

Fig 6.27: Frequencies of lithic technology at Abkan sites

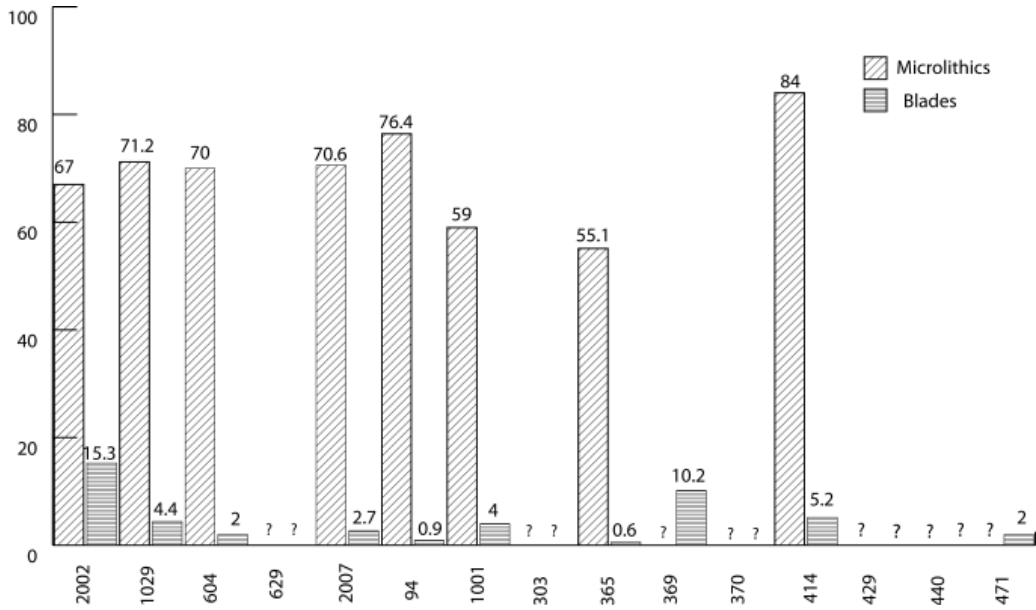
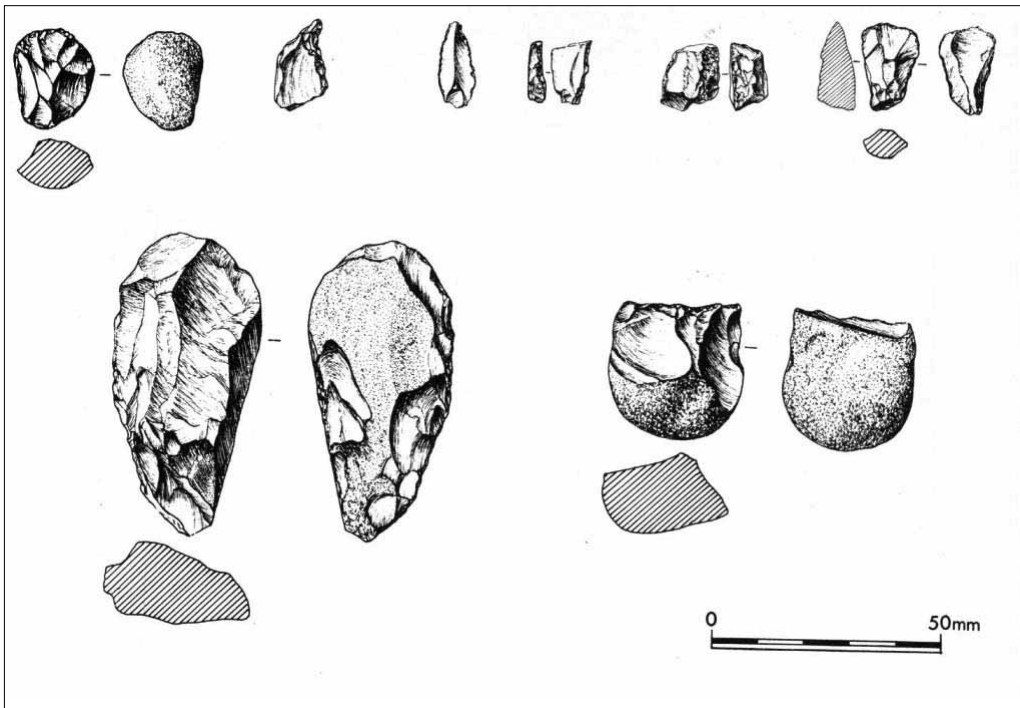


Fig 6.28: Lithic artifacts from site 365 (Abkan) (source: Nordstrom 1972.)



Khartoum Variant Industry

For the Khartoum Variant, with the exception of Shiner's sites 626 and 628, Nile pebbles (chert and agate) were the source of the great majority of the finished artifacts. Quartz accounts for the majority of the debitage only in desert sites. The Khartoum Variant is also basically a microlithic industry. Its microlithic index ranges between 52% and 92%, with most of the assemblages having an index over 70%.

The diagnostic tools are the concave and "exotic" scrapers. Other artifacts include denticulates, lunates, borers, groovers, and micropoincons. Fragments of grinding artifacts are present on almost all sites (Figure 6.29 and 6.30).

Table 6.3: Frequencies of lithic artifacts at Khartoum variant sites

Sites	Total no. of tools	scrapers		Denticulates	Notches	Lunates	Geometrics	Points	Micropoincons	Burins	Borers/Groovers
		concave	others								
1045	321	21.2	19.7	10.3	1.5	5.3	5.6	1.2	4.4	-	2.2
2006	157	1.3	13.5	11.5	15.3	5.7	2.4	0.6	4.5	0.6	5.1
277	99	1	8.1	6.1	6	4	5	10.1	3	-	7.1
2016	66	9.7	9.6	9.1	10.6	3	3	3	4.5	-	6.1
1022	86	15.1	18.7	15.1	5.8	1.2	-	4.7	1.2	-	4.7
626	147	14.3	17.1	14.3	8.1	2	-	2	0.7	1.4	2
628	123	25.2	30	17.9	4.1	-	-	2.4	1.6	0.8	0.8
DIW5	379	24.3	9.3	1.8	5	6.9	14	3.2	6.9	0.3	0.8
18A	77	2.6	21.8	3.9	3.9	2.6	-	13	3.9	5.2	6.5
428	741	7.8	27	5.8	8.1	8.1	1.2	6.7	0.9	3.8	4.4

Fig 6.29: Frequencies of lithic technology at Khartoum variant sites

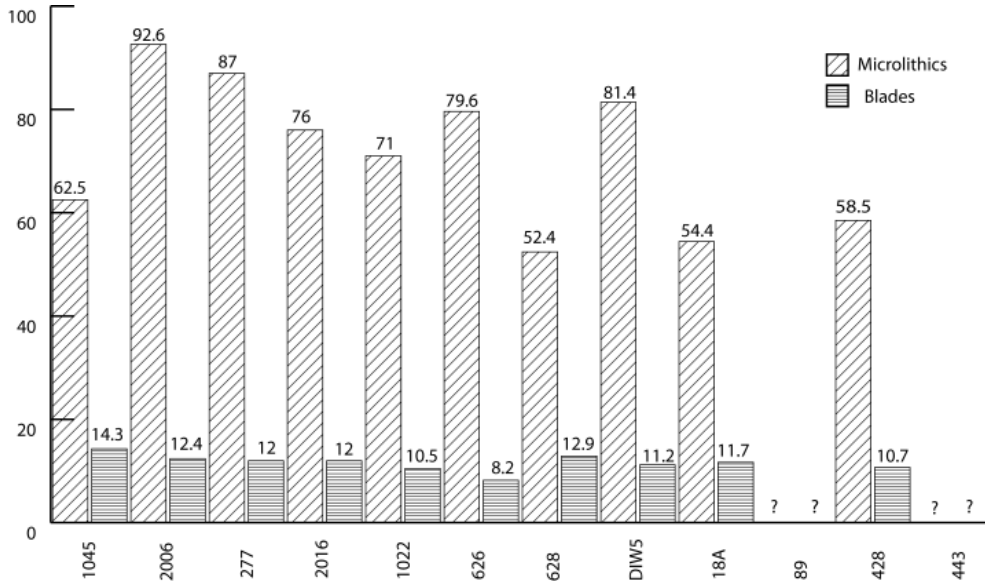
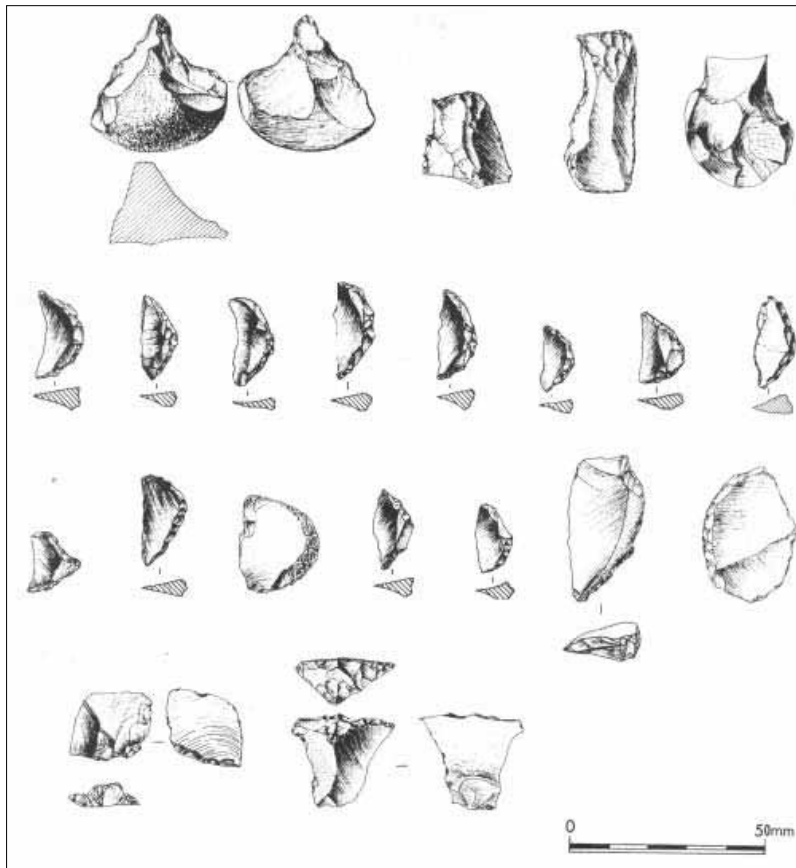


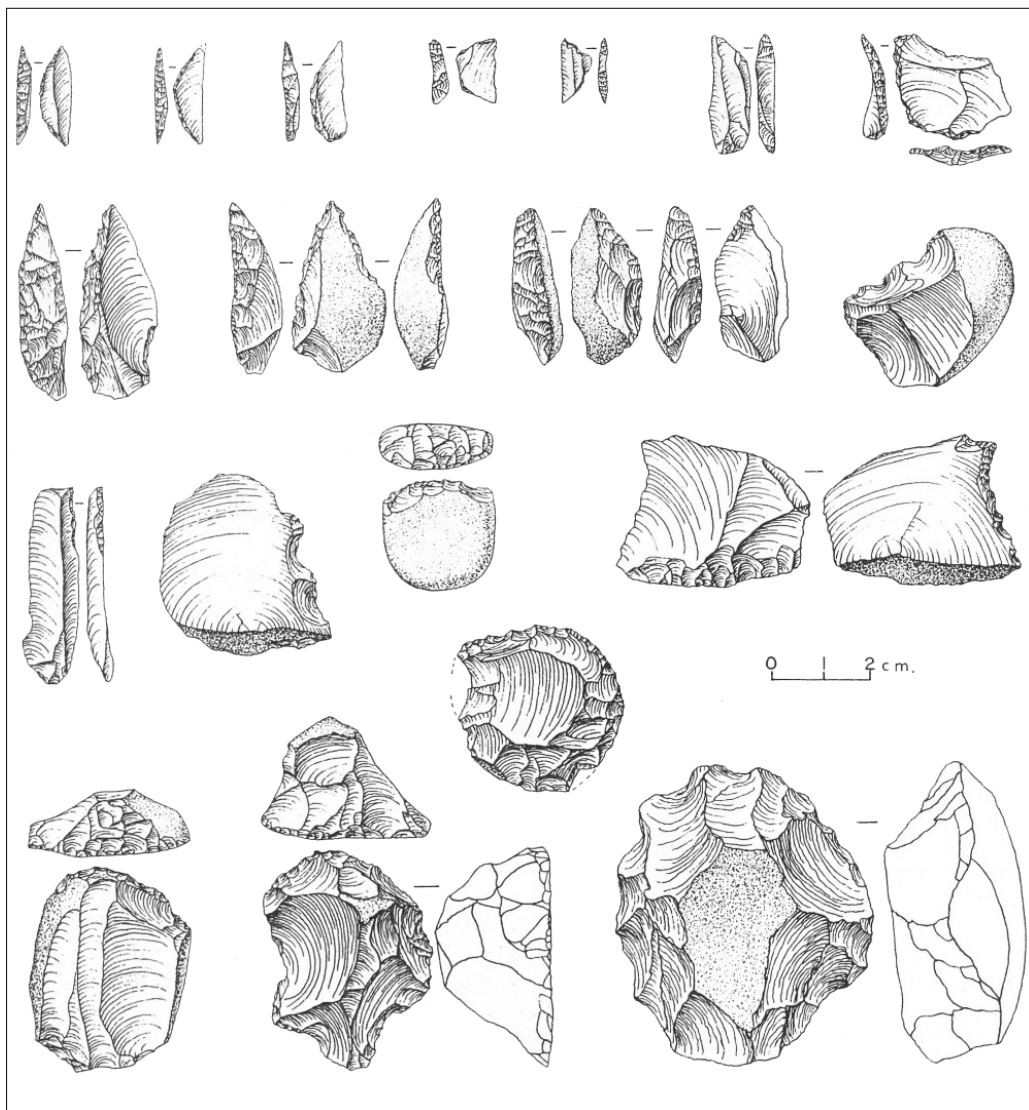
Fig 6.30: Lithic artifacts from site 428 (Khartoum variant) (source: Nordstrom 1972.)



Tergis Group

A single tool type cannot even generally characterise this group, as it is rich and varied. The common raw materials at Tergis sites are Nile pebbles of chert and agate. Among the artifacts, lunates, triangles and trapezes are common, but never exceed 12% of any assemblage. Backed flakes and microblades are also present in significant numbers. Microburins are present, but in small numbers. Scrapers occur in varied amounts, from 8-21% of the assemblages. Other tools include notches, denticulates and scaled flakes. The ground tools include grinding stones and stone rings (Figure 6.31).

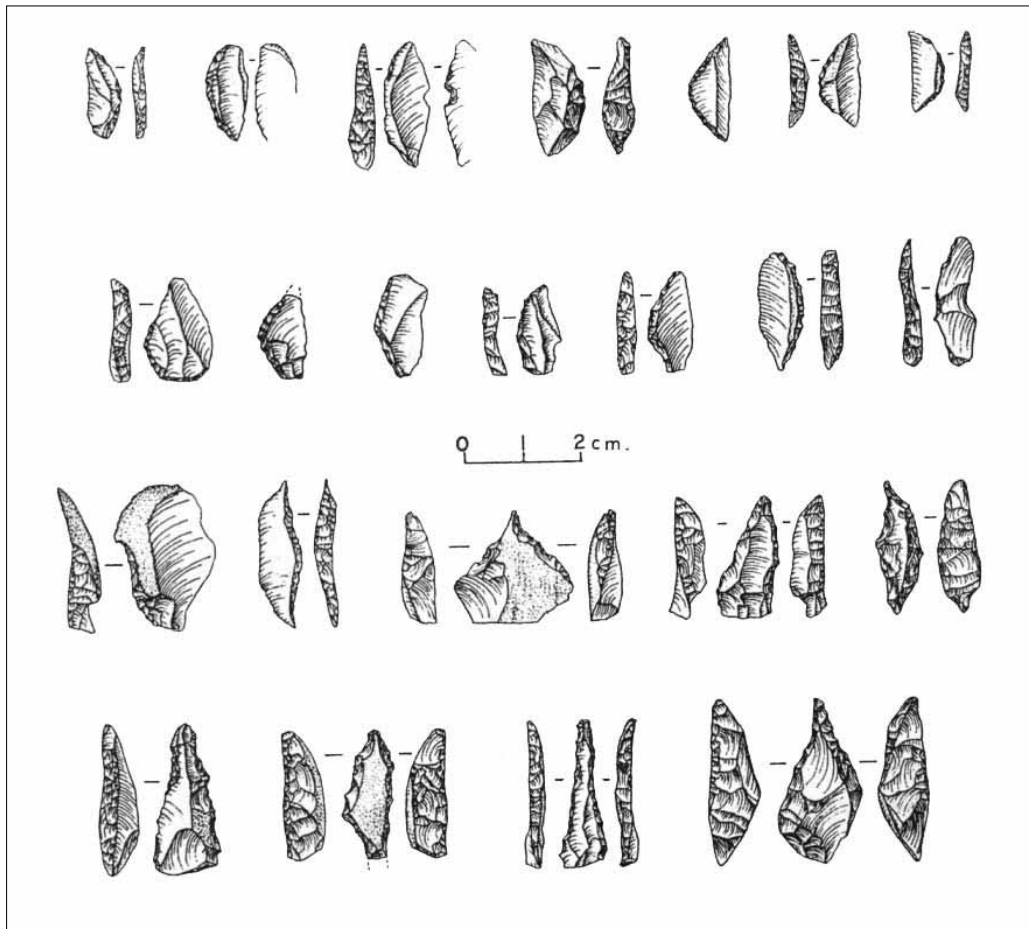
Fig 6.31: Lithic artifacts from Tergis Group sites (source: Hays. 1971b)



Karat Group

Thermally fractured pebbles characterise this group, a technique previously unknown from the Nile Valley (Marks and Ferring, 1971). The technology is characterised by the high index of scrapers, denticulates, notches and lunates. Other tools include notched flakes, backed microblades, scaled flakes and burins. A very few fragments of ground tools were found (Figure 6.32).

Fig 6.32: Lithic artifacts from Karat group sites (source: Marks and Ferring 1971.)

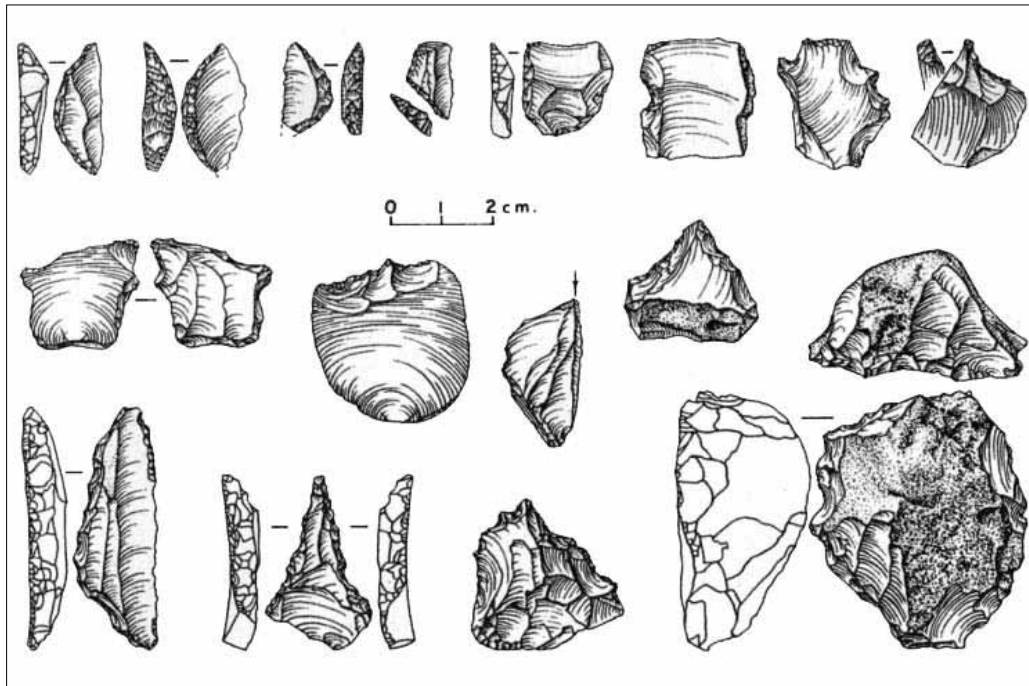


El-Melik Group

This group is characterised by a high percentage of indifferently made and denticulated notched tools. Combined, they account for between 40-60% of all tools. Logically, blades are rare and odd flakes were often used in tool manufacture. Usually, only about half of all tools were microlithic and lunates and geometric forms were not numerous. Other tools include groovers, scrapers, backed microblades and others. Ground stone tools are

rare at the sites along the Nile and often absent at those sites on the western edge of Wadi El-Melik (Figure 6.33).

Fig 6.33: Lithic artifacts from site N25 (El Melik group) (source: Shiner 1971.)



From the above accounts, the following summary is offered;

- a. The diagnostic tools of the Abkan, the borers and the groovers, are fewer than the other Nubian Neolithic industries.
- b. The diagnostic tools of Khartoum Variant, the concave and “exotic” scrapers, are either rare or absent in Abkan and Karat.
- c. The ground tools are rare in all Nubian assemblages but they are more frequent on the Khartoum Variant sites than the others.

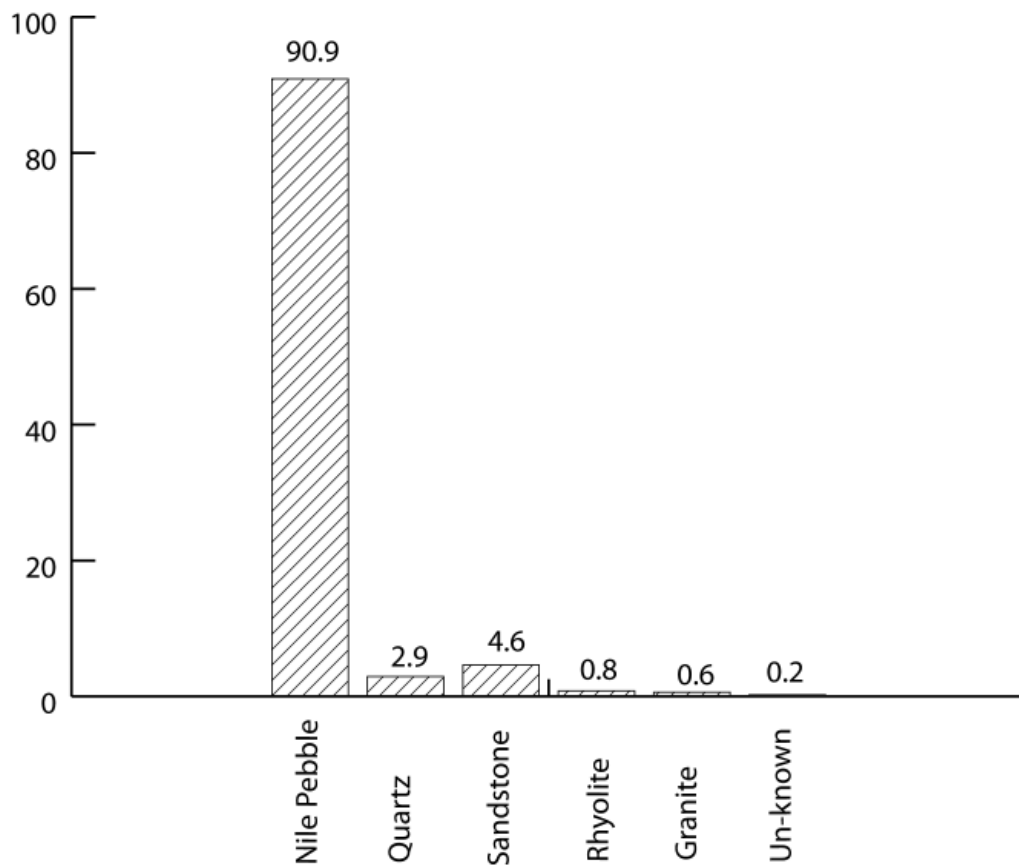
Third Cataract

The archaeological material from Neolithic sites in the Third Cataract Region within the Mahas Survey project is considered here. Observations presented below are based on personal examination of artifact samples from each of these sites (Sadig, 2004).

The identification of material used for artifacts is always difficult, and it seems especially difficult for items found in this area. The main problem is trying to differentiate between different types of quartz, cherts and jasper found along the wadis and gravel pits in the area. This needs more detailed study of the soil features of the region and deferent

materials used on lithic tools. Figure 6.34 summarises the various types of materials. Of the 520 tools collected from Third Cataract (including grinders), 2.9% were made of quartz, 0.6% of granite, 0.8% of rhyolite, 4.6% of sandstone, 0.2% of unknown material and 90.9% of Nile pebbles. One artifact made of diorite, discovered north of the survey area is not included here. Only five types of raw material were utilised for the manufacture of stone implements. All these raw materials are common locally. They are quartz, Nile pebbles, granite, rhyolite and sandstone. The materials utilised for ground stone tools were sandstone and granite. Both occur in the area in large quantities. Among the raw materials, only sandstone and Nile pebbles occur in sufficient quantities to make any statements about their distributions. As is so often the case, both materials are common throughout the areas, and their distribution tends to represent the overall lithic frequency in each site. Very fine-grained gray to dull red Nile pebbles are found locally in large scatters on terraces and eroded areas along the river and seasonal islands.

Fig 6.34: Third Cataract: Frequency of lithic raw materials (in percent)



A large number of artifacts was made of a moderate to coarse-grained, light to dark brown pebbles which were probably collected from the above mentioned sources. Furthermore, some artifacts were made of a white to light brown quartz. It is found in cataracts and banks of small seasonal islands.

Approximately 51.4% of the surface collected lithic sample consist of cores, flakes and retouched flakes. The second most frequent category of lithic artifacts is finished scrapers, which represent about 15.4% of the lithic samples. Backed tools, crescents, borers, groovers, points, axes, and grinders make up the bulk of the remainder (Figures 6.35 and 6.36). The flakes and notched flakes vary from place to place and offer no sure guide to the age determination of surface collections from different locations. Together they represent the greatest number of lithic materials (about 49.3%). All examples of notched flakes shared usually in having a notch or notches on one side of a flake. The flakes themselves vary considerably in size and shape, from small flakes to irregular large flakes. Although only a small sample of chipped stone artifacts has been examined, it is possible to describe the sites industry as a flake - based industry, with some larger and well-made Nile pebble tools being produced on small blades. This is supported by the frequency of finished flaked tools in the sites.

Fig 6.35: Third Cataract: Frequency of lithic tools (in percent)

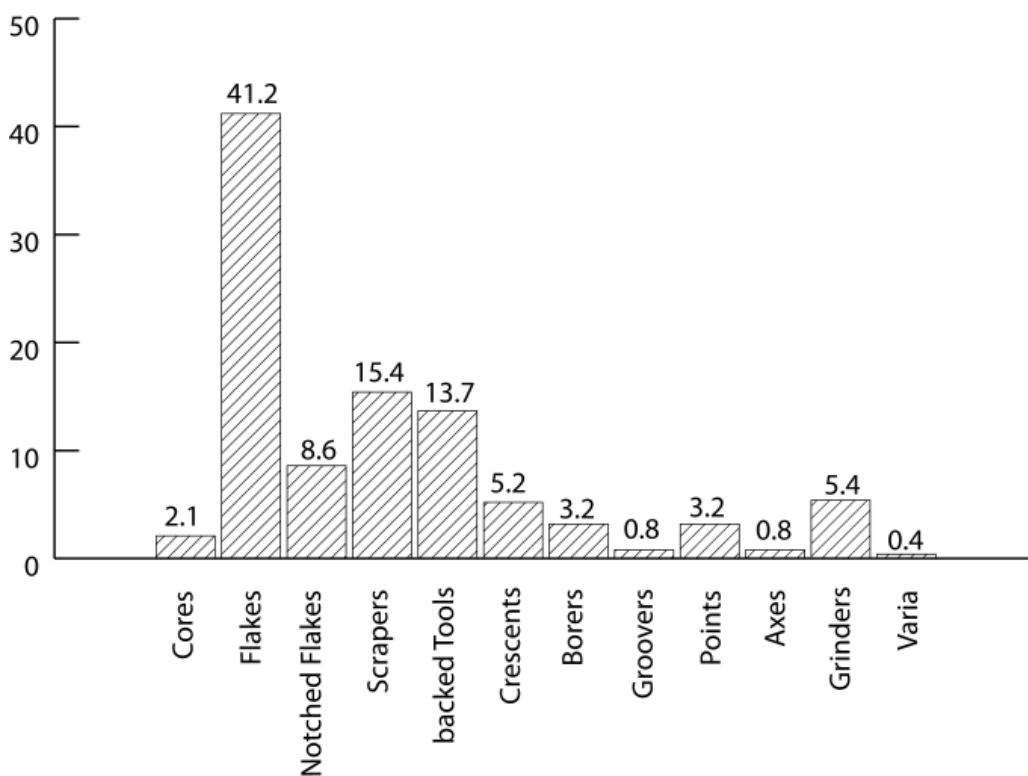
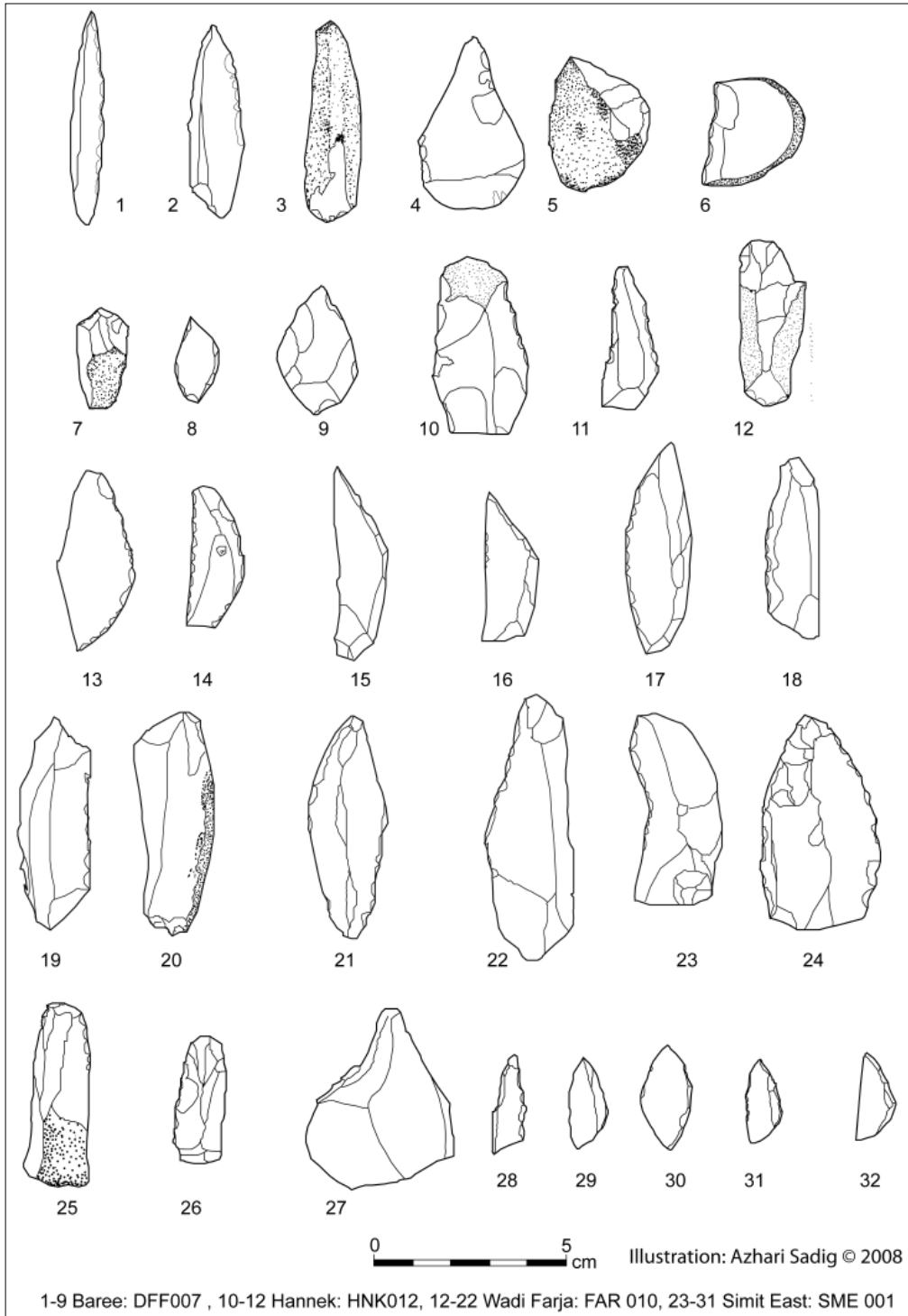


Fig 6.36: Lithic artifacts from Third Cataract region (1, 24, 28 points, 2, 3, 7, 10-23, 25-26 various blade tools, 4, 9, 27 borers, 5-6 Scrapers, 8, 29-32 Crescents.)



Another unusual aspect of the lithic assemblage at the sites is the appearance of a rather large proportion of scrapers. These tools comprise around 15.4% of flaked lithic artifacts. This apparent anomaly could, of course, have an analytical rather than a functional explanation. Therefore, our understanding of its occurrence in these sites is not complete, and the proportion of them in this collection may be a result of sampling. This is a possibility that cannot be confirmed or refuted here; it must await further detailed research on the distribution and use of various lithic material types in Third Cataract. It is assumed that this is an unusually high proportion, closer examination of the distribution of these tools within the sites suggests an explanation for its presence. Of the total number of scrapers recovered from the sites, 25 were found in SME001 and another 20 came from Gam Uffa site (SMW014). Alternatively, either number could be explained as reflecting the favouring of these tools.

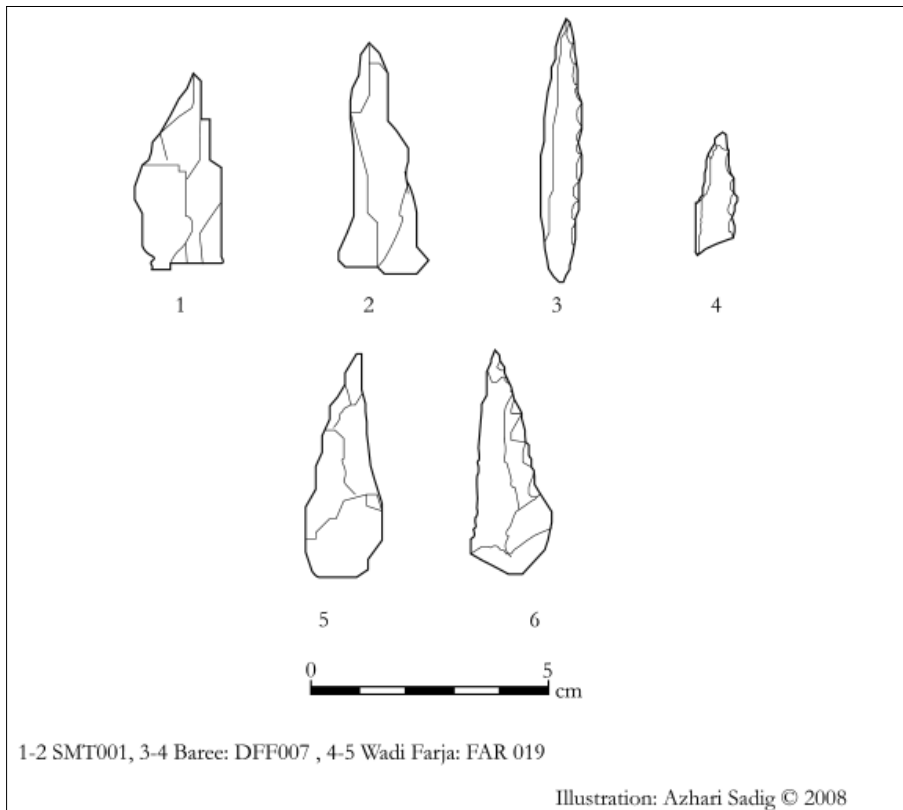
Other noteworthy aspects of the lithic materials at Third Cataract sites include the low frequency of groovers and the complete absence of lunates and burins. In contrast, these tools are common in Abkan sites in Lower Nubia (*groovers being "the hallmark of the (Abkan) industry" which together with the borers make up a high percentage of all tools*) (Shiner. 1968a: 626). It is also interesting to note that almost all of the groovers were collected from one site (SMW014) but they represent only 1.8 % of the tools. Here again, the percentage suggests isolated incidents during which SMW014 tools were sharpened or reworked in some manner, rather than initial manufacture of a finished tool from a core or flake (2 of the tools are reworked from big scrapers). Again, it is not possible to establish a probable "average" frequency of occurrence for these tools in archaeological sites before the sites have been studied in a detailed and specific way. Haaland mentions that engraving tools are the most frequently employed tools on Kadero I and II, Zakiab and Um Direiwa I (Haaland. 1987a: Table 9: 102).

Relatively many backed tools and crescents were found on the sites. They represent 13.4 and 5% of tools respectively. Blades are by far the most frequent category of worked lithic artifact after scrapers. A large number of backed tools was found in SME001 (28 tools), followed by FAD013 (14 tools). In both sites they were more abundant than any other finished tools. This was not the case on Neolithic sites near Khartoum. Haaland observes that the backed tools and lunates are few in number on the Neolithic sites at this area (Haaland. 1987a: 75). These tools are used for many purposes; as weapons; i.e. to tip arrowheads (Wendorf. 1968a: 989-992), and to some extent as sickles (Wendorf. 1968a: 943). The last function is more speculative and no real data could support this assumption (Haaland. 1987a: 75). More than 2,294 complete crescents were obtained from Shaheinab site, of which about 60% were of quartz, about 30% of fossil wood and about 10% of rhyolite (Arkell. 1949: 26).

Borers also are represented in the collection, although to a lesser extent than blades. Some pieces made on large flakes were used as borers. Steep retouching on the dorsal surface along both edges is seen in most cases and most distal and proximal ends are snapped off or broken. They represent about 4.9% of the collection but with a clear absence in HNK012 and FAR019 sites. They represent about 20% of tools in FAR010 site, 2.9% in SME001, 0.6% in SMW014, 2.7% in FAD013 and 14.3% in FAR020.

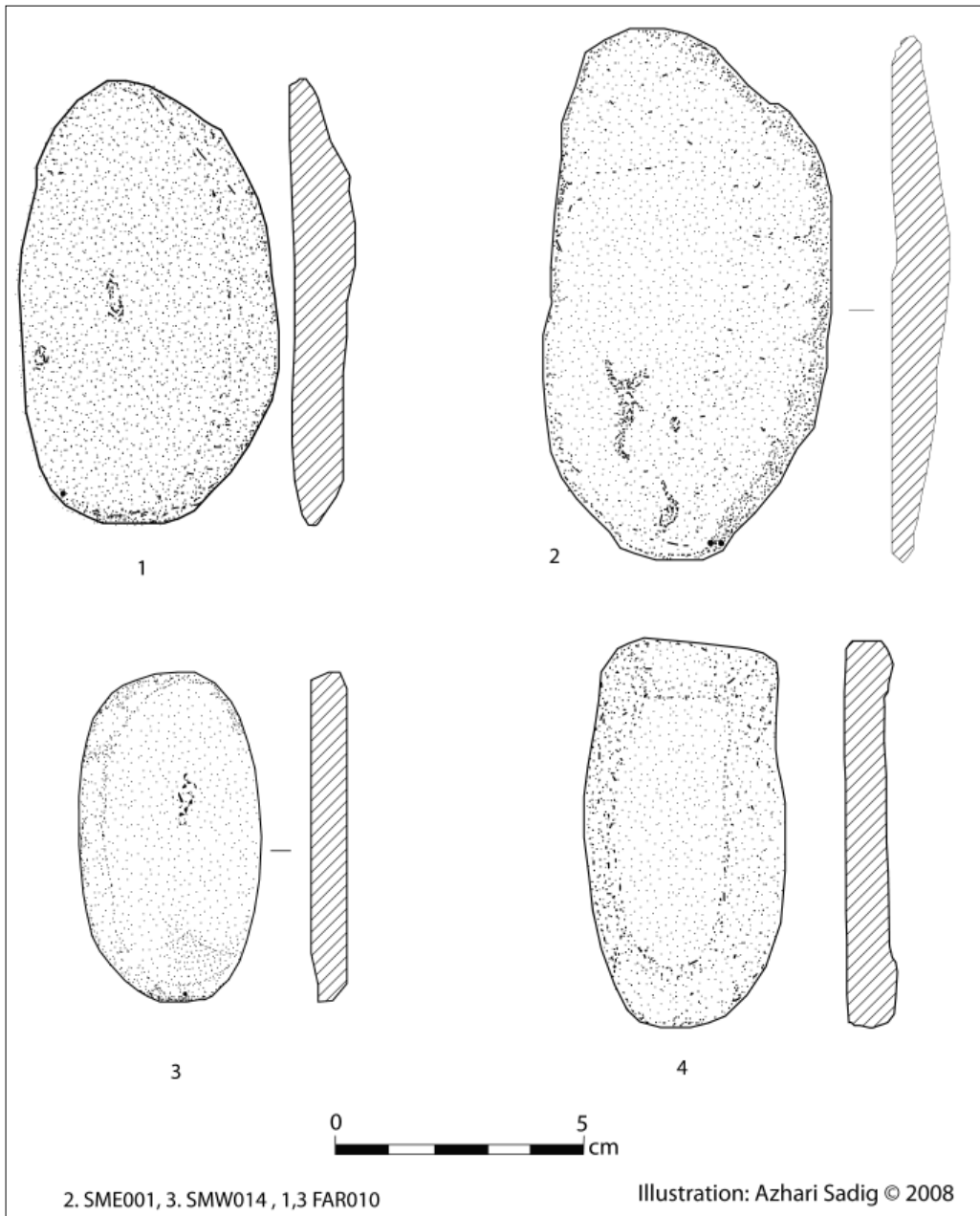
The points collected from the sites are roughly made tools. They were frequently found in FAD013 (13.5%) and SME001 (5%) and they represent about 3.1% of the whole collection. These types were not common in the Khartoum Neolithic sites (Haaland, 1987a), but some examples were mentioned in Khartoum Variant sites as a distinct departure from the Final Stone Age (Wendorf, 1968a: 772). The points were formed by a series of obverse, rather steep edge-retouching along both margins of the proximal part. One point, found in SME001 site, is characterised by rather steep edges and a sharp tip. Another distinctive type was found in FAR019 site. It is a narrow point showing edge retouch, more near the base and tip, and some along the sides (Figure 6.37). Other types were made on flakes and display a poor method of manufacture.

Fig 6.37: Lithic points from Third Cataract region (see also Fig 6.36: 1, 24, 28)



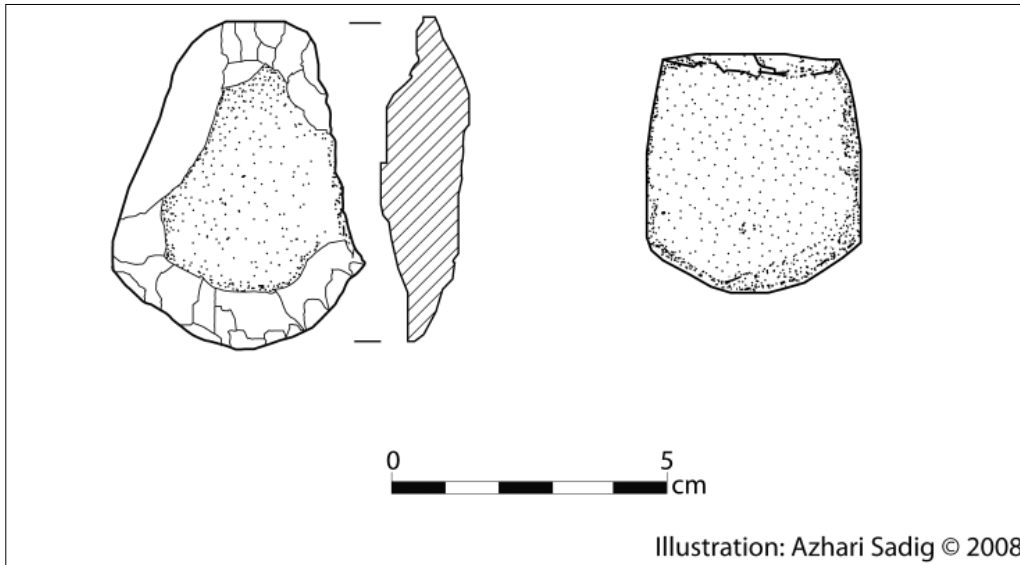
Most of the three types of grinders collected from SME001, SMW014, HNK012, and FAR010 sites are fairly small (Figure 6.38). No similar tools were found on FAD013, FAR019 and FAR020 sites. This may be to the poor condition of the sites and the interest of some local peoples in such tools (the phenomenon is observed in some Mesolithic and Neolithic sites in Khartoum area) (see Arkell. 1949 and Haaland. 1987a).

Fig 6.38: Grinder tools from Third Cataract region



- Three types of raw material were observed to be used in the manufacture of axes:
- Polished granite axes; with a cutting edge and polishing visible on the whole surface. Five examples were mentioned; three of them were from unknown sources.
 - Nile pebbles axe; made on quartz and retouched in one side (Figure 6.39).
 - Quartz axes; trimmed on the whole surface (Figure 6.39).

Fig 6.39: Pebble axes from Third Cataract region

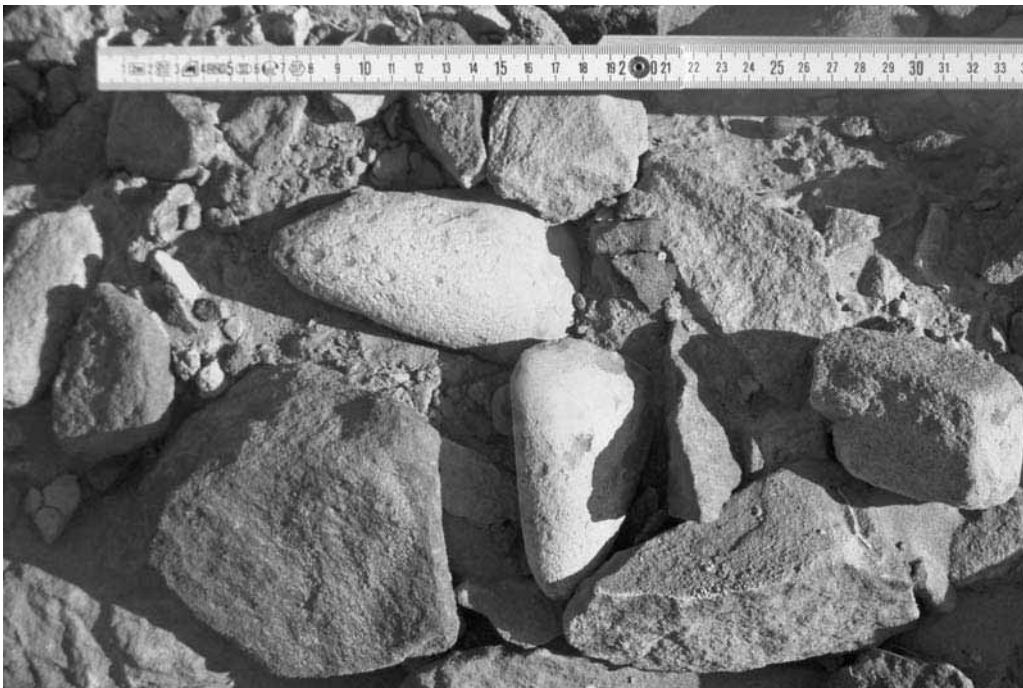


Three Neolithic polished stone axes found in rocky outcrops southeast of Konj hamlet at Arduan are different from any other type (Plate 6.15). They were finely polished all over the surface and there is careful retouch on part of the butt end (their lengths are from 160 to 90 mm and the cutting edges are from 70 to 50 mm). A similar type is found in late Neolithic sites at Kadruka, el Kadada and Kadero I. They are commonly connected with cemeteries and rarely found within the settlement. Another Neolithic grave-related tool was found near Aggetteri (AGT001), north of Third Cataract, a fragment of a diorite mace head usually found amongst grave goods. Another two polished axes made on green chert were collected by the author near Handdika during the field season of students of the Department of Archaeology in summer 2009 (Plate 6.16). This may suggest a Neolithic cemetery site in these two areas or nearby, although there is no clear evidence about the source of these tools.

Plate 6.15: Neolithic polished stone axes from Arduan, Third Cataract region



Plate 6.16: Neolithic polished stone axes from Handikka, Third Cataract region



Some similar examples of what are classified as “*varia*” in the collection were found in Khartoum Variant sites and described by Wendorf as proto-gouge (1968b). Only two

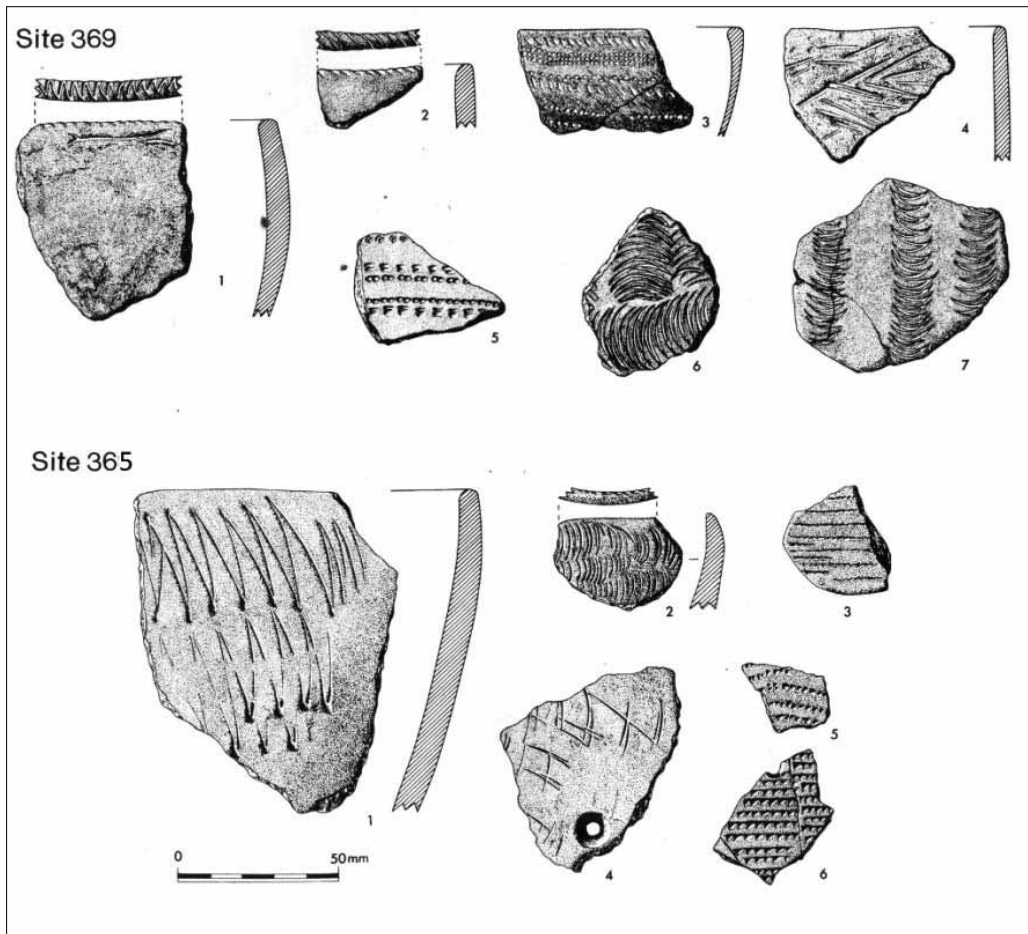
examples of this tool were found, and there is no information as to what purpose these tools were used for.

Pottery

Abkan

Nordström (1972: 49) defined the fabric of Abkan pottery as having “*a relatively dense and homogenous groundmass containing a high proportion of silt*”. The fabric is fired to colours ranging from dark gray to grayish brown, or in few instances black. Abkan ware is generally characterised by 5-10 mm thick walls and a coarse texture. The surface is either burnished or lightly rippled. A few sherds have the outer surfaces coated with red ochre. Decoration is relatively scarce (Figure 6.40). When it exists it consists mainly of parallel lines and zigzag impressions made with a rocker stamp (Nordström. 1972: 74-7).

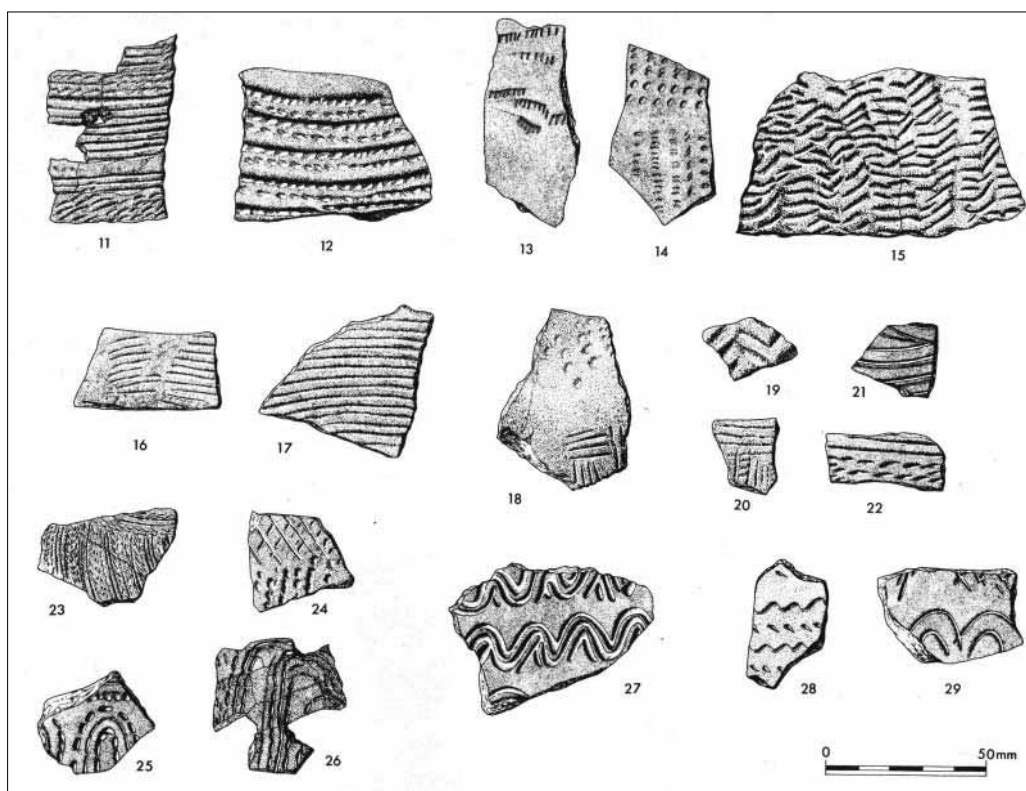
Fig 6.40: Abkan decorated potsherds (source: Nordström 1972.)



Khartoum Variant

Nordström placed the fabrics of this group into two groups: (IA and IB). The IA is characterised by abundant grains of crushed quartz and feldspar, while the fabric IB is mainly micaceous. The colour is generally light brown or pale red. The wares are characterised by 5-10 mm thick walls; but the textures are generally grainy or gritty, and occasionally coarse. Impressed dotted lines, dotted straight lines, zigzag lines, or a combination of these characterises the decoration (Figure 6.41). The technique employed for making the designs was probably rocker stamp and cord impressions (Shiner, 1968b).

Fig 6.41: Khartoum variant decorated sherds. (source: Nordström 1972.)

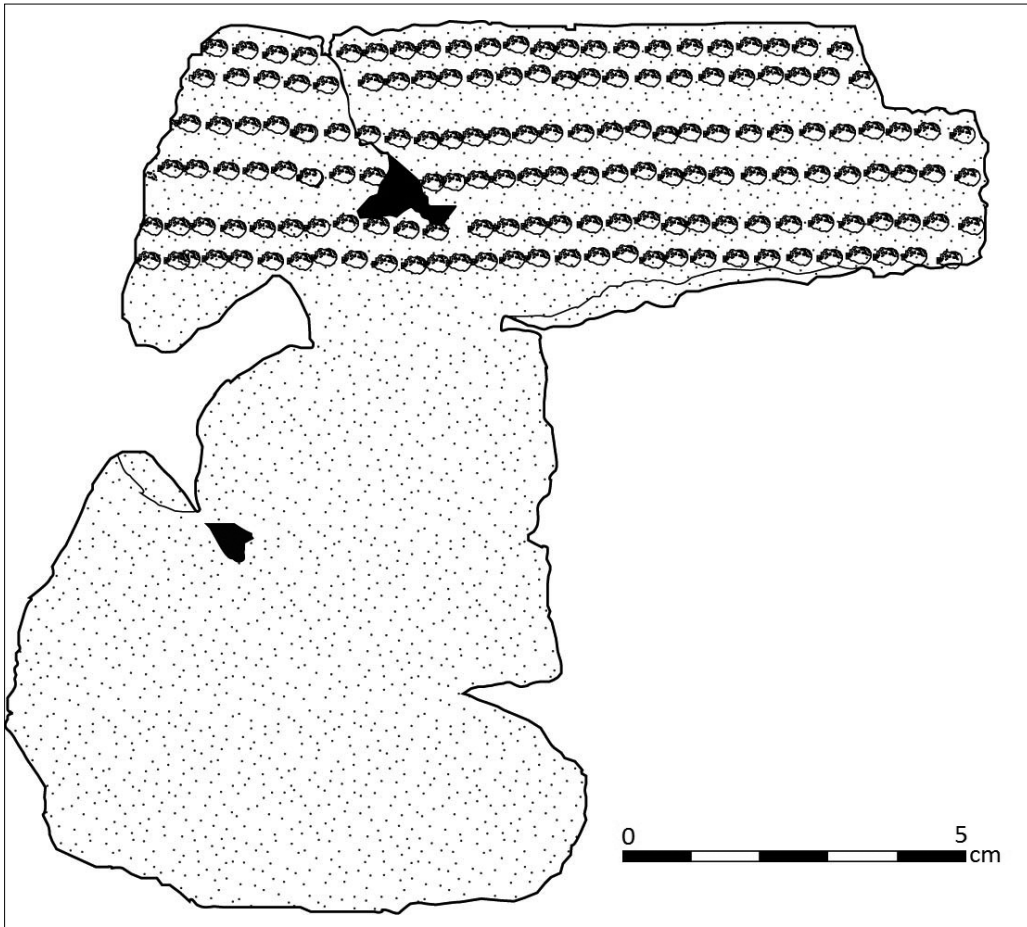


Tergis Group

Relatively few sherds were recovered. The one that were found, however, showed a number of characteristics. All sherds were of moderate thickness and tempered with fine quartz sand. Most sherds had reddish outside slip and either no slip or a buff slip on the inner surface. Those with a red slip were normally lightly burnished on the outer surface, but never on the inner surface. Decorative motifs were restricted to the upper portion

of the vessel bodies and include a two - line band of simple punctuates or a thick cord impressed band, close to but not reaching the rim (Figure 6.42).

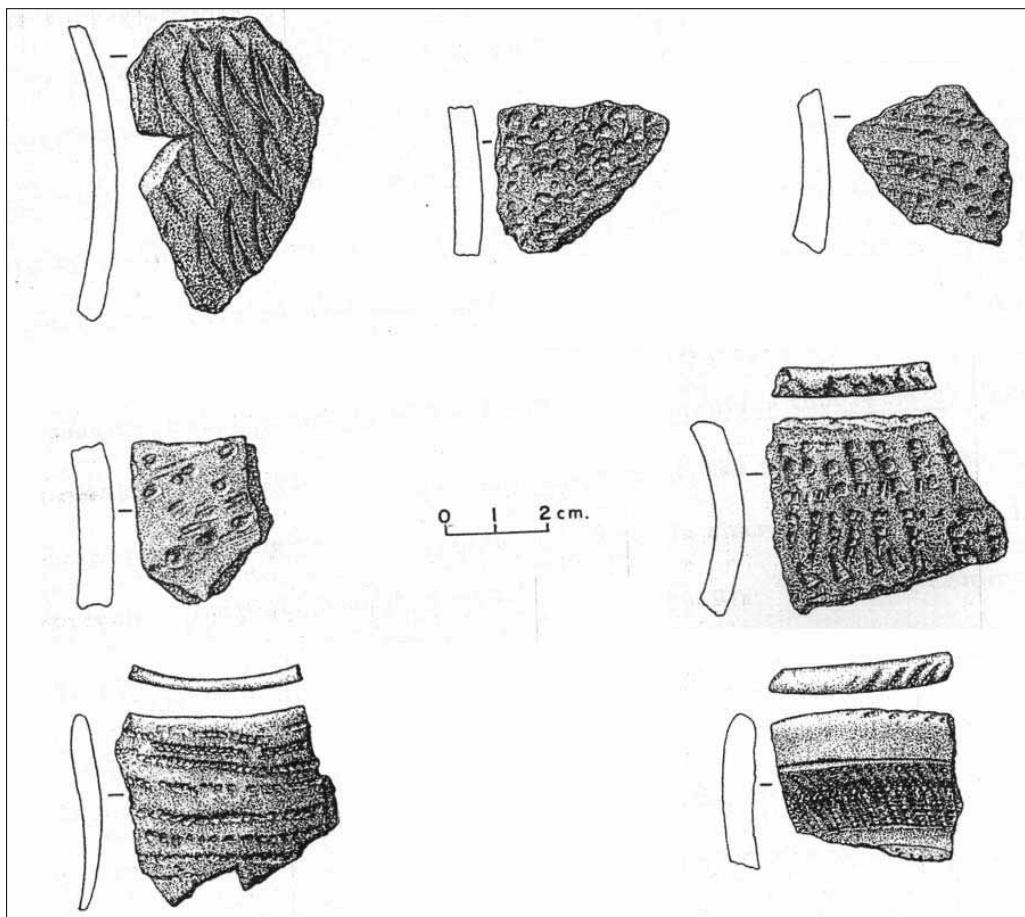
Fig 6.42: Vessel sherds from site N55 (Tergis group) (source: Hays 1971b.) Illustrated from the original



Karat Group

The sparse pottery of this group is of a thin, brownish ware, with a soft sand tempered paste. Two kinds of decoration of the outer surface were typical; a simple “wolf tooth” pattern in a single band around the upper portion of the body, and a complex design made by small, irregular punctuates, which apparently covered the whole body of the pot. Large numbers of body sherds were undecorated (Figure 6.43).

Fig 6.43: Vessel sherds from Karat Group sites (source: Marks and Ferring 1971)



El-Melik Group

Only two sites contained much pottery, N33 and N89. At both sites it was homogeneous, consisting of a rather thin, hard, quartz sand tempered pottery. Most sherds had a red slip on both the outer and inner surfaces. Very few sherds show any decoration, but when present, it tends to be in the form of simple incised lines.

From the above accounts, the following can be suggested;

- a. The fabric of the Abkan and Khartoum Variant are different, and are fired differently, the Abkan groundmass has a high proportion of silty clay and it is dark in colour. That of Khartoum Variant is sandy clay and has a light brown or pale red colour.
- b. The pottery of Tergis and El-Melik groups is not the same as other groups. This pottery is usually coated with red slip.
- c. The great majority of the Abkan and El-Melik sherds is plain, and exhibits little in common with Khartoum Variant.

Third Cataract Region

The archaeological material collected from Third Cataract sites consists largely of potsherds (Sadig, 2004, 2005a). No complete vessels were found, but some rim sherds discovered permits thorough study of the materials, texture, and decoration of the pottery and provides a fair idea of the shape of the vessels. All the potsherds from the sites are handmade, and generally unpolished. Apparently local clay was used. There are minor variations in the soil of the Third Cataract from place to place, but the geology of the region is so uniform that choice and selection were limited. Variations in the final result depend on the thickness and shape chosen for the vessel, the tempering material selected, the amount of effort devoted to smoothing, wiping or scraping and the type of decoration used. The colour runs from black, through dark brown, light brown to gray. In many specimens the colour is uneven, with black and brownish areas. Most of the variations in colour appear to be due to variations in the type of soil or firing. The cross-sections of the potsherds were found to be of uniform texture, but they usually show two colours: a black zone, and a zone of a lighter colour beside it. The division between them is uneven; this shows that the change is due to the effects of firing, and not to the presence of two different materials. Decoration is confined to impressions and incised lines. There is no painting or pictorial art.

Vessel shapes at the sites include variety of open-mouth vessels (Figures 6.44 and 6.45). The favorite vessel forms seem to be a medium-sized open bowl and hemispherical vessels. Many decorative patterns were used (Figures 6.46, 6.47, 6.48 and 6.49, Plate 6.17). The most common pattern is impressed dotted decoration. All the other decorative techniques, i.e. incision, simple impression, rocker stamps, simple Veeps are less common. The favorite decorative technique at Third Cataract Neolithic sites is the impression in all its varieties; accounting for more than 52.5% of the total. The rocker technique accounts for more than 19.3% of the total. The incised lines account for 16% while the rippled and combed decorative patterns account for 15.6%. The Neolithic sites of Shaheinab, Nofalab and Geili offer a different panorama, where rocker stamping constitutes a higher percentage; 45% at Geili, 58-72% at Nofalab, and 50% at Shaheinab. A comparable occurrence of decorative patterns and/or techniques is shown at the other Neolithic sites in Central Sudan, especially at Zakiab and Um Direiwa. A slightly similar situation, however, seems to characterise Kadero I, where the rocker stamping motifs account for 36% of the total, while incised motifs account for more than 18% (against 16% at the Neolithic sites of the area studied). From the above descriptive analysis, it is clear that Third Cataract sites ceramic assemblages are similar to that of other Neolithic sites. The differences of some sites deserve additional investigation and may be useful for developing a temporal sequence, through a detailed study, for Third Cataract pottery. Changes in the frequency

of decoration may be due to the total number of the collection. The data suggest that additional temporal indicators could be the frequency of coarse or plain potsherds, and the frequency of unsmoothed surface treatment.

Fig 6.44: Third Cataract region: Major forms of decorated pottery

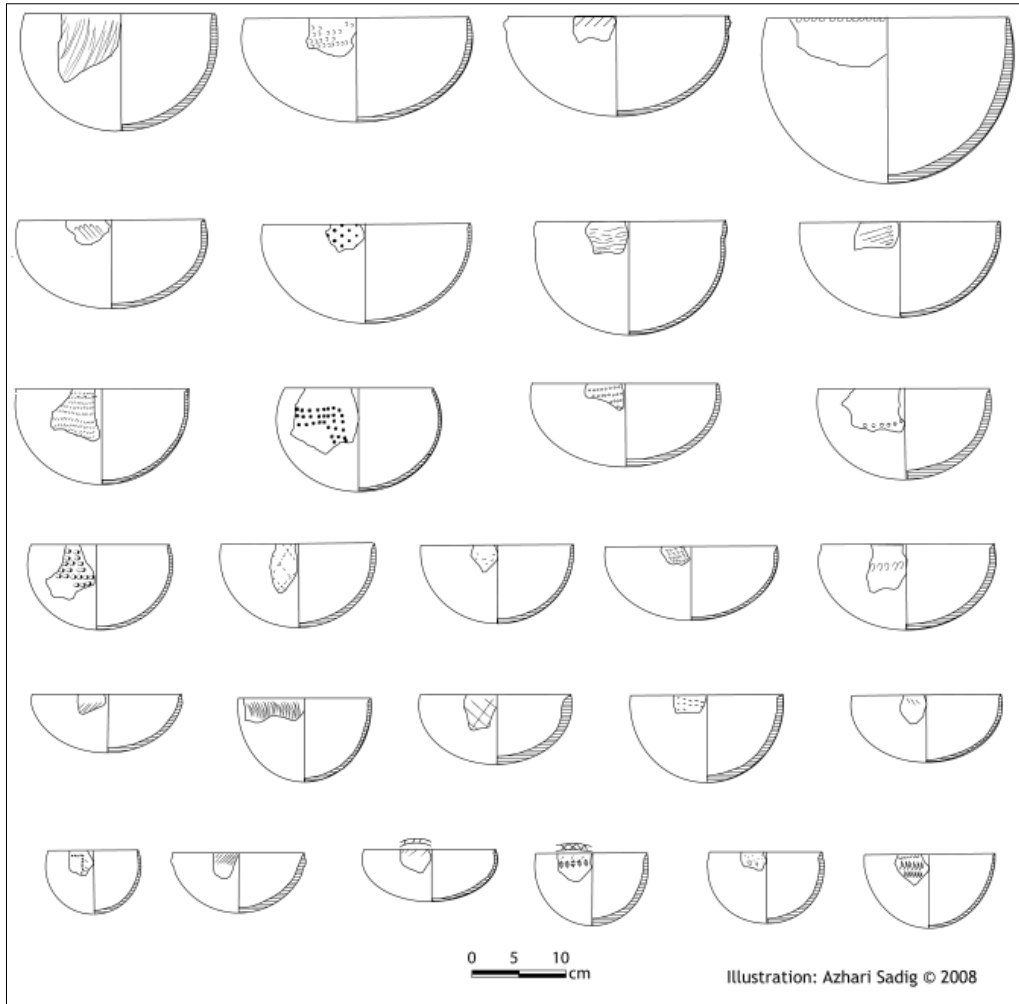


Fig 6.45: Third Cataract region: Major forms of un-decorated pottery

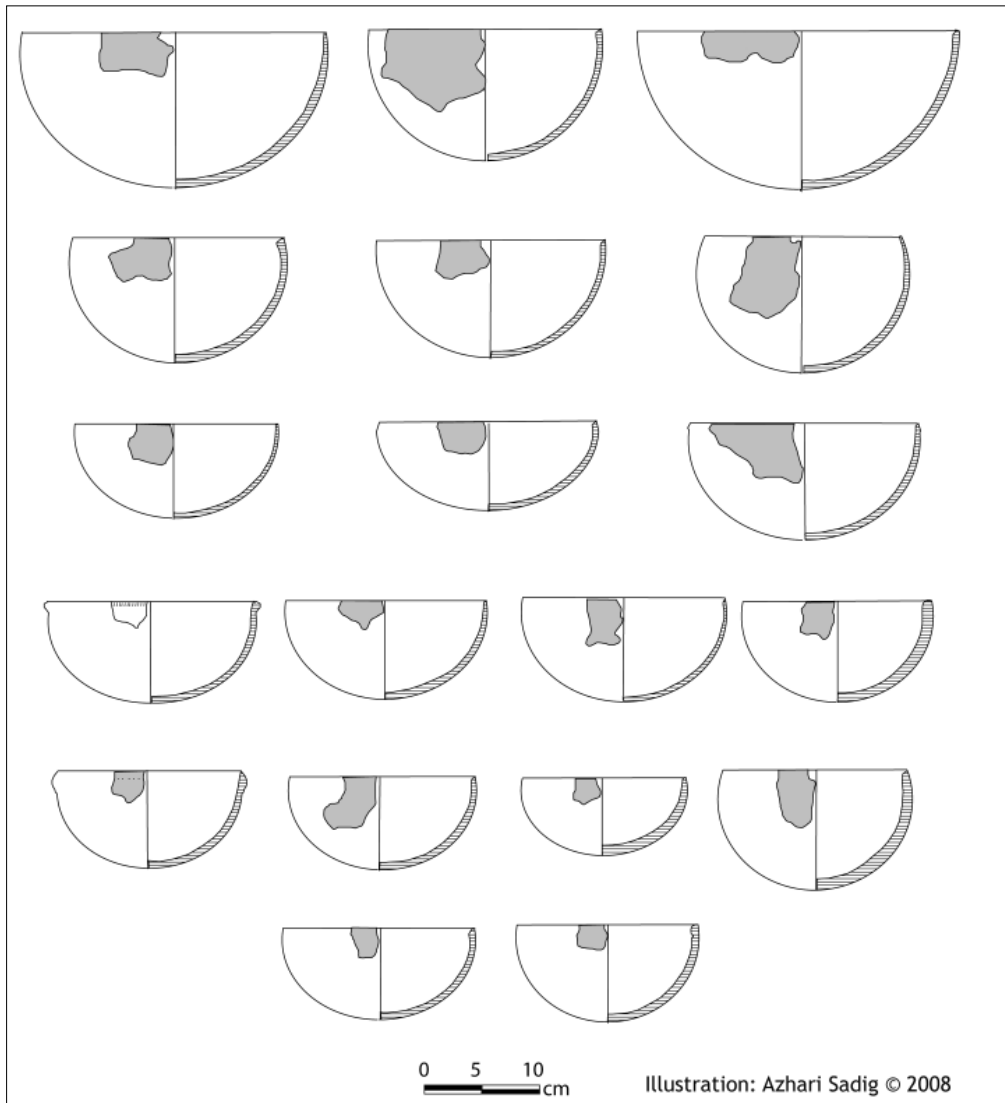


Fig 6.46: Third Cataract region decorated sherds (coarse pottery); a, b, e, FAR010; c, FAR019; d, f, FAR020

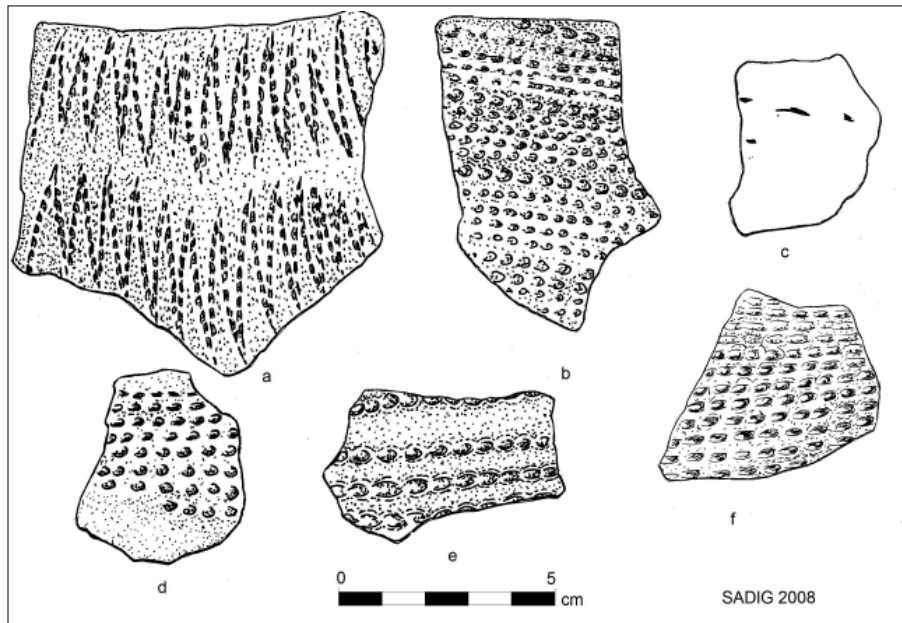


Fig 6.47: Third Cataract region, decorated sherds: Unsmoothed pottery: a-d, SME001; e, f, i, FAR019; g, j FAR020; h, FAR010

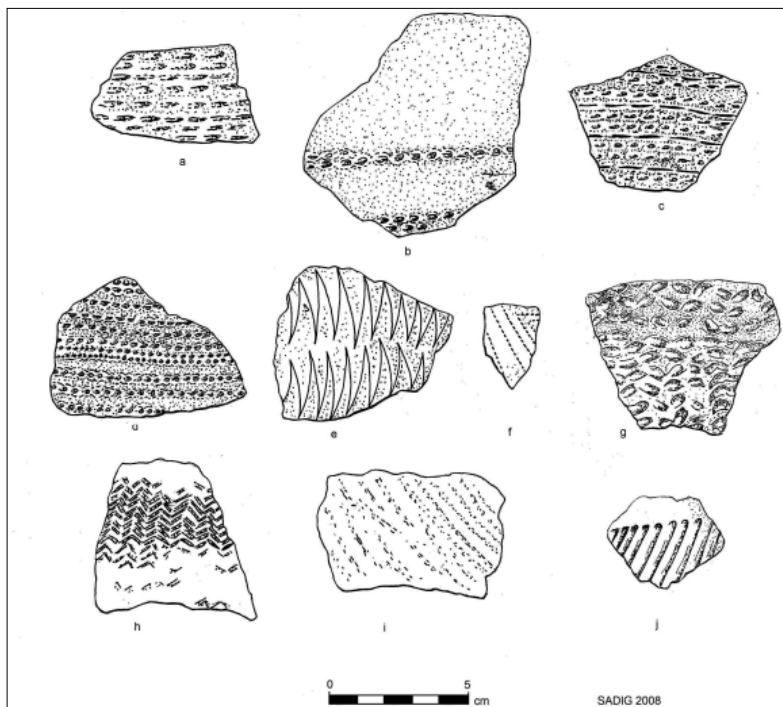


Fig 6.48: Third Cataract region, decorated sherds: smoothed pottery; a, d, FAR019; b, c, FAR010; e, f, FAR020; g, h, FAD013; i, SME001

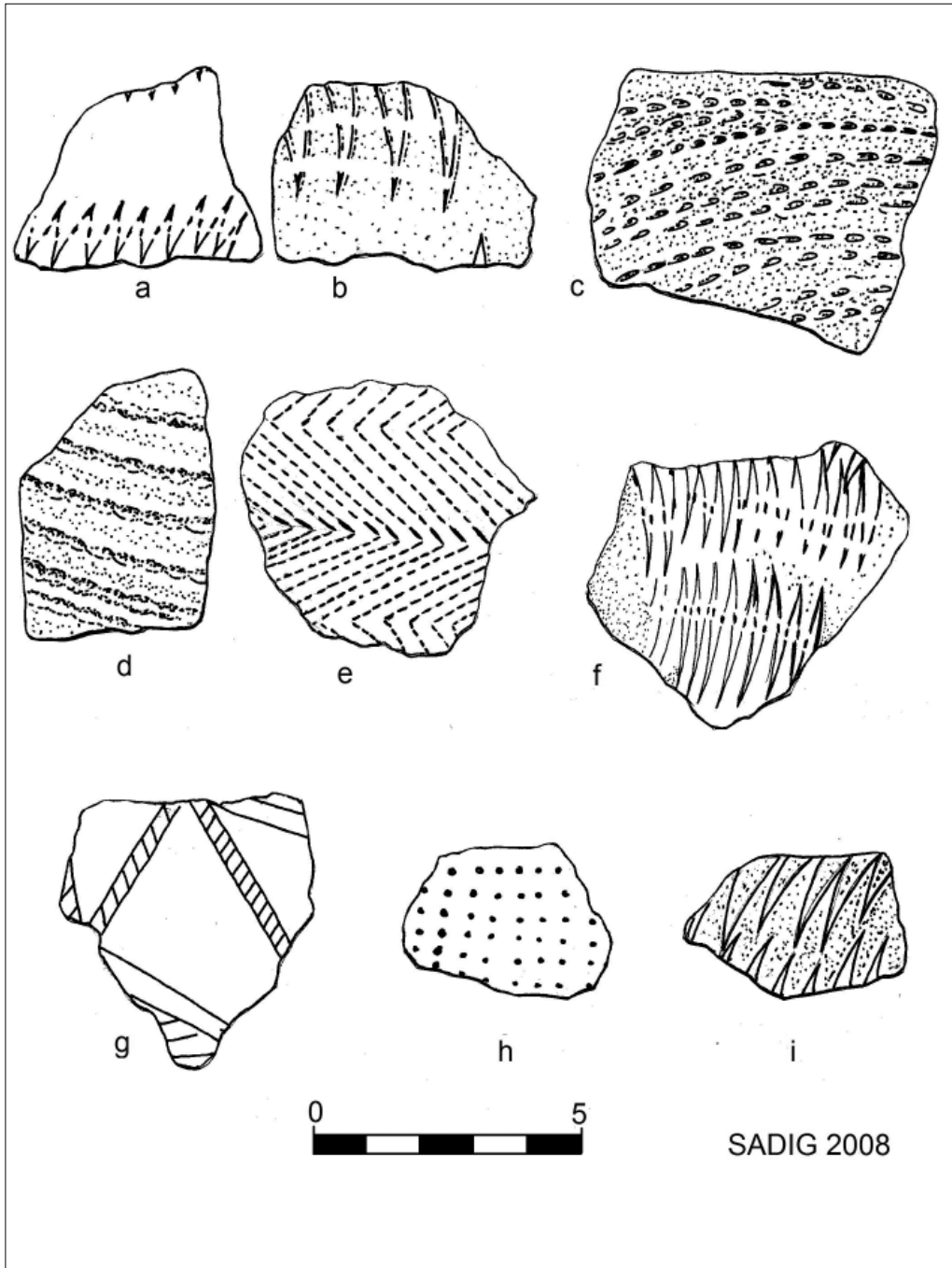
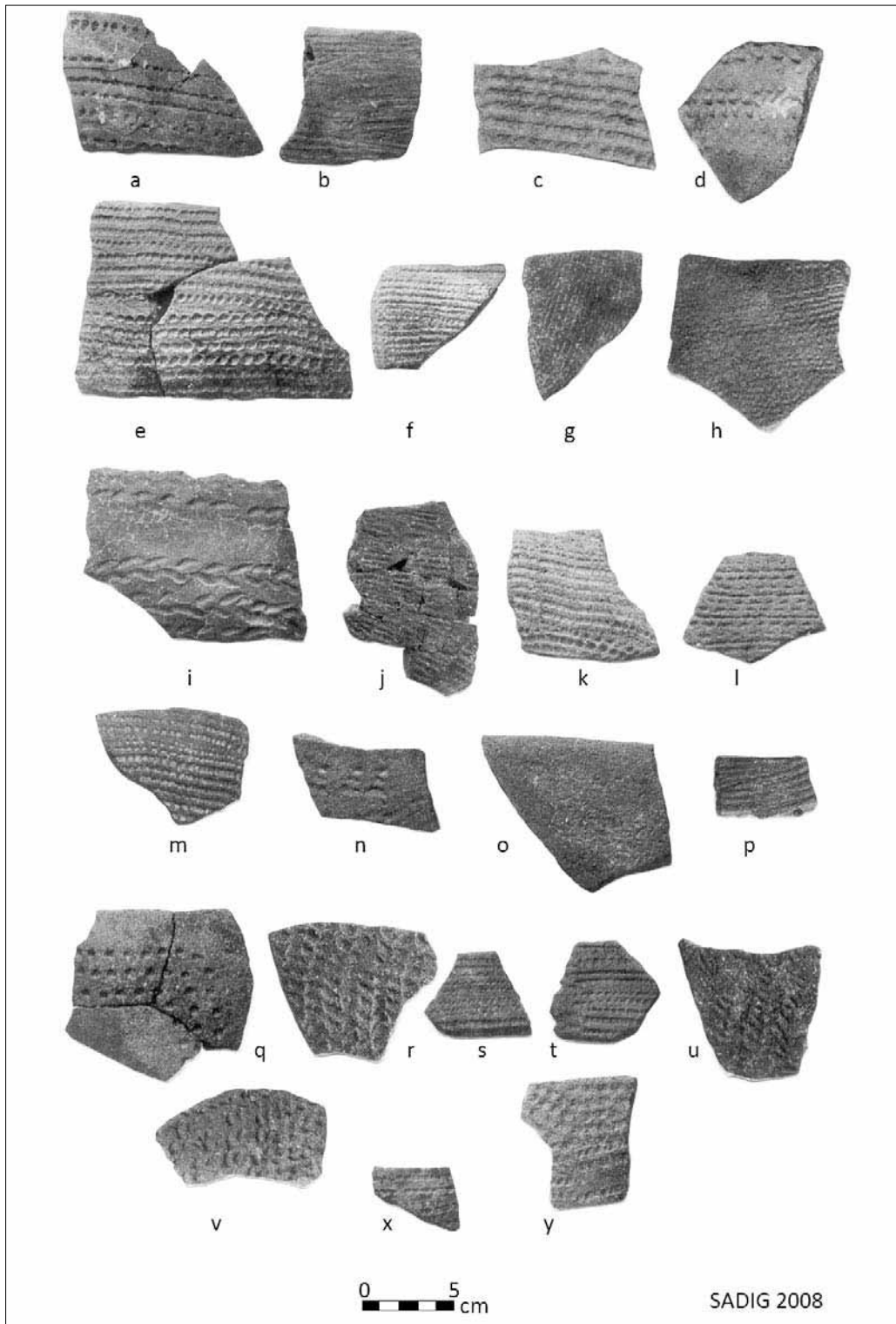


Plate 6.17: Decorated vessel sherds from Third Cataract region sites



Neolithic Burial Customs

Although burials have long been recognised as a source of information about past human populations, only recently have systematic, quantified attempts been made to enlarge the understanding of cultures through analysis of burial practices (Harrold, 1980: 195). Ucko (1969: 257) makes five observations about the interpretation of burial practices, which may be summarised as follows:

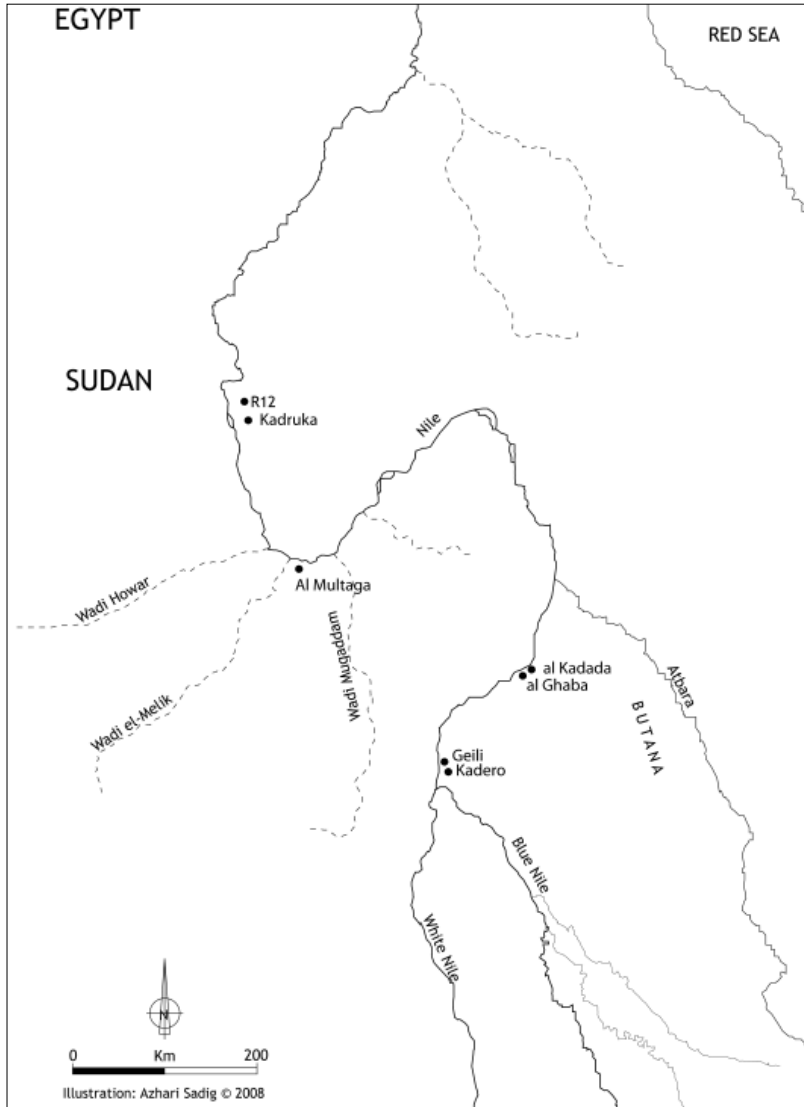
- a. Burial activities are not proof of after-death beliefs.
- b. Grave goods and offering objects are not always present and necessarily inside the grave.
- c. The quantity of the grave goods does not indicate the social status. In other words, the absence of grave goods does not mean poverty or low social status.
- d. Large funerary structures do not always reflect the social organisation in that society.
- e. The variation of body orientation differs from one society to another.

Although more recent studies (e.g. Marcus and Flannery, 1992, Hill, 1992) consider different ways in which researchers could learn more about past ritual practices or belief systems, there are still many questions that can be and have been answered by analysing of mortuary data in general and Neolithic Sudan mortuary data in particular (see below). Given that an appreciation of the nature of social organisation, political organisation, and economics are critical for an understanding of Neolithic culture, this study incorporates those areas as needed. The mortuary data set presented here lends themselves to studies of these topics.

On the evidence of the first excavations at Shaheinab, Arkell suggests that Early Neolithic people were not burying their dead. Only since the late 1970s have significant numbers of burials been excavated at Kadero I, Geili in the Khartoum region, el Kadada and el Ghaba in the Shendi region, and at Kadruka, el-Barga, R12 and Al Multaga in Dongola Reach (Map 7.1). Other Neolithic cemeteries, together with occupation scatters, have been located along the Nile west bank, north of Dongola, by Smith, but a detailed publication is awaited (2003: 165). Further south, east of the Fourth Cataract, a total of 282 Neolithic sites have been located on the Nile right bank between Karima and Khor el-Dagwali (Paner and Borcowski, 2005: 91), but there has been no systematic excavation or any detailed publication of the materials collected during the survey operations. Other Neolithic graves are documented in the Umm Melyekta Island. A total of 19 Neolithic graves have been excavated, but data from only one has been published (Fuller, 2004). The only extensive and detailed publications of survey and excavated activities

conducted in these sites in recent years are that by Welsby for the Northern Dongola Reach (Welsby, 2001), Reinold for the site of el Kadada (Reinold, 2008) and Salvatori and Usai for the site of R12 in the Northern Dongola Reach (Salvatori and Usai, 2008).

Map 7.1: Neolithic cemeteries of Central Sudan and Nubia



Central Sudan Examples

Kadero I

Krzyżaniak, in his excavations at the cemetery of Kadero I, focused essentially on the analysis of the grave goods. He aimed, in particular, at the definition of social inequality among the Neolithic population and the emergence of complex societies in the region

during the 5th millennium BC (Krzyżaniak, 1992a: 267-273). The Early Neolithic graves at Kadero I were divided into four classes according to the richness of their furnishing (Plates 7.1a - 7.1d). Their spatial distribution in the cemetery was also analysed. The application of this kind of methodology, however, largely depends on the extent of the cemetery and the number of contemporaneous graves that are studied. His classes are:

- Class I is composed of 38 burials (69%). These graves contain no furnishing. They contain only skeletal remains of both sexes and children of different ages.
- Class II is composed of 4 burials (7.2%). They contain a single pottery vessel in each grave with skeletal remains of both sexes and children of different ages.
- Class III numbers five graves (9.2%) and they contain one to three pottery vessels and/or utility ware, necklace of carnelian beads and other small personal adornments including small lumps of malachite/amazonite. They also contain skeletal remains of children.
- Class IV comprises eight graves (14.5%) which are demonstrably the richest in this cemetery. Their furnishing comprises fine pottery vessels, as well as beakers, personal adornments, and weapons. These graves contain skeletal remains of six adult males, two females and one child (Krzyżaniak, 1992a: 270).

Plate 7.1a: Grave no. 102 at Kadero I devoid of any furnishing (source: Krzyżaniak 1978.)



Plate 7.1b: Grave no. 54 at Kadero I furnished with a pottery vessel of a utility ware
(source: Krzyżaniak 1978.)



Plate 7.1c: Grave no. 168 at Kadero I furnished with sherds of two pottery vessels of
table ware and personal adornments (source: Krzyżaniak 1978.)

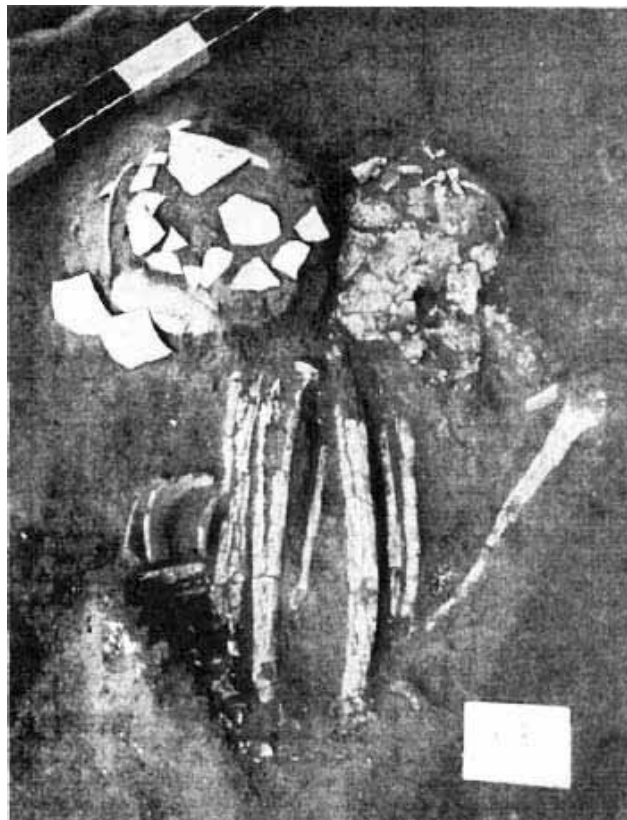
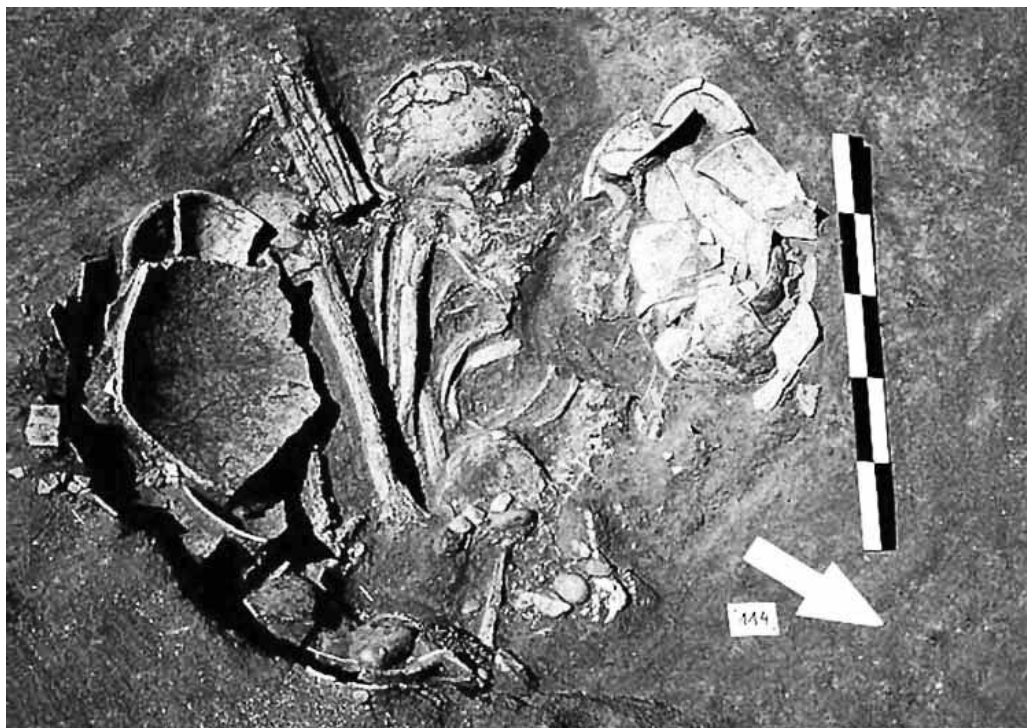


Plate 7.1d: Rich Neolithic grave at Kadero (source: Krzyżaniak 1978.)



Krzyżaniak argues that the concentrated burials as found in the graves of Class IV and most of the graves of Class III represent “*the graves of the individuals belonging to the elite of this Neolithic group*” (Krzyżaniak. 1992a: 270). The graves of Class I and Class II, on the other hand, seem to “*belong to the individuals belonging to the lower part of the social pyramid of this group*” (Krzyżaniak. 1992a: 270).

At Kadero I cemetery, where the quality and quantity of grave goods has been used as an indication of social status, it may be that social status also played an important part in determining the location of the graves and their orientations. The graves of Class IV (“upper class”) occurred in a clear concentration and are located away from the graves of Classes I and II (“lower classes”), with most of the graves of Class I close to those of Class II.

The factors that govern the distribution of the grave goods are not yet clear, but it is quite possible that social status played a major role in the distribution of grave goods in the cemetery of Kadero I. For example, mace heads, fine pottery vessels, personal adornments made of ivory and semiprecious stones were not in general use, but seem to have been confined to the richest tombs.

Krzyżaniak has used this finding to suggest that the presence of a mace - head in a male’s grave, when it is associated with other types of outstanding grave goods, is a symbol

of power (Krzyżaniak. 1978: 169). While this kind of artifact was used as an indication of a chiefdom (Krzyżaniak. 1992a: 271), the emergence of human sacrifices, the increasing complexity of the graves and their grouping in clusters in el Kadada and el Ghaba are all factors which point to “a non-egalitarian society” or units reflecting corresponding social (family or ethnic) associations (Geus. 1991: 57-73; Reinold. 1987: 17-67).

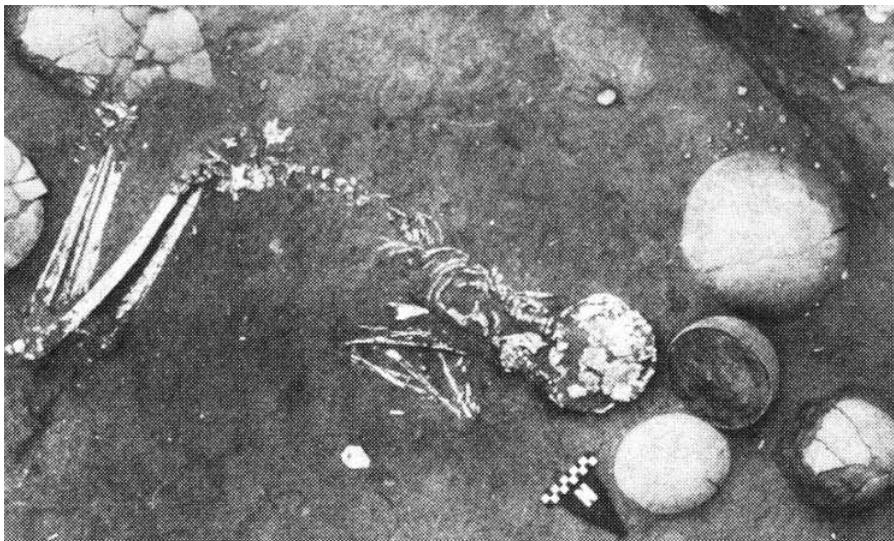
It is possible that the variations in the Kadero I cemetery are due to factors suggested by Krzyżaniak. If confirmed, this would suggest that the emergence of a food-producing economy led to a new type of social organisation.

el Ghaba and el Kadada

A slightly different approach has been taken at the cemeteries of el Ghaba and el Kadada (Reinold. 1987: 17-67; 1991). More emphasis has been given to the social aspects in the analysis of the two cemeteries. Preliminary study of the graves was undertaken with the objective of analysing cultural aspects. Subsequently, a series of attributes were analysed and used to reconstruct a model of burial customs which reflects a degree of social complexity. The analysis was based mainly on the organisation of the graves within the cemetery. Groups with either stratigraphic or topographic relationships were recognised. These groups were considered to be units reflecting corresponding social (family or ethnic) associations. The presence of peculiar vessel types and animal and possibly human sacrifices were also regarded as important elements.

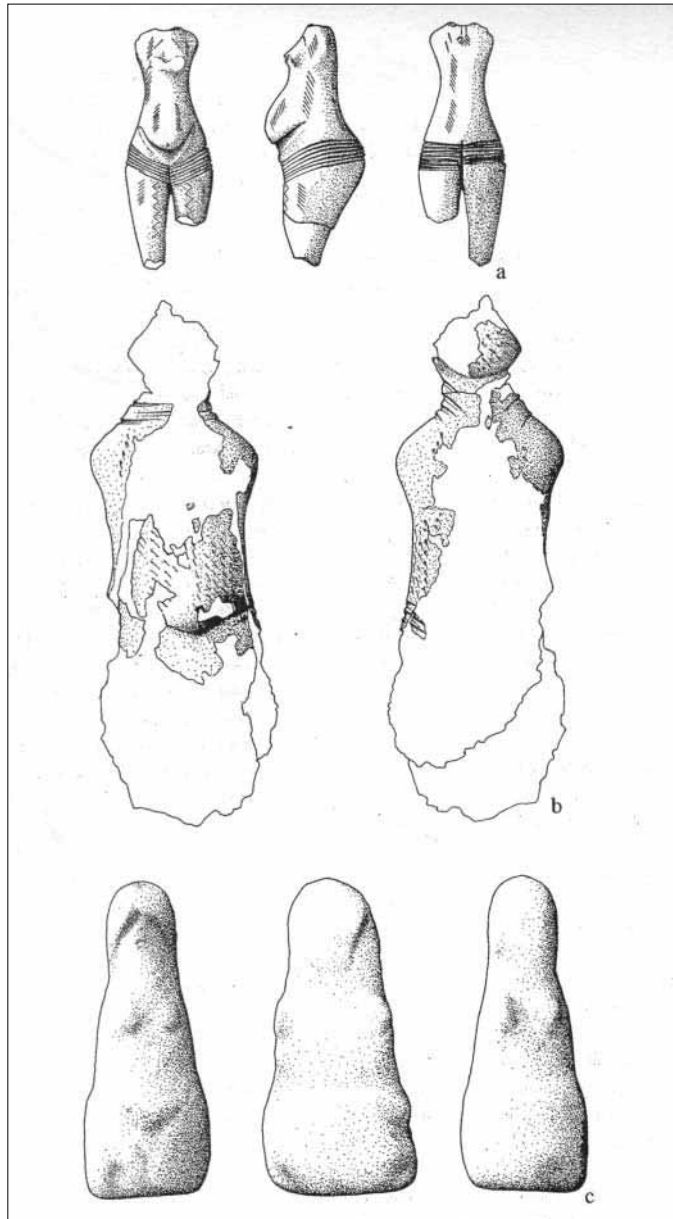
At el Ghaba the deceased wears the ornaments used for adornment during his life and to which he probably attributed prophylactic powers (Plate 7.2). Different objects surround the dead, referring to their lifetime activities or social ranks. The whole cemetery seems to have developed along strictly chronotopographical lines, a likely indication of an egalitarian society structure (Geus. 1991: 58).

Plate 7.2: Early Neolithic grave from el Ghaba (source: Geus 1984a.)



The same was observed in the cemetery of el Kadada, where the female pottery figurines were perhaps one of the most important innovations (Figure 7.1).

Fig 7.1: Human figurines from el Kadada (source: Reinold 2008.)



One of the most important observations at el Kadada cemetery concerns the superimposed inhumations of two and three individuals. A comparative analysis of these burials indicates the presence of human sacrifice in those tombs containing three bodies (Plate 7.3). If confirmed, as Geus said, “*this would be the first occurrence of a custom*

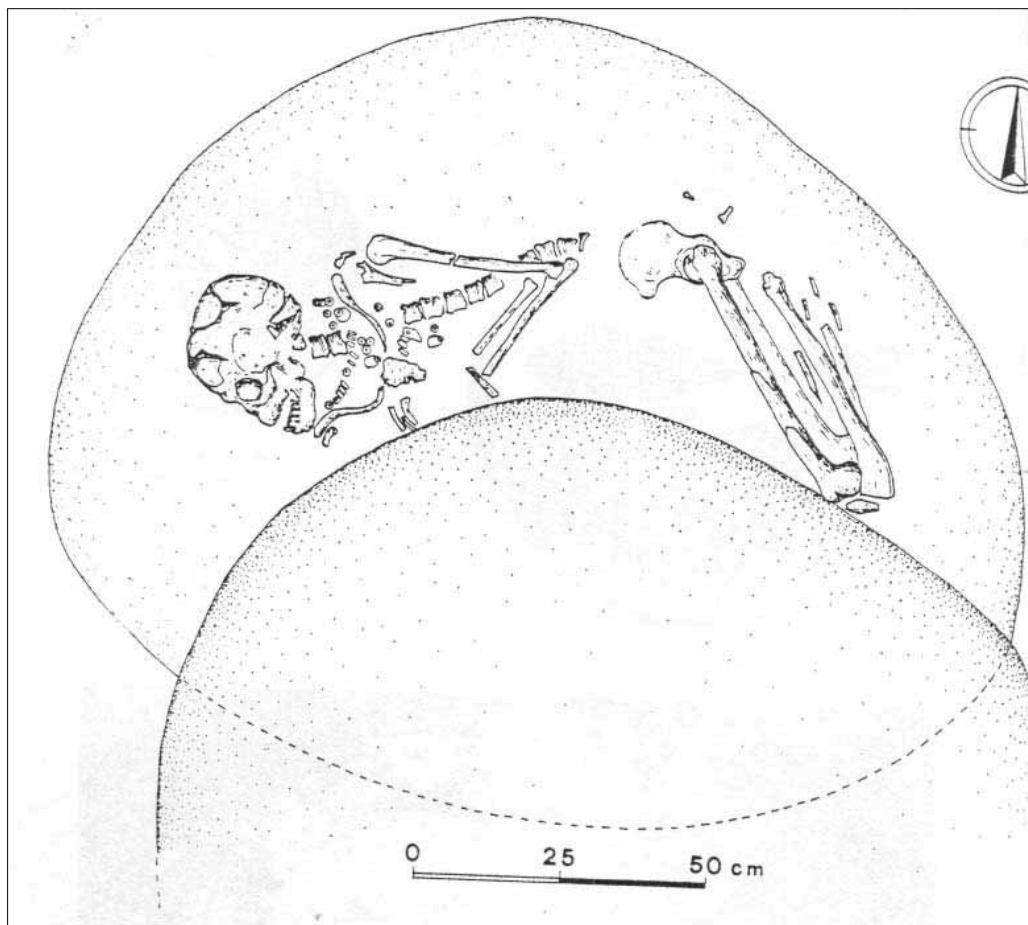
destined to become widespread in later times, particularly in Kerma” (Geus. 1991: 58). Geus argued that the presence of human sacrifices, the increasing complexity of the graves and their grouping in clusters are all factors that point to “*a non-egalitarian society in which the elements of social differentiation were beginning to exist*” (Geus. 1991: 58).

Plate 7.3: Tomb of an elite individual with human sacrifice of a youth at el Kadada (source: Wildung (ed) 1997.)



El Geili

The same approach was adopted for the excavation of the Neolithic cemetery at el-Geili in Khartoum Province (Figure 7.2). New analyses, based on both physical anthropology and bone chemistry, were possible. Besides sophisticated pottery, including pots with rippled, burnished surfaces and rarely with impressed patterns, the graves contain necklaces, stone palettes for cosmetics, disk mace heads, clay figurines and other objects such as axes or querns (Caneva. 1991: 13). Caneva observes some similarities between the Late Neolithic graves goods and those of el Kadada. She assumed that the Geili group was contemporary and “*probably had trade links with that of Kadada, but it belonged to a local population which consistently maintained regional relations in its funerary practices*” (Caneva. 1996: 320).

Fig 7.2: A late Neolithic grave from Geili (source: Caneva 1988.)

Although a significantly different interest in funerary data has developed in the archaeological world, which focuses on the information a cemetery can offer on both the ideology and the social context of the associated population, the Central Sudan case is slightly different. The formal examples focus either upon the interpretation of grave goods or upon the distribution of the graves as evidence of the social organisation. A combination of the two approaches could be seen in the case of el Ghaba and el Kadada.

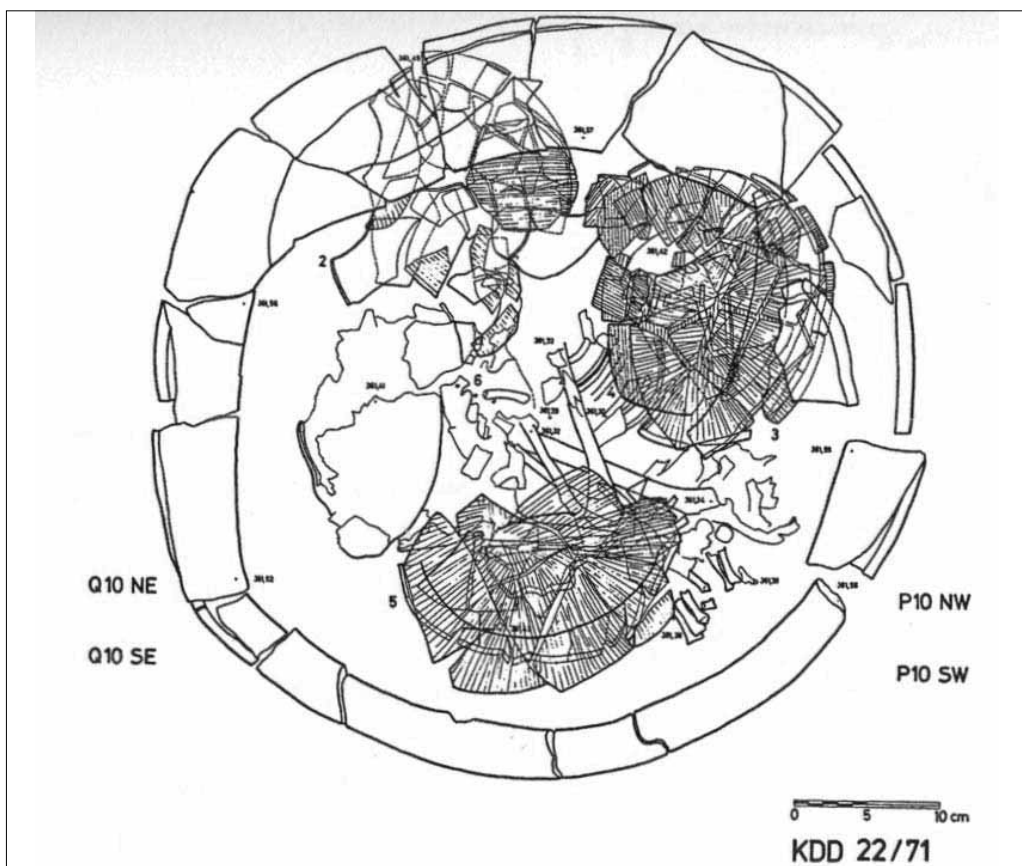
The major feature of the four sites is the occurrence of few graves with rich offerings, which could reflect some kind of social status. Variations among the grave goods and their social indications were not confined to one cemetery. The Neolithic graves at Kadero I, for example, showed considerable variations in their grave goods; while at el Kadada the animal sacrifices, human figurines and artifacts may indicate ritual and/or social aspects. Human sacrifices, if confirmed, may also indicate the social status of the deceased.

In summary, the following conclusions may be drawn from the four sites:

- a. The quality of the grave goods indicates the social status of the deceased. In other words, variability in burial practices reflects variability in social status.
- b. It is clear that a process of social differentiation had occurred in the Khartoum area during the preceding long period of settled life and that the differentiation had been consolidated by the established structure of a pastoral society. Through time, clear signs of developing and more sophisticated social relations can be observed, as in the differentiation amongst the graves.
- c. The cause of death might have played a major role in mortuary treatment (animal sacrifices at the site of el Ghaba).
- d. The spatial patterning of graves within cemeteries forms an important dimension of mortuary practices (for example the distribution of graves at Kadero I cemetery).
- e. The relationship between sex and age and the quality and the quantity of the grave goods is not yet clear. Moreover, we do not know the relationships between the differently sized graves and the varying quality and quantity of grave goods. This may be due to the dereliction of the researchers rather than the lack of data.

The occurrence of child burials inside the settlement may indicate that young children were not considered to be full members of the social group (Figure 7.3). In consequence, they were buried outside the cemetery (Reinold. 2000: 65). Some graves were furnished with rich goods, such as fine vessels, bucrania and polished axes. These rich grave goods reflect the status of their families in the social group (Reinold. 2000: 73). Yet, the complete absence of such graves in the other sites may be due to:

- Poor preservation conditions and the poor condition of the bones; the children's cemeteries might have been destroyed by natural conditions.
- A large number of children may have been buried elsewhere, not in the same cemeteries as the adults.
- It might be due to the limited extent of the excavations. Many graves in the four sites have not yet been excavated, and these might contain more children's graves.

Fig 7.3: Pot-Burial from el Kadada (source: Reinold 2008.)

Northern Dongola Reach

Systematic survey and excavations along Kerma basin and Wadi el-Khowi, in the Northern Dongola reach, provide us with detailed information about Neolithic burial customs. The number of sites in this region suggests a quite intensive occupation throughout the area (Welsby, 2000: 135). Cemeteries currently appear as isolated mounds, in a landscape which is today flat. Seventeen cemeteries have been located; of these only five were tested, three were excavated entirely and three are in the process of excavation. Since they cover the 4th to the 5th millennium in date, they inform us about the evolution of the funeral customs and the modifications of the social relations in these first communities to practice agriculture and cattle breeding.

One of the most important cemeteries in the area was discovered at Kadruka (Plate 7.4, Plate 7.5, Figure 7.4), in the Kerma Basin. This consists of medium-sized Neolithic cemeteries, including wealthy graves that have been tentatively interpreted as those of local chieftains (O'Connor, 1993: 13).

Plate 7.4: Cemetery KDK21 at Kadruka: Graves 240-41. The main burial is that of a female with a sacrificed male placed in the same grave to the north (source: Wildung (ed) 1997.)



Plate 7.5: Human figurine from Kadruka (source: Reinold 2001.)

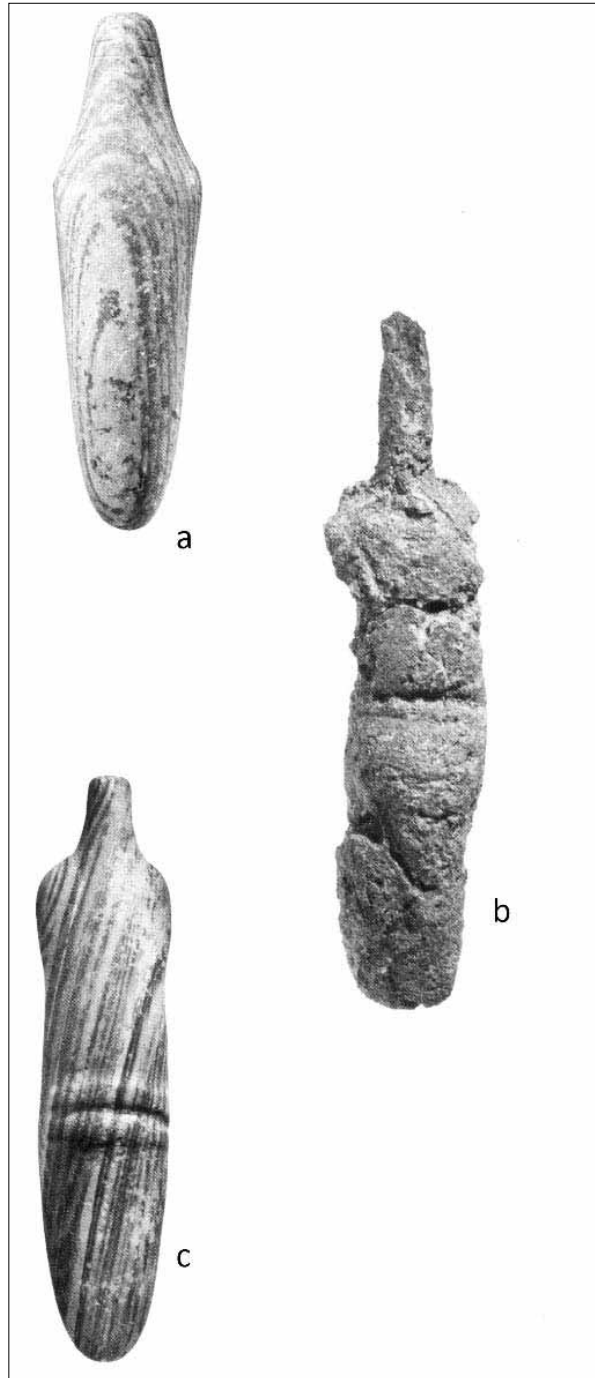
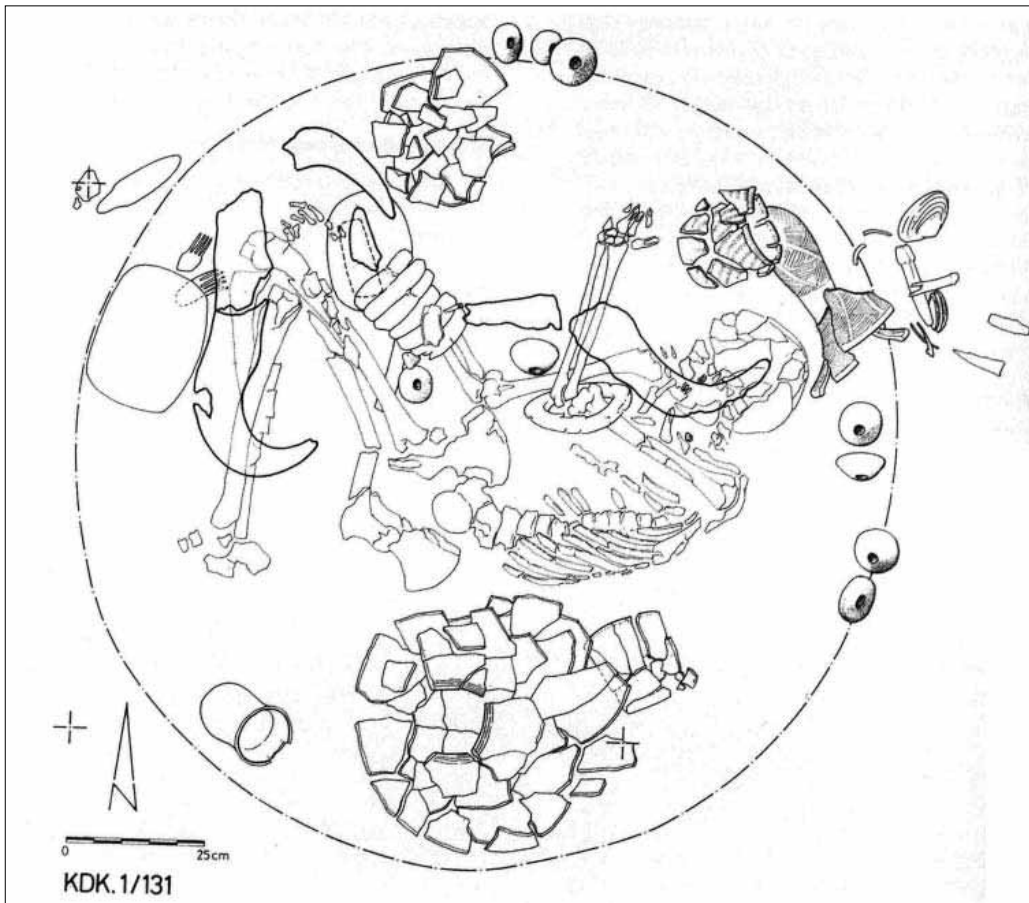


Fig 7.4: Cemetery no 1, chieftain's' tomb (source: Wildung (ed) 1997.)



The most impressive example comes from cemetery KDK 1 where, according to its discoverer, grave 131, located at the top of the burial mound, displays the wealthiest grave furniture ever found in Nubia and Central Sudan in a Neolithic context. The other pits have been arranged around it, expanding out to form concentric circles using the first burial as a focus. Reinold did not use this discovery to infer a related territory that would have been controlled by the owner of the grave, but he concluded that such a finding implied expanding societies, in other words, societies with growing territories, that are a prelude to the emergence of kingdoms (Reinold. 1991: 28). The majority of pits are located on the high part of the *kom*, between contour lines 230.70 m and 231.10 m. The remainder, nearly a quarter of the total, is situated on the lower part at around 230.20 m. Initial observation indicates distribution ordered by gender. The higher are generally male burials, while the lower are female burials (Reinold. 2000).

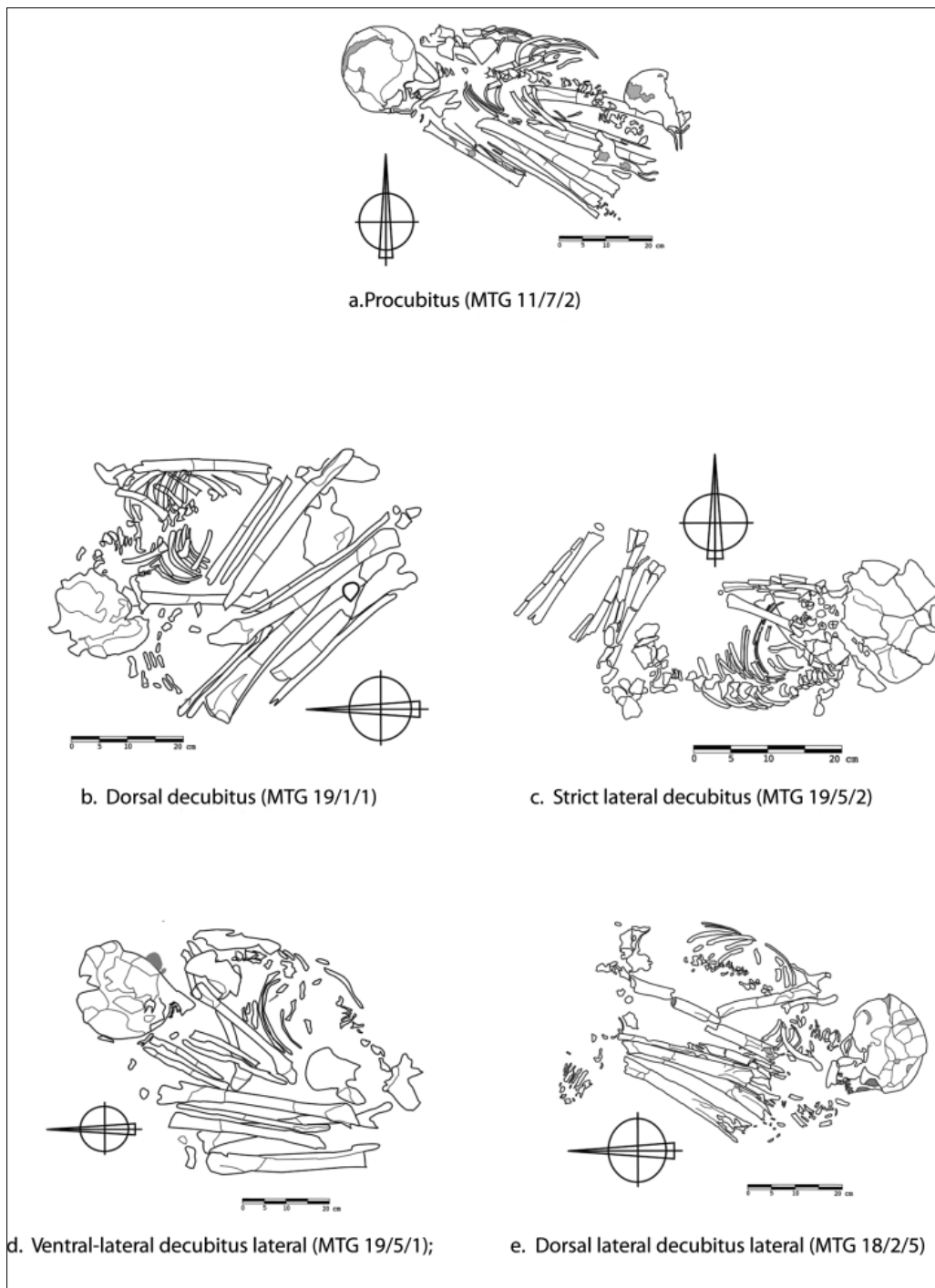
Another cemetery, R12, may give a reasonable picture of a Neolithic Nubian society and may contribute to unraveling problems about the cultural and chronological sequence of the Neolithic in Nubia (Figure 7.5) (Salvatori and Usai, 2008). This cemetery, according to C14 determinations, was used for about 600 years, with the excavation revealing different grave layers, in spite of strong erosion which especially affected the northern and southern periphery in particular. This long use was responsible for graves frequently cutting into each other and for other disturbances. Apart from the risk of mixing of material, careful stratigraphic control often confirmed a chronological order among the different inhumations.

This also means that, unfortunately, many skeletons were found incomplete. Erosion caused extensive damage to both the skeletal and archaeological material. As wind/water cleared part of the original soil of the mound, some of the graves appeared on the surface with bones in a very fragile state and the pottery abraded to such a point that the original surface treatment was sometimes hardly recognisable. Much can be learnt about crafts, ideology and society from these 170 graves.

Investigations in the El Multaga area, located near Korti and ed Dabba, brought to light Neolithic burials differing from other known local and contemporary burial sites (Figure 7.6). The skeletons lay under mounds in contracted positions, inside pits just large enough to contain them. Grave goods were not regular and rather poor. The excavators are of the opinion that such practices probably relate to local nomadic groups (Peressinotto *et al.* 2003: 54). They also argues that the lack of grave concentrations and the scarcity of grave goods, which are among the most striking differences from other cemeteries, seem to indicate an adaptation based on nomadism, which is probably connected with the exploitation of the great wadis that join the Nile in that area. On the other hand, burials of adults and children, whatever their ages at death, do not display any significant difference. The diversity of their orientations and positions fits in with what is known from other sites with the same cultural horizon, but the contracted position of the lower limbs, which involves the use of straps, is greater here than anywhere else.

The cemeteries at Kadruka, Kerma and el Multaga provide us with a remarkable record, displaying many similarities with the sites of Central Sudan and testifying to a common link between the cultures. There are, however, variations that may be interpreted as different modes of evolution or different regional adaptations. These cemeteries display many points in common, especially in material culture. The similarities and differences seem to translate to homogenous populations and indicate a rapid evolution of the social order of the human groups.

Fig 7.6: Neolithic graves at el Multaga (source: Peressinotto et al 2003.)



Conclusion and Further Research Questions

The Neolithic culture of the Middle Nile Region was distributed through the Central and Northern regions in the 5th millennium BC. Several cultural traits mark the social and economical development of the Neolithic period. Burial practices indicate the presence of social hierarchies. Regional cultures became more extensively distributed and, finally, the Late Neolithic cultures of this region became increasingly complex, forming the foundation for the development of the Bronze Age societies (A - Group, C - Group and Kerma civilisation).

The extensive excavations on Neolithic sites together with the results of the previous work in Nubia and Central Sudan have greatly increased our knowledge of the cultural development of the Neolithic period. However, many more questions concerning Neolithic development remain unanswered. We know little about agricultural activities, land use, and community organisation. We lack information on the origins of the Neolithic of Central Sudan. Caneva argued that “*the chronological gap which seemed to separate the Khartoum Mesolithic from the Shabeinab Neolithic is now consistently filled by the dotted wavy line cultures*” (1993: 89-90). Focusing the research on this matter ought to lead to an explanation as to what degree the older, local cultural base contributed to the development of the Neolithic culture of Central Sudan and what were the main factors that contributed to the development of the Neolithic societies in this whole area?

Current research has a major reevaluation of the evidence concerning the Neolithic. One of the issues that remain unsolved is the direction of the spread of these cultural development and the relations between different cultural areas and sites within these areas. The homogeneity of the “cultural” groups who inhabited the large area of the Nile is a major issue. Styles and adaptations of life vary from site to site and from one area to another, which may suggest the development of local cultural preferences. Yet in many aspects these sites reflect similarities were though they did not follow the same developments.

Social differentiation appeared among Sudanese herders by the 4th millennium BP. Clusters of especially rich graves of men, women, and children at Kadero I argue for differences in wealth, but there is no evidence of social stratification. Pastoral intensification and a decrease in wild animal use are also evident at some sites in the Middle Nile after 5300 BP. Despite these developments, the spread of herding was patchy: at Shaqadud, east of the Nile, subsistence focused on wild resources as late as 4000 BP.

However, whatever this social organisation may have been, it should have left some material manifestations of its structure. The increasing importance of domesticated animals, for example, would be associated with the emergence of more individualised rights and responsibilities in economic management and this would have led to increased differentiation within such communities.

An important question here relates to the organisation of chiefdoms. Comparative ethnographic material indicates that the chiefdom is based typically on nuclear families or small extended families of limited span and that it is thus associated with private property. In addition, chiefdoms were based on the concept of hereditary inequality: differential status is ascribed at birth (Wenke. 1980: 342-343). Chiefs frequently had divine status; their families enjoyed privileged access to material resources, food, foreign goods and so on.

It seems that, in spite of the evidence of many excavated sites, evidence of the social organisation of the people of the Neolithic in Central Sudan will be limited to that derived from burial information. Although the hypothetical social classes reflected in the graves were not observed in the settlements, currently available evidence seems to indicate that the burial grounds at el Kadada and Kadero I illustrate well the process toward the end of the Neolithic of the increasing concentration of goods and power by a social "elite".

It is clear that the social structure in Central Sudan during the Neolithic period exhibited more or less inseparable economic and settlement patterns, which are in turn witness to developmental stages extending from the Early Neolithic to the complex picture of the Late Neolithic.

Although the degree of permanency varies from one site to another, reaching its zenith at Kadero I and el Kadada, a mobile pattern exists throughout, and this started to invade a regular schedule of movement through the different microenvironments in later times. Another question relates to the relation between settlement patterns and social and ethnic affiliation during the Neolithic. Certainly, much can be learned about the various subsistence patterns of different "archaeological groups" but it is not possible, for the Neolithic period, to go beyond this and attach linguistic or ethnic labels to archaeological cultures, since it is doubtful that much can be learned about ethnic identity in the absence of written information.

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