of minerals, pink garnet being common, and also a
large number of bone fragments, both brown and colourless transparent. (The latter
probably came from the Meroitic burial). Because in both samples the clay contains
local sand mixed with it, the Government Geologist suggests that they may not be original
alluvium but relaid.

It seemed that the quartz gravel underlyin. g the clay might possibly be divided into
two or three layers as shown in the section, but it was by no means certain that the
divisions were real, so samples Nos. 1, 2, 3, 4 and 6 were taken and submitted to the
Government Geologist. He reports that they cannot be distinguished from one another
on the basis of composition. No. 1 consisted of quartz gravel with kankar and some
dark clay; No. 2 of gravel, mainly quartz, with some kankar pebbles and kankar; No. 3
of coarse gravel with kankar; No. 4 was comparable to No. 2, consisting of gravel with
kankar and some sand, mainly quartz but a few pebbles of Basement Complex; No. 6
consisted of quartz gravel with some sand and kankar.

Artifacts were found in this quartz gravel as follows, their position being shown in
the section (FIG. 2):—

débitage and a fossil tree trunk, probably put in its present position by palaeolithic
man, at 19 m. from the southeast corner of the trench;
a small ferricrete core, 25 cm. below surface, at 28 m. from the southeast corner;
a very rough handaxe of fossil-wood, 71 mm. long, at 31 m. from southeast corner;
a ferricrete sandstone ‘pebble chopper’ in square W 100;
3 ferricrete hammerstones, 3 ferricrete cores, 1 rough flake with faceted butt and one
waste flake (both ferricrete) all about 25 cm. below surface in square X 100;
a weathered core or core scraper in ferricrete in square Y 100; and between
5–20 cm. below surface in the same square a disk chopper diameter 103 mm.
(ferricrete) made on a large flake, the butt of which was not flaked away, an
unfinished handaxe, length 91 mm., made on a side flake, 2 ferricrete cores (one
possibly an unfinished disk chopper);
and 2 ferricrete cores in square Y 103.

There is very little doubt that the artifacts found on the surface in the gully have
come from this fine quartz gravel which underlies the dark clay and overlies Nubian
Sandstone bedrock.
KUSH

An area about four metres square on the edge of the same erosion gully and further up it, about 50 metres west of peg FF 104, was also excavated. Here Nubian Sandstone bedrock was reached in places. The excavation was carried to a depth of 40 cm. if bedrock was not reached before. Finds (PLATE XIV, FIG. 8) included the weathered ferricrete disk chopper Sh. 233 also illustrated on FIG. 1.3, another somewhat similar ferricrete disk chopper, a rough ferricrete disk chopper made from a flake (weathered), length 62 mm., maximum width 52 mm., a small ferricrete ‘pebble chopper’, a rough fossilwood ditto, a fossilwood core, a ferricrete core, 2 silcrete sandstone cores, 2 waste flakes (one ferricrete, one silcrete), a small quartz hammerstone and an oval waterworn quartz pebble 104 mm. long apparently polished by use. These all came from the same quartz gravel.

Ferricrete sandstone weathers considerably in a year or two, as I have noticed at Khor Abu Anga in the case of Acheulean handaxes which are quite sharp and freshly flaked when dug out by gravel diggers; fossil wood also sometimes weathers fairly rapidly, especially when exposed to sand blast; but although the few artifacts of fossil wood and silcrete sandstone mentioned above are relatively fresh, while those of ferricrete (and rhyolite) are definitely weathered, there seems no typological reason to think that the whole rather crude and unsatisfactory assemblage belongs to more than one palaeolithic culture, which I have called Late Acheulean with faceted platform technique, and would have denoted AL on the map in SASOP, No. 1, for the culture is what I was taught to call an Acheulean-Levallois hybrid, the faceted platform technique occurring along with the manufacture of small handaxes and ovates (disk-choppers). The occurrence of one definite early ‘Tumbian’ (or Developed Sangoan) type (PLATE XIIb, top left) is to be noted. The culture is similar to the latest culture found in a similar situation at Khor Abu Anga, and also at Wadi Siru, which lies between Khor Abu Anga and Esh Shaheinab.

PLATE XI is from an oblique air photograph, taken with the Neolithic site at Esh Shaheinab in the foreground, and showing the Sabaloka hills and the Sixth Cataract in the far distance. The dark area near the river is the modern flood plain. The older flood plain above it, where the modern surface slopes down from the remains of the neolithic river bank, appears as a light band next to the dark modern flood plain. What may have been the river bank in mesolithic times, on which the Dotted Wavy Line site (see Shaheinab, p. 8) about 1000 metres west of the Neolithic site is situated, is indicated by the western edge of the second light-coloured band running parallel with the river and about as far again from it as the neolithic flood plain. In the middle distance as the river approaches the Sabaloka massif there seems to be a suggestion of a higher river bank still, where in some previous age the Nile may have run round the Sabaloka massif instead of cutting through it, as it does to-day. But according to levels taken by the Survey Department in 1941 the river would have had to have been 34 metres above its present high flood level to have got round the Sabaloka massif on its western side. And I am informed by the Government Geologist that according to levels taken in January 1952 the Nile would have had to run at 31.15 m. above the 1946 high flood level at Tamaniyat (near Esh Shaheinab) to have got round the east side of the Sabaloka massif. Whether this could have happened in palaeolithic times is at present uncertain, but seems improbable in the light of evidence from Khor Abu Anga and Khor Hudi near Atbara recorded in SASOP, No. 1. That evidence suggests a Chelles-Acheul Nile running at 5 m. only above the present flood plain.
Rock Drawings in the South Libyan Desert

by W. B. K. Shaw

(Note: These notes describe two groups of rock drawings visited during an expedition in the South Libyan Desert in 1935, a general account of which was published in the Geographical Journal, Vol. 87. The long delay in publishing these notes, for which I must apologize, is largely due to my becoming involved first in a civil war in Palestine from 1936 to 1939, and then in World War II from 1940 to 1945. I am greatly indebted to Mr. O. H. Myers who read the draft of this article and made many helpful suggestions.)

Qelti Umm Tasawir

The rock-well of Umm Tasawir (or El Musawwar) is situated on the western side of Jebel Tageru in Lat. 16° 17' N. Long. 27° 00' E. The well is near the head of a fine gorge which runs back into the mountain side for a distance of about three miles from the plain. A sill of rock crosses the gorge and below it is a small basin where the water collects. It was dry at the time of our visit (26.2.35) but the rope grooves scored in the edge of the rock show that water has been drawn there for many years. Near the well the cliffs of the gorge are 100 feet or more high and are covered with dozens of drawings scored on the sandstone; many of them are now inaccessible without ropes or ladders.

The pictures were first recorded by Newbold during his return from Bir Natrune in 1923 and in his article describing that journey he has published a description of them and one plate of illustrations (SNR, VII, p. 76).

At our visit in 1935 we took copies of about 40 of the pictures. The reproductions shown in Fig. 1 are from fair copies, in chalk on brown paper, of the original full size tracings, checked by photographs and some free hand sketches.

Nearly all the pictures are incised; we found only one painting, in red, showing the horns, head and shoulders of an ox, and two or three other indecipherable figures in white paint. The technique used seems to have been that well described by Dunbar (SNR, XVII, p. 152) i.e. the outer, patinated layer of rock has been removed with a stone implement, revealing the lighter coloured rock beneath. The pictures in the photograph in Plate XVA are as found and have not been chalked or otherwise coloured for photographing. In some cases, e.g. the men in front of the animal in No. 1 or the ? oryx in No. 11 the patina of the rock has merely been pecked away, giving the picture a pock-marked appearance; in others, e.g. Nos. 7, 8, 21, 22 the whole surface within the outline of the drawing has been removed so that, as Dunbar says, the finished picture is an intaglio. The animals depicted are mostly 25-40 cm. long and the humans smaller—averaging 10-15 cm. in height.

In most cases single figures are portrayed and there are few attempts at compositions such as those found in the paintings in the Gilf Kebir (cf. L. E. de Almasy, Récentes Explorations dans le Désert Libique).

The great majority of the animals are cattle; there are also giraffes and oryx (No. 11). The horns of No. 35 suggest those of a buffalo. Newbold also mentions elephants, probably referring to No. 5. It is impossible to identify a number of the other animals: the horns of Nos. 7, 9, 15 and 23 might be those of some sort of antelope but the animals
have the long, thick-ended tails characteristic of cattle. Animals which have no horns at all are probably calves.

It is equally difficult to determine what species of cattle are shown. In Saharan and Libyan rock drawings it is usually assumed that animals with long, spreading horns represent *Bos Africanus* (cf. Dalloni, *Mission au Tibesti*, Mem. Acad. Sci. Institut de France, 1935, p. 234 ff. and Breuil, *Revo. Scientifique*, 1928, p. 116) and those with short horns curved forwards *Bos Ibericus* (Dalloni, loc. cit.). In that case Nos. 1, 2 and 21 might be *Bos Africanus* and Nos. 8, 16, 36 and 37 *Bos Ibericus*. But in this matter of the horns so much depends on the angle from which the artist thought he was drawing the picture. There is a picture on the tomb of Ti at Saqqara of a bull which is obviously *Bos Africanus* with one horn pointing forwards and downwards.

As a whole the draughtsmanship is poor, especially in the treatment of the animals' legs which are disproportionately thick. The heads are also badly drawn and the ears misplaced or absent.

The cattle are certainly domesticated; in Nos. 1 and 2, and 37 and 38, men are leading the animals. The only hunting scene is that of the men with the giraffe, Nos. 27–29.

It will be noticed that in many of the pictures patches of the original rock have been left in circles, rectangles and other shapes. The intention was presumably to indicate the varied colouring of the animals' coats. A similar effect is achieved in paint in the pictures at Ain Duwa in Jebel Uweinat (Almasy, loc. cit.).

Some of the animals appear to be wearing an object attached to the neck, viz. Nos. 32 and 39, but it may be going too far to suggest that this is a cattle bell. The neck of No. 36 is surmounted by a curious object rather like a yoke, the horizontal cross-line is clearly drawn, though it is possible that we have only a bad drawing of the animal's ears. No 37 and another not illustrated have a number of short, vertical lines above the neck. In No. 29 a man is shooting at a giraffe with a bow while in other figures the men are carrying some form of club. Dalloni (loc. cit.) suggests that a rather similar weapon is a boomerang.

As regards the human figures, it is worth noting that all except No. 1 are steatopygous and Nos. 9, 10 and 28–31 are ithyphallic or have the curious penis position of the Bushmen drawings. Further, Nos. 25, 26 and 31 seem to have one feather in their hair, the headdress of the Kush of southern Nubia, while Nos. 24 and 38 have the two feathers of the Wawat of Upper Nubia.

Who drew these pictures and when? At Qelti Umm Tasawir there is no internal evidence of date so we naturally seek comparisons elsewhere.

The rock pictures found at Jebel Uweinat by the late Sir Ahmed Hassanein Pasha (*The Lost Oases*), have been divided by l'Abbé Breuil (*Revo. Scientifique*, 1928) into a number of types, two of which concern us here. These are his classifications:—

V a Older, better drawn and usually 'pecked', having a definite relationship with Egyptian pre-dynastic art, the work of a pastoral people who had domesticated *Bos Africanus*, and

V b Later, more schematic, usually incised, having affinities both with Egypt and the French Sahara, the work of a pastoral people who had domesticated both *Bos Africanus* and *Bos Brachyceros*.

The nearest important collection of drawings to Qelti Umm Tasawir is at Zolat el Hammad, 90 miles to the north north west, discovered by Newbold in 1923 (*SNR*, vii, p. 64) and published more fully in *Antiquity*, September 1928. The pictures show humans, cattle, elephants, giraffe, ostrich, oryx, dogs, etc., and the technique is similar to
KUSH

that at Qelti Umm Tasawir. Breuil considers that all the Qelti Umm Tasawir pictures and most of those at Zolat el Hammad fall into his type Vb. But as his article was written before Newbold’s account in Antiquity appeared, he had before him only the line drawings published in SNR, vii. Personally I should be inclined to regard the Qelti Umm Tasawir pictures as belonging to type Va of Uweinat.

WADI HUSSEIN

The rock pictures shown in PLATE xvb were found in Wadi Hussein, a water-bearing depression some 20 miles northwest of Merga Oasis. The waterhole of Bir Bidi (Almasy, SNR, xviii, p. 259) is situated in this depression and about three miles south west of it are two or three low sandstone hills, one of which Newbold and I named Sphinx Hill, from its appearance from the south. The drawings are on a concave surface on the south east side of this hill and were first discovered in 1927 (see SNR, xi, p. 167 and Antiquity, September 1928, p. 279). Later they were visited and described by Almasy (loc. cit.) and by Bloss (SNR, xviii, p. 305).

Part of the main group of drawings is shown in PLATE xvb and FIG. 2 is from a tracing of an enlarged photograph of the whole group. In order to show up for photographing the outlines were traced with a chalk pencil. I should here correct a mistake in the original description by Newbold and myself in which we stated that the pictures ‘were coloured red, apparently by rubbing with friable sandstone and not by painting’. After careful re-examination in 1935 I think that the reddish appearance of some of the drawings is due to the natural colour of the sandstone and that they were not artificially coloured.

As will be seen from the illustrations the drawings are executed with a simple incised line and are not ‘pecked’ or hammered out as at Qelti Umm Tasawir and elsewhere. This is no doubt due to the fact that in the soft, friable sandstone at Wadi Hussein a drawing can easily be made with any sharp pointed implement whereas at Qelti Umm Tasawir the hard silicified sandstone must be pounded away before any results can be obtained. I feel that too much importance is often given to technique which, as Dunbar has pointed out (SNR, xvii, p. 152), is primarily due to the material available.

Most of the drawings are of cattle: some of these (Nos. 4, 9, 19, 27, 32, etc.) are probably Bos Africanus while others (Nos. 1, 2, 11, 14, etc.) may be Bos Ibericus. But it is unwise to be dogmatic about the species when one remembers that, although the animals are drawn in profile, the horns are seen from many different angles. No exaggerated emphasis is given to the udders as in the paintings at Ain Dua (Caporiaco and Graziosi, Le Piture Rupestri di Ain Dua), or in the Gifl Kebir (Shaw, Antiquity, June 1936, p. 176). Nos. 5, 6 and 8 are giraffes and Nos. 12, 24, 37, 39 and 40 may be some sort of antelope. A number of the cattle have what appears to be a neck halter, e.g. Nos. 11, 14, 28, 33. The halter on No. 33 is drawn with two parallel and finely zigzagged lines. In the pictures of long-horned cattle in the Tomb of Ti at Saqqara holders of 3 or 4 ropes wound round the animals’ necks are shown.

Here as at Qelti Umm Tasawir there is no attempt at the composition of a scene. The group of animals is a compact one and most of the animals are facing the same way, but giraffes and antelopes are mixed up with cattle and some drawings are super-imposed on others.

The Wadi Hussein drawings, as l’Abbé Breuil has pointed out to me, recall those found by Schweinfurth near Aswan (Frobenius and Breuil, L’Afrique, p. 61) which are in the same semi-naturalistic style and drawn with a simple incised line. One feature present here but absent at Aswan is the parallel and vertical lines across the bodies of
a. ROCK DRAWINGS AT QELTI UMM TASAWIR

b. ROCK DRAWINGS AT WADI HUSSEIN
ROCK DRAWINGS IN THE SOUTH LIBYAN DESERT

Excavation of a Mound Grave at Ushara
by Kenneth Marshall and Abd el Rahman Adam

Following notes left by A. J. Arkell, a series of some twenty low mounds were rediscovered, lying approximately three kilometres in a south-easterly direction from Jebel el Toriya (see Sheet 55-B of the 1/250,000 map of the Anglo-Egyptian Sudan).

Bearing of Jebel el Toriya – – – – – – 315° (M)

Further prismatic compass bearings were taken as follows:–
1. The houses of the village of Ushara – – – – – 055° (M)
2. Jebel Abu Merawi, north west of Omdurman – – – 348° (M)
3. Gordon’s Tree water tower – – – – – 102° (M)

The prismatic compass bearings were deemed to give a fix of sufficient accuracy to plot the location on a map of so small a scale as the 1/250,000. From the position lines a small cocked hat was obtained about 1 kilo, south west of Ushara.

A well used road, running in a southerly direction, cuts through the site, actually traversing one of the larger mounds and leaving others on either side. Owing to the limiting factor of time and a small labour force it was decided to examine a small mound, which on measurement proved to be 11.5 metres in diameter, lying on the southern side of the site and c. 100 metres to the east of the road. A cutting 2 metres in width was laid out by prismatic compass on a north–south line and bisecting the mound; then removal of the spoil, a brown gravelly fill, began.

An irregular deposit of a more earthy consistency and a red colour was found below the brown gravel at a depth of 0.60 metres and at about this depth one small, coarse potsherd appeared, along with two human finger bones and a number of animal bones. Near the centre of the mound and just below the surface were a number of large stones (0.30 to 0.80 metres across and of a soft yellow sandstone) forming a very rough segment of a circle, whose centre appeared to correspond with that of the mound; and associated with them, one sherd of painted pottery—and further animal remains.

At a point 2.60 metres from the northern end of the cutting and at a depth of 0.70 metres a narrow trench appeared, cut into the natural deposit; which here is a yellow river terrace gravel, of similar consistency to the mound fill but of a quite different colour. This trench extended across the cutting and into the western wall, its width averaging only 0.50 metres. On clearing the trench a skeleton was discovered at a depth below the mound surface of 1.40 metres; it was lying on its face and right side, fully extended, the bones all articulated, although the cranium was badly crushed—probably by the weight of earth. In order to uncover the head of the grave an embayment was made in the west side of the cutting, commencing 2.00 metres from the north end and 2.00 metres by 2.00 metres in size. With the completion of this extension it was possible to expose the whole skeleton, the overall length of which was 1.98 metres, both femurs being 0.42 metres in length. The body occupied the whole of the very narrow grave and there were no grave goods; after measurements and photographs had been taken the bones were removed. This burial was allotted the identification of Grave No. 1.

A careful brushing of the cutting revealed a further narrow trench 0.85 metres from the northern end, commencing half way across the cutting and running into the eastern wall. In order to expose this second burial an extension of 2.00 metres was made on the eastern side of the cutting. In removing the spoil from this area a number of
EXCAVATION OF A MOUND GRAVE AT USHARA
USHARA

South-North Section

A - Brown Gravelly Earth
B - Red Stained Gravel
C - Yellow River Gravel

Fig. 2

USHARA

SITE PLAN

Fig. 3

42
EXCAVATION OF A MOUND GRAVE AT USHARA

roughly piled stones were noted at the foot of Grave No. 1; and there were also a number of large stones immediately below the surface, forming a further sector of the stone circle already remarked upon above. It was also discovered that Grave No. 1 widened in the extension as shown in the Site Plan; but no grave goods were found in the wider section. The second narrow trench—Grave No. 2—was then cleared. It was 0.50 metres in width at the top, narrowing by means of a step to 0.30 metres, at its lowest point. The overall length of the grave was 1.90 metres, a rather smaller skeleton than in Grave No. 1 occupying the whole space. Again there were no grave goods. The skeleton lay on its back and right side, fully extended, the bones all articulated. The cranium was badly crushed, but the mandible was obtained in only two pieces with a number of teeth in position.

After brushing the whole excavated area again, it was observed that a small hole had been sunk into the natural deposit below the stone pile at the foot of Grave No. 1, commencing at the level of the grave bottom. This hole was 0.70 metres in diameter and irregularly circular in shape. At 0.30 metres below starting point a widening began,

43
KUSH

the hole taking on the form of the 'oubliette' or beehive dungeon, and it became necessary to widen the entrance to facilitate excavation. At 0.50 metres below starting point the top of a complete pot was exposed and removal of all the earthy spoil revealed the presence of a further eight pots, arranged in three groups; and on the southern side of the chamber a skeleton. The latter lay in a crouched position, on its right side, face to the N.N.E.; it was badly crushed by the weight of earth resting directly upon it. The hands were folded in front of the body and beside them in two groups were a number of iron arrow heads, badly decayed; under the easternmost group of these lay an iron knife blade or spearhead. Amongst the crushed ribs and associated with the tarsal bones were numerous beads of faience, carnelian and glass. The diameter of this lowest burial chamber—Grave No. 3—at its lowest point was 1.85 metres and its maximum depth below mound surface 2.80 metres. The pots and parts of the skeleton for identification were removed, and all the finds deposited in the Sudan Museum, Khartoum.

The Objects
by P. L. SHinnie

Pottery

Nine pots were found in Grave No. 3.

1. Khartoum Museum, No. 8355. Fig. 5, No. 6. Burnished brown bowl (Ostwald colour 5 lg and 5 pn). Height 6 cm. Diameter of mouth 12 cm. Incised decoration of two groups of three chevrons. Wheel made.

2. Khartoum Museum, No. 8356. Fig. 5, No. 3. Slightly burnished dark brown (Ostwald 4 li and 4 lg) to black bowl. Height 8.5 cm. Diameter of mouth 17.5 cm. Finger nail impression round rim.

3. Khartoum Museum, No. 8357. Fig. 5, No. 4. Slightly burnished dark brown (Ostwald 4 li and 4 lg) to black bowl. Similar to No. 8356 but rougher. Height 9.5 cm. Diameter of mouth 20.5 cm.

4. Khartoum Museum, No. 8358. Similar to Fig. 5, No. 5. Slightly burnished black bowl. Roughly made. Height 5.5 cm. Diameter of mouth 10.5 cm.

5. Khartoum Museum, No. 8359. Fig. 5, No. 5. Slightly burnished black bowl. Roughly made. Height 6 cm. Diameter of mouth 11 cm.

6. Khartoum Museum, No. 8360. Similar to Fig. 5, No. 2. 'Beer jar' originally covered with red (Ostwald 7 ni) slip, now mostly worn off except at neck. Height 47.5 cm. Diameter of mouth 8.5 cm.

7. Khartoum Museum, No. 8361. Fig. 5, No. 2. 'Beer jar' originally covered with brown slip (Ostwald 4 lg) now mostly worn off except at neck. Height 47.5 cm. Diameter of mouth 8.5 cm.

8. Khartoum Museum, No. 8362. Fig. 5, No. 1. 'Beer jar', brown (Ostwald 4 lg). Impressed decoration round rim. Height 47.3 cm. Diameter of mouth 10.4 cm.

9. Khartoum Museum, No. 8364. Fig. 5, No. 7. Rough black bowl. Incised decoration above shoulder. Height 11.5 cms. Diameter 12 cm.
KUSH

All these pots are hand-made with the exception of No. 8355 which appears to have been made on a wheel.

Parallels to all these types can be found at Meroë. The 'beer jars' Nos. 8360, 8361, 8362, are well known (cf. Garstang Meroë—City of the Ethiopians, Pl. XLIV, 11) and have been found at Shendi and at Wad el Haddad. The small bowls are also known from Meroë (op. cit., Pl. XLVI, 44), they also resemble bowls from Gordon's Tree, published by Addison in SNR, Vol. XIV, p. 197 and Pl. XV, 4, 5, 11, 12, though the comparison can only be made from the photograph as the material is not traceable.

Beads

Beads, Khartoum Museum, No. 8363, were found in Grave No. 3. 5 Carnelian beads of Beck type Ibl, but rough and irregular. About 700 blue (Ostwald 19 ge) faience of Beck type Iblb. 31 glass beads (29 green, 1 blue, 1 yellow) of Beck type Iblb.

Beads similar to the faience ones were found by Arkell in his Khartoum site with burial M.19 (6) 1 (Early Khartoum, pp. 125, 126). They were also found at Meroë where the conditions of the discovery are obscure, and at Faras.

Iron

About 15 single tanged iron arrow heads, Khartoum Museum, No. 8365, were found all badly corroded, but so far as the form can be made out they correspond to the well-known single-tanged Meroitic type, known from Faras (LAAA, XI, Pl. LVII, 6, 7, 8, 9) and Khartoum (Early Khartoum, Fig. 9).

There was also an iron knife blade, Khartoum Museum, No. 8366, but it was too corroded for the form to be identified.

Conclusions

There is no doubt from the pottery that this burial is contemporary with the graves found at Meroë by Garstang in the southern necropolis (graves 1-99) and the middle necropolis (graves 300-399).

These graves were at first thought to represent a period of early occupation, but are now known to belong to the very end of the Meroitic kingdom. Their exact chronology depends on the view taken as to the date of this event. The usually accepted view is that Meroë was destroyed by Aezanes of Axum in c. A.D. 350, but Monneret de Villard has made a case for pushing back the date to the end of the third or the beginning of the 4th centuries. He suggests convincingly that this pottery, quite unlike what went before and not in the Meroitic tradition, is that of the intrusive Noba of the Aezanes inscription.

What is clear is that Noba were found at Meroë by Aezanes, and that a new type of pottery appears in the middle of the 4th century at the latest. It seems therefore reasonable to equate the two.

The origin of the Noba, who must surely be the people who introduced Nubian speech, is still obscure, but the philological connections between Nubian and some of the Nuba mountain dialects are too close to be coincidental. If the late pottery people of Meroë are the Noba it is perhaps of significance that our grave, which is certainly contemporary, lies on the route to Kordofan.

Only further excavation on the many mounds which lie along the White Nile can fully answer this problem, but on present evidence we can say that our grave is to be dated somewhere between c. A.D. 270 and 350.
Deux Acquisitions récentes du Musée de Khartoum
(Nos. 5458 et 5459)
by J. Leclant

En Mai 1948, une découverte fortuite faite à Amentego, dans les fondations d’une maison moderne, par Mohamed Ahmed Mohammed, a enrichi la salle de Napata au Musée de Khartoum de deux intéressantes pièces : nos. 5458 et 5459. Je voulais dès l’abord exprimer ma profonde gratitude à M. P. L. Shinnie, qui, lors d’une visite faite à ses collections en Janvier 1950, a bien voulu me permettre d’étudier ces documents et m’inviter à présenter ici les résultats auxquels conduit leur examen.

Le no. 5458 est une plaque de métal, en forme de cartouche, surmonté de deux plumes assez trapues accotant un disque. La longueur maxima de la plaque est de 15.8 cm., sa largeur de 5.3 cm. De nombreuses traces de dorure se remarquent encore, tant sur la face de la plaque que derrière, où une poignée de métal se trouve rapportée au dos du cartouche (pl. xvi, en bas à gauche).

Celui-ci, dont le contour est souligné par un filet en creux, présente, gravés également en creux, les signes, relativement peu soignés, de ‘Chabaka-aimé-d’Amon’ ; comme il se trouve en d’autres exemples, le nom proprement dit du souverain éthiopien est accompagné, dans le cartouche, d’une épithète marquant sa dévotion envers un dieu particulièrement favorable à la dynastie.

La découverte du nom de Chabaka dans un site de la grande boucle du Nil, entre la 4e et la 3e cataracte, un peu en aval de Napata, serait, s’il en était encore besoin, un démenti nouveau à la théorie, imprudemment induite de l’absence de documents dans les contrées méridionales de l’empire éthiopien, selon laquelle les pouvoirs du successeur

2 Vitrine 6 A.
4 Le signe initial du nom du souverain, 33, est d’un tout petit module et simplifié : les tiges de lotus qui le composent sont réduites à trois, les deux intermédiaires qui les accompagnent généralement, plus petites et terminées en bouton, sont ici omises. La position du signe 3 sous le poitrail du bélier se retrouve dans nombre de cartouches, tant de Chabaka que de Chapaka. Quant au bélier b3, il affecte une forme courante à l’époque : corps trapu et tête petite (cf. les photographies des cartouches d’une abaque de Chabaka au Nord du 11e Pylône de Karnak, et d’une colonne d’un ‘trésor’ du même roi dans le secteur Nord de la grande enceinte d’Amon de Karnak, Rev. d’Ég. VIII (1951), pl. 5, B et C).
5 Outre la colonne du Nord du 11e Pylône de Karnak et le ‘tœsor’ de Chabaka cités à la fin de la note précédente, cf. les deux mentions du roi au 1e Pylône de Karnak (J. Leclant, Rev. d’Ég. VIII (1951), p. 110, n. 5, et p. 115 ; pl. 4 et fig. 5 et 7). Sur une série de perles oblongues, la cartouche renferme ‘Nefkerâ-aimé-d’Amon’ (cf. id. ibid, p. 110, n. 5).

47
KUSH

de Piankhy auraient été limités à la partie Nord de la vallée\textsuperscript{7}. Chabaka a été inhumé dans le cimetière d'El Kurru (tombe Ku 15)\textsuperscript{8}; son nom a été rencontré plusieurs fois au cours des grandes fouilles anglaises et américaines, à Kawa\textsuperscript{9}, ainsi que dans la nécropole privée\textsuperscript{10} et le 'Trésor'\textsuperscript{11} de Sanam; en 1940, un scarabée au nom de Chabaka a encore été découvert très au Sud, à Sennar (280 km. au delà de Khartoum)\textsuperscript{12}. On pourrait objecter que ce dernier scarabée, dont on ne sait s'il a été trouvé \textit{in situ}, a peut-être 'voyagé' jusque là, à une date récente; on ne saurait exclure non plus que les scarabées d'un roi célèbre, objets de transport facile, aient été réutilisés par des roitelets postérieurs des dynasties napatéennes et méroïtiques. Mais, en tout cas, il est fort invraisemblable de supposer que le cartouche de métal, à poignée, d'Amentego ait été déplacé de la sorte: il témoigne de la présence de Chabaka en plein domaine kouchite.

Si l'on s'interroge maintenant sur l'usage d'une telle pièce, on doit la ranger dans la série des 'estampoirs'. Sceaux et cachets se rencontrent fréquemment parmi le matériel quotidien\textsuperscript{13} ou sacré, livré par l'Égypte ancienne; de nombreuses empreintes: 'positifs' de ces sceaux et cachets, sont aussi connues. D'une manière générale, les estampilles ont été utilisées pour clore des documents, boucher des jarres, fermer des portes; elles ont servi à aposer des scellés, de façon concrète; parfois cependant, elles semblent trop petites ou trop délicates pour avoir jamais assuré autre chose qu'une protection magique: ce sont alors des sortes d'amulettes servant à garantir les objets auxquels elles sont appliquées\textsuperscript{14}.

Cependant les dimensions de la pièce no. 5458 de la salle napatéenne du Musée de Khartoum semblent mal correspondre à de telles destinations, non plus que celles d'une autre plaque de métal, avec poignée dorsale, longue de 11.3 cm. et large de 4.4 cm., en forme de cartouche surmonté de plumes, au nom de 'Dd-k3-Rc': Chabatka\textsuperscript{15}.

Si nous cherchons des empreintes correspondant davantage aux dimensions et aux caractéristiques de ces deux estampoirs éthiopiens, d'un type si voisin, c'est sur des briques que nous les trouvons.


\textsuperscript{9} Une des colonnes du temple B de Kawa porte le nom de 'Chabaka-aimé-d'Anoukis' (\textit{JEA} xxii (1936), p. 201); une perle oblongue portant le nom de ce roi a aussi été trouvée sur le site de Kawa (M. F. L. Macadam, \textit{The Temples of Kawa} i, p. 87 et pl. 35, no. xxix).

\textsuperscript{10} \textit{LAAA} x (1923), pp. 113 et 168; pl. xlii, 16-20 et pl. xliii, 9-12.

\textsuperscript{11} Un bouchon de jarre du 'Trésor' de Sanam porte des empreintes de Chabaka (\textit{LAAA} ix (1922), p. 121 et pl. lvii, 8).


\textsuperscript{13} Dans ses \textit{Objects of daily use} (British School of Archaeology in Egypt 1927), ch. xvii, pp. 69-71 et pls. lx-lxii, Fl. Petrie publie un certain nombre de 'Stamps' et 'Seals'. Sans vouloir établir ici un essai bibliographique de ces objets, signalons encore V. Struve, \textit{Ancient Egypt}, 1925, p. 74-8 et fig. et W. C. Hayes, \textit{Inscriptions of the palace of Amenhotep III}, \textit{JNES} x (1951).


\textsuperscript{15} Metropolitan Museum of Art. The Murch Coll. of Egypt. Antiq. par A. C. Mace (1916), p. 20 (no. 10.130.1301). La pièce ne présente pas de traces de dorure. Ce dernier renseignement, ainsi que les indications ci-dessus données, m'ont été communiqués par Miss Nora E. Scott, à qui j'adresse mes respectueux remerciements, ainsi qu'à M. le Conservateur, W. C. Hayes, qui m'a autorisé à publier la photographie, pl. xvi (en haut, à droite).
(a) En haut et à gauche, KHARTOUM No. 5459
(b) En bas et à gauche, KHARTOUM No. 5458
(c) En haut et à droite, PLAQUE DU METROPOLITAN MUSEUM No. 10.130.2307.
(d) En bas et à droite, BRIQUE CUITE DE NÉCHAO DE KARNAK

N.B. Les échelles respectives des divers objets groupés ici sont différentes.
a. STATUE No.1. NAQA (see p. 53)

b. STATUE No.2. NAQA
Fig. 1. OFFRANDES DE THOUTMOSIS III À KARNAK.

A partir de la xviiié dynastie en effet, de nombreuses briques crues apparaissent frappées au cartouche du souverain régnant.16 En face de la série des estampilles17, il serait tentant de chercher à reconstituer celle des estampoirs, qui ont servi à marquer les


adobes, mais l’état de la documentation est loin de permettre de placer en face de chaque estampilles de brique connue, la matrice qui a permis de l’obtenir\(^\text{18}\).

Il est possible cependant de trouver des briques estampées au nom de ‘ Chabakaaimé-d’Amon’, encadré du cartouche surmonté de plumes : ce sont les celles du mur d’enceinte du petit temple de Medinet Habou ; certaines sont conservées au Musée de Berlin\(^\text{19}\). La disposition générale est la même ; cependant les dimensions de l’empreinte de Berlin\(^\text{20}\) : longueur de la plaque 17 cm. (donc 5 cm. pour les plumes), largeur 5 cm., sont différentes de celles de l’estamplier d’Amentego. Sous chaque règne, il y avait donc divers types d’estampilles à briques.

Que les estampiers ayant servi à obtenir les estampilles dont sont marquées les briques aient été du type étudié ici : plaque gravée munie d’une poignée de préhension, se trouve confirmé, nous semble-t-il, par l’examen des objets en or offerts par Thoutmosis III à Amon, sur le tribut d’Asie, tels qu’ils sont représentés sur la célèbre paroi du sanctuaire de Karnak\(^\text{21}\) : parmi les simulacres d’objets destinés à l’accomplissement des rites de fondation (peut-être les diverses pièces d’un dépôt de fondation) : massues, houes, godets, queue d’aronde, on remarque, à côté d’un moule à brique (affecté du nombre 4), un objet interprété généralement comme une ‘ taloche ’\(^\text{22}\), vue de profil (fig. 1). Certes, on connaît plusieurs exemplaires de ces taloches, en bois ou en cuivre, ayant servi à étendre où à plaquer le plâtre où les enduits ; il sont d’ailleurs rares\(^\text{23}\). Cependant la disposition de leurs poignées, allant d’une extrémité à l’autre de la plaque, ou, au contraire, s’attachant en leur partie centrale, ne correspond pas à la coupe—ou à la vue latérale—que présente la liste des objets rituels de Karnak. Cette dernière, au contraire, est celle même de l’estamplier à briques no. 5458 du Musée de Khartoum.

Le mur des offrandes de Thoutmosis III à Karnak se trouve aussi donner la signification d’une série d’objets qu’on aura pu s’étonner peut-être de ne voir pas encore cités en cette enquête : ce sont de petites plaques, soit en métal, soit en faïence, d’une longueur d’environ 4 cm. sur 1 cm. de largeur ; elles portent sur leur face le cartouche royal et sont munies non d’une poignée dorsale. Pour nous en tenir à l’époque éthiopienne, signalons une plaque de pâte de verre, sans anse, présentant un cartouche

\(^{18}\) Le rapprochement entre les deux séries avait déjà été établi par M. J. Passalacqua, dans son Catalogue raisonné et historique des Antiquités découvertes en Égypte (Paris, 1826), p. 162 : ‘ Les grands sceaux en terre cuite, tels que les 781 à 787, se rencontrent dans les fouilles à Thèbes, épar dans la terre, et parmi les débris de pierre. Il paraît, d’après la comparaison faite de quelques-uns avec les empreintes qu’on voit sur beaucoup de briques égyptiennes en terre crue, que de tels sceaux servaient pour les marquer ’.


\(^{20}\) Berlin, 1573. D’après les indications aimablement communiquées par M. le Conservateur R. Anthes, et Mlle. B. Scheunemann, que j’assure de ma gratitude.

\(^{21}\) PM, TB, II (1929), plan p. 26, no 72 et bibl., pp. 36-7.

\(^{22}\) ‘ Streichbrett ’ ; Sethen, Urkunden IV, p. 632, et Wreszinski, Atlas II, légende à pl. 33a, no. 50.

DEUX ACQUISITIONS RÉCENTES DU MUSÉE DE KHARTOUM

surmonté de la double plume, au nom de Nefer-Ka-Rê (Chabaka)\(^{24}\); ce nom se lit encore sur d’autres plaquettes d’un type voisin, en terre cuite (pottery)\(^{25}\); un cartouche surmonté de la double plume, en porcelaine aussi, offre le nom de Djed-Ka-Rê (Chabatka)\(^{26}\). La provenance de tels menus objets n’étant généralement pas connue, il n’est pas exclu d’y voir de simples amulettes, ou encore les éléments d’ensemble, collier par exemple, tel que celui retrouvé dans une des sépultures de chevaux de Chabatka à El-Kurru\(^{27}\). Cependant, l’usage de pareilles plaquettes est bien attesté dans les dépôts de fondation du royaume éthiopien. Dans un dépôt de fondation du temple Barkal 700, Reisner découvrit en 1916 un petit cartouche à plumes, en faïence à couverte bleuâtre, portant le nom d’Atlanarsa\(^{28}\); puis en 1918, dans les dépôts de fondation de plusieurs pyramides de Nûri (VI, VIII et XIX), furent trouvées de petites plaquettes d’un type voisin, dont certaines présentent, accotées, les deux cartouches avec nom et prénom royaux: Anlaman, Asalta, Nasakhma\(^{29}\). Ce sont là des simulacres, modèles réduits des estampois à briques que nous étudions ici. C’est ainsi qu’à côté de la série des moules à briques, en bois, de format courant\(^{30}\), existent des modèles réduits, de bois ou de bronze\(^{31}\). D’autres objets de taille réduite des dépôts de fondation correspondent aussi à des outils et instruments employés durant la construction—ou lors des rites de fondations\(^{32}\). De ceux-ci, nous ne possédons que des représentations fragmentaires, choisissant quelques moments typiques des cérémonies, sans nous en donner la suite méthodique et complète. Si les petits moules à briques factices ‘commémorent’ la cérémonie—bien attestée—du ‘moulage de la brique’\(^{33}\), il est permis de supposer que celle-ci, en certain cas tout au moins, s’accompagnait d’un ‘marquage’.

\(^{24}\) Metropolitan Museum of Art, no. 10.130.1687; 4 cm./2 cm., selon les indications aimablement communiquées par Miss Nora E. Scott; signalé dans The Metropolitan Museum of Art. The Murch Coll. of Egypt. Antiq. par A. C. Mace (1916), p. 18.

\(^{25}\) Fl. Petrie, Scarabs (Br. School Arch. Egypt.), pl. I, no. 25, 3 (Shabaka), 8, 9, 10, 11 (diverses dimensions).

\(^{26}\) Fl. Petrie, Scarabas, pl. III, no. 25, 4 (Shabatka), 3.

\(^{27}\) Reisner, BMFA P XIX, no. 112-13 (1921), p. 33; D. Dunham, El Kurru, p. 113 et pl. LXVIII A.

\(^{28}\) JEA IV (1917), pl. XL, 3 et V (1918), p. 107, no. 15.


KUSH

La plaque d’Amentego aurait pu être utilisée lors d’une telle cérémonie. Rappelons qu’elle porte des traces de dorure et qu’il est ainsi peu vraisemblable de supposer qu’elle ait été d’un emploi en quelque sorte ‘industriel’. Estampoir réel mais à usage cérémoniel, le no. 5458 du Musée de Khartoum appartiendrait à une série intermédiaire entre les estampoirs d’usage courant, destinés au marquage en série, et les estampoirs factices, que leur petites dimensions, la fragilité de leur matière ou leur manque de poignée ont exclus de toute utilisation, autre que commémorative ou votive.

* * *

Le no. 5459 est la statuette en cuivre, avec traces d’un mince plaquage d’or, d’un roi s’avancant, jambe gauche première, les bras pliés en avant de la poitrine, paumes ouvertes vers l’extérieur. Sous chacun des pieds se détache un tenon, effilé comme s’il devait être enfoncé dans un socle. Des pieds à la voûte du crâne du roi, la hauteur est de 14 cm (pl. xvi, en haut, à gauche).

L’équipement du souverain est celui que l’on trouve d’ordinaire pour les statuettes de cette espèce: un pagne court, plissé, le rabat entre les jambes se trouvant profilé vers l’arrière, le long de la cuisse droite du roi ; une cinture sur laquelle ne se discernent pas de traces de cartouche ; des bracelets à hauteur des biceps ; un collier d’ou pend sur le cou un médaillon central, et de chaque côté, sur les épaules, un médaillon de même type : ces ornements sont trop émoussés pour qu’on en discerne le détail, mais il s’agit très vraisemblablement de têtes de bélier. La figure est traitée avec vigueur ; au-dessus des yeux, allongés, les sourcils sont accentués en listel ; aux oreilles s’appliquent un anneau. Quant à la coiffure, c’est le large bandeau traditionnel des Pharaons du Sud d’où retombent en arrière, sur la nuque, deux pans ; il s’en détache, sur le front, deux uraei, dont les replis, bien distincts, enseintent la voûte du crâne ; celui du côté gauche a conservé nettement sa couronne blanche ; l’autre écrasé, portait vraisemblablement la couronne rouge.

---


36 Dans les représentations de bas-reliefs, la disposition réciproque des deux uraei du Nord et du Sud ne semble pas avoir été constante (J. Leclant, BIFAO, lxix (1950), p. 188, n. 3 et fig. 4 (p. 189).
Two Statues at Naqa

by P. L. Shinnie

A LITTLE to the north of the temple of Amûn at Naqa (Lepsius' temples c, and d and Caillaud's e) are two statues of which the positions are shown by Lepsius on his plan. These statues though they must have been seen by many visitors have never to my knowledge been described.

They were lying almost covered by sand until, on a recent inspection visit (May 1953), the opportunity was taken of digging them out, erecting them and photographing them. (Plates xvii and xviii).

These statues which are made of ferricrete sandstone, are approximately life size. Although in a mutilated condition and headless they are of considerable interest and show some unusual features. Statue No. 2 is much damaged but sufficient of it remains to show that it is identical with No. 1. They are clearly a pair and probably stood at the entrance to a temple as did the Argo colossi which are possibly of the same date as the pieces described here. The temple to which they belonged must be that now represented by a nearby pile of rubble amongst which a few column bases can be seen. It is shown on Lepsius' plan to have been a building of some size with an outer colonnade.

Two bases with feet lie some distance away but from the similarity of the material it can be safely assumed that they form part of the statues.

The statues represent standing male figures with the right arm hanging straight down and the hand grasping a roll of cloth. The left hand holds the fringed edge of a scarf-like garment which is worn over the right shoulder. The lower part of the body is covered by a skirt decorated with raised bands. This skirt appears to be wrapped loosely round the body, the right side overlapping the left.

The only parallels to this type of garment seem to be those shown in the reliefs on the west outer wall of Lepsius' temple a, the lion temple, at Naqa where Netekamani and Amantarit can be seen to wear the same banded skirt and fringed scarf. There is no parallel amongst the chapel reliefs at Meroë.

Although no other statues of this type are known, the close resemblance in the clothing to that shown in the reliefs suggests that the work is of the period of Netekamani (15 B.C.–A.D. 15).

1 Denkmäler i, pl. 143.
2 Dunham, JEA, xxx, pp. 63–5.
Early Days, 1903–31

by J. W. Crowfoot

EARLY in 1903 there were great doings at Meroë. Two British Officers and 180 Egyptian gunners had been sent there to help Dr Budge, as he then was, to solve the mystery of the pyramids. It was the third mission to the Sudan on which Budge had been sent by the Trustees of the British Museum. He had come twice in the days of Lord Kitchener whose deep interest in archaeological work dated back to the years he had spent on the Survey of Palestine. Now Lord Kitchener had been succeeded by Sir Reginald Wingate whose interest was certainly no less.

The Sirdar’s enthusiasm was widely shared. A tumulus in Berber province was opened by one officer and the contents were sent to the Gordon College; fortunately they were not spectacular enough to encourage the opening of others. Colonel E. A. Stanton, the mudir¹ of Khartoum, had made some excavations at Soba with even more barren results: he rendered a more lasting service to Sudan archaeology by acquiring a copy of Lepsius’ Denkmäler for a library which was then in the palace and which contained also copies of Cailliaud’s Voyage and Quatremère’s Mémoires. These were precious books I had never dreamed of finding in Khartoum which I reached in August 1903 while tongues were still wagging about Budge’s work at Meroë.

The instructions I had received in England were of the sketchiest. They could hardly be otherwise. There were no funds for archaeological work, the budgetary provision for the whole of the Education Department was only £E.8552. A year later, in 1904, I was left to reconcile my duties as Assistant-Director of Education with the claim of a nascent Service of Antiquities as best I could. In practice this was not difficult. On the educational side my first duties were to inspect the primary schools at Wadi Halfa and Suakin and the improved ‘maktabs’ at Berber and Dongola, to find out whether anything could be made of the local religious schools that were scattered about the Nile valley, and to select promising boys for admission to the Gordon College. The most advanced provinces at that time were those in the north where most of the ancient sites lay, and it was easy to dovetail visits to the latter with the educational business.

Being sent to the Dongola province in February 1904, I chose naturally to cross the Bayuda desert by the route which took me past the old fort in Wadi el-Fura and the ruins in Wadi el-Ghazali. In the province I went slowly from Merowe to Kerma and back again, and between discussions with the mudir and his inspectors and visits to a large number of religious schools I contrived to see, cursorily at least, all the principal antiquities above ground, including the church at Old Dongola and most of the forts about which Mr Crawford has been writing recently. I made rough notes about the condition of the buildings (I find in my notes about Old Dongola mention of three bastions northwest of the town which had disappeared when I visited it later: they were built of unhewn stone like those at Khandak), collected potsherds from old sites in the Letti and elsewhere and any traditions that were floating about—all that was then practicable as we had neither money nor staff to make proper surveys or excavations to fill a museum which did not exist.

¹ Governors of provinces were still called mudirs at that time and District Commissioners Inspectors or Sub-Inspectors.
In Berber province where I had already seen the pyramids at Meroë, I had my first sight of the famous desert remains in the train of the Sirdar shortly after my return from Dongola. We started from Shendi and rode first to the beautiful palace ruins at Musawwarat el-Safra. There was a well there but for the next few days water had to be carried by a score or so of camels. A day was spent at Nagaa inspecting the curious temples and the quarry above them. It was then that orders were given for the sinking of a well and the construction of a resthouse. From Nagaa we rode south to the Blue Nile at Eilafun and it was a disappointment to me that we did not come upon any other traces of ancient occupation.

All the principal sites in the country therefore had been visited within a year of my arrival except those in the cataract country between Wadi Halfa and Kerma. These I first saw in the following year when Budge returned on his fourth mission to the Sudan. The object of this journey, which had been arranged in London the previous summer, was the collection of some monuments which Budge had seen in 1897 and 1898 lying about on various sites in the cataract country and their removal for erection ultimately in a museum at Khartoum (see The Egyptian Sudan, vol. 1, p. 436). I was deputed to accompany him as the responsible representative of the Government. Budge has published a detailed account of our journey, how we failed to find the stones at Soleb of which he had talked most but did find others at Semna and Uronarti (Gezirat el Melek), and I will only add that so far as I was concerned the expedition was both profitable and pleasant: I found Budge a delightful travelling companion.

The expedition had two sequels. The first was the loan by the Trustees of the British Museum of the services of the late Mr P. Scott-Moncrieff in the winter of 1905–6. The very fine painted reliefs in the temple of Tuthmosis II and III at Buhen were in danger of suffering from exposure and it was arranged that Mr Scott-Moncrieff should supervise the erection of a light wooden roof over them and clear another small building to the north where he found a figure of Sebek-em-heb. After completing this he went on to Musawwarat el-Sufra and carried out some useful repairs there.

The second sequel is concerned with the splendid stele of Sesostris III which we had found at Uronarti close to the temple. It was a historic document of the highest interest to the Sudan and we removed it with much difficulty to Halfa and thence by rail to Khartoum. It was a shock therefore to hear a little later that Lord Cromer had received a letter from Berlin to the effect that, unbeknown to us, the stele had been seen some years earlier by a German archaeologist and promised to the German Government by a then Acting Governor-General. ‘A promise is a promise,’ Lord Cromer curtly told me, ‘and if you don’t honour your word no one can do business with you’: however, he agreed later that, in view of our feelings about the stele, we might try to offer some other antiquity instead and the sooner the better’. The incident was pleasantly closed when Dr Steindorff came to Khartoum in March 1906 and we went together from Khartoum to Kabushia to choose some tomb reliefs for Germany.

It was on this occasion that I paid my first visit to Basa, one of the ancient sites in the interior of which I had heard from the villagers. I described the place to Steindorff and we both agreed that it ought to be further examined. An opportunity for this was presented by the next Bairam holiday and, as lecturers and schoolmasters in the Education Department received longer holidays than others, I was able to take Mr P. Drummond, then a lecturer on surveying in the Gordon College, with me and visit Umm Usuda also, another site much farther away of which I had been told. At Basa we cleared a small temple and found the figure of an enormous frog in the middle of the reservoir besides more figures of lions, and at Umm Usuda more lions again and a Merotic
inscription: Drummond made plans of both sites which were later published by the Egypt Exploration Fund in a memoir on Meroë (1911).

Another Bairam holiday enabled me to revisit Old Dongola with the head of the Engineering School in the College, Mr, now Sir William McLean. McLean made plans of the church, the ground floor, the first floor and the roof, and a sketch of the head of a painted figure wearing the horned cap which was, and is still, part of the insignia of a 'king' in the Sudan, that we uncovered by discreet tapping on the wall of the part now used as a mosque. I gave a blue print of the plan to Mr Somers Clarke but he refused to regard the building as a church and made no use of it. We did not however see all that we ought to have done (see Crawford, The Fung Kingdom, p. 34).

The first Egyptologist to spend any length of time in the country after Budge's last visit was Professor James Breasted. He came specially to copy all the inscriptions that were visible, and we gladly gave him permission to clear any that were partly buried. Breasted visited Nagaa as well as all the sites on the Nile and succeeded in identifying the Delgo temple with Gem-aton, the foundation which was to carry the gospel of Ikhnaton to Nubia.

In the Nile valley it is difficult to identify the numerous places mentioned by Pliny and other classical writers because, apart from a note of the greenness of the country round Meroë, they mention no natural features we can now recognize, but on the coast of the Red Sea the archaeologist is better off: in extracts from older travellers preserved by Strabo a number of islands, river mouths, small havens and the like which we can still identify with some confidence are described. In the country south of Suakin I made two journeys in 1907, one from Tokar by land, the other by sea in dhowes from Suakin and Aqiq. The second of these was the more instructive: I was able to make what still seems to me a strong case for the identification of Ptolemais-epi-theras with Aqiq and a number of other features named by Strabo with features in the neighbourhood. South of Aqiq the survival of the name of a promontory mentioned by Yakut enabled one to identify the early Arab port of Badi (see the Geographical Journal for May 1911 in vol. xxxvii).

Just before reverting to the Egyptian Government Service in 1908 I had the pleasure of welcoming Dr Randall-MacIver and Mr Leonard Woolley a few miles north of Halfa. They were then working for the University of Pennsylvania, they had already excavated a number of strange Nubian cemeteries, Mr Mileham who was with them had cleared several churches, and they were on their way to start at Buhen the first of the major excavations on one of the greater sites in the Sudan.

The years had passed quickly, and looking back on them I should like to express my gratitude for the goodwill and active support unfailingly given me by the Governor-General, by my own chief Mr Currie and by all the officers then administering the northern provinces: it was amazing.

II

by F. Addison

When the Minister of Education moved the second reading of the new Antiquities Bill in the Legislative Assembly of the Sudan (October 1951) he observed that 'in 1905 the post of Commissioner for Archaeology had not yet been created and such work of conservation of ancient monuments as was done was carried out by an official in his spare time'. I was myself for some years one of these spare-time conservators and, as I have
been invited to contribute to the first number of Kush and cannot now write of any new discovery, it might seem appropriate that I should look back over the half century that the Antiquities Service has been in existence.

The foundations of the service were laid—and well and truly laid—by Mr J. W. Crowfoot, and it is difficult to see how, but for him, such a service could have existed at all in the early years of the present administration. He was at that time seconded from the Egyptian Government to the Sudan Government as Assistant Director of Education, but he was also a trained archaeologist. His discovery of then unknown ancient sites is on record, and he was chiefly responsible for the drafting of the 1905 Antiquities Ordinance which has only recently been superseded. His own account of those early days is given in a separate note, though he does not mention that he is one of the few who can remember travelling on the railway from Kerma to Wadi Halfa which was taken up in 1905.

When Mr Crowfoot returned to Egypt in 1908 he was succeeded as 'acting Conservator of Antiquities' by Mr Peter Drummond, a Scot on the staff of the Gordon College and something of a 'character'. It is to be noted that the prefix 'acting' was retained for nearly twenty years as an indication that the official so designated was regarded as a temporary caretaker and as evidence that the Government intended, when circumstances were propitious, to appoint a full-time qualified conservator.

Drummond carried on alone until 1914, and if he found it necessary on occasion to refer to a higher authority he did so direct to the Governor-General, for at that time the Archaeological and Museums Board had not come into existence. The principal excavations carried out during those years were at Buhen, by MacIver and Woolley (1908–10); at Meroë, by Professor John Garstang (1909–14); at Faras and Sanam Abu Dom (Merowe) by Professor F. Ll. Griffith (1912–14); and at Kerma by Dr G. A. Reisner (1913–15). Much greater than any of these, in terms of cubic metres of debris removed, were Mr (later Sir Henry) Wellcome's excavations at Jebel Moya and associated sites, but these were conducted in an atmosphere of secrecy such as now envelops atomic research, and which the Antiquities Service of the time was not allowed to penetrate. Mr Wellcome was in a category by himself and had a 'special' licence to excavate.

In 1914 Crowfoot returned to the Sudan as Director of Education and thenceforward his advice and guidance were available to the acting Conservator, a title still retained by Drummond until he was invalidated out of the service in 1921. These seven years included the period of the first world war during which, not unnaturally, British archaeologists were unable to come out to the Sudan to excavate. American expeditions were under no such disability, at all events in the early days of the war, and it was during this period that Reisner carried out his immensely important excavations at Nuri, El Kurru and Barkal. There was also a smaller excavation at Gamai conducted by Eric Bates and Dows Dunham in 1915.

Upon Drummond's departure I, having some interest in Egyptology, was asked to take over his archaeological duties. I was then on the staff of the Gordon College and shortly to become an inspector of schools. I inherited from Drummond the nucleus of a museum, a meticulously kept register of objects, and a large number of packing cases stored in various places throughout the country where room could be found. These contained the Sudan Government's share of the finds made during the impressive series of excavations already enumerated, but only a minute proportion of the objects could be displayed. The few show-cases, locally made, which Drummond had been able to acquire out of his exiguous budget provision were housed in a room in the Gordon College.
originally designed as a class-room, separated from the rooms on either side by wooden partitions. Before long, however, Crowfoot was able to make available as a museum a much larger room at the end of the west wing of the building, and some steel and plate glass show cases were obtained from England as a result of a deal with Reisner. He had by this time begun his excavation of the tomb chambers of the Meroë pyramids, and one of his most important early finds was a Greek rhyton of red figured pottery signed by the potter Sotades (c. 450 B.C.), a unique object which could not be balanced, on a division of the finds, by any other of comparable value. It was therefore agreed between Crowfoot and Reisner that the rhyton should go to the Boston Museum of Fine Arts and that Boston should make a cash grant, equal to half the agreed value of the object, for the purchase in England of show cases for Khartoum. Such a transaction was not then complicated by the operation of exchange control! Some small discarded cases were obtained from the British Museum in exchange for duplicate antiquities, and in the years that followed the Sudan Government Finance Department was from time to time prevailed upon to provide funds for other steel cases. Crowfoot retired in 1926, but by that time, with his active interest and encouragement, a not unattractive antiquities museum had been formed, large enough to display a representative selection of objects from all the sites which had been excavated, yet not so large as to intimidate the casual visitor, who not infrequently had travelled through Egypt and reached Khartoum thoroughly satiated with antiquities.

With this building up of the museum there necessarily went experiments in mending pottery and the cleaning of bronze and silver objects, undertaken at first largely by the light of nature, aided, possibly, by an early training in the natural sciences and the use of tools, but later with growing confidence as the first results of the researches in this field by Dr H. J. Plenderleith at the British Museum and Mr A. Lucas in Cairo became available. It was fascinating to observe, for example, how an amorphous lump of lilac oxide, after soaking for some time in a beaker of 'limoon' juice with a few iron nails, was transformed into a silver ring with its intaglio clear and sharp.

The heavy granite statues and sarcophagi which Reisner had found at Nuri and Barkal could not be brought to Khartoum, and these, after languishing for a time on the river bank at Merowe, were eventually installed in a museum specially built at Merowe to house them. This was intended at the time to be a temporary measure though the governor of Dongola Province at the time did not so envisage it; he cemented the objects permanently into position and for all I know they are still there. Another subsidiary museum had already been arranged by Drummond in Wadi Halfa school, but this later had to be dismantled as the room was required for its legitimate use as a class-room. Some of the exhibits were taken to Khartoum and others were afterwards set up in a room provided by the governor of the province.

Before leaving this subject of heavy objects it may be of interest to recall that one Governor-General, on seeing for the first time the colossal fallen statues on Argo Island, suggested that these should be brought to Khartoum and erected in front of the palace. This proposal caused no little flutter amongst the officials of the Railways and Steamers Department, though they were able without difficulty to demonstrate that the cost of transport would be prohibitive.

The museum work could be, and was, largely done in spare time, but the inspection and conservation of ancient monuments presented more difficulty. These for the most part lay remote from schools, and though it might be possible to arrange an occasional week-end trip to Nagaa or a journey by rail to Meroë, the buildings between Kerma and Wadi Halfa were less readily accessible. Only once was I able to visit Argo Island or Sai
EARLY DAYS, 1903-31

Island or the extensive ruins of the temple of Amenophis III at Soleb. This was in 1926 when I made a three weeks’ journey by camel on the right bank of the river from (opposite) Dongola through the Batn el Hagar to Wadi Halfa, crossing to the other bank when necessary and when a boat could be found. The camel may have been slower but it was on the whole a more comfortable mode of transport than the ‘box’ Ford in later years proved to be.

One incidental result of this journey was the discovery that one of the temples of which I was supposed to be in charge had long since ceased to exist. This was the temple of Amara on the right bank of the river, some standing columns of which are shown in the drawings of both Cailliaud and Lepsius, and which Budge described as though he, too, had seen them. In 1926 no trace of these columns was to found, but local inhabitants assured me that, although they had no recollection of any temple on the right bank of the river, there were some ruins on the opposite bank, so I crossed over to see them. These were the ruins of the temple, previously unknown to me, which were later to be excavated by the Egypt Exploration Society under the name of Amara West. Subsequent enquiry and investigation revealed that the missing columns on the right bank had disappeared some time during the mahdia, and that Budge had not, in fact, seen them but had taken them on trust.

Fortunately, most of the ancient monuments in the Sudan are situated in regions where deterioration from natural causes is slow. It was, indeed, remarkable, on first visiting buildings such as those at Nagaa, to see how little they had suffered during the century since Cailliaud made his astonishingly accurate drawings. The cracks which he so faithfully depicted in 1821 appeared to be no wider in 1921, and there were no fresh gaps in the masonry. Incidentally, I never ceased to marvel how Cailliaud, working alone, was able to make such detailed drawings of, say, Meroë pyramids, in the very short time he was able to spend there ahead of Ismail’s advancing army. It is hardly less remarkable that he managed to preserve his drawings and records and get them safely back to France, for he and they accompanied Ismail’s indisciplined host right to Fazogli.

Excavation, however, is not a ‘natural cause’, and experience soon showed that buildings, once excavated, were apt to deteriorate fairly rapidly, which is why modern excavations are usually filled in again. The most melancholy case was that of Meroë, where some of the buildings uncovered by Garstang were protected and roofed over before his departure. But some years later the covering of the painted chamber was torn away during a more than usually violent storm, and the wall paintings were irretrievably damaged in a matter of minutes.

The only excavations between 1926 and 1930 were those in the ancient Egyptian fortresses of Semna, Uronarti and Shalfak made by the Harvard-Boston Expedition, but in 1930 Professor F. Ll. Griffith, returning after many years to the Sudan, started his excavation of the temples at Kawa. I had myself in 1928 identified the main temple as the work of Tirhaqa, so it was with particular interest that, on my final tour of inspection, I saw the building completely excavated in 1931. The Griffiths chose the occasion of my visit to experiment with crocodile meat for lunch!

When I left the Sudan in 1931 the prospect of a full time Conservator of Antiquities still seemed remote, although I had myself some years before been relieved of the prefix ‘acting’. I handed over responsibility to Mr G. W. Grabham, the Government Geologist, but I was still retained as a long range adviser until, at last, Mr A. J. Arkell was appointed Commissioner for Archaeology and Anthropology and the tenuous thread of my connection with the Antiquities Service was broken.
The Red Sea Style
by Derek H. Matthews

INTRODUCTION

The style of building in the Red Sea countries is Arab in character, like the dhows which anchor in the shallows over the coral reefs; where drinking water is brackish, and grains of salt powder the ground. The buildings seen across the water seem to hang suspended. Climate varies according to geographical position and the seasons. The African coast is slightly hotter than the Arabian. The impact of the monsoon can bring pleasantly cool breezes from across the sea; or it can bring sand blowing from the desert. These problems confronting builders have been solved in various ways by the inhabitants, and by foreigners who have been obliged to live there.

Materials are local stone, coral, and sometimes brick; buildings are usually plastered; sometimes reeds and mats are used for small structures. The towns look as if they have been carved out of cheese: Ed, on a sandy plain peppered with white cubes and a finger minaret; Assab (known locally as ‘Bessab’ after the famous merchant) with soft arcades, the former hotel of the Compagnia Italiana Alberghi Africa Orientale in the Italian colonial style, and lattices whose pattern seems to be suggested by the criss-crossing of the palm fronds; walled Jeddah with its tower and gates and minarets; ruined Mocha; dilapidated Yambio where coral walls are crumbling; Sharm Rubigh, a hamlet, dates, and dhows; the lofty houses on the islands of Massaua and Suakin, in the Arab style; Hes with its five-storied governor’s tower, possibly the germ of the idea of the Gondar castles high on the Ethiopian tableland; the delicate tracery of the roof line in Hodeida, a walled town surrounded by palm grooves and gardens, with the minaret of the Grand Mosque and the cupola of the whitewashed government court; the domed mosques of Kamaran; Moskij and Ibbá Abbas; Luhaíya’s ruined hill fort overlooking a mangrove swamp; Haura’s twin fifty-foot towers standing on a mound; all go to form the indigenous pattern.

The basic theme is varied by the works of foreigners who in the past have settled on the shores for the purposes of trade or conquest. Massaua boasts a domed and arched Egyptian governor’s palace, Turkish houses, and Italian buildings reminiscent of Venice. In Aden the Indians observing purdah, enclose their women in courtyards; the Yemenite Jews prefer grim looking stone buildings; the British in the 19th century constructed a shopping crescent strongly reminiscent of Cheltenham.

The Red Sea Style occurs in its most characteristic form in the Sudan at the unique port of Suakin, now an abandoned ghost-town, enlivened by the banging of loose shutters, the whistle of the winter wind, and an occasional pilgrim ship from Jeddah hooting up the zigzag roadstead towards the quarantine quay.

---

1 The nomads ignore town architecture, and only a few make semi-permanent dwellings of mats and straw on the edge of the town. The common practice of the nomadic tribes of the interior is to fix mats over a framework of curved poles, which can be taken down and transported easily on camels (Fig 3). Such tents are eminently suitable for the humid climate, and allow the cool breeze to enter. But compared with these primitive constructions, the Suakin houses represent a high degree of civilization.
THE RED SEA STYLE

It is surprising, on going across the wide salt plain from Port Sudan, to come upon Suakin looming out of the flatness. The white buildings look like skyscrapers, and although none has more than four floors, they seem gigantic, in contrast to the empty plain. The compact and dignified unity of the island group is achieved through a well-established tradition and way of living; it contrasts with the incoherent shapelessness of Port Sudan. (FIG. 1).

The town is built on a circular island (FIG. 2) inside a narrow inlet; before Gordon made the causeway linking the island to the mainland or 'Geyf,' where the majority of the inhabitants now live, all visitors had to be ferried over, or to swim.

Formerly the commercial centre for the indigenous trade of the Sudan, it is now sleeping until such times return when it can prosper again, for it is a natural harbour, although the coral reefs render dangerous the entry of large vessels.

To-day only a few merchants remain, whose main occupation is with the shipment of the cotton crop from Trinkitat; also the staff of the quarantine station for the Jeddah pilgrimage, and fishermen, innumerable cats, and old people attached to the relics of their prosperous past.

HISTORICAL BACKGROUND

The history of Suakin has been dealt with by Dr J. F. E. Bloss in SNR (Vol. xix, part 11, and Vol. xx, part 11).

Suakin appears to have been used as a port since ancient times. At the height of its prosperity trade was carried on with Arabia, Ethiopia, Egypt, India and China. There are many references to it in the books of travellers of various periods. Suakin has always been the port of embarkation for African pilgrims on their way to Mecca.

Suakin first took this name between A.D. 750 and 950. It came under the rule of Egypt in the 13th century. It increased in size from the beginning of the 15th century, trading with India, Ceylon and China. The 16th century witnessed great changes in the Red Sea ports, when the Turks captured Egypt, and pushed south to Massaua, Suakin and Jeddah, whilst at the same time the Portuguese having discovered India, captured its trade, and diverted it to Europe, away from the Red Sea. The Turks at this time improved and enlarged the port, and it was described by Don Juan da Castro as one of the richest cities of the East. He described the island and harbour as it is to-day. Ludolphus published a picture of Suakin in the mid-17th century, showing the island with minarets and a few two-storied houses.

The 18th and 19th centuries witnessed a decrease in the importance of the Red Sea ports. Lord Valentia described this decline when he visited Suakin in 1805. Burckhart was another traveller who described the same things. Suakin came under the complete control of Egypt in 1865, and during the next fifty years the port again became prosperous. Egyptian merchants built themselves houses on the island, and European merchants settled there.

At the beginning of the 20th century the Italians hoped that the Sudan trade would be diverted from Suakin to Massaua, but Port Sudan was built; all the same, Suakin lapsed, although it still remained busy until 1922, when it was finally deserted.

DESCRIPTION OF THE BUILDINGS

The buildings still extant form several distinct styles, according to their period. There appear to be broadly three phases. The oldest includes such houses as the 'Beit el Basha,' (FIG. 32) and Khorshid's (FIGS. 6 and 31). These are of a similar scale to the
two mosques on the island, and are dwarfed by the minarets, as is the Moslem rule (FIGS. 13 and 14). Both these houses and the mosques may be of the 15th or 16th centuries; they are probably of the period before the Turks took over the port, for it is known that Suakin became large and prosperous in the 15th century. It is likely that the sort of buildings constructed then would be similar to them.

The majority of Suakin houses are of the middle phase. They are invariably higher than the minarets, and for this reason alone, it seems probable that they are later. This fact also emphasizes the antiquity of ‘Beit el Bash’ and Khorshid's house. Examples of this period are the house of Sitt Miriam (FIG. 9), and the houses on blocks number 220 to 226 (FIGS. 4, 5 and 7), and the terrace of houses in FIG. 12.

The buildings belonging to the third and last phase are markedly larger and coarser in scale. This is the period of 19th century Egyptian building; examples are the houses of Mohammed Bey Ahmed and Omar Effendi Obeid, and the Wakkala (FIG. 11). The last phase also witnessed the enlargement of some of the older houses by the addition of an extra floor, frequently with a balcony (FIG. 10). The buildings of this period rarely have mashrabiyas, and invariably have projecting balconies.

In addition to the houses, there are a few public buildings; two mosques on the island, and one on the mainland at the end of the causeway. These mosques are obviously ancient. There are also a few ‘zawias’, or praying houses without minarets. Near the mosque by the causeway is the Wakkala, or Caravanserai, built by Shennawi Bey, a leading merchant, in 1881. It consists of store-rooms surrounding a courtyard; above the stores are rooms which were let out to merchants. The building was the terminus of the caravan route from the interior. It is said to have been built by slave labour. Over the main entrance is a huge opening framed up in the mashrabiya manner, but not projecting. The Wakkala is probably the last building to be erected in Suakin in the Red Sea style; it is a monument to the decline of the port. (FIG. 11).

The buildings on the island are grouped according to medieval principles (FIG. 2). The main consideration is to avoid the sun, and the high buildings with projecting mashrabiyas², known locally as ‘roshans’, cast shadows over the winding streets in the same way that the overhang of medieval houses in Europe protected the passer-by from the effects of the weather. The winding streets deflect the wind so that all the buildings get some advantage. Every house has its roof terrace, with some covered rooms, partly shaded. Life in the town is not as congested as it appears to the superficial glance. An average house block of 2,400 square yards, including its share of the surrounding streets, contains space for nine families and fourteen shops, which is a town density of approximately one hundred and fifty persons per acre. Similarly, Shennawi’s old house occupies one-fifth of an acre, and could have accommodated thirty persons, at a town density of one hundred and fifty. Open space occurs in the form of innumerable irregular ‘squares’, and the whole town is surrounded by the sea. The maximum distance of any house from the sea is 185 yards. The town is thus spacious although compact³.

² The ‘Mashrabiya’, derived perhaps from the Arabic ‘sharab’ to drink, or more probably from ‘sharaf’ to peer through, is a form of bay window with adjustable flaps to regulate the entry of light and air, and at the same time, to prevent strangers looking inside the room.

³ There is no exact parallel, but it is interesting to compare contemporary town planning requirements in Europe, which recommend a density of one hundred persons per acre in the centre of towns. This standard is one which assumes smaller rooms than those in the tropics; furthermore, the population of Suakin probably lives for a large part of the year in the open air, sleeping on flat roof terraces or in ‘salas’ and therefore high densities are possible.
THE RED SEA STYLE

Paved streets do not exist, for durable stone is unobtainable, and the street surfaces are formed of sand compacted by foot traffic. Big sea-shells occasionally appear half un-covered in the streets. The existence of a large number of iron lampholders suggests that at one time municipal control was good, and the town well-organised.

HOUSE PLANS

House plans follow the same basic principles in all Moslem countries, because of the practice of segregating the women. In Suakin the simplest plan consists of a pair of rooms. Fig. 29 illustrates the development of a single storey house, with rooms arranged around three sides of a courtyard, the fourth consisting of a wall to the street, and finally the complete enclosure of the courtyard with rooms. The next stage is to construct upper floors. There is a standard plan for a three storied house (Fig. 30), this is varied only according to the exigencies of site planning.

The standard house plan for Suakin contains on the ground floor a ‘maqa‘ad’ which is a reception room for male guests, and where business may be conducted; there are also store rooms for both domestic use, and for goods. There is always a cooking stove for coffee, which is kept ready for visitors at all hours. Sometimes the ground floor may contain shops having no connection with, and not necessarily owned by the occupants of the houses above (Fig. 33). Shop fronts are sometimes constructed like mashrabiyyahs, with huge flaps folding outwards, top or bottom hung, acting as sun shades and counters (Fig. 5).

The upper floors consist of the family quarters, usually divided into a series of self-contained units, each called a ‘maglis’, and occupied by a sub-section of the family. The ‘maglis’ consists of a large, well-proportioned room with one or two mashrabiyyahs, and some windows. These are usually on adjoining walls to give a good distribution of light, and they are never on opposite sides of the room. The other walls have niches containing shelves, usually with small decorative arches over. A small store-room usually adjoins; there will also be a second withdrawing room with one or two windows, and perhaps a mashrabiyyah, connected with the main room by a wide door, often latticed. The bathroom and latrine occur on each floor, with arrangements for the latrine to be flushed by the bath water.

The top floor usually consists of roofed ‘salas’, open roof terraces, and rooms for cooking (well placed in that the cooking odours are kept out of the house), and servants’ quarters. There may be, on the top floor, as in Shennawi’s house (Fig. 33), a magnificent ‘maglis’ for special occasions, such as weddings and funerals. The roof terraces are like unroofed rooms, surrounded by parapets, punctuated by crenellations, the openings being fitted with shutters and window seats.

The larger houses have the same elements as the standard plan, but arranged in a more complex way. It is common to have a ‘sala’ on the ground floor, two floors in height, and open to the street under an arch at a high level, as in Shennawi’s house (Fig. 33). This double-storied space generally has mashrabiyyahs giving on to it from the three walled sides, from which the women of the family can observe the entertainment of the male guests, without being themselves observed. Such ‘salas’, and also the

---

4 Maqa‘ad, Arabic for a stool, i.e., a sitting place.
5 Maglis, from Arabic ‘galas’ to sit down, i.e. a sitting place.
6 Sala, a roofed place open on one or two sides.
living rooms, are frequently decorated with carved plasterwork, or with patterns formed by small pebbles inserted in the walls.

Living rooms are usually 15 or 16 feet wide, and 12 feet high. The system of planning allows great flexibility in the subdivision of house blocks, according to the varying sizes of families, and adjoining houses are easily connected through the party walls, or by means of corridors bridging over the internal courtyards or passages, so that houses along a whole street may be interconnected. This is the usual oriental method when the whole family, which is usually large, lives in the same place.

**House Furniture**

The living rooms have built-in seats running all round, eighteen inches above the floor, and covered with carpets and cushions. There are shelves in alcoves, and sometimes bracketed shelves with similar fretted details as those on the mashrabiyyahs. The centre of the room is left empty, giving a feeling of space in a room which might on occasion be filled to capacity on family visits, allowing the carpet to be seen without being cluttered up with furniture. The only movable features are the brass or copper trays on folding supports, the dishes in the alcoves, and rugs and cushions. Occasionally there may be a small coffee-tray for the use of two or three people sitting inside one of the roomy mashrabiyyahs. There will also be 'angarees' (beds) with carved legs and sides, strung with rope. Lamps are hung from carved timber features in the crown of large internal arches.

**The Mashrabiyyahs and Grilles**

The main features of the Red Sea style are the enigmatic mashrabiyyahs, like limpets on the whitewashed walls. The mashrabiyyah is a brilliant solution to the problem of fenestration in a tropical humid climate; when the panels are closed, light and air are admitted only through the fixed fretted panels of halved slats at the top. These panels usually allow in enough light at the brightest part of the day. Below the panels are pairs of flaps, usually twelve, and the variations possible in opening some or all of these are immense. If all are open, light and air can enter through almost the whole space in the wall occupied by the mashrabiyyah (FIG. 20 a and b). The mashrabiyyah is always a pleasant place in which to sit; with its cushions and carpets it is like a small room.

The ones on the ground floor, giving onto stores and reception rooms for male guests, have bars fixed vertically over the openings for security, behind which are sliding panels like miniature sashes (FIGS. 38 and 39). These mashrabiyyahs may either have a masonry base (FIG. 17), or be corbelled out on timber cantilevers (FIG. 18).

The mashrabiyyahs to the family rooms on the upper floors are slightly different in that they do not have bars, and rarely sliding sashes; normally the openings are fitted with pairs of top and bottom hung flaps, which can be opened outwards, and fixed with metal stays, for the top row to act as a sunshade, and the lower row to rest on carved timber brackets. This form of mashrabiyyah is usually fitted with panels of 'shish' to ensure privacy to rooms which will certainly be used by women; such 'shish' screens are fixed

---

7 In Cairo whole quarters of the old town are planned in this way, with gates across the entrances to cul-de-sacs, so that the whole complex can be guarded for security.

8 Shish, lattice work. The turned and notched lattice work is called Shareikha work, the ordinary criss-cross only is called Shish. Stalactite and other fretwork decoration is called Sharfa work.
either outside the mashrabiya as a sort of box within which the flaps can be operated (FIG. 19), or alternatively as sliding panels or sashes similar to the solid ones on the ground floor (FIG. 20). Occasionally the upper floors have mashrabiya without any 'shish', neither internally nor externally. It is possible that it might have been removed, or fallen off.9

The ornamentation of the mashrabiya is derived very simply by means of the application of boarding cut with a saw ('sharfa work'), the pieces being applied to flat surfaces to give an effect of ornate wood carving, although none of it is carved (FIGS. 40 and 41). The effect satisfies the inherent Islamic love for surface decoration. This ingenious method of decoration is used throughout the whole domestic life of Suakin, even down to the brackets which support shelves, and the children’s swing wheel still in use.10

All mashrabiya are based on the same principles, but no two are exactly alike. The most common types have a plain top with a small cornice and a plain base. The more ornate ones have a hooded top (FIGS. 17 and 26), which may be further elaborated by the addition of a crested centre. Sometimes the hoods are carried right along the building, linking the adjacent windows and mashrabiya into one composition (FIGS. 12 and 26). The top may alternatively consist of a coved cornice, either plain, or with tacked decoration, (FIGS. 19 and 21), and perhaps a crenellated top (FIG. 24).

The base of the mashrabiya on the ground floor may be either solid masonry or cantilevered beams (FIGS. 17 and 18). On the upper floors the cantilevers are masked by flat boards (FIG. 19) or by a coved base which may have saw-cut ornament tacked on (FIG. 21). It may be even more elaborate in section than a simple cove (FIGS. 23 and 24), with the ends of the base formed of elaborate brackets framed up with flat pieces of board to give a solid effect. Intricate bases may be formed of stalactite ornament composed of shaped pieces nailed so as to hang from the ends of the cantilever beams (FIGS. 25, 26, 27 and 28).

The most common mashrabiya in Suakin is four bays wide; examples also occur with three and five bays.11 In one case, two mashrabiya of five and seven bays are joined together to produce a twelve-bay mashrabiya. Pairs of mashrabiya may be linked together with a small 'gulla' stand, which holds the earthenware jar for keeping water cool (FIG. 27). Sometimes an ordinary mashrabiya may have such a place for a

---

9 In Jeddah the mashrabiya all appear to have outside 'shish'. It cannot be certain that this was not so in Suakin, where it might have fallen off through lack of maintenance, and there are well-preserved examples in Massaua still in use, and without external 'shish'. It seems unlikely that there was ever any external 'shish' in cases where there are internal 'shish' sashes under the flaps.

10 The Municipal Museum in The Hague, there are Turkish wall-tiles of the 16th–17th centuries with scalloped stalactite ornament in green, blue, and white, similar to the stalactite 'sharfa work' of the Suakin mashrabiya.

11 The width of each bay is one 'dira', i.e. 58 centimetres approximately. This is the unit used in vernacular building in the Sudan, and is equal to two cubits. Mr. Greenlaw noted that in Jeddah the builders measure with a piece of wood which is approximately the length of a 'dira'. It is probable that the scale of the older buildings in Suakin derives from the use of this measure, and that the later coarse scale of the 19th century Egyptian period is due to the fact that the metric system came to be used. This could account for the difference in scale between the two phases.
porous jar. A rare example is a break-fronted mashrabiyyah, giving extra projection (Fig. 28). Circular and polygonal mashrabiyyahs also occur (Fig. 7).

In narrow streets there are occasionally large openings framed up exactly like mashrabiyyahs, but built in flush with the wall; in such a case it is probable that when the plot on the opposite side of the street was built on, the street became too narrow for the existing mashrabiyyahs, and these were therefore retracted, retaining the outer framework, which came to be fixed flush with the wall.

The mashrabiyyah principle may be used to produce special features, such as the timber infilling at the end of Shennawi’s new house, and the big feature over the main door of the Wakkala (Fig. 11). This principle is also applied to the construction of lock-up shops, in which case the upper half is raised to act as a sunshade, and the lower becomes a counter for the display of goods (Fig. 5).

Variations occur in different parts of the world of the mashrabiyyah principle; examples in stone occur in Greece, and of timber in Turkey; Malta has glazed timber ones supported on massive stone corbels; glazed mashrabiyyahs exist in Addis Ababa where the cool air of the Ethiopian plateau precludes the use of open ‘shish’ (this use in Ethiopia is possibly the basis of the ‘Glazed and Galleried Style’ of the capital); South America has ornate examples decked out in Baroque detail. The mashrabiyyah might well have been the original of the medieval European bay window.

The Grilles

The ventilation grilles in the upper parts of mashrabiyyahs are constructed very simply with slats cut with a saw and halved together, forming an intricate pattern of circles, stars and crosses (Figs. 42 to 46); this method differs from the more usual method of ‘turned shish’ common in Cairo. Such panels filter the light and help to avoid glare from the unglazed uncurtained windows. This type of panel is sometimes used in other small openings giving light and air to staircases and latrines. More generally for these purposes the tenoned and halved types are used (Figs. 48, 49, 50, 51); the tenoned form is usual in the large windows of mosques.

The pierced marble slabs in the Double Temple in Hullabid, Ceylon (A.D. 1224), are similar to the cupboard panels of Shennawi in Suakin (Fig. 47).

The Construction of Buildings on the Island

The timber resources of the hinterland are negligible, and timber has always been imported. The Red Sea style has always turned to the sea and sailors for inspiration and materials. The timber used is Java teak; the stone is either ‘hagar bahari’, i.e. coral from the sea (Burckhardt’s ‘madrepore’), or ‘mangubba’ from the land. Walls are of rubble; the stone is rarely dressed, except in the doorheads (Figs. 34 and 35), and the buildings are finished with plaster. Longitudinal timbers are built in at vertical intervals of approximately four feet (i.e. two ‘diras’), acting as horizontal ties, to stabilize the rubble walls. These horizontals simplify the repair of walls, supporting the upper portions if the stone below has to be removed for renovation, or if it is required to make a new door or window, or block up an existing one (Fig. 7).12

---

12 Such a constructional method has been used since ancient times. Philonius of Byzantium wrote, regarding the walls of strongholds: ‘oak beams, put together with their ends, ought to be knotted together lengthwise in the stonework of the façade and towers. This chaining at six feet vertical distance apart is to localize the effect of enemy missiles on the wall, and to make repairs easier’.

[Continued on next page]
THE RED SEA STYLE

ARCHITECTURAL STYLE

Suakin belongs more to the sea than to the land, and similar buildings occur in the other Red Sea ports of Jeddah, Hodeida and Massaua. It is not purely Sudanese. The basis of the style is the simple white-plastered cube (FIGS. 4, 6, and 8), enlivened by the pattern of the freely placed grilled openings, the doorhead carvings and the mashrabiyyahs. This architecture is a distant relation of the town houses of Cairo, but has regional variations suited to the hotter and more humid climate. History records Suakin’s trading connections with Egypt, Arabia, India and China, which places have undoubtedly influenced its architecture. Although lacking the Hellenistic courtyard plan, the Red Sea style has adapted this idea in the clever use of ‘salas’ and roof terraces at various levels; a sophisticated architectural expression which takes advantage of the change in level afforded by the different floors.

A tropical building is in one of several categories: either of dry inland desert places, designed to exclude the burning wind of the day, and the cold night air: or of the sea coasts, which have developed, like Suakin, a style of ‘aeolian’ architecture, whose many grilled openings allow the cool sea breeze to enter. The wind is the most important element in the Red Sea style.

The details of the style influenced the Italians in their early phases of colonial architecture in Eritrea at the beginning of the century. To-day, the enlightened Public Works Department in French Somaliland is actively applying the main principles of ‘aeolian’ architecture to solve contemporary problems of construction under humid tropical conditions.

(Continued from previous page)

Vitruvius mentioned the cross beams that were used in Roman constructions. In the 6th century Procopius discovered them in the military buildings in Persia. Krencker has noted such forms of construction in Tibet. The system of construction is commonly used to this day in Ethiopia, and was in existence there as early as the period of the Axumite kingdom. The churches in the monasteries of Debra Damo and Debra Libanos in Tigrai have such a system used in a highly developed way, and it had been translated into solid stone decoration in the storied obelisks of Axum, and the rock-hewn churches of Lalibela.

REFERENCES

LITTMAKN, KRENCKER and LÜPKE, ‘Deutsche Aksum Expedition’ (Reimer, Berlin, 1913).
D. H. MATTHEWS, ‘Ethiopian Monastery Church, Restoration at Debra Damo’, The Builder, 4 August 1950, 150.

67
KUSH

REFERENCE TO FIGURES

(Pages 71 to 86)

Fig. 1. View of the Island from the mainland, looking northeast. The Causeway is on the right.

Fig. 2. Plan of the Island.

R = Resthouse. MA = Mohammed Bey Ahmed’s house.
M = Mosque. X = Beit el Basha, probable site of the oldest houses.
Z = Zawia. 
K = Khorshid’s house. W = The Wakkala, or Caravanserai.
SM = Sitt Miriam’s house. Ch = Church.
Sr = Shennawi Bey’s old house. GH = The building of Gellatly Hankey & Co.
S2 = Shennawi Bey’s new house.

Note: The buildings which are hatched on the plan are in a fair condition of repair.

Fig. 3. Beja tent. See note 1.

Fig. 4. House No. 220, of the middle phase.

Fig. 5. Houses Nos. 220 and 221. Note the shop with open flaps.

Fig. 6. House of Khorshid. An example of the early phase. This building is lower than the minarets nearby.

Fig. 7. House No. 226, of the middle phase, with a top floor added later in the late (Egyptian) phase, the latter having semi-circular windows closely spaced, and a balcony. Note the alteration that has been made on the first floor, where a mashrabiyyah has possibly been removed, and replaced by a smaller window. The presence of horizontal timbers in the walls allows such remodelling to be carried out easily. This house has a polygonal mashrabiyyah.

Fig. 8. House No. 126, of the last phase, with semi-circular windows, and no mashrabiyyahs, typical of the Egyptian period.

Fig. 9. House of Sitt Miriam. A fine example of the middle period. The mashrabiyyahs, whilst not actually joined, read together as a vertical feature. This motif has been developed further in Jeddah, where features of two and three storeys are known. The built-in timbers are used as a motif in design, to unify the fenestration.

Fig. 10. House No. 233, an example of the middle phase, with a top storey added in the late Egyptian style. The latter part has the usual semi-circular openings and a balcony; the earlier part has mashrabiyyahs and square headed openings.

Fig. 11. The Wakkala or Caravanserai, the last example of the Egyptian style with typical semi-circular openings, and a large timber feature, not projecting, over the main entrance, in the mashrabiyyah manner. The composition of the elevation is particularly happy.

Fig. 12. A Turkish terrace. Windows and mashrabiyyahs are linked with a horizontal line of sharfa work.

Fig. 13. Mosque on the Island.

68
THE RED SEA STYLE

Fig. 14. Mosque on the Island. The minarets are dwarfed by the later houses of the Turkish middle phase, which must therefore have been built after the mosques. The early houses, viz. Beit el Basha, and Khorshid’s, are similar in size and scale to the mosques.

Fig. 15. Mosque on the Geyf.

Fig. 16. Mosque and Wakkala on the Geyf.

Fig. 17. Ground floor mashrabiyyah: plinth base, hooded and bracketed top.

Fig. 18. Ground floor mashrabiyyah: cantilever base, coved top with tacked ornament.

Fig. 19. Upper floor mashrabiyyah: Cantilever base, masked with boards, plain coved top, and external shish.

Fig. 20. Upper floor mashrabiyyah: cantilever base, coved and bracketed top, internal sliding shish.

Fig. 20a has the flaps closed, and

Fig. 20b has them open, illustrating the mashrabiyyah principle.

The author adapted the idea of the mashrabiyyah to modern needs in the design for the new Town Hall built at Omdurman.

Fig. 21. Upper floor mashrabiyyah: decorated coved base and top.

Fig. 22. Upper floor mashrabiyyah: plain coved base, and bracketed top.

Fig. 23. Upper floor mashrabiyyah: moulded, tusked and tacked base, coved and decorated top, The side tusk are made of small slats nailed to form a solid-looking member.

Fig. 24. Upper floor mashrabiyyah: moulded, tusked and tacked base, decorated coved top with cresting.

Fig. 25. Upper floor mashrabiyyah: stalactite base, plain coved top, and fixed external shish.

Fig. 26. Upper floor mashrabiyyah: stalactite base, bracketed top, with central ‘hat’. This mashrabiyyah is linked to the adjoining windows with sharfa work.

Fig. 27. A pair of upper floor mashrabiyyahs linked by a gulla stand. Stalactite bases and tops. Each mashrabiyyah has in addition its own gulla stand.

Fig. 28. A break-fronted mashrabiyyah for an upper floor, with tusked and stalactite base, and decorated top.

Fig. 29. Evolution of the single storey house, from a basic unit of two rooms, to a more elaborate courtyard form.

Fig. 30. A typical three-storeyed house.

Fig. 31. House of Khorshid.

Fig. 32. Beit el Basha.

Fig. 33. House of Shennawi Bey.

Key to plans:

M = Maqa’ad. RR = Rooms on roof. Cy = Courtyard.
S = Store room. GR = Guest room. Sh = Shop.
MJ = Maglis. L = Bath and latrine. SA = Sala.
WR = Withdrawing room. K. = Kitchen. T = Terrace.

The plans in Figs. 29 to 33 were measured by Mr J. P. Greenlaw, and drawn by Hassan Effendi Shawgi, and redrawn by the author.

69
KUSH

Fig. 34. Carved stone door-head, of a type known in Arabic as 'Agad Mawshaw'.

Fig. 35. Carved stone door-head.

Fig. 36. Timber door, giving on to the street.

Fig. 37. Timber door, giving on to the street.

Fig. 38. Ground floor mashrabiyyah: external elevations. The vertical bars are not shown. See Fig. 39.

Fig. 39. Ground floor mashrabiyyah: plan, section, and internal elevation. Note that the width of each bay is one dira (approximately 58 cm.). This measure is the key to the scale of the early and middle phases of Suakin architecture. The later Egyptian buildings are coarser in scale, probably because the metric system was then in use. (See Note 11 and Fig. 38).

Fig. 40. Typical details of mashrabiyyahs: cornices and bases; tacked and stalactite ornament (sharfa work).

Fig. 41. Tacked ornament (sharfa work).

Figs. 42, 43. Variations of the fretted panels which are used in the upper parts of mashrabiyyahs as fixed lights and ventilators. The ornate effect is achieved in a very simple way by notching thin slats with a saw, and halving them together.

Figs. 44, 45, 46. Variations of the fretted panels which are used in the upper part of mashrabiyyahs as fixed lights and ventilators. The ornate effect is achieved in a very simple way by notching thin slats with a saw, and halving them together.

Fig. 47. A cupboard grille in Shennawi Bey's house. The treatment of this grille, and an external one in Fig. 50 is reminiscent of the pierced grilles in the Double Temple in Hullabalid, Ceylon (A.D. 1224). Such pierced slabs are very distinctive of the Hindu style, and are also similar to Byzantine and Saracenic treatments. Trading connections are known between Suakin and Ceylon.

Figs. 48 and 49. 'Halved' grilles, larger than those in the mashrabiyyahs, but with decoration formed in a similar way. They are the infilling panels to small window openings.

This treatment of wall openings has modern applications, and the author used the principle in the design of some timber grilles in the new Town Hall built at Omdurman.

Fig. 50. 'Halved' grilles, the larger ones being mainly used in mosques. Compare with Fig. 51.

Fig. 51. 'Tenoned' grilles, an alternative form to those shown in Fig. 50.
KUSH

Fig. 3  Beja tent

Fig. 4  House no. 220

Fig. 5  Houses nos. 220 and 221
THE RED SEA STYLE

Fig. 6 House of Khorshid

Fig. 7 House no. 226

Fig. 8 House no. 126
Fig. 11 The Wakkala

Fig. 10 House no. 233 near the Gate

Fig. 12 Terrace houses

Fig. 9 House of Sitt Miriam
THE RED SEA STYLE

Fig. 21

Fig. 22

Fig. 23

Fig. 24
THE RED SEA STYLE

Fig. 29a
Development of the House (Single Storey)

Fig. 29b

Fig. 29c

Fig. 29d

Ground
First
Second floor

Fig. 30
Typical House

Fig. 31
House of Khorshid

Fig. 32
'Bait el Basha'

Fig. 33
House of Shennawi Bey
THE RED SEA STYLE

Fig. 39

Fig. 38

Fig. 37
KUSH

Fig. 44

Fig. 45

Fig. 46

Fig. 47

CUPBOARD GRILLE
SHENNAW'I'S

Fig. 48

Fig. 49
Fig. 51

86
Notes

The following sites have been recently discovered in the Sudan, and have not yet been published elsewhere:

_Umm Ruweim_    Map Sheet 45-F  18° 25' N
                             32° 01' E

Two enclosures of drystone walling were discovered about 20 kilometres up the Wadi Abu Dom from Merowe. The first of them is an elaborate structure standing now about 2½ metres high, and consisting of three concentric rectangular structures each of which in its thickness contains a number of rooms. The two outer rectangles enclose a space between them, but the inner one is solid, apart from its rooms. At the northwestern corner is the ruin of what may have been a tower.

The second enclosure is much simpler and consists only of a surrounding wall about ½ metre high with a gateway in the western wall and the remain of a room or tower in the eastern one. The enclosure is roughly square—about 69 metres in each direction—and was probably used for animals.

There were very few sherds in the enclosures and these were all of a common indeterminate type, except for one which had an incised design associated with the Meroitic and early Christian periods.

These ruins lie on the route from Napata to Meroë, and it is suggested that they were a caravanserai for the travellers along the route. The distance from Napata (modern Merowe) to the ruins is about a day’s journey for a camel.  

_Abu Erteila_    Map Sheet 45-O  16° 51' N
                             33° 46' E

Three mounds covered with broken red brick and fragments of pottery. From the potsherds seen on the surface of the ground, these mounds appear to belong to the Meroitic period.

_All map references refer to the 1:250,000 series of the Sudan published by the Sudan Survey Department, Khartoum._