Centro Ricerche sul
Deserto Orientale
Ce.R.D.O.
Riconosciuto giuridicamente dalla Regione Lombardia

INTERIM REPORT ON THE EASTER DESERT RESEARCH CENTRE'S (CeRDO) ARCHAEOLOGICAL ACTIVITIES 1989/93

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This Interim report on Cerdo's activities was written immediately after the 1993 season and completed in June 1993. It was intended only for internal distribution. However, as some time will elapse before the reports appear in print, it was decided to distribute the manuscript also among other researchers outside Cerdo who might have an interest in the results.

As always happens, since July 1993 and especially since a meeting of the Cerdo scientific committee, many revisions to the original report have become neccessary. Rather than rewrite the interim report, in the interest of saving time it was decided to send the report as is with a sheet of errata appended. This is certainly not the most elegant solution, but it is hoped that the readership will be understanding. The published versions of the report wherein all the necessary revisions will have been made, will be sent out as soon as they appear in print. Those will hopefully make up for any deficiencies in the style of this interim report and appended list of errata.

The revisions are as follows:

- In section 2 on Neolithic Sites, Isabella Caneva upon seeing slides of the pottery from these sites was of the opinion that most could be classified as Mesolithic rather than Neolithic period.

- In section 3 on the Late Neolithic tumulus D5.1, Prof. Vercoutter was of the opinion that the artefacts from the grave fit comfortably within a Badarian/Predynasti A-Group period, and that Late neolithic may not be an appropriate term.

- In section 5 on the simple conical tumuli, Prof. Bonnet identified the three beads from grave C33.2 as similar to examples found in a Neolithic context in the Kerma Basin. Our estimated date for these graves--first mellennium BC--may thus be far off the mark.

- In section 6 the term "camembert" was condemned by all members of the cerdo scientific committee. We had never intended the term to reach beyond the confines of Cerdo in any case. In manuscripts sent for publication the term has been replaced by "Circular platform Tumuli".

Prof. Bonnet was of the opinion that two C14 dates did not justify the confidence with which these tumuli are assigned to the first millennium AD in the text. Caution was advised.

Prof. Hakim was of the opinion that the cross-motif on the so-called stool (see fig. 6.21, p. 110) is not necessarily a sign of Christian beliefs. Indeed, that there is no evidence to suggest the beja were ever Christians.

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Others mentioned that the stool is better described as a stand, and that si similar artefacts are known from Meroe, Soleb, Geili, and Kom Ombo.

The various references to date fruits in the circular platform graves should all be ignored. Additional laboratoty analyses by specialists in Como have shown that thes are not date fruits, but a type of insect larva cleverly disguised to fool gullible Irano-German archaeologists!

- In section 7 on the Arab takeover, Prof. Hakim was of the opinion that terms such a takeover, conquest, etc. were politically incorrect. Further that all oval grave-mounds with head and foot-stones cannot automatically be assumed to have been of Moslems.

- Finally, as an overall consideration Prof. Donadoni mentioned that too much is made in this report of connections with the Nile Valley. He rightly pointed out that the desert remains should be seen as part of an indigenous developmental sequence until contact and connections with the Nile valley sequence can be proven.

It is hoped that the readership will keep the above points in mind while reading the interim report.

Acknowledgments

The researches of CeRDO have been sponsored by Sector Sport Watches, Italiana Petroli (IP), Iveco, Pirelli, and Banca Briantea. The Expeditions could not have been undertaken without the dedication of all the members of CeRDO: Giancarlo Negro, Luigi Balbo, Manlio Sozzani, Mario Canci, and Gianluca Vitelli. Many thanks are also due to the Inspectors of the Sudan Directorate General for Antiquities, Mr. Essam el Hadi and Mr. Omran Ali Fath el Rahman. For their help in the co-ordination of the archaeological research we are grateful to the members of the CeRDO scientific committee: Professors Charles Bonnet, Isabella Caneva, Jean Vercoutter, Sergio Donadoni, and Anna-Maria Donadoni-Roveri. To Professor Ahmed Hakim, director of Sudan Antiquities, a very special note of gratitude for facilitating the work of our project.

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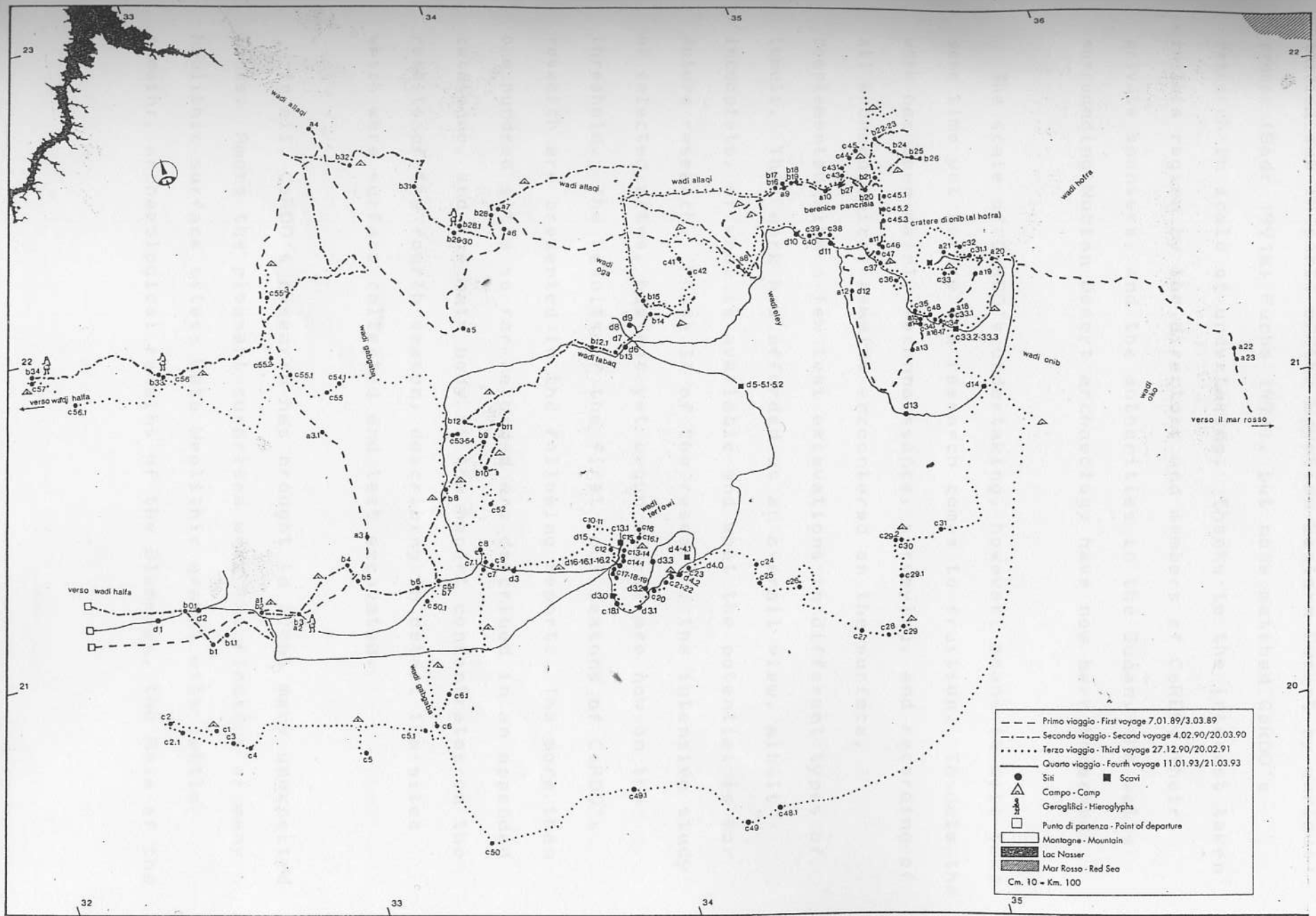
References

1. Introduction

As recently as a decade ago it could be said that "the whole [Eastern Desert] remains, archaeologically, a virtual blank." (Kemp 1983: 122). Since 1990, however, this is no longer true. The four expeditions of the Centro Ricerche sul Deserto Orientale (CeRDO, previously the Castiglioni/Negro Expedition) have brought to light a wealth of archaeological information from the Eastern Desert and the Red Sea Hills. (Fig 1.1) to complement the rich body of textual information concerning that area.

Ancient texts tell us, for example, that the Eastern Desert had provided most of Egypt's gold from the Pharaonic period to the first half of this century (cf. e.g., Save-Soderbergh 1941; Vercoutter 1959; Schweinfurth 1903). We also had scattered references to the indigenous people of the desert, who were known to the outsiders at various times as the Medjay, Blemmyes and now the Beja (cf. e.g., Bietak 1966; Kirwan 1982; Kobischchanov 1979). Archaeological information to corroborate these textual records was, however, sparse if not non-existent. Until ca. 1990, archaeology in the Eastern Desert had not progressed far beyond some rock art research in parts of the Egyptian Eastern Desert (Cervicek 1974), a few forays up the Wadi Allaqi (Schweinfurth 1903; Weigall 1909; Piotrovski 1966, 1967), and some isolated excavations (Murray 1962). Three or four years ago, however, interest in the area quickened. Aside from the expedition by CeRDO, small-scale archaeological surveys were


wadi allaqi
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wadi qabgaba
wadi terfowi
berenice pancrisia
cratere di onib (al hofra)
verso wadi halfa
verso wadi halfa
verso il mar rosso
d5-5.1-5.2
d4-4.1
Primo viaggio - First voyage 7.01.89/3.03.89
Secondo viaggio - Second voyage 4.02.90/20.03.90
Terzo viaggio - Third voyage 27.12.90/20.02.91
Quarto viaggio - Fourth voyage 11.01.93/21.03.93
Siti
Scavi
Campo - Camp
Geroglifici - Hieroglyphs
Punto di partenza - Point of departure
Montagne - Mountain
Lac Nasser
Mar Rosso - Red Sea
Cm. 10 = Km. 100

carried out in parts of the Egyptian Eastern Desert by various groups (Sadr 1991a; Fuchs 1991), but none matched CeRDO's research in scale of undertaking. Thanks to the interest taken in this region by the directors and members of CeRDO, their private sponsors, and the authorities in the Sudan, the walls surrounding Nubian Desert archaeology have now been breached.

The scale of CeRDO's undertaking, however, means it will take some time yet before the research comes to fruition. To date the work has been mainly reconnaissance, surveying, and recording of all archaeological remains encountered on the surface, complemented with a few test excavations in different types of tumuli. This work has afforded us an overall view, albeit incomplete, of what is available and what the potential is for future research. Phase II of the research, the intensive study of selected sites, has not yet begun but we are now on the threshold. The results of the first four seasons of CeRDO's research are presented in the following report. The more than one hundred sites so far recorded are described in an appended catalogue, and the main body of the report concentrates on the results of the fourth season, describing in detail the sites which were surface collected and test excavated.

In all, CeRDO's research has brought to light many unexpected finds. Among the pleasant surprises were the findings of many Neolithic surface sites; Late Neolithic graves with cattle remain;, archaeological remains of the Blemmyes, the Beja of the

first millennium AD; and evidence for gold mining during the Medieval Islamic period at a scale which was completely unexpected. Unpleasant surprises included the almost industrial scale of grave-robberies in this forlorn part of the world: a scale which in comparison dwarfs the scale of looting in the far more densely populated regions of the Eastern and Central Sudan.

Also surprising was the absence of some things we had expected to find. The Pan-Grave culture, for example, which we thought was the archaeological manifestation of the ancient Beja, the Medjay of the 2nd millennium BC (Bietak 1966; Sadr 1990), is practically absent in the desert. Its absence was also noted in the Egyptian Eastern Desert (Sadr 1991a), and casts doubts on our original identification of this archaeological culture as belonging to the indigenous Medjay. Remains which we had originally thought may relate to the second millennium BC Nubian culture known as the C-Group (cf. e.g., Bietak 1968) turned out to be Beja remains from the first millennium AD. Most disconcerting, however, is the paucity of pharaonic remains in the mining villages, although the many hieroglyphic inscriptions found across the desert give us hope that ancient Egyptian materials are buried in the mines beneath the later Medieval Islamic occupations.

There is clearly much to uncover yet. What is described in the following pages is thus but the lightest scratch on the

surface of a veritable goldmine of archaeological information in the Nubian Desert.

2. The Neolithic Sites

During the four seasons of survey and exploration, CeRDO discovered several sites in the Nubian Desert with Khartoum Horizon style pottery of the Neolithic period (Fig.2.1). Being surface sites, these contain little other than pottery and stone artefacts, and have no depth to their archaeological deposits. It is difficult, therefore, to assess their exact age. Further south, in the Khartoum area, however, Neolithic sites are known to date to the 5th and 6th millennia BC (Marks et al. 1985).

The richest Neolithic locality encountered in the Nubian Desert is at Nasb Atiliya near station number five on the Wadi Halfa-Abu Hamed railway line. Here, three large and relatively unmixed sites have been found around a wide natural depression which in the distant past may have formed a seasonal lake. It is expected that there are more such rich Neolithic sites around this depression, and additional surveys may yet bring to light one with better preservation which can provide information about Neolithic subsistence strategies in this part of the desert.

Beyond Nasb Atiliya, we have found only small scatters and isolated sherds of the Neolithic period, generally in a mixed context. Most of these come from the Wadi El Ku, while even


32
33
34
35
RED SEA
RIVER NILE
WADI ALLAQI
22
B 20
WADI GABGABA
NASB ATILIYA
B 0.1
23
D 1
B 1.0
D 2
WADI EL KU
D 15
C 18
D 4
NEOLITHIC SITES
Land above 500 m
0
km
100

farther east a small scatter of Neolithic sherds has been reported from the site of Deraheib (B2Ø) in the Wadi Allaqi headwaters.

Of the main sites in the Nasb Atiliya area, D1 appears to be the oldest. The site stretches along the northern base of a jebel for a 1ØØ or more meters, and overlooks the wide depression on the other side of which is another of the main sites, BØ.1. The surface of D1 is heavily eroded and beneath the cover of broken potsherds and stone artefacts there does not appear to be any depth of cultural deposits. Above the site, in the lower reaches of the jebel, there are a few rockshelters but these are devoid of artefacts and their floors are exposed bedrock. Given their configuration, deposits would have long ago washed out of the shelters to end upon the surface of the site as we find it now.

The ceramics collected at D1, of which there were 27 diagnostic pieces, include designs such as paired dotted lines (Fig. 2.2 b,d) which in the typology developed by Caneva and applied to the stratified Neolithic and Mesolithic site of Shaqadud in the Khartoum/Shendi region (Caneva and Marks 199Ø) are diagnostic of the very early Neolithic period. Although there are only two examples of this type in the collection, their presence suggests this may be the earliest Neolithic site we have yet found in the Nubian Desert. Of the remaining sherds, all but two are plain dotted and dashed rockerstamped (Fig. 2.2 e,f,g), while one shows a dotted wavy line design. Another large potsherd

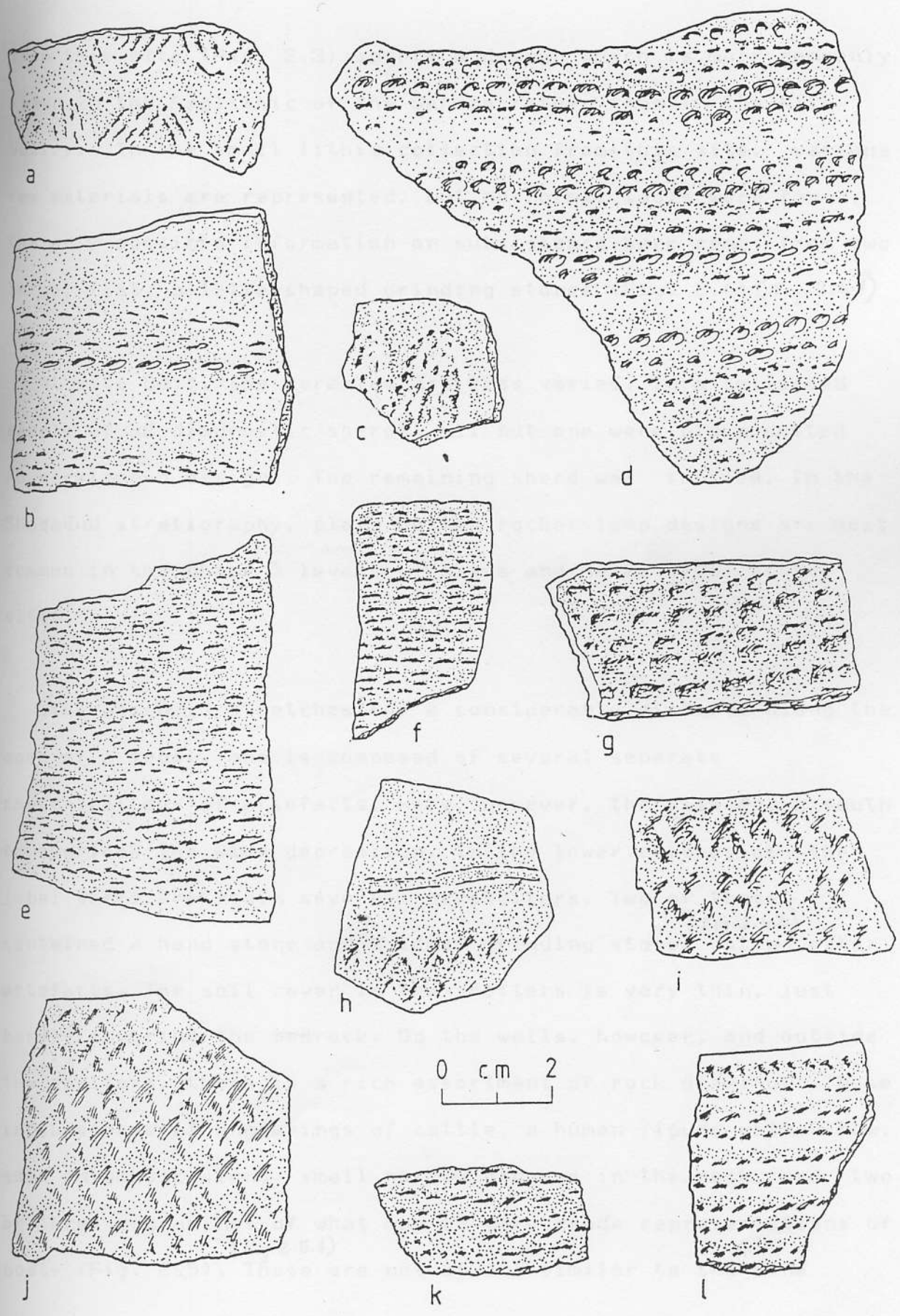


Fig. 2.2 Examples of Neolithic potsherds from various sites.

from this site (Fig. 2.3) sports a design which is more commonly seen in the Neolithic of the Sahara rather than in the Nile Valley. In the small lithic collection from this site, various raw materials are represented, but no formal tools were found. The only possible information on subsistence here comes from two large, flat, palette-shaped grinding stones (Fig. 2.4) (Fig. 2.4.1)

At site BØ.1, the ceramics are less varied. In a collected sample of 32 diagnostic sherds, all but one were plain dotted rockerstamped designs. The remaining sherd was incised. In the Shaqadud stratigraphy, plain dotted rockerstamp designs are most common in the phase 3 levels (Caneva and Marks 199Ø) of the site.

Like D1, BØ.1 stretches for a considerable distance along the base of a jebel, and is composed of several separate concentrations of artefacts. Here, however, the site faces south to overlook the wide depression. In the lower reaches of the jebel there are again several rockshelters. Two of these contained a hand stone and a lower grinding stone, but no other (Fig. 2.42.) artefacts. The soil cover in the shelters is very thin, just barely covering the bedrock. On the walls, however, and outside the shelters, there is a rich assortment of rock drawings. These include several engravings of cattle, a human figure with a bow, some enigmatic signs, small narrow grooves in the rock, and two or three engravings of what may be very crude representations of boats (Fig. 2.5). These are not at all similar to the fine (Fig. 2.5.1)

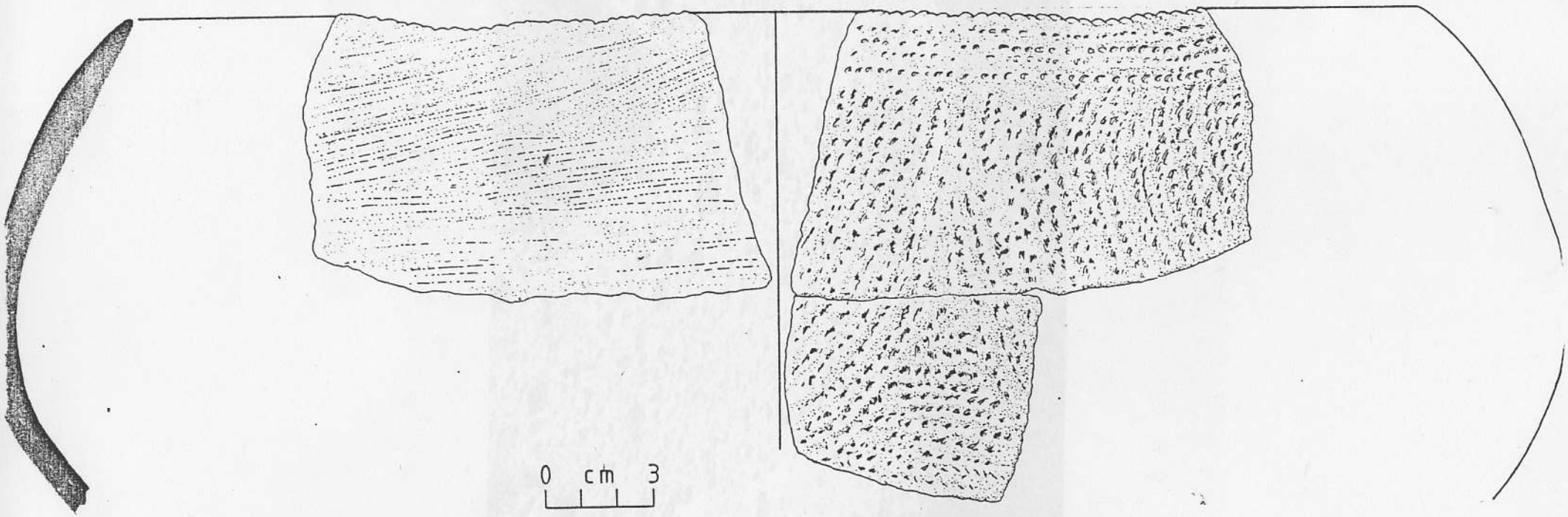


Fig. 2.3 Large potsherd from D1.

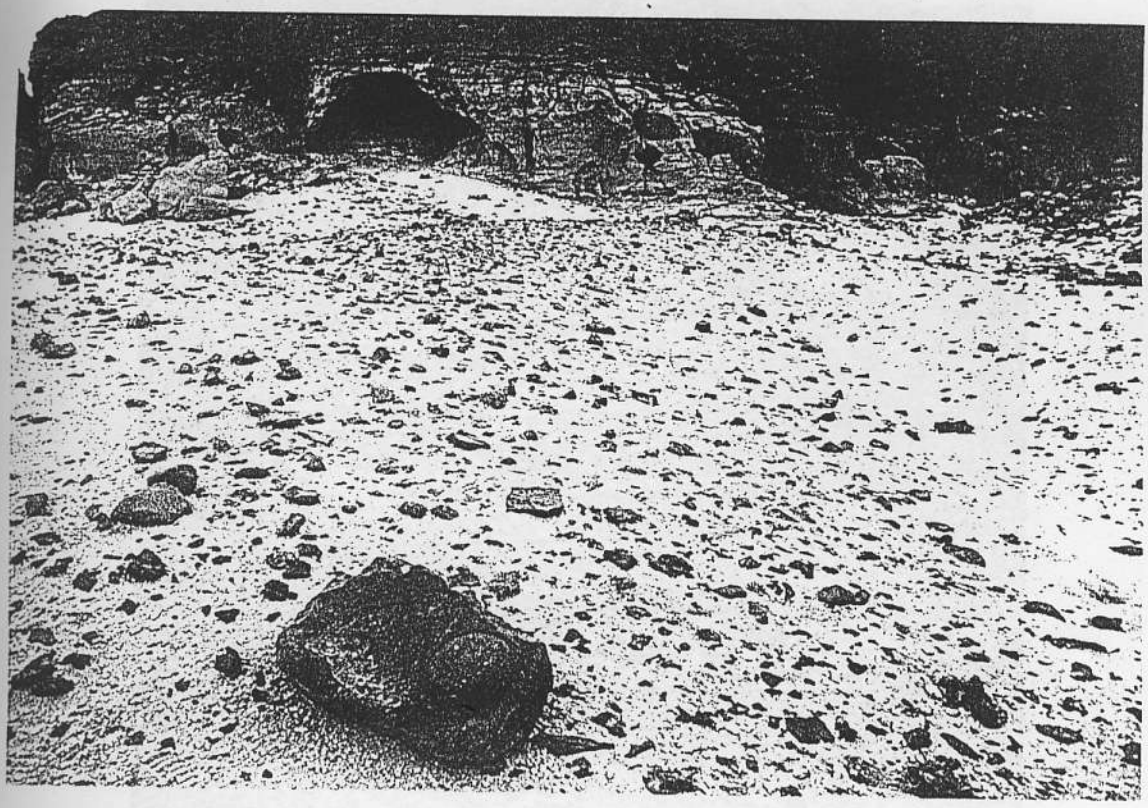


Fig. 2.4

Fig. 2.4.1

Fig. 2.4.2

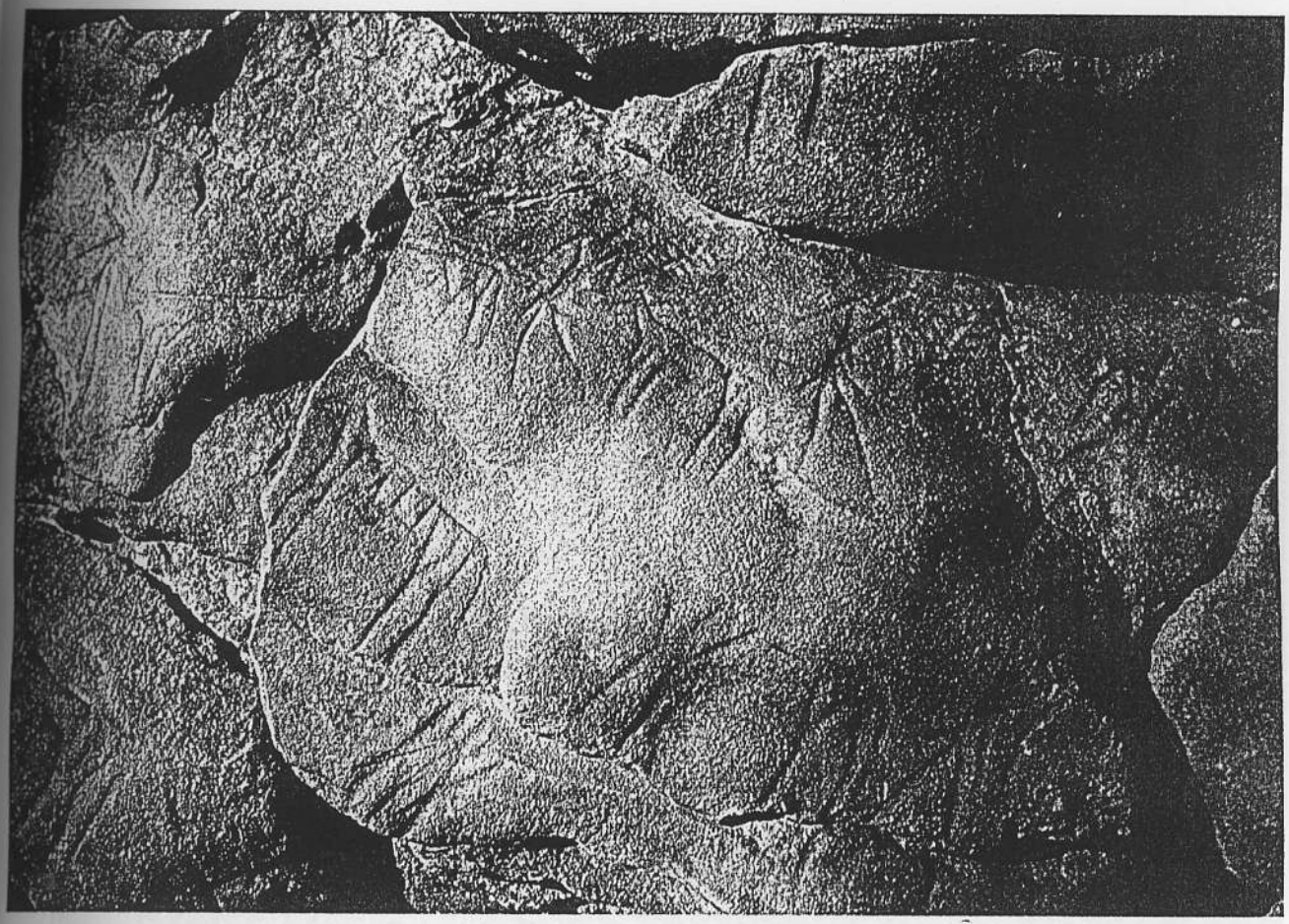


Fig. 2.5

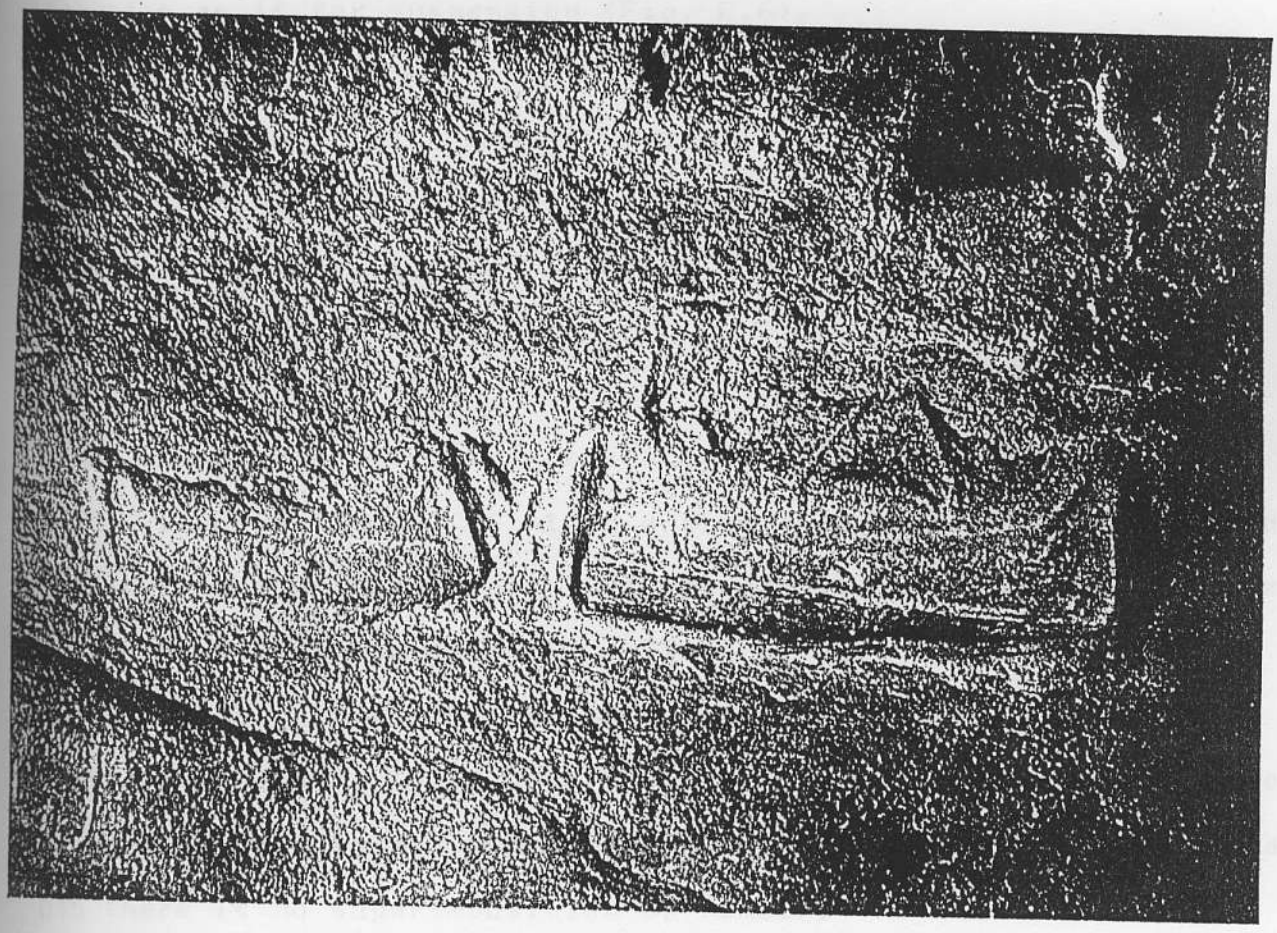


Fig. 2.5.1

engravings of Egyptian style boats to be found farther north in the Eastern Desert of Egypt (cf. e.g., Fuchs 1991; Cervicek 1974). As at D1, the grinding stones at BØ.1 are large, flat and palette-shaped, with a small trough ground hollow on one or both sides. One of the grinding stones had two neat holes drilled in one edge as if for suspension (Fig. 2.6).

The other main site in the Nasb Atiliya area, B1.Ø, was not visited during the 1993 season. It is reported as a large surface site with ceramics similar to BØ.1. There are however no rock shelters nearby.

Of the cluster of artefact scatters in the Wadi El Ku C18 and D15 have but a handful of plain dotted rockerstamped sherds mixed with ceramics of other ages in a low density spread of artefacts which cannot even be properly defined as a site. D2 is a little more definable as a site, being located on a small knoll along the wadi. The density of artefacts here, however, is so low as to suggest no more than a short term, temporary camp. Unlike C18 and D15 there is no superimposition of remains from later periods at D2. The ceramics at D2, all plain dotted rockerstamped, suggest a period of occupation similar to BØ.1. At D4 the Neolithic remains are mixed with those of later periods, but they are relatively more plentiful than at other sites in the Wadi El Ku. The ceramics include designs such as straight line rocker stamped zig zags (Fig. 2.2 h,i,j) which in the Shaqadud stratigraphy (Caneva and Marks 199Ø) are associated with the top layers and

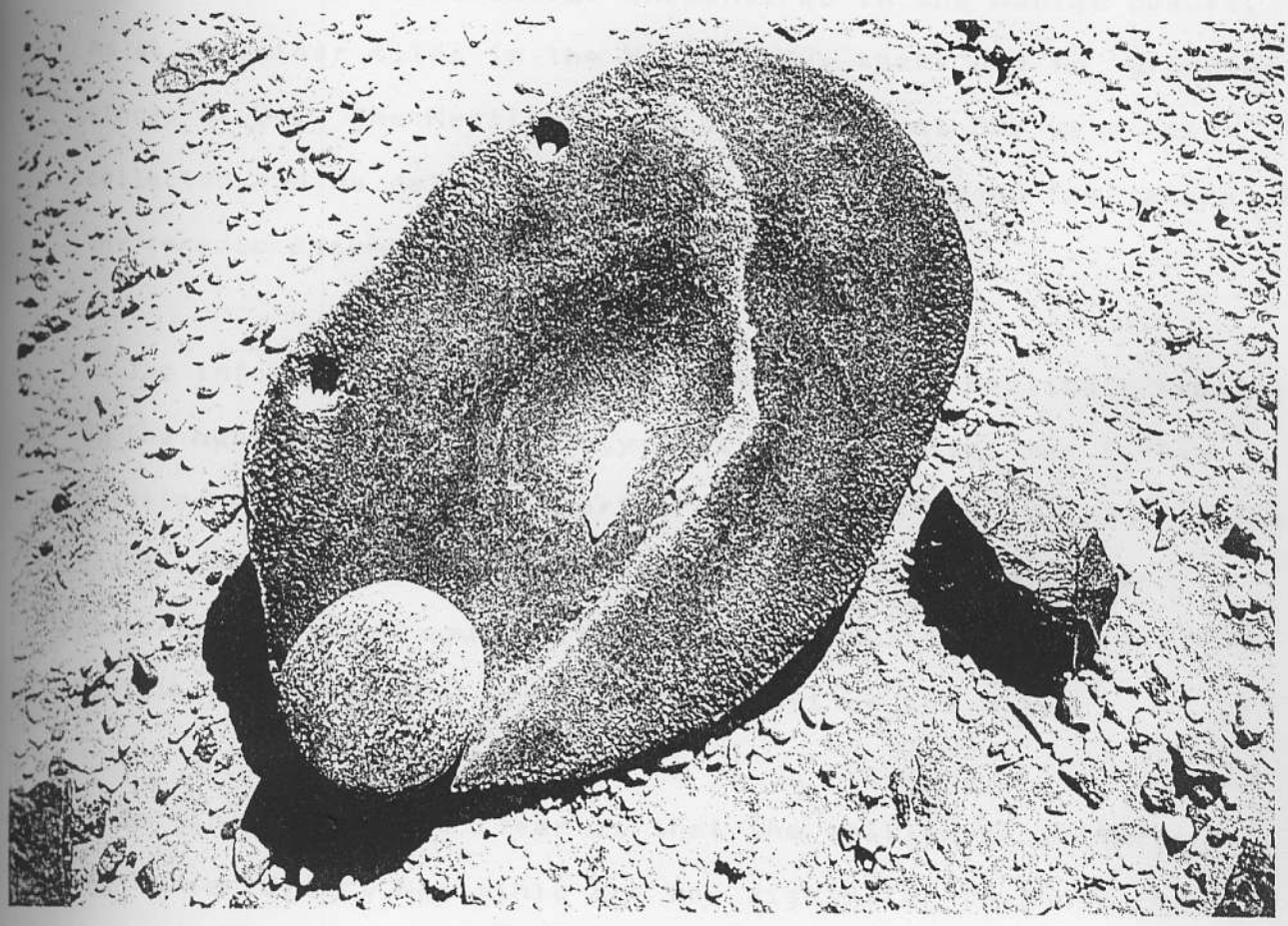


Fig. 2.6

labelled phase 4. As such D4 appears to be more recent than the other Neolithic sites so far encountered in the Nubian Desert. As at the other sites in the Wadi El Ku, there are no grinding stones at D4. The Neolithic period remains at B2Ø were not collected and no detailed information exists about the nature of the ceramic assemblage there.

The information available to date about the Neolithic remains in the Nubian Desert is scanty, but the potential for further detailed studies exists. Further surveys in the environs of the depression may bring to light Neolithic sites with better preservation which could ultimately shed much light on the Neolithic adaptations in the desert east of the Nile.

So far, what seems clear is that the settlement patterns of the Nubian Desert Neolithic are not dissimilar to those reported from the western deserts (cf. e.g., Wendorf et al. 1984), which found base camp and satellite site distributions not unlike what we see in the main sites of Nasb Atiliya and the peripheral sites in the Wadi El Ku. It would be interesting in future to see to what extent the subsistence strategies at the main sites depended on aquatic resources, and whether indeed the depression in Nasb Atiliya could have formed a lake during Neolithic times. If so, further surveys may even bring to light evidence of Mesolithic period lakeside occupations in the area.

Of Neolithic period burials and rock art we have as yet no clear evidence. At B0.1 there are a few rubble mounds which may be associated tumuli marking Neolithic period graves. A simple conical tumulus excavated at C18.1 (see section 5.0) contained no grave goods, nor any datable materials to ascertain its cultural and chronological association, but circumstantial evidence suggests it is younger than Neolithic. Indeed, given that Neolithic graves in the western deserts and the Sahara generally lack grave goods, it may prove difficult to ever confirm Neolithic period burials in the Nubian Desert unless datable materials are found in the graves: the bones themselves are unfortunately far too dry to allow for easy radiocarbon dating.

As for the rock art, at B0.1 and Bir Murat some 30 km to the east there are several engravings of cattle which may date from the Neolithic period, but their association is unclear. Insofar that they must date from wetter periods in the past, say before the second millennium BC (cf. e.g., Muzzolini 1982), the Neolithic occupants of the area could have been the artists. This possibility is partially supported by the present distributions of the cattle art and the Neolithic sites, both of which occur principally in the western sectors of the study area rather than in the eastern highlands of the Red Sea Hills (see also section 8. Rock Engravings and Inscriptions).

3. The Late Neolithic Tumulus D5.1

Within the cemetery of a mining village in the Wadi Elei (D5) there are three large tumuli which stand out in a sea of small, low, simple, stone covered graves. Scattered a few hundred meters apart from each other, these three tumuli are circular, flat-topped mounds of earth and stone, standing about half a metre tall, and with diameters of about six metres. Prior to excavating one of them we thought these might be the elusive Pan-Graves, known from the Nile Valley (Bietak 1966), dating to the first half of the second millennium BC, and thought to have been the graves of the Medjay, the ancestors of the modern Beja. This proved not to be the case. Instead, radiocarbon analysis of charcoal from a sealed context in the grave yielded a date of around 4500 BC, and a ceramic pot within the grave suggests a possible affiliation with Sudanese Late Neolithic cultures, the early A-Group, or early Predynastic cultures of Egypt.

D5.1 proved to be a complicated and quite badly damaged grave, though its surface aspect hinted at neither of these problems. We excavated a two by two meter test pit in the centre (Fig. 3.1.1) (Fig. 3.1.2) of the mound (Fig. 3.1) and found not far below the surface two upright stones in the north corner of the pit (Fig. 3.2). Further down, we found that the upright small stelae stood on a bed of gravel which seemed to have originally covered the entire area of the pit but now revealed a sandy gap in the central portion. In the north-east wall of the pit (Fig. 3.3) the gravel layer was clearly discernible as were two other upright stones or

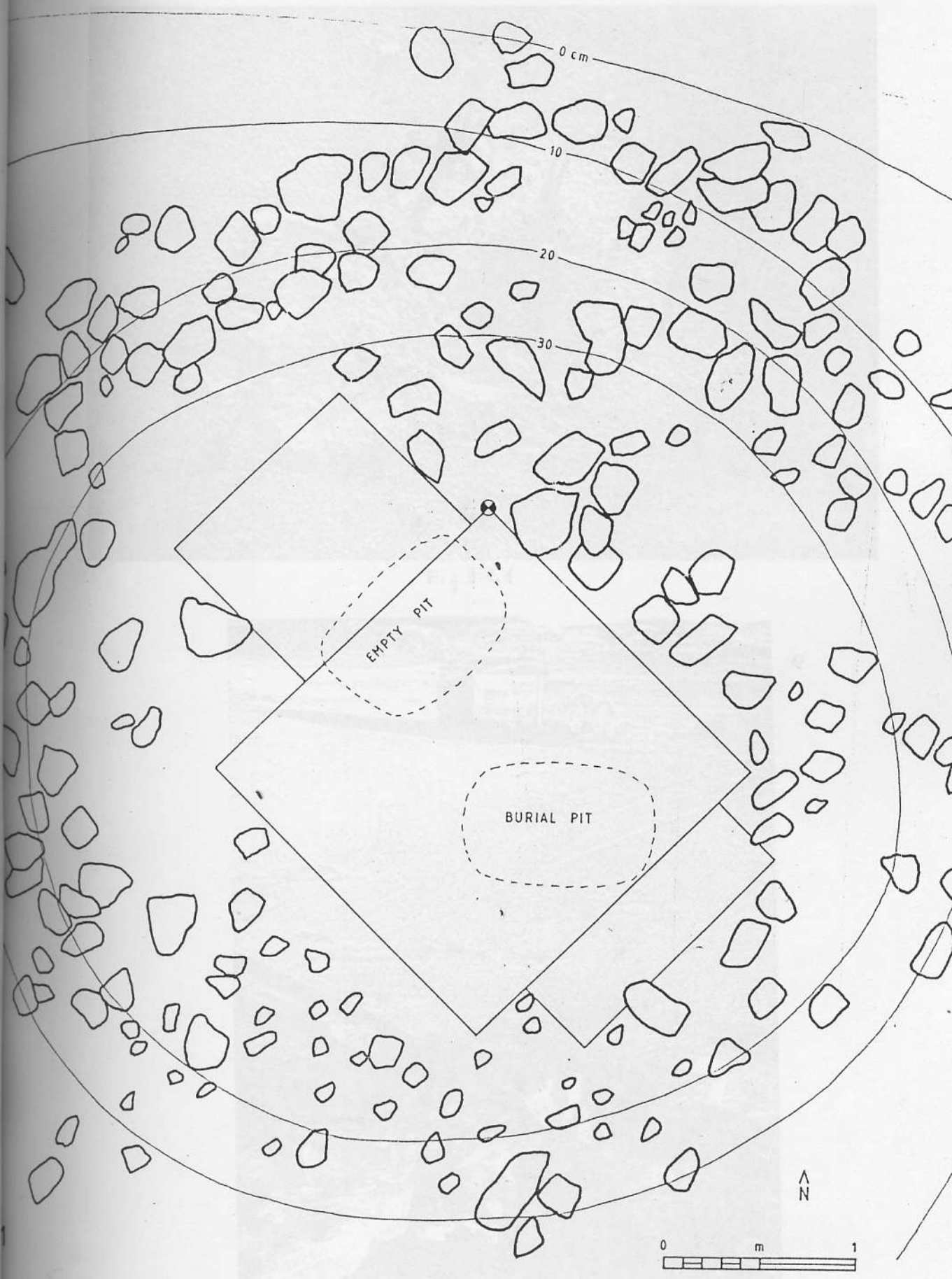


Fig. 3.1 Plan of tumulus D5.1 showing excavated portion.

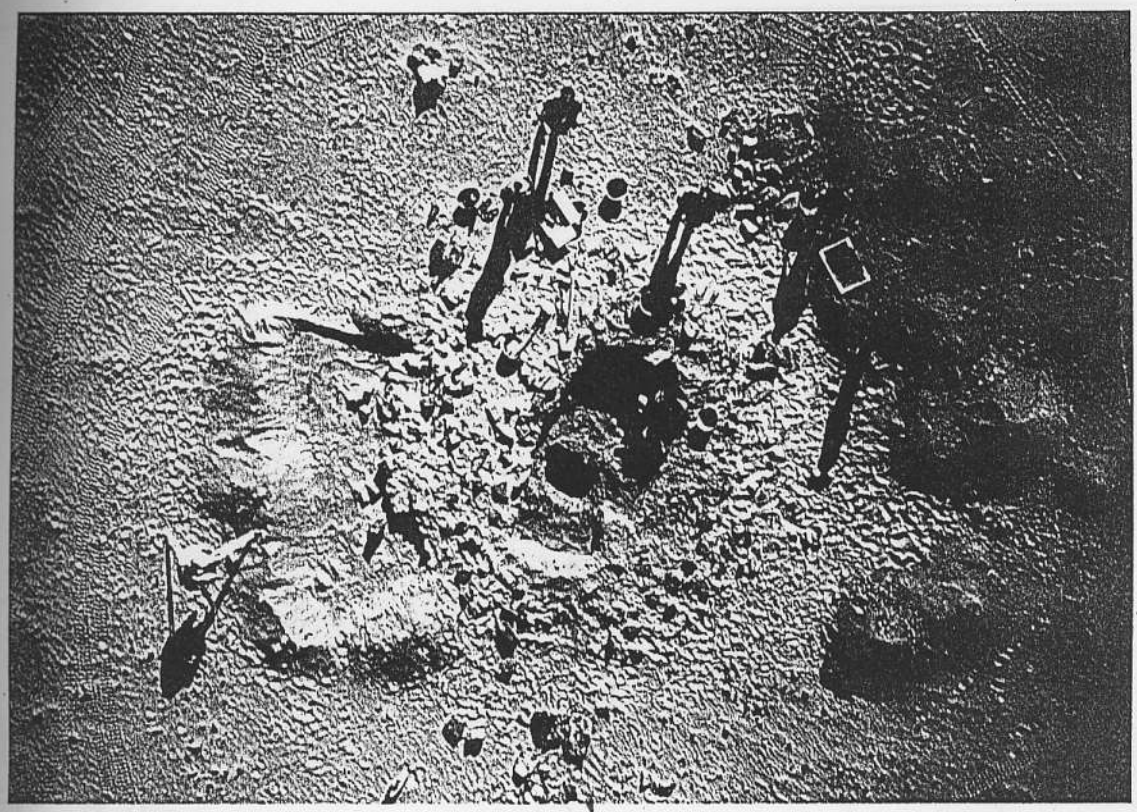


Fig 3.1.1

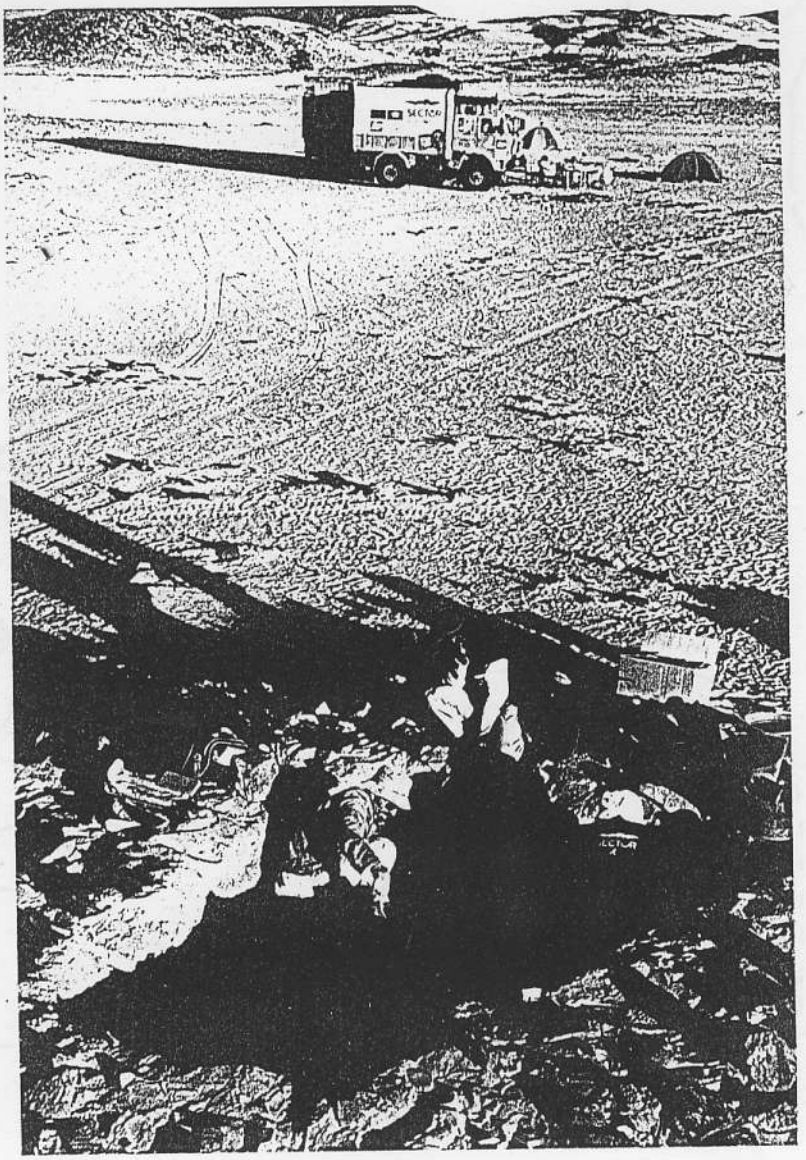


Fig. 3.1.2

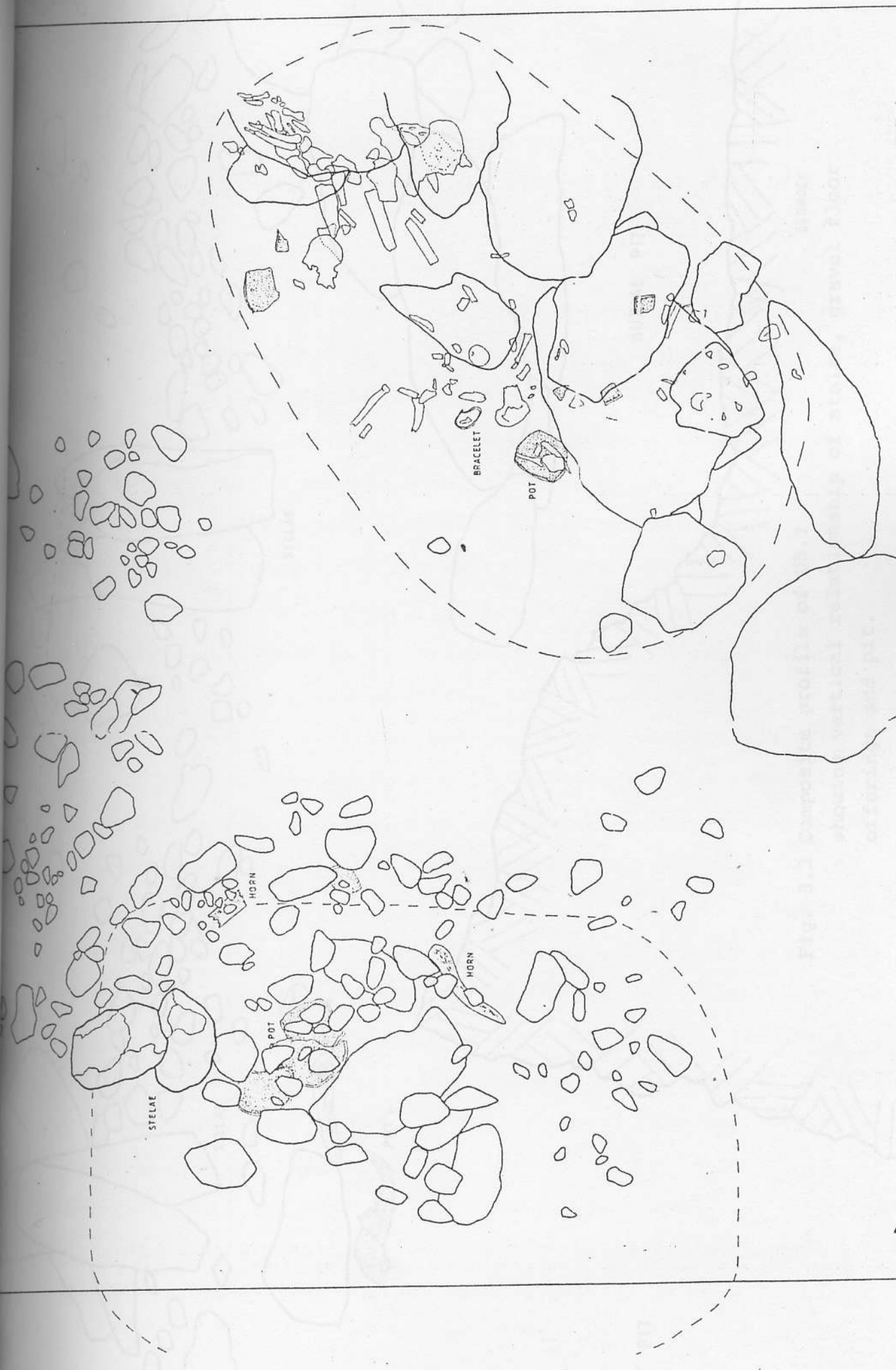


Fig. 3.2 Plan of excavation of D5.1 showing features and burial.

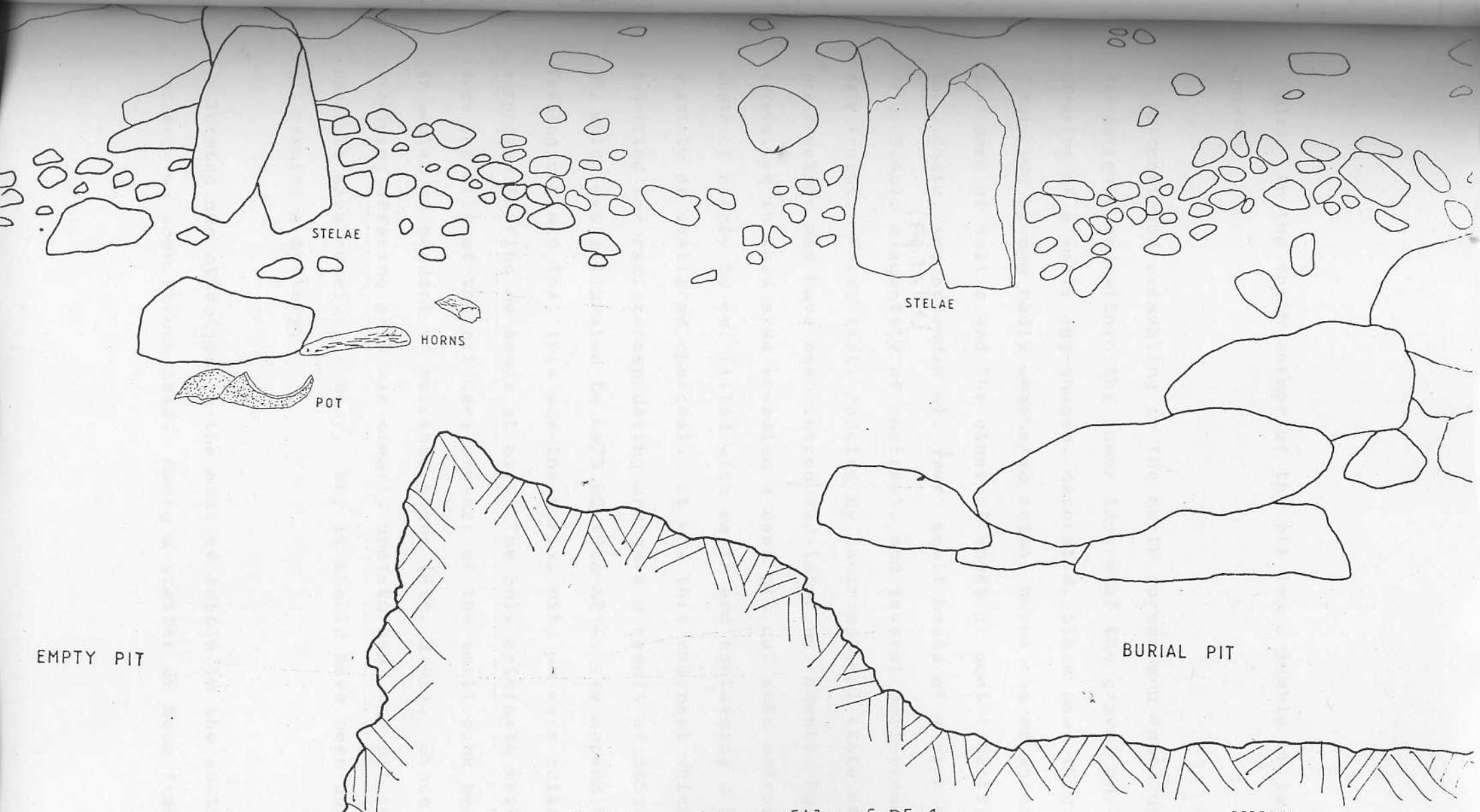


Fig. 3.3 Composite profile of D5.1 showing vertical relationship of stelae, gravel floor offerings and pit.

stelae. In the south corner of the pit lay a jumble of large rocks.

We continued excavating in the north corner and found under the uprights and within the lower layers of the gravel an offering of a small egg-shaped, decorated, black bowl (Fig. 3.4e), two by now badly weathered animal horns one of which may have been of cattle and the other of sheep or goat (identified by Louis Chaix, see appendix 4), four small beads of a pink stone (Fig. 3.4b.1) (Fig. 3.4b), a quantity of charcoal, and several well-preserved date fruits. These last, judging by their optimal state of preservation may have been introduced later by rodents. Further excavation in this area revealed a deep pit cut into bedrock to a depth of nearly 50 cm, filled with earth and containing a great quantity of scattered charcoal. It was this charcoal which was submitted for radiocarbon dating and gave a result of 5650 ± 70 BP, which was calibrated to 4475 BC (Pta-6214, see appendix 1). Feeling certain that this was the burial pit, we were quite surprised to find no bones at all. The only artefacts which came from the fill of the pit were another of the small pink beads and an amulet or pendant of polished stone (Fig. 3.4c). Since the overlying offering area was clearly undisturbed, the pit seems never to have received a body. Why it should have been dug at all remains a mystery.

Turning our attention to the mass of rubble in the south corner, we soon struck gold. Among a scatter of bone fragments

beneath the rocks, some of which could be identified as pieces of a scapula, humerus, and ulna, we found a gold-wire bracelet with notched lines as decoration and a very nicely made hook clasp (Fig. 3.4d). (Fig. 3.4d.1) As this part of the grave was very badly damaged, it was very surprising to find the bracelet at all: an oversight on the part of the looters perhaps understandable if the grave originally contained a large enough selection of other, more spectacular treasures. Continued excavation in this burial pit eventually revealed a grave which had been practically cut in two by the looters. Everything other than the feet and pelvis were smashed and the skull and all vertebrae were completely missing. A line could be described from just above the ankles to just below the femur head were the looters had apparently cut through the bones disturbing all that lay to the west but leaving the feet and pelvis untouched. These sufficed to show that the body had originally lain in a tightly flexed position on the left side with head to the west. Anthropological analyses of the bones by Christian Simon suggested that the individual interred in D5.1 was a female aged between 35 and 55 years (see appendix 3). Sherds of a black bowl (Fig. 3.4a) recovered at various points in the burial pit showed that pottery had also been placed in the pit as accompaniment for the dead.

In several respects D5.1 differs from all the other graves we excavated during the 1993 season. First, it is the only one with a significant amount of grave goods including ceramics. The other graves contained at most a few items of personal jewellery

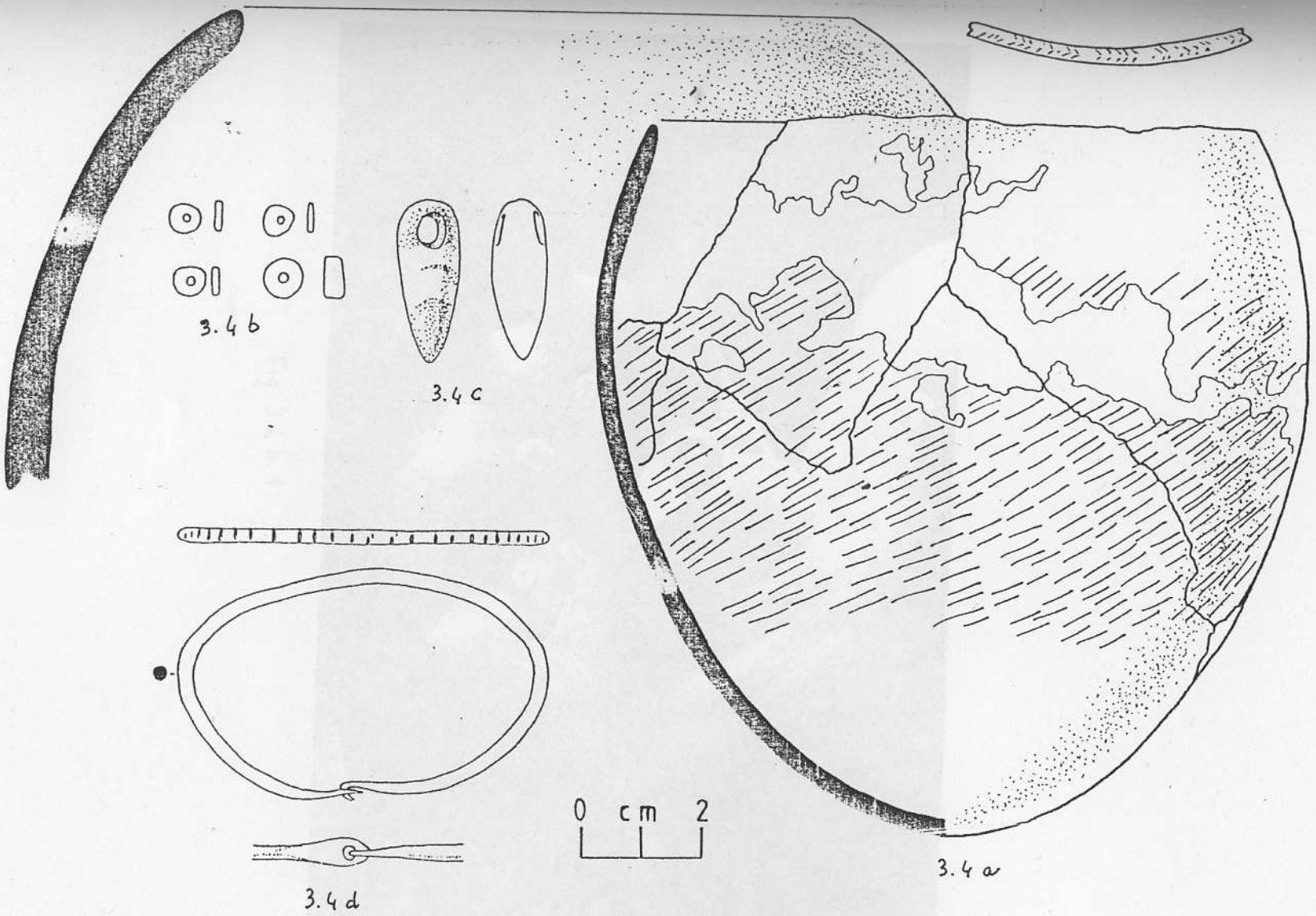


Fig. 3.4 Grave goods from D5.1.

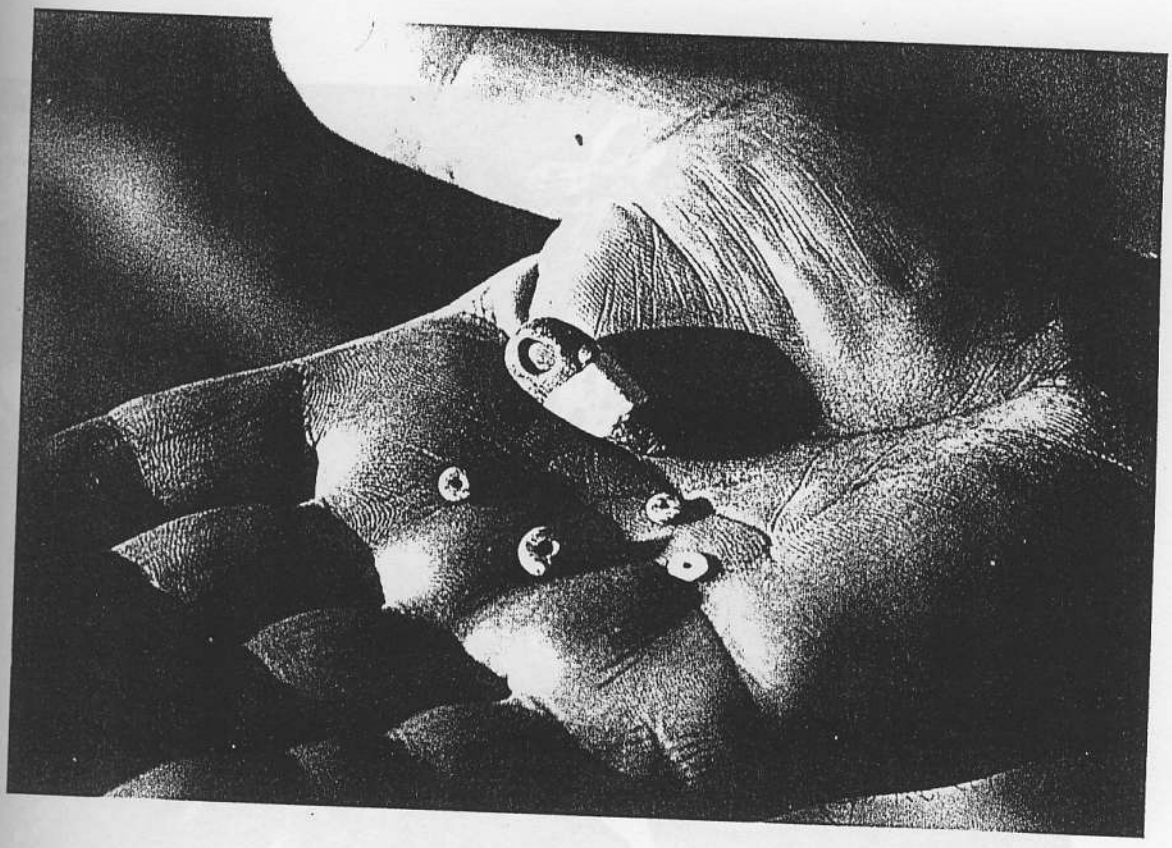


Fig. 3.4 b. 1

Fig 3.4 d. 1

and decorations such as beads and pendants. D5.1 was also the only grave we found with a well defined burial pit dug, in this case, into bedrock. In the other graves the dead was lain on the natural terrain or in a very shallow depression. Another difference is that the construction of tumulus D5.1 made use of earth as well as stones; the other grave superstructures were built purely of stone and what dust was found had clearly been blown in through the crevices after the construction of the tumuli. Finally, it was only in D5.1 where we found a separate offering area within the structure of the tumulus, although it is perhaps the limited amount of excavation in other tumuli which has failed to bring to light such similar internal offering areas.

Before the results of radiocarbon dating had become known, we thought that these divergences from the norm possibly pointed to the fact that D5.1 was not the grave of an indigenous desert dweller. The anomalous aspects of D5.1 are more in line with the kinds of graves one encounters in the Nile Valley. With the dates, however, it seems clear that the difference between D5.1 and the other excavated graves can be explained equally well by its far greater age. Between the burial tradition of D5.1 and the sparse graves of the desert tradition (described below) great changes must have taken place in the ideology associated with death: there is little evidence of cultural continuity between this Late Neolithic grave and the clearly younger simple conical tumuli, or the "camembert" tumuli of the first millennium AD.

The cultural association of D5.1 is unclear. The pendant, bracelet, and pottery in the grave are insufficiently diagnostic to tell us to which, if any, Nile Valley culture the owner of the grave may have belonged. It is also possible that we are dealing with an individual from a local culture, but not of a desert tradition as this area during the fifth millennium BC would have been considerably wetter (Muzzolini 1982). It is hoped that excavation of the two other D5.1 type tumuli at this locality will give us more clues about the relations between these people and their contemporary neighbours in the Nile Valley such as the Badarian of Egypt, the Late Neolithic of the Middle Nile, and the early A-Group of Nubia.

4. The Wadi Elei Mine (D5)

The mining village of Wadi Elei (D5) merits special attention not only because it is extremely well preserved but also because it contains ceramics from a variety of traditions and periods and as such promises to be one of the more fruitful sites for the study of the history of gold mining in the Nubian Desert. The majority of the ceramics are not unlike some Middle Nubian Period (ca. 2500-1500 BC) wares from the Nile Valley, and the possibility exists that the mine was at one time operated by Nubian peoples. If so, this would be a novel discovery as until now there had been no evidence to suggest that the Nubians, on their own, exploited areas this far from the Nile.

Located on the west bank of the Wadi Elei (Fig. 4.1) the mining village stretches in a north to south direction for over a kilometre. (Fig. 4.1.1) Fig (4.1.2) It is composed of half a dozen "quarters" and a large cemetery.

In the far southern extremity of the site, in the foothills of a tall jebel and overlooking a tributary wadi to the Elei, there is a scatter of circular and rectilinear dry-laid stone structures. Among these there are one or two multi-roomed blocks with grinding mills in the vicinity. In terms of artefacts, this is one of the poorer quarters of the site; the few ceramics which were recovered here were all handmade wares resembling the wares found in the quarter some 500m to the north and on the opposite bank of the tributary wadi.

This second quarter from the southern extreme of the site is also a poor one, with a scatter of mainly circular houses, few if any grinding mills, and no clear examples of the multi-roomed structures which in the mining villages of this area seem to signify an administrative or processing centre of the mine. The majority of the ceramics here are handmade wares, with decorations generally showing parallel, horizontal grooves carved or incised on the body of the vessel (Fig. 4.2). In general appearance these ceramics seem quite old, the range of shapes (small open bowls), paste and decoration, as well as firing treatments such as the blackmouth effect --where the interior and


32
33
34
35
RED SEA
NILE RIVER
WADI ALLAGI
WADI ELEI
D5
D3
WADI EL KU
C18
WADI GABGABA
Land above 500 m
0
km
100

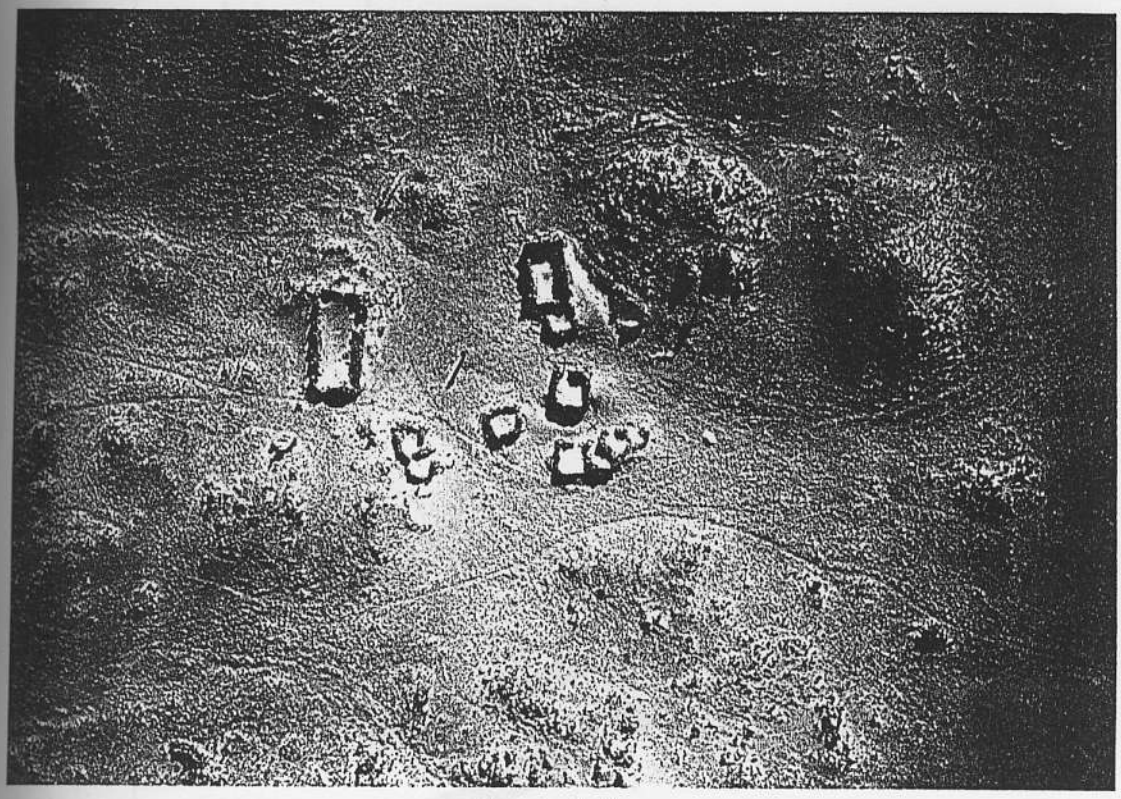


Fig. 4.1.1

Fig 4.1.2

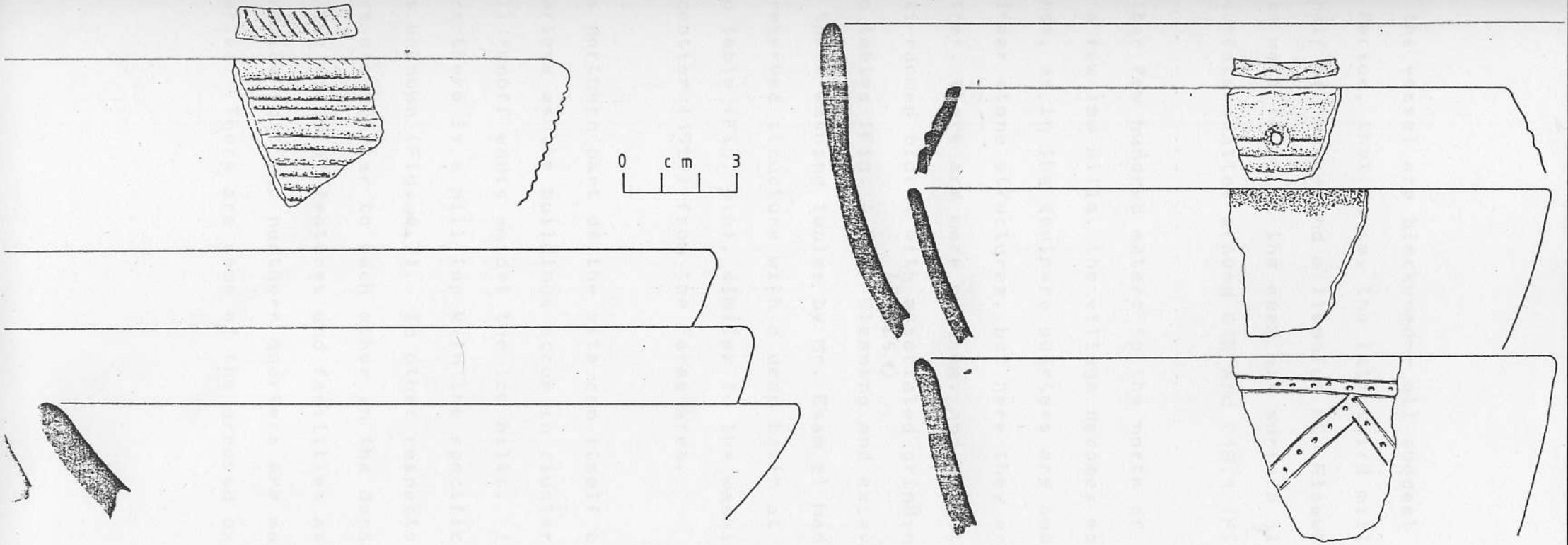


Fig. 4.2. Possible Middle Nubian Period wares from D5.

lip of the vessel are blackened-- all suggest a date of Middle Nubian Period, that is ca. the late third millennium BC and the first half of the second millennium BC. Elsewhere, similar ceramics were found at the open air surface site D3 and also in a mixed surface scatter around C18 and C18.1 (Figs. 4.3 and 4.4).

Another few hundred meters to the north of this quarter, behind a few low hills, the village becomes more nucleated. (Fig. 4.4.1) The buildings, as in the southern quarters are small circular and rectilinear stone structures, but here they are located closer to each other, there are more of them, and amidst them are many more of multi-roomed blocks with associated grinding mills, (Fig. 4.4.2) and washing tables (Fig. 4.5). (Fig. 4.5.1) Cleaning and excavation of part of one of these washing tables by Mr. Esam el Hadi showed a very well preserved structure with a deep basin at the end of the sloping table (Fig. 4.6), similar to the washing tables described by Vercoutter (1959) from the Faras area.

This northern part of the site can itself be divided into a few quarters as the buildings occur in clusters each concentrated in small runoff wadis amidst the low hills. In one of the quarters there is a hill top kiln the specific function of which remains unknown (Fig. 4.7). In other respects the northern quarters are similar to each other in the density of structures and in the sorts of features and facilities associated with each. The ceramics in these northern quarters are more numerous and more varied. There are some of the grooved examples as found

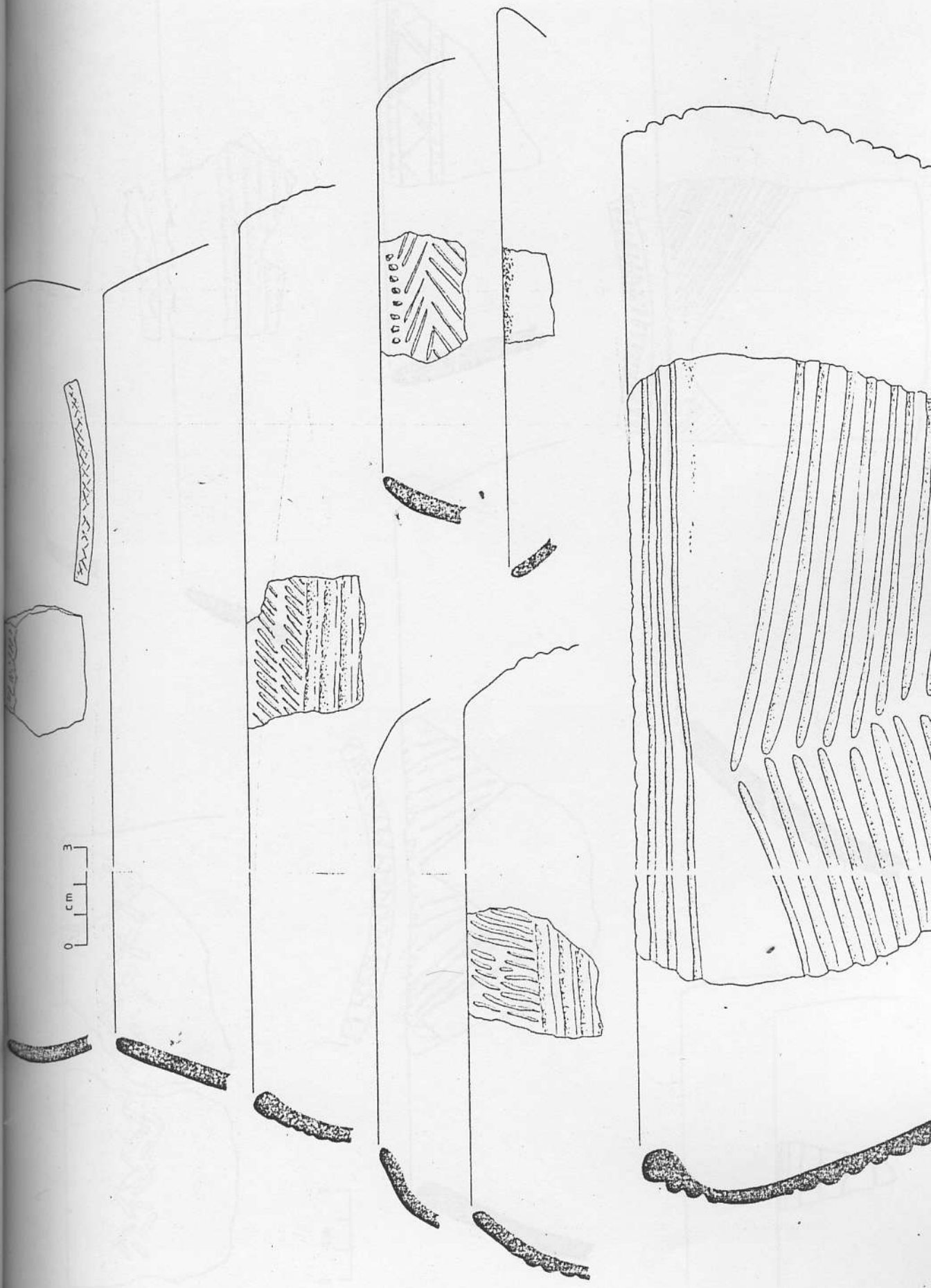
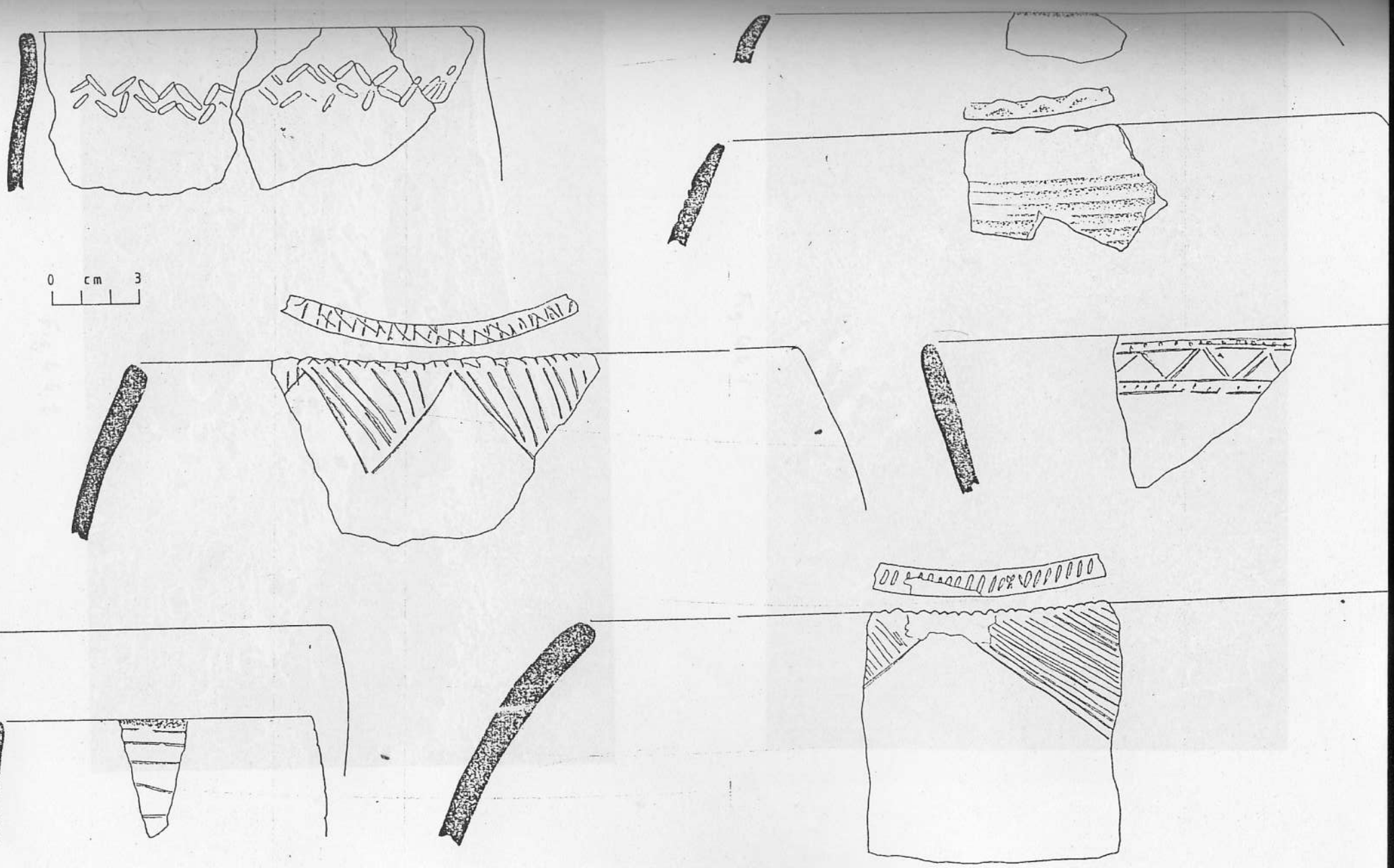


Fig. 4.3 Ceramics from D3.


0 cm 3

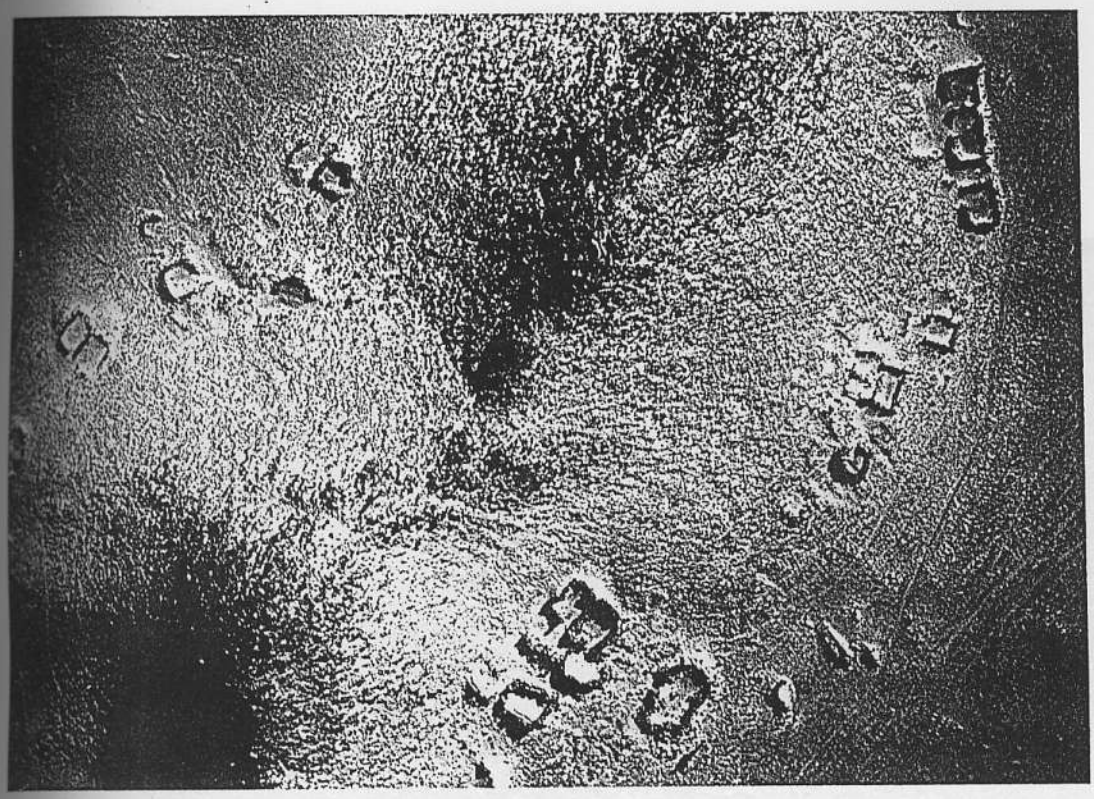


Fig. 4.4.1

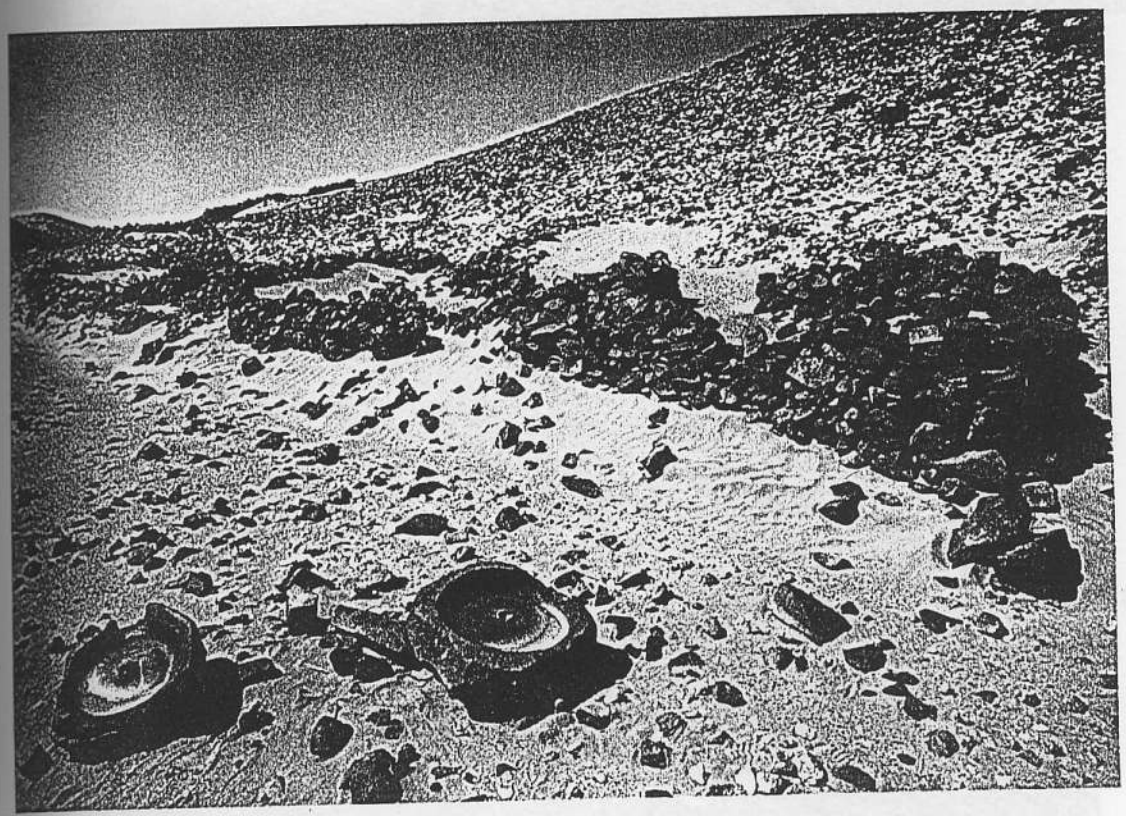


Fig 4.4.2

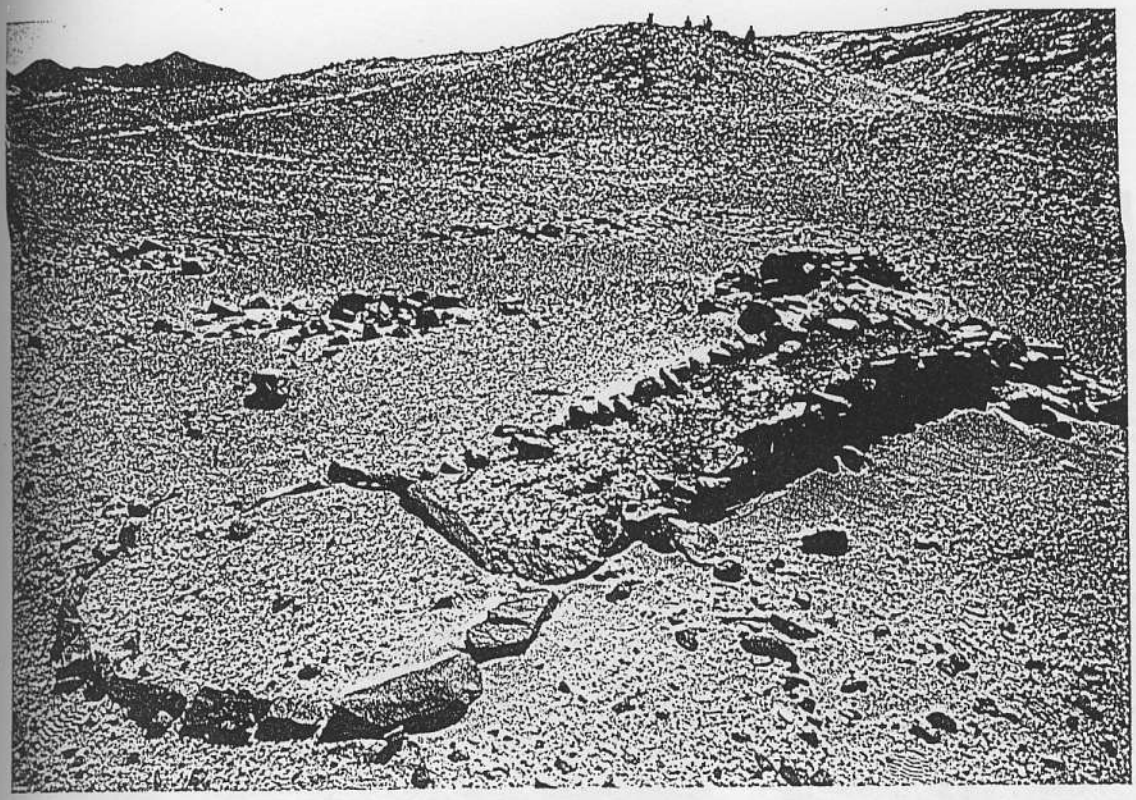


Fig. 4.5

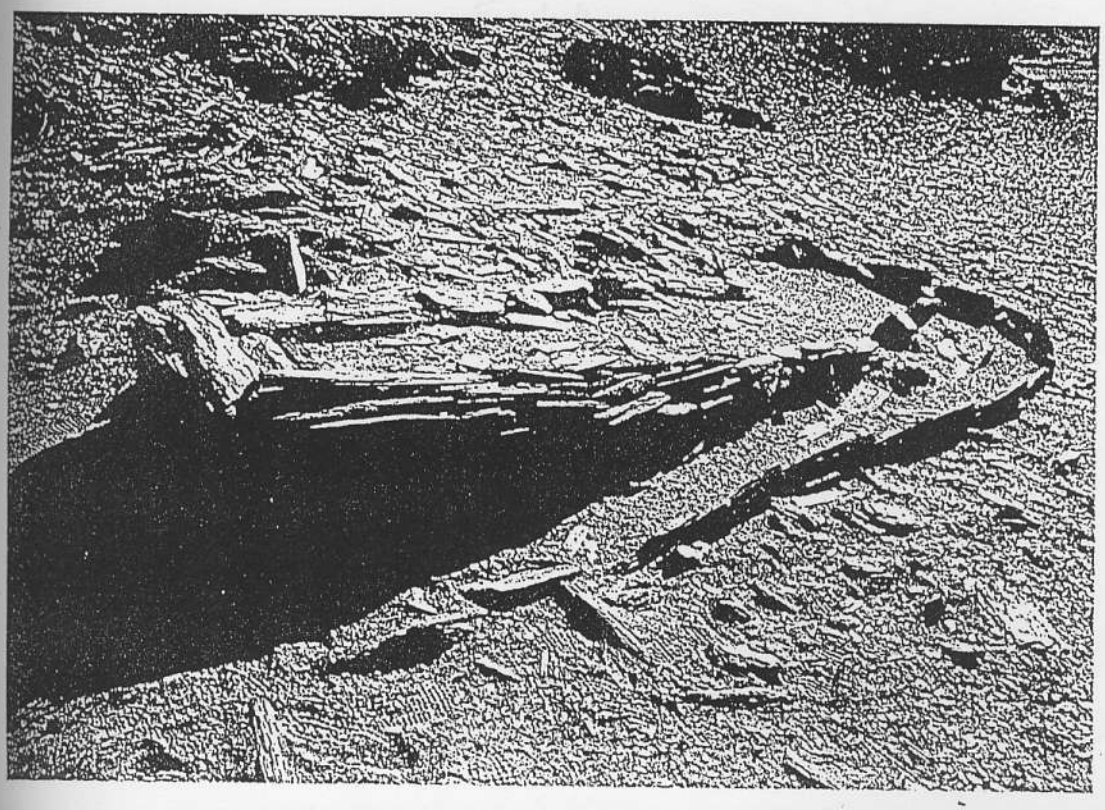


Fig 4.5.1

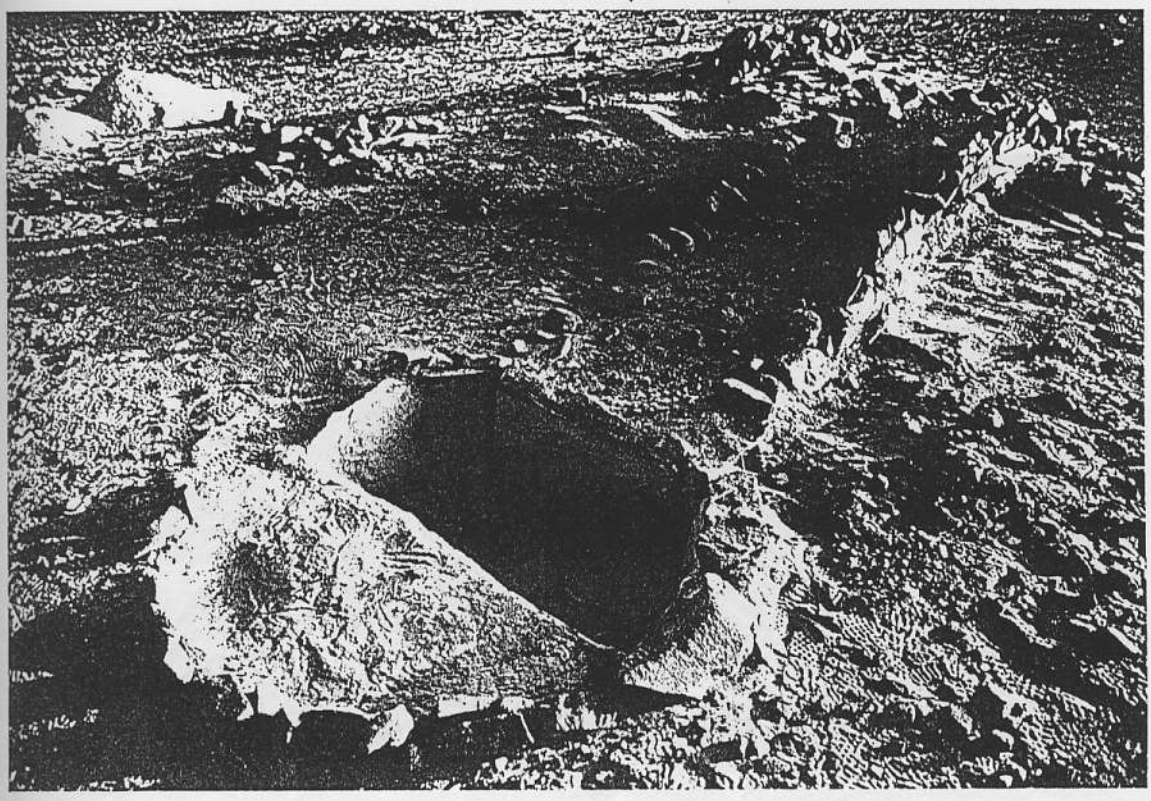


Fig. 4.6

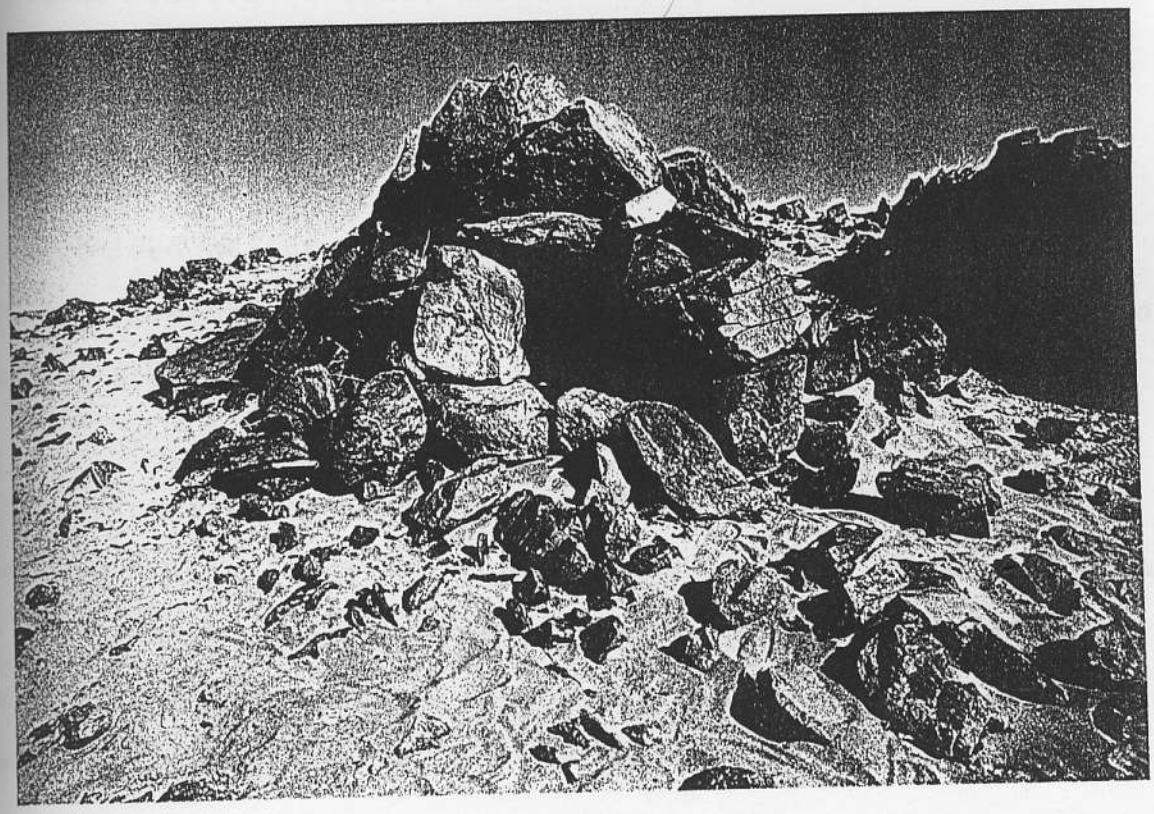


Fig 4.7

also in the southern quarters. Numerous are handmade pots in the form of large bowls with thick walls and generally flattened rims (Fig. 4.8). The surface of this ware is left undecorated but burnished, and the overall colour is a deep brown. Some of these pots have lug handles. The exact age of this style is unknown but these wares are often found in mining villages along with wheelmade Medieval Islamic wares. These latter, the imported Aswani wares (Fig. 4.9) are also found in the northern sectors but in relatively low numbers. Other ceramics include as yet unidentified wheel-made wares, and handmade wares sporting cross-incised designs of a kind which we think are associated with the "camembert" style graves (see section 6) and dating to the mid-first millennium AD.

Farther north from this part of the village lies the cemetery. It is large and contains many dozens if not hundreds of graves, each simply marked with a small, circular, low pavement of stones. Among these are found three much older large tumuli at different points in the cemetery, one of which (D5.1) was excavated, and has been described in the previous section.

One of the interesting aspect about the Wadi Elei mine is the absence, or at any rate rarity, of Pharaonic Egyptian ceramics while apparently Middle Nubian wares are quite common. It suggests that during the Middle Nubian Period there may have been gold mines far in the desert administered by Nubian cultures. Although the mining village itself contains evidence of

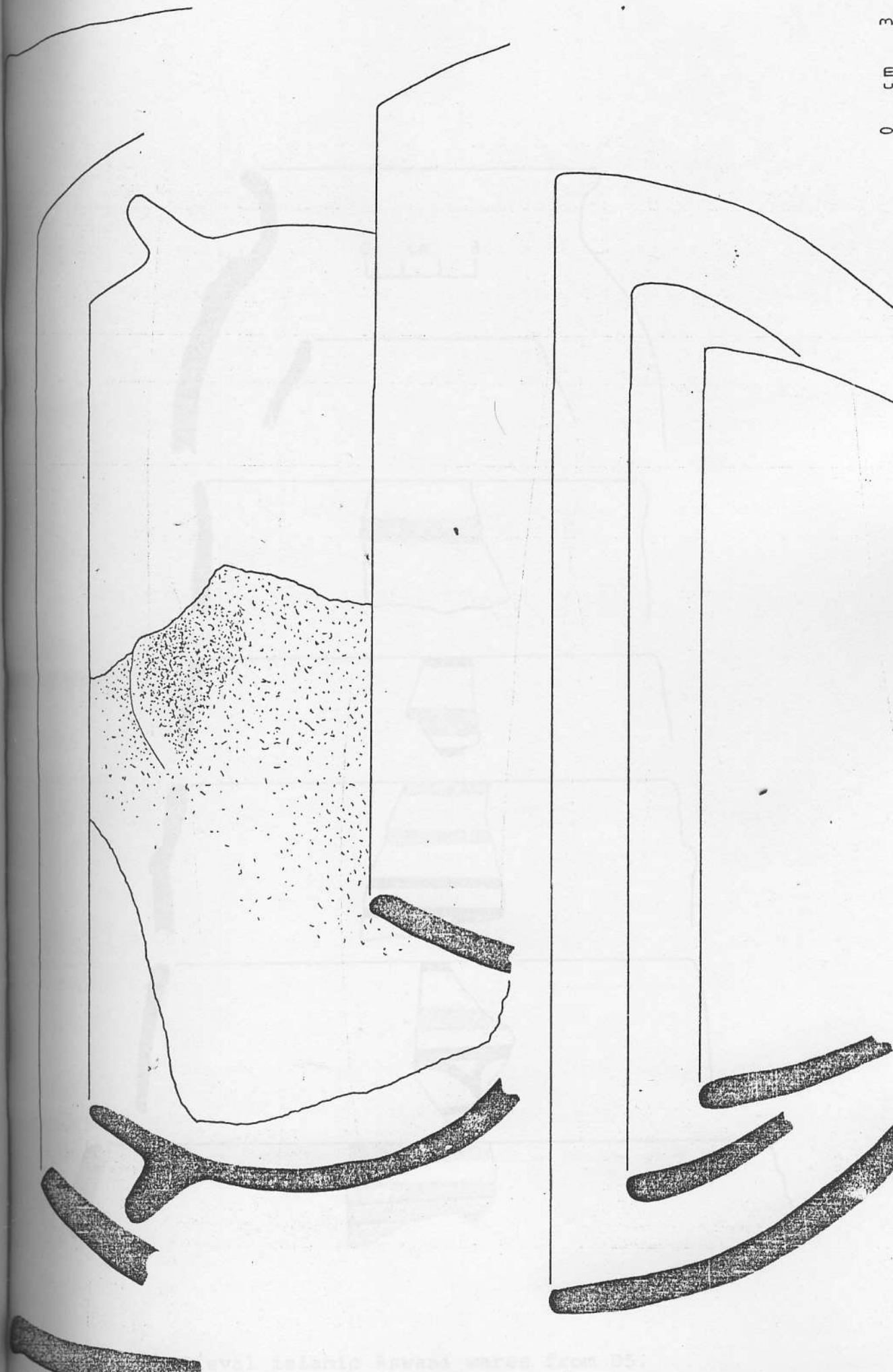


Fig. 4.8 Handmade, brown burnished wares from D

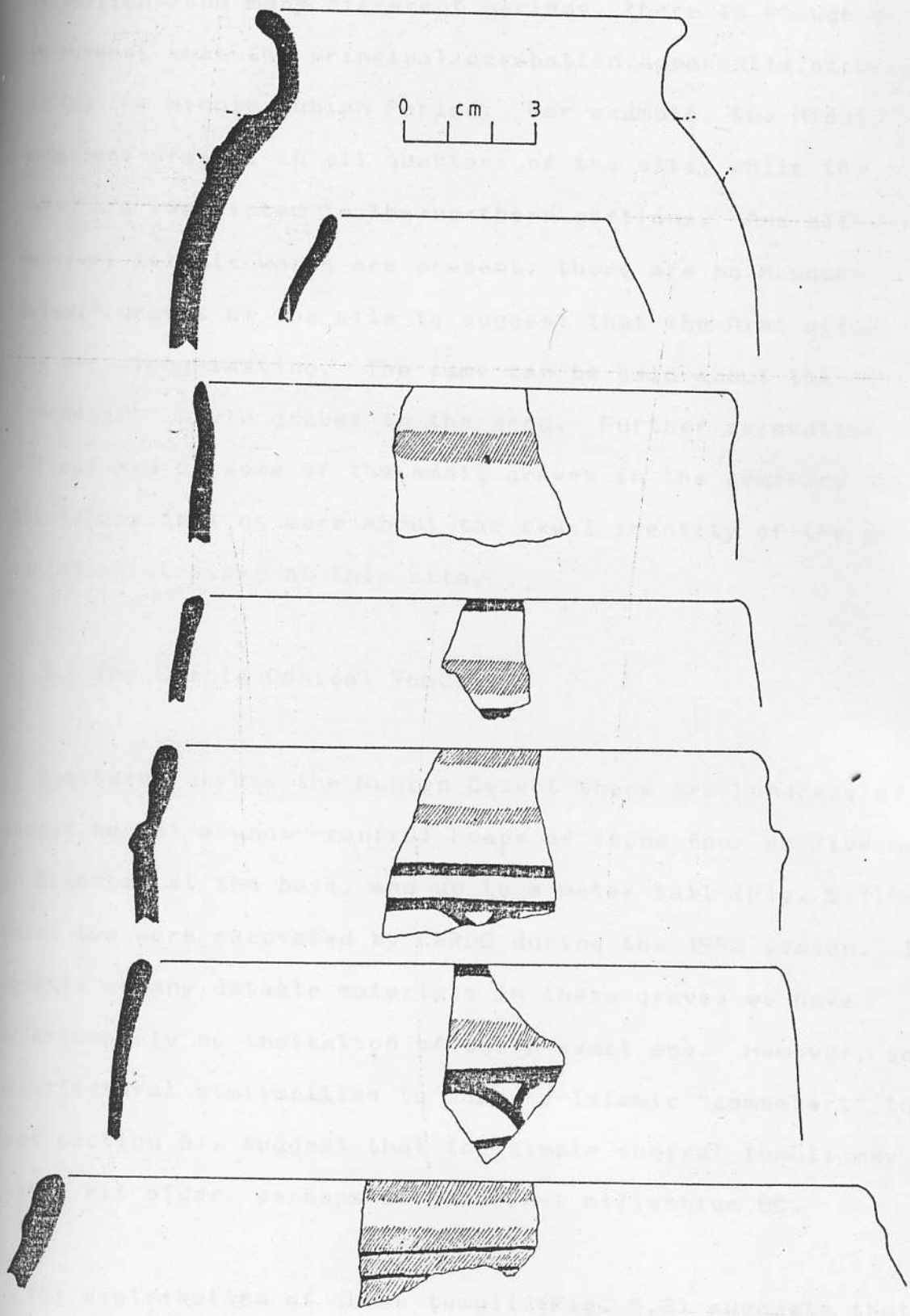


Fig. 4.9 Medieval islamic Aswani wares from D5.

occupation from many different periods, there is enough evidence to suggest that the principal occupation apparently occurred during the Middle Nubian Period. For example, the Middle Nubian wares are present in all quarters of the site, while the other wares are restricted to the northern portions. And although Medieval Islamic wares are present, there are no Mosques nor any Islamic graves at the site to suggest that the Arab occupation was very long-lasting. The same can be said about the rarity of "camembert" style graves in the area. Further excavation in the village and of some of the small graves in the cemetery should in the future tell us more about the exact identity of the workers and administrators at this site.

5. The Simple Conical Tumuli

Scattered across the Nubian Desert there are hundreds of simple burial mounds--conical heaps of stone four or five meters in diameter at the base, and up to a meter tall (Fig. 5.1)--of which two were excavated by CeRDO during the 1993 season. In the absence of any datable materials in these graves we have unfortunately no indication of their exact age. However, some architectural similarities to the pre-Islamic "camembert" tumuli (see section 6), suggest that the simple conical tumuli may be just a bit older, perhaps of the first millennium BC.

The distribution of these tumuli (Fig. 5.2) suggests that they are the graves of an indigenous Nubian Desert population.

Fig 5.1

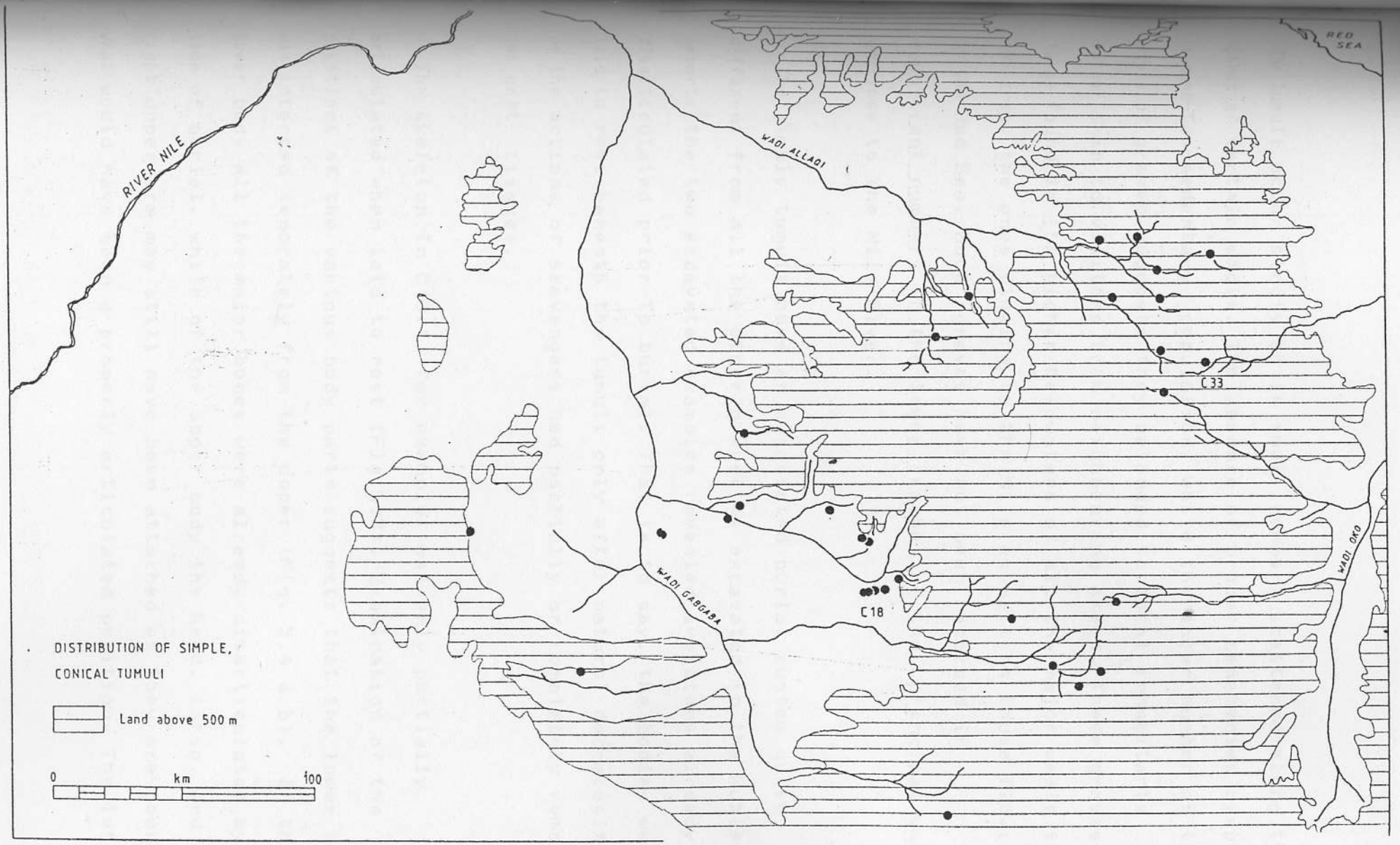


Fig. 5.2 Distribution of simple conical tumuli.

The tumuli occur singly or in small numbers scattered along the banks of certain wadis. The absence of proper cemeteries bespeaks a none-too-sedentary population, while the sheer number of this style of graves suggests they belonged to local inhabitants rather than to visitors from neighbouring areas. These graves are to be found in the higher headwaters of all the major wadis in the area, the ones flowing to the Nile as well as those flowing to the Red Sea. Such graves have not been recorded in significant numbers in the lower reaches of the principal wadis or close to the Nile River.

The simple tumuli have an associated burial custom quite different from all the other graves we excavated in the Nubian Desert: the two excavated examples revealed skeletons already disarticulated prior to burial. That is to say, the bodies were laid to rest beneath the tumuli only after natural decomposition or the actions of scavengers had partially or completely removed the soft tissues.

The skeleton in C18.1, for example, was only partially articulated when laid to rest (Fig.5.3). Examination of the positions of the various body parts suggests that the lower body was interred separately from the upper (Fig. 5.4 a,b). In the lower body all the major bones were already disarticulated by the time of burial, while of the upper body the head, torso, and right upper arm may still have been attached as they are found in what would have been a properly articulated position. The left

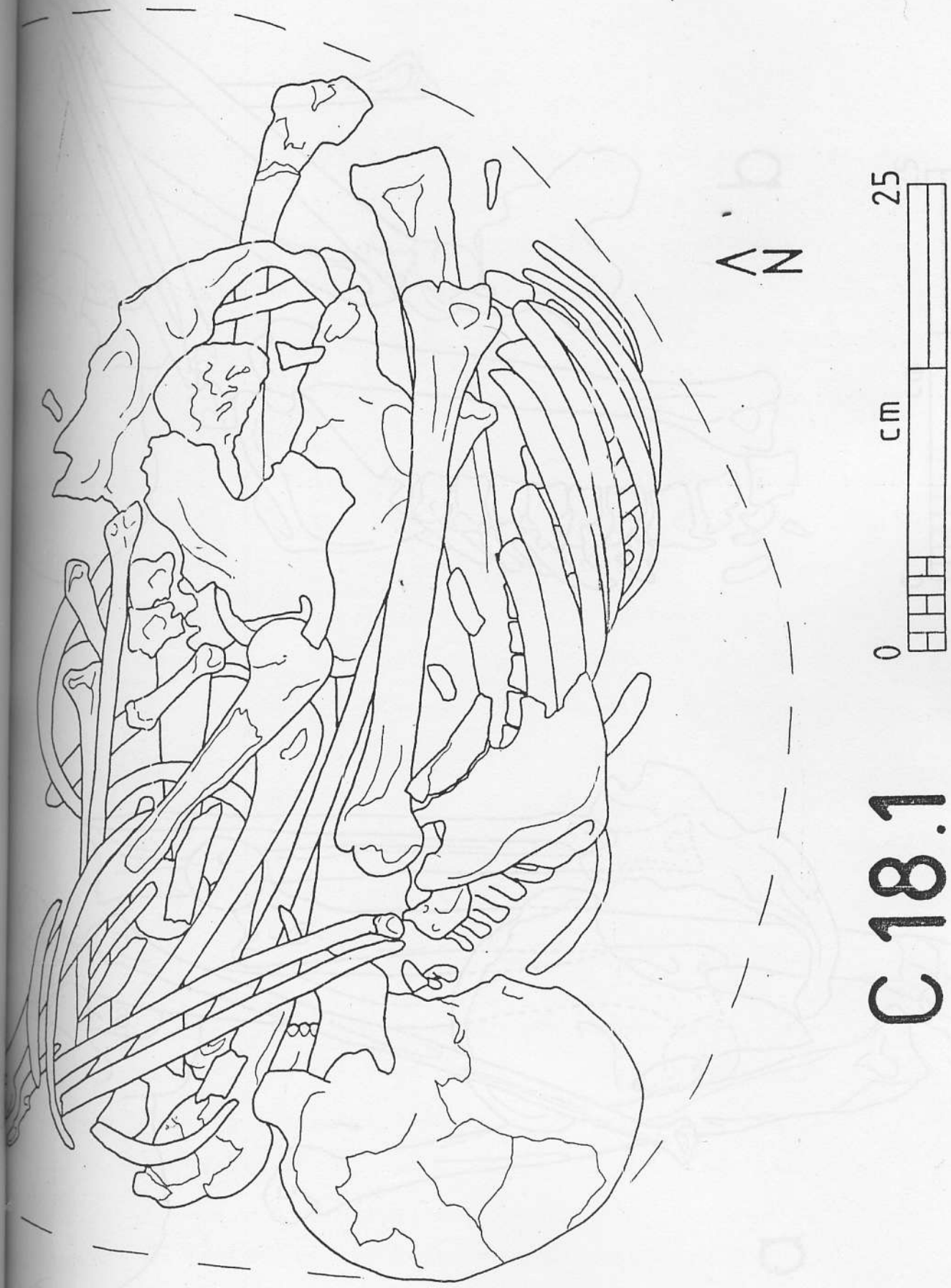


Fig. 5.3 C18.1 skeleton.

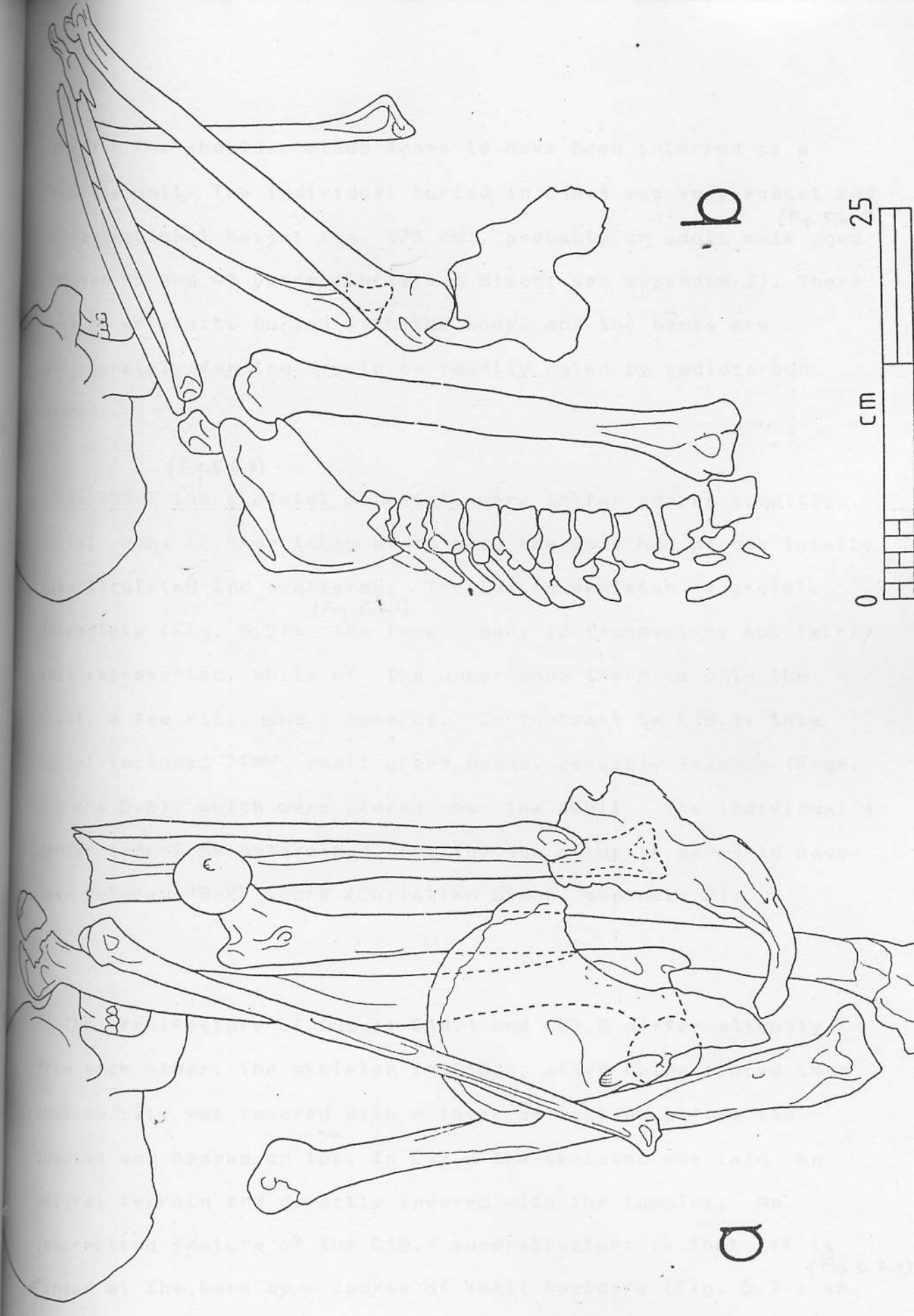


Fig. 5.4 C18.1 lower body (a) and upper body (b) parts.

arm from the shoulder blade seems to have been interred as a separate unit. The individual buried in C18.1 was very robust and of exceptional height (ca. 175 cm), probably an adult male aged between 35 and 45 years (Christian Simon, see appendix 3). There were no artefacts buried with the body, and the bones are unfortunately far too dry to be readily dated by radiocarbon methods. (Fig. 5.4.1)

In C33.2 the skeletal materials were in far poorer condition. Burial seems to have taken place once the body had become totally disarticulated and scattered. The buried skeleton is grossly incomplete (Fig. 5.5): the lower body is fragmentary but fairly well represented, while of the upper body there is only the skull, a few ribs, and a humerus. In contrast to C18.1, this burial included two small green beads, possibly faience (Figs. 5.5 and 5.6), which were placed near the skull. The individual's gender cannot be determined, but the age at death seems to have been between 18-25 years (Christian Simon, appendix 3). (Fig. 5.4.2) (Fig. 5.5.1)

The architecture of tumuli C18.1 and C33.2 differ slightly from each other. The skeleton in C18.1, after being placed in a shallow pit, was covered with a layer of cobbles before the tumulus was heaped on top. In C33.2 the skeleton was laid on natural terrain and directly covered with the tumulus. An interesting feature of the C18.1 superstructure is that it is ringed at the base by a course of small boulders (Fig. 5.7); an (Fig. 5.7.1)

Fig. 5.4.1

Fig. 5.4.2

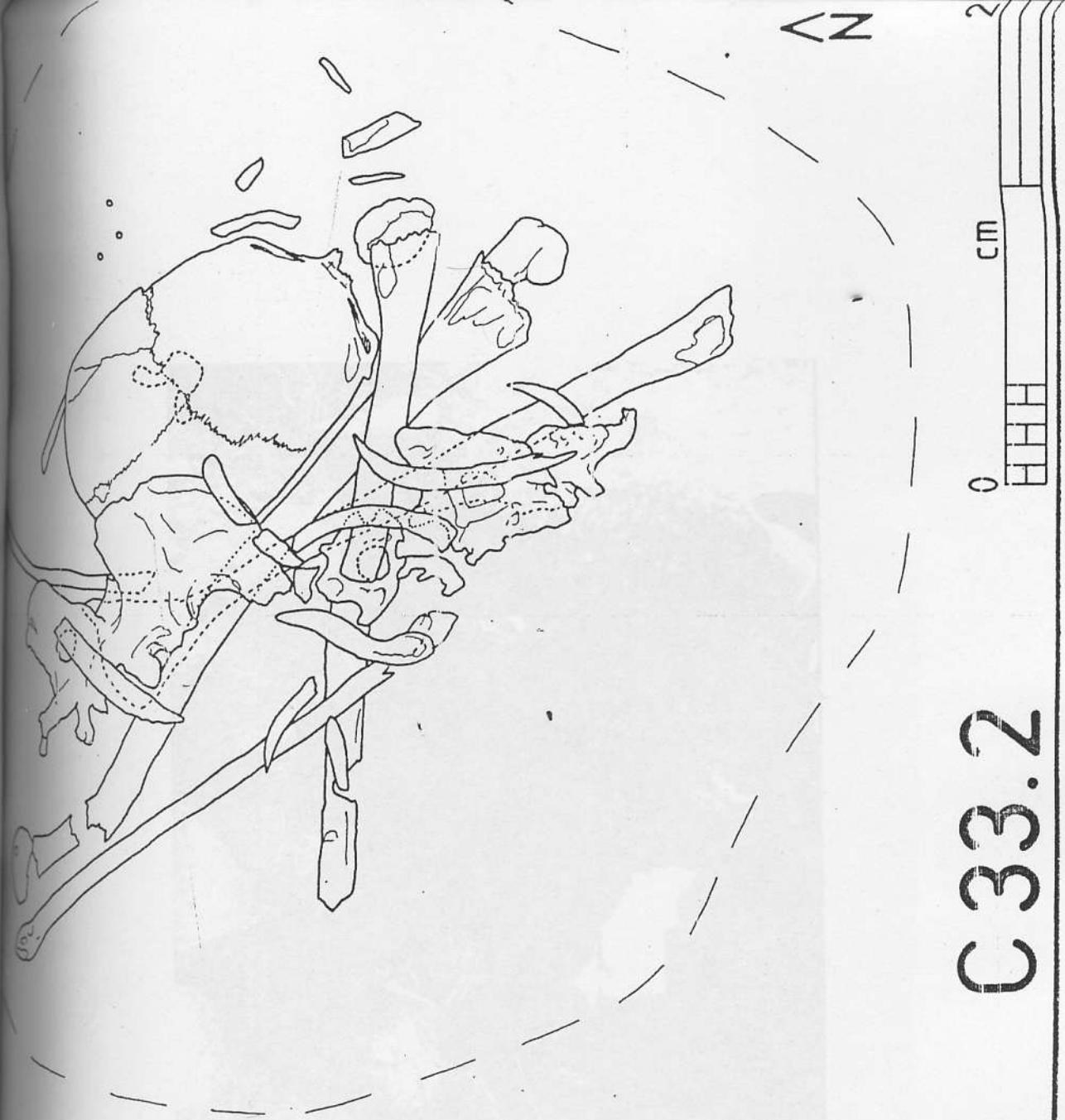


Fig. 5.5 C33.2 skeleton.

Fig. 5.5.1

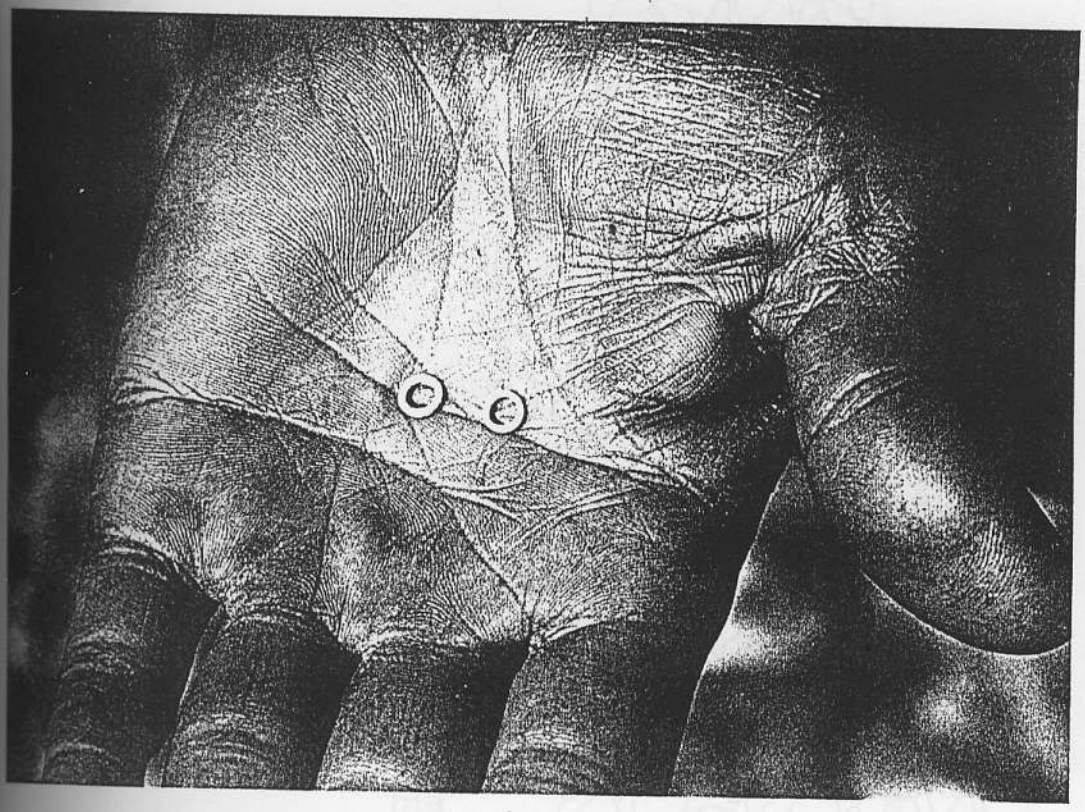


Fig. 5.6

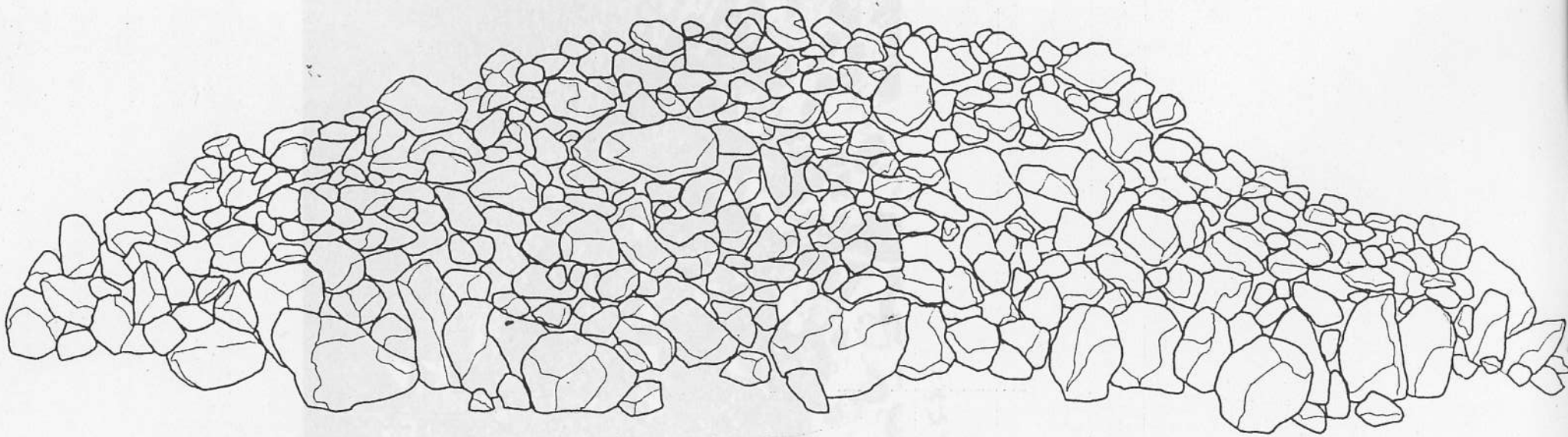


Fig. 5.7 Profile of C18.1 superstructure.

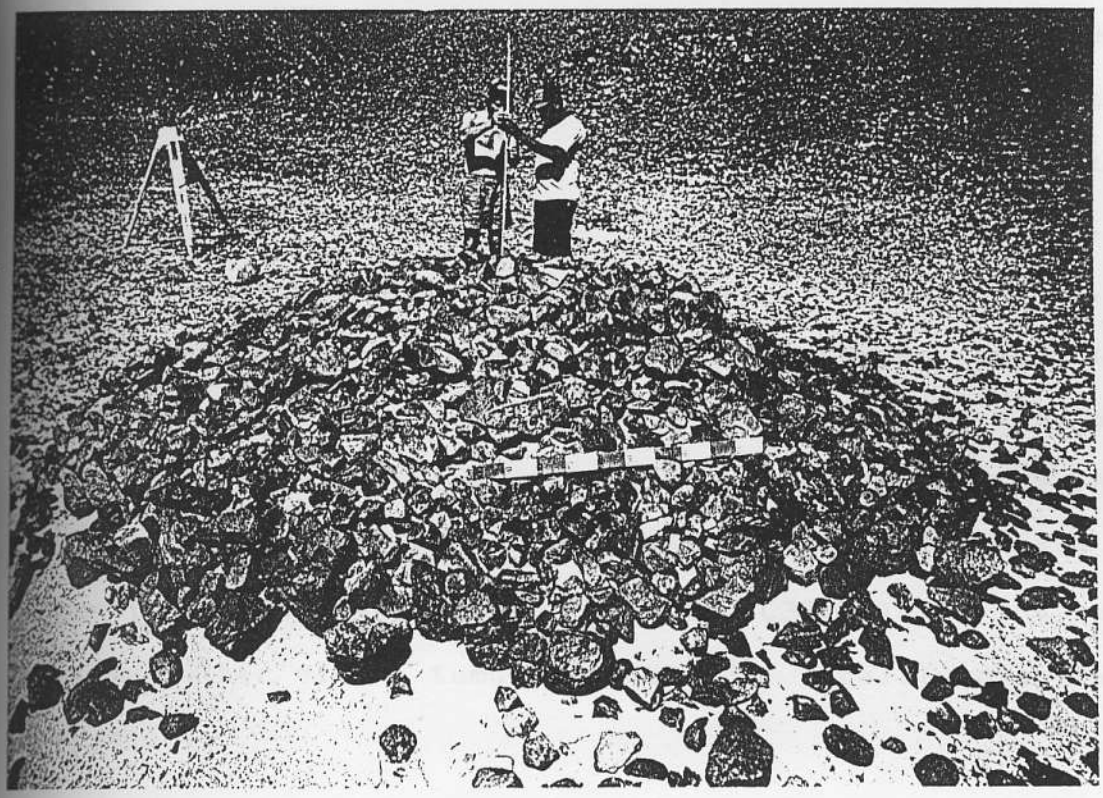


Fig. 5.7.1

embellishment which is also associated with the circular platform or "camembert" type of tumuli described in the next section. The camemberts date to the seventh and eighth centuries AD, and possibly a few hundred years earlier. The idea of a surrounding ring of stones is also realised in some of the Islamic graves in this area. Possibly these represent the transformation in grave architecture which came with the conversion of parts of the local population to Islam during the eighth century (see also section 7). The presence of the ring of boulders or upright slabs in these three types of tumuli--the simple conical, camembert, and Islamic graves-- and the known age of the two latter types, suggests that the simple tumuli date to the period immediately preceding that of the camembert style of graves. The ring of upright boulders in the grave architecture of the Red Sea Hills is without clear parallel in the Nile Valley, and may be a diagnostic trait of the desert cultures. C33.2 lacks the boulder ring , but other simple tumuli in the C33 locality display the same feature.

Aside from the ring of stones, the style of the grave superstructure itself is so simple that it does not help in assessing its age or cultural association. In the Nile Valley such simple tumuli are common and may date from the post-Neolithic to the post-Meroitic periods.

The graves, as mentioned above, contained no pottery. The potsherds found scattered on the terrain around the graves are of

little help in dating the burials because they represent a mix of many different periods and none of them can be securely associated with the tumuli. In the vicinity of C18.1, for example, there are Khartoum Horizon style sherds of the Neolithic period, some sherds with designs similar to early C-Group and Kerma Culture examples (Fig. 4.4), and sherds which we can associate with the "camembert" style graves of the first millennium AD (Fig. 6.20). In the surface collection from the C33 locality, more or less the same mixture is available, augmented by wheel-made wares of various periods.

The issue of the exact age of the simple conical tumuli, it appears, must be shelved for the moment, until further excavations can bring to light some datable materials. Perhaps before then, detailed analyses of the beads from C33.2 may provide further clues to the age of these graves. As we shall see in the next section, it is not only the simple tumuli which are devoid of datable ceramics. It appears that the later Nubian Desert burial traditions stressed that, aside from personal adornment, everyday objects should not be taken out of circulation for the benefit of the dead: a typically sensible desert decision, but a headache to the archaeologists!

Before closing this section, mention should be made of C18, near C18.1, a very large conical mound which we initially thought was a grave superstructure of enormous dimensions. Some 17 m in diameter at the base and about two metres tall, a test pit in the

summit of C18 revealed bedrock only 35 cm beneath the surface. The mound is clearly for the most part a natural feature, but equally clearly its surface has been modified. Cobbles have been placed over the entire surface of the mound in a fairly regular fashion, and balloon photos of the mound (Fig. 5.8) (Fig. 5.8.1) show attempts were made to make the feature nearly perfectly circular at the base.

Lack of time prevented us from opening more than a two by two meter test pit in the summit. It remains to be seen whether elsewhere beneath the surface of this modified mound any cultural remains are to be found. At the moment C18 remains an enigma. The purpose for such time and energy consuming modifications are unknown beyond the obvious fact that it was not merely to build a large version of the simple conical grave superstructures. There may be burials beneath the surface of C18 at various points around its contours which we missed by the unfortunate placing of our test pit. On the other hand, the mound may just be a marker and devoid of any cultural remains. In future, the mound may perhaps be best surveyed by some form of remote sensing device before time consuming excavations are carried out. As it stands, we know neither the function of such large modified mounds, nor indeed whether they are of the same age as the simple conical tumuli.

6. The "Camembert" Tumuli and Related Finds

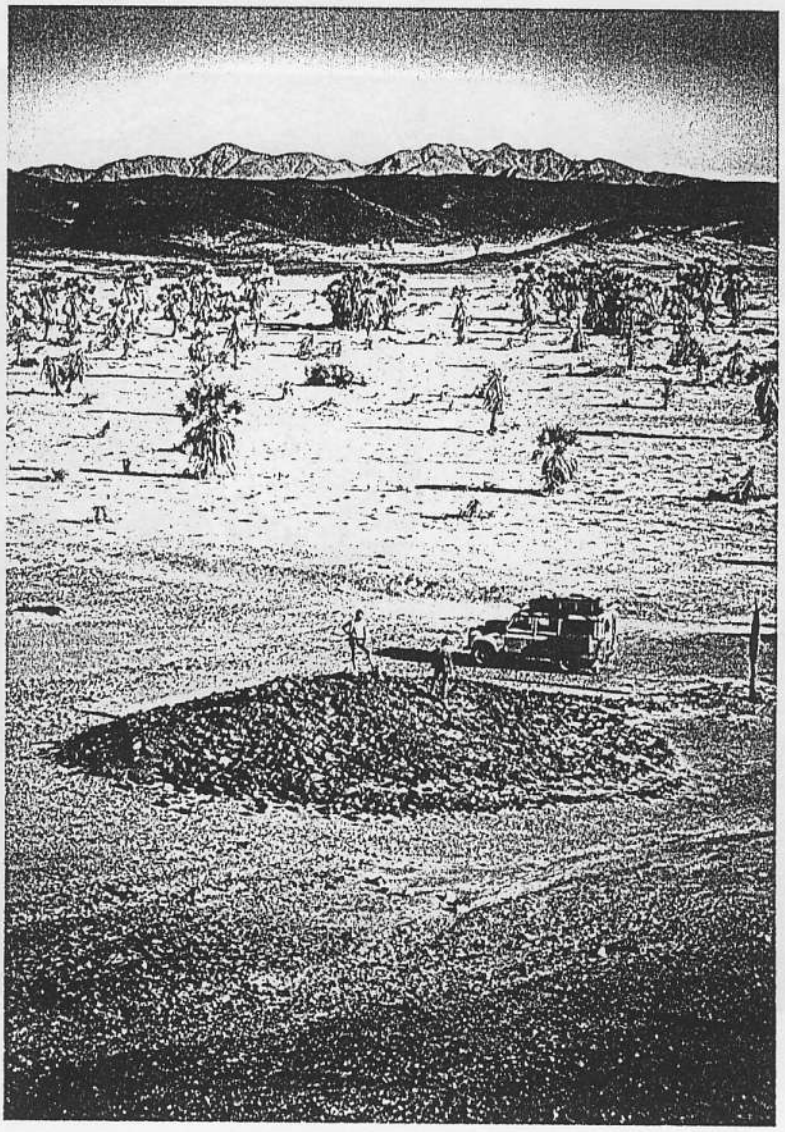


Fig. 5.8

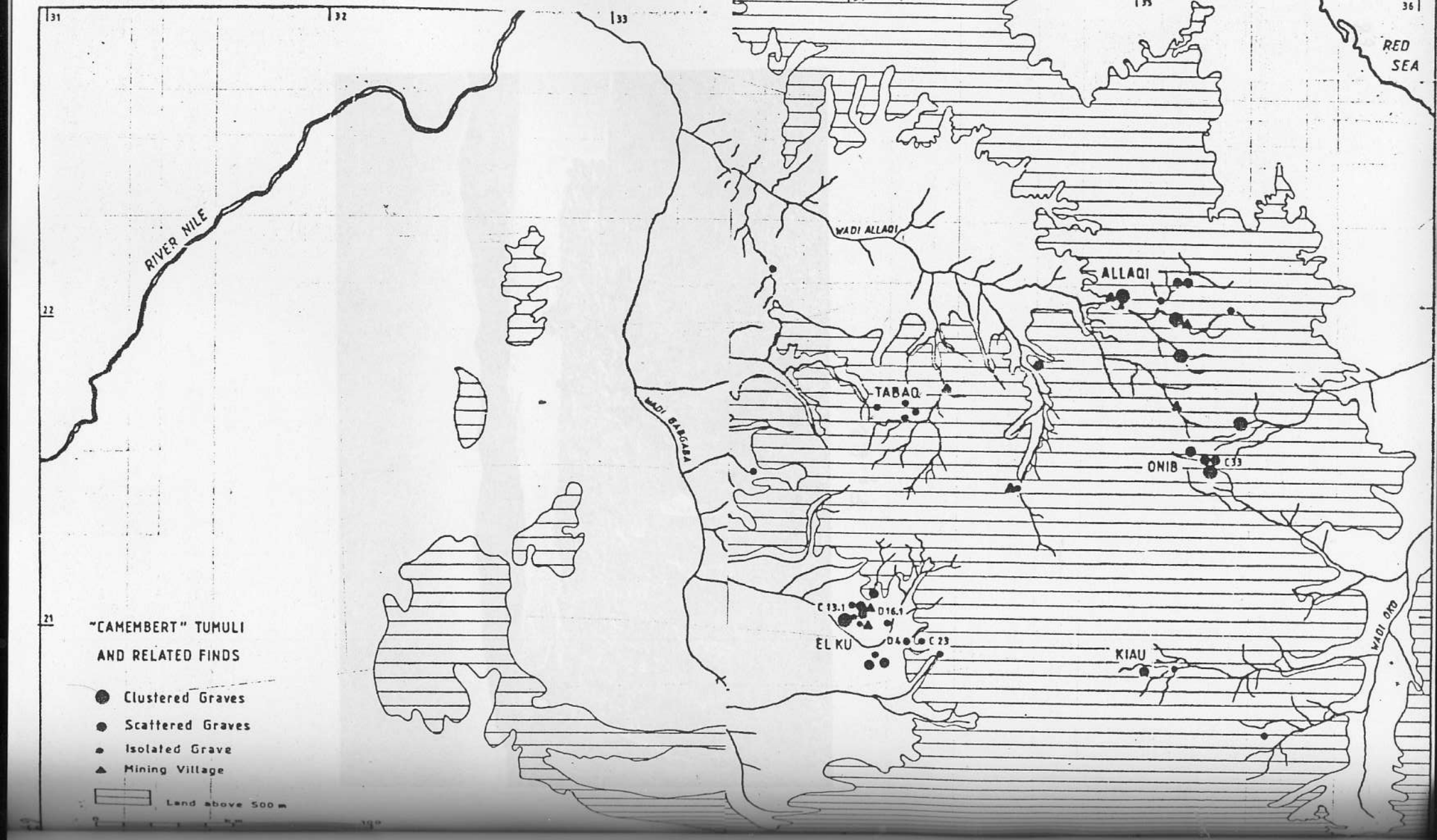
Fig. 5.8.1

6.1 Introduction

Scattered across the Red Sea Hills (Fig. 6.1) are hundreds of finely built, circular platform tumuli which have been dubbed by some French in the Sudan as "camembert" tumuli. The name, although perhaps overly facetious, describes the shape of the tumuli quite well (Fig. 6.2). Until further research allows a proper definition and naming of this archaeological culture, the current title will do.

For long, we thought these tumuli had some connection with the Lower Nubian C-Group culture of the late third and second millennia BC. The C-Group also has finely built circular platform tumuli (Bietak 1968), differing from the camemberts only insofar that the latter has additionally a ring of upright stones at the base of the tumulus. Some of the camemberts, as at site C48.0 for example, even have an appended rectangular chapel as do some of the C-Group tumuli known from Lower Nubia.

Not only the tumuli, but the ceramics of the two archaeological cultures resemble each other. The potsherds which we think are associated with the camembert graves sport design elements such as crosshatched triangles, lozenges and zoned areas very similar to some of the design elements on C-Group pots (cf. e.g., Bietak 1968), but the overall designs are not identical. Nevertheless, given the level of similarity we were sure that the camembert graves were at least contemporary with the C-Group if not belonging to a desert cousin of that Nubian culture.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32
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RED SEA
RIVER NILE
WADI ALLAQI
ALLAQI
22
TABAQ
WADI BARGABA
ONIB
C33
C13.1
D16.1
EL KU
D4
C23
KIAU
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21
"CAMEMBERT" TUMULI
AND RELATED FINDS
Clustered Graves
Scattered Graves
Isolated Grave
Mining Village
Land above 500 m

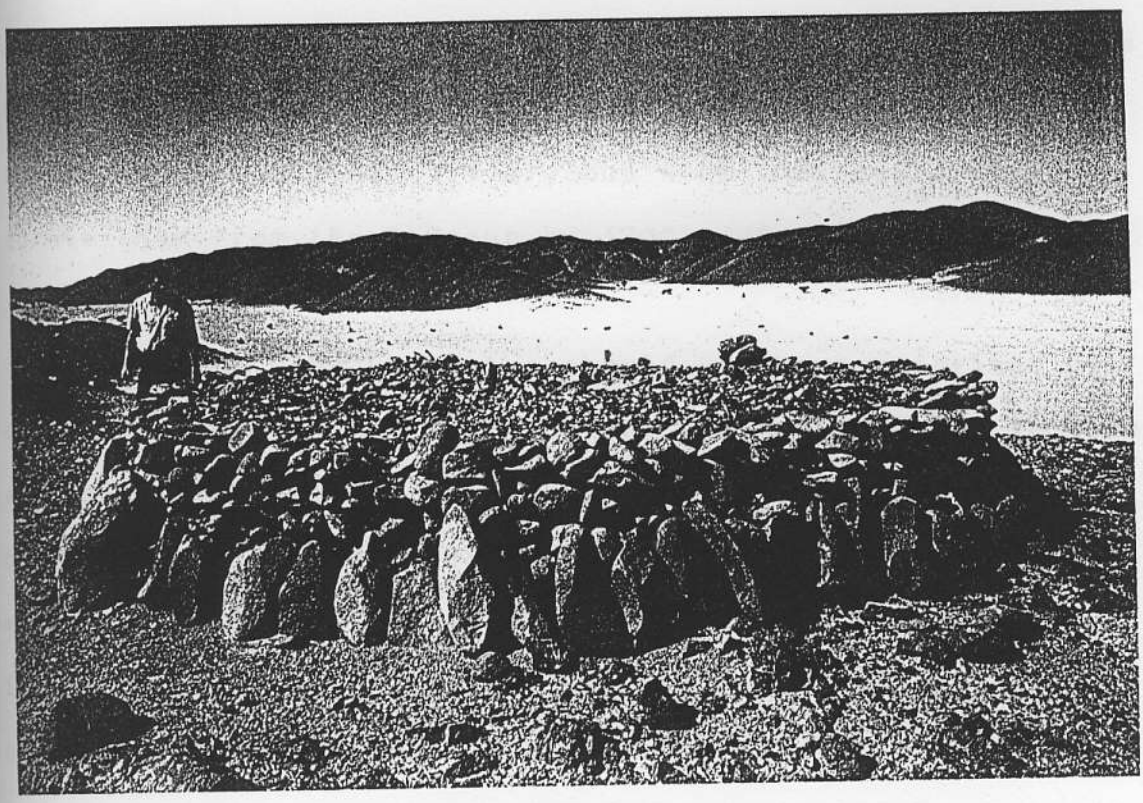


Fig. 6.2

Radiocarbon dating from the camembert graves have now shown that we were far off the mark. The camembert graves date to the seventh and eighth centuries AD, and are thus nearly two millennia younger than the C-Group. Ceramics from camembert graves farther north in the Egyptian part of the Red Sea Hills suggest that some of these graves might date as early as the Greco-Roman period (Sadr 1991a), but even that would still separate them from the C-Group by 1200-1500 years.

In retrospect, the C14 dates should not have surprised us. The camembert graves and ceramics are very often found in close association with Islamic remains, a fact which should have alerted us to close relations between the two. Although the camembert tumuli are clearly not Islamic, they probably were still being built after the initial influx of Arab miners during the seventh century. Another clue to the age of the camembert graves can now be seen in sherds of a ceramic stool or stand, the central motif of which was a cross suggesting a design from the Christian period. We feel the dating of the camembert tumuli is quite secure and at the moment we cannot explain the close similarity to C-Group remains other than as coincidence. Certainly, we have not found any remains which could provide a stylistic bridge across the 1500-2000 year gap separating them.

The camembert tumuli are found from the Egyptian Red Sea Hills (Sadr 1991) as far south as the latitude of Port

Sudan-Atbara (Jacques Reinold, personal communication), and from the Nile Valley (Vercoutter 1959; Horst Jaritz, personal communication) to the Red Sea Coast (Hinkel 1992). Judging by this wide distribution and the quantity of tumuli, we can be sure we are dealing with the graves of an indigenous desert population. Historical records tell us that the desert people here were already known during the first few centuries AD by their modern name, Beja; that they had resisted the Roman Empire (who called them the Blemmyes) so effectively that Rome had abandoned Lower Nubia, leaving the Blemmyes as the rulers of the stretch of the Nile known then as the Dodekaschoenos (Kirwan 1982). In the fifth or sixth century, the Blemmyes were driven out of the Nile Valley by the Noba King Silko, but retained control of the Nubian Desert.

Throughout these early centuries the gold and emerald of the desert belonged to the Beja who traded the latter as far south as Axum, in Eritrea (Kobischchanov 1979). Thus, the period after the Roman's withdrawal from the Dodekaschoenos until the arrival of the Arabs can be considered as a classic period of Beja culture. The camembert graves, easily the most impressive funerary structures in the Red Sea Hills, bear ample evidence to the grandeur of the Beja during this time.

6.2 The Tumuli

Indeed, the graves must have included a rich collection of treasures: we searched a good deal to find a few intact

camembert graves for excavation: the rest have been mutilated by plunderers over the centuries. Given the scale of looting, one assumes it was a profitable endeavour. Of the five camembert graves we eventually excavated only two proved to be untouched; a third was badly damaged, a fourth obviously looted and emptied except for a few bone fragments and the last inexplicably without a body, although the superstructure showed no sign of looting.

Of these graves C23 is perhaps the most informative (Fig. 6.3). Located in the wadi El Ku area, C23 is the grave of an adolescent already rich or high enough in social status to have been buried with five gold pieces. The tumulus of C23 is a typical camembert type platform only some 4 m in diameter (Fig. 6.4). It was built atop an older funerary structure: a large ring tumulus with the grave on the eastern edge of the stone (Fig. 6.4.1)
circle. This original grave was thoroughly looted, but the camembert tumulus was untouched. Excavations carried out in the centre of the stone circle, between the original grave and the camembert tumulus (operation 3) revealed a fireplace and many animal bones of sheep and cattle (Louis Chaix, see appendix 4), along with charcoal which was dated to 3102 BC (4480 ± 20 BP; Pta 6211, see appendix 1). This presumably is the age of the original funerary structure, the fireplace and bones represent perhaps remains of a funerary rite. There is very little possibility that the date is unassociated with the grave as there are no other archaeological sites or occupations visible in the vicinity. The camembert tumulus was constructed considerably

Fig. 6.3

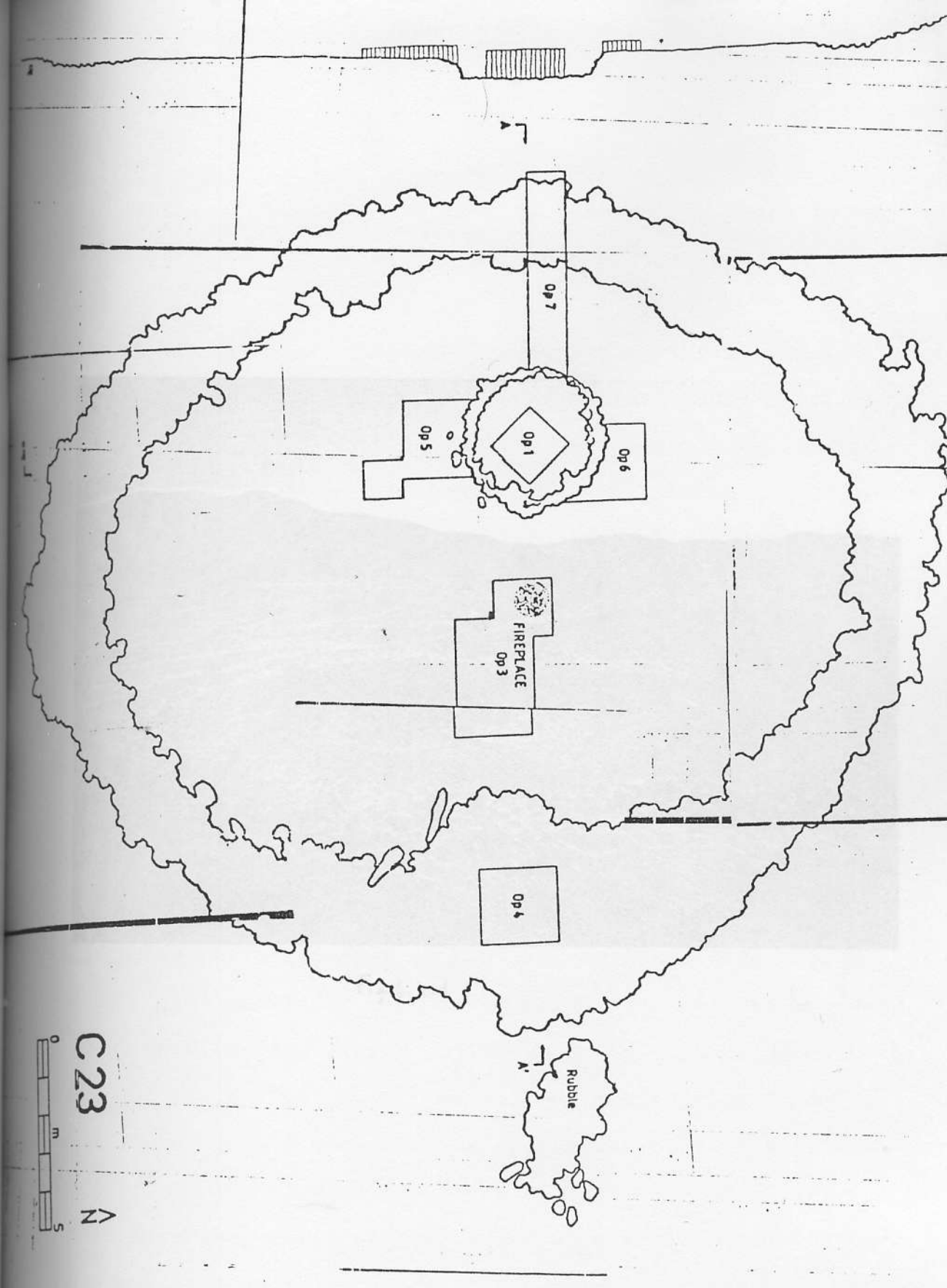


Figure 6.4 Overview of C23 burial complex

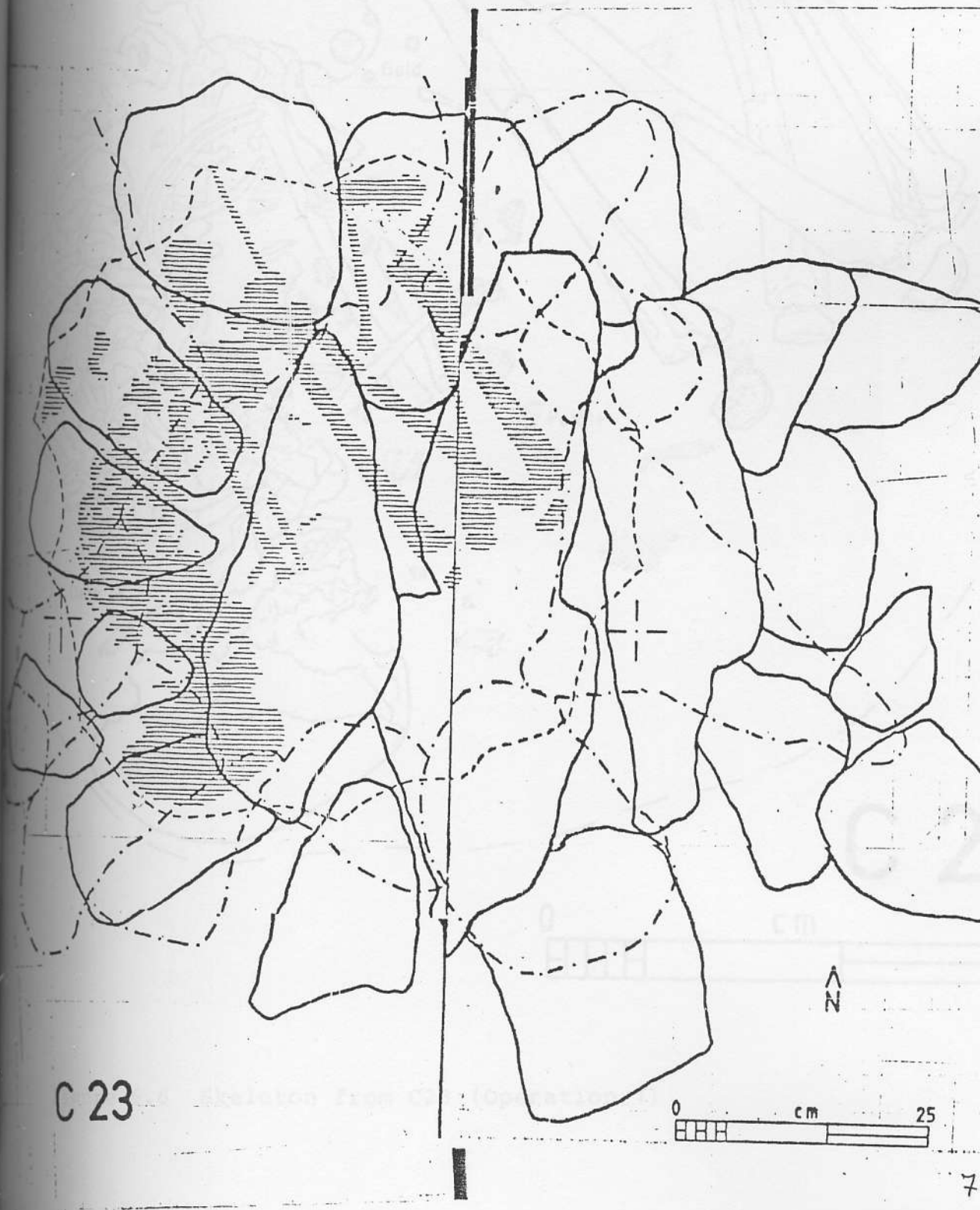
Fig. 6.4.1

later: leather from within the burial chamber was dated to AD 656 (1390 ± 70 BP; Pta 6213, see appendix 1).

We excavated a square through the centre of the tumulus (operation 1), finding the cover of the burial chamber, in the form of three long stone slabs, not far below the surface (Fig. 6.5). The burial chamber was constructed of a three tiered rock circle around the body, with the second tier slightly more constricted than the first, and the third even more so, such that if the process had been continued a corbelled vault or dome would have resulted. Instead, after the third tier the builders closed the chamber with three long boulders and on top piled large cobbles which make up the heart of the tumulus. The surface of the platform was covered with small gravel and pebbles to provide a uniform, even surface.

Within the burial chamber of C23 lay the bones of a tall 12-13 year old individual (estimated height 140 cm; see appendix 3), lying in a tightly flexed position on its right side with the head to the south (Fig. 6.6). (Fig. 6.6.1) Around the skeleton we found five date fruits in such a good state of preservation that they seem unlikely to have been placed there with the body, which was not at all well-preserved. Probably the fruits were introduced by rodents not long ago; a rodent's nest was also discovered within the chamber.

Figure 6.5 Burial chamber of C23 (Operation 1)



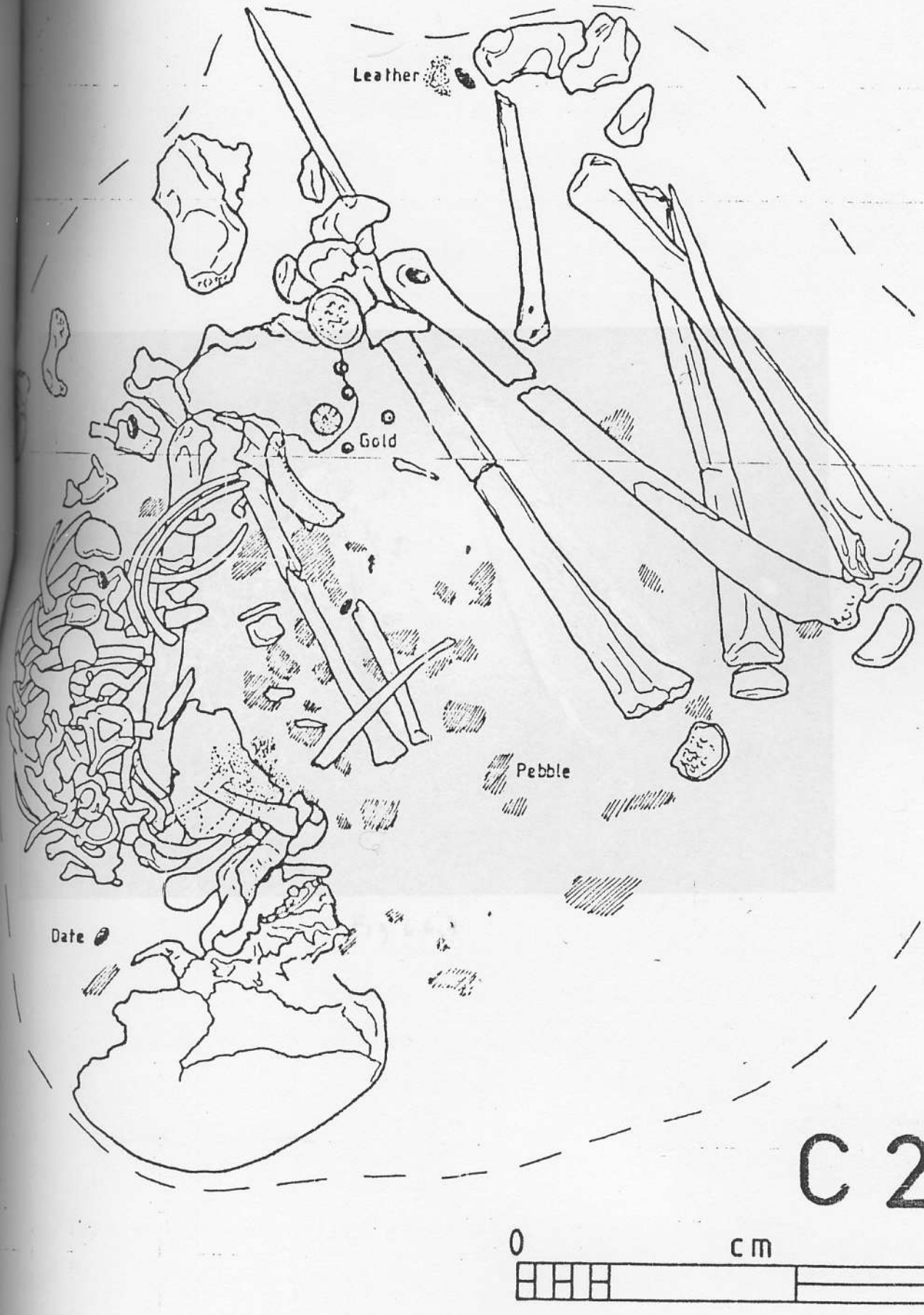


Figure 6.6 Skeleton from C23 (Operation 1)

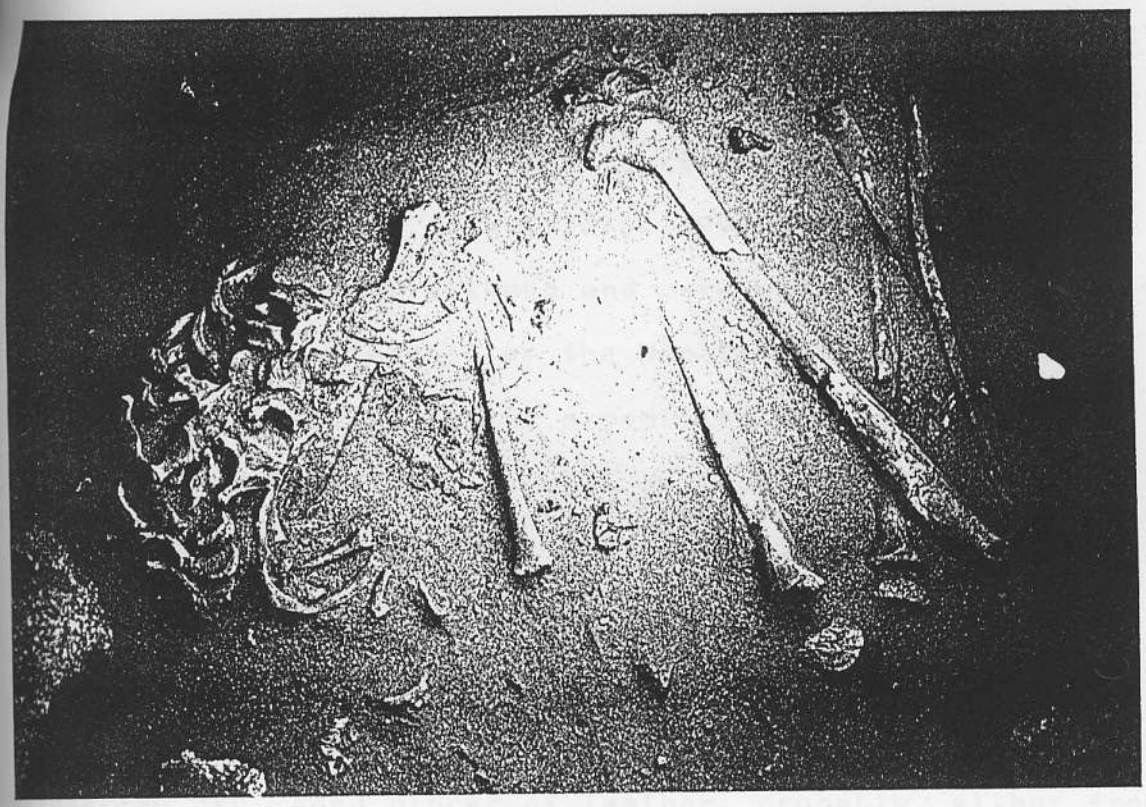


Fig. 6.6.1

What was certainly not introduced by rodents are five gold pieces found in the pelvic area of the skeleton. These pieces, a larger paper-thin gold disc and four smaller discs (Figs. 6.7 and 6.8), were probably originally sewn onto a piece of garment as all the discs are pierced. Furthermore, the large disc which is decorated with four lines dividing the circle into eight sectors, is clearly a rosette of a kind known from Napatan/Meroitic graves and also from engravings of that period showing such decorations sewn onto clothing (cf. e.g., Torok 1990, figure 13). The rosettes in C23 were flattened and very worn, suggesting they may be heavily reused pieces from the Napatan/Meroitic periods. Fresher examples found by the expedition in another context (a looter's cache in D16.1), as well as those found in the royal Napatan graves (Dunham 1950, 1955) are all mould pressed with clear relief.

Beneath the skeleton, in patches under the ankle and shoulder blades lay dry, aged pieces of leather, probably either from clothing or a blanket lain under the body. It was this leather which was submitted for dating. In the chest area of the skeleton were a few local pebbles, perhaps placed there deliberately. The body itself was placed on ground level: there was no burial pit.

At C23 we also excavated operation 5 to the south of the tumulus--at the head end of the grave as it were--searching for buried offerings. Just beneath the soil surface we unearthed the

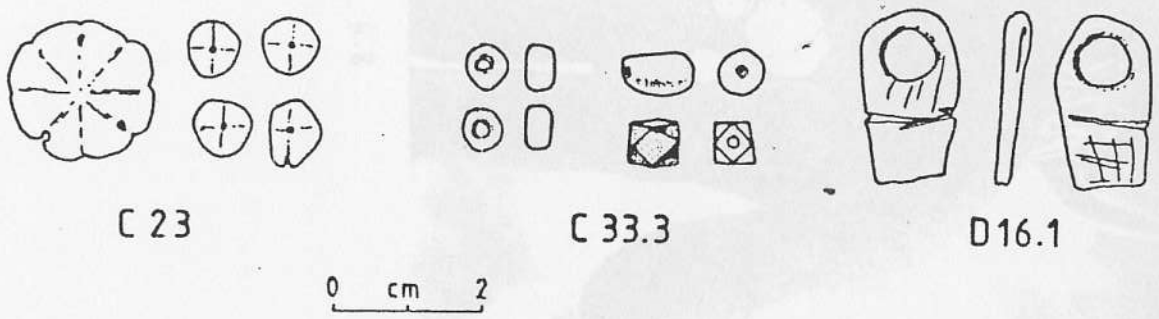


Figure 6.7 Small finds from the burial chambers of C23 (Op. 1), C33.3, and D16.1

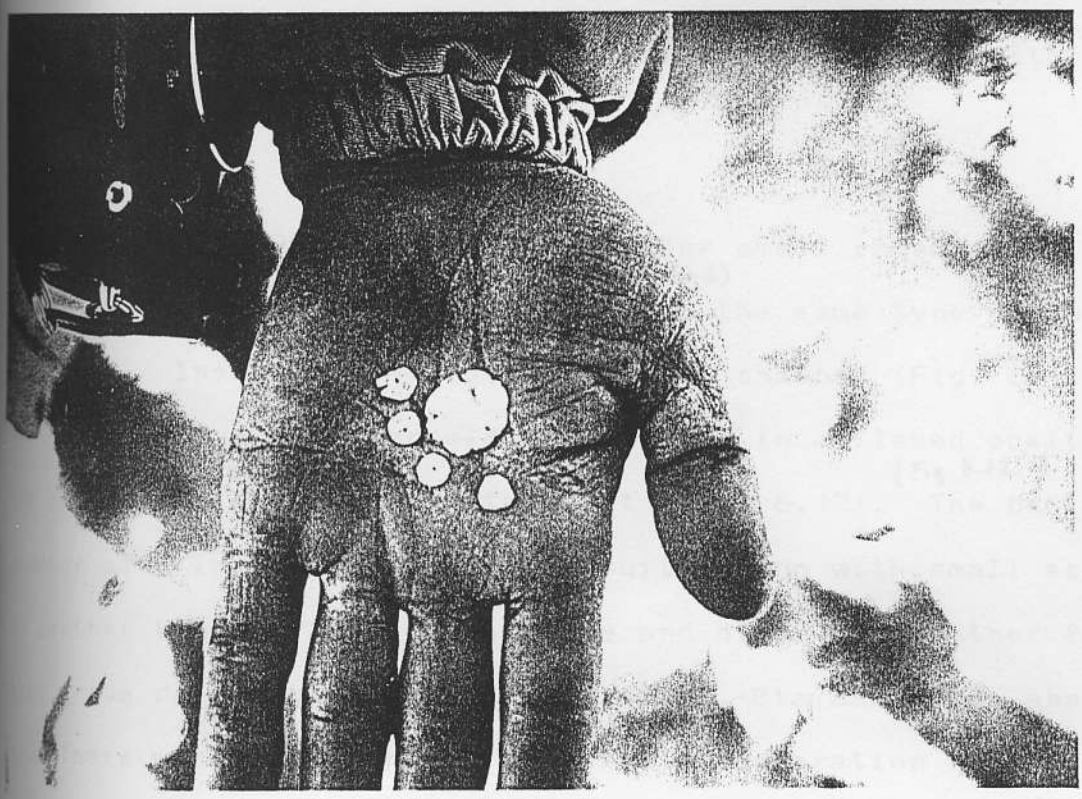


Fig. 6.8

(Fig. 6.8.1)
complete articulated skeleton of a dog (pariah) and some bones of a subadult sheep (Louis Chaix, see appendix 4). Given their location (Fig. 6.9) it is more likely that the animals are associated with the platform tumulus rather than with the original and much older ring tumulus. This was the only sacrificial offering we found in possible association with a camembert grave.

Not far from C23 we excavated another small camembert tumulus, D4 (Fig. 6.10), and found much the same type of burial as in C23. (Fig. 6.10.1) (Fig. 6.10.2) Inside a slab covered burial chamber (Fig. 6.11) lay the remains of a 3-4 year old child lying in a flexed position on the right side with head to the west (Fig. 6.12). (Fig. 6.12.1) The burial chamber also included a few date fruits along with small scraps of leather beneath the elbows, knee and hip. The leather from this grave dated to AD 740 (1280 ± 60 BP, Pta 6208, see appendix 1). There were, however, no articles of decoration nor any other artefacts in the chamber, although a few broken pebbles in the chest area of the skeleton may, as in C23, have been placed deliberately. Above the chamber roof lay a large, broken grinding stone (Fig. 6.11).

(Fig. 6.12.2)
Two other graves were excavated in the El Ku area. C13.1, a larger camembert grave with a diameter of some 7 m, proved also to have a chamber rather than a vault type of internal architecture. The chamber, however, was a rectangular box of long boulders rather than a corbelled semi-vault as in C23 and D4.

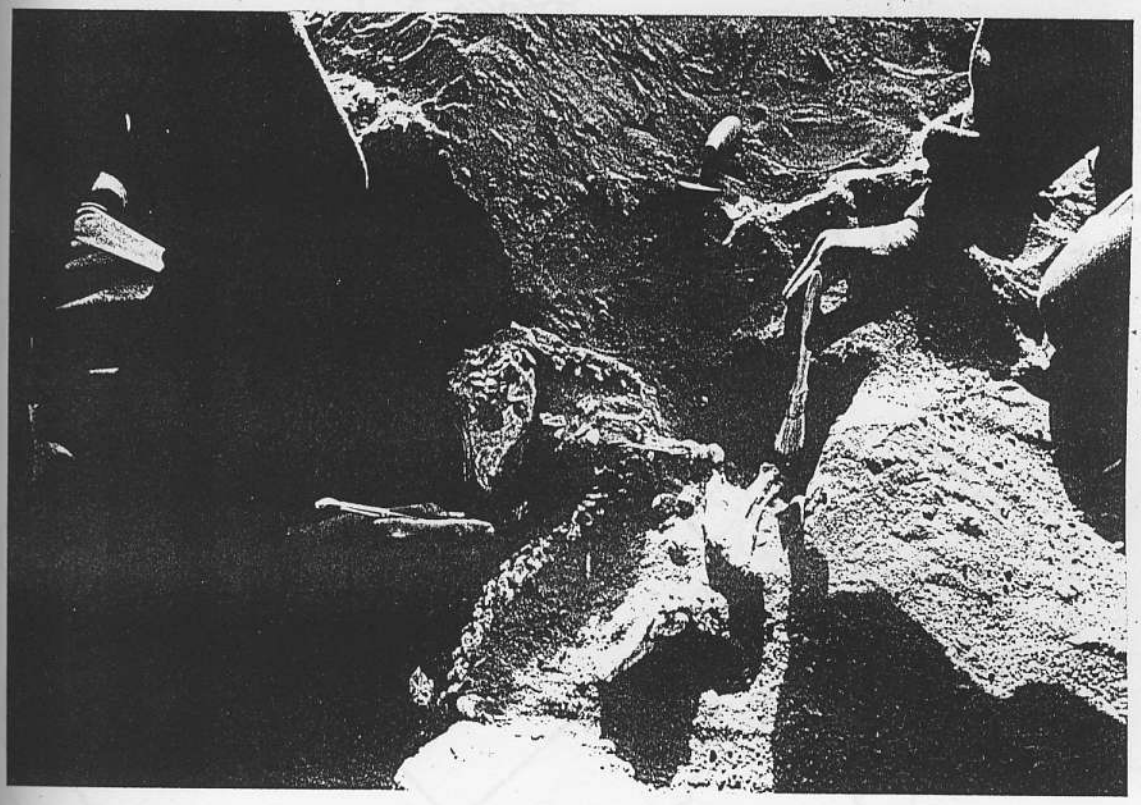


Fig. 6.8.1

Figure 6.9 Plan of the C23 tumulus (operation 1) in relation to the sacrificial dog.

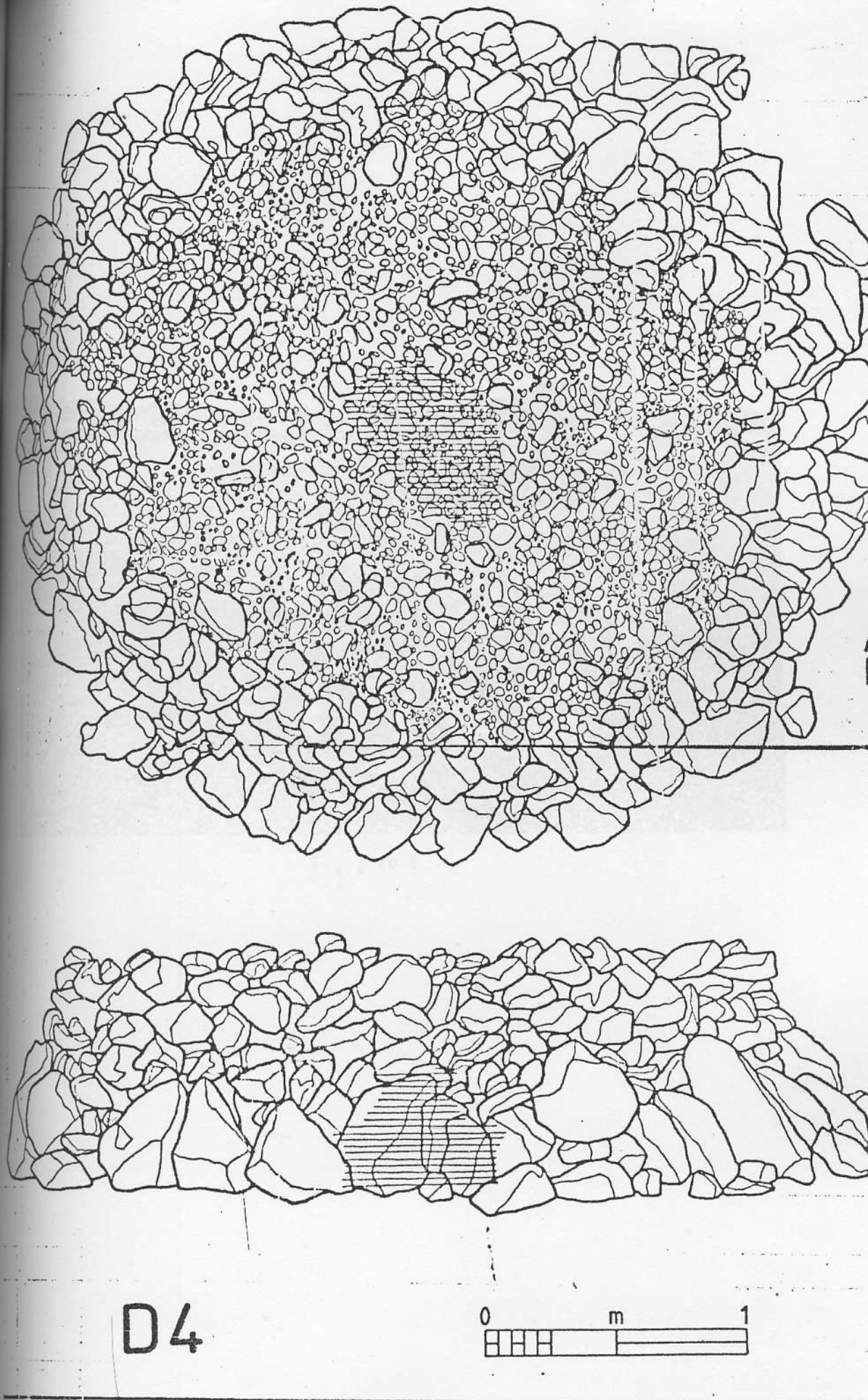


Figure 6.10 The superstructure of the D4 Tumulus. Shaded area shows location of burial chamber

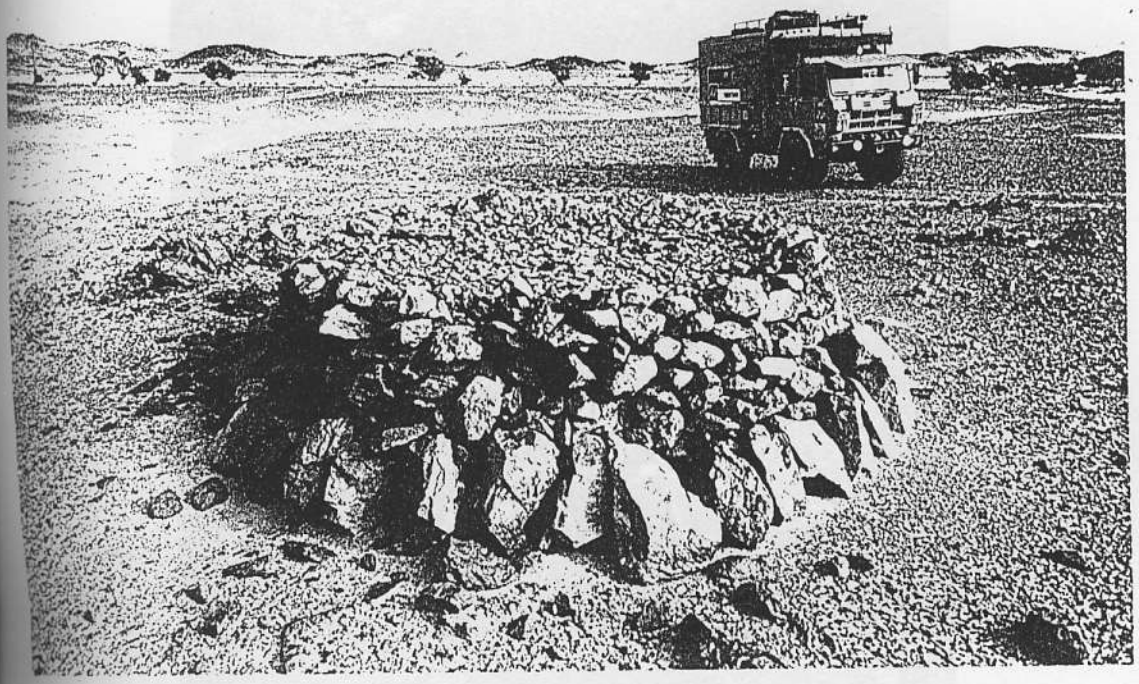


Fig. 6.10.1

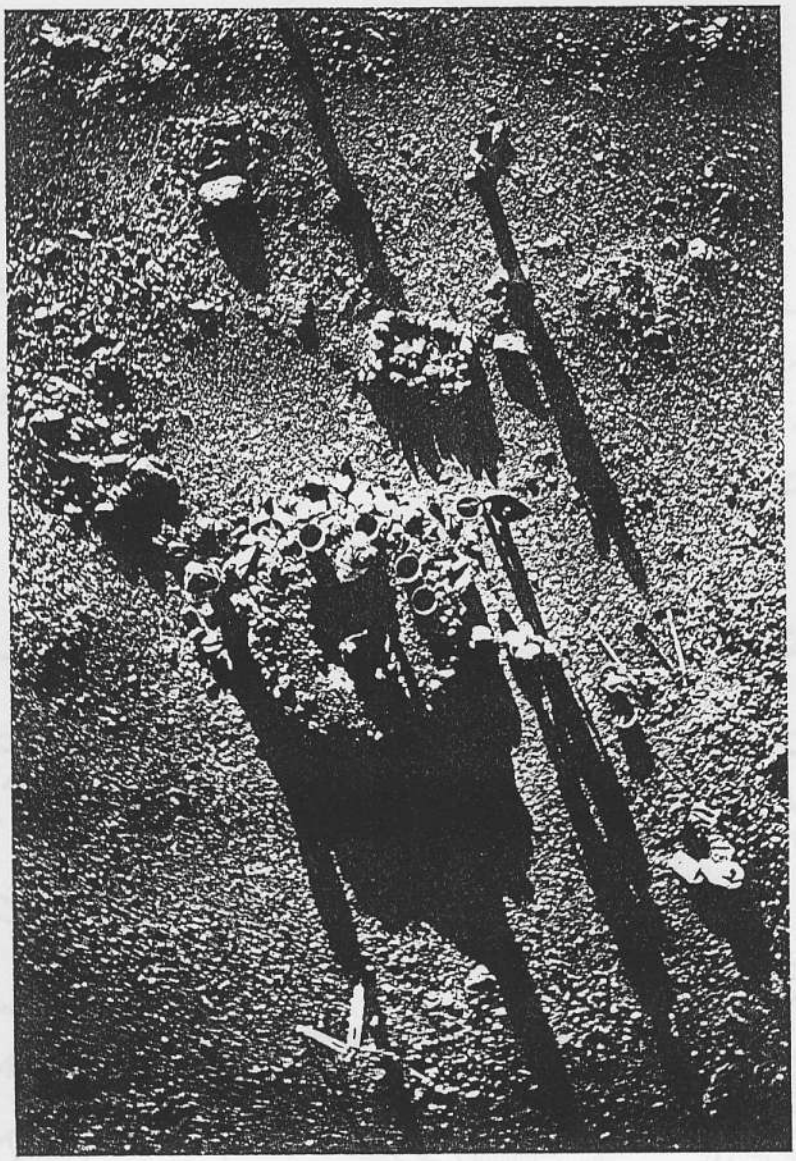
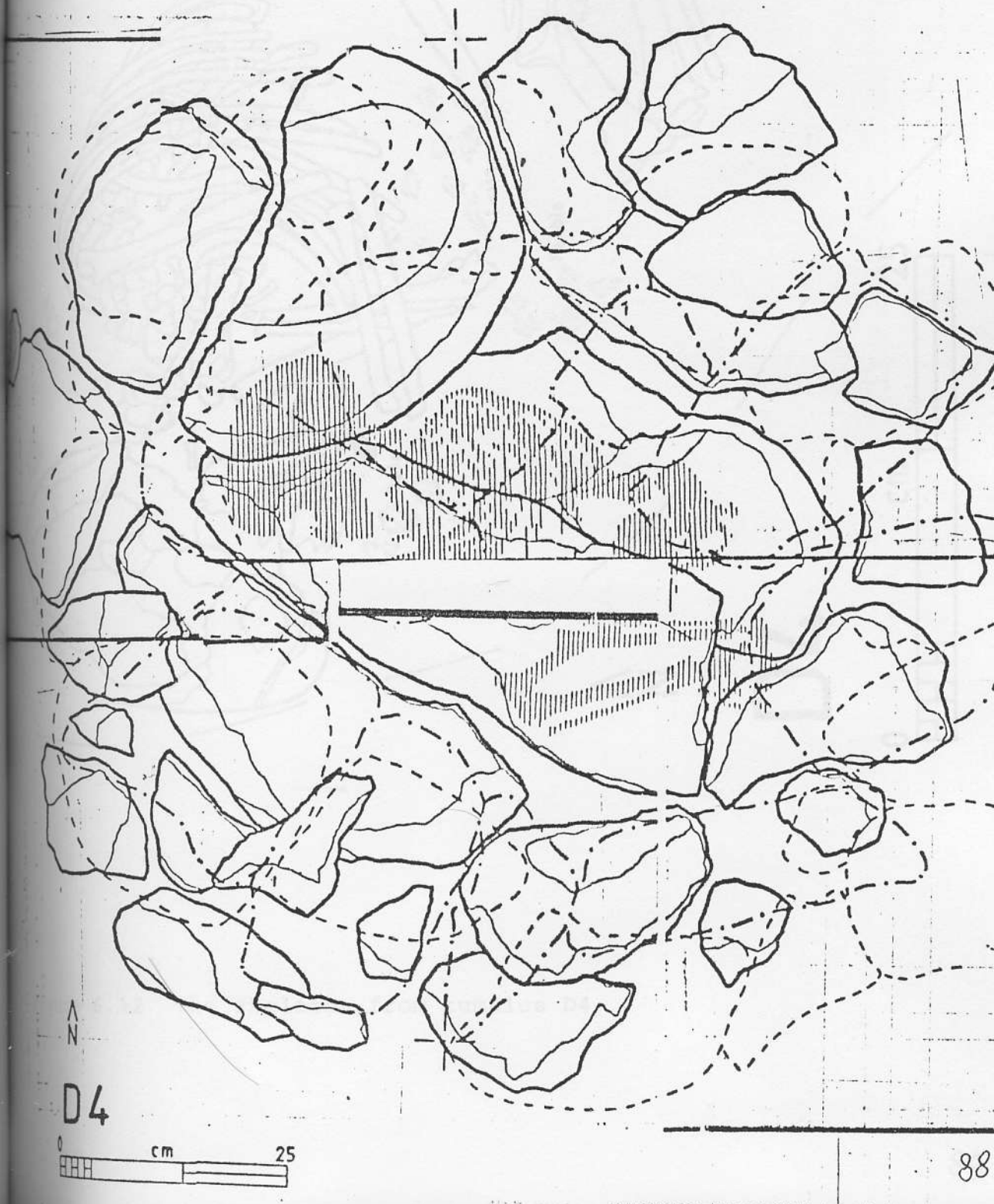


Fig. 6.10.2

Figure 6.11 The burial chamber of tumulus D4



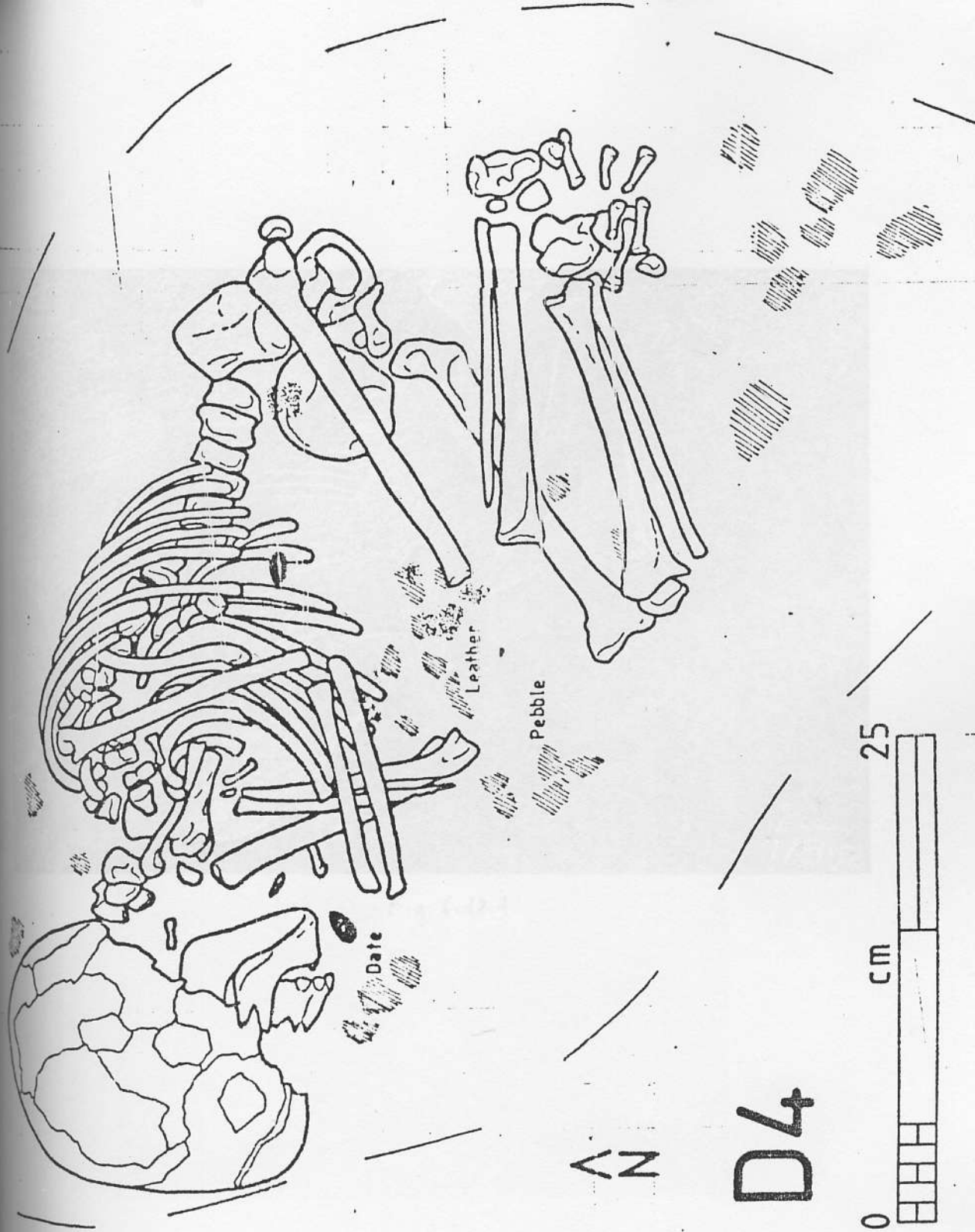


Figure 6.12 The skeleton from tumulus D4

Fig. 6.12.1

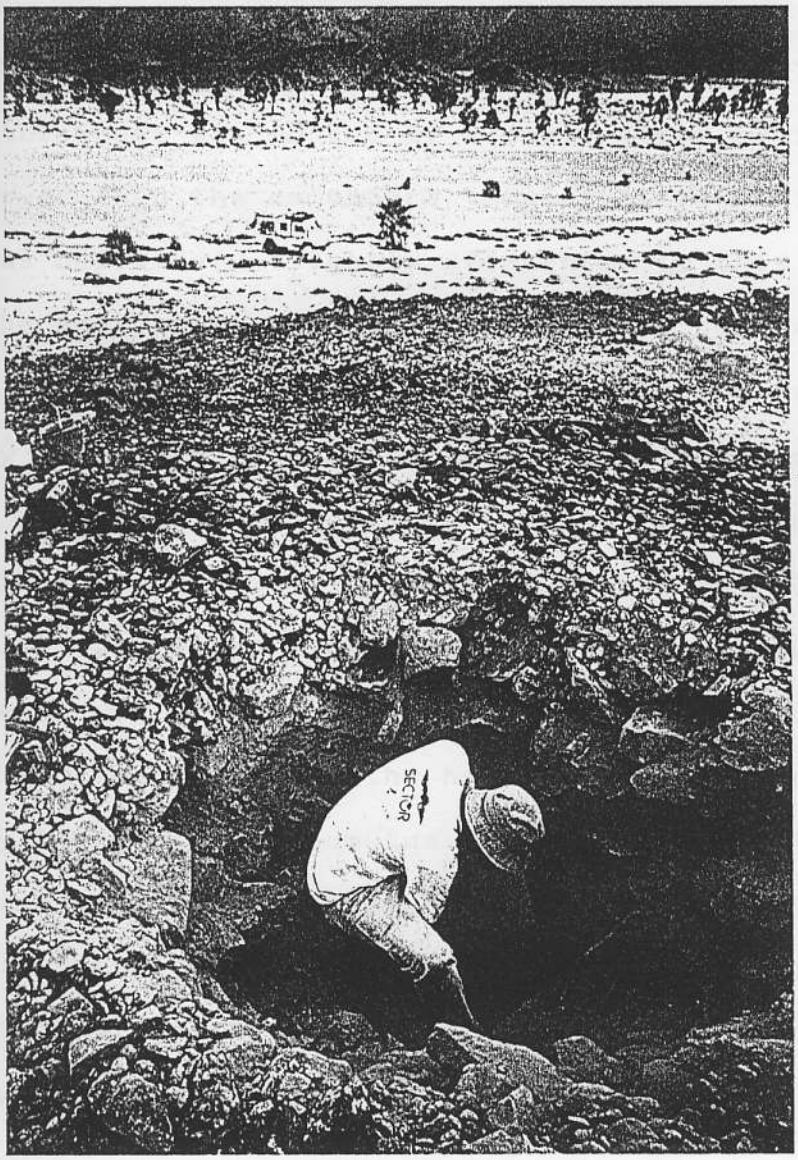


Fig. 6.12.2

The enigma about C13.1 is that although its surface and the chamber were clearly undisturbed, there was no body in the grave. The chamber included only two unidentifiable bone fragments.

Like C23, C13.1 is built atop an older grave. The older grave in this case was marked by a small stone semicircle just barely larger than the camembert tumulus itself (Fig. 6.13). The tumulus was built very slightly off-center in this stone arc. Beneath the empty burial chamber of C13.1 we continued to excavate in what was clearly a hole dug into bedrock and eventually after some 50 cm reached a large rock under which lay some ribs and parts of a forearm. It was clear that this was the burial pit of the original semicircle grave, in relation to which the deep pit was placed exactly centre. In relation to the burial chamber of C13.1 , however, the deep pit was out of alignment and two thirds of the hole cut into bedrock remained covered by the overlying tumulus. Due to lack of time we could not continue excavations here, but it is hoped that we will find the time in future seasons to dismantle C13.1 completely in order to excavate the underlying burial. As it was, we sealed off the deep pit without removing any of the bones.

At this stage we have no idea how much older the underlying grave is, whether it originally had its own superstructure, why the overlying camembert tumulus was built atop the older grave, and most importantly why it was left empty after all that work. All we can say in view of the repeated pattern at C13.1 and C23

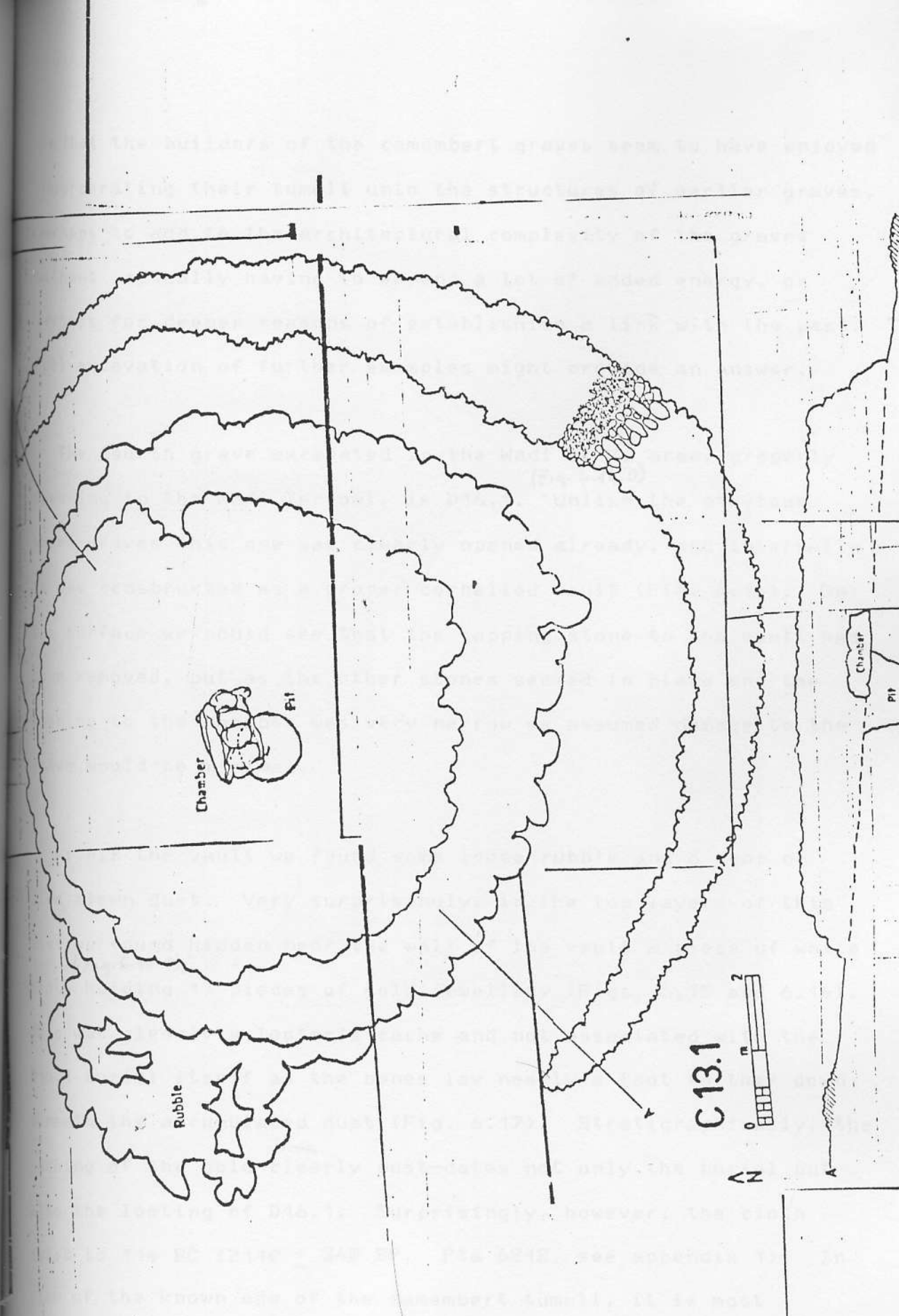


Figure 6.13 Plan of Tumulus C13.1

is that the builders of the camembert graves seem to have enjoyed incorporating their tumuli unto the structures of earlier graves, perhaps to add to the architectural complexity of the graves without actually having to expend a lot of added energy, or perhaps for deeper reasons of establishing a link with the past. Full excavation of further examples might provide an answer.

The fourth grave excavated in the Wadi El Ku area, properly speaking in the Wadi Terfowi, is D16.1. (Fig. 6.14.0) Unlike the previous three graves this one was clearly opened already, and internally it was constructed as a proper corbelled vault (Fig. 6.14). On the surface we could see that the capping stone to the vault had been removed, but as the other stones seemed in place and the opening to the chamber was very narrow we assumed damage to the grave would be minimal.

Within the vault we found some loose rubble and a heap of wind blown dust. Very surprisingly, in the top layers of this dust we found hidden near the wall of the vault a piece of white cloth (Fig. 6.15.0) holding 17 pieces of gold jewellery (Figs. 6.15 and 6.16). This was clearly a looter's cache and not associated with the D16.1 burial itself as the bones lay nearly a foot farther down beneath the accumulated dust (Fig. 6.17). Stratigraphically, the caching of the gold clearly post-dates not only the burial but also the looting of D16.1. Surprisingly, however, the cloth dates to 114 BC (2110 ± 340 BP, Pta 6212, see appendix 1). In view of the known age of the camembert tumuli, it is most

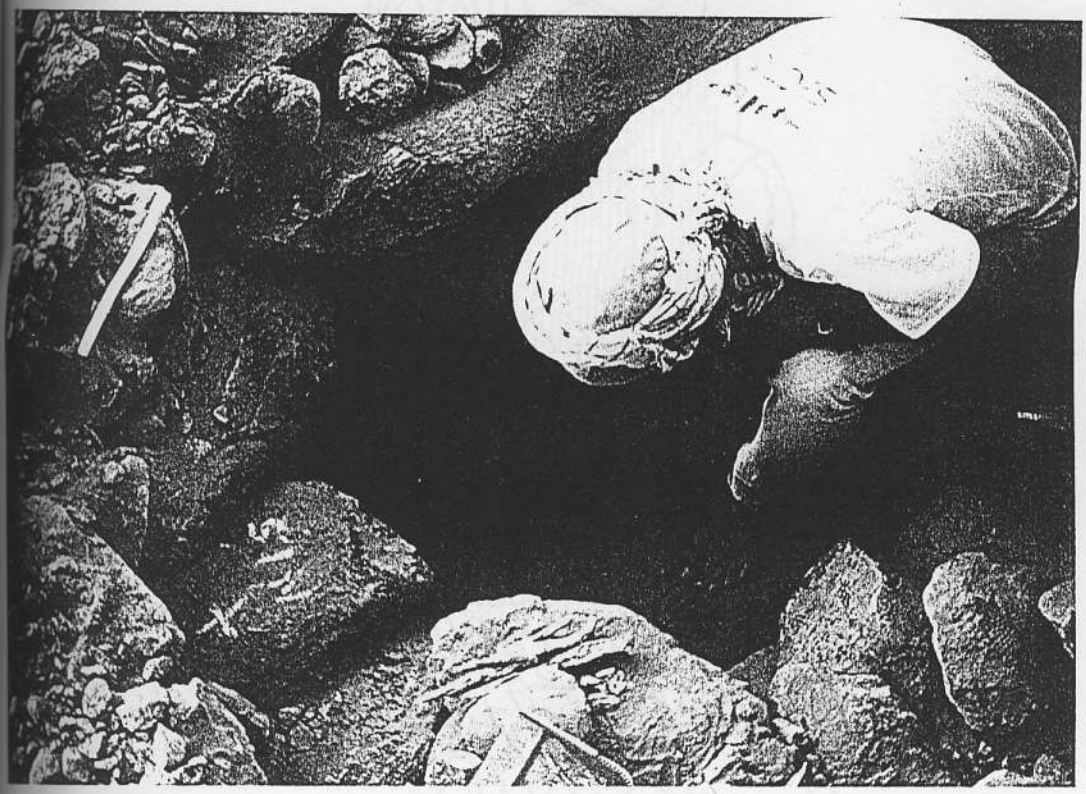


Fig. 6.14.0

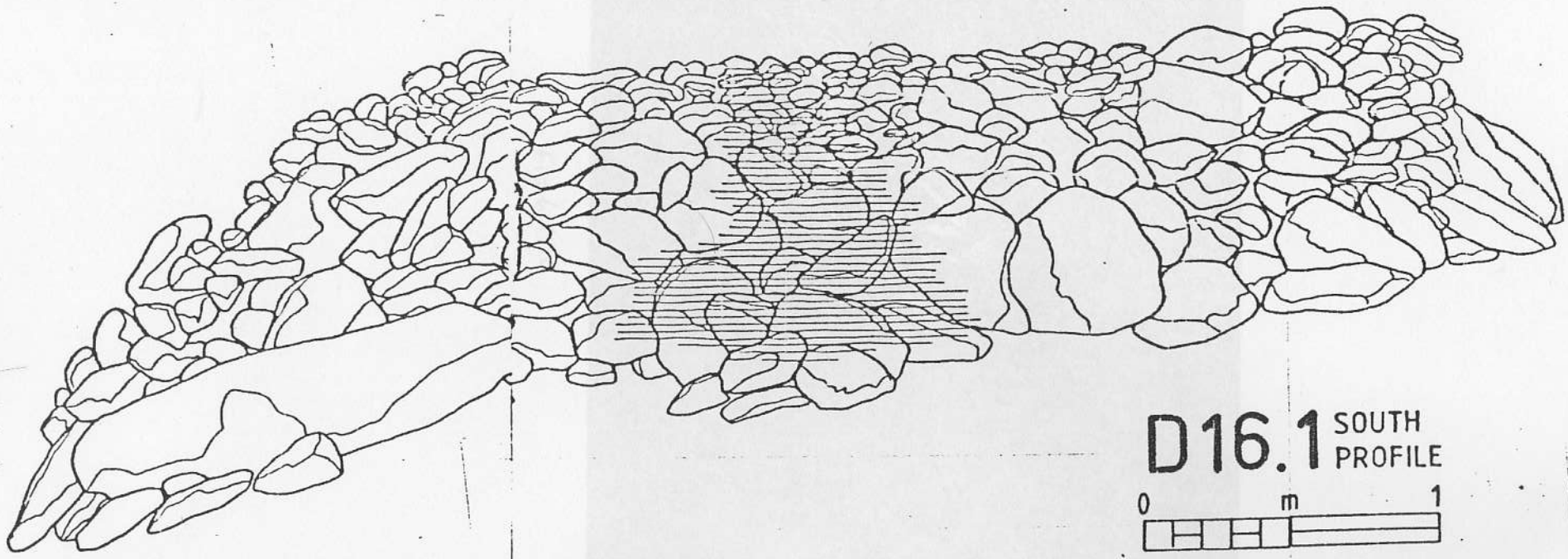


Figure 6.14 The superstructure of tumulus D16.1 in profile. Shaded area denotes burial vault.

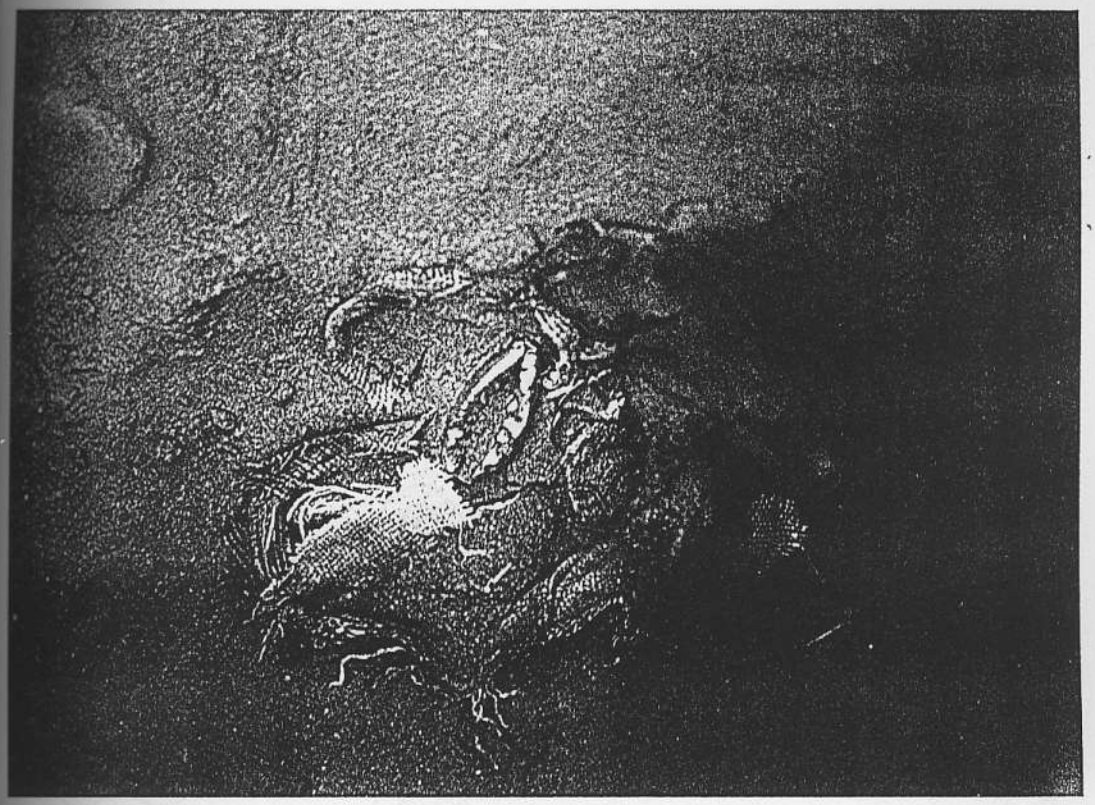
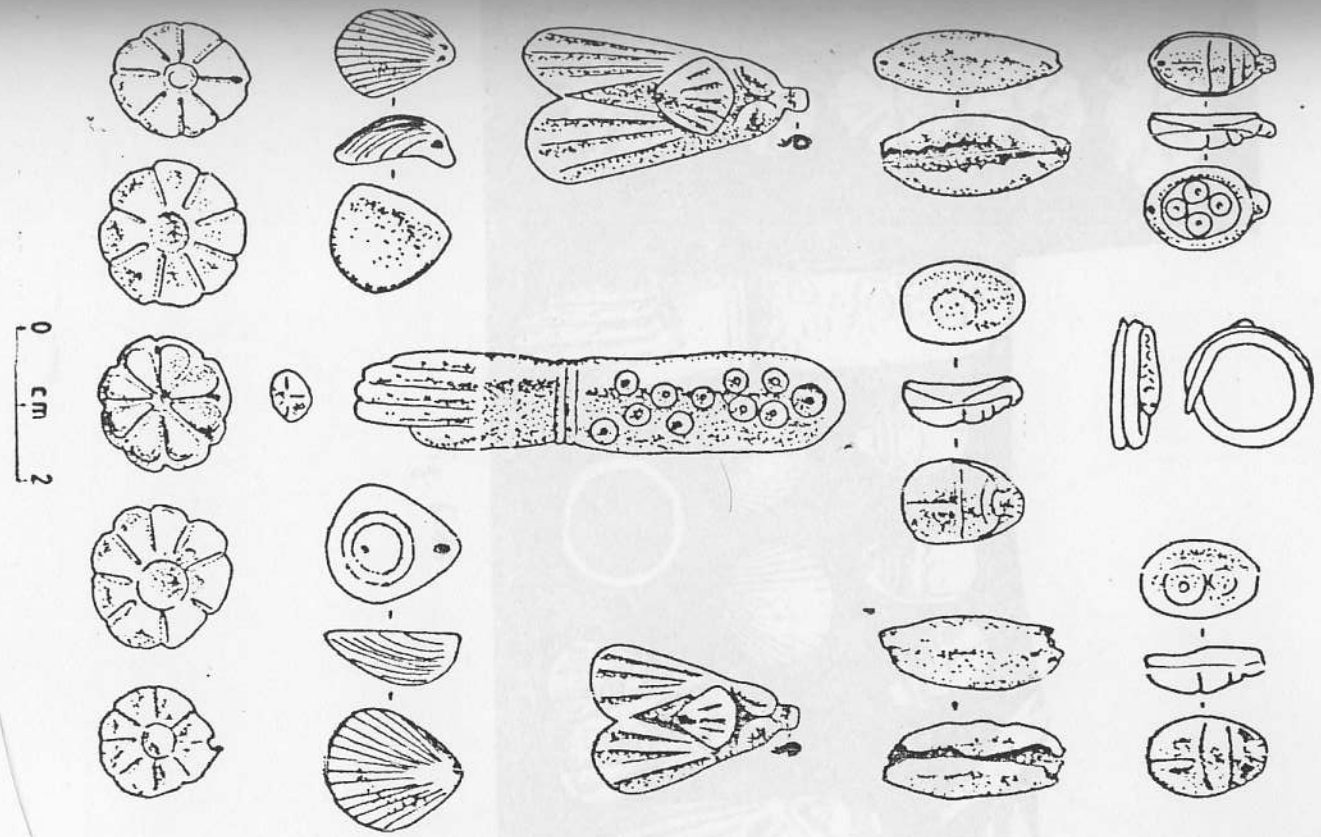


Fig. 6.15.0



Figire 6.15 The gold artefacts found in the looter's cache in tumulus D16.1

Fig. 6.16

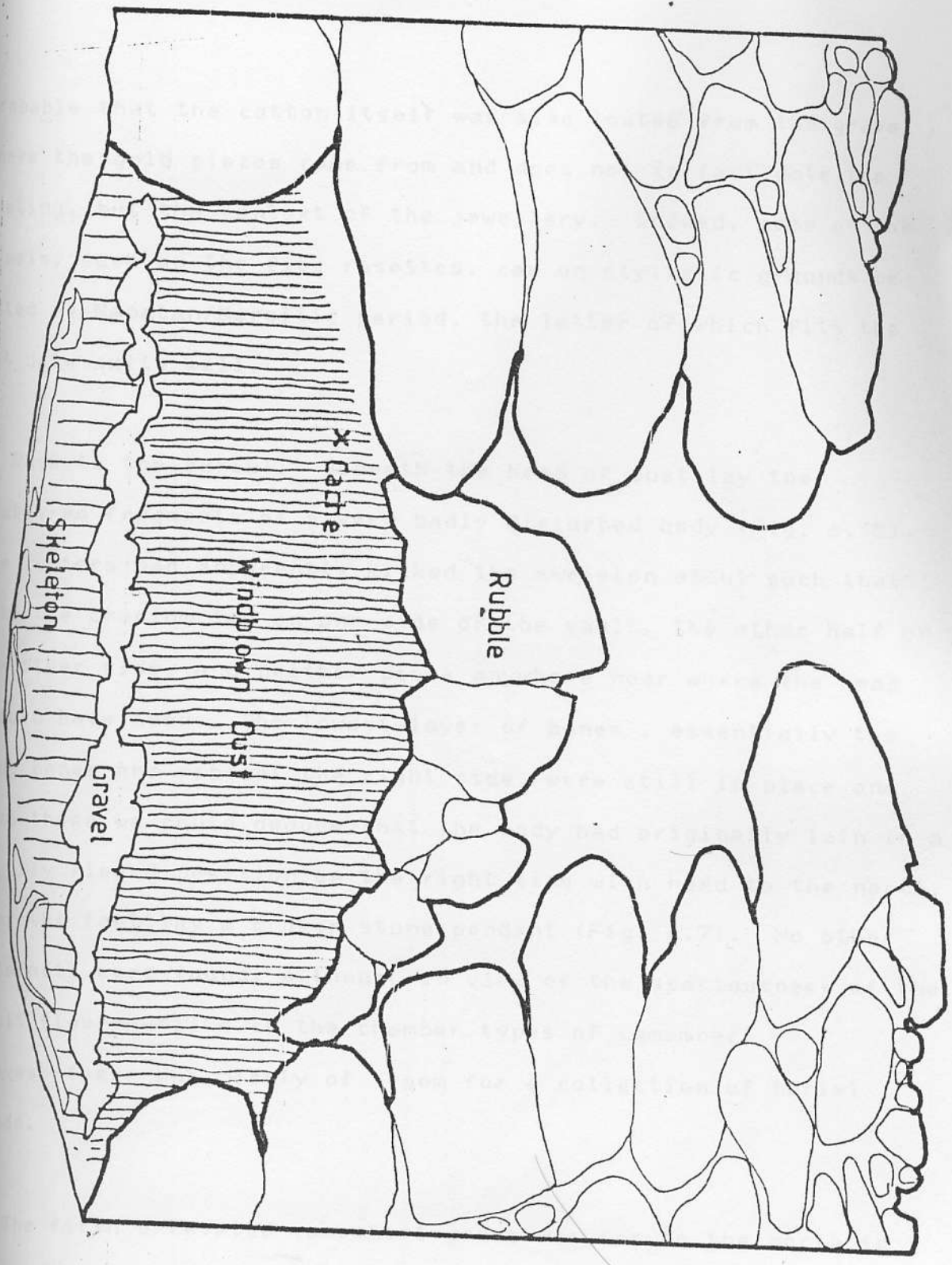


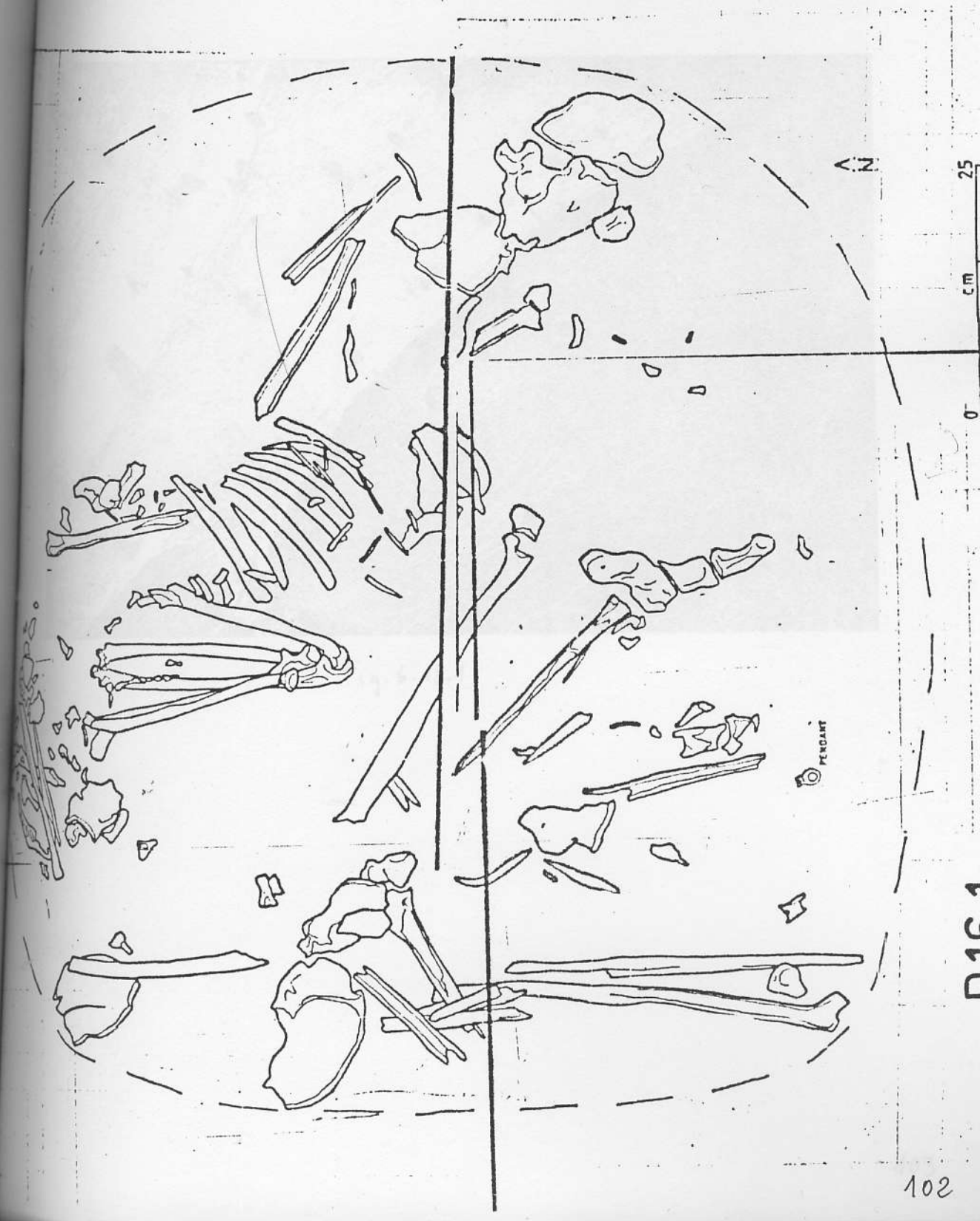
Figure 6.17 Stratigraphic section of the burial vault from Tumulus D16.1

probable that the cotton itself was also looted from the grave where the gold pieces came from and does not in fact date the looting, but the context of the jewellery. Indeed, some of the jewels, such as the five rosettes, can on stylistic grounds be dated as Napatan/Meroitic period, the latter of which fits the C14 date quite well.

Back to the burial. Beneath the heap of dust lay the scattered fragments of a very badly disturbed body (Fig. 6.18). The looters had apparently kicked the skeleton about such that half the cranium lay on one side of the vault, the other half on the other side, and neither piece anywhere near where the head should have been. The lowest layer of bones , essentially the long bones and ribs of the right side, were still in place and from these we could deduce that the body had originally lain in a tightly flexed position on the right side with head to the north. Near the feet lay a broken stone pendant (Fig. 6.7). No other artefacts were found, although in view of the spaciousness of the vault floor--unlike in the chamber types of camembert graves--there was plenty of room for a collection of burial goods.

The fifth excavated camembert grave was far to the north in the Onib area. Located in a cemetery within the Onib ring complex (Fig. 6.18.1), C33.3 is large with a diameter of nearly 10m (Fig. 6.19). (Fig. 6.19.1) Its internal construction was of the vault type, but the surface showed the vault to have collapsed. Hoping that the

Figure 6.18 The skeleton from D16.1



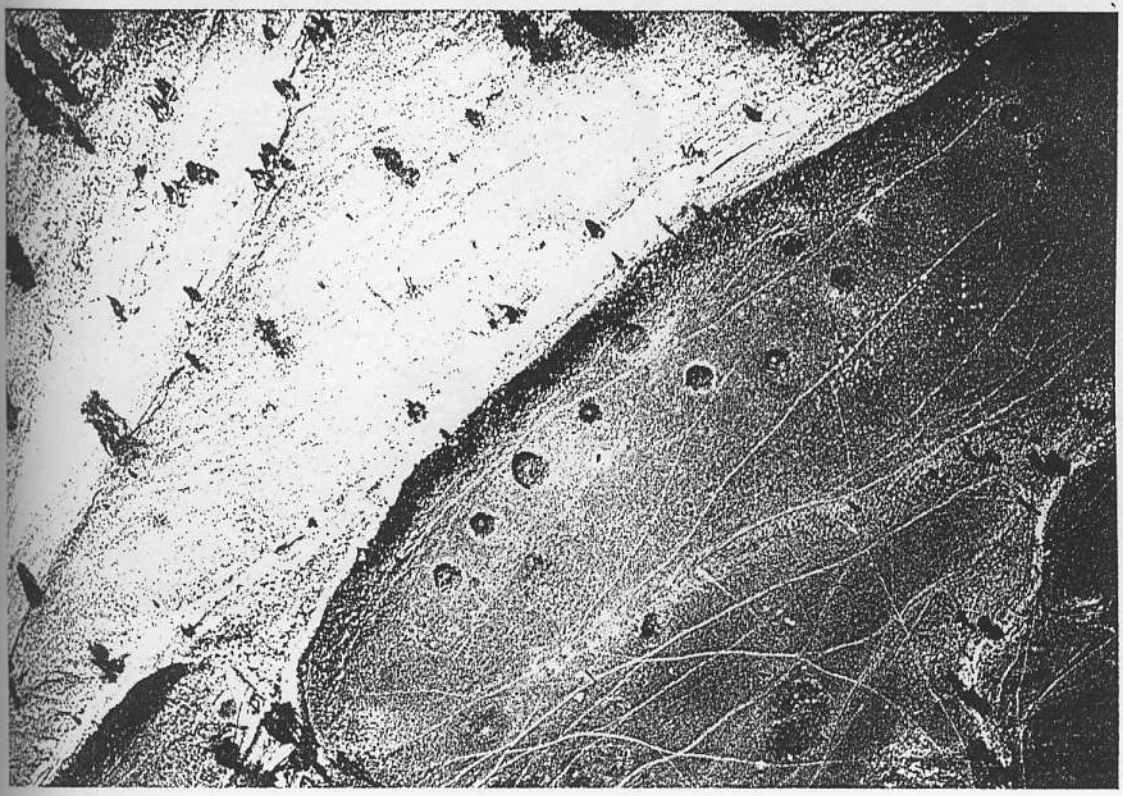


Fig. 6.18.1

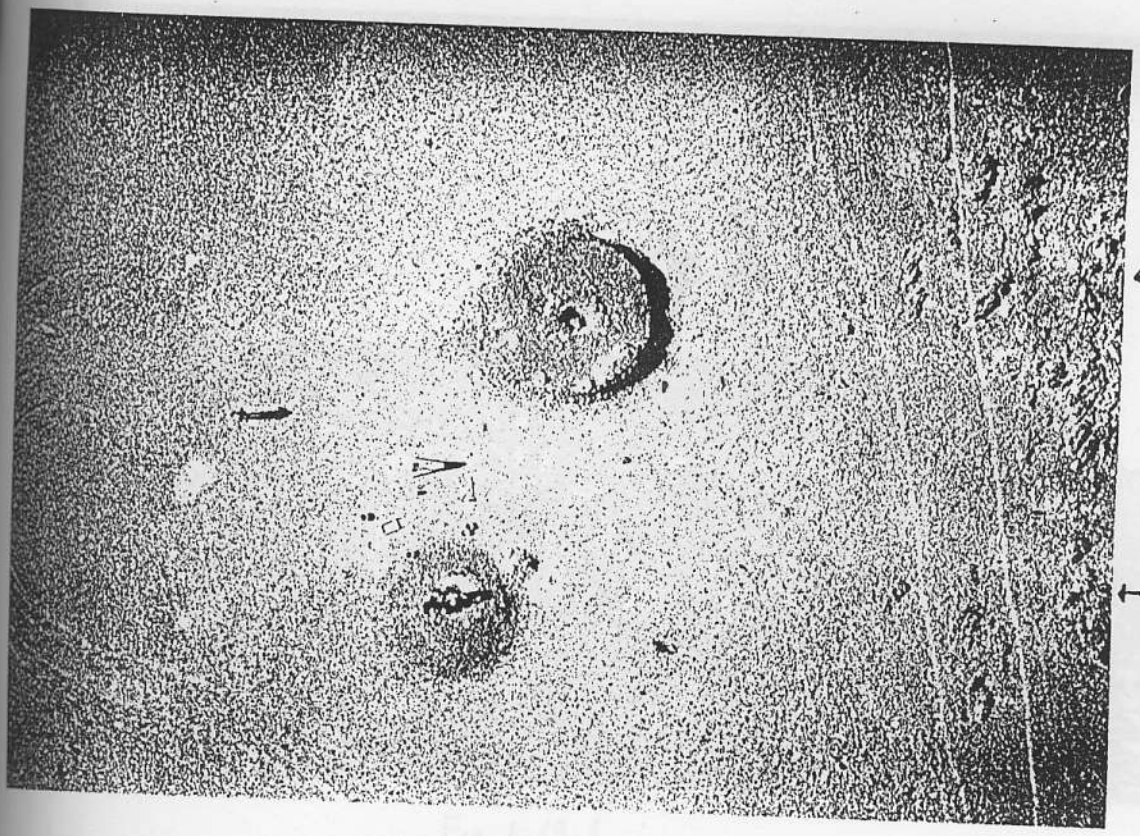


Fig. 6.19

Fig. 6.19.1

damage may have been natural rather than from looting, we cleaned out the vault but to our dismay found only a few scattered bones. Fortunately, we also found a collection of four beads (Fig. 6.7). Two of these were undiagnostic simple beads, the third a fine carnelian oval bead, and the last a faceted square blue glass (Fig 6.19. bead of a type found also in the royal graves of Ballana and Qustul, dating to the fifth century AD (Emery 1938). Like D16.1, the vault of C33.3 was also spacious enough to have accommodated a good collection of grave goods, but if there was anything, the looters unfortunately got there first. Indeed, the entire cemetery had been thoroughly plundered with not one of the more than fifty camembert graves left intact.

6.3 The Ceramics

We have found no ceramics inside any of the excavated camembert tumuli. Indeed, it is not clear whether any of them ever contained ceramics as grave goods. However, we have often found sherds scattered on top of many of the plundered camemberts, and as these are always of the same ware and design tradition, we are fairly sure that the ceramics are associated with the graves. We have also found the same wares in some of the mining villages in the vicinity of the camembert tumuli.

Generally, these potsherds are decorated with crosshatch incisions within zoned triangles, lozenges, and squares arranged in bands on the pot, and often alternated with open fields or bands of simple incisions (Fig. 6.20). The principal difference

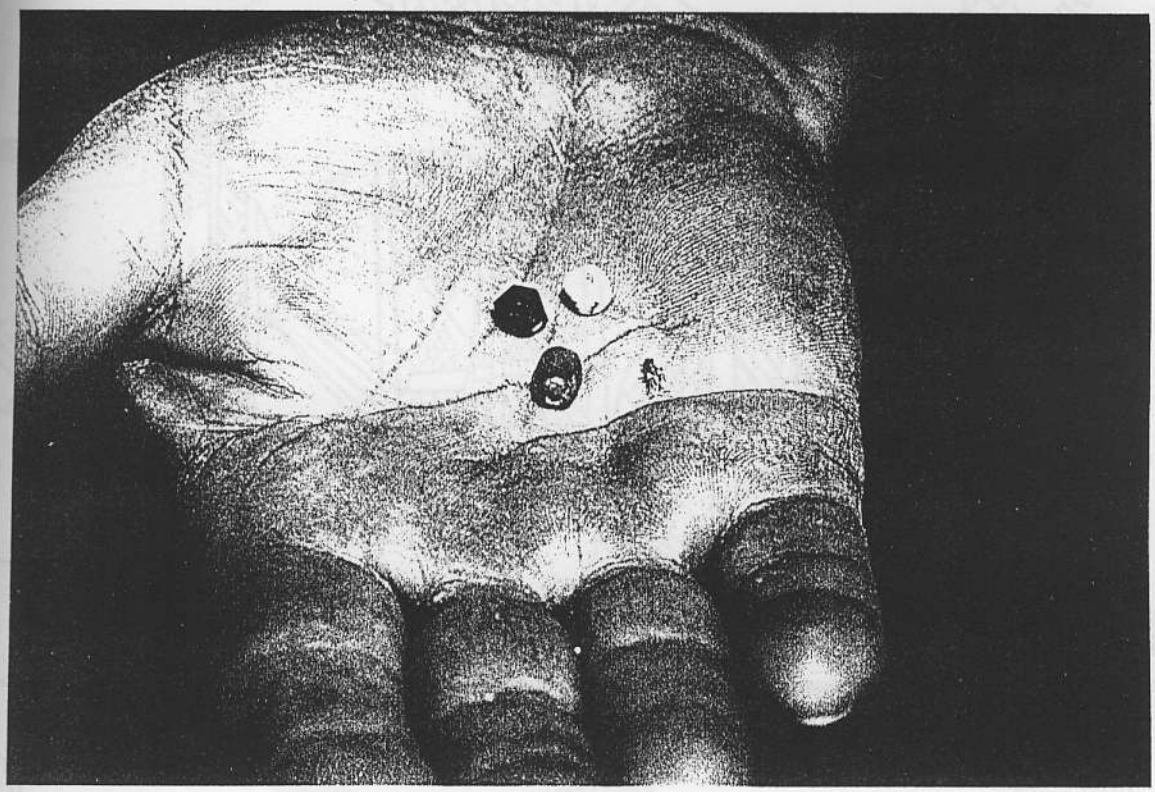


Fig. 6.19. 2

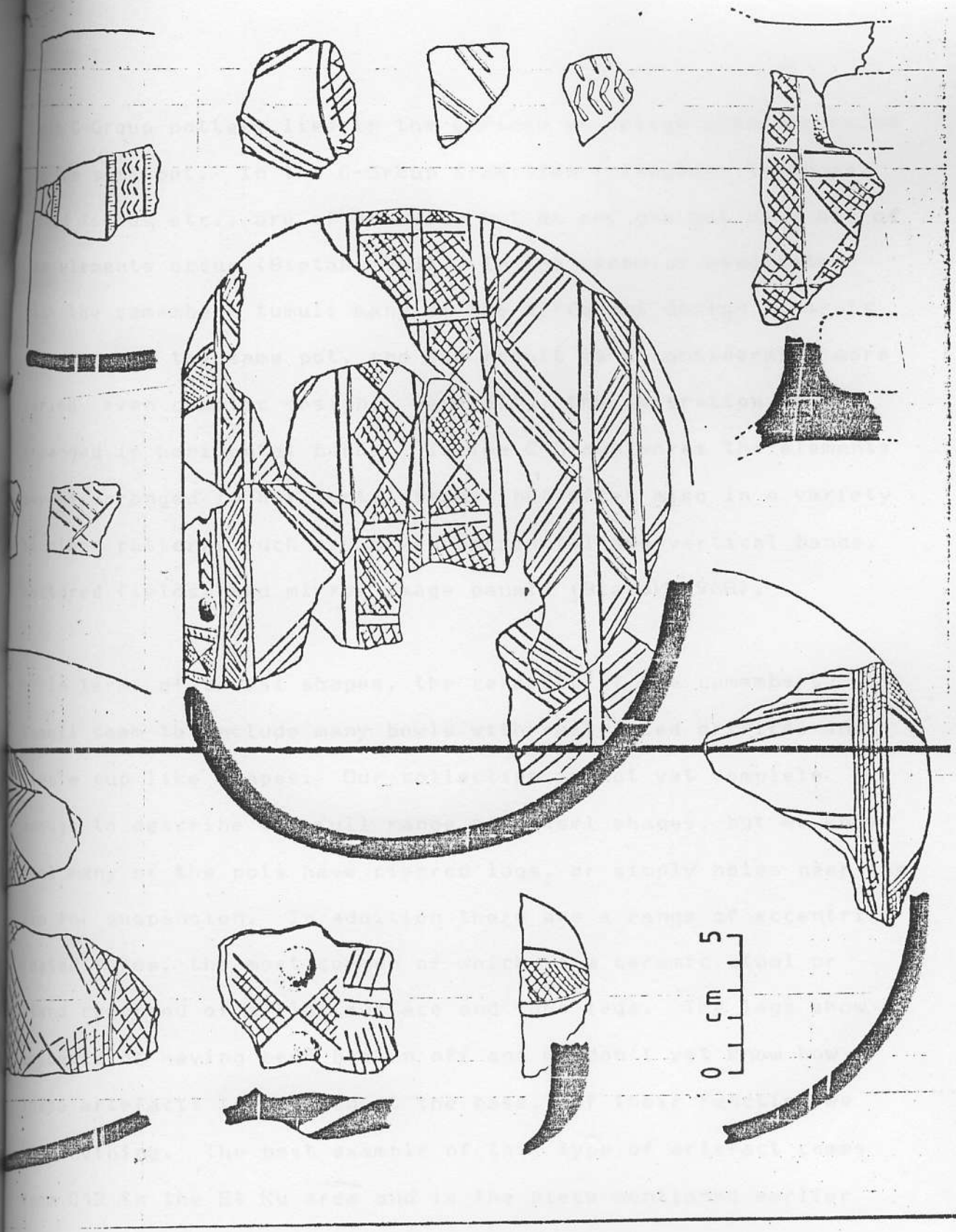


Figure 6.20 Ceramics associated with the camembert tumuli

with C-Group pottery lies in the variety of design elements found on the same pot. In the C-Group tradition triangles, lozenges, zoned fields etc., are often used, but on any one pot only one of the elements occur (Bietak 1968). In the ceramics associated with the camembert tumuli many of the different design elements can occur on the same pot, and the result is a considerably more varied, even chaotic design. Generally, the decoration is arranged in horizontal bands. In the C-Group wares the elements may be arranged in horizontal bands, but often also in a variety of other patterns such as mixed horizontal and vertical bands, sectored fields, and mirror image panels (Bietak 1968).

In terms of vessel shapes, the ceramics of the camembert tumuli seem to include many bowls with restricted orifices and simple cup like shapes. Our collection is not yet complete enough to describe the full range of vessel shapes, but we know that many of the pots have pierced lugs, or simply holes near the rim for suspension. In addition there are a range of eccentric footed forms, the most common of which is a ceramic stool or stand composed of a flat surface and four legs. The legs show evidence of having been broken off and we don't yet know how these artefacts terminated at the base. Of their function we know nothing. The best example of this type of artefact comes from C12 in the El Ku area and is the piece mentioned earlier with a cross as a central motif (Fig. 6.21).

6.4 The Mining Villages

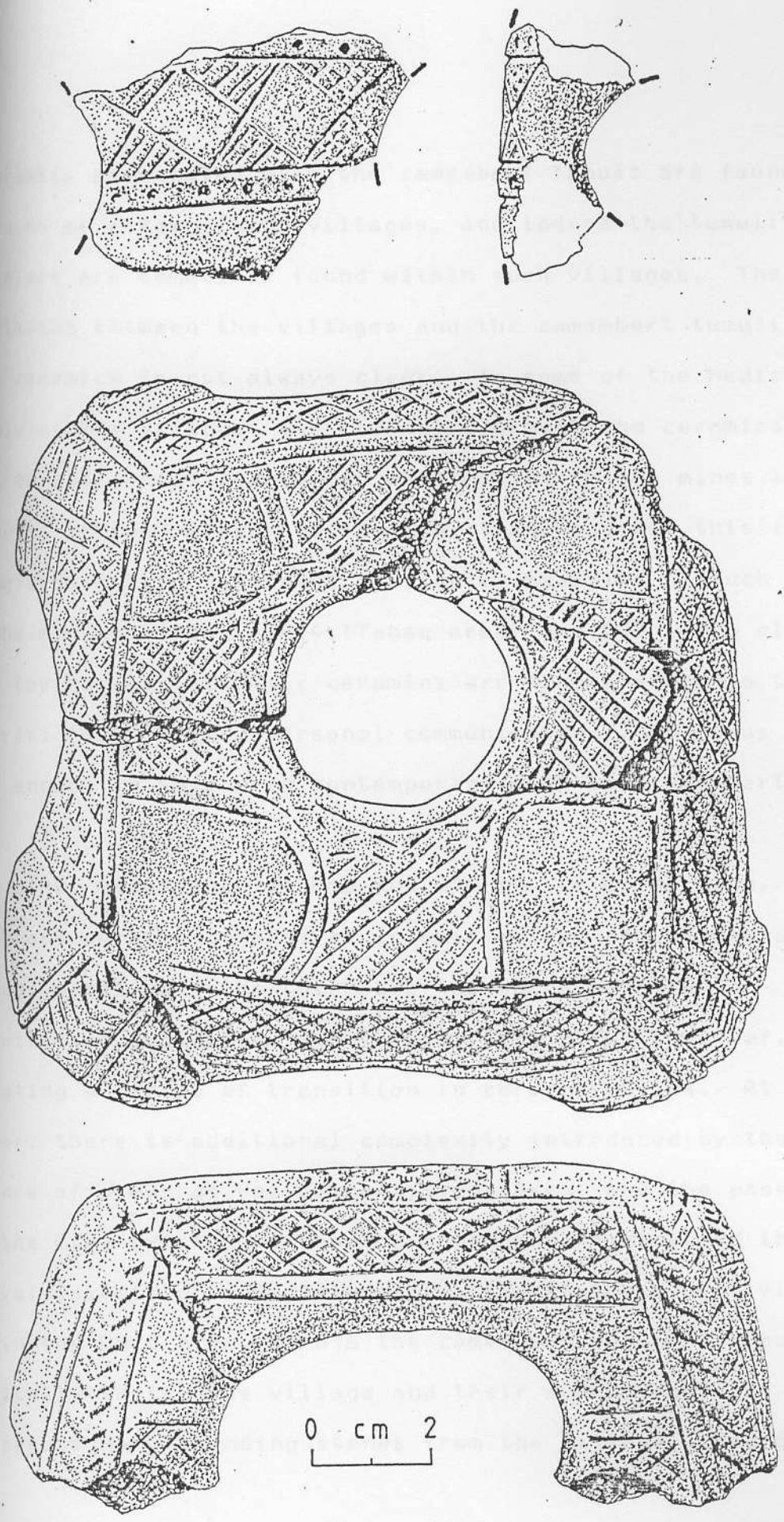


Figure 6.21. Ceramic "Stool" from C12; Top, piece of similar stool from B20.

Ceramics associated with the camembert tumuli are found among the ruins of a few mining villages, and indeed the tumuli themselves are sometimes found within such villages. The association between the villages and the camembert tumuli and their ceramics is not always clear. In some of the Medieval Islamic mining villages the camembert graves and ceramics may point to indigenous people who were active in the mines alongside the newly arrived Arabs. Historical texts suggest this is a strong possibility (see next section). Examples of such sites are the mining villages B14 (Tabaq area) and C37 (Onib cluster) where the Medieval Islamic ceramics are from the 8th to the 10th centuries (W.Y. Adams, personal communication), and thus possibly early enough to have been contemporary with the camembert tumuli.

At other mines such as D15 and D16 in the El Ku area, indigenous ceramics, Medieval Islamic wares, and undecorated, handmade wares which we think are the successors to the cross-incised indigenous wares (Fig. 4.8) occur together, suggesting a period of transition in ceramic styles. At D16, however, there is additional complexity introduced by the presence of other as yet unidentified wares, and the possibility that the mine existed before the camembert remains and the Medieval Islamic ones found there. Like at the mining village of C48 in the Onib area, at D16 the camembert tumuli are built practically inside the village and their superstructures incorporate many grinding stones from the village. One gains the

impression that the tumuli may largely post-date the village occupation, the original date of which remains unknown.

At yet other villages, there is the possibility that the makers of the camembert tumuli were inhabitants active in the mine during periods before the arrival of Moslem Arabs. At Deraheib (B2Ø, Allaqi cluster) one of the structures seems to be a modified church which would suggest a pre-Islamic, Christian occupation at the site. Historical records do indicate that the site of Deraheib may have been the stronghold of the Christian Beja prior to the dominance of Moslem Arabs in the area (see next section).

In all these myriad possibilities, one thing seems clear: judging by the mix of ceramic styles, the makers of the camembert tumuli were apparently never the sole occupants or builders of any of the mining villages. Desert people on their home ground would hardly need to expend the effort to build villages of stone walled houses just to exploit a mine. They may have occupied pre-existing ruins, or they may have inhabited active mining villages constructed by outsiders such as the Arabs, but it is unlikely that they would have adopted the trappings of sedentary life only to pursue their own mining activities.

6.5 Conclusions

What little we can deduce of the Beja settlement patterns during this period from the distribution of the camembert graves

suggests that they lived much the same nomadic life as the Beja of the area do today. The camembert tumuli are distinctly clustered in several localities. The major known ones are in the Allaqi headwaters, the Onib area, and the El Ku area. In all three there are cemeteries, scatters of graves as well as isolated tumuli, in addition to camembert related ceramics in a few mines. Elsewhere, there promises to be such a major group of burials in the Kiau area, but that locality is not yet fully surveyed. In the Tabaq area we find many hilltop isolated graves but no clusters resembling cemeteries.

The major tumuli localities recall the situation at the sectional headquarters of the modern Beja. In the Abraq area of the Egyptian Red Sea Hills, for example (Sadr 1991a) the Hamidab section of the Ababda Beja has its chief's permanent camp. The Hamidab cemetery is located there, and during the dry season the area attracts all the Hamidab, some 600 souls, who return from their wet season wanderings to the permanent water supply of the spring at Abraq. A Hamidab informant revealed that members of that section are buried in the Abraq locality if they happen to die in the vicinity. As the dry season encampment near the springs are occupied for most of the year, and as the old and infirm are usually left there all year round, most Hamidab die and are buried around Abraq. Those who meet their end far away during their wet season wanderings are buried where they fall. The distribution of modern Hamidab graves therefore shows clusters at the dry season headquarters at and near Abraq, and a

dispersion of isolated graves in the far background, throughout the Red Sea Hills.

The pattern of the camembert tumuli distribution suggests a similar picture: clusters of graves, even cemeteries in a few discrete localities which may represent sectional headquarters (Allaqi, Onib, El Ku), and scattered isolated graves elsewhere which may represent the graves of those who died wandering. The Tabaq area with its many isolated graves may have been then, as it is now, a favoured wet season pasture and consequently includes more isolated graves than other "background" areas.

From this distribution we might suggest that the study area includes at least three sectional headquarters of the Beja who occupied the region during the mid-first millennium AD. Why some wadi headwaters were central localities while others weren't remains to be investigated. The El Ku and Onib areas, as we noticed during the 1993 season, are considerably greener than other wadi headwaters in the general area. In the past perhaps this was also the decisive factor. The Onib area is apparently even today a sectional headquarters, judging by the many modern Beja camps in the area. As these were abandoned at the time of our visit during the wet season, one assumes the members of the modern Onib section were engaged in their seasonal wanderings away from their base.

In any case, whether or not the localities represent ancient sectional headquarters, we can be fairly certain that gold mining alone does not explain the distribution of the camembert tumuli. The lowlands of the Nubian Desert are full of gold mines, especially of the Medieval Islamic period (see next section) but camembert tumuli are encountered in numbers only in the higher elevations of the Red Sea Hills. Nor do the mines in the lowlands contain the distinctive decorated ceramics associated with the camembert tumuli. They do, however, include the handmade undecorated brown burnished ceramics which we think may be their successors. If so, their distribution may indicate that after the arrival of the Arabs, the local Beja settlement patterns changed to some extent and the local population along with the Arabs focused more on mining as a way of life in the Nubian Desert. Once again, the historical records do not contradict this possibility (see next section).

The archaeology has little to tell us yet about the interactions between the resident Beja and the arriving Arabs. Historical texts by classical Arab scholars (cf. e.g., various sources in Vantini 1975), on the other hand, provide a wealth of information about the history of the Arab take-over, their conflicts with the Beja , and their eventual alliance against the central government. In the next section, this history is discussed along with the archaeological remains of the Medieval Islamic Period recorded in the Nubian Desert.

7. The Arab Take-over and the Medieval Islamic Remains

7.1 Introduction

The vast majority of archaeological remains recorded in the Nubian Desert are of the Medieval Period, and most of these are Islamic remains. Almost every mining village we encountered during the 1993 season contained some Medieval Aswani ceramic wares (cf. e.g., Adams 1986), and among all but a few scatters of tumuli lay at least one Islamic grave. Islamic cemeteries are, needless to say, numerous.

This richness of Medieval archaeological remains is more than matched by a treasure trove of historical documents, which have been collected and translated by Father Vantini (1975). The wealth of references to the Nubian Desert by classical Arab historians and geographers stems not only from the gold which attracted many Arabs from the Nile Valley, but also from the fact that for a time the only route to Mecca from the Nile Valley ran through the Nubian Desert.

Thus, from the point of view of research, given the quantity and quality of information, the Medieval Period is the richest trophy of the Nubian Desert, and it is indeed a fascinating

period. It exemplifies a recurrent pattern in Beja history: the arrival of outsiders, their initial dominion over the Beja, and their eventual absorption into Beja culture. In the long history of the Beja this seems to have happened time and again. The Pharaohs, Viceroys, Cesars, Caliphs, and Governors came and went, but the Beja have remained, leading much the same life they seem to have led for at least 4000 years. In some respects they have changed so little that one can recognise Beja on Egyptian murals of the Middle Kingdom Period (cf. e.g., the twelfth Dynasty tombs of Meir, Blackman 1914, 1915, 1915a).

7.2 The Historical Record

Before the Arabs started to arrive in the Nubian Desert during the seventh century, the Beja--or Blemmyes as they were known to the Romans at that time--had enjoyed a particularly successful phase. In AD 289 Rome withdrew from her southernmost frontier, the Dodekaschoenos stretch of the Nile from Aswan to past the mouth of the Allaqi. Blemmyes took over, reigning for some time over the valley population known to us as the Ballana culture. As Olympiodorus tells us (ca. AD 425), the Blemmyes did not settle in the Nile Valley but continued their nomadic pastoral life (Kirwan 1974), controlled the gold mines (their rivals in the Nile Valley, the Noba, had only silver for their royal crowns; Trigger 1965), and mined emeralds which they traded with the Axumite kingdom far to the south in Eritrea (Kobischchanov 1979). As the Kalabsha inscription tells us, sometime in the late fifth or early sixth century the Blemmyes

were defeated by the Noba King Silko and lost control of the Nile Valley (Kirwan 1974). But the wealth of the desert remained in their hands. Their enmity with Rome must have continued as well, because in 568 according to John of Biclar (ca. AD 590, in Vantini 1975) the Beja sent a delegation to Egypt asking to live in peace with the Roman Empire and to embrace Christianity. Less than a hundred years later, however, Islam forced its way into Egypt.

During the seventh century there was already a steady influx of Arabs into the Nubian Desert, but from across the Red Sea and the immigrants were Christian Bellou or Hadareb (Paul 1954). In time they intermarried with the Beja and eventually became Beja themselves. On the other side of the Desert Arab Moslem armies marched into Egypt in 641 and carried on south into the Sudan as far as Dongola. Ten years later the Nubians and the Beja tried to resist at Debba but were defeated by the armies of Khalid ibn Waled (Paul 1954). Meanwhile, Moslem Arabs filtered into the Eastern Desert from the Nile, searching for gold. According to Al Aswani (quoted by Maqrizi, see Vantini 1975) these Arabs encountered many mining villages of the Rum (Greco-Romans) some of whom continued to work in the mines (although Paul 1954 is of the opinion that here Rum refers to the Bellou Christians).

It is almost certain that the Arabs from the Nile encountered active mining communities. According to the Synaxarium Arabo-Jacobitum written in the 13th and 14th centuries (in

Vantini 1975) during the initial conquest the Arabs invaded churches at Allaqi. Probably at what is now the site of Deraheib, Allaqi seems to have been a community large enough to warrant a church, and there is indeed at this site a building the original plan of which suggests a church (Manlio Sozzani, personal communication). One presumes the Bellou or the local Christian Beja had even before the arrival of the Moslems established a stronghold at Allaqi. As Paul (1954) mentions, during the eighth century the capital of the by then Beja Hadareb (erstwhile Bellou) was in the gold country en route to Aidhab (as is Deraheib) and was named Dherbe. Indeed, real Rum may have been at Allaqi as well. A Ptolemaic coin found at Deraheib suggests that the site was even occupied in Ptolemaic times: indeed, circumstantial evidence suggests this site may in fact have been the Berenice Panchrisia mentioned by Pliny the Elder. Possibly, the site remained occupied throughout the first millennium AD, and some Greeks may have stayed on, as the Moslem newcomers reported.

It appears that relations between the Beja and the Moslems were tense at the beginning. Sometime between the late seventh and early eighth centuries, one presumes after a major conflict between the two, the first Arab Beja treaty was signed by Ebeidallah ibn Hadhab stipulating that the Beja were to pay 300 camels annually, to ensure the safety of Moslems in the desert, and to cease harbouring escaped slaves (Paul 1954). The treaty apparently did not prevent the Beja from harassing the Arabs

again: we know of at least two other Arab/Beja treaties very similar to the first, which were signed during the ninth century. Moslem Arabs, however, were not discouraged by the violence and not only continued to expand into the desert but also began to influence the Beja. The Hadareb Beja, by then a ruling caste, were early converts to Islam although their serf-like tribe, the Zenafig, remained Christian until the 14th century (Paul 1954).

During the ninth century Arab/Beja relations were particularly complex and explosive. In 831 Caliph Mamoun sent an expedition under Abdullah ibn Jahan to subdue the Beja, and the result was the second Arab/Beja treaty (Al Maqrizi quoting Al Masudi in Vantini 1975; Paul 1954). In 854, however, the Beja rose again, this time under the leadership of Ol Bab, massacred Arabs in the mines and raided as far as Esna in Upper Egypt (Paul 1954).

The next year the Arabs retaliated. The ruler of Egypt, Al Muttawakil, ordered Al Qummi to campaign against the Beja and to gain control of the gold country. Several Arab historians have written colourfully about this campaign (Al Tabart, Ibn Hawqal, Al Mukawath, Ibn al Furat). The accounts do not always agree in the details, and are probably inclined to be boastful. But the general picture is as follows. Al Qummi collected a thousand men in Aswan and marched into the desert, arranging also for a supply ship to meet him on the Red Sea Coast. At Allaqi he was joined by 3ØØØ men of the Rabi'a clan, and from other mines he gathered

men also, such that in the end he had a force of some 20,000 under his command. Some accounts mention that Al Qummi arrived at a fortified place and castle of the Beja, meaning perhaps Deraheib. Ol Bab, the Beja chief, however, played coy, retreating and drawing the Arabs farther into the desert in the hopes that dwindling supplies would weaken them and lead to an easy Beja victory. Somewhere near the Red Sea Ol Bab got wind of the supply ship and decided to wait no longer. With the Beja attacking and seeing the odds heavily against him, Al Qummi ordered his cavalry to put bells around the horses' necks and charged into the Beja camelmen, frightening their beasts and thus routing the enemy. Ol Bab's defeat led to the signing of the third Arab/Beja treaty (with stipulations similar to the first two), and the Beja chief himself was taken to the Caliph in Baghdad.

When Al Qummi returned to Egypt, the Rabi'a clan stayed behind, intermarried with the Beja and embarked on a long struggle against other Arabs for the control of the mines. Late in the ninth century, under the leadership of Al Omari they succeeded to become masters of the desert. Indeed, after Al Qummi's death in 861, the authority of the Caliph was no longer recognised at Allaqi (Paul 1954).

Allaqi, towards the end of the ninth century, is reported to have become a great market town of Arabs and non-Arabs, profitting not only from the gold mines but also from sitting

astride one of the two routes which led from the Nile to Aidhab, the Red Sea Port. An idea of the grandeur of Allaqi can be gained from the writings of Yaqubi (in Vantini 1975) who mentions that supplies to the desert were once sent out from Aswan on the backs of 60,000 beasts of burden.

During the tenth century several writers mention Allaqi and Aidhab as the extremes of Upper Egypt, while ca. 950 Al Masudi mentions that the mines in the Nubian Desert are ruled by Ishaq ibn Rabi'a who commands 3000 Rabi'a cavalry, and 30,000 Beja camelmen.

During the 11th and 12th centuries Allaqi continued to prosper partially because it lay on one of only two routes across the desert to Aidhab and thence to Mecca: the Crusades had closed the overland route across the Sinai. The Beja profited tremendously from this. Not only did they receive two thirds of the revenues from Aidhab, but also plundered caravans, and sold charcoal to the port. The crusader Raynault de Chatillon's daredevil naval raid on Aidhab in 1183 proved only a temporary setback, and the pilgrims continued to cross the Red Sea from there until late in the 13th century when the overland route reopened.

As late as the early 12th century, Arab writers (e.g., Yaqut al Rumi) mention Allaqi and its fortresses ruled by Rabi'a but by the mid 1100's Al Andalusi writes that Allaqi is the royal town

of the king of the Beja. Arab Moslem culture had apparently finally been absorbed into Beja culture.

Thereafter the lights of history began to dim in the Nubian Desert. By the end of the 13th century Al Qalqashandi (quoted by Abul Fida) reports that the gold output at Allaqi barely sufficed to pay the cost of its extraction. The gold and emerald mines were finally exhausted by the end of the 14th century. By that time the merchants and pilgrims had largely abandoned Aidhab as a gateway to Arabia and in 1426 the Mamluke Sultan Bars Bey sealed the port's fate by sacking it and crippling the once powerful Hadareb Beja in retaliation for the plundering of a caravan (Paul 1954). In the records, silence descended again upon the desert.

7.2 The Archaeological Remains

Archaeologically, we cannot yet match the wealth of fascinating detail provided by the records. To date we know little besides the location and superficial aspects of the mining villages and cemeteries of the Medieval period. With additional intensive research, however, we should be able to contribute greatly towards balancing the wealth of historical detail on the political/military situation with archaeologically gained insights into the social relations of Arabs and Beja. As in all historical archaeologies, the comparison of historical facts with the results of excavations in the Medieval layers of the desert will undoubtedly bring to light many discrepancies which will

tell us much more about the realities of that time than will either source by itself.

So far, as mentioned in the previous section, it seems we have found the Christian Beja element of the immediately pre-Islamic period in the form of the camembert graves. In future, perhaps it will be possible to distinguish even the graves of the Christian Bellou or Hadareb from Arabia, from the graves of the Hadareb in their later manifestation as the ruling caste of the Beja, and perhaps even the graves of the Zenafiq Beja who apparently remained Christian for a considerably longer period.

The graves of the Moslem Hadareb Beja are, we think, already identifiable. There are in some of the Islamic cemeteries in the study area typical low, oval, gravel mounds with head- and foot-stones, but with an additional ring of upright stones forming a circle at a small distance from the mound (Fig. 7.1). (Fig.7.1.1) (Fig.7.1 The surrounding ring of uprights brings to mind the same arrangement around the base of the camembert tumuli. The impression that these Islamic graves are the successors to the camemberts is strengthened by their identical distributions. Admittedly, the sample for the Islamic graves is small: we only have records for them from seven sites. But of these seven sites, six are to be found in the three major localities of the camembert graves, namely Allaqi, El Ku, and Onib. The seventh is an isolated grave in the lower Allaqi Valley.

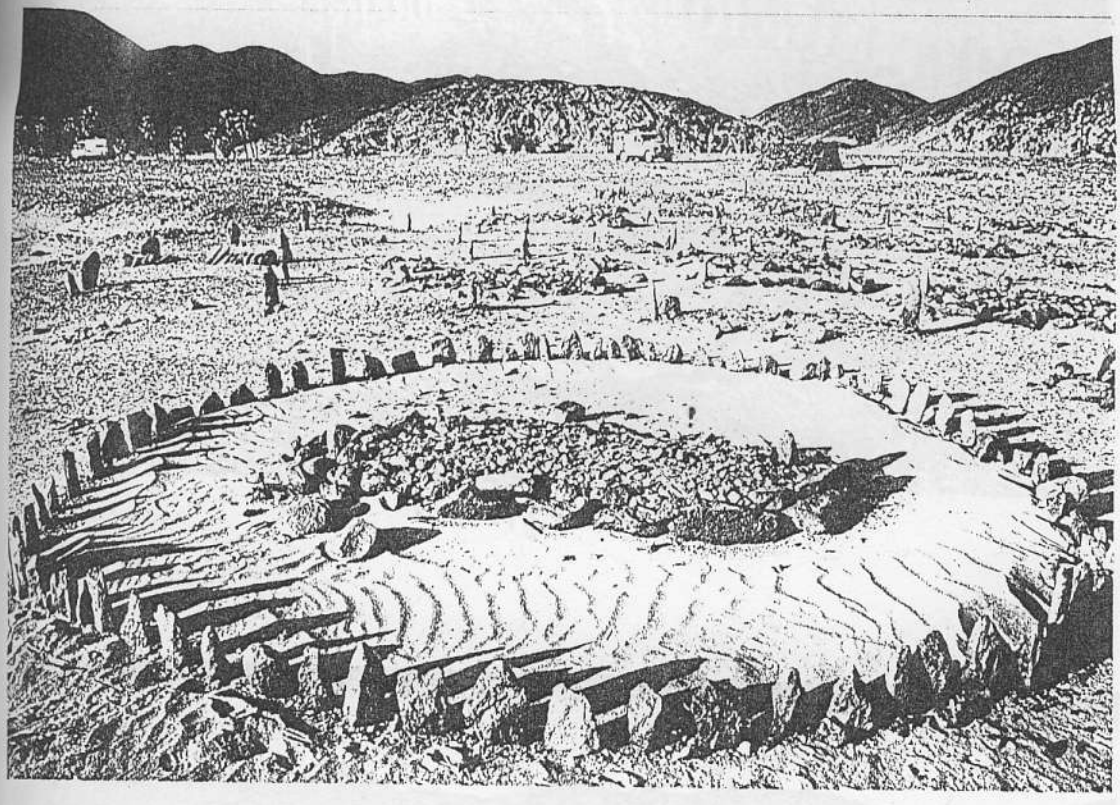


Fig. 7.1

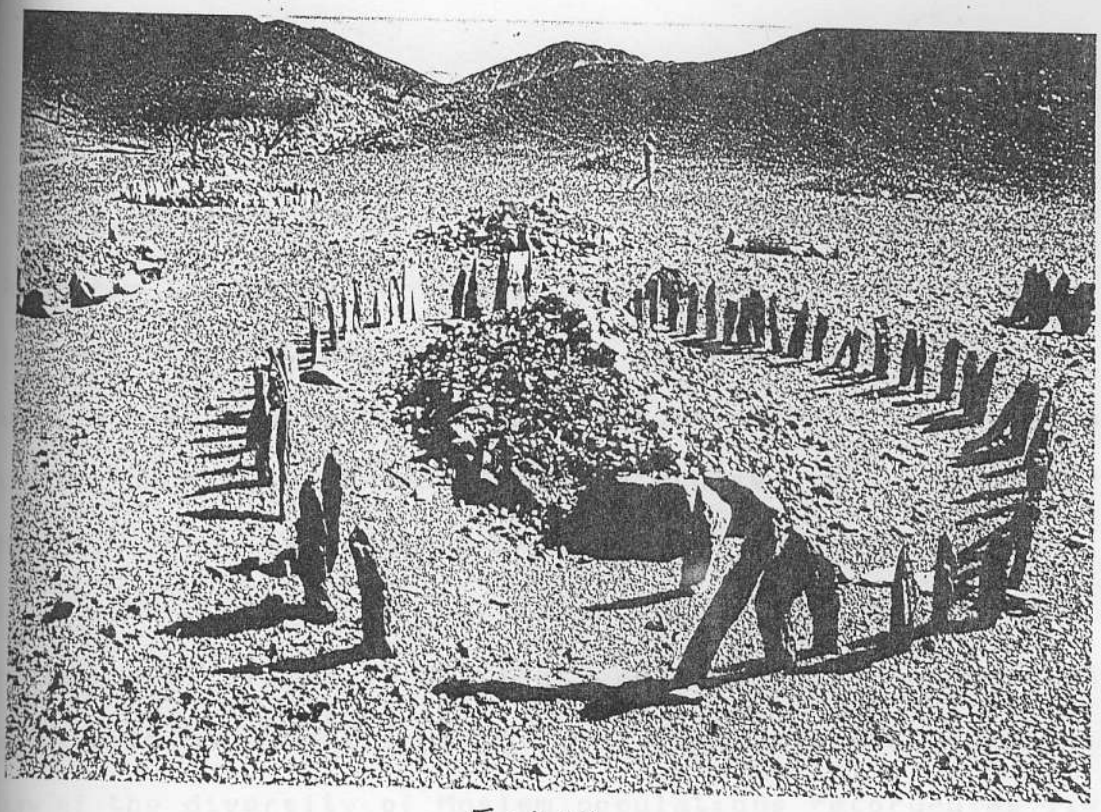


Fig. 7.1.1

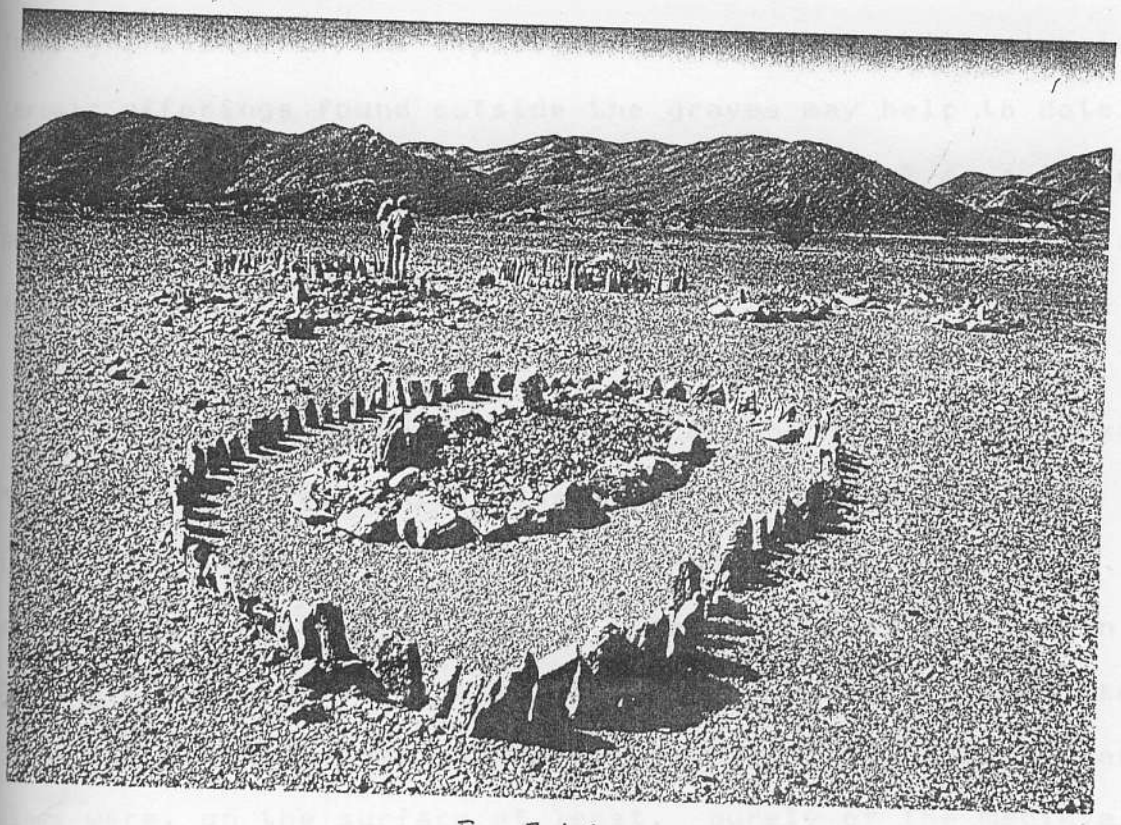
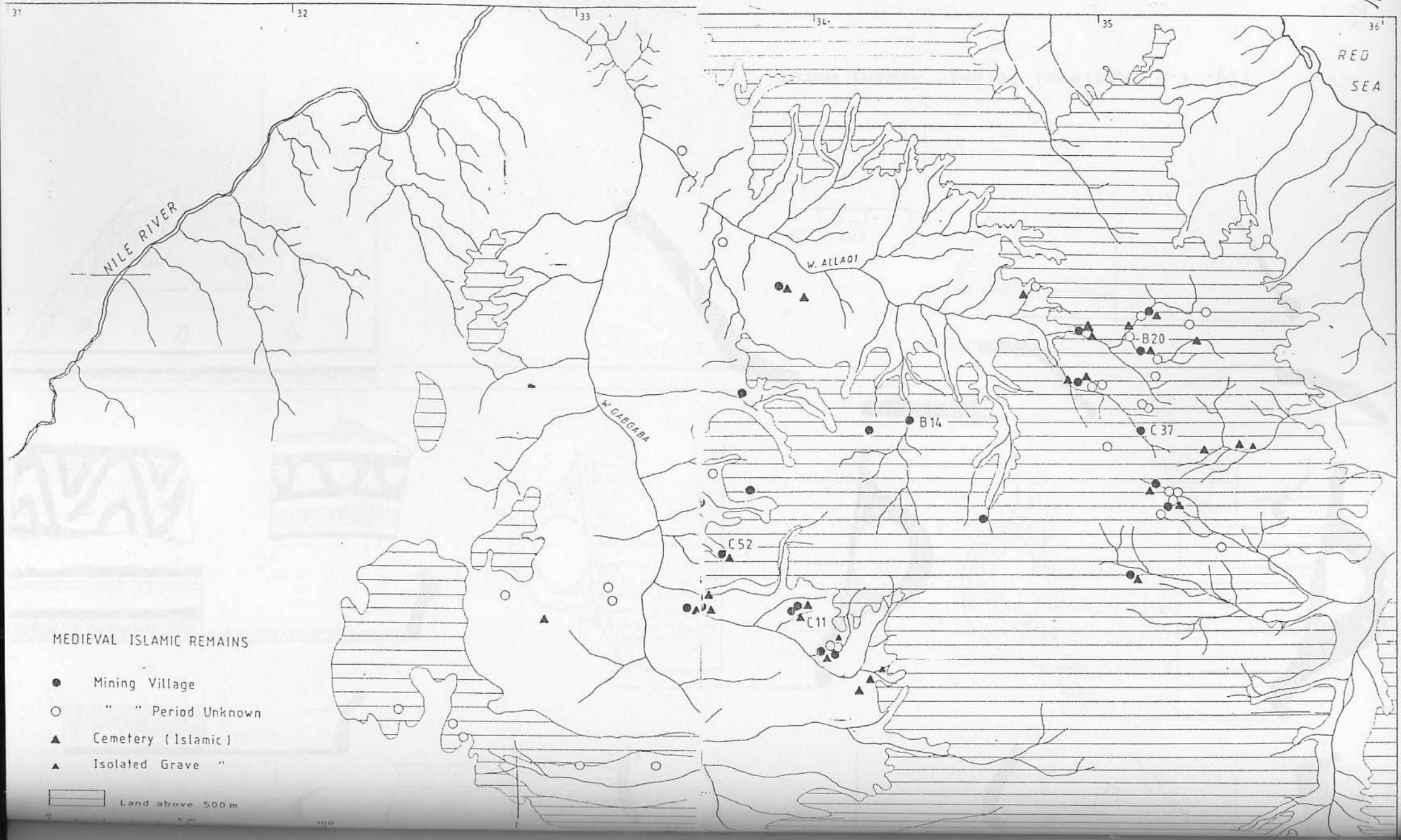


Fig. 7.1.2

There is quite a lot of variety in Islamic grave types. Apart from the above mentioned type, there is another with a ring of stones, but not uprights. In a third type, the oval gravel mound is ringed at the base with larger stones, very similar to some of the simple conical tumuli discussed in a previous section. There are squared versions of the gravel mounds, mounds with a stripe of quartz pebbles on top, mounds with a semicircle of stones at the foot-end (fishtail), and very simple mounds with no embellishments. The variety is not surprising in view of the diversity of Moslem populations recorded as living in the desert or just passing through. Although we can't excavate any of these, their differential distributions may help resolve the significance of the stylistic differences, while occasional ceramic offerings found outside the graves may help to date some of the types. The dating will be quite important as a large number of these graves are bound to be of post-Medieval to recent age.

Aside from graves and cemeteries, mining villages with known Medieval Islamic occupation (as shown by the presence of imported Medieval Aswani wares) are abundant. Their distribution, along with that of Islamic graves is shown on Fig. 7.2. Every mining village we encountered during the 1993 season contained at least some Aswani wares (Fig. 7.3), and many of the mines were, on the surface at least, purely of the Medieval Islamic period. These were identifiable not only by the


31
32
33
34
35
36
RED SEA
NILE RIVER
W. ALLAQI
W. GABGABA
B20
B14
C37
C52
C11
MEDIEVAL ISLAMIC REMAINS
Mining Village
" " Period Unknown
Cemetery (Islamic)
Isolated Grave "
Land above 500 m

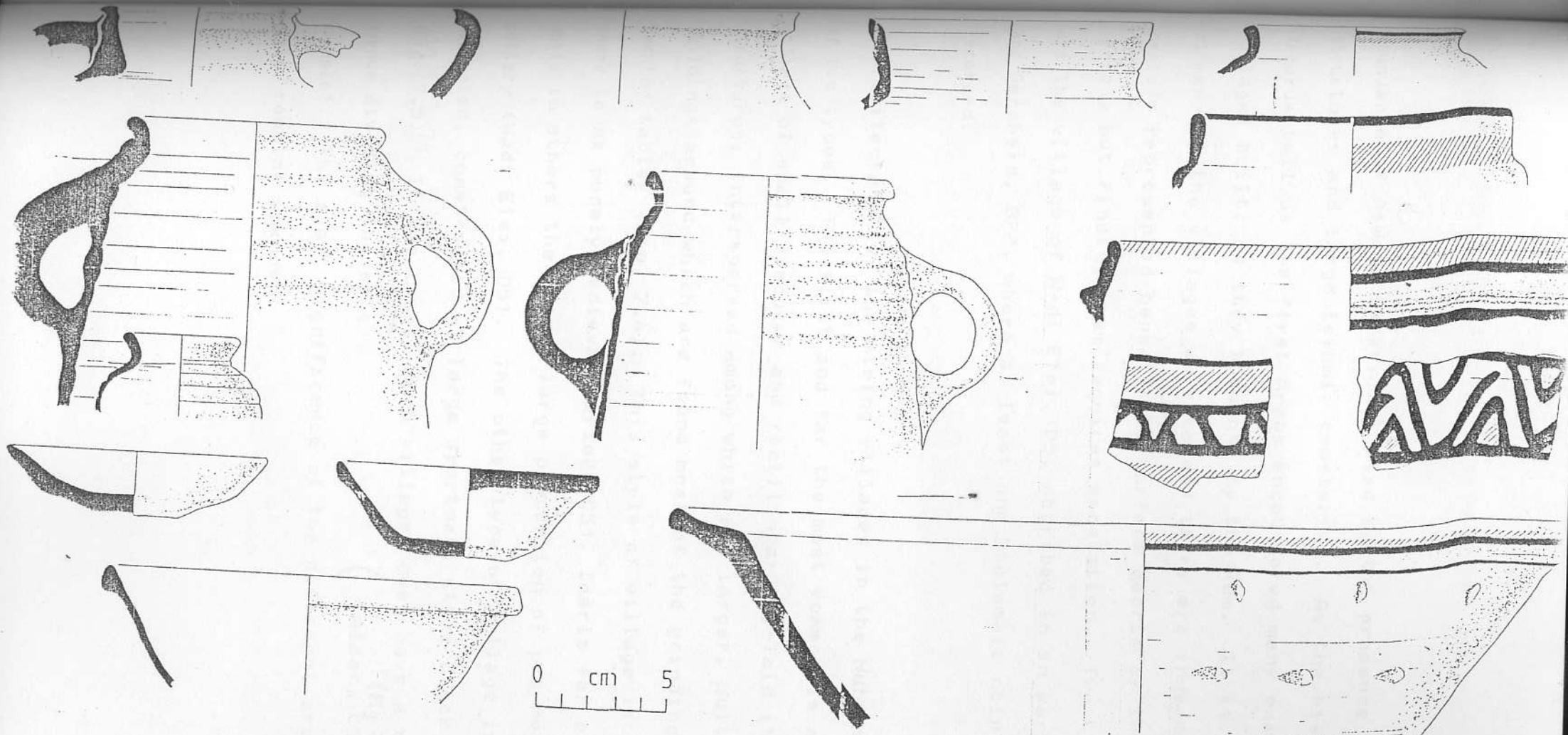


Fig. 7.3 Medieval Islamic Aswani Wares.

abundance of Aswani wares, but also by the presence of mosque structures and large Islamic cemeteries. As the historical records tell us the first Arabs encountered many existing mining villages built, as they thought, by the Rum. It is likely that at many of the villages we recorded there are indeed earlier periods represented beneath the surface debris of the Medieval period, but finding them requires excavation. Two known example are the village of Wadi Elei, D5, decribed in an earlier section and Deraheib, B20, where at least one Ptolemaic coin was recorded.

Architecturally, the mining villages in the Nubian Desert are of two types. The first and far the most common is a scattered village of small circular and rectilinear dry-laid stone structures, interspersed among which are larger, multi-roomed buildings around which are found most of the grinding mills and washing tables (Fig. 7.4). This style of village is known in cases to be purely Medieval period (C51, Idarib for example) (Fig 7 while in others there is a large proportion of pre-Medieval pottery (Wadi Elei, D5). The other type of village is much more nucleated, constructed of large apartment style block of rooms (Fig. 7.5). In two cases, such villages even have a central avenue dividing the site (Fig.7.5) (Alaar, C37, for example). The exact significance of the different architectural styles remains unknown.

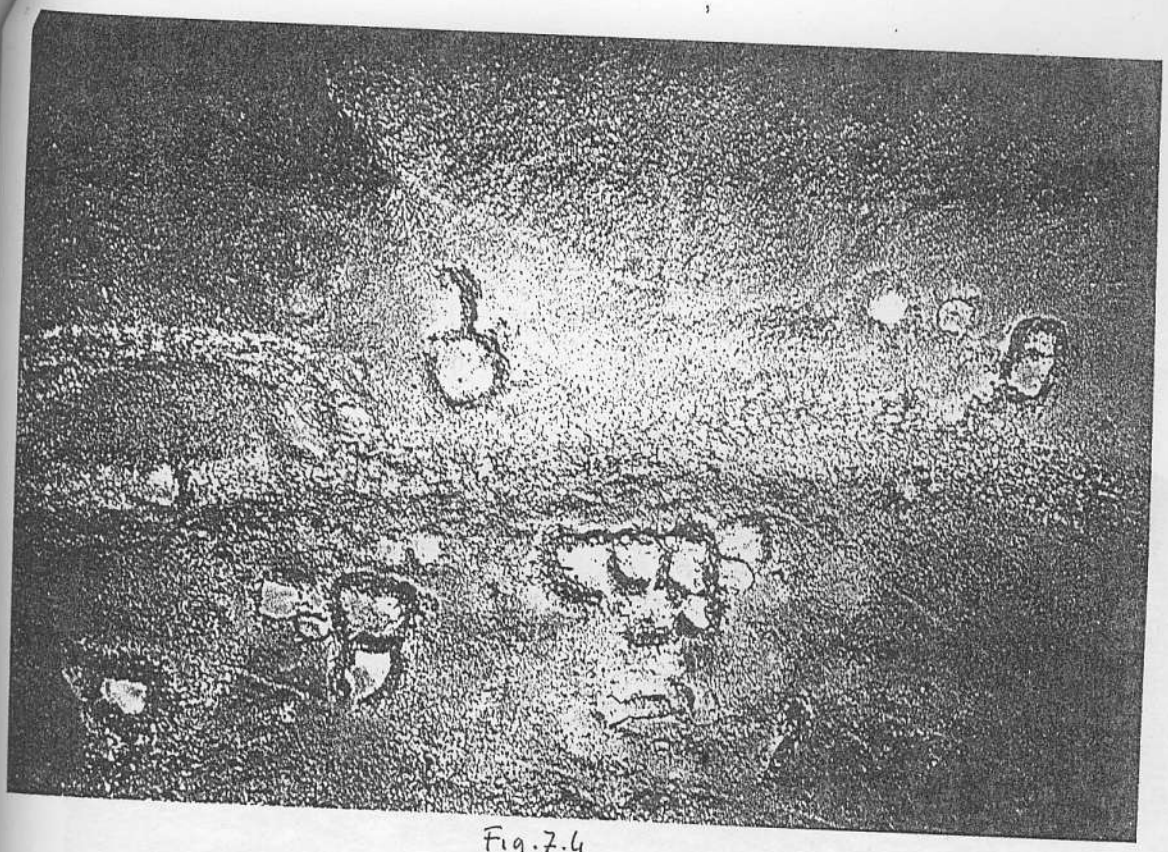


Fig. 7.4

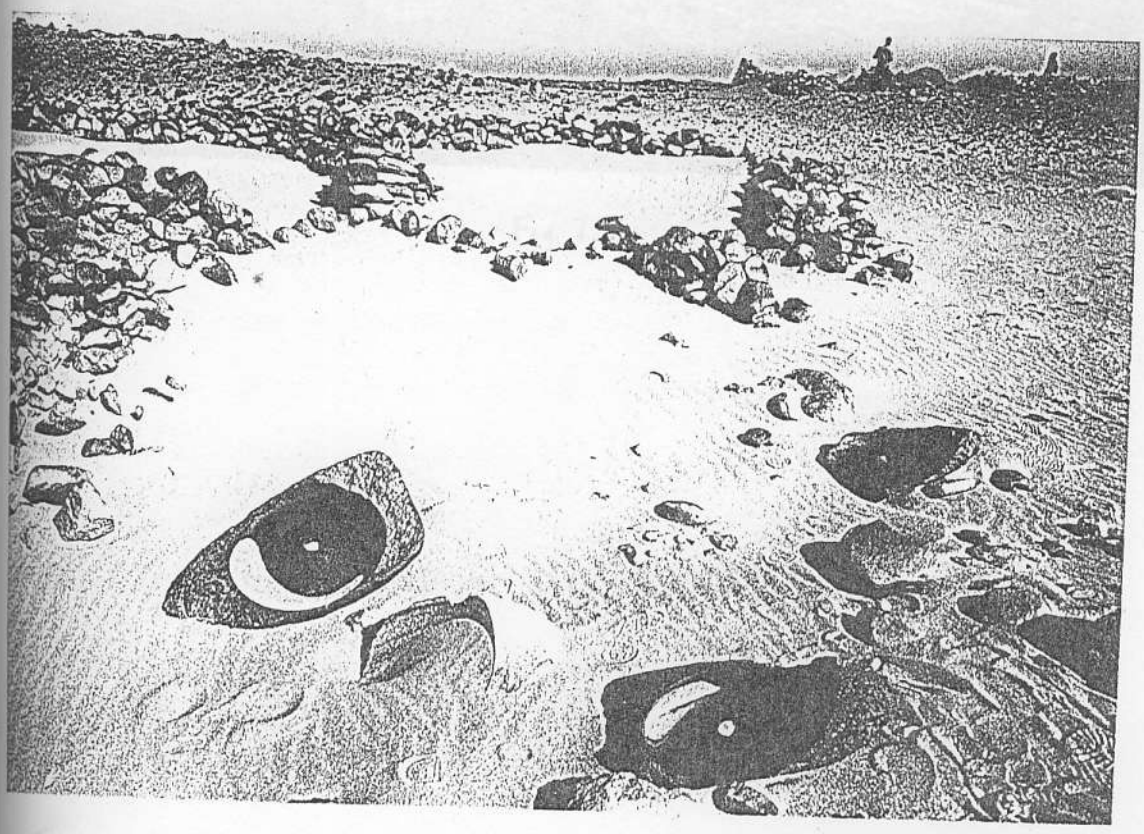


Fig. 7.4.1

Fig. 7.5

We know that not all the mines were occupied at the same time. Professor William Adams has kindly identified from photographs of potsherds the probable age of the some of the mining villages. He found that mines C8, C11, and C37 contained ceramics typical of the period 700-900, while B14 dates to 850-1000, and B20 and C52 have ceramics of the 11th century. These identifications are of course based on small, unsystematic, surface collections, and much more work needs to be done to find the full range of dates, Medieval and pre-Medieval, from each village. Eventually, with a series of well-dated villages, and proper architectural studies concerning size of site, number of different types of structures etc., we will be in a good position for a detailed study of the social organisation of Arab mining in the desert, and the expansion and contraction in the scale of their activities through time. Such differences as numbers of mills, washing tables, multi-roomed structures, or the presence or absence of mosques, size of cemeteries and types of graves (styles of superstructures, as well as size differences denoting child versus adult burials) can all provide a wealth of information about the organisation of the mining communities and the hierarchies which existed between different mines and mining localities.

Another potentially informative line of evidence is the presence and numbers of locally made ceramics versus imported Aswani wares. At many of the Medieval Islamic mines we found handmade, brown burnished bowls (Fig. 4.8) which we think might

be locally produced wares, perhaps even a Beja ceramic tradition. If so, their distribution on the mines could eventually tell us much about interactions between Arabs and Beja within the mines and across the region as a whole.

In all this, the site with the greatest potential for further study is clearly Deraheib. It is almost certain that Deraheib was the Town of Allaqi, capital of the Rabi'a clan and centre of mining operations in the Nubian Desert, as mentioned by the Arab writers. Probably it was also the Beja stronghold of Dherbe. Its church suggests that it was a major centre even before the Arabs arrived. It probably has a Ptolemaic layer buried under the Medieval remains and as mentioned above, may have been the Berenice Panchrisia of Pliny the Elder. Notable similarities in the site's layout and position to that of the mine shown on the Pharaonic map now housed in the Turin Museum raise even the possibility, as Paul (1954) also thought likely, that Deraheib was the goldmine of Seti I and dates back as far as the New Kingdom period. Our plans to visit the site during the 1993 season were foiled by the tense situation on the Sudano-Egyptian border, but it is hoped that in future intensive research can be carried out at this singularly interesting site: it promises to tell much more about the history of gold mining in the Nubian Desert than any other site in the region.

Finally, the study of the Medieval Islamic period in the Nubian Desert will require also comparisons with neighbouring

regions. Already, there are very interesting discrepancies between the desert and the coast, for example. Professor Ahmed Al Hakim in his paper on Islamic archaeology delivered at the Meroitic Conference in Berlin (1992) mentioned the presence of engraved tombstones in the Khor Nubt area in contrast to their absence in other areas such as the Nubian Desert as perhaps signifying rifts in Islamic beliefs among diverse sects. As another example, reports (cf. e.g., in Hinkel 1992) indicate a much greater variety in Islamic burial types on the coast. The Red Sea coast was undoubtedly a more cosmopolitan place than the Nubian Desert and the variety in grave types there is probably an indication of the diverse populations who reached that coast from the east as well as the west. Intensive studies of grave typologies and their distributions on the coast, in the desert, and in the Nile Valley could probably afford us an archaeological view of the human traffic from east to west and vice versa. Clearly, much interesting information on early Islamic history remains yet to be discovered in our study area. Knowing the importance of coast/inland connections in the Medieval period, especially in the case of the traffic between Aidhab and the Nile via Allaqi, it is clear that the Medieval archaeology of the desert cannot be understood properly without reference to the coast.

8. Rock Inscriptions and Engravings

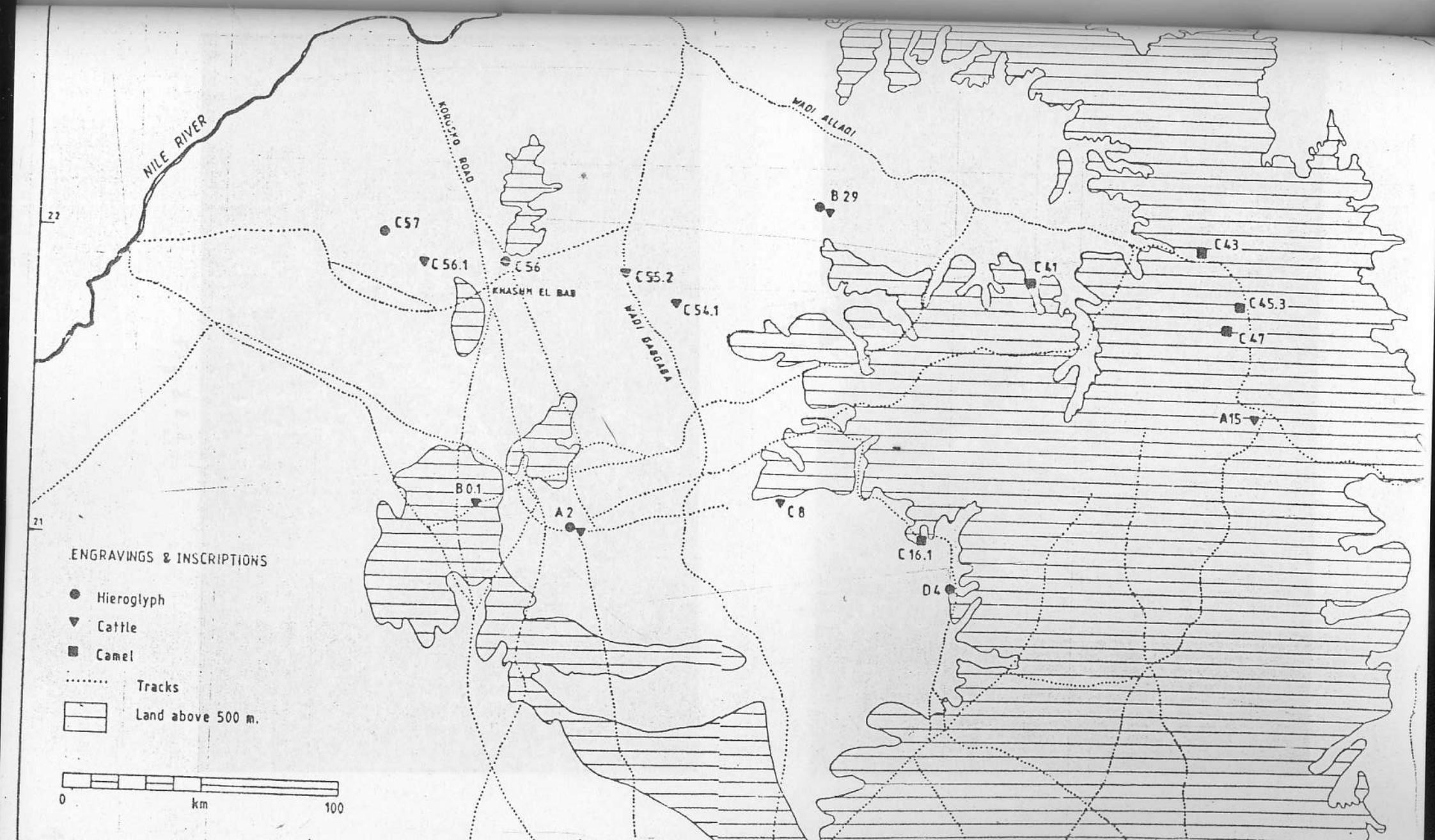
8.1 Introduction

During the four seasons of exploration in the Nubian Desert, several hieroglyphic, some Arabic, and one Greek or Coptic inscriptions as well as several pictorial rock engravings were encountered and recorded (Fig. 8.1). The engravings can be divided in two main groups: depictions of cattle, and occasionally giraffe and elephants which obviously date from a wetter period in the past; and depictions of camels, along with horses and human figures in a crude style which judging by patination are more recent.

8.2 The Hieroglyphic Inscriptions

Of the hieroglyphs all seem to be short records of passers-by who left little more than their name and rank chiselled or pecked into rock faces (Fig. 8.2). (Fig. 8.2.1) The greatest concentration of such graffiti is to be found at Khashm el Bab (site C56; see Fig. 8.2.3.) a natural pass along the Korosko road connecting the Nile north of the second cataract with the Nile near the fourth, bypassing the great bend of the river.

At Khashm el Bab there are three major panels, each with six or seven lines of inscriptions (see appendix 2 for details on text and transliteration). Here, the officer of Rerjj, the letter carrier Nakht, the chief of the messengers Mery, the scribes Keni, Djehuti-hotep, Neb-tjehnet, Desnefer and others took time from their journey to leave their names for posterity. They did not leave any indication of when they passed through the Bab: as with all other rock art, the question of the age of the


NILE RIVER
KORUSKO ROAD
WADI ALLAQI
WADI BARGABA
KHASHM EL BAB
22
21
C57
C56.1
C56
C55.2
C54.1
B29
C43
C41
C45.3
C47
A15
B0.1
A2
C8
C16.1
D4
ENGRAVINGS & INSCRIPTIONS
Hieroglyph
Cattle
Camel
Tracks
Land above 500 m.
0
km
100

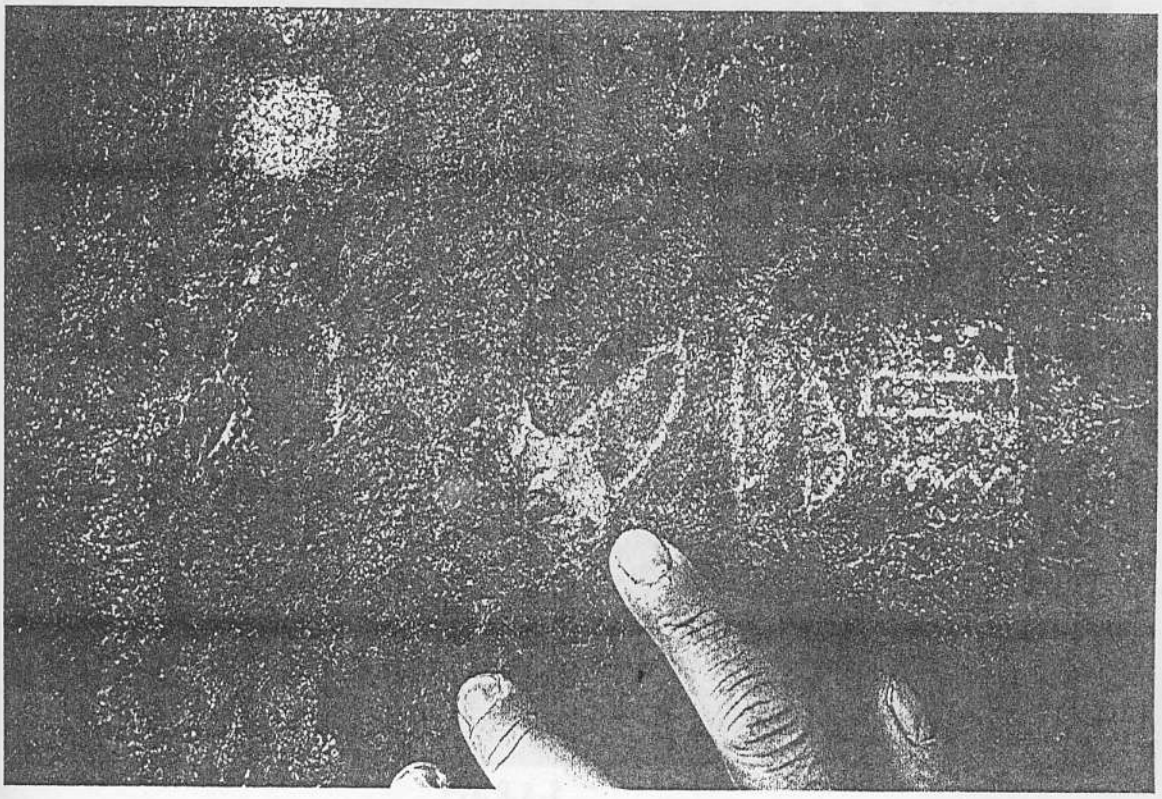


Fig. 8.2

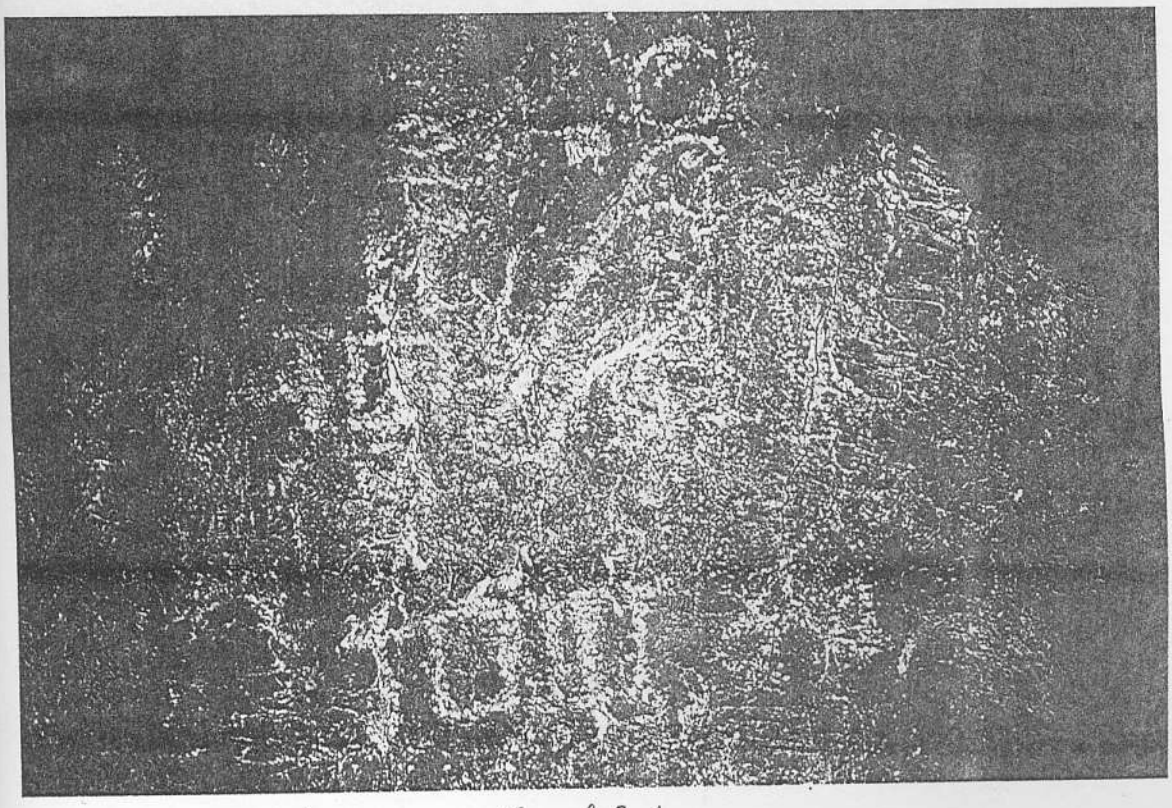


Fig. 8.2.1

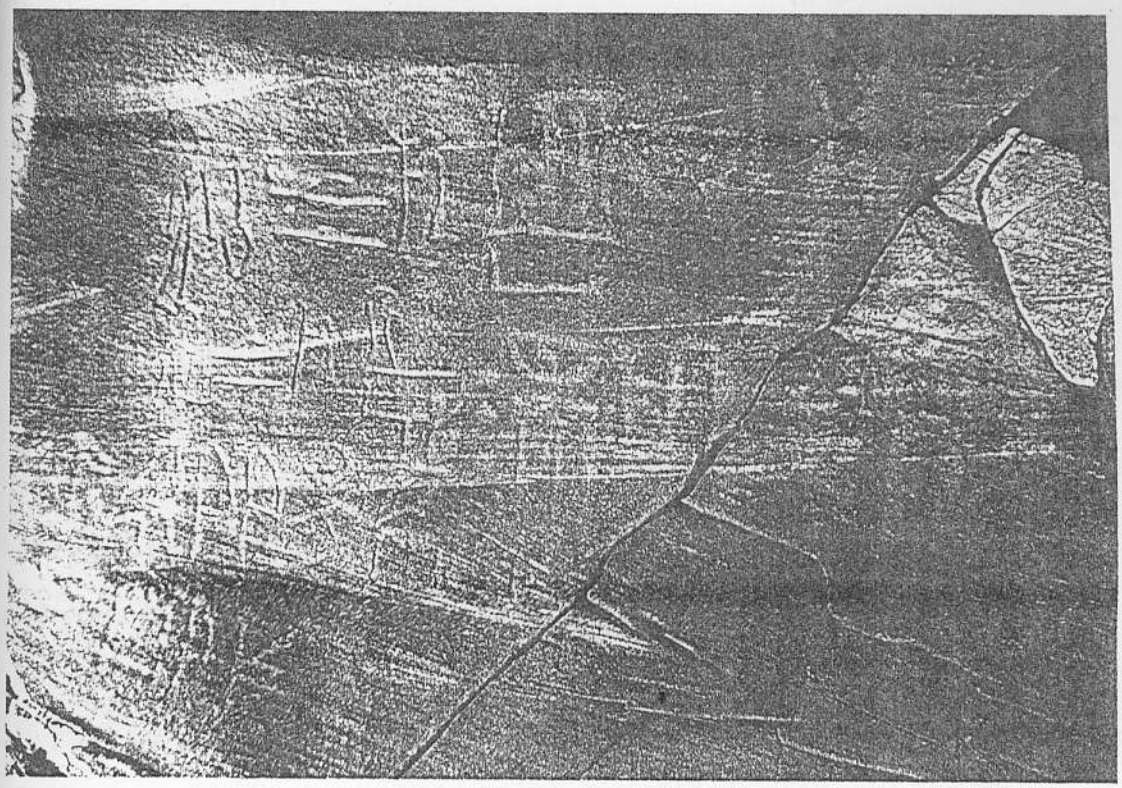


Fig. 8.2.2

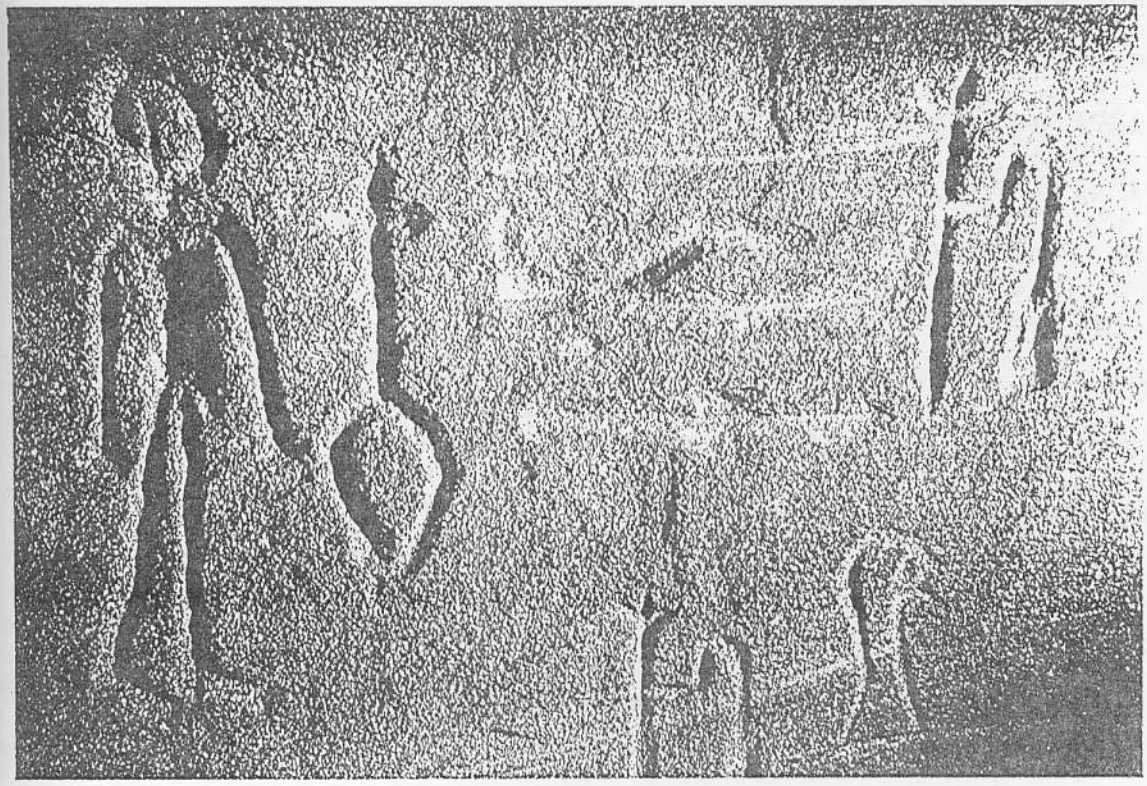


Fig. 8.2.3

hieroglyphs is a difficult if not impossible one to answer. There are some clues to their age, however. The Korosko Road itself was well-travelled during Napatan times (c. 750-350 BC) when the Kushitic Pharaohs of the 25th Dynasty maintained regular contact between their capital at Napata near the fourth cataract and Egypt proper (Adams 1977). The names written at Khashm el Bab, however, according to Maurizio Damiano-Appia who translated the hieroglyphs (see appendix 2), were most common during Old, Middle and New Kingdom times, that is between c. 3000-1100 BC.

Indeed most of the hieroglyphic inscriptions in the Nubian Desert are dated by Damiano-Appia to the Dynastic periods. The most securely dated inscription is at Wadi Hamid, where the prince of Miam, Hekanefer, inscribed his name. (Fig. 8.2.4) This person, also known from the Theban tomb of Huy (Davies and Gardiner 1926), lived during the 18th Dynasty of the New Kingdom Period, that is between 1350-1310 BC. Other less well-dated inscriptions at Bir Ungat (fig. 8.2.5) include names such as Khnem, Nefer, Ankh Nehesek, and Pa-ir which Damiano-Appia mentions were most common during Old Kingdom times, especially during the fifth and sixth Dynasties. At nearby Jebel Ungat Amenemhat left his name and Schweinfurth (1903) mentions a scribe Amenhotep from the same locality, perhaps even the same inscription. The former name seems to Damiano-Appia to be of the Middle Kingdom Period, probably the twelfth Dynasty.

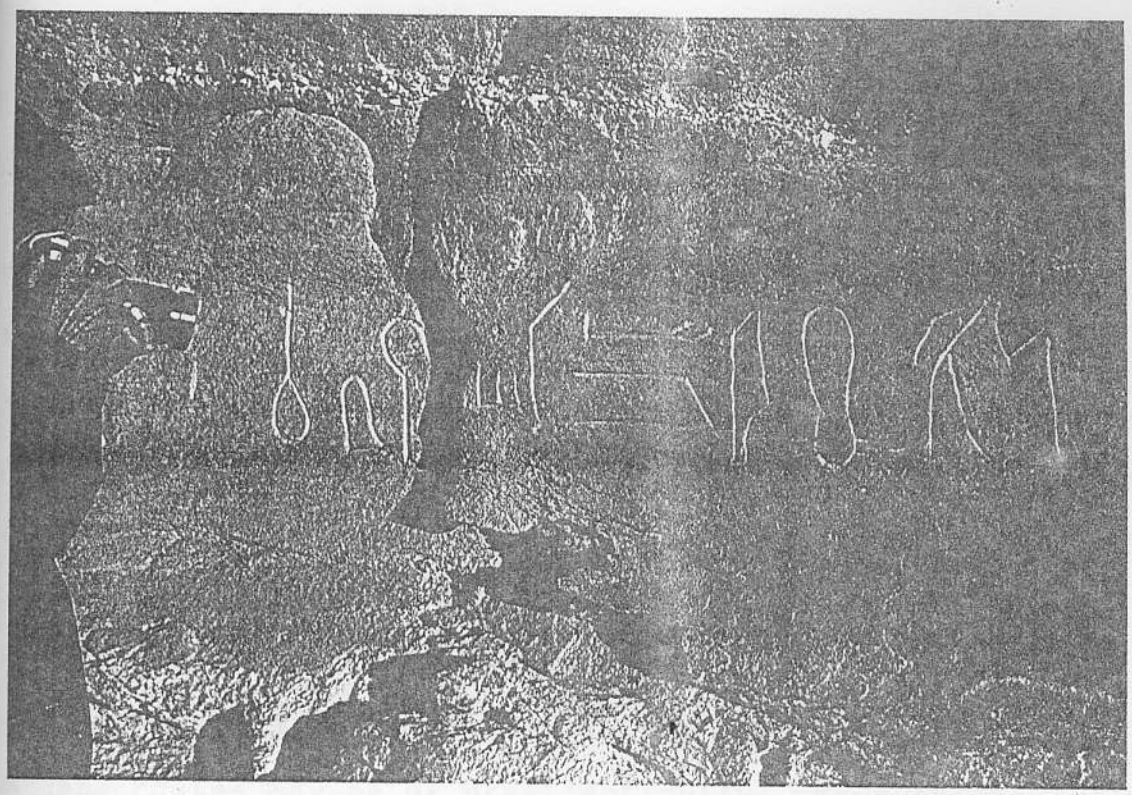


Fig. 8.2.4

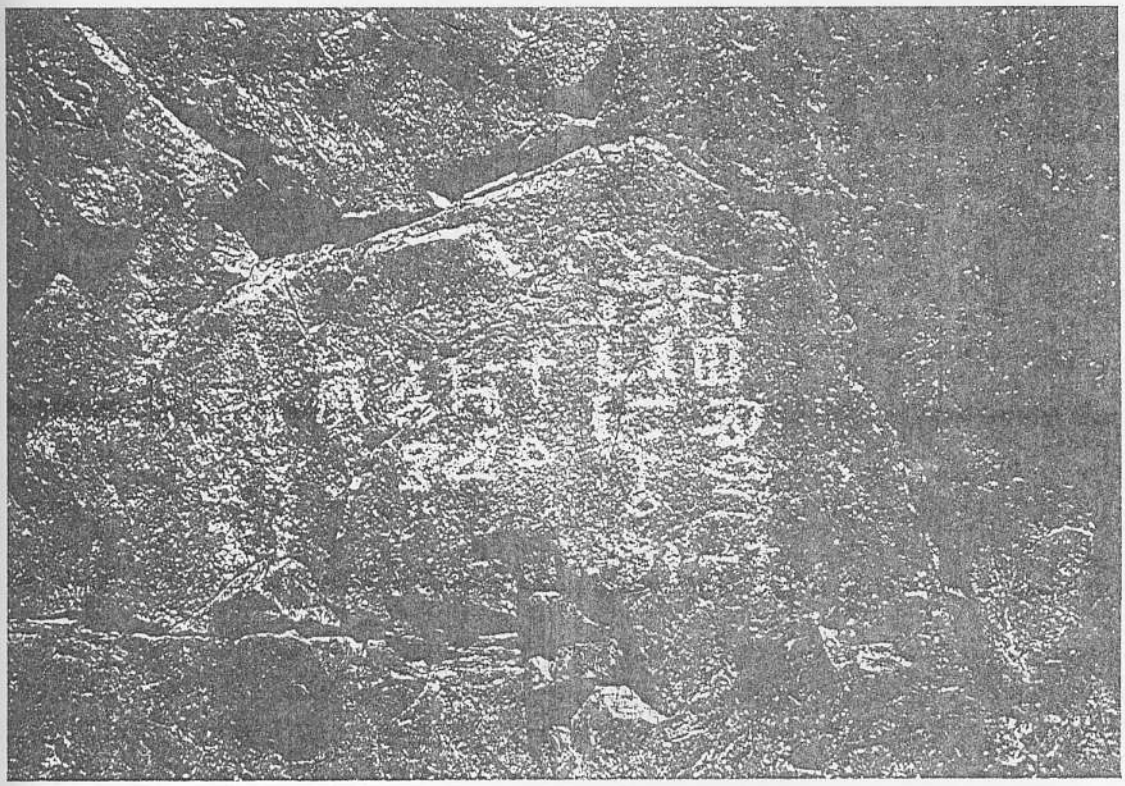


Fig 8.2.5

If the arguments about the age of the names is correct, there seems to have been a fair deal of traffic in the Nubian Desert during the entire dynastic period. The records of gold mining in the area (Save-Soderbergh 1941; Vercoutter 1959), however, suggest that extensive mining in the Nubian Desert only took place during the Middle and New Kingdoms. Be that as it may, the inscriptions provide tempting clues to reconstructing the routes and destinations of the Egyptian prospectors. Many of the inscriptions lie astride tracks which are still used in the Desert (Fig. 8.1), and which like the Korosko, Allaqi, and Gabgaba routes may be of great antiquity. However, to fully explore the possibility of reconstructing ancient routes much more systematic searches for rock art and inscriptions need to be undertaken. What is noteworthy at this point, however, unless it is merely an effect of incomplete survey coverage, is the absence of hieroglyphic inscriptions in the highlands of the Red Sea Hills. What inscriptions we have are all to be found in the Wadi Allaqi and Gabgaba valleys and in the lowlands of the Nubian Desert not far from the Nile Valley. Could this be taken to indicate that the hills were not penetrated by ancient Egyptian prospectors?

8.3 The Cattle Art

Also more common in the lowlands are the groups of rock engravings depicting cattle, and sometimes giraffes and elephants (fig. 8.3) (fig. 8.3.1) (Fig. 8.3). The cattle engravings occur in large panels, for example at Bir Murat (A2), or scattered as isolated pictures as

Fig. 8.3

Fig. 8.3.1

around the jebel overlooking site BØ.1. Only one rock art station with cattle engravings has been encountered in the highlands of the Red Sea Hills within our study area. The known examples in the lowlands all occur within 2ØØ km of the Nile river, and farther north where such cattle drawings are found in the highlands (as at Abraq in the Egyptian Red Sea Hills), the distance to the Nile is again less than 2ØØ km (Cervicek 1974; Sadr 1991a). Such a distribution, if not an artefact of incomplete survey coverage, may indicate that the cattle herders were dependent on the Nile for part of their seasonal rounds: the highlands in the present study area may have been beyond their seasonal reach.

Given that the Nubian Desert is now far too dry for cattle, these pictures must have been drawn before the first or second millennia BC when the area had a slightly wetter climate (Muzzolini 1982). Cattle bones were found in the excavation of sites C23 Op.3 and D5.1 (see sections 3 and 6). The former was dated to 31Ø2 BC while D5.1 dates to 4475 BC. The drawings, could like the bones, date from the fifth and fourth millennia BC. However, the style in which the cattle are depicted greatly resembles the drawings of cattle on stelae and pots of the C-Group culture of Lower Nubia, dating to the late third and early second millennium BC (cf. e.g., Bietak 1968). Could the cattle art in the Nubian Desert be the stylistic ancestor of the C-Group cattle art?

The rock drawings themselves are unfortunately not datable, and they are not yet found in secure association with datable ceramics. Few C-Group-like potsherds have been found in the Nubian Desert. On the other hand, there are many Khartoum Horizon style Neolithic potsherds in the area, and they are like the cattle engravings predominantly restricted to sites in the lowlands. The Neolithic occupants of the area may turn out to be the artists responsible for these engravings.

8.4 The Camel Art

Finally, the group of engravings which depict camels, some with riders, along with cavalry and individuals on foot, all often shown in combat seem to be of a considerably later period, judging by their very light patination (Fig.8. 4). The engravings are very crude, no more than stick figures. Since (fig. 8.4.1) camels were not widely used in Northeast Africa before Roman times (Adams 1977) we can assume the drawings are likewise not from an earlier period. On the other hand, the drawings may have been executed in pre-Islamic times if the artists were observant of the Koranic rule prohibiting the depiction of the human form. The camel art may thus have been executed during the first millennium. It is tempting to see in the pictures depictions of the conflicts between Arabs and the Beja as briefly described in the previous section. Possibly, the camel art is to be associated with the camembert tumuli, which like the art, are found principally in the highlands rather than the lowlands of the Nubian Desert.

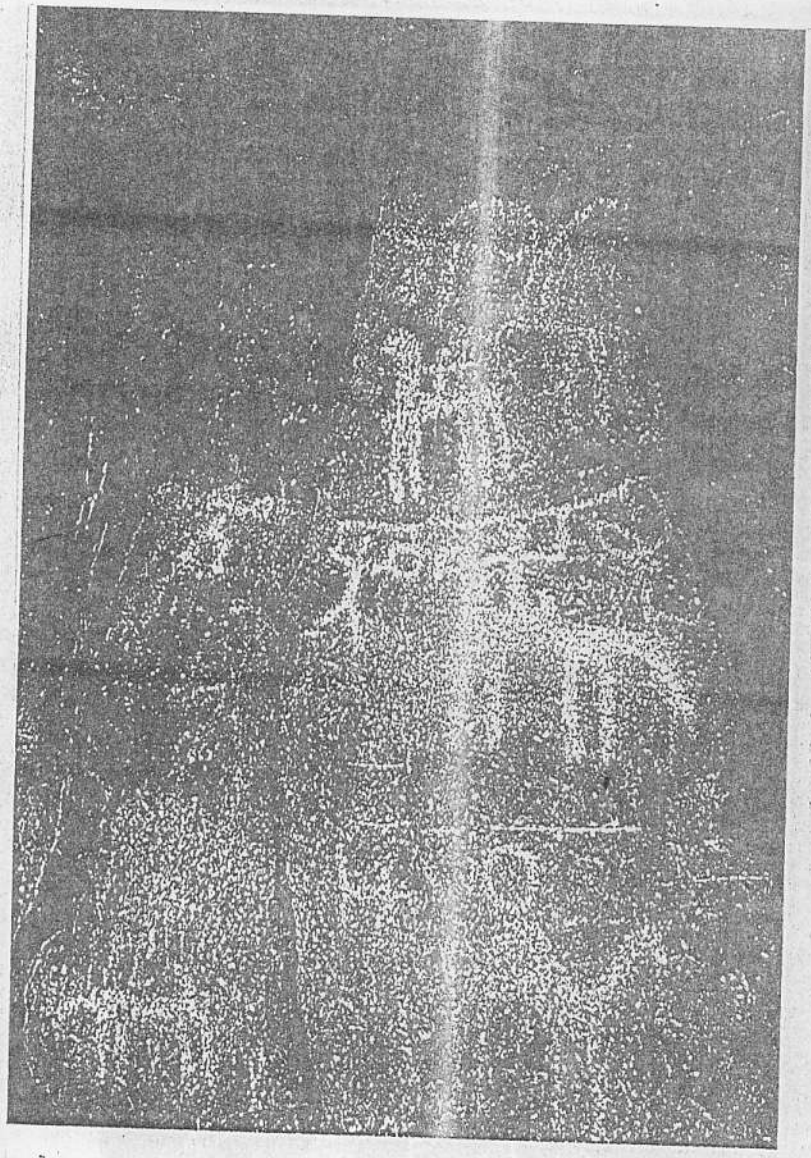


Fig. 8.4

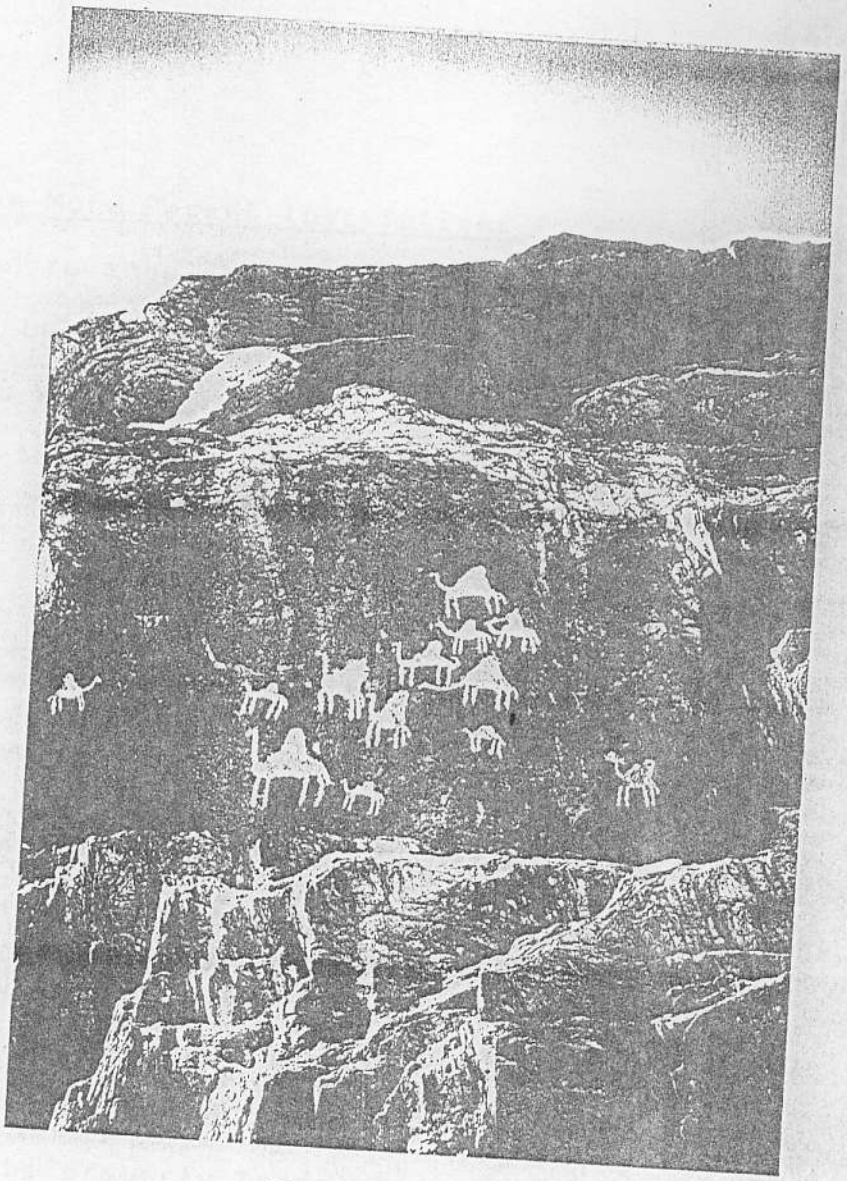


Fig. 8.4.1

8.5 The More Recent Inscriptions

Rock engravings and drawings of even more recent periods have also been encountered. Among these are diverse signs pecked into rocks which are similar to signs branded onto modern day camels in the area. These engravings are presumably not very ancient

An inscription in Arabic was found on a boulder near Bir Murat (Fig. 8.5). With a date of 1898, it names two Egyptians, as well as mentioning the Sudan Regiment and identifying the location as well number 14. The regiment, one assumes, guarded the well, and was presumably stationed at nearby Fort Murat.

Within the fort, on the well-preserved plaster inside a room was an inscription in cursive Greek/Coptic (Fig. 8.6) which remains to be properly translated. Given the architecture of the fort, the good preservation of the plaster, and the remains of glass and "Zir" water jars within the fort's compound, the text on the plaster must date from around the early years of this century.

8.6 Discussion

Much work remains to be done to complete a study of the rock art and inscriptions in the Nubian Desert. Interesting questions have arisen even from the few engravings encountered during the survey, such as the possibility of finding the stylistic

Fig. 8.5

Fig. 8.6

predecessor to the C-Group cattle art, the possibility of identifying an early Beja art, and the possibility of reconstructing routes and destinations of ancient Egyptian prospectors in the area from their graffiti. Other interesting questions concern the absence, except for a few very crude examples at BØ.1, of Egyptian boat engravings encountered so frequently in areas of the Eastern Desert farther north (cf. e.g.. Fuchs 1991; Cervicek 1974).

What is needed now is a more systematic search for engravings and inscriptions in the Nubian Desert. The way forward is to examine the environs of every well, modern and ancient, in the area and to fully record the rock art around these. It is by now clear that the richest art is to be found around the wells, and their systematic examination will provide even if not all the art in the desert, a more representative view of the kinds of art and their distribution in the Nubian Desert.

9. Summary and Discussion

The archaeology of the Nubian Desert is extremely rich. The four seasons of reconnaissance by CeRDO have led to the recording of a multitude of ancient mining villages, graves, cemeteries, forts, rock engravings, and inscriptions which cover a period extending back to at least the Neolithic. Keeping in mind that CeRDO has concentrated its efforts on standing architecture (mining villages and tumuli), and has not yet even begun the

systematic recording of surface sites, the potential exists that much older sites will be found in the future, along with many more campsites of the Neolithic to recent periods.

Looking at the remains in turn, this preliminary report has shown the strong potential for documenting much detailed information about the Neolithic period in the Nubian Desert. With additional work in the Nasb Atilya area, the possibility exists that Neolithic sites--even perhaps Mesolithic ones--with in situ remains will be found, and that their excavation will allow a reconstruction of everyday life in this desert during such early periods of its history. Indeed, given the number of rockshelters in the surroundings of the Nasb Atliya depression, it is not unlikely that one will be found which still contains stratified deposits. The finding of such a site would be well worth the effort of surveying the area systematically.

From the fifth and fourth millennia BC we have so far found two quite different graves, D5.1 and C23, both of which include remains of cattle. One of the goals for future research ought to be the discovery of more evidence for occupation during these early post-Neolithic periods, and to find their relation with contemporary Nile Valley cultures such as the late Badarian, Predynastic, and A-Group. Although little, if anything, is known about the contacts between these populations and the peoples of the Nubian Desert, it has been hypothesised that at least the A-Group maintained close ties with the Desert, and may indeed

have played the role of middleman in the cattle trade between the Desert and Upper Egypt during Predynastic times (Nordstrom 1972; Sadr 1991).

From the third and second millennia BC we have no definite information as yet. Some of our sites such as D5 (the Wadi Elei mine) include ceramics which at a general level bear some resemblance to the Middle Nubian period wares from the Nile Valley. In the other direction, the wares from D5 and other sites such D3 also bear superficial similarities to ceramics from the Southern Atbai (Eastern Sudan) from the third and second millennia BC (cf. e.g., the Gash and Mokram Groups, see Sadr 1991). More detailed work is needed to understand the significance of these similarities. Related to a better understanding of this period is also the question of the apparent absence of the Pan-Grave culture in the Nubian Desert. This second millennium archaeological culture, which was thought to represent the Beja of that period (Bietak 1966; Sadr 1990), is in need of serious reassessment if its absence in the desert turns out to be real rather than just a result of incomplete survey coverage.

Of the first millennium BC we have no dated evidence except for the looter's cache from D16.1. Clearly, somewhere in this desert there is or are well-preserved burials of the Meroitic period. We hope some have been left unplundered and that these can afford us an archaeological view of the activities of the

Meroites in the Eastern Desert. Other finds, such as the simple conical tumuli, may turn out to date to the first millennium BC, but we have no direct evidence for this as yet. Also to be expected are the future findings of Ptolemaic layers in some of the mining villages. At Deraheib we know of one Ptolemaic coin, and can thus be fairly certain that at least at this site evidence for occupation during that period awaits discovery.

First millennium AD remains are plentiful. There is a rich collection of Beja graves of the seventh and eighth centuries in the form of the camembert tumuli, as well as many remains of the Medieval Islamic period in the mining villages. Coupled with the wealth of historical documents, the quantity and quality of archaeological remains from this period provide the potential for in-depth research into a period which can act as a source of analogy for all the other "gold-rush" periods which preceded it. Detailed study of the mining villages should indeed bring to light archaeological evidence for these earlier mining periods, such as during Dynastic and Ptolemaic periods.

Aside from the habitation sites and graves, another rich body of information is contained in the many rock engravings and inscriptions of the Nubian Desert. Even though the systematic search for these has not yet even begun, we have already found a sizeable sample of art and inscription from many different periods. In the future, systematic searches around wells, where the art is concentrated, should provide us with a representative

view of the art's distribution, which coupled with the distribution of dated sites should help to date the art itself. As it stands, the similar distribution of the camel and stick figure style of rock art and the distribution of the camembert graves, for example, suggests that the two were created by the same population. Similarly, the finding of cattle remains in the 5th and 4th millennia BC sites, and the distribution of the Neolithic sites, suggest that we are not far from identifying the creators of the cattle art of the Nubian Desert. Further work in this field should lead to more secure assignments of styles to periods, and eventually to a better understanding of the changing world views of the inhabitants of this desert through analyses of changes in their art.

The promise and potential of Nubian Desert archaeology is marred only by one thing: the monstrous extent of looting and the untold damage it has caused. The scale of grave robbery in this remote corner of the world far outstrips the extent of damage I have seen in many more populous areas of the Sudan. Hardest hit are the camembert tumuli, among the hundreds of which we were lucky to find two untouched examples. We think most of the looting took place during the Medieval "gold rush". Probably the graves were seen as the easiest source of gold, and the hard task of crushing quartz to get at the precious metal was undertaken only after all the graves in the vicinity of the mines were systematically plundered. Given the scale of mining during

the Medieval period it is surprising that a few graves actually remained untouched.

Not all the looting, however, can be blamed on the Medieval population of the area. Some of it is recent, as finds of barely corroded spades and crow bars by some of the tumuli in Wadi Terfowi attest. A good deal of the looting has been and undoubtedly continues to be carried out by the local Beja. Elsewhere, in the Abraq area of the Egyptian Eastern Desert, for example, the culprit could be identified, and not surprisingly he was the richest inhabitant of the Abraq settlement. More ominously, however, during the 1993 season we heard unconfirmed reports of roving tourists in three jeeps. Whether or not there were indeed tourists this far from the Nile, or whether or not they were dabbling in a bit of grave robbery, the danger always exists that with research publicised as widely as the work of CeRDO is, some individuals with the means to traverse the desert will set out with the aim of discovering a bit of treasure for themselves. There is little that the Sudanese authorities can do to protect their cultural resources in such a vast desert, and there is little we can do to stop potential looters except perhaps by appealing to their better judgement.

Archaeological remains, graves or sites, are each very much like a unique, hand-written book written in a foreign language. Those who have not learned to read the language may be tempted to tear out a page or two so as to possess at least the beauty of

the script itself. In so doing, however, they prevent those of us who can read from finding out and reporting on what the book had to tell. For the sake of the superficial beauty of the handwriting, the real treasure, the contents and story of the book, will have been lost or at least rendered incomplete. A page, one might say, is not much. But unless one has read the book, how is one to know whether the page one tears is not perhaps the crucial part of the story? Sometimes, the removal of but a single word can completely change the meaning of a text.

In the same way, every shovel full of earth removed from a grave by an illiterate is a page torn out of a priceless and unique book. Remove enough earth and the "book" becomes unreadable. Destroy enough of the books and there will be nothing decipherable left of an entire period of history, except for a few baubles gathering dust in the hands of private collectors. Such pretty little antiques, like pages torn out of, say, the original Gutenberg Bible, may tell us something about the level of the craftsmanship of its creator, but that is like nothing compared to the glorious story the book could have told in its complete form. And if there is only one of those books...

Appendix 1

The Radiocarbon Dates from the Nubian Desert

John C. Vogel

Five samples of charcoal and leather from four sites were submitted by CeRDO for radiocarbon dating. The dates are reported in conventional radiocarbon years Before Present (BP, i.e. before AD 1950), using a halflife of 5568 years for C-14. Ages are corrected for variations in isotope fractionation. Calibrated ages are also calculated using the Pretoria programme for southern hemisphere (Talma and Vogel 1992). The 1 sigma range in calibrated age is given, along with the most probable calendar age shown in brackets.

Pta-6211. Charcoal sample from a hearth in operation 3 of burial complex C23. 4480 ± 20 BP, d 13 C = -22.8‰. Calibrated date: 3298-3237; 3112 (3102) 3091 BC.

Pta-6213. Leather fragments beneath skeleton in operation 1 of burial complex C23. Small sample, with only 0.92 g suitable carbon present for analysis. 1390 ± 70 BP. d 13 C = -19.4‰. Calibrated date: AD 622 (656) 683.

Pta-6208. Leather fragment from beneath skeleton in tumulus D4. Small sample, with only 1.3 g suitable carbon present for analysis. 1280 ± 60 BP. d 13 C = -20.0‰. Calibrated date: AD 674 (740) 798.

Pta-6212. Cloth from looter's cache in tumulus D16.1. 2110 ± 4
BP. d 13 C = -24.3‰. Calibrated date: 179 (114) 52 BC.

Pta 6214. Charcoal from deep pit in tumulus D5.1. 5650 ± 70
BP. d 13 C = -24.2‰. Calibrated date: 4417-4383; 4542 (4475
4437 BC.

Appendix 2

Study of the Human Skeletal Remains from the Excavations of CeRDO in 1993

Christian Simon

Etude des ossements humains provenant des fouilles du Centre de Recherche sur le désert Oriental en 1993.

Les restes humains mis à notre disposition par Monsieur Sadr proviennent de six squelettes dont la conservation est généralement mauvaise.

Nous présentons ici brièvement une analyse de chacun d'eux.

C 18.1.

Conservation : du crâne nous disposons seulement de fragments des maxillaires supérieurs et de la partie droite du corps mandibulaire.

Du squelette post-crânien les diaphyses des fémurs et tibias gauches.

Sujet probablement masculin (peu d'éléments pour diagnostiquer le sexe. L'âge n'a pu être estimé que par l'usure dentaire qui est forte (35-45 ans d'après Brothwell).

Dentition : l'usure des dents et surtout des molaires n'est pas régulière. Sur la mandibule on note une forte inclinaison linguo-vestibulaire (l'usure est plus forte du côté de la langue) et vestibulo-palatine sur le maxillaire supérieur. Cette pathologie avait déjà été observée sur de nombreux sujets de Kerma (Muller 1984). Cette usure particulière serait conditionnées par un mouvement de rétrusion de la mandibule et en relation avec la nutrition.

On n'observe pas de caries mais une forte parodontose et quelques résorption alvéolaire (chute de la dent et comblement de l'alvéole par de l'os).

Morphologie du squelette:

Sur le maxillaire supérieur dans la région sous nasale, on n'observe pas de sillon ou fossette prénasale que l'on retrouve généralement sur les crânes négroïdes.

L'ossature du squelette post-crânien est robuste, l'estimation de la longueur du tibia permet d'apprécier sa taille qui serait grande (environ 175 cm). Le fémur montre un pilastre fort développé et un aplatissement de l'os dans la région sous trochantérienne. Le tibia montre également un aplatissement de l'os au niveau du trou nourricier.

C23 (Wadi El Ku).

Squelette bien mieux conservé que ceux déjà présenté. Le crâne et la mandibule sont très fragmentés.

Le squelette post-crânien montre pour les os du membre supérieur la présence de diaphyses d'humérus et d'ulnas mais des radius complets.

Le membre inférieur est presque complet exception faite des fibulas.

De la colonne vertébrale il manque l'atlas et l'axis ainsi que quelques vertèbres thoraciques. On a également des fragments d'os iliaques et de sacrum.

Il s'agit d'un adolescent d'environ 12 à 13 ans. La denture montre seulement quelques dents. Les incisives ont leurs racines terminées, la troisième molaire montre sa racine non terminée. D'autre part les os longs ne sont pas synostosés.

La taille de cet adolescent peut être estimée à 1.40 m ce qui correspond à une stature élevée à l'âge adulte.

C33.2 (Cratère de Obni).

Conservation : du crâne nous disposons de fragments des os de la boîte crânienne ainsi que quelques débris du maxillaire supérieur.

Du squelette post-crânien nous avons seulement l'épiphyse proximale et la diaphyse du fémur droit ainsi que la diaphyse du tibia gauche.

Sujet de sexe indéterminé. L'âge est situé entre 18 et 25 ans. Toutes les sutures crâniennes sont ouvertes et l'usure dentaire est faible.

Dentition : peu de chose à dire étant donné que presque toute les dents sont cassées. On observe une faible usure, sans trace de caries.

Sur le squelette post-crânien on observe une ossature gracile. Cependant le pilastre est assez développé et on observe un aplatissement de l'os dans la région sus trochantérienne (moins marqué que le sujet C18.1).

D4 :

Conservation :

Du crâne nous disposons que des fragments des maxillaires supérieurs et de la mandibule.

Du squelette post crânien nous n'avons que les fémurs.

Il s'agit d'un enfant de 3 à 4 ans. La dentition lactéale est entière et la première molaire définitive a sa couronne formée. La longueur des os longs nous donnerait un âge légèrement plus élevé (4 à 5 ans).

La stature estimée sur la base de la longueur des fémurs indique une taille d'environ 59 cm. (méthode de Telka).

D5.1 :

Conservation : pas de restes crâniens. Le squelette post crânien est composé essentiellement de diaphyse des os du membre inférieur. On dispose également de fragments de l'aile iliaque du côté gauche.

Il s'agit d'une femme. Diagnose effectuée sur l'aile iliaque qui montre une échancrure sciatique largement ouverte et la présence d'un sillon préauriculaire (trace de parturitions) bien marqué.

L'âge à été estimé par l'évolution de la cavité médullaire du fémur, stade II de Nemeskèri. Ce qui donne un âge compris entre 35 et 55 ans.

D16.1 Wadi Terfowi).

Conservation : du crâne nous avons que des débris de la boîte crânienne et de la mandibule.

Du squelette post-crânien nous avons que des diaphyses d'os longs et aucun os entier.

Il s'agit d'un homme, diagnose confirmé par une échancrure sciatique très fermée.

Le squelette est robuste et la stature que nous avons pu calculer sur l'estimation de la longueur du radius et de l'ulna est moyenne (160-165 cm).

Conclusion :

En définitive il n'est pas possible de tirer de grand renseignements sur des os aussi mal conservés et dans ces conditions il est impossible de situer ces ossements dans un contexte plus large.

Appendix 3.

Preliminary Report on Animal Remains from the CeRDO excavations of 1993

Louis CHAIX

The small sample of animal bones recovered by CeRDO from various sites are generally very poorly preserved. They show the typical degradation due to long exposure to desert conditions: the bones are very light and brittle.

The following general remarks can be made about the samples:

- Except for a few bones of rodents and amphibians, all the faunal remains are from domesticated animals.
- In all the samples studied caprines (sheep/goat) are dominant.
- Cattle and dog bones are also present.

At site C23, operation 3 (see section 6), we found the remains of the skeleton of one young sheep, around a year old. Also from this location came a fragment of humerus belonging to a subadult cattle. Charcoal from a fireplace in Operation 3, apparently associated with these bones was dated to 4480 ± 20 BP (Pta 6211, see appendix 1).

At the same site, in operation 5, an articulated skeleton of a dog was found. After comparisons with ancient dogs from the site of Kerma, we can say that this was a medium sized dog, comparable with the actual pariah. Wither's height is ca. 45 cm. From the

same Operation we have also some bones of a subadult sheep, less than two years old.

In tumulus D5.1 (see section 3) some remains of horn cores were found. They belong to ruminants. One may be of cattle and the other from sheep, but these attributions are doubtful due to the extremely poor condition of the samples. Charcoal from a pit beneath the horn cores was dated to 5650 ± 70 BP (Pta 6214, see appendix 1).

Also in tumulus D5.1 we have observed some bones of amphibians, probably frog, and some rodent bones. The presence of these animals is probably not of anthropic origin.

Appendix 4

Catalogue of the Sites Recorded by CeRDO

- Sites with prefix A were recorded between January and March 1989; with prefix B between February and March 1990; with prefix C between December 1990 and February 1991; and with prefix D between January and February 1993.

- Site locations were determined by a Global Positioning System (GPS) Instrument. The seconds are read to the hundredth rather than the more usual sixtieth.

- The site co-ordinates are followed by the AMS site designation (see Hinkel 1977).

- Sites marked with * are mentioned on the series 1404, 1:500,000 scale maps of the Sudan and Egypt.

A1 (21.07.13N;32.46.58E) (NF-36-J/24-K-1) * Umm Nabardi. Massive modern mine and village with many English artefacts. Vail (1978) mentions that this mine functioned between 1910 and 1945. A concentration of hundreds of basal grinding stones with troughs found in a particular sector of the village near the workmen's houses. These grinding stones are also found in ancient mining villages and their presence in a modern setting may indicate collection and reuse of ancient artefacts or more likely the survival of an ancient technology. Nearby a small, older mining village with apparently Islamic period ceramics.

A2 (21.03.72N;32.55.32E) (NF-36-J/24-S-1) * Fort Murat. English period fortified camp, with very well preserved buildings. On plaster inside one of the buildings are

fragments of writing in cursive Greek or Coptic. Nearby, in the wadi bottom lies a now defunct well head. Close by is a boulder with Arabic inscription mentioning a well number 14, the Sudan Regiment, a date of 1898, and two individuals with apparently Egyptian names. Across the wadi there are two Islamic cemeteries. Farther upstream, near some trees which probably mark the site of a spring or seepage are many rock drawings of cattle, two of elephants, three drawings of Horus, and a few lines in hieroglyphic.

A3.Ø (21.15.91N;33.12.31E) (NF-36-K/13-Y-1) * Mountain falsely marked on maps as a pyramid.

A3.1 (21.37N;33.Ø7E) (NF-36-K/7-M-1) Fossilised tree trunks.

A4 (22.35N;33.22E) (NF-36-G/8-R-1) * Umm Qareyat.

Numerous scattered, isolated rectilinear and circular dry laid stone structures along the edge of a wadi. Traces of shallow mining trenches on the hill sides. Schweinfurth (19Ø3) mentions that this site was the focal point of renewed gold prospecting in the Nubian Desert during the early years of this century.

A5 (21.49.5ØN;33.42.98E) (NF-36-K/3-T-1) Ismat Omar.

Some fifty isolated, scattered, well preserved circular dry laid stone structures along the foot of some low hills. Many large, circular grinding mills along with abundant crushed quartz. Washing tables. Mining trenches hundreds of meters long. Ceramics at this site are plain and painted, probably Islamic wares of the medieval period. Enormous quartz vein some 5 km away.

A6 (22.Ø7.49N;33.57.16E) (NF-36-G/22-D-1) Isolated tomb consisting of two large circles of stone shaped as a figure 8. Within the circle are 6-8 low mounds of gravel. Along

the edge of each circle there is a group of 2-3 stelae.

Overall length c. 26 m; width c. 13 m. Probably Islamic period.

A7 (22.08.79N;33.52.49E) (NF-36-G/22-M-1) * Abu Fas.

Large ancient mining village utilised also in modern times as English artefacts attest. Rectilinear and circular dry laid stone structures, some of which are well preserved. Many grinding mills and washing tables. Mine tunnels and trenches in the surrounding hills. Stone wall across small tributary wadi probably acted as water control feature.

Islamic graves. Three km away another cluster of dry laid stone structures.

A8 (21.48N;34.40E) (NF-36-L/1-S-1) Numerous tumuli including "camembert" types scattered along wadi Elei.

A9 see B17 (Al Fawi).

A10 (21.58.23N;35.04.15E) (NF-36-L/3-B-1) Necropolis of small simple tumuli marked by large stelae.

A11 see C46.

A12 (21.38.47N;35.00.71E) (NF-36-L/9-K-1) Block of rectangular, multi-roomed stone structures as well as some circular stone structures in the vicinity. No grinding stones.

A13 (21.25N;35.12E) (NF-36-L/15-J-1) Some 40 circular stone structures in poor state of preservation scattered along the base of a hill. Much quartz, but no grinding stones. Shallow mining trenches.

A14 (21.28.57N;35.14.65E) (NF-36-L/15-E-1) * Onib. Vast scatter of rectangular, multi-roomed, as well as circular

isolated stone structures in various states of preservation.

Some metal structures. Numerous grinding mills. In surrounding areas are deep mining pits and trenches.

A15 (21.28.45N;35.14.29E) (NF-36-L/15-E-2) Very large cemetery of Islamic period. Nearby rock engravings of cattle. One km from cemetery constructions of different types in a circular settlement measuring 200-250 m in diameter.

A16 see C48.0

A17 see C34.1

A18 (21.29.88N;35.20.71E) (NF-36-L/16-B-1) Very well preserved, probably recent, rectangular stone structures.

A19 (21.36N;35.26E) (NF-36-L/10-N-1) Very large stone circle on hillside, with small stone tumulus in centre. Possibly a grave or only a marker.

A20 (21.37.28N;35.32.59E) (NF-36-L/11-K-1) Isolated Islamic grave with surrounding ring of stones.

A21 (21.38.68N;35.25.20E) (NF-36-L/10-N-2) Bisharin camp.

A22 (21.07.76N;36.15.41E) (NF-37-I/20-K-1) Cemetery with dozens of Islamic graves. Many of the graves have a circle of cleared ground around them, and a group of stelae set at the edge of the clearing pointing east towards Mecca. Many of the tumuli have a covering stripe of quartz. There are also a few simple conical tumuli with a stela.

A23 (21.05.56N;36.15.74E) (NF-37-I/20-P-1; N.B. in Hinkel 1992 this site is numbered /20-Q-1 on the basis of approximate co-ordinates for the site) * Gobeit.

Functioning mine and occupied village probably situated on site of more ancient mine.

B0.1 (21.09.11N;32.33.13E) (NF-36-J/23-G-1) Half a dozen small rockshelters on the lower slopes of an isolated jebel, some with rock engravings of cattle, hunters, crude boats. At the foot of the jebel on the Southern face there are surface scatters of Neolithic potsherds, and a few palette shaped grinding stones. Vague rock piles in the vicinity may be tombs.

B1.0 (21.03.51N;32.38.07E) (NF-36-J/23-R-1) Surface site with Neolithic pottery and grinding stones. Some simple conical tumuli.

B1.1 (21.03N;32.39E) (NF-36-J/23-S-1) Surface site with grinding stones and ostrich egg shells.

B2.0 see A1 (Umm Nabardi).

B3.0 see A2 (Fort Murat).

B4.0 (21.10.05N;33.07.08E) (NF-36-K/19-H-1) Mosei. Many scattered circular stone structures. Many basal grinding stones with oval troughs.

B5.0 (21.07N;33.08E) (NF-36-K/19-M-1) Nabi. Scattered circular stone structures. Shallow mining excavations and trenches on hillside. Water catchment feature.

B6.0 (21.03.58N;33.20.50E) (NF-36-K/20-Q-1) Large block of quartz and debris. Some simple conical tumuli.

B7.0 see C51 (Idarib).

B8.0 (21.20.91N;33.30.46E) (NF-36-K/15-P-1) Well.

B9.Ø (21.27.11N;33.41.61E) (NF-36-K/15-D-1) Isolated "camembert" type tumulus with one large stela.

B1Ø.Ø (21.23.24N;33.38.62E) (NF-36-K/15-M-1) Group of tombs of different types. One is a simple conical tumulus with stela. Another a circle of stones with recent offering of 3 pots and sea shells.

B11.Ø (21.3Ø.96N;33.45.39E) (NF-36-K/1Ø-U-1) Abu Bard. Dozens of circular stone structures scattered over a large area. Numerous grinding mills. Washing tables. Ceramics include painted examples, possibly Islamic wares of the medieval period.

B12.Ø (21.33.Ø5N;33.37.16E) (NF-36-K/9-R-1) Abu Baraga. Some 3Ø grouped and isolated circular stone structures. Few mill fragments.

B12.1 (21.4ØN;34.Ø6E) (NF-36-K/11-H-1) Isolated camembert tumulus some 8 m in diameter. Other types of tumuli scattered nearby.

B13.Ø (21.39N;34.13E) (NF-36-K/11-J-1) Isolated camembert type tumulus on hilltop.

B14.Ø (21.43.54N;34.19.98E) (NF-36-K/12-B-1) Wadi Tabak. A few dozen circular stone structures with some grinding mills. Among the plain and painted wheel made ceramics, W.Y.Adams has identified some medieval Islamic examples of 85Ø-1ØØØ AD. Hand made pottery includes incised designs of the type found associated with the camembert tumuli. Washing tables. Mining trenches in surrounding hillsides. One km away there are two simple conical tumuli and a large stone circle.

B15.Ø Wadi Oga at 21.45N;34.19E.

B16.Ø Wadi Allaqi at 22.Ø1.53N;34.53.21E.

B17.Ø (22.Ø1.37N/34.55.12E) (NF-36-H/2Ø-X-1) * Al Fawi.

Numerous circular stone structures scattered in two adjacent wadis. Numerous grinding mills and much quartz debris.

Mining trenches. Water control dams across tributary wadis. Various types of hand- and wheel-made pottery including

incised examples elsewhere associated with the camembert graves. Some Islamic tombs with covering layer of quartz at

the entrance to the Wadi.

B18.Ø (22.ØØ.48N;34.57.33E) (NF-36-H/2Ø-Y-1) Tombs, including at least one of the camembert type and several

Islamic ones .

B19.Ø (22.Ø1.37N;34.57E) (NF-36-H/2Ø-Y-2) Necropolis with camembert type, simple conical, and various types of

Islamic graves.

B2Ø.Ø (21.56.93N;35.Ø8.88E) (NF-36-L/3-H-1) * Deraheib. Vast settlement with artefacts from many different periods.

Some scattered circular stone structures at the base of surrounding hills. On the banks of Wadi Allaqi are two main

clusters of rectilinear dry-laid stone structures. The main cluster is cut by an avenue. In the other cluster are two

large castles, the architecture of which includes arches cemented with mud. Paul (1954) mentions that these castles

may have served as Al Omari's headquarters towards the end of the ninth century when the Rabi'a gained control of the

Allaqi mines.

Aside from the structures there are two or three cemeteries, among which one is Islamic and another contains camembert type graves. Many mills, quartz debris, and mining tunnels some of which are quite deep. Finds include pottery from various periods including Chinese porcelain, Christian period wares (Pamela Rose, personal communication), medieval Islamic ceramics from the period 1000-1100 AD (W.Y. Adams, personal communication), and Khartoum Horizon style potsherds. A Ptolemaic tetradrama coin was also found dating to 300-100 BC. The site contains iron slag and bloom which according to Professor Marco Tizzoni resembles samples from the island of Kithnos dated to the Hellenistic period.

Deraheib can almost certainly be associated with the city of Allaqi mentioned by many classical Arab geographers (cf. several sources in Vantini 1975). Other possible--but as yet hypothetical--identifications for this site are Berenice Panchrisia, and the gold mine of Seti I shown on the Turin Map.

B21.0 (21.56.93N;35.12.50E) (NF-36-L/3-J-1) Well.

B22/23 (22.04.26N;35.21.92E) (NF-36-H/22-R-1) A well preserved circular stone structure with other examples scattered one km farther away. A broken mill and mining trenches.

B24.0 (22.02.37N;35.17.29E) (NF-36-H/22-W-1) Well preserved rectangular stone structures. Washing table and chute.

B25.0 (21.59.25N;35.19.17E) (NF-36-L/4-B-1) Isolated camembert style tumulus with a diameter of c. 5 meters.

B26.0 (21.59.10N;35.21.58E) (NF-36-L/4-C-1) Group of Islamic tumuli. Stray find of two steatite pipes of the

type used to increase kiln temperature (see chapter by Vercoutter in this volume).

B27.Ø (21.56.93N;35.Ø4.5ØE) (NF-36-L/3-G-1) Beja encampment.

B28.Ø see A7 (Abu Fas).

B28.1 (22.1Ø.76N;33.46.Ø4E) (Nf-36-G/22-F-1) Some dozens of circular stone structures and a broken mill.

B29.Ø (22.Ø7.31N;33.44.5ØE) (NF-36-G/21-D-1) Lithic scatter with polished axes and stone rings, and incised ceramics possibly of Pan-Grave type. Two looted camembert style graves. Rock engravings of cattle and hieroglyphic inscriptions. Farther away, an Islamic cemetery and a cement walled well.

B3Ø.Ø (22.Ø7.31N;33.45.Ø5E) (NF-36-G/22-K-1) * Bir Umm Gat. Wells.

B31.Ø (22.17.88N;33.39.77E) (NF-36-G/15-X-1) Numerous circular stone structures, some mills, and shallow mining excavations.

B32.Ø (22.24.92N;33.27.22E) (NF-36-G/14-J-1) Many scattered circular stone structures, some grinding mills, washing tables, and quartz debris. Shallow mining pits.

B33.Ø see C56.Ø (Bab el Khashm).

B34.Ø see C57.Ø.

C1.Ø (2Ø.43.4ØN;32.33.89E) (NF-36-N/11-B-1) A few square km of shallow excavations probably related to gold mining.

C2.Ø (2Ø.46.15N;32.24.22E) (NF-36-N/4-X-1) Umm Fit Fit. Many dozens of circular and rectangular stone structures scattered at the foot of some low hills. Some of the ceramics appear to be of the pharaonic period (Pamela Rose, personal communication). Many lower grinding stones with troughs. Very little quartz debris.

C2.1 (2Ø.46.18N;32.24.11E) (NF-36-N/4-X-2) Isolated tomb delimited with fossilised tree trunks.

C3.Ø (2Ø.43N;32.36E) (NF-36-N/11-C-1) Settlement with few circular stone structures, no grinding stones, but abundant quartz debris.

C4.Ø (2Ø.41.34N;32.37.44E) (NF-36-N/11-H-1) Rod el Ushal. Numerous isolated circular stone structures, no grinding stones, and scarce quartz debris.

C5.Ø (2Ø.35.25N;33.Ø2.45E) (NF-36-O/7-P-1) Abu Siha. A dozen scattered circular stone structures without grinding stones. Abundant quartz fragments. Shallow mining pits. Three km farther a group of simple conical tumuli.

C5.1 (2Ø.35N;33.17E) (NF-36-O/8-P-1) Extensive scars of mining excavations.

C6.Ø (2Ø.35.4ØN;33.17.25E) (NF-36-O/8-P-2) Nasb el Husan. Few circular stone structures without grinding stones. Abundant quartz fragments and extensive scars of mining excavations.

C6.1 (2Ø.41.44N;33.24.ØØE) (NF-36-O/8-I-1) Group of a dozen tombs marked by small, ground level circular pavements of stone.

C7.Ø (21.Ø6.66N;33.34.35E) (NF-36-K/21-L-1) Group of three simple conical tumuli one of which has a diameter of c. 9m.

C7.1 (21.Ø7.32N;33.35.74E) (NF-36-K/21-L-2) A few low circular stone structures. Some Islamic graves.

C8.Ø (21.Ø9.8ØN;33.35.99E) (NF-36-K/21-G-1) Nabi Tana. Settlement of circular and some rectilinear stone structures. The latter are generally two or three roomed blocks around which are found most of the grinding mills. Also in the vicinity of these buildings are the washing tables. Much quartz debris and many mining pits in the surrounding hills. William Adams has identified the diagnostic wheel-made ceramics as medieval Islamic wares of the 8th and 9th centuries. Mosque outline and a few Islamic graves. Two km away there are some simple conical tumuli. Also small engraving of cattle on a boulder.

C9.Ø (21.Ø6.7ØN;33.35.95E) (NF-36-K/21-L-3) Dozens of scattered, well preserved circular stone structures at the confluence of Wadis Naba and El Ku. No grinding stones and little quartz debris. Faint scars of mining pits. Islamic graves nearby.

C1Ø.Ø (21.Ø7.77N;33.56.99E) (NF-36-K/22-N-1) A dozen apparently Islamic graves. poorly preserved stone structures with numerous grinding mills and quartz fragmentation mortars. Scarce quartz debris but extensive mining pits.

C11.Ø (21.Ø7.87N;33.56.88E) (NF-36-K/22-N-2) Kabeseit. Vast settlement with numerous circular and rectilinear stone structures. Stone outline of a mosque. Many mills. Diagnostic wheel-made medieval Islamic wares of the 8th-1Øth centuries (W.Y.Adams, personal communication), as well as

some Roman or earlier sherds (Pamela Rose, personal communication). Numerous simple conical tumuli. Extensive mining trenches but scarce quartz debris.

C12.Ø (21.Ø2.Ø8N;34.Ø1.ØØE) (NF-36-K/23-U-1) Isolated, looted tumulus of camembert type. Fragments of a cross-incised ceramic stand in vicinity and on top of tumulus.

C13.Ø (2Ø.59.Ø5N;34.Ø1.81E) (NF-36-O/5-A-1) Terfowi. Circular and rectilinear stone structures and grinding mills. Some pharaonic or late period sherds (Pamela Rose, personal communication). Mosque outline. A dozen or so camembert type tumuli, as well as some Islamic graves.

C13.1 (2Ø.59.15N;34.Ø2.17E) (NF-36-O/5-A-4) A camembert type grave excavated by CeRDO.

C14.Ø (21.ØØ.72N;34.Ø2.19E) (NF-36-K/23-U-2) Terfowi. Some 3Ø well preserved rectilinear stone structures and some grinding mills.

C14.1 (21.Ø2N;34.Ø3E) (NF-36-K/23-V-1) Large scatter of isolated camembert type tumuli along wadi. Also some simple conical tumuli.

C15.Ø (21.Ø1.61N;34.Ø4.83E) (NF-36-K/23-V-2) Islamic cemetery. One of the graves has offerings of a steatite and a grey stone vessel.

C16.Ø (21.Ø4.84N;34.Ø6.4ØE) (NF-36-K/23-R-1) Very large stone circle on a hillside with a scatter of large boulders in the middle. Maybe a grave or a marker. Adjacent are some circular stone structures.

C16.1a (21.Ø1.7ØN;34.Ø4.56E) (NF-36-K/23-V-3) Well.

C16.1b (21.Ø5.52N;34.Ø6.51E) (NF-36-K/23-R-2) Rock engravings showing horsemen in battle with others on foot, geometric signs, and representations of camels. Some scattered tumuli.

C17.Ø (2Ø.51.14N;34.Ø4.94E) (NF-36-O/5-L-1) A dozen simple conical tumuli.

C18.Ø (2Ø.51.27N;34.Ø5.14E) (NF-36-O/5-L-2) Bedrock outcrop covered with earth and cobbles to resemble a very large simple conical tumulus. Some 17m in diameter and c. 2 m tall, a test pit in the summit found bedrock at 35 cm but no archaeological deposits.

C18.1 (2Ø.51N;34.Ø5E) (NF-36-O/5-L-5) Simple conical tumulus near C18.Ø excavated by CeRDO during the 1993 season. Nearby another small simple conical tumulus.

C19.Ø (2Ø.51.78N;34.Ø5.74E) (NF-36-O/5-L-3) Numerous camembert style tumuli scattered along the wadi. Also some simple conical tumuli.

C2Ø.Ø (2Ø.51.84N;34.Ø8.38E) (NF-36-O/5-M-1) Islamic cemetery. One of the graves has offering of pots. Also some camembert style tumuli scattered along the wadi.

C21.Ø (2Ø.53.93N;34.11.Ø8E) (NF-36-O/5-N-1) Large, isolated simple conical tumulus.

C22.Ø (2Ø.53.43N;34.11.18E) (NF-36-O/5-N-2) Small Islamic cemetery.

C23.Ø (2Ø.55.24N;34.15.52E) (NF-36-O/6-F-1) Isolated tomb consisting of a large ring of stones, c. 25 m in diameter, with a thoroughly looted grave along the east rim. In the

west centre of the ring of stones a camembert style tumulus

excavated by CeRDO during the 1993 season. Large ring tumulus has a central fireplace and fragments of animal

bones including cattle and sheep. Charcoal from the fireplace was dated to 4480 ± 20 BP (Pta 6211). The most

probable calendar date is 3102 BC. The camembert tumulus is a much later addition. Beneath the skeleton of a juvenile

lay leather fragments which were dated to 1390 ± 70 (Pta 6213), the most probable calendar date being AD 656. With

the skeleton were found five small gold discs. To the south of the tumulus was an articulated skeleton of a dog and some

fragments of a sheep.

C24.0 (20.53N;34.18E) (NF-36-O/6-L-1) Isolated camembert style tumulus atop a hill. Nearby, three short lines of

upright slabs set in the ground.

C25.0 (20.48N;34.28E) (NF-36-O/6-T-1) Large circle of stones some 12-15m in diameter. Probably a tomb.

C26.0 (20.45.88N;34.35.09E) (NF-36-P/1-V-1) Group of

simple conical tumuli.

C27.0 (20.36.74N;34.45.70E) (NF-36-P/8-K-1) Group of simple conical tumuli.

C28.0 (20.32.N;34.52E) (NF-36-P/8-W-1) Scattered group of

simple conical tumuli.

C29.0 (20.34.54N;34.55.86E) (NF-36-P/8-S-1) Group of simple conical tumuli.

C29.1 (20.44N;34.57E) (NF-36-P/8-E-1) Scatter of numerous

tumuli along wadi.

C29.2 (20.49.48N;34.59.92E) (NF-36-P/2-T-1) Scatter of simple conical tumuli.

C30.0 (20.50.78N;35.01.83E) (NF-36-P/3-P-1) Keyau el Nafaab. Small, well preserved fort with corner tower, built of stone and mud cement. Apparently older, less well preserved settlement with rectangular stone structures and grinding mills. Large Islamic cemetery. Some camembert tumuli scattered atop nearby hills. Very large deep well currently in use. Many scars of mining excavations. In general vicinity of site many more graves.

C31.0 (20.50.74N;35.07.86E) (NF-36-P/3-R-1) Isolated camembert style tumulus.

C31.1 (21.38N;35.28E) (NF-36-L/10-O-1) Group of Islamic graves.

C32.0 (21.37.68N;35.26.10E) (NF-36-L/10-N-3) Two large camembert style graves.

C33.0 (21.37.32N;35.21.19E) (NF-36-L/10-M-1) Necropolis with over 40 camembert graves and many of other types including simple conical and Islamic ones. A simple conical tumulus and a camembert style one (C33.2 and C33.3) were excavated by CeRDO during the 1993 season.

C33.1 (21.30.59N;35.17.14E to 21.29.37N;35.15.15E) (NF-36-L/10-U-1) Isolated and grouped scatters of camembert style graves along wadi Onib.

C34.0 (21.29.90N;35.15.00E) (NF-36-L/16-A-1) Settlement with very well preserved rectangular stone and mud cement structures.

C34.1 (21.3Ø.1ØN;35.14.15E) (NF-36-L/9-Y-1) Circular stone structures in poor state of preservation. Numerous isolated camembert style graves. Rain pool (Qalt).

C35.Ø (21.31.49N;35.11.83E) (NF-36-L/9-X-1) Half a dozen camembert style graves, some with diameters over 1Ø m. Numerous Islamic graves. Settlement with rectilinear stone structures, poorly preserved. Lower grinding stones with oval troughs. More camembert style tumuli farther away.

C36.Ø (21.39.56N;35.1Ø.6ØE) (NF-36-L/9-I-1) Some simple conical tumuli.

C37.Ø (21.41.58N/35.Ø8.39E) (NF-36-L/9-H-1) * Alaar. Two clusters of buildings. One of rectilinear stone and mud cement structures is cut by a central avenue. Some of the buildings are in good state of preservation. The second cluster with circular stone structures. Abundant grinding mills, quartz debris, and scars of mining pits and trenches in the surrounding hillsides. Among the ceramics there are wheel-made wares of the medieval Islamic type from the 8th to the 1Øth centuries (W.Y.Adams, personal communication), as well as some apparently pharaonic period sherds (Rose, personal communication). Some ceramics of the kind associated with the camembert graves, some glass and evidence for modern occupation in the form of metal structures. Cement water catchment basins and a deep well with abundant water.

C38.Ø (21.5ØN;35.ØØE) (NF-36-L/3-P-1) A dozen circular stone structures in poor state of preservation and a simple conical tumulus. Some grinding mills.

C39.Ø (21.49.5ØN;34.57.41E) (NF-36-L/2-T-1) Rectilinear stone structures with a few circular ones in the vicinity. No grinding stones but some mining trenches evident.

C40.Ø (21.50.51N;34.55.50E) (NF-36-L/2-S-1) Group of rectilinear stone structures. Much quartz debris and many grinding mills. Nearby, some circular structures, as well as some Islamic graves.

C41.Øa (21.53.82N;34.27.43E) (NF-36-K/6-O-1) Crude rock engravings of camels.

C41.Øb (21.51.50N;34.28.58E) (NF-36-K/6-O-2) A simple conical tumulus and a large ring of stones with central tumulus.

C42.Ø (21.47.28N;34.29.83E) (NF-36-K/6-Y-1) Large stone circle on hillside with central scatter of boulders.

C43.Øa (21.59.ØØN;35.Ø2.15E) (NF-36-L/3-A-1) Rock engravings of camels.

C43.Øb (22.ØØ.71N;35.Ø5.23E) (NF-36-H/21-V-1) Poorly preserved circular stone structures and some mining pits.

C43.Øc (22.Ø1.35N;35.Ø5.44E) (NF-36-H/21-V-2) Isolated camembert grave on a hilltop.

C43.1 (22.Ø2.ØØN;35.Ø5.49E) (NF-36-H/21-V-3) Group of Islamic graves. Five km farther a group of simple conical tumuli.

C44.Øa (22.Ø3.95N;35.Ø7.41E) (NF-36-H/21-R-1) A dozen scattered clusters of rectilinear stone structures. No grinding stones. Some of the rooms are semi-subterrenean.

C44.Øb (22.Ø4.ØØN;35.Ø8.41E) (NF-36-H/21-R-2) A scatter of camembert type tumuli.

C45.Ø (22.Ø4.43N;35.Ø9.72E) (NF-36-H/21-S-1) Rectilinear stone structures without grinding stones. Scarce quartz debris. Nearby group of graves with camembert style, simple conical tumuli, and Islamic tombs. One km farther another small mining settlement.

C45.1 (21.56.68N;35.1Ø.37E) (NF-36-L/3-I-1) Very scattered clusters of round stone structures and simple conical tumuli along the wadi. The landscape shows scars of mining excavations.

C45.2 (21.52.91N;35.11.27E) (NF-36-L/3-N-1) Scattered isolated circular stone structures. Shallow mining pits and abundant quartz debris.

C45.3a (21.49.83N;35.1Ø.78E) (NF-36-L/3-S-1) Group of camembert style and simple conical tumuli.

C45.3b (21.49.85N;35.1Ø.78E) (NF-36-L/3-S-2) Crude rock engravings of camels.

C46.Øa (21.45.29N;35.Ø9.61E) (NF-36-L/3-X-1) Well preserved rectilinear stone structures with many grinding mills and abundant quartz debris. Mining pits in the hillsides.

C46.Øb (21.45.44N;35.1Ø.13E) (NF-36-L/3-X-2) Less well preserved settlement of circular stone structures.

C46.Øc (21.45.Ø9N;35.Ø8.51E) (NF-36-L/3-W-1) Mining settlement.

C47.Øa (21.44.95N;35.Ø7.76E) (NF-36-L/9-C-1) Rock engravings of camels.

C47.Øb (21.45.Ø9N;35.Ø8.51E) (NF-36-L/3-W-2) Small mini

settlement scattered along a wadi.

C48.Ø (21.29.64N;35.15.63E) (NF-36-L/16-A-1) Numerous camembert style graves, at least one of which has a small

rectangular chapel appended. Superstructures incorporate many grinding stones with troughs, reused from pre-existin

mining settlement. Abundant quartz debris. Numerous othe tumuli in the vicinity along the wadi.

C48.1 (2Ø.Ø6.77N;34.21.17E) (NF-36-O/24-M-1) Low isolat

simple conical tumulus.

C49.Ø (2Ø.Ø5.8ØN;34.16.94E) (NF-36-O/24-P-1) Isolated tomb in form of circle of stones some 1Ø m in diameter wit

one or two stelae along the edge of the circle.

C49.1 (2Ø.15N;33.54E) (NF-36-O/16-X-1) Isolated tomb consisting of a circle of stones.

C5Ø.Ø (2Ø.13.66N;33.21.91E) (NF-36-O/2Ø-C-1) Omar

Khabash. Scattered clusters of rectilinear, multi-roomed stone structures among which there are also some 2Ø

aggregated and isolated circular ones. Numerous grinding mills and quartz debris. Vast scatter of mining pits and

trenches. Of the painted ceramics some appear to be of the pharaonic period (Pamela Rose, personal communication). Tw

km farther an Islamic cemetery.

C5Ø.1 (21.Ø2.62N;33.18.42E) (NF-36-K/2Ø-V-1) Isolated simple conical tumulus.

C51.Ø (21.Ø6.63N;33.24.93E) (NF-36-K/2Ø-N-1) Idarib.

Vast settlement of scattered circular and some aggregated rectangular stone structures. Mosque. Many grinding mills,

quartz debris and ceramics of the medieval Islamic types.

Several small Islamic cemeteries within the settlement.

Mining pits and trenches.

C52.Ø (21.16.29N;33.39.21E) (NF-36-K/15-X-1) Dom. Isolated and grouped circular stone structures over a vast area in several wadis. Some grinding mills and a few grinding stones with oval troughs. Washing tables. Painted and plain wheel-made medieval Islamic wares of the 11th and 12th centuries (W.Y.Adams, personal communication). Mosque and many graves. Farther away is a vast area of mining pits.

C53.Ø (21.3Ø.64N;33.35.1ØE) (NF-36-K/9-V-1) Abaraga Forts. Four well preserved stone and mud plaster hilltop forts, each measuring ca. 1Øm by 1Øm with walls up to 1.8 m tall. Inside each compound is another small rectangular room.

C54.Ø (21.31.17N;33.35.81E) (NF-36-K/9-V-2) Abaraga. A few hundred scattered, generally isolated circular stone structures. Aswan wheel-made ceramics of 7ØØ-85Ø AD (W.Y.Adams, personal communication). No grinding stones, nor much quartz debris. Some mining trenches. Isolated tumuli.

C54.1 (21.47.32N;33.14.18E) (NF-36-K/1-Y-1) Badly eroded engravings of cattle.

C55.Ø (21.47.Ø3N;33.11.25E) (NF-36-K/1-X-1) Simple grave marked with fossil tree trunks.

C55.1 (21.5Ø.33N;33.Ø4.65E) (NF-36-K/1-Q-1) Scatter of fossil tree trunks.

C55.2 (21.53.6ØN;33.Ø3.99E) (NF-36-K/1-K-1) Badly eroded rock engravings.

C55.3 (22.Ø6.85N;33.Ø3.6ØE) (NF-36-G/19-L-1) Surface site with grinding stones, pottery, lithics, bone and ostrich egg shells.

C56.Ø (21.54.86N;32.38.32E) (NF-36-J/5-H-1) Bab el Khashm. Rock shelter with hieroglyphic inscriptions.

C56.1 (21.54.89N;32.21.73E) (NF-36-J/4-H-1) Badly eroded rock engravings of giraffe in a rock shelter.

C57.Ø (22.ØØ.35N;32.13.41E) (NF-36-F/21-Y-1) Rock shelter with hieroglyphic inscription and some broken ceramics.

D1 (21.Ø2.58N;32.26.11E) (NF-36-J/22-X-1) Surface site at the base of a jebel with Khartoum Horizon style pottery of the Neolithic period. Lithics of diverse raw materials. No Bone, nor any subsurface deposits. Two or three small rockshelters in the lower reaches of the jebel are empty of cultural deposits. Grinding stones.

D2 (21.Ø7N;33.32E) (NF-36-J/23-L-1) Sparse scatter of Neolithic period potsherds on a wadi terrace. Isolated Islamic grave.

D3 (21.Ø4.14N;33.44.53E) (NF-36-K/21-T-1) Large surface site with ceramics bearing grooved decorations: vague resemblance to some Pan-Grave ceramic decorations but other items of Pan-Grave culture missing. Grinding stones, lithics and ostrich egg shells.

D3.Ø (2Ø.58.9ØN;34.Ø2.Ø7E) (NF-36-O/5-A-2) Small cemetery with diverse types of tombs.

D3.1 (2Ø.52.92N;34.Ø5.91E) (NF-36-O/5-L-4) Isolated camembert style grave.

D3.2 (20.54.23N;34.06.78E) (NF-36-O/5-H-1) Small cemetery.

D3.3 (20.58.09N;34.08.85E) (NF-36-O/5-C-1) Isolated camembert style grave.

D4 (20.54.93N;34.13.23E) (NF-36-O/5-J-1) Two small camembert style graves, one of which was excavated by CeRDO during the 1993 season. The skeleton was of a child, and leather fragments beneath the skeleton were dated to 1280 ± 60 (Pta 6208), the most probable calendar date being AD 740. Surface scatter of ceramics with a mix of diagnostic pieces from many different periods. Some Islamic tombs nearby. Also nearby, a hieroglyphic inscription.

D5 (21.24.44N;34.35.38E) (NF-36-L/13-G-1) Vast mining settlement with circular stone structures and a few rectilinear ones. Washing tables, grinding mills and much quartz debris. Ceramics include a few Islamic medieval wares, incised wares elsewhere associated with the camembert style graves, grooved decorations similar to those found at D3, wares similar to Middle Nubian Period ceramics, and other wares not yet identified. Nearby vast cemetery with many small ground-level circular pavements of stone, and three larger graves marked by low circular mounds of earth and a few small boulders. Nearby some isolated camembert style graves.

D5.1 One of the three larger tumuli in the cemetery of D5 excavated by CeRDO during the 1993 season. Inside was an offering area with ceramics and horn cores sealing a deep pit cut into bedrock. To the east was a shallower pit which contained a badly damaged skeleton, pieces of a pot and a gold bracelet. Charcoal from inside the deep pit was dated to 5650 ± 70 BP (Pta 6214), most probable calendar date

being 4475 BC. It is unlikely that this grave is associated with the mine.

D6 (21.38.44N;34.11.41E) (NF-36-K/11-N-1) Isolated camembert style grave.

D7 (21.41.40N;34.11.34E) (NF-36-K/11-I-1) Shashu et Ab. Small scattered mining settlement with circular and rectilinear stone structures. Washing table and grinding mills Ceramics of the medieval Islamic wares.

D8 (21.41.11N;34.11.51E) (NF-36-K/11-I-2) Isolated camembert type tumulus with sherds of an incised pot at base of superstructure.

D9 (21.41.05N;34.11.35E) (NF-36-K/11-I-3) Simple conical tumulus.

D10 (21.51.55N;34.53.18E) (NF-36-L/2-M-1) Small Islamic cemetery. Some of the graves have offerings of brown burnished, undecorated pots of a kind often found in association with medieval Islamic wares in mining villages.

D11 (21.48.50N;35.00.03E) (NF-36-L/3-P-2) Small graveyard with central double tiered circular platform grave surrounded by a number of small simple tumuli.

D12 (21.38.35N;35.00.21E) (NF-36-L/9-K-2) Small group of very well preserved rectilinear stone buildings. No associated ceramics, mills or quartz debris. Possibly recent and unlikely to be a mining village.

D13 (21.13.51N;35.06.55E) (NF-36-L/21-C-1) Small mining village with many grinding mills. Medieval Islamic ceramics and small Islamic cemetery.

D14 (21.18.43N;35.24.26E) (NF-36-L/16-S-1) Small mining village with many grinding mills. Artefacts include green glass, incised sherds elsewhere found in association with camembert graves, and wheel-made wares possibly of the medieval Islamic period.

D15 (20.58.49N;34.02.00E) (NF-36-O/5-A-3) Small scattered mining village with mosque. Isolated camembert style tumulus.

D16 (21.00.17N;34.02.37E) (NF-36-K/23-U-3) Small, nucleated mining village with predominantly rectilinear stone structures. Many grinding stones with oval troughs. Ceramics include many with incised designs elsewhere associated with camembert style graves and some as yet unidentified wheel-made wares. Half a dozen camembert graves scattered about the village.

D16.1 A camembert tumulus in the village of D16 excavated by CeRDO during 1993. Looted and badly damaged grave. Unrelated to the burial, near the top of the burial vault lay hidden a piece of cloth containing seventeen pieces of gold jewellery. The cloth was dated to 2110 ± 40 BP (Pta 6212), with the most probable calendar date being 114 BC.

D16.2 (21.00.00N;34.02.20E) (NF-36-K/23-U-4) Mining village across the wadi from D16.

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