A PAROCHIAL PERSPECTIVE ON THE END OF MEROE: CHANGES IN CEMETERY AND SETTLEMENT AT ARMINNA WEST

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Understanding the 'X-Group problem,' i.e. the relationship between the Lower Nubian society of the late fourth to early sixth centuries AD and the preceding Meroitic culture, remains one of the most discussed issues in Meroitic studies.[1] Since individual communities constitute a scale at which many social processes operate, it is at this scale that aspects of change and continuity may be most visible (cf. Trigger 1978, 115-121). This study will focus on the community of Arminna West. At the encouragement of Professor William Kelly Simpson, I have undertaken the publication and analysis of the Meroitic and Post-Meroitic cemeteries at Arminna.[2] An interpretation of the Arminna West data is presented below to suggest that the texture of social change in the fourth century in Lower Nubia cannot be reduced to the collapse of the central Meroitic state, nor to the arrival of X-Group immigrants. Instead, by focusing on the unique and local nature of changes within a given community, it is hoped that insight can be gained into some of the cultural transformation processes operating in Nubia at that time. Even if somewhat parochial, such a local picture has implications for the larger patterns of change.

Arminna West contained the remains of a settlement site covering approximately 5.5ha, 18% of which could be planned on the basis of exposed walls, while only 5% of the settlement area (about 2800m²) was stratigraphically excavated, although it spanned from the Meroitic to the Classic Christian period. The settlement was once suggested to provide evidence of a local transition from the Meroitic to Ballana cultures on the basis of layers containing a mixture of late Meroitic and early X-Group ceramics (Trigger 1965, 134; 1967, 80-2). While this interpretation can be dismissed for not taking into account the formation processes of the archaeological

record,[3] I will nevertheless be arguing that Arminna shows a local transition in its cemeteries and provides no evidence for a population replacement by immigrants at the start of the X-Group. Arminna West Cemetery B provides evidence for the transformation of ritual practices, suggestive of the processes of culture change during the third and fourth centuries.

Rather than focusing on generalised types of graves, an approach to the past which has tended to reify the Meroitic/X-Group distinction,[4] I have tried to examine diversity and diversification of burial practices. Rather than treating time as static and cemeteries as synchronic, I hope to situate them in the flow of time. Time as a social dimension is punctuated by funerary rituals of which tombs and graves are the material residue. In addition to occurring through time rituals occur situated in space, within the local landscape which is structured symbolically by the belief system of the living community. This structuring of the landscape is partly realised through and influenced by the material structures already built within it.[5] Thus we should consider the building of a tomb and the practice of burial in relation to the structures already present in the vicinity.

In Arminna West Cemetery B we find a wide diversity of burial customs. They span from the late Meroitic period in the third century to the early X-Group. Since there are no natural features, like rock outcrops, hills, gullies or the like to influence the placement of tombs, it is likely that the tombs were purposely placed in relation to each other. There are

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[1] Kirwan 1982; Adams 1976; Török 1988; Dafa'alla 1989; Williams 1991b; Edwards 1996b.

[2] It is hoped that the final report, *Arminna West: The Late Nubian Necropolis and Meroitic Buildings Excavated 1963*, Publications of the Pennsylvania-Yale Expedition to Egypt 7, will go to press in 1998. The preliminary reports on these cemeteries are quite limited, but see Simpson 1963; 1964; 1965; also Trigger 1970a; 1970b.

[3] Williams 1985, 150, n.13; 1991a: 4, n.31; 1991b: 18, n.57; Rose 1993, 85; cf. Trigger 1986, 414. The excavators should not be faulted for this, since it was after the period of the excavations that an explicit concern for formation processes developed in archaeology (e.g. Schiffer 1972; 1987; Clarke 1973).

[4] The descriptions of 'typical' Meroitic and X-Group graves, such as those given by Emery (1965), while not inaccurate overlook much important variation and compare the mid-points of phases, i.e. the mid-fifth century Classic X-Group with the classic Meroitic tombs of the late second to early third century.

[5] These propositions are based on a burgeoning theoretical literature on social practice which recognises that ritual practices maintain and recreate traditional social structure while also providing a medium for the restructuring relations (e.g. Morris 1987; 1992; Barrett 1994; Boyd 1992; Mizoguchi 1992; 1993; Gosden 1994, 15-22, 122-30).

five tomb clusters (Fig. 1). Within each cluster there is a variety of tomb types: there are square sandstone structures with offering niches on the east side; there are similar superstructures made of mud-brick; there are round tumuli framed in mud-brick and there is a scattering of graves without any significant superstructure at all. Thus in many ways these clusters of tombs seem to be basically equivalent which would suggest that the clusters are neither primarily temporal (and showing horizontal stratigraphy) nor due to social differentiation like ranking. Indeed when I determined the probable period of the earliest datable finds from each tomb, I found that they are largely contemporary and overlapping in time (Fig. 1). Each cluster has a long history of perhaps a century and a half or so. The explanation for these clusters is probably kinship, with each group representing an extended family or lineage.[6] Meroitic funerary inscriptions usually spend a significant amount of space listing the names of relatives and their titles.[7] This emphasis on the importance of the accomplishments of kin and what seems to be a certain amount of transferable honour, transferable within a lineage, is clearly an important part of Meroitic funerary ritual and belief as it occupies much of the inscriptions placed outside many Meroitic tombs. At Arminna West these relationships seem to have been mapped onto the landscape through the clustering of tombs. This is even given support from an inscription from AWB 19 which commemorated two people who are brother and sister (Fig. 4) and appear to have been buried in the same mud-brick superstructure which had two graves (Trigger 1970b).

This brings up another crucial point for understanding cemetery B, namely that tombs have multiple graves. Many of the superstructures in the cemetery contain more than one grave and in several cases it seems clear architecturally that some of the graves were added after the structure had been built (Fig. 2). This suggests that tomb structures were reused and restructured. Often some graves contain goods which date later than the goods in the original grave. Reuse in this cemetery was rampant. Not only were superstructures used for multiple graves but individual graves themselves were used for subsequent burials. Often due to subsequent plundering the graves contained just a hodgepodge of bones from several individuals (as many as six) along with whole

and fragmentary ceramics, often from different periods. Thus despite the heavy disruption of the original ritual patterns in such a grave, it is still possible on the basis of the pottery to suggest the span of time over which the multiple burials occurred. Yet we know from a few intact graves that subsequent burials could be and perhaps regularly were carefully placed so as to not significantly disrupt the earlier interments (Fig. 3). In such cases it has been possible to investigate the sequence of burial stratigraphically. Based on the minimum and maximum ages of some multiple burial graves it seems that in many cases the same grave or graves in the same superstructure were used over a period of a century to perhaps as long as 150 years. Intact cases suggest a respect for the corpses of previous internments and this suggests that there was an actively sought symbolic connection by subsequent generations through the reuse of tombs.

In order to take into account reuse, the necropolis should perhaps be considered a 'living' cemetery, engaged with by the living and restructured through their actions. The bringing of offerings is suggested by the presence of offering niches (tomb chapels) on the outside of the tomb superstructures, in front of which was sometimes a mud-brick offering podium where a sandstone offering table could have been placed.[8] The presence of Ba-statues in front of these pyramids also suggests that people were meant to visit and interact symbolically with their ancestors. That the cemetery was a place for the living to visit is suggested by marks they themselves have left us carved on the sandstone, such as a pair of feet carved facing the corner of AWB 19 (Fig. 4). Similar carvings are known from sacred hillsides, such as near the site of Debeira,[9] and many such graffiti have been found leading up to and around the great temple at the site of Qasr Ibrim.[10] This clearly is a symbol for visits by the living to sacred places. In addition, by another Meroitic burial structure an ankh was carved, symbolising perhaps the continuing 'life' or influence over the living by the dead. The combination of these symbols strongly suggests that the necropolis was very much seen as being alive and to be interacted with by the members of the Arminna community. By visiting and revisiting the necropolis, members of the community learned and recreated symbolically elements of the social order, such as kin relations, which were probably symbolically mediated by the

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[6] Clustering of tombs by family groups has also been suggested for Karanog (Abdallah 1984, 35; O'Connor 1993, 97), Amir Abdallah (Fernandez 1984); and Wadi Qitna (Strouhal 1984).
[7] Millet 1981; Abdallah 1982; O'Connor 1993

[8] Cf. the photo from the Faras excavations (Welsby 1996, 88, fig. 29)
[9] Keating 1962, 91, Pl. 71; in general see Millet 1984
[10] P. Wilson, 102-14 in Rose 1996.

dead. Tombs are analysed in terms of a sequence of actions which create and subsequently modify archaeological features of the tomb. By looking at which aspects of the funerary traditions were maintained over long periods of time and which aspects changed it may be possible to chart the reformulation of the social and symbolic structures through which people at Arminna lived their lives. This may provide insight into changes in the community which can then be related to larger regional patterns of change.

In the late Meroitic period, variability in tomb structure was quite limited. Square sandstone superstructures, which are traditionally thought to have been pyramids,[11] were built. These housed individual burials in well carved sandstone graves in which extended bodies were oriented with heads to the west. Graves were sealed with large stone slabs. There seems to have been an emphasis on offerings placed around the exterior of the superstructure. By many of these tombs, ceramic bowls were found placed within the offering niche or near the corners of the exterior of the tomb.[12] Most of the pyramidal tombs at Arminna employed stone-working, for carved foundations of the superstructure as well as for ba-statues, stelae, offering tables and sculptured elements of architecture, such as a doorjamb which had a representation of the goddess Nephthys pouring a libation and an associated lintel with a vine motif.[13] Some of these sandstone elements were found reused later to seal early X-Group graves. During this period offering tables and stelae, were also part of the repertoire.

When the distribution of worked sandstone is mapped onto the cemetery, it is clear that this Meroitic repertoire of stelae, Ba-statues, sandstone architectural elements, etc. are clearly linked and almost always coincide with sandstone superstructures (excepting obvious cases where sandstone elements have been reused to fill and seal later graves, cf. Fig. 5), acts of re-use which themselves may be symbolically significant. It is interesting to note that although there are many similar square structures built of mud-brick, almost none of them had associated stelae or sculptures. This might suggest that many of these Meroitic burial traditions ended as the

availability of stone-working or stone-workers waned in the area. This could be indicative of certain economic networks which had been operative amongst local and regional elites.[14] Only a few fragments of classic Meroitic decorated pottery were found, suggestive of a third century date.[15] This is supported by four radiocarbon dates from graves of this phase which all calibrate to median dates between AD 210 and 240.[16]

In the succeeding periods, the Terminal Meroitic period and the Kalabsha Phase post-Meroitic, many tombs were reused often with mud-brick additions to their superstructure. Often additional graves and partitions were added inside tombs (e.g. Fig. 2). In addition, ceramic offerings such as jars and bowls seem to have been placed inside superstructures during these periods. New superstructures were built of mud-brick and almost certainly could not have supported full pyramid superstructures. The fact that the graves within superstructures were being consecutively reused strongly suggests that these tombs' superstructures were indeed not pyramids, at least not any longer. Instead of pyramids, some have suggested that these superstructures were open mastabas (Almagro 1965, 19, fig. 4). I must concur with the later suggestion. Such a structure could easily serve as a set of retaining walls within which sand could be heaped to cover the grave(s) but at the same time making reburial within a grave considerably more feasible. Continued use of these structures persisted until the late fourth century, supported in part by a radiocarbon date from inside an early X-Group bowl (Adams form C46, Ware R25 (Adams 1986)) inside a reused sandstone superstructure (AWB 4) with a median calibration of AD 370.[17]

While some ceramics suggest late Meroitic or early X-Group affinities, others have their closest parallels to the north in the Dodekaschoenos among wheelmade ceramics from the Kalabsha region.[18] Thus there seems to be an increase in influences from the

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[11] Woolley and MacIver 1910; Emery 1965, 227-9; Trigger 1965, 127; Adams 1977, 371. For some examples from Arminna see Simpson 1964, pl. IX.
[12] The patterning in this respect is not entirely clear due to the degree of post-depositional disturbance.
[13] For the doorjamb see Simpson 1964, fig. 2; 1965, 10.

[14] Edwards (1996a; 1996b) has suggested that power relations were maintained through a prestige goods economy. This segmentary organisation of state power could well have also included the sending of artisans employed by major officials (such as Peshtos at Karanog) to local elites like those at Arminna.
[15] On the decrease of decorated vessels in the later Meroitic period, see Adams 1964, 165; Williams 1985; 1991a, 11-14; Török 1987.
[16] CAMS-20820, 1840+70 bp, 145-330 cal.AD; CAMS-20819, 1800±70 bp, 100-250 cal.AD; CAMS-20821, 1850±60 bp, 100-245 cal.AD
[17] Beta-828-4, 1710±70 bp, 240-420 cal.AD
[18] the Post-Roman assemblage discussed at length by Rose 1993, e.g. wheel-made assemblages of Strouhal 1984 and Ricke 1967.

north at the same time that older Meroitic associated traditions are degrading. In the period of the collapse and aftermath of the Meroitic kingdom it is likely that local leaders strategically renegotiated their relations of power. Given that at this time there seems to have been a powerful polity centred at Kalabsha,[19] a northern focus of local leadership is not surprising. In fact, some graves from this period suggest that ties to both north and south were maintained. For example, in tomb 5 one of the graves contained a bronze tripod vessel, common in late Meroitic graves further south and absent from northern Dodekaschoenos graves.[20] In addition, it contained an ivory cosmetic container which might suggest trade with southern ivory supplying regions. However, the same grave contains a table amphora imported from Upper Egypt, a form quite common in the fourth century[21] Dodeka-schoenos and it contains a glass vessel inscribed in Greek like some from the Kalabsha region which were manufactured in Egypt in the late third or early fourth century (see Török 1989, 149, 188). Another (probably earlier) grave in the same tomb contained a late Meroitic, baggy jar (Adams form W35, Ware R32[22]). This tomb clearly shows reuse through the mid-third to mid-fourth century.[23] It has been suggested that within the Meroitic kingdom prestige goods were redistributed through power networks from major centres to local elites; these artifacts might attest to local elites beginning to tap into a different power network: de-emphasizing one with a fragmenting segmentary south, while turning towards a new polity to the north. In fact, it is pottery which came into Nubia from this northern source which provides some of the inspiration for the succeeding X-Group pottery and its decoration,[24] even on forms that are distinctive of Meroitic lower Nubia, such as jars, that are unknown in the Post-Roman Dodekaschoenos assemblage.

Dating from this period are the first of a new kind

of tomb structure in which an oval mound was framed and perhaps completely paved with mud-bricks (Fig. 5).[25] The grave itself, a simple east-west chamber carved into the bedrock, and the placement of the body, extended towards the west, as well as the sealing of the grave, by mud-brick vault or stone maintained the prior Meroitic period practices. These new superstructures must have developed locally through innovation and reformulation in funerary ritual. The Meroitic tombs recalled symbolically the Royal pyramids far to south,[26] which although local inhabitants had probably never seen them, would probably have been known of through oral tradition, myth, and perhaps travels of the most elite (or their artisans). However, with the loss of the political influence of this southern polity, the symbolic efficacy of such structures would surely have been lost. While similar structures continued to be used through the recreation of traditions there would have been little societal selection to maintain the old symbols, allowing aspects of them to change through innovation. One of these tumuli contained numerous re-used pieces of Meroitic sandstone architecture: showing clearly that the traditional Meroitic tombs had fallen out of their traditional kind of use, even though some were still being used for subsequent burials. The few graves in cemetery AWB which date clearly to the early X-Group period, were mostly in tombs of this type although a few continued in reused 'Meroitic' structures.

The form of these new structures may have been encouraged by political ties northward. A small outlying cluster of eight graves, AWD (Fig. 6), may be even more directly influenced by the northern traditions of sites like Kalabsha and Sayala. These graves were heavily plundered leaving little in the way of skeletal remains, let alone datable pottery, although the knobbed base of an Aswani Amphora (Adams Ware R30, cf. form Z7) suggests a late third/early fourth century date. On the surface by one tomb an offering table was found which had carved steps leading into a square basin; an offering table type well represented at Kalabsha and the Dodekaschoenos[27] but

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[19] Ricke 1967; Williams 1991b, 157; Rose 1993; 1995

[20] While similar vessels continue to be made well into the X-Group period, they seem to become restricted to only the highest social strata, such as royal tumuli at Qustul and Ballana. (cf. Török 1988; Williams 1991b).

[21] While this form is not chronologically distinctive, its widespread use in graves seems to focus on the period of the mid to late fourth century. These forms are absent from Cemetery C (Classic X-Group).

[22] Adams 1986; for the late date of this Jar form see Williams 1985; 1991a.

[23] Radiocarbon date CAMS-20819 (see note 19 above) came from basketry in the same grave as the W35 jar.

[24] Cf. Adams 1964; 1986; Trigger 1965, 133; 1986; Williams 1991b

[25] For a photo of one of these structures, see Simpson 1964, pl. X, 3.

[26] Woolley and MacIver 1910, 13-14; Trigger 1965, 127; Adams 1977; O'Connor 1993

[27] Ricke 1967; cf. Griffith 1912, MI 133. One of the inscribed offering tables from AWB was also of this type (Trigger 1970b). This offering table type may be generally later than other types characteristic of the Classic-Late Meroitic period. A table of this form but made of ceramic was recovered from a Late X-Group level in the Arminna settlement (Weeks 1967, 32, pl. XIIa). Out

uncommon in Meroitic Lower Nubia. Most of the graves in this cluster were enlarged natural crevices roughly east-west with heaped stone tumuli above them. In one case the grave itself was constructed atop the ground surface out of rocks, recalling tomb types from the Kalabsha region (Ricke 1967; Strouhal 1984).

After cemetery B falls out of use there may be a break in excavated cemetery areas before the more distant cemetery C came into use in the Classic to late X-Group periods, (c. AD 425 to the early sixth century). While in cemetery B some of the later graves (early X-Group) were aligned north-south, the bulk of those in AWC were so aligned (Fig. 7). The superstructures were now rings of stone surrounding tumuli with graves dug into sand rather than being carved in stone or built against rock ledges; bodies are placed in crouched positions rather than extended. The small number of graves in the cemetery and the apparently decreasing number suggests that an increasing portion of the population was becoming Christian which demanded different burial rites. It is becoming recognized that the christianization of Nubia was not an event but a process[28] the end of which may be seen here where the last graves change orientation back to east-west, contain no offerings, and in one which the excavators found intact, the body was wrapped in textile as known from later Christian graves.

With the change to cemetery C we can see what represents a major change in social structure as it is embodied in burials and perhaps kin relations. Instead of tombs placed in tight overlapping clusters we have evenly spaced tumuli. Instead of reuse, graves are only used once. While the superstructures in cemetery B vary little in size, perhaps to minimise the distinctions between individuals, at least among those distinguished enough to get superstructures, in cemetery C we have vast differences in the size of tumuli. If there is any period which might be considered to have evidence for a complete break with local tradition which might correspond to an influx of new people, it would seem to be the Classic X-Group period at Arminna West, although this shift could also be a response to the solidification of the Ballana kingdom.

In summary I think it is possible to see changing

patterns in the ritual expression of social differentiation and ties of cultural (and presumably political) interaction enacted in the necropolis of Arminna West. It is possible to interpret this archaeological pattern in relation to the meagre historical framework. By the early fourth century the Meroitic kingdom was fragmenting and had waning influence on Lower Nubia;[29] meanwhile Rome withdrew its border allowing desert Nomad groups to settle in northern Lower Nubia (Rose 1993, 174-5; 1995; Edwards 1996b, 92). The elite of the group seem to have been focused at Kalabsha and produced ceramics distinct from those of Lower Nubia as well as incorporating many Egyptian imports. Trade with the distant south seems to have greatly waned or disappeared and such things as bronze vessels go out of use. The fourth century may have been a period of political division and military conflict, until Nubia was united perhaps temporarily under Kharamadoye. In the mid-fifth century Silko reunited Lower Nubia, which may coincide roughly with the shift of the royal cemetery to Ballana (Török 1988, 57ff.; Rose 1993). On a local level this correlates roughly with the abandonment of Arminna West cemetery B and/or the start of cemetery C. Thus the practices at Arminna West move from a well canalised tradition of the Meroitic period to a diversification as political ties and social structure are re-formulated in the late third and fourth centuries. Once political control over Lower Nubia is again well established, burial customs again simplify and standardise.

While I have so far emphasised political factors this is clearly an oversimplification. Numerous other currents of change seem underway in Nubia during the fourth century which certainly affected Arminna. These include changes in cultural ecology and

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of the vast corpus of tables from Karanog, only two had steps leading into the central libation basin (nos 50 and 144 in Griffith 1911) and in neither case were the tables square or the basins within them squares, as seems to be uniformly the case with the Dodekashoenos type.

[28] Krause 1987; Horton 1991b; cf. Trigger 1965, 144; Adams 1977, 443ff.

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[29] Although it has been argued that the Meroitic kingdom maintained control of Lower Nubia until c. 370 (Haycock 1978, 70-2; Török 1988, 45-6), this seems hard to fathom given that direct control over the Western Butana is questionable, as indicated by the abandonment of sites in this region (Edwards 1996b, 92). Also, Meroitic inscriptions at Philae (or royal names at Ibrim) stop by c. 300 (Shinnie 1967, 52; Edwards 1996b, 92; Welsby 1996, 197). Sometime in the mid-fourth century Axum conquered Meroe, or at least the two states were at war (Hägg 1984; Burstein 1981; 1984; Török 1988, 36; Welsby 1996, 198-9). If we follow Edwards lead (1996a; 1996b) in seeing the political influence of the Meroitic state tied to royal prestige-goods redistribution, then the decline in this during the late/terminal Meroitic period may have lead to the formation of other, more local power networks (such as between Arminna and the Dodekaschoenos) even if on an ideological and religious level the authority of the Meroitic king may have continued for some time to be recognised.

subsistence. In the late Meroitic period, probably by the end of the third century, there was the adoption of improved irrigation and, quite probably related, the introduction of several new crops. The *saqia*, although traditionally seen as a classic Meroitic introduction *c.* AD 100 (Trigger 1965; Adams 1977), is not in evidence in Lower Nubia before the terminal Meroitic period and seems more likely a fourth century introduction.[30] The *saqia* doubtlessly allowed the irrigation and cultivation of more land (and thus facilitated population growth?). Archaeobotanical evidence from Qasr Ibrim (Rowley-Conwy 1989) and carbon isotope studies on Nubian bones from Wadi Halfa (White 1993; White and Scharcz 1994) both argue strongly that the Post-Meroitic period witnessed a major shift towards the incorporation of plants like sorghum in the diet. The growing of sorghum, a summer crop, would have necessitated a reorganization of labor and social scheduling which no doubt also influenced changes in social structure between the Meroitic and X-Group periods.

Another crop for which the first botanical evidence occur at this time is the grape. In collaboration with the archaeobotanist Lucinda McWeeney at Yale, charcoal from a burnt offering in one of the cemetery B graves at Arminna was found to include that of grape wood.[31] These pieces of wood are too large to have been imported with bundles of grapes and must have been grown locally. This supports arguments for a Nubian 'experiment with viticulture' which included the building of wine presses, two (possibly three) of which were recorded at Arminna East (Adams 1966). This experiment should perhaps be dated to the (mid-) fourth century. Wine was clearly important in Nubian culture as indicated by the large numbers of imported wine amphora found in graves both in the Meroitic period and the later classic X-Group period. The new *saqia* irrigation may have facilitated local viticulture which may also have been motivated by a declining or interrupted wine trade with Egypt due to the incursion of the Blemmyes in northern Lower Nubia. Thus the subsistence landscape and cultural ecology also underwent a period of diversification and innovation in the fourth century. This was no doubt both driven by political change as well as facilitating changes in social

organisation.

The cultural change between the Meroitic and Post-Meroitic periods was the outcome of a dynamic social process. While there remains the possibility of some new settlers and small scale population movements, this period was clearly a time in which many local communities continued, adapting to a destabilised and changing geopolitical situation. Ritual practices, as manifest in the mortuary record, and perhaps religious beliefs changed with the changing times and new traditions were created out of the reformulation of old ways and synthesis of new influences. By focusing on local communities, like Arminna West, it may be possible to recapture more of the social texture of change relating to the collapse of one state and emergence of another.

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[30] Rowley-Conwy 1989; Horton 1991; Williams 1991b; Rose 1993; Edwards 1996. Occurrences of the *saqia* at Arminna West occur in settlement debris with pottery of the Kalabsha Phase post-Meroitic or early X-Group. Occurrences in AWB graves are associated with pottery of the earliest X-Group.

[31] This charcoal came from the same sample which yielded the date of *c.* AD 370, see note 18.

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General Discussion

László Török - You very briefly talked about the availability of stone monuments, we have the same issue as with Mahmoud's contribution, are we talking about reasons or their consequences. What is available; availability is orientated by the needs, the demands, so if I have structures in which there is a demand for actual masonry architecture it is available. If it is not available, it is not because all of a sudden all the stone-masons died or were taken away. What happened to the demand for stone architecture?

Dorian Fuller - I think it is an issue we have to look at, whether it's the demand that stops, they don't want to build in sandstone, they don't want sandstone ba-statues and stele, or does it have to do with the process by which these sculptures are made, I mean looking at ba-statues from Arminna stylistically they look a lot like those from Karanog. Maybe they didn't have stone-masons at Arminna, but they were travelling to Arminna from some other centre.

László Török - It coincides with so many other changes, among them the move from square to circular forms, it is so significant.

Dorian Fuller - But you get square structures in mud brick, succeeding the sandstone structures before the round structures

come in. There seems to be a phase which no longer has sandstone masonry, but you have similar structures in mud brick, mastabas, where otherwise burial rituals appear to be the same, except we lose all the sandstone paraphernalia, even ba-statues. Janice Yellin - Just to respond to László Török's comments, two things occurred to me. One is that its much less expensive to build with brick than stone. And what we may have reflected here is perhaps an economic reality, not a change in custom. The other is in looking at offering tables from Karanog and other carved sculptures, it seems to me that you do indeed have workshops or travelling artisans who move through certain areas and sometimes even between north and south. You can see the same hand, so I think there's a limited number of artisans who produce these things, not minuscule but limited, and that there are centres or people who travel according to the demand which is maybe reflected in what you've seen there.
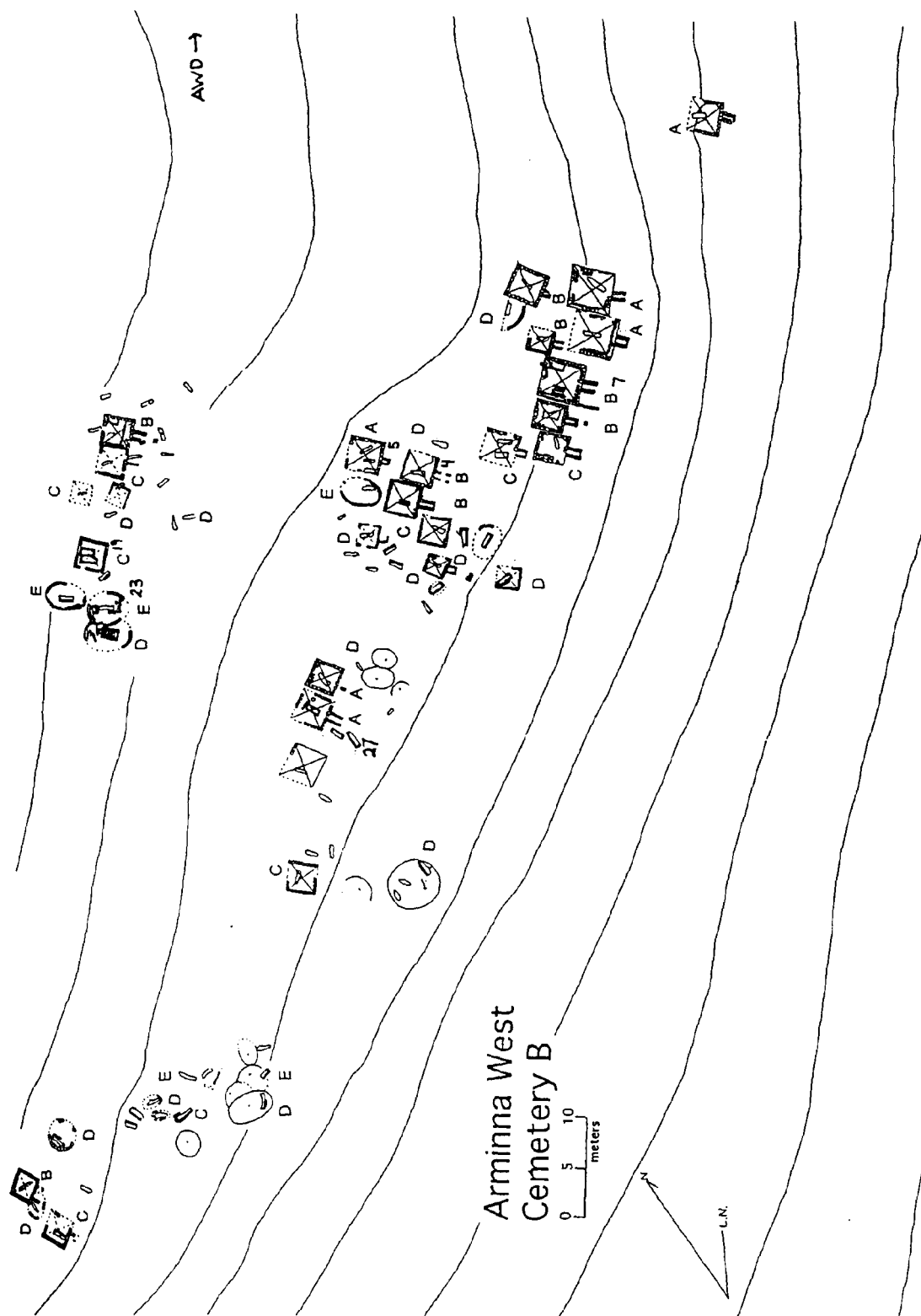
Arminna West
Cemetery B

Fig. 1 Plan of Arminna West Cemetery B. Notice that tombs group into five clusters each with a range of superstructure types. Graves mentioned in this paper are numbered. Letters near tombs indicate probable period of earliest internments: A = Classic/Late Meroitic (late 2nd century - c. AD 240); B = Late Meroitic (c. AD 240-300); C = Terminal Meroitic (c. AD 300-340?); D = Kalabsha Phase Post-Meroitic (c. AD 330-380); E = Qustul Phase Post-Meroitic (c. AD 370-420).
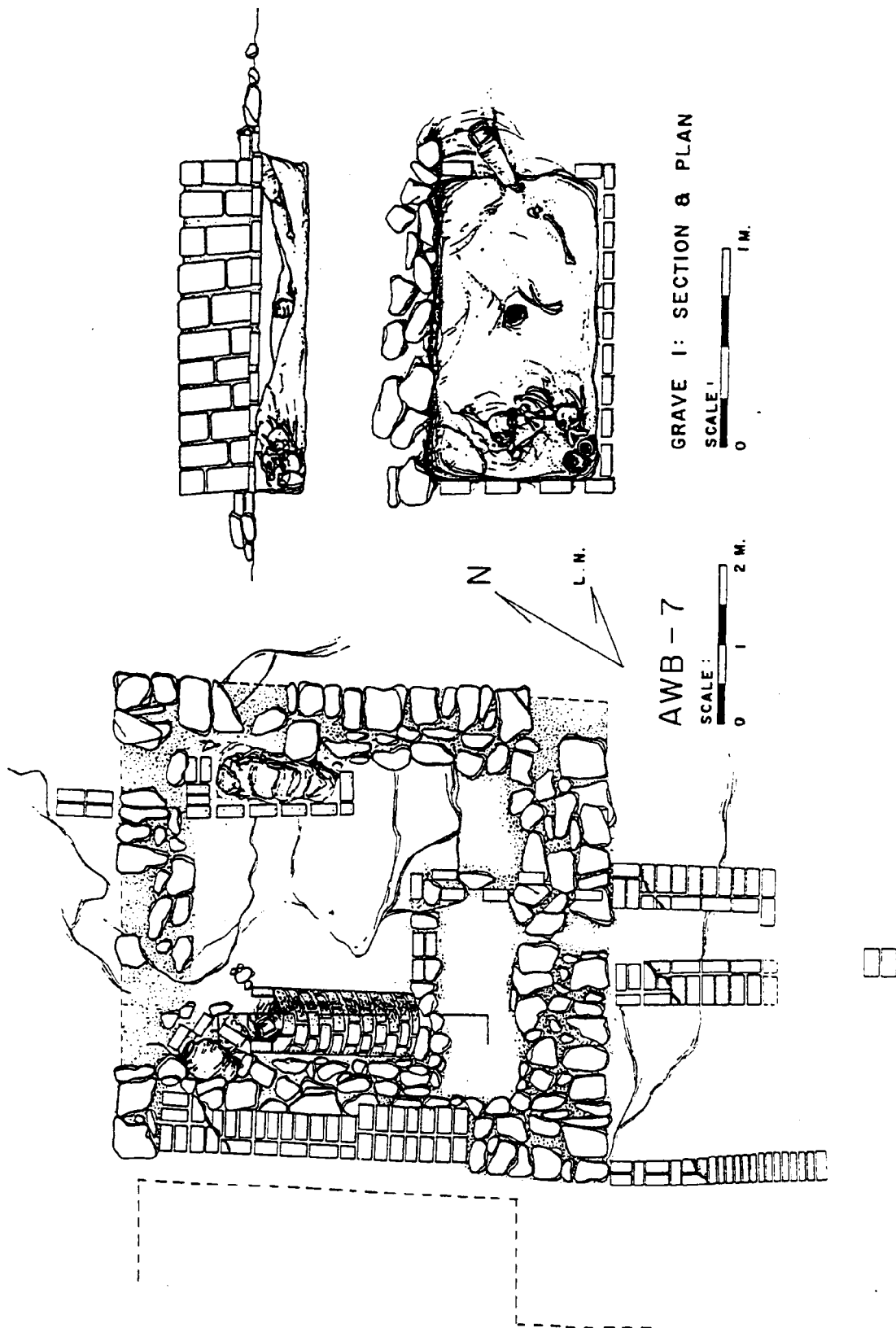
GRAVE I: SECTION & PLAN

SCALE:

AWB - 7

SCALE:

N

Fig. 2 Plan of Tomb AWB 7 Note second grave built of mud-brick added in the north-west corner. Also a mud-brick partition wall was added within the superstructure contemporary(?) with the vaulted ceiling of grave 1 after the second internment in that grave.
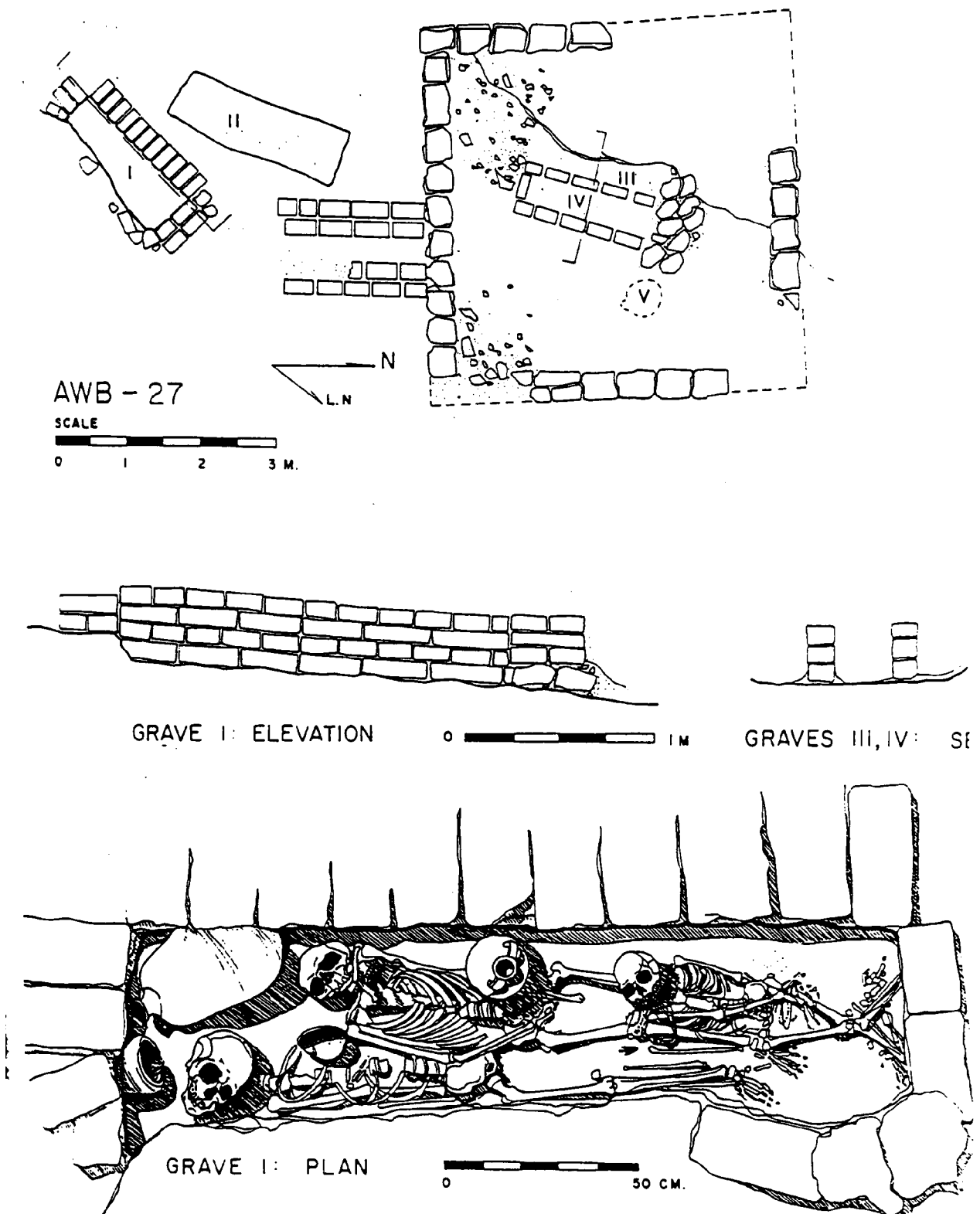
AWB - 27

SCALE

0   1   2   3 M.

GRAVE I: ELEVATION   0 ▬▬▬▬ I M   GRAVES III,IV: SE

GRAVE I: PLAN   0 ▬▬▬▬ 50 CM.

Fig. 3   Plan of Grave 27.1 containing three sequential, intact burials, the earliest associated with Late Meroitic finds and radiocarbon date CAMS-20821 (AD 100-245 cal.)

AWB - 19
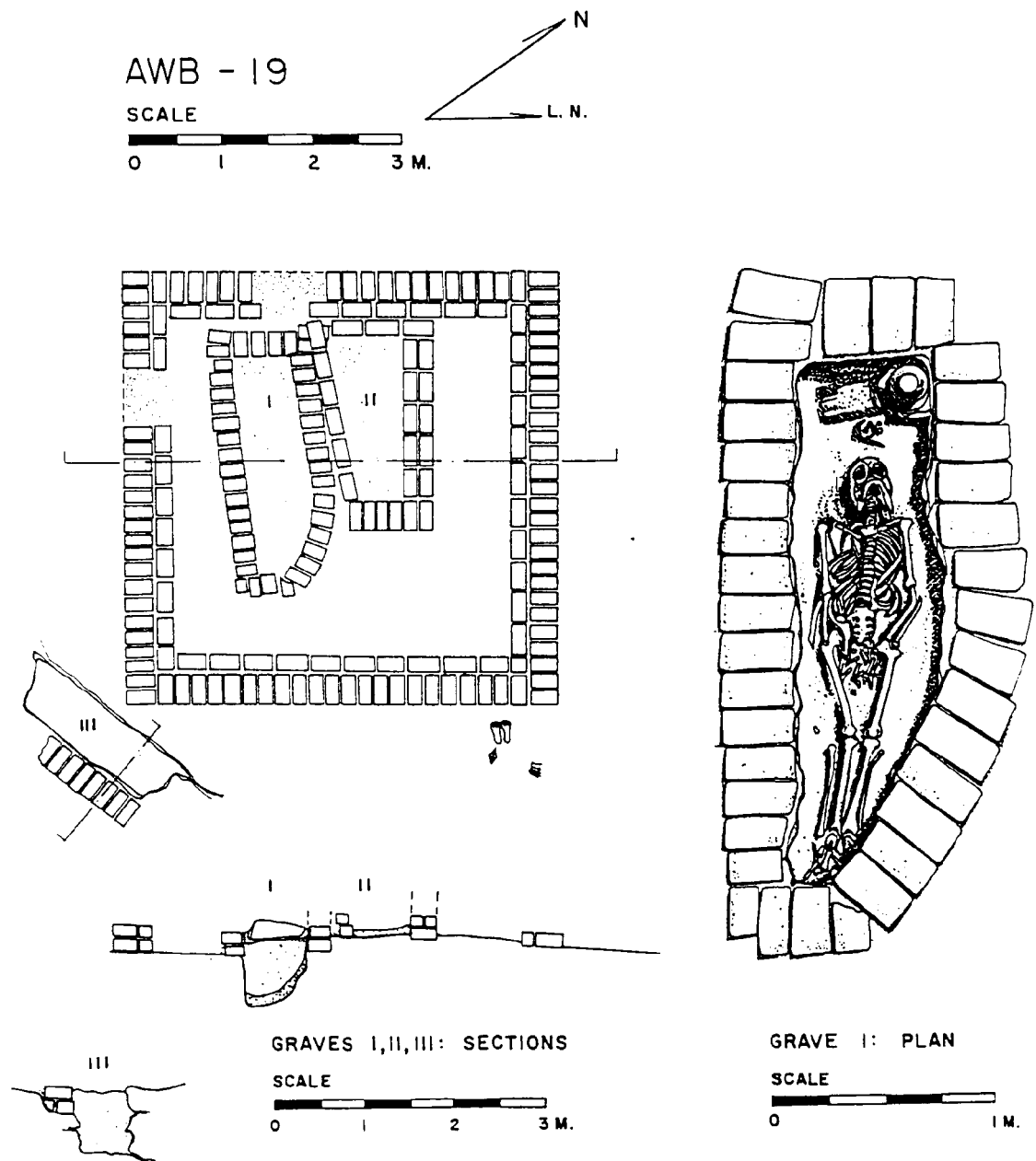
SCALE

0   1   2   3 M.

N

L. N.

I   II

III

III

I   II

GRAVES I,II,III: SECTIONS

SCALE

0   1   2   3 M.

GRAVE I: PLAN

SCALE

0   I M.

Fig. 4   Plan of Tomb AWB 19, showing graffiti, including inscribed feet, outside the north-east corner of the structure
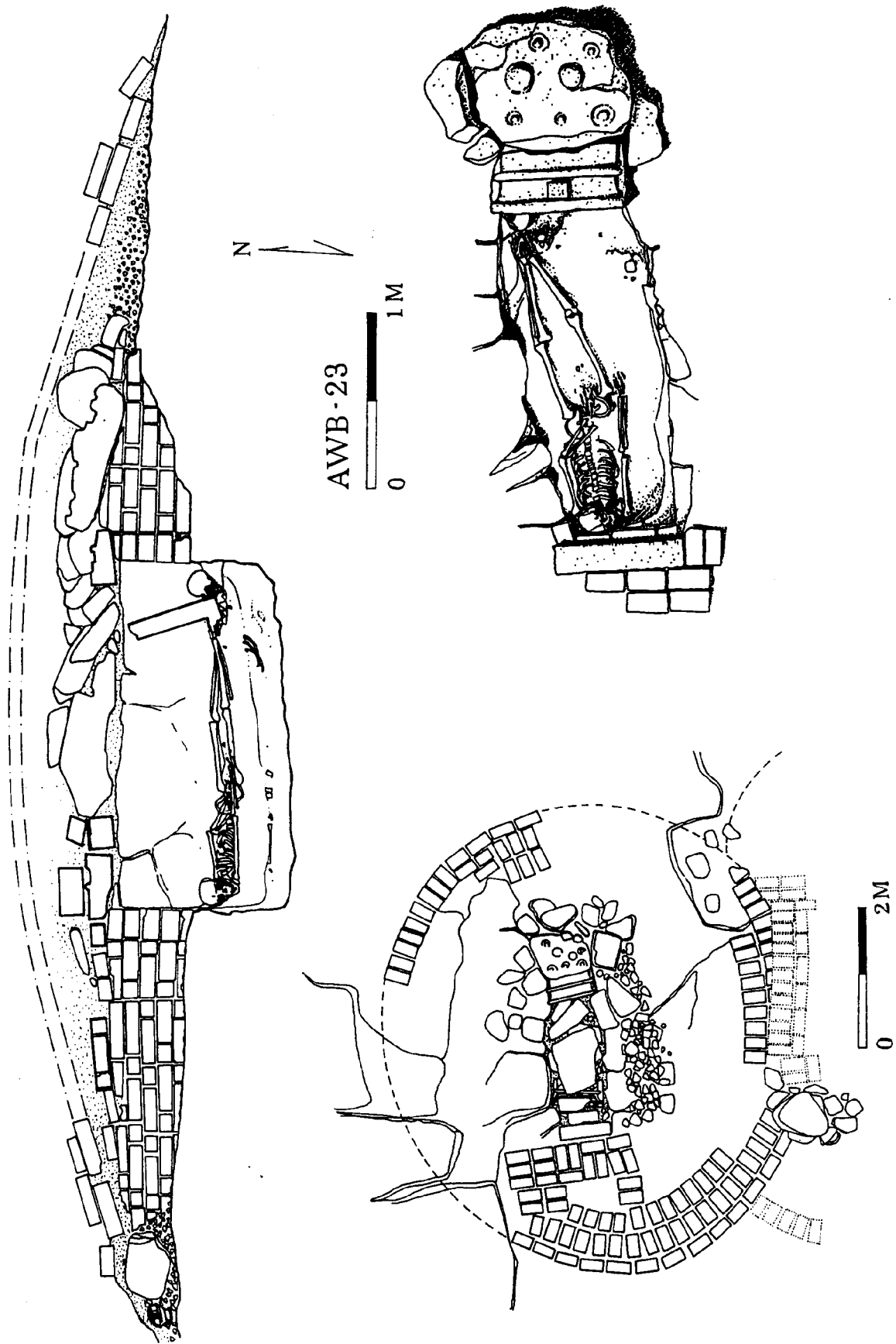
AWB·23

N

0 ▮▯ 1M

0 ▮▯ 2M

Fig. 5   Plan and section of AWB 23, a common mid(?)-fourth century tomb type at Arminna West
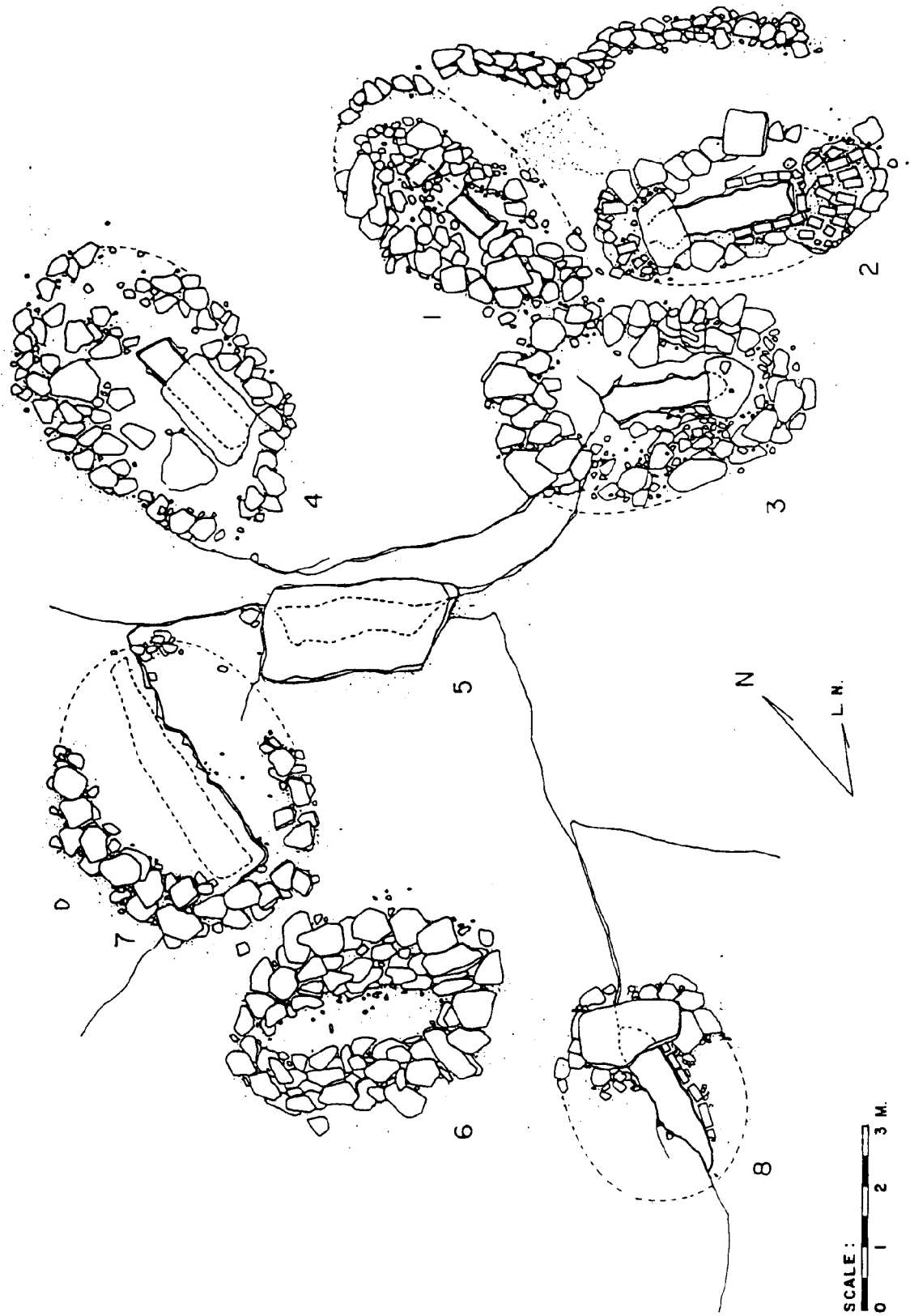
SCALE:

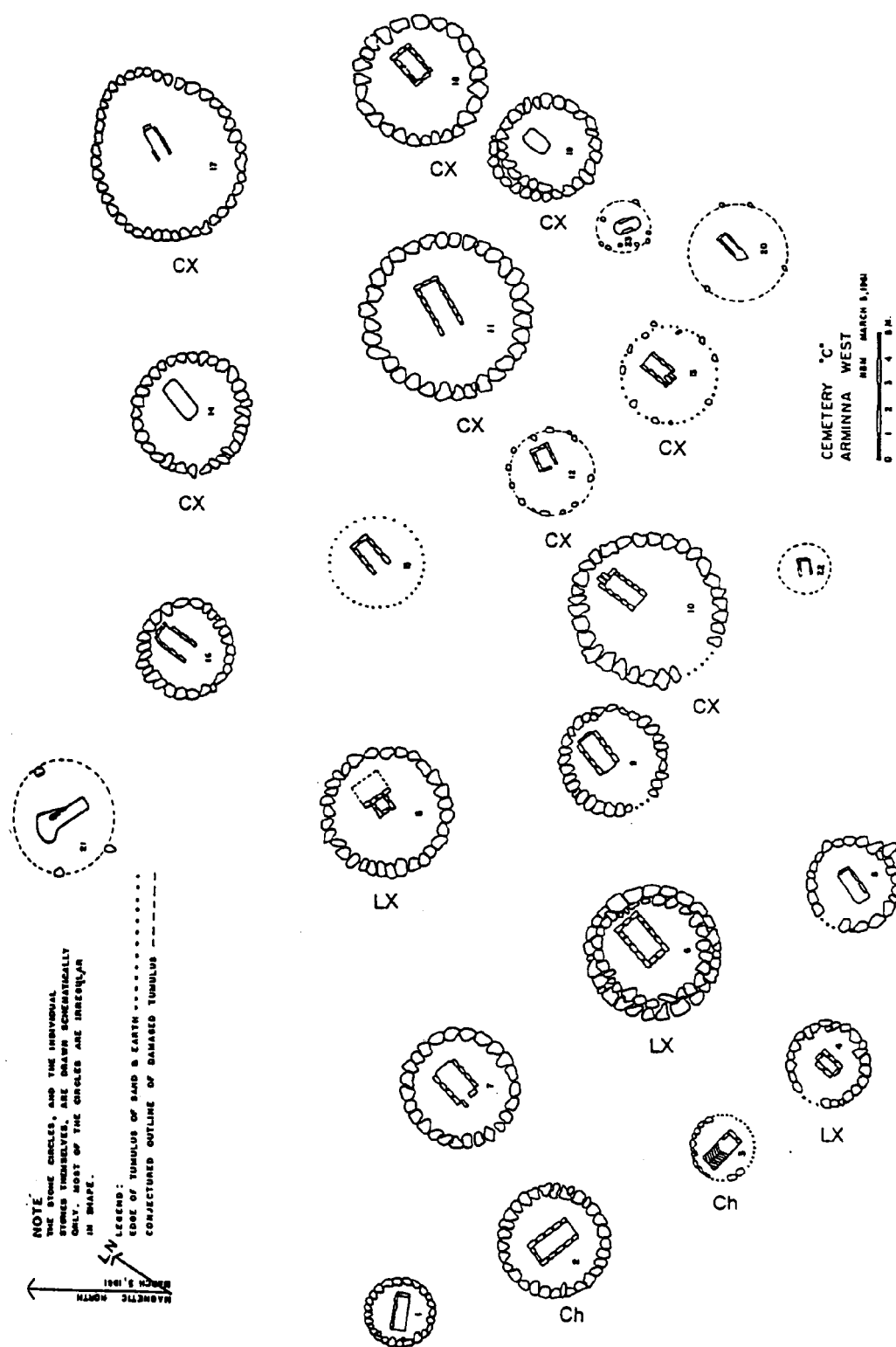Fig. 6   Plan of Tomb cluster AWD

Fig. 7   Plan of Arminna West Cemetery C. Period of datable graves indicated on plan: CX = Classic X-Group/Ballana Phase (*c.* 425–490)   LX = Late X-Group/Firka A Phase (*c.* 490–525?)   Ch = Initial/Transitional Christian (*c.* 525?–550)

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