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II

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EDITORIAL NOTES

UNTIL recently the Sudan has usually been considered an archaeological off-shoot of Egypt. Wellcome's excavations at Jebel Moya before the First World War were the first to reveal an aspect of the native culture, but the long delay in the publication of this work has meant that it is only over the last few years that a proper appreciation has been possible. Largely as a result of the excellent publications by Addison and Crawford recent research has emphasized the local characteristics of ancient cultures of the country and has shown not only the special Sudan contribution, but has also drawn attention to influences coming from other than the lower Nile Valley. Meroë is shown to have been far more than a barbaric and provincial off-shoot of Hellenistic Egyptian culture and can be shown to contain elements of a vigorous African civilization and to bear many traces of cultural influences from the east, which were not filtered through Egypt. The extremely important article by Mlle. Préaux in Chronique d'Égypte (53, pp. 257 ff.) has drawn attention to the eastern influences already noted by Arkell. Recent excavations by the Antiquities Service on medieval sites have shown the highly individual nature of Christian civilization both in Nubia and at Soba. The article by Mr Balfour Paul in this number brings out another aspect and emphasizes the western contribution to Sudan history at a rather later date.

This research, now in its very early stages, has only touched the fringe of some of the major problems of the archaeology of the country. The problems are as immense as the area involved. Only the most accessible parts of the country have yet been examined by the trained archaeologist and even in these areas the examination has been, in most cases, superficial. Pharaonic times have been well studied, and the main excavations of the past 40 years have been on sites of Egyptian culture, or of the Egyptianized Napatan Kingdom. The time has now come to pursue a more vigorous policy of research into certain aspects of fundamental importance. Amongst these are an investigation of the causes of the fall of Meroë, to which the small excavation at Ushara, described in Number 1 of this journal, was perhaps a contribution. The history of the coming of the first Arabs into the Sudan is still most obscure, but Mr Glidden's article throws some light. A detailed survey of the Red Sea Hills and littoral is a prerequisite for further advance here. For earlier times, further survey is badly required to establish the geographical distribution of the early cultures found by Arkell round Khartoum, and particularly to close the immense geographical gap between the two graves discovered near the Omdurman Bridge and the apparently contemporary culture known from Faras with its close contacts with Egypt.
These are only a few of the problems to be solved. Geography, climate, and shortage of trained workers makes their solution difficult. The Antiquities Service has to live a hand-to-mouth existence and plan much of its work on a short term and ad hoc basis. It cannot, until more trained personnel are available, carry out more than one investigation at a time. At the moment the main emphasis is being laid on establishing a chronology for the material remains of the medieval Christian period. Other problems must remain in abeyance. Over the last 10 years the Government has had an almost complete monopoly, with one or two notable exceptions, of archaeological work. This is an unsatisfactory situation, for a small Government Antiquities Service must spend a large amount of its time on administration and conservation and cannot be wholly a research organization. In other parts of the Near East research has been largely in the hands of universities and learned societies. Since the hey-day of excavation between the two wars very little work by such bodies has been carried out in the Sudan. Expense is a real, but not an absolute bar. It is not now large scale spectacular Near Eastern excavation of the old type that is required, but careful survey and small scale carefully selected excavation of stratified sites. These do not make the same demands on money and personnel and should be well within the powers of many organizations. The Sudan is a fruitful field for the adventurous archaeologist and it is a country where the foreign worker will receive every help and encouragement.

The Editor regrets that by mental aberration, the numbering and the date as given on page 1 of Number 1 are wrong. Instead of reading Vol. I no.1, it should read Number 1, since the intention is to produce one number per year, and the date should be 1953 as on the cover. Apologies are tendered for this mistake, which should be attributed to excess of dust storms and extreme temperature.

P.L.S.
Sultans’ Palaces in Darfur and Waddai

by G. Balfour-Paul

The Medieval palaces of Darfur, built on their mountain-tops by the Tunjur and early Fur Sultans, have already been described by A. J. Arkell in Sudan Notes and Records. The later palaces, built when life was at least safe enough to live at water levels, have received less attention than they merit. In the 18th and 19th centuries all Central African sultans built themselves walled palaces of some sort—the Bagirma at Massenia, the Waddai at Wara, the Daju at Sila, the Tama at Jebel Nyeri, the Fur at sundry focal points in their empire—all of them perhaps, to a closer or more remote degree, collateral descendants of the Medieval Bornu palaces of Gasregano and Gambaru, west of Lake Tchad, a distant reflection of the age when the Bornu hegemony is believed to have extended over the whole area concerned.

Shoba and Wara have been chosen for description for various reasons. Architecturally they are the most spectacular. They were the capitals of the rival sultanates of Fur and Waddai. They were in part almost contemporary.

The descriptions are based on three hurried visits to Shoba in 1952 and a single visit to Wara in 1953, and make no claim to finality. The titles of principal works referred to are: W. G. Browne, Travels in Africa, Egypt and Syria (London 1799); Muhammad Omar el Tounisi, Voyage au Darfouur, tr. Perron (Paris 1845) and Voyage au Ouaday (Paris 1851); Nachtigal, Sahara und Sudan (Berlin 1889) Vol. III.

SHOBA

Seven miles south of Kebkebia, which guards the pass between the massifs of Jebel Si and Jebel Marra, are the remains of two walled palaces and a large mosque attributed to the Fur Sultan Muhammad Teirab (c. 1752–1785). They are sited on either side of the small Wadi Shoba, at the foot of the Jebel of the same name. Let us take them in turn.

(a) The Larger Palace.

The thick overgrowth of bush and the decayed condition of the building make photography difficult, and certain details of construction must await closer examination and clearance of debris. But some idea of this remarkable palace may be gained from the accompanying plan (Fig. 1) and photographs (Plate I, A and B). Thirteen ground-floor rooms of varying sizes enclose a rectangular courtyard, 50 ft. by 70 ft. The north-west corner, judging by its general appearance and the enormous quantity of tumbled bricks, must have been a solid tower. On three sides of the courtyard are first storey balconies,

1 SNR, xix, Pt. ii, p. 301 (Ain Farah); SNR, xx, Pt. i, p. 91 (The Turra Palaces); SNR, xxvii, p. 185 (Uri).
3 Measurements of this and the other palaces figured were paced; those of Shoba Mosque (Fig. 3) taped. The general layouts of the two Shoba palaces have been checked against air photographs.
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A. SETTING IN MAZE OF STONE WALLS

B. GROUND PLAN

Fig. 1. SHOBA, LARGER PALACE
A  2-STOREY BRICK BUILDING WITH CENTRAL TOWER (?)  
B  SIMILAR 2-STOREY BUILDING OF MUD & GRAVEL  
C  STONE FOUNDATIONS SURROUNDING BRICK CIRCLES  
D  STONE BASES OF GRASS HUTS  
E  MAIN RAMPART GATE5 (BRICK ON MUD CORE)  
F  SIMILAR GATE IN INNER WALL  
G  BRICK GUARD-HOUSE (?)  
H  SMALL ENTRANCE THROUGH RAMPART  
J  MOUND CROWNED WITH STONE WALLS

Fig. 2. SHOBA, SMALLER PALACE
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CONSTRUCTION OF PILLARS

Each course
Each brick

Fig. 3. MOSQUE AT SHOBA
a. SHOBA. THE LARGER PALACE FROM THE SOUTH EAST

b. SHOBA. THE LARGER PALACE
(Part of room 7 showing wall in elevation and section)
a. SHOBÁ MOSQUE. INTERIOR LOOKING EAST

b. SHOBÁ MOSQUE FROM THE NORTH WEST
PLATE III

a. WARA PALACE. VIEW FROM HILL TO SOUTH

b. WARA PALACE. BUILDING A
PLATE IV

a. WARA. BUILDING E
(The plinthed tower) with building A in background

b. WARA. THE MOSQUE WITH HEXAGONAL MINARET
The main gate of the mur d'enceinte appears in the background
SULTANS’ PALACES IN DARFUR AND WADDAI

one of solid masonry, the other two being carried on narrow windowless chambers. The first floor rooms, to which access seems to have been gained by a single stair leading up from room 11, were supported on square columns of varying dimensions as shown in the plan. That there were three storeys is evident from joist holes in the south-west corner and is also recorded by Nachtigal (see below).

A curious feature of the layout is a portico (if such it is) in the northwest corner of the courtyard, where can be seen a few courses of three round columns set on quadrangular plinths and constructed of specially shaped bricks⁴ as follows:

The walls of the palace vary in width from 3 ft. (normal) to 5 ft. on the north side where a further thickness was added internally with no attempt at bonding. As in all Fur palaces of brick—as too in the Bornu palaces and at Wara—brickwork is for the most part in ‘English bond’, alternate rows of headers and stretchers. Windows are of three designs, the larger being rectangular with a wooden lintel⁵, the smaller consisting of a triangle or double triangle framed in outsize bricks. Both of this type are visible in PLATE 1, b. The detail of the double triangle type is as follows:

A feature of the whole palace is the plethora of recesses or built-in cupboards in the walls of every room. Some forty are traceable on the ground floor. All of them were plastered internally.

The palace is set at the centre of a maze of stone walls (FIG. 1, A) too low to be seriously defensive⁶ but full of blind entrances. No doubt they represent on a large

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⁴ For the different method of constructing round pillars adopted in the Mosque see FIG 3. (Inset). This was also the method employed on the solitary column in the roughly contemporary Fur palace at Gerli. Bricks of this shape (the truncated cone) are also declared to have been used by the Fur in lining wells.

⁵ The only lintel of which traces remain in this palace is of Doleib palm. The lintels remaining in the mosque are of Nabag wood.

⁶ The most solid are in the area of the south entrance, some 5 ft. wide and (now) 5 ft. high, roughly faced. The outer perimeter walls are of poorer construction, very narrow and in their present state often not more than 2 ft. high. It seems unlikely that stones have been looted to any great extent since the local villagers do not build in stone.
scale the transformation into stone of the maze of fences, made of withies, thorn, or millet stalks, popular even to-day round the houses of richer villagers in Darfur, intended to confuse or impress the visitor, animal or human, and to divide off the women’s quarters and the huts of dependants.

Apart from one or two stone circles marking the base of grass huts, there are no other buildings in immediate association with the Larger Palace.

(b) The Smaller Palace

This group of buildings, enclosed in a considerable earth rampart, is situated some 500 yards lower down the wadi and on its left bank. FIG. 2 shows its general layout. The earth rampart or wall, which is much decayed, is interesting as the only known example in Darfur of a method of defence familiar to the west and south of Lake Tchad.

The principal building occupies the north-west corner of the compound. In construction it closely resembles the Larger Palace but on a smaller scale—84 ft. by 72 ft. as compared with 124 ft. by 99 ft. Its condition is even more ruinous and an accurate plan is not possible without clearance. But the same type of brickwork, the same square supporting columns, the same plastered recesses are in evidence; and in the centre are what appear to be the remains of a squat tower in solid masonry mounted by a stepped or graded ramp in the south hall.

Immediately south of this is a second large building very similar in plan but constructed of a mud and gravel composition instead of brick, the joist holes of its upper storey being framed with slaty stones. In this building there is no trace of the central tower.

The foundations remain of sundry other stone or stone-and-brick buildings of minor importance. All these, together with a less elaborate network of low stone walls, are enclosed by the earth rampart. Outside it on the south west are numbers of stone hut-bases. The rampart itself is pierced by two considerable gateways on the north and north-west, each consisting of a pair of 12 ft. square blocks, now about 9 ft. high, of burnt brick round a mud and gravel core. A similar gateway pierces the inner surround-wall on the south. There is also a small entrance through the southern end of the rampart.

(c) The Mosque

About 1,000 yards north-west of the Smaller Palace are the remains of the biggest mosque in Darfur—128 ft. by 98 ft., and still (by comparison with the palaces) in a fair state of preservation. Forty seven round brick columns, 3½ ft. in diameter and constructed as shown in the inset to FIG. 3, supported the flat roof7. PLATE II, A shows the interior of the mosque looking towards the Qibla. The south-east corner of this mosque, like those further south at Kurro and Bensei, is occupied by a two-storeyed partition. The lower room, which is only 4 ft. high, was used according to local tradition for storing books; the upper served no doubt as a khalwa or Koranic school.

The bricks of which the mosque is built are smaller than those used for the Larger Palace—12 in. by 6 in. by 2½ in. as compared with a rough average of 14 in. by 6½ in. by 2½ in. (The bricks in the Smaller Palace were not measured but resemble those in the Larger one).

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7 The pillars of all other Fur mosques I have seen are of square plan.
SULTANS’ PALACES IN DARFUR AND WADDAI

The little that is known of the history of Shoba as a royal capital is all associated with the Sultan Muhammad Teirab. Browne, who was in Darfur in 1794, 7 or 8 years after Teirab’s death, lists Shoba as one of the nine chief towns of the Fur⁸ and records⁹—though he never visited it—that ‘In Shoba was an house of Teirab’ and that it was ‘adorned with a kind of whitewash extracted from some chalk pits in the vicinity’¹⁰. That is all he has to tell us. By the time Muhammad Omar el Tounisi arrived in Darfur (1803), Teirab’s successor, Abdelrahman el Rashid, had established his ‘fasher’ at Tendelti. Shoba in consequence receives no mention from him at all. Nachtigal in 1874 learnt that Shoba had been Teirab’s favourite residence in the west—the others being at Gerli and Gogorma—and that he moved late in his reign to Ryl for strategic reasons. He adds (presumably from hearsay as the measurements are not correct) that the house was 55 metres long, 20 metres broad and 27 metres high, and contained 33 rooms for ‘Lieblingsfrauen’ whither he withdrew for a year’s retreat after laying in a stock of 365 rams (calculated, it would seem, in accordance with the Gregorian calendar).

In local tradition, too, Teirab is the only Sultan associated with Shoba and its buildings. The Smaller Palace, according to the neighbouring villagers of Shoba Fur, was built by him for his mother¹¹. The leading local historian, the Shartai Ahmedai of Kebkeba, on the other hand, drawing perhaps on his splendid gift for improvisation, declared it to have been designed by Teirab as a stopping-place for lunch on Fridays on his way from the Larger Palace to the Mosque. (The distance is about a kilo).

There can be no doubt that the Larger Palace was Teirab’s work and must date to the first half of his reign—say c. 1760. The Smaller Palace—or at least the earth rampart and the mud-built house in the centre of the compound—looks earlier. The Mosque, on the other hand, looks later, but it is difficult to see why anyone should have sited an outsized mosque at Shoba after the transfer of the Fur capital to Fasher (Tendelti) in the 1790’s.

Where Teirab found his architects and masons is a mystery. The Shoba palaces have no basis in earlier Fur building traditions. They bear no resemblance to the Meks’ palaces in the Northern part of the Fung Kingdom and little to the Fung king’s palace at Sennar, which is believed to be roughly contemporary¹². It seems most likely that the technicians were obtained from what is now Northern Nigeria. There is a vague tradition that they came from the West—as did so many of the Fur sultan’s right-hand men down to the present century. And the 16th Century palaces of Bornu are certainly reminiscent.

Wara

250 miles away to the west of Shoba lay the capital of the rival sultanate of Waddai, magnificently sited in a flat arena ringed by tall protective hills on east, south and west.

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⁸ op. cit. p. 236.
⁹ ibid., p. 239.
¹⁰ ibid., p. 239.
¹¹ In view of the position accorded in the Fur and other African sultanates to the Sultan’s mother the suggestion is not in principle unreasonable. Special residences for her are recorded at Ain Farah and Uri (Arkell, op. cit.), at Wara (Tounisi, Ouaday, PLATE VIII) and at Abeché (Nachtigal, op. cit., p. 64).
¹² See Crawford, The Fung Kingdom of Sennar, passim.
KEY

A  THE KEEP (1 STOREY 33 FT. HIGH)
B  LATER (?) 2 STOREY BUILDING
C  3-ROOM BUILDING WITH DAISES
D  LARGE 2-STOREY BUILDING
E  2-STOREY TOWER ON 14 FT. PLINTH
F  GATES IN SURROUND WALL
G  MOSQUE WITH HEXAGONAL MINARET

Fig. 4. WARA PALACE
SULTANS' PALACES IN DARFUR AND WADDAI

OUARA PALACE
DETAIL OF MAIN BUILDINGS

KEY

| A       | Single Storey 'Keep' 33 ft high          |
| B       | Later 2-storey building                  |
| C       | Building with raised wood dihæses       |
| D       | Large 2-storey house                     |
| E1      | 14 ft high plinth (Mud strengthened with flat brick courses) |
| E2      | Small 2-storey tower                     |
| E3      | Huts slightly countersunk                |
| F       | Store-rooms, etc                         |
| G       | Inner surround walls, stone or earth faced with brick |

SHADING

- 10½ x 5 x 2"
- 11 x 5½ x 3"
- 12½ x 5 x 1½"
- 13 x 5½ x 1 to 3"

BRICKS

- Mixed

Fig. 5. WARA PALACE, MAIN BUILDINGS

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HAREM
OU HUTTES DES FEMMES LEGITIMES ET CONCUBINES

DMEURE DU SOULTAN

17

18
16

19
15

20
14

21
13

H

E

D

B

A

18

19

20

21

A. MOSQUEE
B. CASR DE LA JUSTICE
D. LIEU OU LE SOULTAN PASSE LES SOIREES DU RAMADAN
E. CASR OU DMEURE PARTICULIER DU SOULTAN
H. UNE PARTIE D'UNE DES TROIS PETITES CONSTRUCTIONS QUI SERVENT
DE TRSOR ET GARDE-MEUBLE ETC.

11. PLACE DU SOULTAN À LA REVUE ET AU SALUT DE VENDREDI
13, 14, 15, 16. LES 4 PORTES PRINCIPALES DE PALAIS
17, 18. HUTTES DES EUNUQUES ET DES JEUNES TOUAYRAT
19. HUTTES DES TOUAYRAT ET DES SAIS (OU GROOMS)
20. HUTTES DES DOMESTIQUES ET DES OZBAN
21. HUTTES DES OZBAN POUR LA GARDE DE NUIT

Fig. 6. TUNISI'S PLAN OF WARA PALACE IN 1810

14
Within a brick-faced mud-and-stone mur d'enceinte 360 yards in diameter and now 14 ft. at its highest point is a group of singular brick ruins. Separate from this central group but still within the wall are two smaller brick houses (of single storey, 30 ft. square), the bases of many stone huts, and the traces of numerous low stone partition walls. Outside the main (west) gate stands what is left of a large brick mosque distinguished by a remarkable hexagonal tower or minaret at its north-east corner. The general layout of this palace capital can be seen in PLATE III, A, taken from near the top of the steep hill enclosing it on the south, and in FIG. 4. In FIG. 5 is shown the detailed layout of the main group of buildings.

Of this main group the central feature is Building A, the subject of PLATE III, B. Its design is curious. A 50 ft. square wall, 33 ft. high, encloses a 21 ft. square inner room, set concentrically within it, the space within the concentric squares being divided by diagonal walls into trapezoid-shaped rooms, accessible one from the other by low doors in the diagonal walls (save that there is no door through the south-east diagonal). Despite its 33 ft. the building is of one single storey. The only entrance is on the east side. Between this doorway and the north-east corner is a small ground level aperture, about the size of a latrine-bucket. A second (possibly the original) door on the north side has been carefully blocked. Part of the roofing (of timbers and mud plaster) including one of its projecting earthenware rain-pipes, remains in situ.

Immediately east of Building A is a two-storey house (marked B on the plan) which in view of its state of preservation appears later. Its north wall is projected to meet the east wall of Building A, and this connecting wall is pierced by a doorway leading into a high walled court. Excluded from this court (there is a small door in its east wall but it has been blocked) and immediately east of Building B is a smaller three-roomed one-storeyed building. The eastern half of all its three rooms was evidently occupied by a raised wooden dais, suggestive of audience chambers. Fifty yards south of this is a fourth large building (marked D) consisting of a rectangular hall, its roof supported on three massive square columns, fronting a two-storey block. The north-east portion of this block is too dilapidated for certain oddities in its design to be explained without clearance. On the south-west side of this group of buildings is a most peculiar construction, Building E. It consists (see PLATE IV, A) of a plinth, 81 ft. square, 14 ft. high, and built of flat bricks set in wide courses of mud mortar, surmounted by a small square tower with internal stairway. From the upper room windows face to the four points of the compass, enabling the sultan (so the local tradition runs) to sit and observe what went on in all four corners of his capital. Traces of four round brick huts, slightly countersunk into the plinth, surround the tower at its four angles, serving reputedly to accommodate four selected representatives of the sultan's harem. Close to the south-east face of the plinth the shaft of a latrine is still visible. Access to the plinth was gained by an internal stair at its north-east corner.

With the exception of patches in the north wall of Building D and in the walls of the (7) store-rooms north of Building A, where the bricks are laid herring-bone fashion, the technique of brickwork is the same throughout—alternate rows of headers and stretchers. The internal bonding at corners is hardly more competent than at Shoba. A remarkable feature of the whole group is that the bricks used vary in size and shape in each building. (For details see Inset to FIG. 5). Apart from the massive west gateway (visible in PLATE IV, B) the mur d'enceinte is pierced by only one small gate, on the north.

Of the mosque (PLATE IV, B) the principal feature is the hexagonal minaret (already mentioned) ascended by a spiral stair. It was, as Nachtigal grudgingly observes in 1874, 'für die dortige Welt eine ansehnliche Leistung der Baukunst'. The rest of the
mosque is clearly not in its original condition. As can be seen in the Plate many of the square columns have been doubled at a later date for reinforcement; and the outer walls, save for their lowest courses, have evidently been reconstructed using the smaller, more professional brick with which the columns were also strengthened. The bricks of the minaret are different again, very flat like those of Building C. The only other feature worth mentioning in the mosque—also visible round the upper half of Building A as seen in PLATE III, B—are occasional timber strengtheners set in the brickwork.  

On top of Jebel Thurraya on the west side of the walled palace is visible a platform (not visited) where the ceremonies of investiture were performed and the insignia of sovereignty kept.

The architectural history of Wara is by no means clear. Traditionally it was first established as the capital of Waddai early in the 17th Century by Abdelkerim ibn Yame, allegedly a Gimiraw from Shendi, who overthrew the more or less pagan Tunjur dynasty and founded the present line of Muslim sultans. Nachtigal was told that the mosque was built by him, but he may have been confusing this Abdelkerim with Abdelkerim Saboun (c. 1803–1811), who conquered Bagirma and Tama and to whom present-day tradition ascribes all the buildings at Wara indiscriminately. As the introducer of Islam, Abdelkerim ibn Yame may well have built a mosque at Wara, but not the mosque that now stands; for even the earliest of its three portions must be later than him. His son, Kharout I, again according to Nachtigal, enlarged and developed the royal residence. The original mur d’enceinte might conceivably be his—the main gate was certainly reconstructed over and over again—but the group of buildings described must all be after his time. There can in fact be little doubt that many of the Palace buildings were the work of Abdelkerim Saboun—but not all. For this is where the mystery begins.

Muhammad Omar el Tounisi spent 18 months in Wara in 1810–1811, shortly before Abdelkerim Saboun’s death, and has given us a short description of it and a plan. His plan in its essentials is reproduced in FIG. 6. In his description he says:

‘La plupart des maisons et de leurs enclos sont en maçonnerie. Il en est de même de la demeure du Soultan. Elle se compose d’espèces de pavillons ayant des “mouchrabat” ou fenêtres grillées en bois, saillantes au dehors, et de murs solides. Au lieu d’un zéraib d’epines (like the contemporary Fur sultan’s palace at Tendelti, whence Tounisi had just come) elle a un mur d’enceinte qui la clôt et l’entoure comme le hâlo entoure la lune’.

And later: ‘La demeure du Soltan est une construction assez considerable, toute en maçonnerie . . . A l’ouest, devant le mur extérieur du palais, est une mosquée et la grande place du Facher’. He then describes the four gates shown in his plan—of which only one is now traceable—and a ‘Castr de la justice’ of which, in the place he allots it, there is no trace at all. He adds: ‘Les murs qui forment l’enceinte et les murs de la

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13 The same resource was used in the Fung king’s palace at Sennar. This must also be the explanation of the holes piercing the columns of the early mosque at Ain Farah to which Arkell draws attention in his article cited in footnote (1) above.

15 Nachtigal, op. cit., p. 78.
16 ibid., p. 78.
17 ibid., p. 273.
18 Tounisi, Ouaday, PLATE VIII.
20 ibid., p. 263.
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partie ouest du palais n’ont qu’une médiocre élévation. Ils ne dépassent pas que de très peu la hauteur d’un homme ... La Casr ou appartement particulier du Soultan domine toute la ville. Cette construction a un seul étage au dessus du rez-de-chaussée et trois fenêtres à cet étage.’

Some features of his description and of his plan cannot be reconciled with what is now on the site. We must of course make allowances. He wrote his account 34 years after his visit, and the plan was then drawn for him in accordance with ‘Les croquis grossiers et les explications’ given by himself. The ‘appartement particulier’ must be our Building A; but the building shown by him on its north side might be any of those adjoining it. As for his ‘Casr de la justice’ it looks as if he has simply misplaced it and was referring to Building C. But it is inconceivable that if the plinthed tower was there when he was, he should have made no reference to it at all.

We must conclude that the plinthed tower and some at least of the other buildings are later than 1811, and therefore almost certainly later than Abdelkerim Saboun. Now we know that Wara was abandoned\(^{21}\) in 1850 by his fourth successor, Muhammad Sherif, after 15 years of almost continuous campaigning. It is difficult to believe that during the period of disorder and famine between Saboun’s death (c. 1811) and Muhammad Sherif’s accession (c. 1835) any major building works would have been undertaken at Wara; surprising, too, that if Muhammad Sherif had erected buildings of this spectacular nature—there are no other 19th Century brick buildings in the whole of Waddai—he should have abandoned them soon after for not very good reasons.

Barth, who collected much valuable information about Waddai when he was staying in the tributary state of Bagirma in 1852\(^{22}\), has nothing to tell us about Wara itself. The account given by Nachtigal, who visited Wara from Abeché in 1873, creates more problems than it solves. This is what he says\(^{23}\):—’Von der einstigen Königsberg waren nur kümmeliche reste erhalten: sie bildete ein grosses Oval oder längliches Rechteck ohne scharfe Ecken und hatte eine ansehnliche Grösse gehabt. Das Innere war ganzlich zerfallen; nur die Umschliessungsmauern, zu welchen ziemlich viel gebrannte Steinen verwendet waren, hatten der Zeit etwas mehr widerstand geleistet. Eine Ausnahme vom allgemeinem Verfall machte die ganz aus rothen Backsteinen erbaute grosse Moschee Abdulkerrim’s, des Gründers der Dynastie, welche sich durch ein etwa 10 m hohes, regelmässig-polygones, scharfkantiges Minaret auszeichnete.’

Thus all Nachtigal seems to have found remarkable or in tolerable condition were the mur d’enceinte and the mosque. The reasonable condition of Buildings A to E eighty years after his visit is therefore astonishing. For there is no suggestion that after the transfer of the capital to Abeche any further building was undertaken at Wara—the local villagers could hardly be ignorant of it if it had. Moreover the present condition of the hexagonal minaret is no more decayed than that of the other buildings (with the possible exception of B). We know from Tounisi’s plan that a mosque with a minaret—though he does not specify that it was hexagonal—stood on the present site in 1810. It seems inescapable that the other buildings were in existence when Nachtigal visited Wara, and that he simply wasn’t interested in ruins.

What facts emerge? Variation in the bricks, a number of blocked up doorways, a considerable amount of shoddy repair, indicate at least that the buildings are not all

\(^{21}\) Ostensibly on the grounds that it had been rendered uninhabitable by evil spirits, but actually for security reasons. Nachtigal, op. cit., p. 77.

\(^{22}\) See Barth, Travels, Vol. III. Appendices VI to VIII.

\(^{23}\) op. cit., p. 78.
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contemporary. Building C appears earlier than its neighbours; it must anyhow precede the high courtyard wall which blocks its front—and since the bricks composing this wall are the same as those used in Building D, we may perhaps deduce that Building C precedes the latter as well. From Tounisi we can be fairly sure that Building A and the mosque were in existence in 1810 and that Building E—the plinthed tower—was not. Building B appears to have been maintained down to recent times. The present Sultan’s father, like his predecessors, was brought from Abeche to Wara for his installation ceremonies in accordance with ancient practice. Further investigation may reveal that Building B was kept in order for this purpose.

As for the architects who designed and built these singular buildings, they are as little known as those of Shoba. Certainly they were not natives of Waddai. Despite the fact that Waddai was tributary to Darfur, the buildings obviously owe little to any of the Fur sultans’ palaces. The Sultan Ali Muhammad Sherif, Nachtigal’s host at Abeché, imported large numbers of Bagirma craftsmen of all sorts when he suppressed a revolt in their subject state; and it is possible that Abdelkerim Saboun, who first conquered the Bagirma, did the same. The Bagirma had at that time a strong brick wall round their capital city and they may perhaps have learnt brick building from their Bornu neighbours.

On the other hand it was Abdelkerim Saboun who opened the great caravan route through Jalo to Benghazi. Waddai imported much from the north and may have imported builders. But it is also worth mentioning that the man who constructed the successor palace at Abeché between 1850 and 1873, when Nachtigal arrived, is specifically stated by him to have been a Dongolawi from the Nile.24

24 ibid., p. 56.
Four Khartoum Stelae

By J. W. B. Barns

I am grateful to P. L. Shinnie, Esq., and the other authorities of the Khartoum Museum for permission to publish these four hieroglyphic stelae belonging to the collection there, which I was allowed to study during a visit to Khartoum in the winter of 1952–3. In interpreting and commenting upon them I am throughout greatly indebted to Professor T. Säve-Söderbergh, of Uppsala, whose excellent hand copies of the texts, made from photographs which I had sent him, are reproduced here.
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No. 5320. Funerary stela of red-tinged grey sandstone; execution very rough. From Scott-Moncrieff’s excavations at Buhen; removed from the (south) temple there and brought to Khartoum in 1947. See Porter and Moss, Topographical Bibliography, VII, 138. Second Intermediate Period (see commentary).

This stela is stated in Porter-Moss, loc. cit., and in the files of the Khartoum Museum catalogue, to belong to the same Sebekemḥab as the owner of the statuette found by Scott-Moncrieff while working at the Hatshepsut temple at Buhen (see Woolley-MacIver, Buhen, Text, p. 101). Scott-Moncrieff’s description of this statuette (PSBA XXVIII, 118 f.) is in several respects inaccurate: (1) the opinion of a geologist, Miss F. Delany, pronounces it to be of Nubian mudstone, and not, as Scott-Moncrieff says, of black basalt. (2) The inscription makes its owner not a ‘scribe of the soldiers’, but a ḫrp. The full text is as follows: on the apron of the figure:

\[ \text{[Inscriptio]n]} \]

and below:

\[ \text{[Inscriptio]n]} \]

‘A boon which the King gives (to) Ptaḥ lord of ‘Ankh-towy, that he may give invocation-offerings (consisting of) oxen and fowl to the ka of the director Sebekemḥab, justified. It was his son who made his name to live: the greatest of the tens of Upper Egypt, Dedi.’ (3) The figure is stated to be ‘clearly XIIIth Dynasty’. Its style suggests to me rather the XVIIIth; its fine execution is a complete contrast to the crude workmanship of our stela. Their owners, whatever their possible family connexion, were certainly not identical. The style of the stela, and certain similarities in the content, suggest that it is to be grouped with the two Buhen stelae (Khartoum 18; Philadelphia 10984) treated by Sāve-Söderbergh in ‘A Buhen Stela from the Second Intermediate Period (Khartoum No. 18)’, JEA XXXV, 50 ff. In fact, Sāve-Söderbergh thinks that the Ka mentioned by the present stela as the son of its owner Sebekemḥab is the same as the owner of Khartoum 18. He suggests the following genealogy:

Sebekemḥab

\[ \text{[Genealogy]} \]

It is most interesting, as Sāve-Söderbergh observes, to find this man already building at the temple of Buhen. He adds: ‘The problem is to explain how and why the C-group
was so rapidly Egyptianized in the Second Intermediate Period. Earlier we thought that it could be explained by the fact that mercenaries, such as are represented by the Pan graves in Egypt, brought home the taste for Egyptian civilization. But this explanation is unsatisfactory (a) because the Pan graves probably do not represent the same tribe as the C-group in Lower Nubia, and (b) because we have no evidence to show that they ever returned to Nubia. Thus, on the basis of such evidence as Khartoum No. 18 and Philad. No. 10984, I suggested (JEA XXXV) that the Egyptianization was due to the personal tastes of leading Nubian chieftains (such as N̄dh) who had Egyptians in their service. Your Khartoum stela supports my idea, because it shows that my two Egyptian servants of a Nubian ruler are not an isolated phenomenon, and that this process of Egyptianization at the Nubian court(s) lasted at least two generations, if my genealogy is correct."

(1-9) 'The noble Sebekemhab says: I made a "soul-mansion" for my god Horus; I gave him a hst(?)-vessel. His son: Ka. His daughter: Ta-Ibsheki. The announcer-priest of the good god, the Lord of the Two Lands, the Lord of accomplishment, King of Upper and Lower Egypt, Kha'-kau-Re', Son of Re' Sesostris, given life, beloved of Horus lord of Buhen. A boon which the King gives (to) Horus lord of Buhen for the ka of the noble Sebekemhab, begotten of Sebekemhab. His brother: Im. His brother: Weser-Ptah. His son: Sopedher-Harnakht.'

(1a) 'Slaughtering of many cattle.'

(4a) 'Ta-i . . . .'

(1) hwt-ki: with the broad squat shape of what I read asasis compare the shape ofa twice in l. 9. For hwt-ki generally, see the references in Gardiner, Ancient Egyptian Onomastica II, p. 211.*

An indentation which looks likeß beforeasis is perhaps due to accidental damage to the surface.

(2) hst(?): Säve-Söldebergh points out that if this is it is not written as it is normally in hst 'praise'; so we should not take the present sentence as 'I gave what was commended'.

Ki: the name, which is that of the owner of Khartoum Stela 18, is uncommon.

Ti-Ibškī: this name is not in Ranke, Personenmamen, but a Sī-Tbšk (not Pī-Tbšk, as Gauthier, Dict. Géogr. s.v. Åbcheh) is found in a New Kingdom inscription, Roeder, Debdob bis Bab-Kalabscheh 181. For 'Ibšk (Faras ?), see Säve-Söldebergh, Ägypten und Nubien, 202. Ti- is no doubt (virtual) definite article, and the name an early example of the Ti-nt-X type; Säve-Söldebergh compares Ti-Snswrt and the variants Ti-nt-Twnw and Ti-nt-Twnw, etc.; Ranke, op. cit. 357, 23.

(3) whm: evidently not whm 'herald', which would put our Sebekemhab in the lifetime of Sesostris III, but the priestly title of Wb. I, 344 (17) ff. which we find (for instance) in Siut I (pl. 7). Sesostris III was worshipped as a god in Buhen and elsewhere long after his death; see Säve-Söldebergh, Äg. u. Nub. 202 ff. He is invoked with Ptah-Sokaris and Horus of Buhen in the Philadelphia stela from Buhen (JEA XXXV, 54).

(5) di 'nh: after name of deceased King, see Smither, JEA XXV, 37; Säve-Söldebergh, Äg. u. Nub. 142, n. 2.

(6) The older form of the formula here (see Smither, art. cit. 34 ff.) gives no positive evidence of date.
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(8) An indentation in the stone under = I take to be accidental.

(9) Spd-hr-Hr-nḥt : the compound name is new; Spd-hr, however, occurs twice elsewhere; both examples are from Buhen (see Buhen, p. 113 f.), one being the owner of the Philadelphia stela. Säve-Söderbergh points out that is to be restored at the end of the line.

(10a) Säve-Söderbergh remarks that this is probably a wish for offerings to the stela; and questions whether appear to be plural strokes or dots under = are not simply accidental indentations.

(4a) Säve-Söderbergh says: ' There are many possible readings of the name here. It may be a name in the form of a pw-clause (cf. Ranke, Personennamen 184, 14–17; 326, 5–10; 413, 11, etc.), and thus Tri-pw-nš, where belongs to Tri. But I think that it is rather a syllabic writing of a foreign (?) name, and for does not disturb me in a text of this poor quality. If so, we can read (a) Tri-pwn (= Tri-a-pu-n ; according to Allbright’s system of vocalization) + land determinative; or (b) Tri-Inwn (Tri-a-nu-n) + land determinative; or (c) Tri-lpwnš; or (d) Tri-Inwnš; or again—if the whole name is in syllabic writing—(e) Tri-lpwn (Tri-a-pu-ha); or (f) Tri-Inwn (Tri-a-nu-ha). Personally I prefer (a) or (b); it would then be a parallel to Tri-Išši, the latter half of the name being probably a Nubian geographical name.

No. 2651. The lower part of a sandstone stela of the early New Kingdom with a well-executed inscription commemorating a ‘prince and count and treasurer of the King of Lower Egypt’, Akhes. See Porter-Moss, Top. Bib. VII, 150, where it is stated to have been found beneath the temple (of Dedwen) at Semna West, and the Boston Expedition photographs A 5009, B 6425 are mentioned. Incised signs filled with blue, lines between filled with red.
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'... in] the commendation of the King: Akhes, justified, following the heart (i.e., happy), great in (?) commendation... [a goodly burial] after old age, passing to the blessed state; to the ka of the prince and count, the treasurer of the King of Lower Egypt, the [Unique] Companon, [the mouth] pacifying in Nubia, favourite of the King in Khent-to, whom the King placed at the [head of?] the Companions, so highly efficient was he considered; free of stride in the King's house; who did not calumniate instead of appeasing the heart; whom the Lord of the Two Lands himself magnified, since he knew that he was excellent before; it was he whom the King commended for doing right; who did not make partisans among the assessors; who entered into the Palace while yet a youth; who did what was commended of Him who was in it; he came forth commended, after he (Akhes or the King?) had paid homage to him (the King or Akhes?) and the Lord of the Two Lands had taken his hands (?) or, listened to his words? Akhes, justified.'

\[x + 1. m] hst nsw: 3hs: cf. (for instance) Rec. Tr. XXII, 85: ph 3wy m hsut nb tr wwy: Sn nfr m3-hrw.

\[sms ib, if correctly read, is here doubtless an epithet, as Säve-Söderbergh points out. The following signs he suggests should be restored: \[\text{Restored Signs}\].

The next signs are a puzzle for which I can suggest no solution.

\[x + 1 f\]. Before m-[h]t 3wy, etc., we should expect something which the dead might call fortunate; \[krst nfr\] is most likely and agrees with the traces.

\[x + 2 f\]. [r] shr, etc.: restored by Säve-Söderbergh, who compares r shr m ti r gr.f, for which see Wb. IV 208 (3) f.

\[x + 3\]. The parallelism with Ti-Sti must make \[\text{Restored Sign}\] a local name; see Gauthier, Dict. Géogr. s.v. Khent-ta, Khent-Ta Sti.* The space is too short at the end of the line for \[r [h]t\]. I suggest, doubtfully, \[r [tp]\]; an expression with this sense cited Wb. V, 271 (19) as 'vereinzelt sp'.

\[x + 4 f\]. tm sdw m st shtp ib: Säve-Söderbergh compares Urk. IV 41, 7: \[m st shtp ib\].

\[x + 5\]. hnt(w): the adverb, Gardiner, Eg. Gr. 2, § 205.

\[x + 6\]. tm ir mr(t) m dig: cf. Urk. IV 41, 5: \[\text{Restored Sign}\]. Note the absence of determinative in this case also. Säve-Söderbergh adds the following note: ‘\[dig\] is here, in my opinion, rather "Gerichtsbehörde", "assessors", than "magistrates", and the point is that he does not use his influence in the judgement hall to make partisans, that is, to make others dependent on him; it is thus about the same as "who is no intriguing party-maker among the judges"', and thereby not \[ir mr(t).\] Sethe's translation (Übersetzung. Urk. IV, p. 22) 'der nicht Sklaven machte aus einer Behörde' is, I think, off the point; and \[m\] in this sense would be strange.

\[tr n.f\]: note that the word can be used of homage paid by an inferior to a superior, and \[vice versa\].

The upright stroke after \[nb tr wwy\] I took to be a defective writing of \[\text{Restored Sign}\] and the first sign under \[\text{Restored Sign}\] to be \[\text{Restored Sign}\]. Säve-Söderbergh, however, points out that these signs

* The similarity to Gayet, Louvre C 2, 8: \[imy ib nb f hnt tt, mh ib f hnt weib wy\] must be a similarity of sound only.
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might be read $\text{\large \textastarsymbol{279}}$ and translated ‘... and the Lord of the Two Lands had listened to his words’; $\text{\large \textastarsymbol{279}}$ being used in the sense which we find in Wb. IV, 532 (9).

There is, I think, just room for the name of the deceased with $\text{\large mi'-hrw}$ written vertically.

No. 2685. A small limestone stela, found in a rubbish heap near the temple at Uronarti; acquired by the Museum in 1914. New Kingdom. Porter and Moss, Top. Bib. VII, 144.

The direction of the writing is somewhat puzzling. I think that the text is to be read thus: ‘Regnal year 5: office of reports, made by the town administrator Ameny.' $\text{\large h}i$ has no determinative, perhaps because, the tablet being affixed to the building so designated, it was felt to need none. Perhaps $\text{\large h}i \text{\large n smit}$ is a place where information of the kind which we find in the Semnah Dispatches (JEA XXXI, 3 ff.) was reported.

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No. 2482. A grey sandstone stela of the late New Kingdom found in the course of Reisner’s excavations at Kumma temple, set against the western jamb of the doorway from court A to hall B; see Porter-Moss, Top. Bib. VII, 152. On the R. the deceased, standing, pours a libation with the right hand and holds a censer with the left; above him: $\text{\large \textastarsymbol{279}}$ $\text{\large \textastarsymbol{279}}$. I think that the singer ($\text{\large hsw}$) Re$\text{\large '}$ is a more likely reading of this than a proper name $\text{\large Hsw-R'}$; though Ranke, op. cit., gives $\text{\large Hs-R'}$ (254, 20); $\text{\large Hsij-R'}$
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(255, 3). He faces, across a table of offerings, the seated figure of the goddess Termuthis, serpent-headed and suckling a child; compare (for instance) the example in Kair. Mitt. 8, pl. 28, a scene from the tomb of Kha'emhêt at Thebes; over her is written: 𓊐𓅓𓏏𓊖𓊐𓏏𓊖, 'Termuthis, mistress of the food'. (On Termuthis in general, see Bonnet, Reallex. 803 ff.)

Below, the remains of the top line of a hieroglyphic inscription mentioning Khnum of 'Itnw-pḏw (Kumma). Säve-Söderbergh suggests at the end of the line 𓊐𓊐𓊐𓊐𓊐, or possibly 𓊐𓊐𓊐𓊐. I think the former more probable.
Christian Monuments from Nubia

By J. W. B. Barns

During a short visit to Khartoum in the winter of 1952–3 I was shown a number of Christian monuments in stone and pottery from various sites in Nubia which are now in the Khartoum Museum and which the authorities of the latter have kindly allowed me to publish. On the subject of Nubian Christianity and its monuments in general I have nothing to add to the article by Dr. M. F. Laming Macadam in SASOP, no. 2, which the present article is designed only to supplement. Three of these, bearing the Museum numbers 3726, 3727 and 5588, are 12th-century tombstones of a type already familiar. Except for a few lines of Nubian at the end of 3727, they are, as usual, in Greek; the depth of barbarism to which that language could sink in this outpost of Christianity is well shown by their almost incredible corruptions of the familiar Euchologium prayer (see Ricci, Comptes Rendus 1909, 161; Junker, ZAS LX, 124). Significant departures from this norm, and points of comparison with other such texts, will be noted. Beside Ricci’s seven texts (op. cit. 156 ff.) we may quote, as No. 8, the text in JEA XIII, pl. lvi; as No. 9, ib. pl. lvii; as No. 10, Liverpool Annals XIII, pl. lxxxii. The same prayer is found in the smaller pottery fragments mentioned at the end of this article.

No. 3726 (Plate V, a, Fig. 1). From Mainart, near Wadi Halfa; transferred to Khartoum from the Wadi Halfa Museum in 1941. Tombstone of Tjöassë son of Sentiko(l), died 1162. Incised characters filled with red.

1. On rim; not in 3727, 5588. 2. Variations on α and ω as so often, but with some signs unintelligible to me. 8. τοι ἃ: for τοι δοξακομιστεω; cf. 3727, 5588, and 5, 7, 10; written fully in 8. Δώανει: contrast the writing with the Coptic σ l. 20, below. The owner of 5588 bears the same name. 14. Note the confused order of the words; so also in 3727; 5, 7; and omission of ἄνευ ἀφες (3727; 2, 3; 5; 6; 7). I suspect that 3726 and 3727 are from the same hand. 17. θεάς πάσης om., with 3727; 5588; 5; 7; 9. 19. καί: this, or an abbreviation, instead of κ(θυρί)ε, 3727; 5; 6; 5588 om. 20. Ἀναπνεως τοι ἄ, κτιλ: 3727 much the same; the original ἀνάφιασι is not found in 5588; 1; 2; 5; 6; 7; 8; 9. 25 f. The owner of No. 3 is likewise an ἐπισκοπὸς Νοβάδιας (cf. Griffith, Christian Documents from Nubia (Proc. Br. Acad. 1928), p. 15 f.). But who is so designated here? Not, apparently, the owner of the stone. The word at the beginning of 26 is most puzzling; it can hardly be connected with the καιρικό, χειρικό of Nos. 7; 9. A sign Π occurring twice in it looks like that in 3727, ll. 23 (?), 24, which I suggest is the Nubian letter ρ (η). 26. ο ΠΘΙΘΙΑ ΚΟΤ: cf. No. 9, which ends: ο ΠΘΙΘΙΑ ΠΡΩΘΟΣ. 27. The last monogram is evidently μιχαλα; Dr. Macadam suggests that the first, in spite of one or two inexplicable details, may be ΔΑΙΜΗ.
+ ΧΕΝΟΝΟΜΑΤΙΤΟΤΟΥ ΠΡΟΣΤΟΤΩ ΠΡΟΣΤΟΤΩ ΚΩΝΩΣΑΜΗΝ
+ Α + Ω + ΚΙ + \( \varphi \) + ΜΩΧΤΩΝ ΠΝΩΤΩΝ. ΚΣ ΠΑΧΣ
ΣΑΡΚΟΣ. ΟΤΟΝΒΑΝΑΤΩΝ. ΚΑ
5 ΤΑΡΑΝΕΣ. ΚΣ ΤΟΝ ΑΘΗΝΑΚΑΤΑ
ΠΑΤΗΝΕΣ. ΚΣ ΖΩΗΝ ΤΩΚΟΣ
ΜΩ. ΧΑΡΙΚΑΜΕΝΟΣ. ΑΝΑ
ΠΑΣΚΟΝ ΤΩΝ ΔΩΣΑΣ ΤΕΣΕΝ
ΠΙΚΟΛΕΝΚΟΠΟΙΑ. ΒΡΑΜΣΙΚΑΚ
10 ΚΑΙΙΑΚΩΒΕΝΤΩΝΟΥΦΩΤΙΝΟΝΕΝΤΩΝΠΛΑΧΩΛΗ
ΕΝΤΟΠΟΛΑΝΝΥΣΕΩΣΕΝΤΑΝΕΔΡΑ. ΓΟΔΙΝΗΣ
ΟΛΥΒΗΝ ΚΑΙΣΤΕΝΑΓΜΟΣ ΠΑΝΑΜΑΡΤΙ
ΜΑΝΑΡΑΤΤΩΝ ΠΑΡΧΘΕΝΟΛΟΓΟΝΗΝΕΡ
ΓΩΝΑΘΟΘΟΗΚΑΤΑΔΙΑΝΙΑΣΦΙΛΣΕΝ
15 ΧΩΡΟΝ ΤΙΟΤΚΕΣΤΙΝΑΝΟΟΣΕΝΣΧ
ΣΕΤΑΙΣΟΤΧΑΜΑΡΤΥΣΕΙΣΤΓΑΡΜΟ
ΝΟΣΑΜΑΡΤΙΑΕΣΚΟΣΤΙΠΑΡΧΕΙΣ
ΣΗΔΙΣΟΚΥΝΗΣΕΟΤΙΔΙΣΟΚΥΝΗΣΕΙΣ
ΤΟΝΑΪΩΝΑ ΚΑΙΟΛΟΓΟΣ ΑΝ[\( \varphi \) ΤΑΛΗ
20 ΘΕΙΑ ΚΤΙΡΙΑΝΑΠΑΥΕΙΣΤΟΝΟΣΩ
ΑΣΣΑΙΣΣΕΝΤΙΚΟΣΤΗΝΔΟΞΙΑ
ΝΑΜΕΛΠΟΜΕΝΟΥΝΤΟΥ ΠΡΕΣΤΟΤΟΥΠΗΝΣ
ΕΤΙΘΣ ΖΩΗΝ ΑΥΣΤΟΥΦΕ. ΑΝΟΜΑΡ
ΩΝ. ΘΩΑ? ΜΗΝΟΝ. ΤΗ. ΣΕΛΕΝΗ. Η
25 ΑΝΑΝΑΥΣΟΝΕΠΑΡ(ΣΟΛΑ). ΝΑΠΑ
ΣΚΡΑΠΓΙΣΙΤΥΛ. ΟΔΕΒΟΝΘΙΑΜΟΥ
κ \( \Lambda \) \( \times \) \( \Lambda \) \( \times \)

Fig. 1. TOMBSTONE FROM MAÎNARTI.
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No. 3727 (Plate V, b, Fig. 2). Found at Saqia 43, Ashkeit, near Wadi Halfa. Presented by Mohamed Mohamed Werdie to the Halfa Museum in 1940, whence it was transferred to Khartoum in 1941. Tombstone of a woman, Eksir (?) ; precise date omitted ; seems contemporary with last.

6. The Ρ in the pr. n. seems plain here ; not so below, where it might be Ροκ. Ροκ om.; so 5588. 7. ΙΑ of εικονιδ on rim. 17. Short space after ΑΟ/ΠΟΕ. Ρ of θαρ/χεικ on rim. 19. ΙΑ, sic ; a confusion of Ρ and Α. Α of ΑΟΟ on rim. 21. In No. 6 also the prayer breaks off at this point. 21 ff. I think that all that follows the pr. n. is in Nubian; but I cannot understand the first words. ἄρτοικα, however, is quoted as a place name by Griffith, The Nubian Texts of the Christian Period, p. 130; perhaps here the native place of the owner of the monument.1 ΑΠΟ ΑΡΤ’ may be part of a Nubian passage ; see the inscription of King George, in Griffith, Christian Documents from Nubia, p. 7; Zyhalrz, Griffith Studies, p. 101. It may here begin a phrase. 23 ff. 'The years (?) of her life (?) were 72; she died on Mesore 13th' . The last two letters of 23 are obscure. In 24 we should expect ἙΛΑ, but ΙΕΠI seems clear; could this be another word for 'year'? ΔΑΠΠΟΝΑ : cf. ΔΑΠΠ- in Zyhl. op cit. p. 173; 'Zugrunde gehen'.

26. ΧΡΟΣ = ΑΙΧΑΝ; JEA XI, 262, n. 5; Griffith, Chr. Doc., p. 29.

No. 5588 (Fig. 3). Found at Kor, near the Pharaonic site, 1949. Tombstone of Tjôassë son of Sh . . ., died 1163 (?) .

6. The first stroke of the Ρ of ΡΟΔ/ΠΟΓ om. 7. Α of εικονιδ on rim. εύ τόπο . . . ςθα om. 9. An extraordinary confusion, for πάν αμάρτημα παρ’ αυτ’ πραξθέν. 12. Perhaps a blank space before ΣΤΗΧΩΡΙΚΟΣ. Ω of ΣΤΗΧΩΡΙΚΟΣ has first stroke om.

10 ΘΕ : 5588 is alone in adding this. 16. ΟΧΩΝ: I cannot account for this. ΔΙΑΚΕΝΗ: cf. No. 4; an intelligible reading. 17. κυρίε . . . αλήθεια om. 18. = Φ(ν)Χ(ΙΗ) 22. First Α on left-hand rim.

Since I was able to see the originals of the texts from Kor and Wadi Dôm et Tör edited or described by Dr. Macadam, and piece together some of the fragments, I have a few notes to add in supplementation of his admirable article. Nos. 2 and 3 of his texts are certainly parts of one monument; so are 5 and 7. The piece mentioned by him (p. 47) as presumably Coptic fits exactly another fragment which is certainly Greek; I read:

\[
\begin{align*}
\text{τω}. \\
\text{·······} \\
\text{τοιςκ} Ω\text{ΩΝΟΣ} \\
\text{[Δ]βρ[Δ]ακ[κ]ακ[κ]} \\
\text{[ΔΚ]Κ[κ]ιακ[κ]} \\
\end{align*}
\]

1 A modern village still called Argin is on the west bank of the Nile opposite Ashkeit where the stela was found.—[Ed.].

28
3727.

ΦΩΒΕΩΝ ΝΑΤΩΣ ΠΑΣΗΣ ΣΑΡΚΟΚΟΣΟΝ ΜΑΝΑΤΩΝ
ΚΑΤΑΡΓΗΣΑΝ ΣΤΟΝ ΛΑΔΗΝΚΑ
ΤΑ ΠΑΤΗΣΑΝ ΣΖΩΝ ΤΩΚΟΣ

ΜΩΧΑΡΙΖΑΜΕΝΟΣ ΚΑΝΑΝΑΠΑΥ
ΣΟΝΤΗΝΥΤΧΗΝ ΤΗΝ ΕΚΙΟΡ
ΚΟΛΠΟΙΟ ΑΒΡΑΑΜ ΣΙΣ ΣΑΚΣΕΙΑ
ΚΩΒΕΝΤΩΠΟΦΩΤΙΝΟΝΕΝ
ΤΩΝ ΧΩΛΗΝ ΕΝ ΠΟΝΩΝΑΠΥ

ζεωσέν τα Πανελλήνιον
λυπής στεναγμος παναμορ
τιμα παρατω παξ θενολο
gυρ εργοναγαθοσ καταδια

οτέκετιν ανοςοσ ζήσεται
βουχαμαρτυρεις ιναρμο
νος αμαρτιας εκτοστη
κεισθησευς ινα τεισος
θειο ιστοναίωνας λογος

σοι οληθεια συρειανα
πατσίς την εκισιρατ

ζεωσέν τα Πανελλήνιον
αργινησονα απο
μαρω (θανει) ταναρεν
ιεριγοιλασιλον οβ θεο

ρεισθευσαπονα
ττ η χεξ π θ

Fig. 2. TOMBSTONE FROM ASHKEIT.
I think that the letter before ΑΡ is not Α. The pieces next mentioned by him containing the letters ΕΥ and ΕΙΚ/, together with another from the top right corner which joins the latter, all belong to the top of the monument, the first line of which now reads: ΕΥ[ ΕΙΚ/Ε. A small fragment of the left-hand margin of the same monument bears only the letter Α[; remains of seven lines of the middle and lower left show that the end of the text at any rate was in Greek:

Of the last monument mentioned by Macadam, I found several more pieces. The top reads:

Below:

ἈΝὴρ could be for ἄνηρ, but it is hard to see what can have preceded ΦΑΡ] in the following line, which would make too short a supplement compared with the next. Before ΤΩΝΠ, perhaps the same abbreviation of ΑΙΧΑΝΔ which we see in the top line; the text seems to end with ΤΩΝΠΩ(Ν) ἐν τῷ ΒΑΣΙΛΕ]Α ΤΩΝ ΟΥ(ΡΑ)ΝΩ(Ν), but ΒΑΣΙΛΕ]ΙΑ must have been abbreviated.
ἀ]ω
[σετων πνατων[σ]μαχεσκοκός
[οτωνβανατονκα]ταργεκακρστ[ον]
[αδνκατα]πατςακκ[σ]ω[θν]
[αν]πακοντοδωχκολ
[π]οιαβρασκκσιαακκσιακσβ
[απεδραοδηνκσλτ[π][κ]
[ετε]ιαμοπαραμαρτιμαπρα
10 [χλο]ισωνθυνκαταδλανοι
[αν]αφεσωσαγαβωκσφια[c]
[.] cυνχωριονοθοςκτιου[k]
[ες]τιανοποιεταικσουχ
[.] τιμαγινγαιρειμονος
15 [ες]τοιοπαμαρτιακούδιοφυ
c]ουοδηγονοςτονδιαμενη
τουσαιωνασγαιρειανα[σα]
ελικαναποκοντὴνψχ
[ακ]τοισωχτοιςχυν. [.].
[έ]ηνδοζαλαναπεμπ[ομ]
20 [εντεσ]πρεκστωτωκστος
αειωπνινηνκααεικσειςτου[c]
[αιωνακωνεωνακαμαν]
[ε]ητηθετηθετηθενη[παγθ]
c]απομαρτωβαναπαγεες
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There are fragments of two other pottery monuments from Wadi Dôm et Tôr which produce a recognizable text: one, numbered 9503 O, reads:

\[\text{ἐντο[πωχλονσεντοπωλαλψεθες]}
\text{θανεδ[πασυμικαυπυκεκεπα]}
\text{ταοια[καρτικα].....παραπω}
\text{νραχσε[καλουχεργεωκαδαξα]}]
\text{κοιασε[καθοθοκφιλαποθεκχω]}
\text{ρς[καθ]}

Two small joining fragments, 9503 K and 9503 HH, are probably from the bottom two lines of the above:

\[\text{κεισε[ι]}
\text{οτ:πο}]

Finally, 9503 ΑΑ + 9503 Ζ:

\[\text{οφετ[ωνπα[α]}
\text{τωκα[πακε]}]
\text{σαρ[κος[ο]τοκεα}
\text{ματο[καταρφη}
\text{εσκακτο[κακα}
\text{ταπαθεςκ]αιτω}
\text{κετωκοσκω, κτλ.}

32
Four Occupation Sites at Agordat

by A. J. Arkell

During 1942 surface finds from several ancient occupation sites around Agordat were sent in to the Khartoum Museum by Major J. S. Last, then Political Officer at Agordat. These finds show that these sites are well worth excavating scientifically, but as eleven years have now passed and they have not been excavated, I have been asked by the Commissioner for Archaeology to publish a report on them.

I visited Agordat on leave of absence from war duties in Khartoum during July 1942, but after spending one afternoon in being shown round the sites by Major Last and a long hot day in digging single-handed a small trench in one of the sites (Kokan), I found that the spot I had chosen had been disturbed anciently, for after removing the occupation debris by six-inch layers to a depth of 31 inches, I found traces of a human skeleton. There were no grave goods associated with it. The next day my leave came to an end, and I was recalled to Khartoum. I had however learned that the site was a heavily eroded occupation site, composed from the surface down of a compact mass of sherds, stone artifacts, etc.

Agordat is situated on the Khor Baraka at the beginning of the wide sweep in which it changes direction from west to north, embracing the foothills of the Eritrean plateau and defining the natural limits of the Sudan plain. A characteristic feature of the area is the isolated granite hill or small range of granite hills, rising abruptly from the sandy plain. Often the smooth core of the hill is encumbered at the base by massive boulders so piled as to provide in their labyrinthine interstices a refuge for man from the weather and from attack, also a safe retreat for the cattle thief and the outlaw, a strong defensive post in warfare, or, in time of peace, shade for the goatherd and his charges.

The site at Kokan, 6 kilometres south of Agordat (see sketch map Fig. 1), lies on the north and east side of just such a hill, an irregular granite formation. This hill rises to a height of about 360 feet above the plain and is separated from the main Kokan range by about 300 yards. It abounds in caves which contain some evidence of occupation. But the main occupation site is in the open at the base of the hill, and is now being cut by more than one erosion channel caused by the water from torrential rain running off the hills. I understood from Major Last that the best finds were mostly found in these erosion channels, and so it is possible that they came from graves made in the occupation debris, and later cut by these channels.

The site at Ntanei (Entinahaiek) is on the north and south sides of one of a group of hills rising about 1000 feet above the plain about five kilometres north of Agordat. There has also been some occupation of the top of the hill. Major Last reported 'circular piles of rough stone which may indicate tombs or huts' near the north site.

Shabeit, 10 kilometres north of Agordat, is a hill rising less abruptly from the plain than the foregoing hills, and has no boulders at its base.

About one kilometre east of Shabeit is the small site of Dandaneit, which has been much disturbed by recent grave-digging.

It will be impossible, without excavation, to say how many periods the finds cover. Judging from similar occupation sites in the Sudan, it is highly probable that since the sites ceased to be occupied they have been used as burial grounds at one or more subsequent periods. But as the finds from all these four sites seem to be more or less uniform,
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and most of the pottery seems to belong to one culture, they will all be treated together. Letters indicate the site from which an object came:—

K  Kokan
N  Ntanei
NN  Ntanei north
NS  Ntanei south
NT  Ntanei top
S  Shabeit
DN  Dandaneit

while the numbers are those in the Antiquities Collection Catalogue of the Khartoum Museum.

![Map of Agordat Area]

**FIG. 1. SKETCH MAP OF AGORDAT AREA**

**Maceheads and Perforated Stone Disks**

K 4528/1 (Fig. 2, no. 1) is a more or less spherical macehead of ?serpentine, which has two slight knobs or excrescences opposite each other. The hole tapers slightly from 23 to 20 mm. in diameter. The length of the hole giving a diameter of the macehead is 65 mm.

N 4509 is part of a similar macehead of a typical coarse sölsbergite showing one knob. The length of the hole, which was probably bored from both ends, is 73 mm.

S 4815/1 (Fig. 2, no. 2) is approximately half a flattened spherical macehead of fine-grained sölsbergite, clearly bored from both ends, for the hole tapers from 34 mm.
FOUR OCCUPATION SITES AT AGORDAT

at the outside to 17 mm. at the centre. The length of the hole is 58 mm. and the maximum diameter of the macehead is 87 mm.

K 4528/2 is a fragment of a ?spherical macehead of metagabbro.

K 4529 (FIG. 2, no. 3) is a fragment of a ?pick-shaped macehead of altered porphyritic andesite that has been battered at both ends since fracture. The hole was about 25 mm. in diameter.

K 4530/4 (FIG. 2, no. 4) is a fragment of a black and white metagabbro disk macehead with a collar on the underside. The hole was bored from opposite directions. Maximum depth 27 mm.

K 4530/1 (FIG. 2, no. 5) is half a black and white metagabbro disk macehead with a slight collar around the hole on the underside. The hole is widest at the top. The outer edge is comparatively blunt. Maximum diameter 142 mm.; maximum depth 23 mm.

K 4530/2 is part of a black and white metagabbro disk macehead with a slight collar around the hole on the underside. The outer edge is similar to the foregoing. Estimated maximum diameter 140 mm.; maximum depth 24 mm.

Seven other small fragments of black and white metagabbro disk maceheads from Kokan are catalogued under 4530.

4530/7 is highly polished, and has a comparatively sharp edge, being only 10 mm. thick 35 mm. from the edge.

There are numerous other perforated disks of grey green gabbro and similar stones, of which the relationship to the disk maceheads of black and white metagabbro is apparently shown by the fact that one of them also has a slight collar on one side round the hole, viz:—

K 4532/1 (FIG. 3, no. 1), of grey-green fine-grained schistose epidiorite, maximum diameter 77 mm., maximum depth 15 mm., with hole perforated from either side tapering from 22–20 mm. to 12 mm.

The other disks which have no collar range from a maximum diameter of 110 mm. to one of 47–55 mm. Some of the smallest may be spindle whorls, as must be K 4532/12, a flat disk of altered volcanic rock, of maximum diameter 30 mm. and 6 mm. thickness, with a hole of 8 mm. diameter. Compare a perforated pottery disk S 4815, of maximum diameter 48–53 mm.

Some of these smaller perforated stone disks may also have been used for rope-making. This was possibly the purpose of K 4532/11, half a thicker stone ring of 50 mm. maximum diameter and 23 mm. maximum thickness, which has been perforated from either side by a hole which taps from 26 mm. to 13 mm. in diameter.

N 4510 (FIG. 3, no. 2) of dark slightly metamorphosed grit, with maximum diameter 106 mm., maximum thickness 30 mm., and perforated from either side by a hole tapering from 35 to 17 mm., seems to be with little doubt a degenerate disk macehead; as do

K 4532/3 (FIG. 3, no. 3), half a fine-grained gabbro disk of maximum diameter 98 mm., maximum thickness 20 mm., perforated from either side with a hole tapering from 28–34 mm. to 19 mm. in diameter; and

S 4815/2 half a gabbro disk of maximum diameter 113 mm. and maximum thickness 27 mm., perforated from either side with a hole tapering from 30 mm. to 17 mm. in diameter.

K 4532/2 (FIG. 3, no. 4) is too irregular in shape and perforated with too small a hole to be a degenerate macehead. It is of grey green gabbro, maximum diameter
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varying from 119 to 102 mm., maximum thickness 24 mm. and the hole perforated from
either side, tapering from 26–28 mm. to an oval of 7–9 mm. diameter.

The others, which are more numerous, are probably too small to have been maceheads
and must have had some other purpose, viz:—

K 4532/4 (FIG. 4, no. 1) of fine grained gabbro is oval in shape, maximum diameter
79 mm., maximum thickness 20 mm., and perforated from either side by a hole tapering
from 37–39 mm. to 11 mm. diameter.

K 4532/5 of chlorite schist is circular, maximum diameter 76 mm., maximum
thickness 15 mm., perforated from either side by a hole tapering from 20 to 12 mm.
in diameter.

K 4532/6 (FIG. 4, no. 2) is a circular disk of gabbro of 72–74 mm. diameter,
18 mm. thickness, perforated from either side with a hole tapering to 11 mm. maximum
diameter.

N 4511 is an oval disk of gabbro, of 60 mm. maximum diameter, 12 mm. maximum
thickness, and perforated from either side by a hole tapering from 22 mm. to 9 mm.
diameter.

K 4532/8 is a rough sub-oval disk of pale quartz schist, of maximum diameter
55 mm., and maximum thickness 12 mm., being perforated from either side by a hole
tapering to a minimum of 8 mm. diameter.

With the above perforated stone disks may be mentioned some stone disks partly
perforated from either side, of which the range is shown by:—

K 4543/1 of gabbro, maximum diameter 132 mm., maximum thickness 38 mm.,
maximum diameter of partial perforation 45 mm.

K 4532/13 of schistose quartzite, maximum diameter 78 mm., maximum thickness
15 mm., maximum diameter of partial perforation 25 mm.

CELTs

A number of stone celts and fragments of celts came from all four sites. Most of
them gave the impression of having been influenced by metal prototypes. This is
certainly the case with the two-lugged axes (FIG. 5, nos. 12–14) and probably the case
with those simpler celts which have an expanded cutting edge, of which K 4538/1 (FIG. 5,
no. 11) is the extreme example.

K 4540/1 (FIG. 4, no. 3). Small sub-triangular celt. Material: fine-grained dark
psammite. Length 73 mm. Maximum width 54 mm. The sides are nearly straight
and diverge to the cutting edge, which is straight and sharp, but damaged at one corner.
The surface has been ground smooth on either side near the cutting edge, and is other-
wise pecked.

K 4540/2 (FIG. 4, no. 4). Long narrow celt, with tapered butt. Material: fine-grained epidiorite. Length 143 mm. Maximum width 56 mm. The sides are
straight, and the cutting edge sharp and slightly rounded. Approximately one third
of the surface has been ground smooth at the cutting end, and the rest of the surface
is pecked.

N 4505 (FIG. 4, no. 5). Material: epidiorite. Length 120 mm. Maximum width
65 mm. This is the only celt from these sites with a markedly asymmetrical side view,
being flat on one side, and convex on the other at the cutting edge end. This may be
not because the celt was used as an adze, but because it was made out of a grinder.
This would account for the flat side being smooth all over. The other side has only
been ground smooth near the cutting edge and the centre. Otherwise its surface is
FOUR OCCUPATION SITES AT AGORDAT

Fig. 2. Scale 1/4
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Fig. 5. Scale 1/4
pecked, as is that of the edges and butt. The cutting edge is sharp and rounded, and somewhat narrower than the widest part of the celt. The sides are nearly straight in the middle, where they diverge towards the cutting edge. The butt is somewhat tapered and rounded.

K 4539/8 (Fig. 5, No. 1). Material: aplitic rock. Length 118 mm. Maximum width 73 mm. Either unfinished or weathered; the cutting edge is quite blunt. Sides slightly rounded; cutting edge markedly curved and narrower than the maximum width.

K 4538/8 (Fig. 5, No. 3). Material: felsite. Length 132 mm. Maximum width 77 mm. Ground smooth on either side from the point of maximum width to the cutting edge; the rest of the surface pecked. The cutting edge is sharp and curved. The butt end is relatively narrow and rounded. The sides are nearly straight, but show a slight constriction in the central portion. They diverge till the point of maximum width, where the cutting edge, which is almost semi-circular, begins.

K 4538/6 (Fig. 5, No. 2). Material: fine-grained gabbro. Length 128 mm. Maximum width 77 mm. Surface pecked all over except near the cutting edge which is ground smooth. The cutting edge, which has been badly damaged, was originally curved and sharp. The butt end is relatively narrow and rounded. The sides at first straight below the butt diverge towards the cutting edge, and then about the middle of the celt begin expanding markedly until the point of maximum width is reached.

K 4538/3. Material: coarse-grained gabbro. Length 134 mm. Maximum width 73 mm. Culet rough and somewhat battered, especially at the butt end. Butt rounded. Sides relatively straight, and diverging slightly, until at 75 mm. from the butt they expand rapidly towards the cutting edge, which is roughly circular and somewhat sinuous. Only ground smooth very close to actual cutting edge.

K 4538/5 (Fig. 5, No. 4). Material: speckly grey fine-grained metagabbro. Length 96 mm. Maximum width 69 mm. This culet consists of a sub-triangular butt half, of which the surface is pecked, and a considerably expanded cutting edge half, which has been ground smooth. The cutting edge is fairly sharp and curved so as to be approximately semi-circular. The butt has a rounded end, which has suffered some damage.

K 4538/4 (Fig. 5, No. 5). Material: grey fine-grained gabbro. Length 130 mm. Maximum width 82 mm. This culet is similar in outline to the foregoing, except that it is more elongate. The surface is pecked except for a restricted area near the cutting edge, which is ground smooth. The cutting edge has been somewhat blunted.

K 4538/9. Material: blue grey coarse-grained gabbro. Length 63 mm. Maximum width 40 mm. This small culet is rough and either unfinished or weathered. In outline it is similar to the foregoing, but there is a slight constriction in the butt half, just above the cutting edge half, which is roughly circular.

N 4506/1 (Fig. 5, No. 6). Material: altered porphyritic andesite. Length 141 mm. Maximum width 94 mm. The cutting edge is rounded and relatively broad as in the foregoing examples. Both cutting edge and butt end have been battered, and the culet is weathered, but appears originally to have been ground smooth in the cutting edge half, while the surface of the butt half was pecked. The sides of the butt half are approximately straight, though diverging somewhat until they expand suddenly on reaching the middle of the celt.

NN 4149 (Fig. 5, No. 7). Material: grey green gabbro. Length 120 mm. Maximum width 82 mm. The butt is rounded. The sides of the butt half are straight and diverging, until about the middle of the celt they expand suddenly but asymmetrically (possibly because the culet was made from a natural waterworn pebble) to give a
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broad cutting edge. The cutting edge is sharp and curved. The surface is pecked in the butt half, while near the cutting edge it has been ground smooth.

K 4538/2 (FIG. 5, no. 8). Material: grey green coarse-grained gabbro. Length 217 mm. Maximum width 129 mm. This large flat celt is rough and relatively blunt. It is either weathered or unfinished. It may never have been ground smooth or really sharp, and its size suggests that it may have served rather as a hoe than as an axe. In shape it generally resembles the foregoing. The butt is round; the sides of the butt-half are straight and only diverge slightly till the middle of the celt where it expands suddenly and slightly asymmetrically to give a rounded and relatively broad cutting edge.

K 4538/7 (FIG. 5, no. 9). Material: blue grey coarse-grained gabbro. Length 162 mm. Maximum width 89 mm. Butt rounded, sides relatively straight until about 50 mm. from the cutting edge they expand to give a broader cutting edge. The cutting edge is slightly curved, but much straighter than in the foregoing examples. The surface has been ground smooth near the cutting edge, which has been subsequently blunted. In general the celt presents a weathered appearance, and a flake has been broken from the butt end.

DN 4816 (FIG. 5, no. 10). Material: andesite. Length 66 mm. Maximum width 40 mm. This small celt in outline generally resembles the foregoing, but the expansion to give a broad cutting edge, which takes place in the lowest third of the celt, is rather more gradual, and the cutting edge, which is sharp, is slightly more curved. The surface of the butt half of the celt is pecked, while that of the rest has been ground smooth.

K 4538/1 (FIG. 5, no. 11). Material: fairly fine-grained grey gabbro. Length 121 mm. Maximum width 95 mm. Of all the celts from these sites this one has the broadest cutting edge in relation to its length. The butt is rounded, and the butt-half sub-conical, its surface being pecked. The expansion about 45 mm. from the cutting edge is very marked, and this part of the celt has been ground smooth. The cutting edge is sharp and curved.

Two-lugged celts

N 4507/3 (FIG. 5, no. 12). Material: gabbro. Length 98 mm. Maximum width 60 mm. The butt is more or less straight, with a constriction about 15 mm. nearer the cutting edge, forming two prominent sub-conical lugs. After the constriction the edges run straight and diverging until within about 15 mm. of the curved cutting edge, which is thus expanded. The celt is pecked all over, and a large flake has been broken from one edge as shown. ? Unfinished.

N 4507/2 (FIG. 5, no. 13). Material: black indurated ? greywacke. Length 109 mm. Maximum width 56 mm. The edges are more or less straight and parallel until within 25 mm. of the slightly convex butt, when the width of the celt expands to give two pointed lugs or projections to the butt. The celt has been ground smooth all over, and the curved cutting edge is sharp.

N 4507/1 (FIG. 5, no. 14). Material: grey-green gabbro. Length 142 mm. Maximum width 86 mm. Surface pecked all over: no signs of cutting edge having been ground smooth, and the celt is unusually thick: ? unfinished. Butt slightly convex. Celt constricted to a maximum about 50 mm. from the butt, which is thus given two prominent sub-conical lugs or projections. After that the celt widens again gradually to produce a somewhat expanded cutting edge. The cutting edge itself is circular.
FOUR OCCUPATION SITES AT AGORDAT

N 4507/4 is a butt fragment of a celt which had similar lugs, though the back of the celt was straight. Maximum width 80 mm.

N 4507/5 is a butt fragment of a similar celt with two less prominent lugs and a slightly concave butt. Maximum width about 47 mm.

K 4533/1 to 4 are four more butt fragments of similar two-lugged celts.

K 4535 (Fig. 5, no. 15). Material: gabbro. Length 83 mm. Maximum width 55+ mm. Much weathered; cutting edge battered, and one lug damaged. This is an unusual variety of two-lugged axe, which has two grooves round the middle, one of which is smooth on one side, and both of which were no doubt intended for the raw hide thongs which fastened the celt to a wooden handle. The cutting edge is expanded and circular. The surface of this celt has been ground near the cutting edge, and is otherwise pecked all over.

S 4815/3 (Fig. 5, no. 16). Material: gabbro. Length 137 mm. Maximum width (near cutting edge) 79 mm. This almost straight-sided celt has a groove at the butt end, the butt being thus rendered concave with a boss on either side of it. The celt appears to have been pecked all over, and perhaps to have been ground near the curved cutting edge, which has been heavily battered. The celt has an oval concavity on one side, showing that it has been used at some time as a palette.

K 4536 (Fig. 6, no. 1). Material: gabbro. Length 112 mm. Maximum width 68 mm. This celt has much the same proportions as K 4538/8 (Fig. 5, no. 3 above), but it has a marked groove in either side of the butt, which thus gives the butt a fish-tail appearance. The purpose was no doubt to facilitate the strengthening of the hafting with raw hide. The celt has an expanded curved cutting edge, which has been ground smooth on either side, and is still fairly sharp although battered. The surface of the rest of the celt is pecked. For a celt with a similar butt, but a cutting edge more like Fig. 5, no. 11 above (4538/1), see Archaeological Survey of Nubia Report for 1910-1911, pl. 20 (g), F 61, also pp. 140 and 220. Compare also one from Akasha in the Khartoum Museum, catalogue No. 4753.

K 4534 (Fig. 6, no. 2). Material: gabbro. Length 118 mm. Maximum width 90 mm. This is presumably an extreme development of the two-lugged celt, although it is so thin and flat that I at one time wondered whether it really belonged to the palettes (see p. 45). The slight groove round the waist, and the trace of some sharpening of the cutting edge (now battered) make it more likely that it was a celt, if rather a more showy than practical one. It has a fish-tail butt, which is the thickest part of the artifact.

Of two butt-end fragments, K 4517/1 of gabbro may be an extreme form of the two-lugged celt, with the butt narrower than the blade, and K 4517/2 of fine-grained gneiss, which has a fish-tail butt, and a notch in either side near it, is part either of a crude fish-tailed celt or of some other artifact.

FLATTENED STONE CYLINDERS WITH GROOVES ON THEM

N 4514/2 (Fig. 6, no. 3). Material: grey phyllite. Length 112 mm. Width 38 mm. Thickness 23 mm. This specimen has had a number of approximately straight parallel lines incised in columns on the outer parts of each of the two major faces. The grooves are mostly about 2 mm. apart, and in some cases rather more. Only twice are the lines on either side joined by continuation round the edge. On one side there are two columns of 33 grooves, and on the other one column of 36 grooves and one of 35+ (it has been damaged).
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N 4514/3 (Fig. 6, no. 4). Material: grey semi-pelitic schist. Length 83+ mm. Width 40 mm. Thickness 29 mm. Part of an object similar to the foregoing, from which it differs by having a straight line cut up one edge, cutting in half the other incised lines, which on this edge have been cut round from one side to the other. The other edge is much damaged, but does not seem to have had a straight line cut across its grooves. These grooves are also on the average 2 mm. apart.

N 4514/1 (Fig. 6, no. 5). Material: green grey quartzitic schist. Length 117+ mm. Maximum width 48 mm. Apparently part only of an object similar to the foregoing. It has also been used as a fabricator of some kind, judging by the step flaking at either end. From the fact that the parallel grooves are cut only in one half of the object, and appear to have been continued on to the fracture, it would seem that it was originally longer. In this specimen there were only two columns of grooves cut from one face, as shown in the illustration, right round the edges and on to the other face, from which a long flake is missing. In this specimen the grooves are from 3 to 5 mm. apart.
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S 4815/4. Material: grey semi-pelitic schist. Length 120+ mm. Width 34 mm. Part of a similar object which has split longitudinally. It has two columns of grooves on the major face, 37 in one and 50 in the other.

N 4514/5. Material: grey semi-pelitic schist. Length 65 mm. Maximum width 40 mm. A flake from part of the major face of a similar object, showing two columns of eleven grooves, perhaps going round the edge, and separated by about 27 mm. of ungrooved face.

K 4523/2. Material: grey semi-pelitic schist. Length 87 mm. Part of a similar object, broken off at the end, and certainly split longitudinally. It has had grooves about 2 mm. apart cut on either edge, some of them only coming round on to the major face. 22 grooves can be counted on the best edge.

Then there are a number of flatter objects with grooves cut on the edge only:—

K 4523/3. Material: psammitic schist. Length 55 mm. Width 48+ mm. Thickness 12 mm. A fragment showing 12+ straight parallel grooves 3 mm. apart cut in the only undamaged portion of edge.

K 4523/4. Material: semi-pelitic schist. Length 83+ mm. Width 63 mm. Thickness 20 mm. Part of a flattish, palette-like object, with 16 grooves cut in one edge. The other edge appears not to have been grooved.

K 4523/1. Material: psammitic schist. Length 67 mm. Width 55 mm. Maximum thickness 24 mm. Part of a flattish object, with rounded end and oval section: seven grooves cut in each edge.

N 4514/4. Material: semi-pelitic schist. Length 85+ mm. Width 52 mm. Thickness 15 mm. Central portion of flattened stone object with grooves cut in each edge, 16 in one and 28 in the other.

K 4148/1. Material: fine-grained muscovite schist. Length 110+ mm. Width 55 mm. Thickness 12 mm. Central portion of flattish stone object (?palette) with rounded edges, in one of which 10 grooves are visible: the other edge was grooved but has since been battered.

K 4523/8. Material: pale grey phyllite. Length 78+ mm. Maximum width 40 mm. Thickness 9 mm. Fragment of flattish stone object with rounded edges, in one of which are 2 grooves and in the other 4 grooves.

There are also three small edge fragments of larger stones K 4523/5, K 4523/6 and K 4523/7 which show respectively 7, 13 and 14 grooves; and K 4524 a kidney-shaped water-worn pebble of Greenschist, which has on its concave edge 10 grooves on an average 5 mm. apart.

What the function of the above grooved stones was, is not yet clear. I thought at first that the thicker specimens described first, including those illustrated, might have been special hammers for pounding and giving a kind of pattern to bark cloth; but the flatter fragments, which look as if they may have come from palettes, make me wonder whether they could have been intended to facilitate the grinding to powder of red ochre or similar pigments.

PALETTES AND STONE DISHES

K 4148/2. Material: slate. Length 73+ mm. Breadth 68 mm. Thickness 8 mm. Apparently the corner of a rectangular slate palette not unlike those used in Predynastic and Protodynastic Egypt. The parts of two tapering edges which remain have a number of small cuts on the edge about 2 mm. apart, the purpose of which is apparently decorative, although the possibility of a connection with some of the foregoing grooved slate objects must be considered.

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FIG. 8. Scale 4
KUSH

S 4815/5. Material: hornfels. Length 188 mm. Maximum width 112 mm. Thickness about 25 mm. Rough tapering oval, which has been smoothed on one side by grinding, and has two marked notches for suspension at the narrow end.

N 4503/1 (FIG. 7, no. 1). Material: spotted phyllite. Length 115 mm. Maximum width 55 mm. Smoothed on one side by grinding and with notches and groove for suspension towards one end.

N 4503/2 (FIG. 7, no. 2). Material: banded phyllite. Length 90 mm. Maximum width 43 mm. Has notches for suspension, is smooth on one side, and shows traces of numerous scratches running lengthways on the other side. The bottom edge, which shows recent damage, seems once to have been sharpened like a celts, making it uncertain whether this specimen should be classified as a palette, a degenerate lugged axe or some other tool.

S 4815/6. Material: Greenschist with magnetite. Length 163 mm. Maximum width 111 mm. Thickness about 27 mm. Roughly oval in shape, with two small notches in edge towards one end, and a groove connecting them at the back, and with a small purposely shaped crescentic projection at the other end. It has been slightly smoothed by use on the upper side only.

S 4815/7. Material: meta-andesite. Length 96 mm. Maximum width 81 mm. Thickness about 15 mm. An oval palette with notches in the edges at one end and traces of a slight groove connecting them. Only used on one side, which has been slightly hollowed by use.

K 4516/3 (FIG. 7, no. 3). Material: meta-andesite. Length 165 mm. Maximum width 120 mm. Thickness about 15 mm. An unfinished scutiform palette, with a groove for suspension on either side toward one end. On one side of the grooves this palette has four rough decorative knobs, and a projection in either edge on the other side of the groove. It does not appear ever to have been used for grinding.

N 4502 (FIG. 8, no. 1). Material: meta-andesite. Length 160 mm. Width 90 mm. Thickness about 25 mm. Oval palette or shallow stone dish, with marked hollow on one side and shaped on the other side. Marked groove on either side for suspension towards one end, and beyond it four well-shaped rounded knobs for decoration. Some subsequent damage.

K 4516/1 and S 4815/8. Material: meta-andesite. Pieces of two palettes or shallow stone dishes, with grooves for suspension on either side, similar to the foregoing but with triple knobs for decoration.

S 4815/9. Material: felspathic Greenschist. Part of a similar palette or shallow dish with grooves for suspension on either side, but with a double knob for decoration.

K 4516/5 (FIG. 8, no. 2). Material: meta-andesite. Length 135 mm. Maximum width 103 mm. Thickness about 35 mm. Palette or shallow stone dish, with one notch in the end, and two notches one in each side near the same end. These two notches are joined by a groove at the back only.

N 4501 (FIG. 9). Material: speckled meta-gabbro. Length 153 mm. Maximum width 118 mm. Maximum depth 51 mm. Shallow oval dish with flat base, rounded sides, and rounded knob half way up the side at each end.

GRINDSTONES, ETC.

Various upper and lower grindstones, ochre grinders, rubbers and hammerstones are to be found on these sites. The following are mentioned:—

N 4504. Material: ? gabbro. Length 103 mm. Width 78 mm. Depth about
FOUR OCCUPATION SITES AT AGORDAT

27 mm. An oval lower grindstone, with more or less perpendicular sides, and a smooth shallow depression in the upper side. Presumably used for grinding ochre and similar substances.

K 4521/1. A flat water-worn pebble of altered tuff, which has an oval depression 102 mm. long, 35 mm. wide and 4–5 mm. maximum depth in one side.

K 5781. A lower grindstone of roughly oval shape, with a deep oval depression on the upper side, and shaped like a dish on the underside. Dimensions approximately 45 by 35 cm., thickness of original slab about 7 cm.

SMALL PERFORATED OVAL FLAT DISKS OF STONE

K 4518/1 (FIG. 10). Material: purple mudstone. Length 62 mm. Breadth 49 mm. Thickness 4 mm. Smoother on one side than the other, and with numerous haphazard scratches on that same side. Perforated with a pair of holes bored from either side near one end, in the edge of which are traces of two or three other holes.

K 4518/14. Waterworn oval flat pebble of mudstone, with single hole perforated from either side at one end. Length 38 mm. Maximum width 31 mm.
KUSH

K 4518/2, 4518/3 and 4518/4. Oval flat pebbles of dark grey phyllite with single perforation at one end bored from either side. Length ranging from 58 to 39 mm. K 4518/3 has a high polish on one side, as if it had been used for burnishing.

? BURNISHING RODS

K 4546/1 is a small rod of slate with the thicker end roughly rounded, and the opposite end rubbed smooth on one side and thin. Has two sets of three straight lines crossing each other at right angles on the back, presumably an owner's mark. Length 70 mm. Width 13 mm. Maximum thickness 6 mm.

K 4546/2. A similar rod of slate, recently damaged at the end where rubbed thin. Length 96+ mm. Width 11 mm. Maximum thickness 5 mm.

K 4546/3. The upper end of a similar slate burnishing rod 15 mm. wide and 4 mm. thick.

OBJECTS OF UNCERTAIN USE

K 4545/1. A blunt cone of kaolinised gneiss. Length 48 mm. Maximum diameter 15 mm.

K 4545/2. Blunt-ended barrel-shaped object of kaolinised gneiss. Length 56 mm. Maximum width about 25 mm.

K 4545/3. A rod of kaolinised gneiss with two rounded ends, near one of which are three small cuts in one edge: particularly smooth on one side. Length 73 mm. Maximum width about 21 mm.

K 4545/4. A weatherworn cylinder of kaolinised gneiss with rounded ends. Length 76 mm. Maximum width about 25 mm.

K 4544/1 (FIG. 11). A short cylinder of pink kaolinised gneiss (more ferruginous) with a groove round the waist: upper end rounded and rough, lower end flat and smooth with traces of scratches. Compare the mullers illustrated with Dyn. XII scribes' palettes in Petrie: Objects of Daily Use, pl. LVI, 11 to 14 and p. 63. Length 40 mm. Diameter of business end 33 mm.

![Fig. 11. Scale 4](image1)

![Fig. 12. Scale 4](image2)

N 4513 (FIG. 12). An ovoid stone artifact of pink kaolinised gneiss with a groove round the middle. Length 71 mm. Maximum diameter about 35 mm. Very light for its size.
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Obsidian Artifacts

Particularly on sites K and N are found numerous flakes and cores of obsidian, which is said not to be a local stone. But the only artifacts apart from one large flake which has apparently been made into a large sub-triangular arrow-head, 61 mm. long by 48 mm. wide, are a number of small mostly elongated crescents which were probably used for arrow barbs, and vary from 27 to 13 mm. in length, for examples see Pl. xi, No. 2. I searched hard for other artifacts the day I was at Kokan, but only found one small borer of dark grey quartz worked on two sides and 27 mm. in length, and some rough scrapers, besides cores.

Stone Animal Figurine

K 4547 (Fig. 13). Length of fragment 47 mm. The hinder portion of a small animal made of grey stone striped with reddish brown (weathered gneiss with colour blending) which has lost its head, both front legs and one hind leg. The striped markings make one wonder whether it was meant to represent a zebra, but on C Group analogies it is more likely to have represented a domestic animal, cp. Steindorff: Aniba I, pl. 73.

Objects of Personal Decoration

Stone Bracelets

Ten fragments of stone rings that were mostly bracelets, although some may have been anklets, were found.

The largest K 4527/4 (Fig. 14) is about a third of a heavy keeled bracelet of metadolerite (with epidote).

K 4527/2 are two parts making up about two thirds of a sub-carinate bracelet of metadolerite of about 90 mm. diameter, diameter of perforation about 40 mm.; the bracelet itself being about 28 by 22 mm. thick.

N 4512/1 is part of an irregular keeled ring of green metamorphosed tuff of approximately the same size as the foregoing.
KUSH

K 4527/1 is part of an irregular partly keeled ring of semi-pelitic schist of approximately similar dimensions.

K 4527/8 is half a bracelet of metamorphosed tuff with rounded exterior; diameter of bracelet 88 mm., diameter of perforation 40 mm.

K 4527/5 is part of a flattened ring of metamorphosed tuff of approximately similar dimensions.

K 4527/6 and 7 are pieces of two bracelets made of dark grey psammitic schist with an approximately square section rounded on the inside. 4527/6 is about 12 mm. thick and 4527/7 is 9 mm. deep by 7 mm. thick.

SHELL PENDANT

N 4149 is an oval nacreous shell pendant 24 mm. long with a hole of 4 mm. diameter somewhat worn. For stone pendants see pp. 49–50.

EAR-PLUGS (Pl. XI, No. 1)

K 4148 is a damaged pottery ear-plug of the double disk form known in Ancient Egypt—diameter of disk 46 mm. Width of groove between disks 14 mm. Depth of groove 11 mm. Maximum axis of ear-plug 40 mm.

There is also another fragment from K which appears to have come from a similar ear-plug, decorated on the outside with small incised dots. From NN is half a plain red ware plug of oval shape, which appears to have been about 50 mm. long, 26 mm. wide and 21 mm. thick. And from K there is part of a fine red ware (black fracture) pottery object, which appears to have been the shape of an Egyptian pot-stand, but only to have been about 16 mm. maximum diameter and 12 mm. deep. It seems unlikely to have been a bead, and may possibly also have been worn in the lobe of the ear.

LIP-PLUG

When digging the trench on the Kokan site in 1942, I found in the first three inches below the surface a small quartz lip-plug 19 mm. long and 6 mm. thick, with a marked groove 2.5 mm. deep cut 3 mm. below the head. Both ends are flattish; see Fig. 15 and Pl. XI, No. 4. It differs from all the many types found at Jebel Moya, being closest to Addison's type D.1.a, but the groove is more pronounced.

BEADS

Only a few beads have been found, and all come from the surface of K:—

One barrel bead of mottled kaolinised gneiss. Length 24 mm., with hole of external diameter 6 mm. bored from either end

One disk bead of pale green ? quartz. Diameter 9 mm. Thickness 4 mm., bored from either side eccentrically.

One disk bead of ostrich eggshell. Diameter 6 mm. Diameter of perforation 2 mm. Part of one short barrel bead of light grey ? steatite, the hole of which (diameter 4 mm.) has worn through to the outside of the bead. Length 12 mm. Diameter about 13 mm.

One weathered blue glass eye-bead (K 4548). Maximum diameter 9 mm. Diameter of perforation 4 mm. Thickness 6 mm. This is presumably later than most of the finds.

One natural waterworn opaque white quartz pebble, partly perforated from one side.
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SEMI-PRECIOUS STONE, ETC.

One piece of blue-green microcline felspar (amazon stone), unworked, was found at N, and one piece of malachite was found at K.

METAL OBJECTS

One thin finger ring with a single small flattened circular bezel, ? copper, is probably of later date than most of the finds from Kokan. But for this shape in shell in C Group times see Archaeological Survey of Nubia, Report 1908-1909, pl. 37, b, 5. Also all apparently found near each other in an erosion channel cutting into the site at Kokan, see FIG. 16:—

One ? copper bracelet with overlapping pointed ends, external diameter 60 mm. and the following small ? copper tools:—

? Woman’s toilet knife. Length 84 mm. Maximum width 23 mm. One end rounded and slightly tapered, the broad end straight with rounded corners.

Part of a similar knife. Maximum width 28 mm. Awl, with square section in the centre for hafting. Length 98 mm.

Also ? the point of another awl.

POTTERY

These sites are all rich in sherds, particularly K and N, and many of the sherds are so large that it seems possible that they come from pots from disturbed graves, although this is by no means certain.

(a) Combed beer-pots decorated with patterns made with small clay balls.

(Pl. vi. Nos. 1-3 and 5)

Sherds of this red ware are the most striking and characteristic found on these sites. They most, if not all, seem to come from beer-pots with short narrow necks. These pots usually show marked combing on the inside, as in early Nubian ware from Kerma and elsewhere, and have been combed externally as well up to the base of the neck. The more squat necks seem to have been usually combed on the inside as well, while the taller necks are smooth inside, and often burnished with an application of bright red slip externally and for a short distance inside the rim. The rim in all cases is everted, thickened and rounded. The necks vary in external diameter from 65 to 110 mm. The more squat necks were usually 20-25 mm. high, and the taller necks 35-45 mm. high. The combing is usually done in more or less straight lines, but in one sherd, which comes from near the neck, wavy lines and straight lines have been made alternately with a seven-toothed comb, making the sherd look at first sight as if it belonged to the Khartoum Mesolithic cp. Early Khartoum pl. 61, but on careful study several differences can be seen.

What gives the ware its special character is that on the combed body of the pot various patterns were made with different arrangements of small flattened balls of clay
usually about 5 mm. in diameter. In order to get the balls to adhere better they are sometimes set in grooves, as in Pl. vi, No. 3. Sometimes straight rows of balls have degenerated into long thin sausages, as in Pl. vi, No. 5. Sometimes the balls are painted with a deep red slip and highly burnished: and occasionally variation is achieved by making the balls oval instead of round (Pl. vi, No. 3); and on one sherd the balls are given an incuse ring with a raised dot in the middle, making them look very like beads (Pl. vi, No. 3). It is indeed possible that this ware was inspired by basketwork ornamented with beads sewn on the outside in various patterns.

A neck sherd of this ware together with other finds similar to those from Agordat now being described was brought in to the Khartoum Museum (Antiquities Catalogue No. 3870) by P. J. Sandison in December 1940 from the north west corner of the large most southerly hill at Jebel Ofreik (16° 15’ N, 35° 42’ E), where the finds were said to be associated with round cairns, querns and agate chips.

This ware must be connected with the yellowish white pot with two necks, similar to the necks of this Agordat ware and decorated with patterns of balls (Linsen-muster) which was found part in a C Group cemetery and part in the C Group settlement at Aniba: see Steindorff Aniba i, pl. 91, 170 (S 216) and p. 215. See also pl. 93, S 145 for a similar sherd of red ware. See also LAAA viii, pp. 78 and 102 and pl. xviii 1 and pl. xv type viiiia for a rough black-mouthed red ware bowl from the C Group cemetery at Faras, which had ‘slight dog-tooth impressions on mouth and seven groups of eight to twelve pimples laid in double lines below mouth’.

(b) Red ware pot-stands with incised dot decoration, some with trefoil feet

Two of these pot-stands are sufficiently complete to be reconstructed.

N 4152/1 (Fig. 17) is of red ware rather roughly finished. It consists of a small shallow bowl made in one piece with a solid triple foot. There is a small depression roughly in the centre of the bowl and probably made with the thumb. The small portion of rim that remains is undecorated. The diameter of this bowl is about 10 cm. The overall height of this pot-stand is 68 mm. and the diameter of the triple foot about 50 mm. On the outside the pot-stand is decorated with two rows of rough triangles with a common irregular base line, the lines being all made with oval ring dots, probably the impressions of a piece of straw. See also Pl. vii, No. 1.
FOUR OCCUPATION SITES AT AGORDAT

N 4152/2 (FIG. 18) is two-thirds of a similar object of red ware but much better made. The base is flat but there is one gadroon or rounded groove in the edge, and there were originally three. The solid base was made in three parts, and it is one third of the base that has broken away along a line of cleavage due to the original pieces not having been entirely assimilated. The flattened slightly everted rim is decorated with criss-cross incisions, and the outside of the stand is decorated with alternating triangles hatched with rows of small roughly triangular impressions of varying size, the whole being clearly intended to imitate basket-work. The diameter of the bowl was approximately 107 mm., the diameter of the base was about 75 mm., and the overall height of the pot-stand was about 75 mm. See also Pl. vii, No. 2.

![Fig. 19. Scale §](image1)

![Fig. 20. Scale §](image2)

![Fig. 21. Scale §](image3)

N 4152/3 (FIG. 19) is the undecorated base of a red ware pot-stand that had a base consisting of three incipient legs: Diameter of trilobed base about 60 mm. Height of base 43 mm. See also Pl. vii, No. 2.

The base of this stand is similar to the base of a somewhat taller red ware stand found with a shallow bowl or platter in a C Group cemetery at Aniba, see Steindorff, Aniba I pl. 58, FIG. 17 and p. 95. Compare also the C Group pots with three legs illustrated in Archaeological Survey of Nubia, Report 1908–1909, pl. 47, b 3 and c 4.

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Four other related red ware pot-stands were found with the above:—

N 4152/4 (Fig. 20). Part of a pot-stand with possibly a triple foot: smooth flattened rim; decorated with many small incisions on the exterior, divided by three impressed lines running horizontally round the stand. Height about 73 mm. See also Pl. vii, No. 2.

N 4152/5 (Fig. 21). Red ware pot-stand almost complete except for the rim which is missing. There is a small depression in the base of the bowl as in 4152/1, and in this specimen alone the inside of the bowl is decorated—with a chevron pattern of parallel lines of incised dots. The exterior is decorated with a pattern of chevrons alternately plain and filled with impressed dots, separated into panels by vertical plain bands bordered by lines of impressed dots. Two horizontal lines of these dots run round the stand just above the base. The base is flat, and 70 mm. in diameter. See also Pl. vii, No. 1.

N 4152/6 (Fig. 22) is about a quarter of a red ware pot-stand with a flat base, decorated on the rim by incised lines at right angles to the rim, and on the outside by a double chevron of incised dots running round the pot, with the inverted triangles between the rim and the chevrons also filled with incised dots: a double line of these dots also runs horizontally round the stand just above the base. Height of pot-stand 64 mm. See also Pl. vii, No. 2.

N 4152/7 (Fig. 23) is about a third of a rather roughly made red ware pot-stand, of which the upper half is bowl and the lower half solid; slightly rounded at the bottom; decorated on the rim with a single line of impressed dots, and on the exterior with many of these dots. Diameter of bowl about 100 mm. Diameter of base about 68 mm. Overall height of stand about 67 mm. See also Pl. viii, No. 1.

Apparently related to the above are pieces of red ware pots with more or less elaborate bases, decorated with patterns in incised line, in which a number of horizontal lines often run round the waist or stem of the vessel, and above them are patterns of alternating triangles hatched with parallel incised lines. In one example there are traces of a second row of alternating triangles separated from the lower row of three horizontal lines. In some cases the bases are like small inverted bowls and in some cases flattish, as in Fig. 24. Three of the bases range in diameter from 48 to 66 mm. and are surmounted by a solid stem, ranging from 45 to 55 mm. in height. For the above see Pl. viii, No. 3.
PLATE VII

POT STANDS, POT-BASES AND SHERDS (SOME BLACK TOPPED) FROM AGORDAT.
Scale: nos. 1, 2 and 4, approx. \(\frac{1}{4}\); no. 3, approx. \(\frac{1}{6}\); no. 5, \(\frac{1}{2}\).
PLATE VIII

SHERDS FROM AGORDAT
Scale: Nos. 1, 2, 3, approx. 1; no. 4, approx. 1
PLATE IX

SHERDS FROM BOWLS, SOME BLACK-TOPPED: FROM AGORDAT
Scale approx. 1
PLATE X

SHERDS FROM AGORDAT
Scale: nos. 1, 2, 3, approx. 1; nos. 4, 6, 7, approx. 1/4; no. 5, approx. 1/4
PLATE XI

EAR-PLUGS, LIP-PLUG, CRESCENTS, BEADS AND ATYPICAL SHERDS FROM AGORDAT

Scale: nos. 1, 5, 6, 10, approx. 1; nos. 2, 3, 4, 15; nos. 7, 8, 1; nos. 9, 11, approx. 1
a. ATYPICAL SHERDS FROM AGORDAT. (No. 4 probably Pan-grave)
   Scale: nos. 1, 2, approx. ¼; no. 3, approx. ½; no. 4, approx. ⅔

b. TOMBSTONE FROM KHOR NUBT
   (see p. 64)
FOUR OCCUPATION SITES AT AGORDAT

One large rim sherd and a fragment (FIG. 25) consisting of the stem and part of the body of the pot (both from N) suggest a beaker-like vessel with a plain rim decorated with three horizontal lines below the rim and about 10 horizontal lines round the stem, with hatched triangles as described above between them. The height of such a beaker was probably about 130 mm.

One unique specimen (FIG. 26) is really little more than the thick heavy slightly everted flat base of a pot.

(c) Red ware pots copying baskets

N 4149 (FIG. 27 and Pl. vi, No. 4) a large sherd, unfortunately weather-worn, and two other base sherds, enable one to see that they came from small pots with more or less vertical sides, a thick and everted rim, and a flattish base slightly pushed up in the centre. The shape is in every way an exact replica of a basket still made in the Sudan. Two of these sherds are black on the inside. The resemblance to a basket was further greatly enhanced by the external incised decoration, which starts with concentric rings of incised or impressed dots, beginning in the centre of the base and gradually working their way up the outside of the pot. In the largest sherd rows of incised dots in pairs are separated by horizontal incised lines. The outside edge of the thick rim is decorated with wide vertical cuts. There is also a thick sherd from a rim of a much larger pot of the same type, with the rim likewise decorated with large vertical incisions. There are traces of triangular impressions on the external wall of the pot just below this rim (Pl. x, No. 5 bottom). The base sherd that is red inside has a part of the wall of the pot ascending at an angle of 45° instead of vertically. All the above are from N.
(d) Bowls inspired by baskets

There are also sherds from fairly large bowls with thickened rims sometimes everted, and sometimes turned in, that are decorated to resemble basket-work. Most of them are red ware, some with slip and burnish on the plain rim, but some are red ware with black rims and black inside. One similar sherd has been published from Kassala in *JEA*, xiv, pl. 13, *fig. 15.*

It is impossible in a study of surface finds such as this to know in what order the various related designs developed, but as early as the Protodynastic—see *Archaeological Survey of Nubia, Report 1910–1911*, pl. 20a—a raised wavy line as a decorative motif was being made by making a thick straight line of clay delineated on either side by an incised line and then impressing one edge of the line with triangles and the other edge with inverted triangles, arranged so as to alternate. Probably the best bowls of the kind now being described were decorated with bands of these raised wavy lines all over as in Pl. vi, No. 6. There are many variations of this pattern. One sherd is shown in which the raised lines round the bowl are alternately straight and wavy. Or they may be reduced to a double or single wavy line round the bowl just below the rim, the rest of the bowl being left more or less plain; or on black topped brown bowls there may be incised decoration below a single such wavy line, or between two such wavy lines, see Pl. vii, No. 4.

Probably later as a degeneration of this way of making a pot like a basket, the bowl was decorated with horizontal deeply incised lines only (the first stage of producing the above decoration) see Pl. viii, No. 1, and that this pattern went sometimes all over the pot is clear from the near base sherd.

Then there are rim sherds with a red slip on the rim and on the inside, which have deep horizontal lines on the outside, only the first of which has had rough dots impressed on either side of the uppermost horizontal line just below the rim (see top centre): also rim sherds on which a band of seven or eight deep horizontal lines only run round the outside of the bowl just below a plain rim. The rest of the bowl may be roughly decorated as bottom right, which shows the tops of two triangles in line; or the horizontal lines may alternate with triangles of deeply impressed dots as top left, the rest of the bowl being plain. All these bowls have rims somewhat inverted and the rim is usually, but not always, thickened.

Then there are sherds from bowls with thick everted rims (red slip on the rim only) in which the basket-work pattern has been produced by first making deep incised horizontal lines round the bowl and then making the slightly slanting impression of a three-toothed comb across the incised line so that the impression of one tooth comes on the lower side of one plain band and the impressions of two teeth come on the upper side of the plain band immediately below (Pl. viii, No. 3). This process was sometimes repeated all over the bowl. A variation of this process may be seen in Pl. viii, No. 2 top, a large sherd from a black-topped brown bowl which was highly burnished on its black interior, and had a band of five horizontal lines incised round its rough exterior just below the rim, these lines being left alternately all plain, or all having angular impressions made in them, as in Pl. vii, No. 5 bottom left. A unique sherd from a small black-topped pot with an everted rim decorated externally in this way, has a pattern on the inside of the rim made by incising two horizontal lines and between them a band of vertical lines, across every four or five of which another incised line slants upwards to the left at an angle of about 45°. A small rim sherd from a black-topped brown bowl with an inverted rim shows a pattern in which thick wavy lines, produced as above, in groups alternate with fine herring-bone incisions in the incised grooves, see Pl. vii, No. 5 top left.
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Pl. vii, No. 5 and Pl. viii, No. 3 show some of the many other varieties, but they are all varieties of the same theme. The bowls, which usually have thickened inverted rims, and are sometimes black-topped, and sometimes have red slip on the rim only or all over the inside, have deep parallel horizontal lines incised either all over the outside or in a band below the rim, and their impressions are made either in the incised grooves or on the plain bands between the grooves, either all over the pot, or on every other band or groove, or sometimes only on every third or fourth band; and the comb or other object with which the impressions are made varies also. Even more complicated patterns occur, as in Pl. viii, No. 3, where slanting lines are cut across a band of horizontal lines below the rim, or horizontal lines are crossed by groups of five lines which slant up alternately to right and to left, leaving between them triangles in which dots are impressed by a comb on the plain horizontal bands.

(e) Impressed dog-tooth decoration

We have already noted under (a) a C Group bowl from Faras which had 'slight dog-tooth impressions on the mouth'. These impressions are unfortunately not shown in the publication, but are presumably similar to what are now going to be described. In many C Group bowls bands of varying arrangements of impressed triangles and inverted triangles run round the outside of the bowl just below the rim, see for example Steindorff: Aniba 1 pl. 50, 3 and pl. 51, 7. See also Archaeological Survey of Nubia, Report for 1908–1909 pl. 46, d, Report for 1909–1910 pl. 32, c and Report for 1910–1911 pl. 24. This motif also occurs on some fine bowls from the Kerma Nubian as yet unpublished.

We have also noted under (d) that the main motif was the repetition of raised wavy lines of clay formed by impressing a straight raised line of clay with triangles on one edge and inverted triangles on the other edge alternately.

On several sherds from these Agordat sites a thick wavy line has been produced on the exterior edge of the rim, by making triangular impressions well spaced out on the exterior edge of the rim, and inverted triangular impressions on the interior edge of the rim opposite the spaces between the exterior impressions. This occurs both on sherds which appear to come from short-necked beer-pots, and also right on the top of the rim of deep bowls such as one described in (f) below. (Pl. viii, No. 4). In some of these there is degeneration, and the impressed triangles occur on the inside of the rim only, or on the top of the rim on the inside only, and as a band of impressed triangles below the rim on the outside of the bowl, and so contribute little or nothing to the wavy rope-like effect achieved where both decorations are on the top of the rim (Pl. ix, No. 1).

It would appear that the pinched rims from Kassala (see ʃEA, pl. xiii, b, c and e) from otherwise similar bowls are a further degeneration of this decoration.

Another form of impressed triangle decoration occurs on several much everted rim sherds from the Agordat sites, making double, triple or quadruple bands of dog-tooth on the inside of the everted rim (see Pl. viii, No. 5). One of these sherds with also a criss-cross decoration on the rim itself may have come from a pot stand similar to those described under (b).

A rim sherd from a brown ware deep bowl with a slightly thickened carinate rim has a double row of impressed dog-tooth on the thickened rim of an otherwise plain bowl (Pl. viii, No. 5 top centre), as frequently occurs on C Group bowls.

(f) Deep bowls usually decorated on the body with patterns made by criss-cross combing

Rim and other sherds that come from deep bowls of brown, of black-topped brown, and apparently of black ware, are common on all the sites. These bowls usually
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had simple rims, but they are sometimes slightly thickened and carinate. The space immediately below the rim may be left plain or may have a band of decoration of its own. This decoration when it occurs is usually a band of crossed lines or lines all slanting in the same direction, see Pl. ix, Nos. 1 and 4; or may be made with triangular impressions as described in (e) and shown in Pl. ix, No. 3.

The body of the bowl may be roughly combed, or combed all over with lines slanting in one direction and bands of combing running across the combed background: or simple patterns may be formed by bands of combing running at an angle to each other on an otherwise plain bowl. Patterns made with incised lines crossing each other, or making herring-bone, rough chevrons or triangles occur, as do bands of triangles filled with cross-cross hatching. For examples see Pl. ix and Pl. x, Nos. 1–4.

(g) Large beer-pots with narrowed necks and out-turned rims

Sherds from these occur. They are of red ware and decorated externally with various incised patterns, see Pl. x, Nos. 6 and 7. The actual rim is sometimes thickened and often decorated. The pots are usually combed internally.

(h) Various

Sherds less typical of this Agordat culture may be seen on Pl. xi, Nos. 5–7, and Pl. xii, Nos. 2–3. They include a few highly burnished ones in both red and black ware decorated with incised patterns. Other sherds of plain burnished ware have a bright red slip on the outside and are black and burnished inside. One from NS came from a pot apparently similar in shape to Reisner's type BKT, XII 11 (see Kerma, IV–V, Fig. 249). Another sherd of this ware also from NS shows marked carination. A sherd from K showing a similar simple everted rim has a black band 5 mm. deep on the outside just below the rim. A few sherds of unusually fine ware are decorated with parallel ridges that are quite sharp. These are probably Pan-grave, see Qau and Badari III pl. x. See Pl. xii, No. 4.

A few sherds of lightly fired brown ware show exceptionally fine and complicated patterns all over, among which the raised wavy band made by triangular impressions and described above in (d) and (e) occur: see Pl. vii, No. 4 top.

One sherd from K possibly comes from a four-eared bowl as found at Aniba see Steindorff Aniba, vol. I, pl. 58, Fig. 6. It is decorated by a pattern of chevrons alternately hatched or plain.

A complete small bowl of smooth red ware undecorated came from S. Maximum diameter 76 mm. Height 40 mm.

A number of solid pointed bases of red ware that look as if they came from amphorae or copies of amphorae were found at N—date uncertain.

(i) Handles

Handles are rare. One horizontally perforated lug handle with a vertical groove in it occurs on a rim sherd decorated with a pattern of triangles alternately plain and hatched with impressed dots. It appears to be contemporary with the main occupation—also a pointed knob decorated with impressed dots, on a sherd from a large pot decorated with a similar pattern, see Pl. xi, No. 8. Other lug handles may come from a later ware, see (n) below.

(j) Spouts

One short spout, with diameter about 22 mm. from just below the rim of a plain
FOUR OCCUPATION SITES AT AGORDAT

red ware bowl comes from site K, as do two smaller short spouts diameter about 5 mm. one from just below the decorated rim of a brown ware bowl. Pl. xi, No. 9.

(k) Pot-lids
Fragments of pot-lids consisting of plain red ware disks about 20 cm. diameter and about 15 mm. thick occur.

(l) Spindle whorl
One of plain red ware from site S. (See also p. 35 above for examples in stone).

(m) Shaped sherd
One 103 mm. long and 70 mm. wide from S. This was a potter’s tool, as still used to-day in the Sudan for working the pot into shape from the inside.

(n) Finger-nail ware
A thin rough brown ware, in which the decoration seems always to have been made with the finger-nail and to have consisted of bowls and beer pots with sloping constricted necks, as occurred in the Meroitic period at Faras, Buhlen and elsewhere, see for example LAAA, xi, pl. xliii, was the only ware found actually in the caves on Kokan when I searched them. This fact seems to separate it from the rest of the assemblage, as well as the fact that the type of mouth in the beer pots seems to be late. A feature of the ware is that it is full of quartz sand, and the whole body of the pot seems to have been roughened by impressions of the finger, as if in an endeavour to copy the mat-impressed ware which started in the Late Meroitic. Other pots of this ware have been decorated with a roller on the body of the pot, giving it the appearance of having been made on a piece of fabric. It seems probable that several types of lug-handle belong to this ware: see Pl. xi, Nos. 10-11.

CONCLUSION

Until at least one of these sites has been excavated it will be impossible to say for certain what is the date of their main occupation, butMajor Last made such a good collection of objects that after a detailed study of them I am fairly happy at hazarding a guess: and that is that most of the finds come from an occupation possibly contemporary with what is known as the Second Intermediate Period in Egypt and probably contemporary with the beginning of the New Kingdom in Egypt.

The study of the pottery suggests that though it is so varied, most of it is linked together by sharing in a few striking motifs and techniques described above, and so probably belongs to one culture. That culture is part of a large family which includes the C Group and Kerma Nubian. Of course there are descendants of that culture existing in the Nuba Mountains and elsewhere to-day; but there is nothing to suggest that the Agordat sites do not ante-date the Iron Age—indeed the fact that stone cels were common is good evidence that it does; and the elongated two-lugged cels such as FIG. 5, Nos. 12, 13, 14, provide some of the best evidence as to date. These cels must have been inspired by a special form of the Egyptian two-lugged copper axe, which does not seem to have had a very long range in time in Egypt. Petrie, Tools and Weapons, pl. ii, 84; pl. vii, 151-2, and p. 9, dates it from the end of Dyn. xvii to the end of Dyn. xviii. If this is the case, the Agordat stone cels in question were presumably copied within a century from such metal prototypes, from axes either seen in Egypt or imported from there. Such metal axes cannot have been common at Agordat, or they would have driven out stone cels, as they had already done at Kerma by the Second Intermediate, and seem also to have done to a large extent with the C Group in Lower Nubia.

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There, however, they were nearer to sources of metal axes than were the ancient inhabitants of Agordat. Pottery wares seldom have a distribution in space of more than 100 miles, though odd pots may travel further. The black incised bowls so characteristic of the C Group do not occur at Agordat, but nor did they to any extent at Kerma which was much nearer to Lower Nubia. Red incised ware, in some cases apparently clearly related to the Agordat wares, did occur in the C Group. It occurred in some quantity at Aniba, see for example Steindorff, *Aniba*, vol. 1, pl. 92; and there too were found rare examples of the *Linsen-muster* ware, one of the characteristic wares of the Agordat sites, see p. 53 above. The double-spouted pot from Aniba (pl. 91) was of a different fabric (yellowish white clay) to the sherds of this type from Agordat, but sherds of red ware showing this striking decoration probably inspired by the decoration of baskets with bead-work did occur at Aniba, and the similar finds from Agordat are presumably approximately contemporary. A C Group cemetery at Aniba also produced a solid pot-stand with a tripod foot, not known elsewhere as far as I know, but now occurring in similar form at Agordat, see p. 55. Rare pottery spouts at Agordat occur in similar forms in the C Group, see *Aniba*, vol. 1, pl. 94. These are the features that suggest a date for Agordat not far different from that of the C Group. Other finds from Agordat, while not such good chronological indicators in themselves, fit in easily to such a setting:—combined pot and pot-stand (cp. Pl. VII, No. 2 bottom right and fig. 19 with *Aniba*, i, pl. 58, 17); stone shallow dishes or deep palettes (cp. particularly fig. 9 with *Aniba*, i, pl. 68 and Reisner, *Kerma*, pl. 62, 4); stone muller of Egyptian type (fig. 11); and pottery earstud which could be a copy of one of Dyn. xviii date. The glass eye-bead too may date from Dyn. xviii.

For some time it seemed that there was possibly an earlier occupation also, contemporary with the Predynastic period of Egypt. In addition to the disk maceheads (fig. 2, Nos. 3, 4 and 5), it seemed that knobbled spherical maceheads (fig. 2, No. 1) might have been derived from knobbled maceheads probably of Asiatic origin which occur in the Late Predynastic in Egypt. The fragment of the rectangular slate palette with decorated border (p. 45) also suggested such a date, cp. *Prehistoric Egypt Corpus*, pl. lxxix, and palettes such as fig. 8, nos. 1 and 2 looked as if they had been inspired by slate palettes of Petrie's types 75 and 67, for which see *Prehistoric Egypt Corpus*, pls. lvi, lvii. But it seems more probable that the palettes are a local variation of the shallow dishes or palettes of the C Group, and presumably the disk maceheads are a somewhat disturbing survival, such as seems to have occurred at Kerma see Reisner, *Kerma*, iv–v, p. 289 where two 'sharp-edged maceheads' are unfortunately not illustrated.

References

Guy Brunton, 1930. *Qau and Badari III*.
The Khor Nubt Tombstones
The earliest dated Arab Remains in the Sudan

by H. GLIDDEN

The recent publication by G. Wiet\(^1\) of seven early Arab tombstones from Khor Nubt now makes it possible to correct certain misconceptions which for some time have existed concerning the date of the earliest Arab remains in the Sudan and the character and origin of the people whom these remains represent.

Through the kindness of P. L. Shinnie, Esq., Commissioner for Archaeology to the Sudan Government, the author of this article in the spring of 1953 was permitted to examine the seven Arabic inscribed tombstones from Khor Nubt in the Sinkat area, which are now deposited in the Khartoum Museum.\(^2\) As a result of this examination of the original objects it is possible to say that Wiet’s readings are correct in all important respects save possibly one. This last involves the reading of the earliest of these dated inscriptions, but since the possible difference is of only two years it does not materially affect the conclusions to be drawn from this material.

The discovery of these tombstones appears to have been made by G. E. R. Sanders and T. R. H. Owen in 1932, as related in an article which Owen published in 1937.\(^3\) The dates on the stones they were able to read are given as ranging from A.H. 227–277 (A.D. 841–890). It was suggested by the discoverers that the graves in question were probably those of troops and a garrison sent to put down the revolt of the Beja leader ‘Ali Bābā in A.H. 241.\(^4\) J. F. E. Bloss, writing in 1936,\(^5\) repeats the same information, which he apparently had secured from the authors of the previously-mentioned article before they published it themselves. His date (A.D. 854) for the revolt of ‘Ali Bābā, however, is incorrect, as are the equivalents (A.D. 848–898) he gives for the dates A.H. 227–277 (A.D. 841–891 are correct).

In 1938 Ugo Monneret de Villard published an article\(^6\) in which he stated that the Khor Nubt finds represented the oldest Arabic inscriptions in the Sudan. According to him, the earliest was dated A.H. 147 (A.D. 764–765); another was of the year A.H. 153 (A.D. 770), while still others were dated A.H. 315, 364 and 377 respectively. From all this, Monneret de Villard drew the conclusion that groups of Arabs as early as the middle of the 7th century A.D. had pushed out in the direction of the Nile (presumably from the east). These conclusions were accepted by O. G. S. Crawford\(^7\) in 1951 and the date A.H. 147, at least, most recently by J. Spencer Trimingham\(^8\) in 1952. Finally, Sanders

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\(^1\) *Journal Asiatique*, ccxl, fascicle 3 (1952), pp. 292–297.

\(^2\) The accession numbers of these tombstones are 2765–2771.

\(^3\) ‘The Hadendowa’, *SNR*, xx, pp. 185–186.

\(^4\) A.D. 855–856.


\(^6\) ‘Note sulle influenze asiatiche nell’ Africa orientale’, *Rivista degli Studi Orientali*, xvii, P. 324.

\(^7\) *The Fung Kingdom of Sennar* (Gloucester, 1951), p. 121.

\(^8\) *Islam in Ethiopia* (Oxford University Press, 1952), p. 50, note 5.
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and Owen in late 1951⁹ were independently dating these tombstones in the range of A.H. 149 to 315.

The critical inscription in this series is no. 2771 (see PLATE XIIIb) in the Khartoum Museum. It is the earliest of the lot and upon it the above-quoted writers have based important historical conclusions. This stone, the top part of which is broken off and missing, reads as follows:

1. and grant him peace. 'He sent him with the Guidance
2. and the true religion that he might manifest it over
3. all [other] religion, even though the polytheists
4. might be averse.¹⁰ She testifies that
5. the promise of God is true, that the meeting of Him is true,
6. that the Hour is coming, no doubt
7. of it, and that God will raise up those who are in
8. the tombs. She died in Shawwāl
9. of the year seven [nine?] and forty and two hundred.

There are two problems which have arisen in connection with this date. Fortunately the more serious of the two is easily disposed of. This is the same date as has been read variously as 147 and 149 in the above-mentioned articles. In these instances, however, an error was made in reading the word مَيْعَةٌ as mi'ah (100), whereas as Wiet reads and the present writer concurs, it should be read mi'atay, an incorrect use of the construct for the absolute form of mi'atayn (200). This peculiarity occurs in other inscriptions of the Khor Nubt series, but it is not confined to them. It is found also in inscriptions of the same period from Egypt.¹¹ Other orthographic peculiarities which link these inscriptions stylistically with those of the same period from Egypt are the spelling اَيَضَ (asāhar) for عشر (asāhar) in the word for ‘ten’¹² and the repetition of the word صَانَعَ (‘year’) at the end of the date.¹³

Secondly, but less important, is the question as to whether the word سَمَعَ should be read سَمَعَ (seven) or سَمَعَ (nine). Wiet interprets it as the latter without any question, while the present writer read it as ‘seven’ before having seen Wiet’s article. The fact is that the four vertical teeth which together constitute the first two letters of the word are of the same height and are spaced the same distance apart. It is therefore actually impossible to tell which number was in the mind of the person who cut the inscription and there is no way of checking it since the date and day of the month are not given. Therefore, all that can be said is that the date of this tombstone is sometime in the month of Shawwāl A.H. 247 (December 8, 861–January 5, 862) or A.H. 249 (November 17–December 15, 863).

¹⁰ Koran 9: 33.
¹¹ Cf. E. Combe, J. Sauvaget, and G. Wiet, Répertoire chronologique d'épigraphie arabe, i (Cairo, 1931), Nos. 105, 118, 131, 138, and 139.
¹² ibid., Nos. 121 and 221.
¹³ ibid., No. 159.
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We have, then, a series of inscriptions dated A.H. 247/A.D. 861–2 (or A.H. 249/A.D. 863), 253/867, 264/877–8, 277/890, 315/927, and 329/941 (one is undated). They are all anterior to the group from the island of al-Riḥ published by E. Combe in 1930\(^\text{14}\); the earliest of these is from A.H. 387/A.D. 997.

The persons themselves who were buried in these graves are interesting. First of all, four of the seven, including the earliest (A.D. 861–3) and the latest (A.D. 941) were women, an unusually high proportion. It indicates that this was a permanent settlement, not merely a camping-place for transients. Secondly, three of the five names which are preserved (‘Ā’ishah ibn ‘Isā al-Riḥ, Hasan bin ‘Isā, and Sarī bin ‘Abdallāh bin MHĀ) are indubitably Arabic; but two, a man (Aksūmī bin Ya’ lūm) and an unidentified woman حاسِبَةُ بنت سكِسُسُس are not. The man would seem to have been of Abyssinian origin, while the woman might possibly be of Beja background. Finally, the anonymous inscription of A.H. 329/A.D. 941 is crudely scratched and is replete with orthographic errors consisting chiefly of confusion between long and short vowels. This suggests that the person who incised the inscription was not a native speaker of Arabic.

The conclusions to be drawn from the above are the following: The earliest dated Arab remains in the Sudan are from shortly after the middle of the 9th century A.D., not the 8th century as held by Monneret de Villard and others. It is probable that the persons who composed these inscriptions and those who occupied the graves were of mixed origin, consisting of Arab elements from Egypt, an Abyssinian element from the southeast, and local Bejas who were attracted to this site by the gold workings. This picture conforms very well to that given by al-Maqrizī\(^\text{15}\), quoting in part from his 10th century predecessor al-Mas‘ūdī, who states that the chief attraction for the Arabs in this part of the Sudan was the gold mines and that the incoming Arab settlers inter-married with the local Beja and converted others to Islam.

\(^\text{14}\) SNR, xiii, pp. 188–191.

\(^\text{15}\) Kiṭṭat, ed. G. Wiet, Part ii, p. 277.
Excavations at Tanqasi, 1953

by P. L. SHINNIE

1. General.
2. Description of mounds and excavations.
3. Description of objects.
4. Conclusion.

1. General
The group of mounds at Tanqasi, wrongly placed and wrongly described as 'pyramids' on map sheet 45-F of the 1/250,000 series of the Sudan, have given rise to much speculation. They have been accepted as burial mounds by all visitors, but their date has never been satisfactorily determined.

First mentioned by Lepsius, who made a plan of them, they were visited by Budge and Reisner. The latter made a cut into one of them, apparently without result. It was Reisner who first pointed out that these mounds were not pyramids 'but circular grave-tumuli composed of earth held in place by an outer layer of small rough stones'. He believed them to be of late Meroitic date at the earliest. The obvious external similarity of these mounds to the X-Group ones excavated by Bates at Gamai, by Kirwan at Firka, and by Emery at Ballana and Qustul in Egypt, made it likely that a late Meroitic or X-Group date was correct.

To test this, the Sudan Antiquities Service carried out a small excavation in January and February 1953. The Brooklyn Museum of Fine Arts made a generous contribution to the expenses of the work, and thanks are due to the Trustees of that Museum and to Mr J. Cooney, Curator of Egyptian Art, whose interest was largely responsible for the work being carried out.

The expedition consisted of Mr H. N. Chittick, Curator of the Sudan Museum, to whom I am indebted for much help in the preparation of this report, my wife and myself, my two Qufi foremen, Ibrahim Umbarak and Hassan Musa, and about 40 local men and boys.

2. Description of mounds and excavations.
The Tanqasi grave mounds lie on the left bank of the river at a distance of from 1 to 2 kilometres from the market town of Tanqasi (FIG. 1). They are situated on slightly undulating land devoid of vegetation. This gravelly surface is broken up by large patches of lower lying ground which supports tufts of tabbas (a kind of coarse grass). These mounds were planned by Lepsius (Denkmäler 1, 124) but check measurements showed his plan to be in some respects inaccurate, and a new plan has been made. (FIG. 2).

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1 For position see map FIG. 1.
2 Denkmäler 1, 124 and Text v, pp. 255–6.
4 JEA v, p. 67.
There are some 170 mounds of various sizes in the main field, and 30–40 more in a group a short distance to the south east. The mounds are almost all constructed of alluvial soil; the outside appears originally to have been covered with a layer of gravel. Many of them also had a rough revetment of stones round the edge. This revetment is to be seen protruding through the detritus washed down from the tip of some of the lower graves. There is little doubt that in many cases (as Mound I) this revetment is concealed by such detritus. The mounds can be divided, chiefly according to size, into three main categories:

(a) Very high mounds (height 6–10 metres). There are six of these, of which Mound I is one. They all appear originally to have been conical, though some have become misshapen. Many have secondary graves, covered with cairns, and apparently later in date, on their flanks. These high mounds were presumably the tombs of the more important chiefs.

(b) Medium-size mounds (height 2–4 metres), of which Mound II is an example. One of this category is constructed of red-brick rubble. Many of them have a small depression in the centre (never found in the very high mounds) perhaps due to robbing, as in the case of Mound II, or, possibly, to the collapse of a tomb chamber. In some cases the depression is of such large dimensions that it may have been a constructional feature. There is no clear-cut line on grounds of size between this category and the next.

(c) Low and very low mounds. Some of the low mounds have flat tops, presenting a profile like an inverted plate. They frequently have a large diameter in proportion to their height. Many of the very low mounds amount to hardly-perceptible rises in the ground, marked by a circular patch of gravel. They never have depressions in the centre.

Mound I

This mound was chosen as being one of the biggest, and, as such, the most likely to contain a rich burial, and because it appeared unrobbled. This last supposition turned out to be incorrect as will be described later. (Plate XIIIa).

The diameter of the mound was 16 m. It was 8 m. high, and was composed of loose black earth, with a large admixture of sand. This soil was extremely unstable and made it difficult to obtain a section.

A large number of pieces of sandstone lay on the surface of the mound, particularly at its foot; as work progressed it became clear that these were displaced pieces from the stone revetment, which was found to surround the mound and presumably marked its original foot.

Several cairns made of these stone fragments were found on the lower slope of the mound; where the loose soil of the mound had slipped beyond the revetment.

One of these graves was excavated and found to contain a single extended burial in a narrow grave with no grave goods. Unfortunately no date can be given to these graves, except to say that they are later than the tumuli. The body was laid on its back, head to west, face turned south, and legs crossed.

The excavation of the tumulus was undertaken by driving a very wide cut into it from the north. Since there was no information as to the form of the burial chamber, it was not possible to find a short cut to the chamber itself, and, in view of the unstable
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material of which the mound was made, a wide cut was necessary. Accordingly, a cutting 30 metres wide was laid out and digging commenced from the north.

The spill beyond the revetment was soon cleared, and the revetment exposed (Plate XIIIb). It is clear that this marks the outer limit of the mound as it was originally

![Plan of Grave in Mound I, Tanqasi](image)

**Fig. 3. PLAN OF GRAVE, MOUND I, TANQASI**

constructed; and that the stones were external and visible as first laid. Beyond the stone circle a vast amount of sterile earth remained to be removed before the burial chamber could be reached. The only objects found in this soil were a few sherds, described and discussed later.

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Burial Chamber

It had been hoped that the burial chamber would prove to be a brick structure of the type made familiar in X-Group mounds. It was in fact of a much simpler type (see FIG. 3).

At the centre of the mound was a rectangular pit (PLATE XIVA) filled with earth before the mound was heaped above it. On removing this earth, a ramp was found, commencing at the east end of the pit, and sloping down to the graves at the west end.

At the bottom of the ramp were found what appeared to be three graves, two of normal rectangular shape, and one L shaped. (PLATE XIVB). These grave pits were filled with mud brick thrown in haphazard. On removing these bricks to a depth of 60 cm., properly laid bricks were found, and below them, the graves were found to be shafts with the actual grave itself in a niche, similar to Meroitic niche graves. The actual lay-out of the graves was peculiar, and has not been found before. They consisted, originally, of four niche graves, the one L shaped grave having been two.

Grave B had two small oval depressions dug into it (see FIG. 3). All four graves had been robbed; the robbers having driven a tunnel from the south side of the mound, under the natural soil, to the centre of the mound, and then broken into grave B. The entrance to the robber hole had completely filled in with wind blown sand, and was not visible. The passage being cut in the natural soil below ground level, there had been no subsidence of the mound to indicate this robbing. Graves A, C and D were quite empty, even the bodies having been removed.

In Grave B parts of two pots were found in the holes, there were parts of a skeleton and a few beads, as well as sherds indicating the existence of at least two more large pots.

In the robber passage were found more fragments of the pots, a skull, beads and fragments of basket, which were presumably used by the robbers.

Fig. 4. SECTION OF MOUND II, TANQASI

Mound II

A low circular mound 19 m. in diameter, and 1.20 m. high (see PLATE XVA). In the centre was a depression, with a trench leading to it from the edge of the mound, both filled with sand, and evidently cut by robbers.

Cut into the soil underlying the barrow were a number of earlier grain-storage pits which contained grains of millet.

The excavation was carried out by stages based on the removal of diagonally opposed quadrants, until almost the whole of the mound had been removed (see PLATE XVIII). The section drawn from north to south through the middle of the mound (FIG. 4) indicates that it was built of loose alluvial soil covered with gravel; its original diameter

70
was about 1.4 m. The gravel had slipped down to the edge of the mound, being in turn covered with eroded alluvium which formerly it overlay.

The grave consisted of a roughly rectangular shaft, with its longer axis east and west, cut to a depth of 1.70 metres below the original land surface. At the bottom of the shaft, on the south side, a rough niche had been cut to accommodate the burial, the shaft afterwards being blocked to rather over half its height with alternate layers of rough sandstone and broken mud-brick. (FIG. 5)

The circular pit excavated by the robbers was dug into the middle of the shaft, and had destroyed most of the original shape; they had cut into the topmost (mud-brick) layer of the blocking and then abandoned their efforts, presumably because they thought they were cutting into natural soil. The present excavators were themselves for long deceived as to the whereabouts of the burial.

Much of the roof of the burial niche was found to have fallen in, and the grave was filled with gravel (which had presumably filled the upper part of the shaft). This
Fig. 6. PLAN OF BURIAL, MOUND II, TANQASI

1. Pot
2. Pot
3. Pot
4. Pot
5. 150 shell beads
6. 7 drop beads
7. small shell beads
8. drop beads
9. shell beads
10. silver ring
11. silver ring
12. beads under Pot.

Scale

0 0.50 1 metre

A B

N

stones

Scapulas

finger bones

toe bones
gravel had become cemented together into a tenacious mass, which made the clearing of the burial a difficult task.

The burial was of an adult female. Few of the bones of the skeleton were in the original position; they can only have been disturbed by the action of water or burrowing animals. They were all in a very fragile condition. The head was at the east end lying on its left side. In front of the face was a ‘beer jar’(4) and a rough globular pot (3); a similar ‘beer jar’ (2) and a larger globular pot (1) lay at the west end of the niche, and it appears that the body had been laid rather askew to allow room for these two groups of pots.

The beads were mainly of ostrich egg shell, of which two types were found, one with edges left rough (8) perhaps a waistlet and one with edges smooth (9), a necklet or waistlet. The pear-shaped ‘drop beads’ were mainly of white quartz; two of carnelian and three of black quartz. There were also two carnelian barrel-beads. It is possible that the groups of these drop beads (6), (9) and (12) originally formed one necklace and had become separated; the three beads (12) were found under pot (3), where they are hardly likely to have been originally placed. A possible arrangement of the bead ornament may thus have been (i) necklace of drop beads; (ii) waistlet of ostrich egg shell beads (as worn at the present day by Shilluk tribesmen); (iii) two wristlets, one of smooth-edged and one of rough-edged ostrich egg shell beads.

The two toe-rings (10) and (11) were found close to each other, with a phalanx lying within each. One of these has been identified as being probably the first phalanx of the great toe (right foot) of an adult woman. The toe-rings are similar to some found at Ballana(6), except that the Ballana examples taper towards the ends.

The Grain-pits

Eighteen grain-pits were exposed in the area excavated, cut through the gravel of the original land surface and into the alluvial sub-soil (see PLATE XVB and plan FIG. 7 showing general view of excavated area). They were mostly of ‘beehive’ shape, the diameter at the bottom being greater than that at the top. Some, however, were cylindrical. The pits were of depths varying between the limits of 70 and 160 cm. The diameter at the top averaged 100 cm., the widest being 120 cm. and the smallest 60 cm. One pit (marked Z on the plan) had a layer of rough stones of granite, intermingled with potsherds, at the bottom, presumably for drainage purposes. The one marked ‘P’ had a semicircular depression cut in the floor, which may also have been for drainage.

Many of the pits contained small quantities of grain, sometimes found on the floor of the pit, and sometimes in the fill. The grain has been identified(7) as millet, almost certainly sorghum Sudanese.

The pits were found to be filled with soils of varying qualities, but in every case the topmost layers consisted of wind or water-bonds of sand, in many examples interlaid with bands of mud, clearly deposited by rain when the tops of the pits lay open. The greatest number of such mud bands clearly distinguishable in a single pit was

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5 The Arabic numbers in brackets refer to those allotted to the objects in the plan of the grave (FIG. 6).
6 See Emery, Ballana and Qustul 1, p. 197, No. 61.
7 By Mr Ferguson, Chief Agronomist, Sudan Government.
EXCAVATIONS AT TANQASI, 1953

three, which taking into account the infrequency of rain in the district probably represents a considerably greater number of years. The pits had evidently been completely filled and were flush with the surface when the mound, which overlay them, was made. The sherds found in the fill of the pits, and at the bottom of pit ‘Z’, appear to be of late Meroitic type.

The millet thus antedates the 5th century A.D., so that this appears to be the earliest clear context in which this grain has been found. *Sorghum Sudanense* is not now cultivated for its grain, but it would appear from the number of the grain-pits found and from the comparative plumpness of the grains themselves that it was so anciently.

A number of shallow depressions, also cut through the gravel into the alluvium, and ranging in depth from 35 to 50 cm., were also found (marked A, B, G, H, S, T, and W on the plan fig. 7). They were also filled with wind and water-borne sand and fine mud. The purpose which they served is obscure. Basins of similar character are made at the present day in the Sudan as receptacles into which to pour water, drawn from a well, for cattle to drink from. No trace of a well was, however, found, although water is reported to be reached at a depth of about 6 m. in the area.

3. Description of objects

**Pottery**

**Complete pots**

Five complete pots were found, four in the grave Mound II, one in Mound III. In addition sufficient fragments were found in the graves of Mound I to reconstruct two pots.

**Sudan Museum No.**

11325 Globular pot with high neck. Hand made. ‘Beer-pot’. Red slip, burnished. Decorated round shoulder with impressions forming a series of diamonds with tassle shaped incisions below them (fig. 8, No. 1). Height 36 cm. Diameter of mouth 7 cm.

Mound I. Grave B. Not complete.

11326 Globular pot with high neck. Hand made. Coarse red ware. Mat impressed from shoulder downwards. Shoulder and neck covered with burnished red slip. (fig. 8, No. 2). Height 48 cm. Diameter of mouth 10 cm.

Mound I. Grave B. Not complete.

11329 Globular pot, slightly everted rim. Hand made. Coarse red ware. Traces of red slip. (fig. 8, No. 3). Height 21 cm. Diameter of mouth 11 cm.

Mound II. Grave. Reconstructed from fragments.

11330 Globular pot with high neck. ‘Beer-pot’. Hand made. Coarse red ware with burnished red slip. At base of neck are five groups of appliqué pear-shaped pellets, arranged four to a group to from a diamond shape. (fig. 8, No. 4). Height 48 cm. Diameter of mouth 4.4 cm.

Mound II. Grave. Reconstructed from fragments.
Fig. 8. POTS FROM TANQASI. Scale \( \frac{1}{4} \)
11331 Roughly globular pot. Hand made. Red ware with pink slip, very lightly burnished. (FIG. 8, No. 5). Height 16 cm. Diameter of mouth 11.3 cm. Mound II. Grave.


The ‘beer-pot’ types are well known as being typical of late or immediately post Meroitic times. They are comparable with those from Ushara (Kush I, p. 45) and Meroë.

The other types could not be easily dated if found by themselves, but there is no difficulty in accepting them as being contemporary, as they must be, with the Meroitic type pots.

Fig. 9. SHERDS FROM TANQASI. Scale †
Fig. 10. SHERDS FROM TANQASI. Scale 1.
EXCAVATIONS AT TANQASI, 1953

FIG. 11. SHERDS FROM TANQASI. Scale 4

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KUSH

Sherds

A selection of the sherds found is given in FIGS. 9–12.

The majority of sherds were of coarse unidentifiable types, but a few have characteristics which enable approximate dates to be given. An unusual feature of the coarse sherds from the fabric of Mound I is that many of them had had their edges rubbed smooth to make pottery scoops (FIG. 10, No. 1). The purpose of these scoops is obscure.

Fig. 12. SHERDS FROM TANQASI. Scale 1
a. TANQASI MOUND I BEFORE EXCAVATION

b. TANQASI MOUND I DURING EXCAVATION, SHOWING STONE REVETMENT
a. Tanqasi Mound I Burial Pit as Found

b. Tanqasi Mound I Burial Pit After Clearing
a. TANQASI MOUND II

b. TANQASI PITS BELOW MOUND II
EXCAVATIONS AT TANQASI, 1953

FIG. 9

All these sherds are of known Meroitic types, and come from the fabric of Mound I.

FIG. 10
1. Black ware, outside burnt red. Edges rubbed down to make a scoop?
3. Black ware, outside burnt red. Decorated with three applied pellets below rim.
5. Red ware with burnished red slip. Lower part mat impressed.

Nos. 2–5 are Meroitic. No. 1 is too featureless for dating. All from fabric of Mound I.

FIG. 11
2. Coarse red ware. Cross incised on rim.
   Robber passage of Mound I.
   Robber passage of Mound I.
4. Red ware with red slip.
   Robber passage of Mound I.
   Robber passage of Mound I.
6. Red ware with burnished red slip.
   Robber passage of Mound I.

Of these sherds, No. 1 is of Meroitic type. The others are well known types of the Christian period.

FIG. 12
4. Pink ware. Impressed decoration of diamonds filled with dots.
5. Brown ware with very lightly incised decoration.

Nos. 1, 4, and 5 are Meroitic. The other sherds probably are. All from the fabric of Mound II.
KUSH

Beads

A considerable number of beads were found both in the graves and in the fabric of the mounds. Examples are shown in Fig. 13.

![Beads Diagram]

Fig. 13. BEADS AND TOE RING, TANQASI. Scale 1, except no. 15, 4


The small glass beads and the disc beads of ostrich-egg shell are types which occur widely throughout the Sudan in different periods and no firm date can be given to them. The quartz droplet beads of type 14 are well known from Meroitic times being found in sites as far apart as Faras and Abu Geili; they are also found in X-Group contexts. They would appear to range in date from the 1st century B.C. to the 5th century A.D.

Silver

Fig. 13

15. Silver toe ring. Two identical rings were found with the burial in Mound II. They may be compared with ones from Ballana (see Emery, Ballana and Qustul, p. 197, No. 61).

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9 Firka, PLATE XIII, 3.
EXCAVATIONS AT TANQASI, 1953

GRAVE REGISTER

Mound I

Grave B
Sudan

Museum No.
11325 Pot. Fig. 8, No. 1.
11326 Pot. Fig. 8, No. 2.
11327 Skull. Mandible missing.
11328 Beads. 58 quartz droplet (Fig. 13, No. 14).
7 carnelian droplet (similar to Fig. 13, No. 14, but smaller).
12 red glass (Fig. 13, No. 5).
3 blue glass (Fig. 13, No. 5).
1 yellow glass (Fig. 13, No. 5).
5 blue glass (Fig. 13, No. 9).
20 ostrich-egg shell (Fig. 13, No. 1).

Mound II

Sudan

Museum No.
11329 Pot. Fig. 8, No. 3. ... ... ... ... ... 1
11330 Pot. Fig. 8, No. 4. ...
11331 Pot. Fig. 8, No. 5. ...
11332 Pot. Fig. 8, No. 6. ...
11333 20 ostrich-egg shell beads (Fig. 13, No. 1). ...
11334 7 quartz droplet beads (Fig. 13, No. 14). ...
11335 24 ostrich egg shell beads (Fig. 13, No. 1). ...
11336 10 quartz droplet beads ...
2 carnelian droplet beads (Fig. 13, No. 14).
2 carnelian barrel beads (Fig. 13, No. 3).
2 ostrich-egg shell beads (Fig. 13, No. 1).
11337 129 ostrich-egg shell beads (Fig. 13, No. 1). ...
11338 Silver toe ring (Fig. 13, No. 15). ...
11339 Silver toe ring similar to 11338. ...
11340 3 quartz droplet beads (Fig. 13, No. 14). ...

No. in Grave Plan, fig. 6

1 2 3 4 5 6 7 8 9 10 11 12

4. Conclusions

Although disappointing from the point of view of the poverty of the material discovered, the Tanqasi excavations were not entirely without value. It is now possible to give an approximate date to this group of mounds and this dating and the identification of the culture to which they belong may throw some light on the beginnings of the X-Group. The material from the burials is all of known type, already approximately dated; the pottery, of coarse mat impressed beer pot type, is very similar to that from the late burials found by Garstang at Meroe, although there are differences of detail. The excavation at Ushara also produced pottery of very similar type. There seems no doubt that this class of pottery must be dated to the very end of Meroitic times and I have suggested in Kush I, p. 46, that it is the pottery of the black Nuba of the Aezanes inscription, in whom I see the probable destroyers of Meroe. On this argument, the pottery must belong to the end of the third and beginning of the fourth centuries A.D.
KUSH

It bears resemblances to the coarse black pottery of African tradition found at Faras and at other Meroitic sites. It is, however, not precisely the same: it is coarser, generally has a taller mouth and, unlike the probably earlier examples from Faras, is mat impressed. I suggest that the resemblances are due to common African origin arising from somewhere south and possibly west of Khartoum, but that the Faras material represents an earlier stage and that its better technique may be due to the higher cultural development of Meroitic civilization 100 to 200 years earlier.

The other approximately datable objects from the Tanqasi graves are the quartz droplet beads. These are normally considered to be characteristic of the X-Group and certainly many have been found in the burials at Ballana and Qustul and at Firka. They cannot, however, be taken as direct evidence of X-Group date, since they occur also in earlier contexts at Faras, where Griffith considers them to range from the beginning of the first century B.C. to the end of the second century A.D. It is clear then, that their real time range runs from the first century B.C. to the fifth century A.D. They can, therefore, only be used to give a rather large chronological bracket to the Tanqasi burials. The pottery and the type of burial, however, enable a rather closer dating to be given. It is accepted that the mounds at Meroë itself are unlikely to be earlier than the middle of the third century A.D. and there is no evidence as yet of this type of mound burial existing in earlier times.

This is a rather hazardous hypothesis at this stage, since there was a much older tradition in the Sudan of mound burial, for example Kerma and other sites of similar date. It may be that this local burial custom persisted in more remote areas throughout the period of Pharaonic occupation and became common again after Egyptian influence had gone. This can, however, remain no more than a hypothesis at this stage, and on present evidence, the main graves cannot be dated earlier than mid third century. It is worth noting, however, that, although externally similar, there are varying burial customs within the mounds. At Ushara and perhaps in Mound II at Tanqasi the burials were crouched: at Meroë they are placed on beds; and in Tanqasi Mound I, although the robbing had destroyed any direct evidence, it seems likely from the lay-out of the graves, that the burials were extended, but not laid on beds. There would certainly have been no room for a bed in the rather small graves. The difference between the two types of burial at Tanqasi and the close analogy between Tanqasi Mound II and Ushara may be due to a class difference.

The two mounds which show similar burials (crouched) were of approximately the same size and comparable in richness of grave goods. The extended burial was found in the very much larger Mound I and it is reasonable to suppose that it represents the burial of a person of greater importance. Whether the four burials of Mound I represented one man and his wives can now never be solved, owing to the destruction by the robbers of nearly all the skeletal material. If this was so, however, it is strange that there is not a greater contrast between the size and elaborateness of the different graves. Though, if this were the case, it must be assumed that grave B was the most important, since it is slightly larger and had the two small pits, shown in the plan, dug into it.

The external similarity between the mounds at Tanqasi (which it should be noted are very much larger than any of the thousands of mounds to be found all the way along the river from Ushara to north of the junction of the Atbara with the Nile, and right across the Bayuda desert to Tanqasi itself) and the known X-Group ones of further north, raises the problem of what communication, if any, there was between the two. The type of mound is identical, and one class of beads is common to both. Mound I at Tanqasi contains, in the ramp leading down to the burials, a feature that bears some
resemblance to the ramps found in the much more elaborate burials of the northern X-Group. Here the resemblance ends. There are none of the imported luxury goods that the X-Group graves supplied, nor are there any of the small fine pots characteristic of these burials and presumably derived from the Meroitic painted ware, of which so much was discovered at Faras.

Much depends on one's view of who the X-Group people were. If, as Emery has argued, they are the Blemmyes, the resemblances must be largely coincidental and due to the Blemmyes adopting some of the burial customs and a considerable amount of the material culture of the old Meroitic peoples they found in occupation along the river. On this view, there would be no direct relationship between the mounds of Tanqasi and those of the X-Group, other than the influence of cultural contact. It seems possible, however, that there is a closer link and that the people buried in these mounds were both the overthrowers of Meroë and the precursors of the X-Group.

I would suggest that they were a people coming from the general area of Kordofan, settling along the stretch of river from approximately Khartoum to Atbara, contributing to the collapse of Meroitic power and then pushing across the Bayuda, along what was a well-known route, to the fertile lands of the Dongola reach; that the area of Tanqasi became the centre of a ruling house, who were buried in the large mounds, and that these Tanqasi mounds represent an earlier stage in the development of the X-Group. At some later period they moved down the river and, on coming into contact with the richer culture of lower Nubia and Egypt with all its Mediterranean influences, developed the culture known to us from the excavations at Ballana, Qustul and Firka.

**APPENDIX**

Dr L. S. B. Leakey has kindly reported as follows on the skull found in the robber passage of Mound I and presumably from the primary burials. The skull bears the number 11327 in the Sudan Museum.

'Age c. 55 years or more; almost certainly female. Has strong negroid features, including the form of nasal bones, the sub-nasal prognathism and the very short "E.H."; but the supraorbital ridges and temporal muscle scars are too strongly marked for a female negro and the nasal spine is of a type not common in negroes. This is probably the skull of a cross-bred negro. Length 182 mm. Breadth 134 mm. Cephalic index 73.071. Nasal measurements: length 44 mm., breadth 29 mm., index 65.9'.
Notes

THE STONE TOMBS OF THE N.E. SUDAN

In Sudan Notes and Records Vol. xxxiii, pp. 54–9, Messrs Paul and Delany return to the subject of stone tombs, first described in 1922 by Madigan and Crowfoot (ibid., v, 78–87). In the last article, Crowfoot suggests that the tombs are Mohammedan gubbas constructed, perhaps during the 14th century, by 'Arabised Beja who had been brought into contact with more advanced peoples by the extensive use which was made of the desert route from Qus or Aswan to 'Aidhab by pilgrims and traders during the 11th, 12th and 13th centuries'. Mr Paul, on the other hand, prefers to regard them as the work of refugees from Badi, which was abandoned before—probably not long before—the year 1172. He agrees that they 'show every evidence of Arab inspiration and design', but dissociates them from the Beja who 'have shown themselves always remarkably unreceptive and incurious', both of strangers and of new ideas and influences. He cites the known distribution of the tombs as evidence against any association with the Kus-'Aidhab trade.1

I have never seen any of these tombs, and it is always rash to write about things of which one has no first-hand knowledge. But, while agreeing to some extent with some of Mr Paul's criticisms, I think he goes too far in denying 'that any trickle of Arab culture should have found its way to the country in which these tombs occur'. Both before and after Mr Crowfoot wrote his article, evidence (some of it discovered by Mr Crowfoot himself) has accumulated for a very considerable Arab penetration, not only of the north-eastern Sudan but also of Abyssinia. The evidence is partly historical and partly archaeological, and I summarized it in my Fung Kingdom of Sennar2. Arab writers of the 9th and 10th centuries display a knowledge of the Red Sea hinterland that must have been obtained from Arab traders who had penetrated far into it. In the 10th century, according to Masudi, Suakin was inhabited by a Beja tribe called Khasa who were Moslems and whose habitat seems to cover the region of the tombs. The archaeological evidence comes from inscribed tombstones, some of them dated and covering the period about A.D. 760–1060. Those at Khor Nubt, 70 miles west of Suakin, range from A.D. 764–988.3 At Sinkat not far off, if the identification is correct, there was a mosque in A.D. 831. One might attribute these Moslem tombs to Mr Paul's 'ruling caste' rather than to the Bejas over whom they ruled. If one would also attribute to the rulers the stone tombs which are the subject of controversy, one would have to meet Mr Crowfoot's objection that none of the tombs have inscriptions. This is a serious difficulty, but not, I think, an insuperable one. In the Nile Valley between Atbara and Abu Hamed there are Christian cemeteries which seem to belong to the same period (perhaps about the 10th century); there is evidence of class distinction, shown by a division of the cemeteries into ordinary graves and 'gubbas'. Some of those with gubbas certainly carried inscriptions; but in others an intensive search failed to reveal any traces of such. Perhaps further investigation might bring to light fragments of inscribed tiles round the stone towers, or alternatively remains of towers associated with the cemeteries (such as Khor Nubt) which have yielded inscriptions. A thorough exploration of the sites is urgently needed and might well be most rewarding. Yet another possibility is that the builders of the stone tombs were illiterate.

1 By an editorial oversight Mr Crowfoot's views are twice attributed to 'Mr Crawford'!
3 But see Gildeden's article on p. 63 of this journal.
4 See Fung Kingdom, 105.
NOTES

The Moslem penetration which, so far as is known, began with the exploitation of the Allagi gold-mines in the 9th century, was far more thorough and extensive than is generally realized. A Moslem cemetery has been found in the province of Enderta, not far from Makalle, in Abyssinia; two of the tombstones have been dated by Rossini to the late 10th or early 11th century. As he remarks, the presence of a Moslem centre in the heart of Enderta is a most surprising fact. But it is less surprising in view of the discovery of a document proving that in the 12th century Shoa itself was a Moslem Sultanate, whose foundation goes back probably to the 10th century. But Moslems penetrated even further. During their exploration of Southern Abyssinia in the 20’s, Fathers Azais and Chambard discovered inscribed Moslem tombstones well to the south of Addis Ababa, beside the lakes that fill the northern end of the Great Rift Valley. Two of these, from a place called Lafto, are dated A.D. 1263–4 and 1267–8, respectively. There are others from Heissa, Tchelenko, Bati, and Munessa near Lake Zuwai. Amongst the names recorded on them are Ibrahim b. Jaquib, Suhra, Abdallah b. Salim, Rahmatallah. No clue is given to the position of these places which are not to be found on the maps that I have consulted, but I believe some of them are even further south than Lake Zuwai.

It is significant that all these penetrations of Africa took place during the period when the Eastern Caliphate was a great commercial centre. I suggest that they were primarily commercial, and that the capital which made them possible may have been derived ultimately from Baghdad rather than from Egypt, though Egyptian capital may have financed the northern ventures. The southern entry was probably through the port of Zeila whose relations were with Aden and the Persian Gulf rather than with Red Sea ports. The Shoaan Sultanate was absorbed in 1285 by that of Ifat, which before 1435–6 moved eastwards to Adal under pressure from Abyssinia. The capital then moved south to Harar whence in 1577 it was driven out by the Gallas into Aussa. Finally in the 17th century the Imamate of Aussa split up and the Emirate of Harar came into existence, lasting till 1887, when it was conquered and annexed by Abyssinia.

The remains of small towns or villages in British Somaliland, though undated, must have been politically connected with one or other of these Moslem principalities. It is most desirable that one of them should be properly examined.

I should connect our stone tombs with some phase of this commercial expansion rather than with refugees from Badi, who probably just migrated to Suakin exactly as the merchants of Suakin have now in their turn migrated to Port Sudan. If there is anything in the suggestion of a Baghdad connection, however indirect, the tombs should date before its sack by the Mongols in 1258—a catastrophic and world-shaking event comparable with the sack of Rome and of Constantinople. I see no reason why the tombs should not have been constructed about the same time as the inscriptions (circa 760–1060); but that is merely a guess. What we need is evidence of date.

O. G. S. CRAWFORD

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5 Rassegna di Studi Etiopici, iv, 1946, 37, giving references.
7 The definitive publication is by Paul Ravaisse in ‘Cinque Années de recherches arch. en Ethiopie’, by Azais and Chambard (Geuthner, Paris, 1931) 283–309; but the best account is that by Enno Littmann in Zeitschrift für Semitistik und verwandte Gebiete (Leipzig, 1924) Vol. 3, 236–46. In this article Littmann severely criticizes the shortcomings of the first publication of the tombstones by Ravaisse in La France Illustrée, 27 Octobre, 1923.
8 Cerulli, op. cit. 37.
KUSH

SOME NOTES ON THE SUDANESE NEOLITHIC

The following remarks are of the exploratory kind, as befits a period and area that is still imperfectly explored. One resembles a traveller in a strange country who climbs a hill to have a look round and take his bearings.

The first Sudanese neolithic site excavated was Jebel Moya. Then, some thirty years later, came Arkell’s discovery of sites at Khartoum, Omdurman Bridge and Shaheinab (all of which he also excavated), and of others known chiefly by surface finds. At about the same time, and since, Balfour-Paul found and excavated sites in the Gezira at Umm Sunut, Goz Bakheit and Wad Sheneina. Lastly in 1952 the present writer found (but did not excavate) others at Jebel Erembat (near Goz Regeb), Shigla, El Damer and Jebel Umm Marrahi. Arkell’s sites are by general agreement regarded as the earliest and Jebel Moya as the latest. A few words must be said first about nomenclature.

The characteristic ware on Arkell’s first site, which may be called (after his book on it) Early Khartoum, is ornamented with incised wavy lines, and Arkell at first called it the Wavy-line type and culture. He now proposes to change the name to Khartoum Mesolithic. As the discoverer he has of course the prior right of proposing its name, but his colleagues also have the right to reject it and propose another if they don’t like it. I for one don’t, and think some others are of the same way of thinking. It is begging the question to call the culture Mesolithic. I much prefer his first choice and shall call it here the Wavy-line (or Early Khartoum) type. The culture found at Shaheinab, which at first he called the Gouge Culture, he now wants to rename the Khartoum Neolithic. This is an even more unfortunate change because the type-site is not at Khartoum but some 30 miles away, and the other site (which seems contemporary with Shaheinab) is at Omdurman Bridge, not Khartoum, on the west bank of the White Nile. Moreover the terms ‘Mesolithic’ and ‘Neolithic’, even if used only in a cultural sense, must surely suggest a chronological gap of some magnitude; but the existence of any such gap has yet to be conclusively proved. It is certainly agreed that Early Khartoum and Shaheinab are probably separated from each other in time, but that is all. So far as the distinction between Early Khartoum on the one hand and Shaheinab and the allied sites (Shigla, etc.) on the other is based upon pottery, it is a distinction almost without a difference; for as Arkell himself has shown, the wavy-line decoration of Early Khartoum and the impressed dot patterns of Shaheinab (also found at Early Khartoum) were both made with the same tool—a catfish spine—variously manipulated. The wavy lines were produced by moving the tool over the wet clay for a few inches, the dots by just pressing it into the clay; and in between are designs made by dragging or scooping movements of a few millimetres. Wavy-line ware was the commonest at Early Khartoum, much less common were sherds of Mica-ware which is extremely common on the Shaheinab sites; but Mica-ware sherds occurred at all levels, being in fact commonest in the lower ones. A few had Wavy-line decoration, ‘but the wavy line motif does not occur on sherds that one would attribute confidently to the present (i.e. Mica) ware’1. At sites of the Shaheinab type, however, Wavy-line sherds are comparatively uncommon, whereas Mica-ware sherds are very abundant. In the absence of whole pots we have to depend solely on ornament and fabric; I would suggest retaining the term Wavy-line ware and calling the other Dot-and-Drag ware; and that if it should be necessary to use more comprehensive terms we should call the associated cultures after Khartoum and

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1 Arkell, Early Khartoum, 89. The figures for the sieved layers are: 80–110 below surface, 1: 130–80, 8: 180–220, 9. Ibid., 96–97.
NOTES

Shaheinab respectively. (The term Impressed ware might be used of both types). These two are the type-sites and the first where the ware was recognized, if we except certain Dot-and-Drag ware sherd s from Jebel Moya. Mica-ware sherd s would of course be so called without reference to the decorative patterns, and without any cultural or chronological implications. Dot-and-Drag ware corresponds to Myers' Saharan ware from Armant and is found right across the Sahara to the Atlantic coast. I sent a specimen from Early Khartoum to Professor Childe, asking him for suggestions for a name for it. In his reply he pointed out that similar ware occurs also on the shores of the Mediterranean where it was called by Brea, the discoverer, 'ceramica impresa'; and Professor Childe suspects some ultimate connection with the African ware. So do I; the facts of distribution seem to point to dispersal from some central region in the Sahara, perhaps caused by desiccation.

When the Khartoum and Shaheinab sites were occupied, the annual Nile flood reached a higher level; at Khartoum the Blue Nile rose four metres above its present average highest level. Arkell has observed the same at Shaheinab, and I found similar evidence at Shigla and Damer, where both kankar and kankar-encrusted bones occur. This higher Nile implies a heavier rainfall, such as is also demanded by the presence in the occupation-layers of Early Khartoum of shells of Limicolaria, which requires an annual rainfall of at least 400 mm. (The present Khartoum average is only 164 mm.)

Cleopatra, an aquatic species, was found there 'mostly below the occupation layer'. Tothill has shown that, in the top six feet of Gezira soil, Cleopatra fades out as Limicolaria increases. The site would therefore seem to have been first occupied when Cleopatra was becoming rare or had ceased altogether to live there, but when annual rainfall was still more than double that of to-day. Zeuner has recently made out a strong case for believing that the climatic phases of Europe are valid also for Africa. Assuming that validity, the only place for Early Khartoum would be late in the Atlantic phase which began about 6000 B.C. Unfortunately for our present purpose the end of that phase is much more difficult to date than the beginning; the succeeding Subboreal phase (Godwin's Pollen-zone viib) is generally agreed to have been dry, but its onset and even its existence cannot be detected by pollen-analysis. The date usually given (on European evidence) for the beginning of the Subboreal phase is 3500 B.C., but it is not an agreed date. The date in the 4th millennium would be acceptable for the Shaheinab site if Arkell's suggested typological correlation with the Fayum Neolithic A is valid, and if the radiocarbon date for that is correct (range, 4249–3839 B.C.). How much if at all earlier Early Khartoum is than Shaheinab is a matter of opinion; the presence on each site of sherd s typical of the other suggests that the gap between them is not great. The fauna on the other hand, suggests 'a considerable separation in time'. An early date in the Atlantic phase is precluded by the character of the pottery which is technically advanced, and it seems unlikely that pottery was invented before the 5th millennium.

Mr Addison, who has helped much by his criticisms of earlier drafts of this note, suggests a possibility that Reisner's explanation of the change in the flood-level at Semniah

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3 Sudan Notes and Records, xxvii, 1946, 160.
may be wrong, and that the higher flood level there in 1840–1700 B.C.—which is as much as 8 metres—was due to a greater volume of water, i.e. to heavier rainfall in the Sudan. This seems to me a much more likely explanation, but I do not know the site and have not examined the facts of the case.

It will be seen that all these Sudanese sites fall well within that period of time to which the term 'neolithic' is applied, and I propose to call them Neolithic. I think that it is wrong to use the term 'mesolithic' of any of them, and that it should be dropped. It is still premature to subdivide the Sudanese Neolithic period into phases, but if we wish to be more precise we can speak in terms of the pottery most characteristic of a given site.

It is clear that these Neolithic cultures flourished during a period of heavier rainfall and higher Niles, but it is not yet possible to say when that climatic phase ended. I have suggested for them a date in the 4th millennium B.C., but it must be emphasized that this is little more than a guess. Archaeological evidence might even suggest a much later date. Dot-and-Drag sherds were found in the lowest (d) stratum at Jebel Moya together with many that have a wavy-line ornamentation indistinguishable from that on those from Early Khartoum. Compare, for instance, the sherds shown on *Jebel Moya*, plate xciv, a1 and 2, with Arkell's *Early Khartoum*, plates 61 (top) and 67 (top right). Compare also *Jebel Moya*, plate xciv, a8 and 9 with *Early Khartoum*, plate 62, 2. The Jebel Moya sherds from the lowest levels were of Mica-ware. Addison calls it all 'impressed ware'; the term was his own and given without any knowledge of Brea's of which it happens to be a translation. It is a very handy omnibus-word to apply to all this pottery, regardless of the exact pattern. At Jebel Moya these sherds (plate xciv) occur in all four layers, and amounted in all to such a large quantity that the fragments in the higher layers could not all have been carried upwards from an original early deposit by the activities of grave-diggers and burrowing animals. In any case the pottery of this kind in the upper levels had a smaller mica content than that in the lower. It must therefore have been made continuously though 'in diminishing quantities throughout the period of occupation' of Jebel Moya, which began, according to Addison, about 1000 B.C.

No one would think of dating the oldest layer at Jebel Moya so early as the 4th millennium. Either, therefore, the climatic correlation suggested is too early or else both the Wavy-line and the Dot-and-Drag wares continued to be made for a very long time. As Addison has pointed out8 'some kinds of pottery in the Sudan had a long history and a wide distribution'. Black burnished ware of early Fung type is made to-day in the Nuba hills. Birmas go back to the Meroitic period—with a life of some 2000 years as against some 2500 for impressed ware, if my correlations are correct.

Before ending I should like to pay a tribute to Arkell's pioneer work, without which we should not have the basis of any argument. I would like also to thank Addison for his comments, some of which are embodied in the above paragraphs and all of which were invaluable in composing the successive drafts of which this is the last.

O. G. S. CRAWFORD

Note by Editor

Since Dr Crawford's note was written a Carbon14 date has been obtained for some Shaheinab material. The results as published in Arkell, *Shaheinab*, p. 107, are:—

Charcoal 5060±450 before present.
Shell 5446±380 before present.

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7 Reisner, *SNR*, xii, 160.
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A KHARTOUM MESOLITHIC SITE AT ED DAMER

During a tour of the Northern Province in February 1952 Dr O. G. S. Crawford, the Editor of Antiquity, collected between one and two hundred sherds, some fragments of stone ochre-grinders and one crescent of ?chert from an occupation site at Ed Damer. These objects are now in the Sudan Museum at Khartoum catalogued under Nos. 9500–2 in the Antiquities Collection. A few more sherds, part of a barbed bone spear and four disk beads of blackened ostrich egg-shell, were collected from the same site in July 1952 by Mr H. B. Arber, Governor of the Province. His finds are catalogued under Nos. 10534–7.

The site is a mound or low hill situated on the north-eastern edge of Ed Damer town near the cemetery. I feel sure that I saw it on the only occasion on which I visited Ed Damer. This was before I excavated Early Khartoum in 1944. I have now no doubt that the mound is situated on an old bank of the Nile. All the above finds, with the exception of three or four sherds, belong to the culture found at Early Khartoum, and which I now call Khartoum Mesolithic1, and not to the Khartoum Neolithic of Esh Shaheinab, as stated by Dr Crawford on p. 20 in Kush, no. 1.

The best of the ochre-grinder fragments (Cat. No. 9501) are comparable to Early Khartoum, pl. 29, Fig. 2 and pl. 31 Fig. 67, and the crescent (Cat. No. 9502) to the second from the left in the bottom row on pl. 10, Fig. 3. The barbed bone spear fragment (Cat. No. 10536), showing three damaged barbs but neither the point nor the butt, is 50 mm. long.

With regard to the pottery, among the sherds collected only four show the wavy-line decoration so characteristic of Early Khartoum. The most typical is a small rim sherd (Cat. No. 10534) comparable to those on pl. 66. There is on the other hand a larger proportion than at Early Khartoum of sherds with the pattern shown on pl. 75, Figs. 2 and 3 and pl. 76, Fig. 1, although it does not look as if this pattern on the sherds from Ed Damer was made by impressions of twine. Another pattern, which did occur at Early Khartoum, is commoner at Ed Damer and is made by ‘walking’ a comb with larger blunter teeth than a cat-fish spine (p. 82 and p. 83 varieties e and f.) This comb is sometimes straight and sometimes curved. There are three rim sherds from pots decorated with this pattern which, below a plain rim and above the decoration on the body of the pot, have a band from 23 to 30 mm. deep decorated by fairly broad and deep lines sloping up from the right at an angle of about 45 degrees to the rim and from 2 to 5 mm. apart. This pattern was not found at Early Khartoum. On one other sherd these lines are even deeper and almost vertical; on another sherd lines slope up both from the right and from the left and cross each other. There are also six or seven sherds on which the band of deeply incised lines below the rim is only about 12–18 mm. deep. On five these lines are straight and more or less vertical, while on one they are curved. The Thin Brown Ware with Lines of Incised Dots (cp. pls. 83–4) does occur but there are only three or four sherds of it in the collection. Two other sherds indicate that blunt conical bases (as pl. 74, Fig. 3) occur. There are two sherds of Crude Black Fracture ware (cp. pl. 76, Fig. 2 and pl. 77). Dotted Wavy-line ware (pl. 72) typical of the later stage of the Khartoum Mesolithic does not occur, nor does the Micaceous ware (pls. 79–81) or any of the sherds on pl. 82. One rounded sherd diameter 35–40 mm. perforated with a hole of 11 mm. diameter (Cat. No. 10535) is certainly made from a Khartoum Mesolithic

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1 See Shaheinab, p. 102.
2 Where not otherwise stated all references are to Early Khartoum.

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sherd, but is probably a spindle whorl made at a later date. There are, not unnaturally in the vicinity of a town, one or two sherds that are certainly much later.

Generally speaking the Khartoum Mesolithic ware is like that of Early Khartoum, full of quartz fragments crushed and carefully distributed in the clay. Some sherds have a very high proportion of this quartz and some have flakes of mica mixed in them no doubt intentionally, although they are otherwise the typical Khartoum Mesolithic ware and not, as already stated, the special Micaceous ware found at Early Khartoum.

The interest of this site is not only that it fills in a blank on the distribution map (Fig. 8 on p. 116) north of Mutmir, but that it provides some new varieties of Khartoum Mesolithic ware, while confirming the existence of one or two patterns which could not be said certainly to belong to the Khartoum Mesolithic after the excavation of Early Khartoum. But, if it had been a Khartoum Neolithic site, as Dr Crawford thought, it would have been more important, for that culture has not so far been found north of the Sixth Cataract.

A. J. Arkell

BELLS

In the Sudan Museum, there is a group of brass bells (Kh. 392) of the Christian period, which was excavated in the church at Buhen by Mileham, in 1909. (Fig. 1).

The excavator describes them as follows: 'Forty-one brass bells were found in a heap on the floor of the space under the staircase. Several of them were badly damaged. They are all about 0.035 m. to 0.04 m. high and are formed in two equal pieces soldered together. To the top a flat ring is attached and at the bottom there is a cut through the metal. A small piece of rough iron inside formed the striker.' They were found in the lower level of the church.

Fig. 1. BELL FROM BUHEN. Scale 1

The possible use to which these bells were put has remained obscure, and in the Khartoum Museum they are described as being used 'for ritual purposes.' A copy of a wall painting of the Bishop of Faras, uncovered by Griffith in his excavation of the Rivergate Church at Faras, shows that some objects, hitherto thought of as tassels, have

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1 G. S. Mileham Churches in Lower Nubia, p. 55, and Plate 38a.
an appearance very similar to that of the bells (FIG. 2). They are attached to the edge of the Bishop’s outer robe in the form of a fringe. There are 52 represented in the copy, though it is clear that some others in the original wall-painting have become obliterated by time—probably there were sixty. It is suggested that the Bishop wore bells as decoration on his vestment, which would have tinkled charmingly as he moved.

FIG. 2. BISHOP OF FARAS

In the Fung period, there are later instances of the use of bells as decoration. Crawford mentions that Poncet and Brevedent, who travelled through the Sudan at the end of the seventeenth century, in the course of a visit to the Chief Customs Officer on Argo Island, learnt that the King of Dongola rode in public on a horse which was covered with two hundred small brass bells\(^3\). Furthermore, a number of brass bells

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\(^3\) O. G. S. Crawford, *The Fung Kingdom of Sennar*, p. 197.
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were excavated by Crawford at Abu Geili, a site also of the Fung period. These, however, have not the same form as the Buhen bells, for they have two holes pierced in the base instead of a slit, and are of the spherical shape associated now-a-days with baby’s rattles.

It seems possible that there may have been a tradition of the use of bells as decoration amongst people of high rank, either for themselves or for their animals, which had persisted. They have, of course, been found in excavations of sites of much earlier periods, as for example at Kurr, Gemia and Firka, where in all cases they were associated with animal trappings, but these were open at the lip, whereas the examples mentioned above are all enclosed. The oval form of the Buhen bells is quite distinctive, and no further examples have yet come to light in the Sudan.

MARGARET SHINNIE

NOTES ON THE ARCHAEOLOGY OF THE MIDDLE NILE REGION

The following are some comments on the interesting article by Dr O. G. S. Crawford, entitled ‘Field Archaeology of the Middle Nile Region’ in Kush I.

The grave at Erebat illustrated in plate I, B, and of the type referred to on page 4, is, I think, Moslem, and probably of the Fung period. The presence of white quartz pebbles on the surface of the grave, within a surround of stones, is characteristic of such burials. Typical examples can be seen in the cemeteries of Qerri, the important Fung town at the south end of the Sixth Cataract. The placing of a flat stone at head and foot is also, of course, typically Moslem. The presence of red bricks with crosses among the ruins of an adjacent building does not connote that the graves round about are necessarily Christian, even if the building had been a Christian gubba, for it is not unknown for Moslem graves to be centred round a place holy in Christian times. And the gubba may equally well have been a Moslem one, of which many are built with re-used Christian bricks.

On page 10, Dr Crawford mentions quern-fragments and rubbing-stones found at Shiqla and Ed Damer in conjunction with sherds of ‘Shaheinab’ type, and suggests they are evidence that these sites fall within the food-producing stage. No such stones from Shiqla have been catalogued in the Sudan Museum, but I have examined those collected by Dr Crawford from Ed Damer, and they are all, with one possible exception similar to those found by Mr Arkell at Esh Shaheinab, except that from Ed Damer there is only one sandstone fragment, the rest being fashioned from gneisses and graniters, whereas the Shaheinab examples (the pebble-grinders excepted) are mostly of sandstone. Mr Arkell has shown convincingly that these small grindstones were used for grinding ochre and perhaps clay, and I see little reason for thinking that the case is different at the Damer site.

On pp. 21 ff. of his article Dr Crawford describes Jakdul. I have twice visited this place, and have not been able to find anything in the immediate vicinity of the pools demonstrably earlier than 1884. All three forts there were built by the Desert Column

4 O. G. S. Crawford, Abu Geili, p. 85 and Plate LIV.
5 There are bells hanging from the horns on the head dress of the Eparch of Nubia in the painting in Abd el Qadir church. LAAA, XV, Plate XXXII.
1 Catalogue No. 9501.
2 See Arkell, Shaheinab, pp. 42–3 and Plate XX, Fig. 7 (pebble grinders), p. 44 (sandstone dish grinders), p. 47 and Plate XXIII top (lower grindstones).
3 See also Arkell, Early Khartoum, p. 70.

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sent to relieve General Gordon, and the cemetery is the resting place of the dead of that force. As to the ‘evidence of permanent occupation’ the cross-wall mentioned was probably built to control the access of animals to the pool; the stone enclosure may well have been a compound for animals; the ‘parallel ridges exactly like the ridge-and-furrow of our English medieval cultivation’ are, as Mr Shinnie first realized, the relics of the spaces cleared for camel-lines or for tents; and the ‘remains of stone huts’ are, I fancy, the stones with which the tents of the Desert Column were weighted.

Jakdul pools are not fed by any significant spring, but depend on flood waters from the hills behind, which have excavated the pools from patches of rock much softer than that of which the surrounding hills are composed. The force of the great volume of water that descends in the rains scours the pools out of itself, overflowing to the south where much of detritus is dropped, so forming the rise in the ground which Dr Crawford has termed a dam. I do not think man has played any appreciable part in its making.

The area round about Jakdul is not, however, entirely devoid of antiquities. I have found Christian sherds and other remains in the Gilif hills immediately to the north of Jakdul, and it seems that there may have been occupation in that area. There is also a fair-sized cemetery, probably Christian, about 2½ km. sw. of Jakdul consisting of ‘raised’ or ‘box’ graves of the type shown in the plate v, b, of Dr Crawford’s article. It is hoped to describe these and other finds from the Bayuda desert in a future number of this Journal.

H. N. CHITTICK

4 See Gleichen, With the Camel Corps up the Nile, pp. 91–3.