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Neolithic Pottery from the Third Cataract (Mahas Region- Northern Sudan)

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Abstract. During four seasons of the Mahas Survey project (Dept. of Archaeology, University of Khartoum), 47 prehistoric sites were recorded in the area of the Third Cataract (the southern part of the Mahas region) of which 17 were considered as Neolithic sites. The ceramic material from nine of these Neolithic sites will be considered in this paper. The ceramic collection analysed here shows wide range of variations from site to site. The analysis clearly shows that the Third Cataract sites ceramic assemblages are similar to other Neolithic sites in the Sudan. The differences occurring on some sites deserve additional investigation and may be useful in developing a temporal sequence, through a detailed study, for Third Cataract pottery.

1. Introduction:

The Mahas region is located in Northern Sudan along the Nile between Hannek-Tombos, at the top of the Third Cataract, and Jebel Dosha-Wawa, close to Soleb. The total length of its area is c.100 km. It includes the whole of the Third Cataract region, which extends over some 55km of the Nile.

The Third Cataract region is marked by a series of islands and rapids between Tombos and at Kajbar-Sabu. The region in general is a narrow strip along the two banks of the river, with a range of mountains on both sides of the river. The only exception to this is the Kokka Reach, which is a flat open area connected to the Libyan Desert (Map 1).

In 1990 the Department of Archaeology of the University of Khartoum began the Mahas Survey project which has resulted in an increasing accumulation of data on the type and location of prehistoric sites. The majority of prehistoric sites were found on high elevations adjacent to small watercourses associated with sandy soils and rocky areas. No previous survey was conducted in this region, though few sites dated to the prehistoric period were investigated.

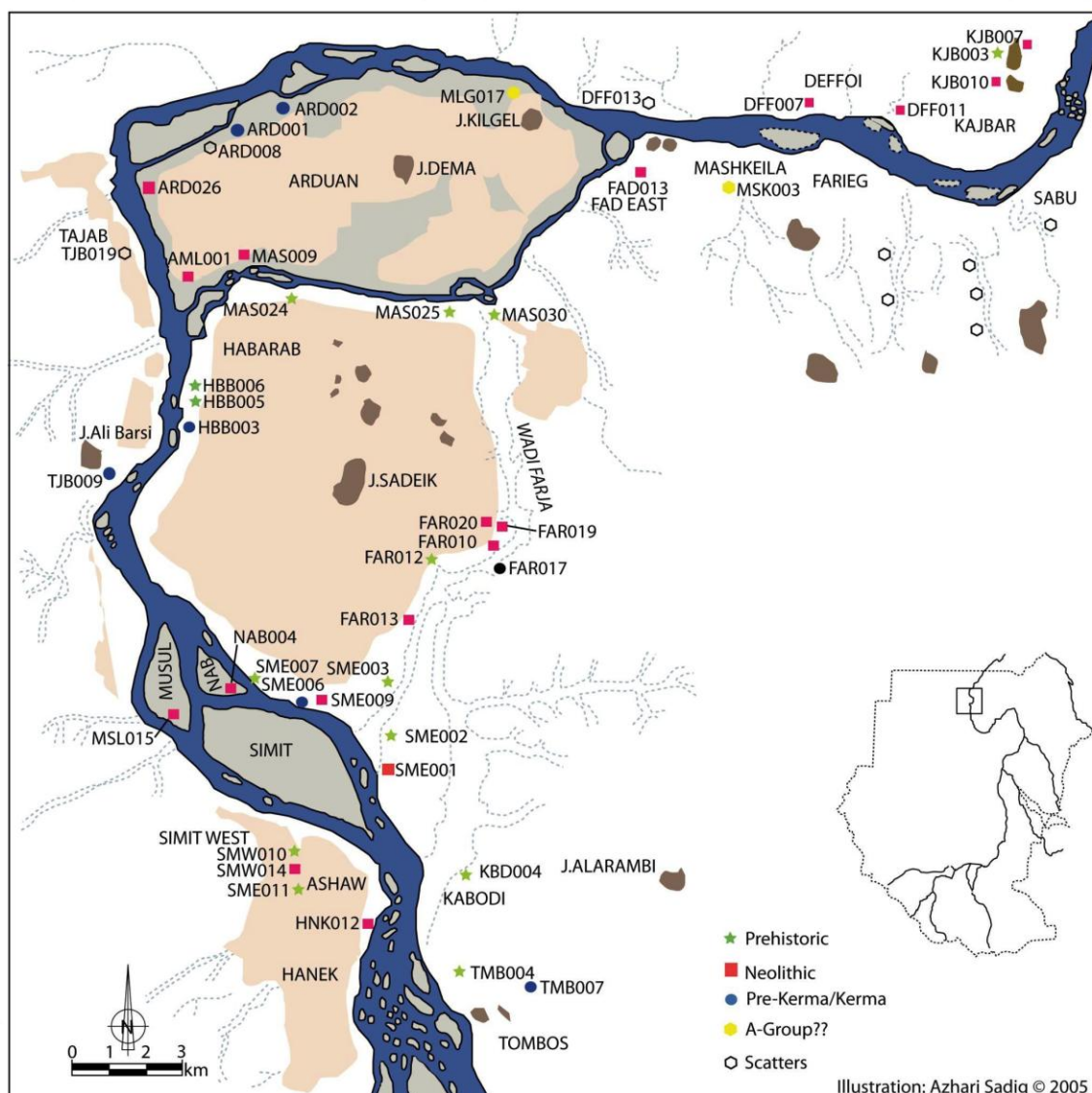
Little was known about the early settlements. The Mahas Survey project was the first expedition to report prehistoric occupation in the region.

During four seasons of the Mahas Survey project, 47 prehistoric sites were recorded of which 17 were considered as Neolithic sites (Edwards & Osman, A.1992, 1994a, 1994b, 2000; Osman & Edwards 2002). The ceramic material from nine of these Neolithic sites will be considered in this paper.

2. General Description:

The potsherds collected from the sites consisted of 1742 potsherds, 962 of which were classifiable. These consist of 212 rims, 748 body sherds, and 2 bases. The potsherds then were classified according to selected variables; namely, decoration, surface treatment, colour and hardness, form and texture. Attempts were also made to reconstruct the diameter of the pots relying on the rim sherds.

Yet several factors affected the examination of the collections. One problem was the small number of sherds from each site (fig 1). The second problem was the lack of whole or reconstructable vessels. Only 60 rim sherds, out



Map 1: Prehistoric sites in the Third Cataract Region

of 212, were reconstructable (fig. 2). The generally small size of the potsherds, the weathered condition of many and the small proportion of rim sherds had complicated not only the attempts of reconstruction but also the determination of vessel size and shape.

In general, the archaeological material collected from the Third cataract sites consists

largely of potsherds. As mentioned, no complete vessels were found, but the sherds discovered permit certain variables to be analysed, such as raw material, texture, surface treatment and decoration of the pottery. With some thoroughness, and in some cases a fair idea of the shapes of the vessels, could be formed.

All the potsherds from the sites are hand made, and generally unpolished. Apparently local clay was used. There are minor variations in the soil of the Third Cataract Region from one place to another, as the geology of the region is so uniform that choice and selection were limited.

Variations can be observed in the thickness and morphology of the vessel, the tempering material selected, the amount of effort devoted to smoothing, wiping or scraping of the surface 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 on the same sherd.

Most of the variations in colour appear to be due to firing techniques. The cross section, the potsherds are 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 was due to the effects of firing. Decoration reflects a number of techniques and motifs, but there is no painting or pictorial art.

3. Classification:

Classification of a ceramic assemblage is the first critical step of ceramic analysis, and usually involves identification of wares and types that already have been established within the general region. Historically, most archaeologists have focused on ceramic typology in order to determine the general temporal associations of prehistoric sites, but more recent studies have used typological variation to study aspects of intraregional and interregional connections (Caneva and Marks: 1990, Mohammed Ali: 1991).

Five attributes were selected for comparative descriptions and identifications: form, hardness, colour, surface treatment and vessel

decoration. In relation to form, the pottery material was divided into four categories: rim sherds, body sherds, bases and other miscellaneous ceramic objects.

The rim sherds category consists of pottery fragments from the top of the vessel that retain enough surface area to distinguish the lip portion. Larger potsherds that retain rims and either necks or body portions are also classified in this category.

Base sherds included any fragments from the base of the pot. Body sherds were all fragments without rims or bases. Individual attributes have been recorded for each potsherd such as mouth diameter and thickness.

A forth category, "miscellaneous ceramic objects," contains items that were not parts of vessel but represent other ceramic items (e.g. disc-shape items) but are not included in the percentage totals.

3. 1. Surface treatment:

Surface treatment refers to the manipulation of the vessel surface prior to the firing process. These treatments may include slipping, polishing, smoothing, wiping, and scraping, among others. Surface treatment is one of the primary attributes used for classifying potsherds or vessels within an existing typology.

The collection was first divided into three categories according to the surface treatment (table 1). These are:

1. Coarse sherds.
2. Fine unsmoothed sherds; and 3. Fine smoothed sherds.

3. 1. 1. Coarse sherds:

Approximately 185 potsherds collected from the sites belong to this class. Of these, 45 were undecorated; the rest were decorated on wiped or scarped background. The pieces are

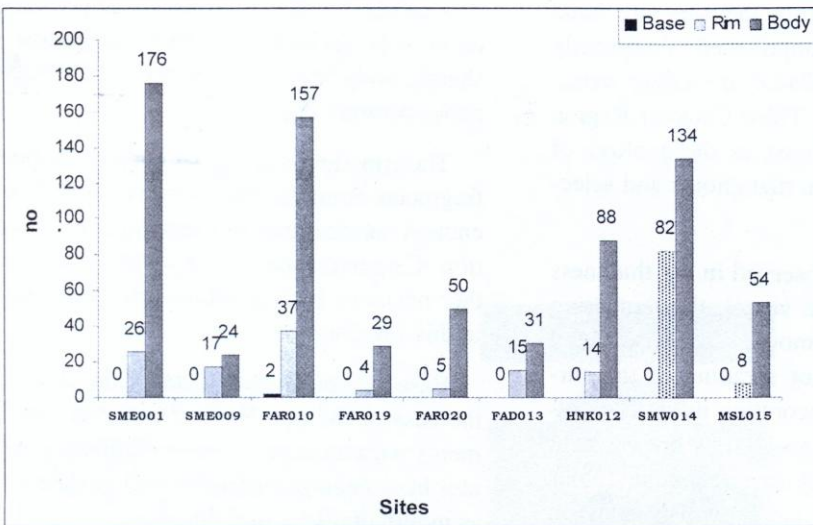


Fig. 1: Cross typology of sherds according to sites.

usually from 10-19mm in thickness, and black or brown in colour. The texture is slightly dense. Several materials were used for tempering; they include sand, mica, very small pieces of unknown crashed rocks, and feldspar.

In terms of surface treatment, of the 185 identifiable coarse sherds, approximately 24.3% are unsmoothed and 65.7% are wiped or scraped. Roughly 85% of the body sherds are identified as unsmoothed, while only about 15% of the rim sherds are scraped or wiped. The pottery has been subdivided on the basis

of decoration into the following types:

- a. Plain pottery.
- b. Decorated pottery.

Examination of table (1) shows that decorated pottery with wiped or scraped surface indicated slight changes which appear to be significant. While all the potsherds had wiped or scraped exterior surface, 31.4% were smoothed on the inside. The most charac-

teristic group is numerically small at all sites.

The shapes used can be reconstructed to some extent from the fragments shown in fig. (2). Rims of the class under discussion are straight and flaring. The walls are thickest near the rim, and in some cases in the body and bases. Pottery of this sort seems to have been used for storage or cooking. Many of the potsherds are heavy; i.e., moving vessels from place to place would have been out of question.

Most of the coarse pottery collected from the sites was decorated with patterns produced

Class	Coarse Pottery		Fine unsmoothed pottery		Fine smoothed pottery	
	Plain or doubtful	Decorated	Plain	Decorated	Plain	Decorated
SME001	10	51	41	82	4	14
SME007	3	6	10	10	4	8
FAR010	8	49	37	79	6	14
FAR019	5	5	4	8	2	9
FAR020	3	12	3	25	2	10
FAD013	3	1	23	6	5	7
HNK012	3	5	15	64	7	8
SMW014	5	7	162	21	15	6
MSL015	5	2	3	33	7	12
AML001	0	1	0	5	0	6

Table. 1: Classes of sherds in number according to their surface treatment.

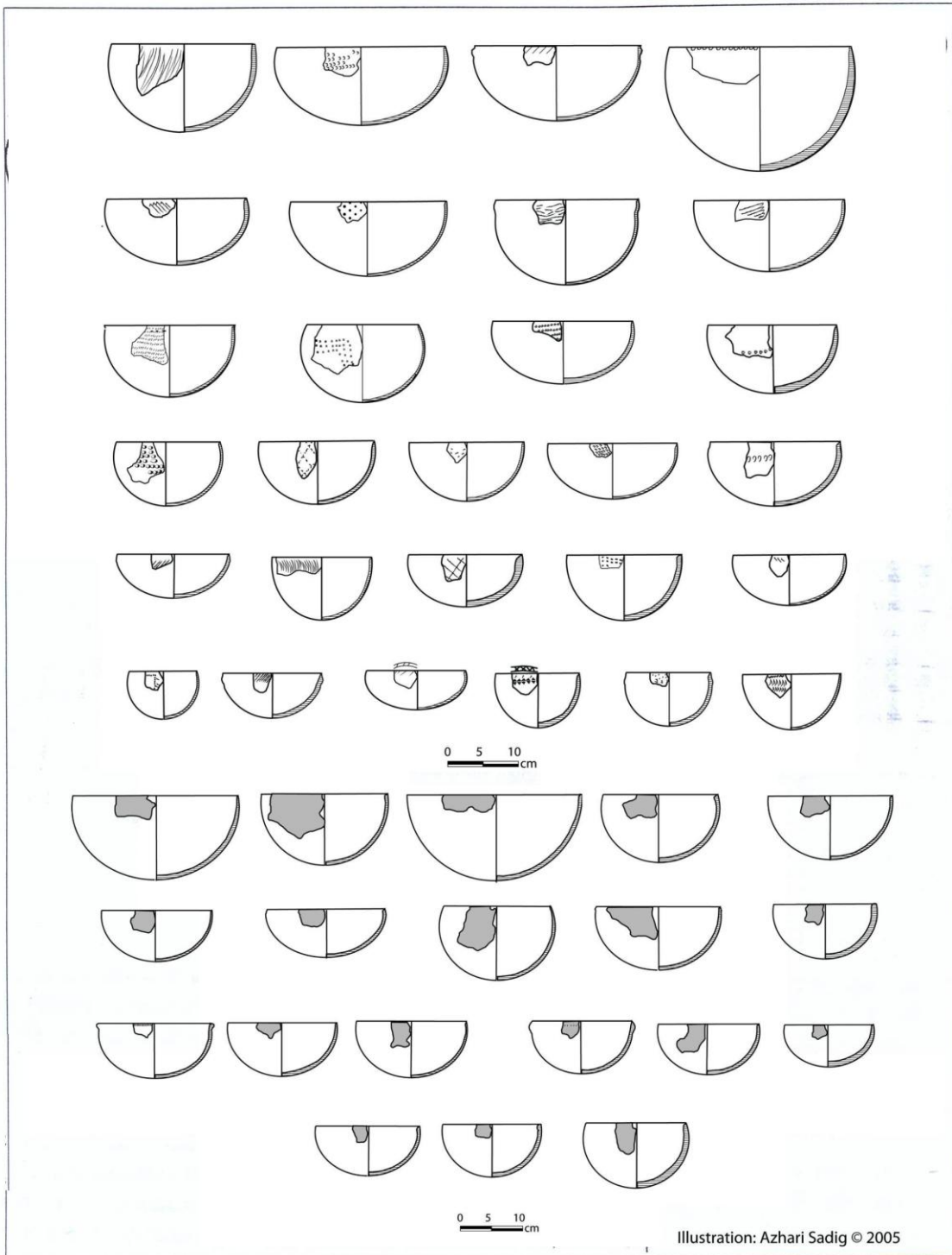


Fig. 2: Reconstruction of shape based on the main catogories of rims.

	Site	Surface Treatment	Rippled	Double incised lines	Single incised lines	Rocker Zigzag dotted straight lines	Rocker Zigzag dotted curved lines	Rocker Zigzag incised curved lines	Rocker Zigzag incised straight lines	Impressed	Impressed Complex dotted Straight Lines	Impressed double dotted Straight lines	Impressed single dotted Straight line	Impressed dots	Impressed Vees + dots	Impressed Vees	Impressed dotted wavy lines (rocker tech.)	Combed wavy lines	Total	
	SME001	Wiped				10		1		10	20	6	2	2						
		Scraped																		
	SME007	Wiped				3				3									6	
		Scraped																		
	FAR010	Wiped		1		12				14	9	3	1	7	1				48	
		Scraped				1													1	
	FAR019	Wiped							0	3				1					4	
		Scraped						1											1	
	FAR020	Wiped		1		1	2	1	1	3	2			1					12	
		Scraped																		
	FAD013	Wiped									1								1	
		Scraped		1															1	
	HNK012	Wiped			1				1	1	1			1					5	
		Scraped																		
	SMW014	Wiped							1	2								1	4	
		Scraped												2				1	3	
	MSL015	Wiped		1		1													2	
		Scraped																		
	AML001	Wiped																		
		Scraped										1							1	
	Total			0	4	1	28	2	2	4	36	33	10	3	14	1	0	0	2	140

Table. 2: Coarse decorated sherds in number per site.

by impressed dots or rocker stamps (table 2, fig. 3, 7). Very few potsherds were decorated with incisions.

In some cases the decoration extends right to the rim of the vessel; in others, a smoothed band was left below the mouth. In few cases the rim of the pot had a narrow band of incised decoration.

3. 1. 2. Fine Unsmoothed pottery:

The surface of the vessel in this category is

fine but it lacks the soft characteristic of the smoothed pottery. The ware is usually about 70-12mm thick and black or grayish-brown in colour. The paste is finer than in coarse pottery, apparently through more careful selection and preparation of materials, but contains largely the same ingredients. 631 potsherds were classified in this group, 298 of which were plain; i.e., undecorated. The number of pieces is given in table (3). Rim fragments of this category indicate that bowls and wide-mouthed vessels were used. Otherwise, the

Class Type	Unsmoothed Pottery		
	Plain		Decorated
	Fine	Coarse	
SME001	6	25	54
SME007	4	7	13
FAR010	10	15	106
FAR019	3	8	18
FAR020	0	2	31
FAD013	7	14	12
HNK012	11	5	57
SMW014	26	146	22
MSL015	0	9	20
AML001	0	0	0
Total	67	231	333

Table 3: Number of unsmoothed sherds in number per site.

fragments are so small that it is quite impossible to be sure of the shape of the entire vessel.

The number of plain unsmoothed potsherds from each site is shown in table (4). It is evident that decorated unsmoothed pottery was common. On the basis of the exterior treatment, the pottery has been subdivided to the following types (table 3):

- Fine Plain.
- Coarse Plain.
- Decorated.

The decorative elements used in this class consist of many types of decorations (table 4, fig 4, 7). About 56.5% of potsherds were decorated with impressed dots. These include, as these potsherds imply, irregular complex lines of dots that run horizontally round the pot. 58 potsherds include single or double dotted lines and the rest include multiple dotted lines. The latter decoration extends into a variety of patterns. Some potsherds reveal four dotted lines closely spaced and another three in the same closeness are banded leaving between them a relatively wide interval. Some potsherds have eight dotted lines together. 91 potsherds in this category were distinguished.

58 potsherds were decorated with rocker zigzag pattern. These include 40 potsherds decorated in zigzag dotted lines. As Arkell argued (1953: 72), this pattern seems to form the basis on which all the impressed patterns are founded. Zigzag dotted curved lines, zigzag incised curved lines, and zigzag incised straight lines were also used. Other decorative patterns include 34 potsherds with incised lines, 47 potsherds with combed pattern and 4 potsherds with combed wavy lines. The combed pattern was not further sub-divided. The combing was not in a horizontal direction.

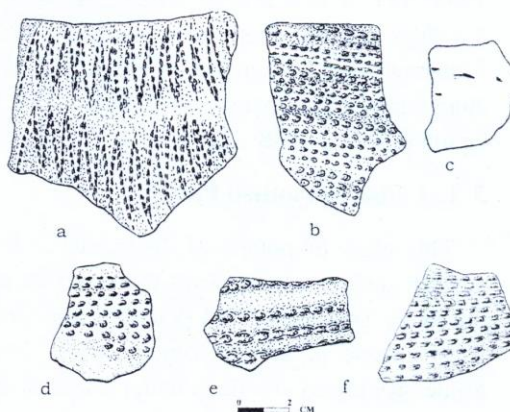


Fig. 3: Coarse decorated sherds; a, b, e, FAR010; c, FAR019; d, f, FAR020;

Site	Rippled	Double incised lines	Single incised lines	Rocker Zigzag dotted straight lines	Rocker Zigzag dotted curved lines	Rocker Zigzag incised curved lines	Rocker Zigzag incised straight lines	Impressed	Impressed Complex dotted Straight Lines	Impressed double dotted Straight lines	Impressed single dotted Straight line	Impressed dots	Impressed Vees + dots	Impressed Vees	Combed dotted wavy lines (rocker)	Combed wavy lines
SME001		3		7			1	2	10	10	39	10				
SME007		1	1	4				2				1	1			
FAR010		1		22				5	12	10	11	1	13	2		2
FAR019			1	1				2				4				
FAR020				6		2	2	1	4			10				
FAD013	1								3			2				
HNK012		3		1		2	12				2	44				
SMW014			5			1		8		1		4				2
MSL015		18					2		10			3				
AML001									2	3						
Total		24	10	40	1	4	13	47	39	54	4	91	2			4

Table. 4: Occurrence of unsmoothed ceramic decoration types at Third Cataract sites

Two of the potsherds showed traces of impressed dots under the combing. Probably a fish-spine with several points was used. This kind of decoration exists at Shaheinab, where it is described as incised and burnished (Arkell 1953: 73). It is a typical feature of the Late Neolithic period, where it is usually applied to a characteristic hole-mouth ovoid vessel. It includes the rippled pattern in Caneva's classification (Caneva 1988: 106-107).

3. 1. 3. Fine Smoothed Pottery:

This class of pottery is distinguished by a smooth surface which seems to have been produced by smoothing and polishing the vessel with a stone or another object before firing. Some specimens are much better polished than others.

It is not always possible to tell whether a given piece comes from the polished area near the rim or from the body of a wholly polished

vessel. In many cases the polish is incomplete or uncertain, and there is doubt whether certain specimens should be assigned to this class or the preceding one.

Most sherds range in thickness between 4-18mm. The texture is less dense, more compact, and finer than in the coarse pottery described in the earlier section. Some potsherds were very fragile, normally with laminated fabric.

It is more difficult to reconstruct shapes for this class than for the preceding one. Polished ware seems to have been used for bowls and vessels of moderate size which were handled frequently. Many rim fragments indicate that a number of shapes were in constant use.

Plain potsherds of this class are sub-divided into the following (see table 5):

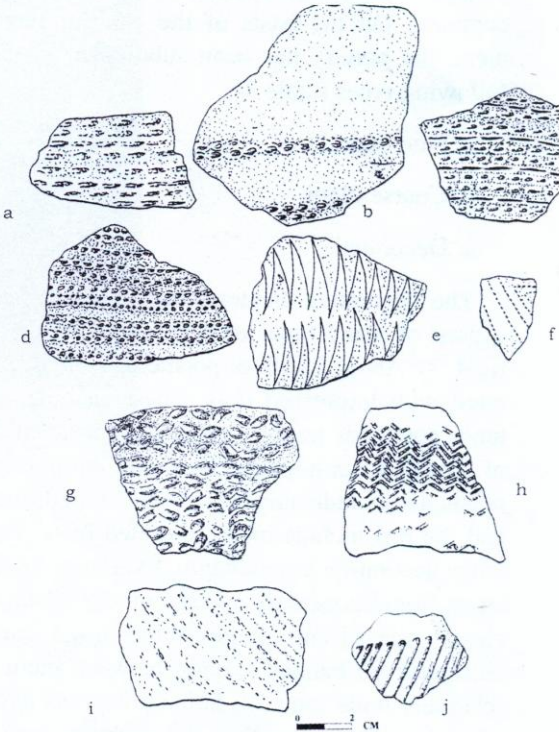


Fig 4: Unsmoothed decorated sherds: a-d, SME001; e,f,i, FAR019; g, j FAR020; h, FAR010.

1. Plain black potsherds:

All the potsherds in this class are smoothed. 20 potsherds of this pattern were collected.

2. Plain brown potsherds:

The potsherds exhibit burnishing and are fairly brown to gray brown in colour. 5 potsherds were collected but it is doubted whether they all belong to the Neolithic context since some very smoothed incised potsherds were found on the surface. Such brown and incised potsherds are believed to be of a later period (contemporary with Kerma period). 3 of these potsherds were found in FAD013.

3. Plain grey and red potsherds:

This group includes 7 potsherds with gray or light red colour. The potsherds have some smoothing with a hard interior.

3-2: Decoration:

Only 94 potsherds of the collection were decorated (Table 5). Decoration by impressed dots is common. These include 10 impressed

Class Type	Smoothed Pottery	
	Plain	Decorated
SME001	9	29
SME007	4	7
FAR010	7	9
FAR019	0	4
FAR020	6	9
FAD013	7	2
HNK012	9	17
SMW014	6	5
MSL015	4	12
AML001	0	0
Total	52	94

Table 5: Smoothed Pottery: Number of plain and decorated sherds per site.

complex dotted straight lines, 6 impressed double dotted straight lines, 4 impressed single dotted straight line, and 12 sherds decorated with impressed dots. The lines are usually parallel to each other, but some times they are arranged to form unfamiliar designs, and some times simple curves are introduced side by side with other elements. Impressed Vees with

dots is a unique pattern on three potsherds exhibiting traces of dotted lines between horizontally laid rows of Vees. It seems to be from a later stage in the development of the pottery styles.

Decoration with incised lines is also common. 19 potsherds were collected. These include 14 potsherds with double incised lines and 5 potsherds decorated with single incised line. The first pattern consists of closely and evenly spaced incised horizontal or vertical lines. There are semi-circular lines, closely spaced together, which seem to have their ends attached to the strip of incised lines over them. The intervals between the lines are 2 to 3 mm. The other pattern includes one incised line forming a horizontal strip or band (table 6, fig. 5, 6, 7). A small number of potsherds with rippled pattern were also found. 7 potsherds were collected from SME001, FAR019, FAR020, and SMW014.

6. Miscellaneous ceramic objects:

These include 4 disc-shaped ceramic artifacts found in SME001 and FAR010. They are shown in fig (7). These pieces seem to be fragments of pot covers. Although they are represented by only four pieces, there is no reason to say that they have come there by accident.

4. Discussion and conclusion

The following traits are observed within the whole collection of potsherds:

- The ceramic collection analysed here shows wide range of variations from site to site. The number of potsherds is too small for the regularity of a large random sample to make its appearance. As might be expected, the variations are least in the classes which contain the largest number of potsherds.
- General tendencies can be observed in the table of the comparison of the groups. Coarse and unsmoothed pottery is above

84.8% of the total. Coarse pottery is fairly uncommon and ranges from 5.9% to 0.1% of the total number of the potsherds collected from each site. Unsmoothed pottery is very common and ranges from 19.2% to 0.5% of the total number of the potsherds collected from the sites and is present on every site. Smoothed pottery is never abundant and represents 15.2% of the collection. The numbers of potsherds range between 6 and 21. These three classes are represented by small numbers of specimens, and the irregularity in percentages may be due to this fact alone.

c. Vessel shapes at the sites include variety of open-mouth vessels. The favorite vessel shapes seem to be a medium-size open bowl and hemispherical vessels.

d. The decoration on the potsherds was of abstract type. Many decorative patterns were used. The most common pattern is dotted decoration. All the other decorative motifs (i.e., simple impression, zigzags, simple Vees) are less common.

e. The favorite decorative technique at the Third Cataract Neolithic sites is the impression in all its varieties. These account 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, Sarrorab and Geili offer a different panorama; the rocker stamping constitutes a higher percentage: 45% at Geili (Caneva: 1988), 58-72% at Nofalab and Sarrorab (Magid 1982, Mohammed Ali 1982), and 50% at Shaheinab (Arkell: 1953). A comparable occurrence of decorative patterns and/or tech-

Site	Rippled	Double incised lines	Single incised lines	R.Z. dotted straight lines	R.Z. dotted curved lines	R.Z. incised curved lines	R.Z. incised straight lines	Impressed	Impressed Complex dotted Straight Lines	Impressed double dotted Straight lines	Impressed single dotted Straight line	Impressed dots	Impressed Vees + dots	Impressed Vees	Impressed dotted wavy lines	Combed wavy lines	Total
SME001	3	1		2		1	1	1	2	1		2					14
SME007		1	1	3				1				1		1			8
FAR010		1		2			2	1	2	2	1	2	1				14
FAR019	2	1	1	1			1	2				1					9
FAR020	1	2	1	1			1	1	1			1				1	10
FAD013		1	1	1		1			1		1	1					7
HNK012					1		1	1	1	1	1	2					8
SMW014	1	1	1					1		1		1					6
MSL015	6								2		1	1				2	12
AML001								2	1	1			2				6
Total	7	14	5	10	1	2	6	10	10	6	4	12	3	1		3	94

Table 6: Types of smoothed decorated pottery per site.

niques is shown at the other Neolithic sites in the Central Sudan, especially at Zakiab and Um Direiwa (Haaland: 1987). A slightly similar situation, however, seems to characterize Kadero (Krzyzaniak 1984) where the rocker stamping motifs account for 36% of the total, and incised motifs account for more than 18% (against 16% at the Neolithic sites of the studied area).

f. From the above descriptive analysis, it is clear that the Third Cataract sites ceramic assemblages are similar to other Neolithic sites. The differences occurring on some sites deserve additional investigation and may be useful in developing a temporal sequence, through a detailed study, for Third Cataract pottery. Changes in the frequency of decoration may be

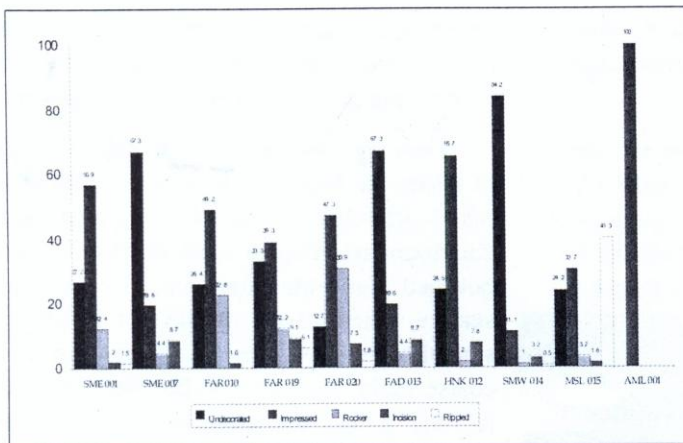


Fig. 5: Smoothed decorated pottery types per site.

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.

The significance of the material found at the Third Cataract sites depends largely on its age. Since the study of the sites has been achieved through surface collection, no data required for establishing absolute chronology are available. Nevertheless, the only possible

way is the establishment of relative chronology through the sherds collected from the surface.

Although the comparative study of artifacts types depends mainly on the personal judgment and plain common sense, this, however, is the only possible method available for establishing the relative chronology of the sites. It is not easy to reach a satisfactory conclusion on the subject. There is no lack of evidence, but the evidence is conflicting. One set of facts indicates that the sites are very old; some of them contain wavy line pottery, a decorative pattern which can date back to the 10th millennium B.P in neighboring sites (Khabir 1987). Another set of facts indicates that the sites are contemporary to known early Neolithic sites along the Nile and they are earlier than other known protohistoric cultures in northern Sudan (i.e., the so-called A-group, C-group and Kerma civilization). Each suggestion is significant for the history of the sites. It will be necessary to examine all the evidence before reaching a tenta-

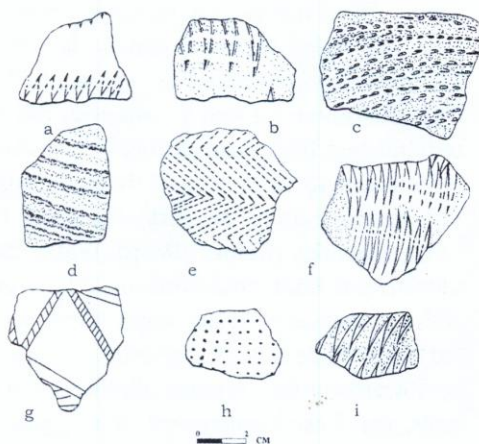


Fig. 6: Smoothed decorated pottery; a,d, FAR019; b,c, FAR010; e,f, FAR020; g,h, FAD013; i, SME001.

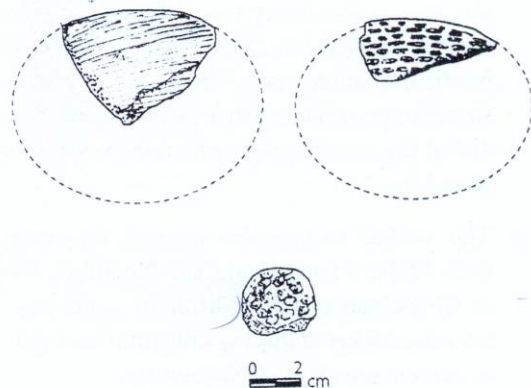


Fig. 7: Disc-shaped ceramic objects; a,c,d FAR010; b, SME001.

tive conclusion; a final conclusion demands that further research in the field be undertaken.

Although the data collected from the surface of the Third Cataract sites is badly disturbed, it still reflects variation and similarities between the Shaheinab site and the Third Cataract sites in terms of pottery craftsmanship. These can be listed as follows:

- a. The dotted wavy line pottery, which provides an essential link between Khartoum Hospital site and Shaheinab site, is completely absent from the Third Cataract sites. The pottery predominant at these sites included developed types of impressed ware, manufactured with high efficiency and even with greater variety.
- b. The frequency of the burnished/smoothed potsherds (plain or decorated) is however high among the potsherds collected from Shaheinab. Arkell (1953: 69) took burnishing as one of the distinguishing features of the Shaheinab pottery. According to Mohammed Ali (1982: 79), there is no burnished pottery at Shaheinab, and most of the potsherds were highly smoothed but were not polished. In the case of our sample, this is absolutely true. Many potsherds were smoothed but there is no evidence of burnishing at the sites. The lesser degree of smoothing on many other potsherds may be due to the conditions in which the potsherds were found.
- c. The rocker techniques account for more than 19.3% of the total. The Neolithic site of Shaheinab offers a different panorama; here the rocker stamping constitutes a higher percentage (50% at Shaheinab).
- d. The Shaheinab pottery is generally thinner (4-6mm). It was also quartz tempered and was fired hard in a reducing atmosphere. In

cross-section it is brown to black in colour. The same features were found in our samples although the potsherds were thicker.

When we compared our samples with that of Khartoum Hospital site we were able to find many differences. Evidently, the pottery of the Khartoum assemblage is neither burnished nor polished, but quite often slipped on the outer surface. The interior of the pot is normally smoothed, yet with certain styles, such as the coarse plain (part of Arkell's "black fracture" [1949]), it was left unsmoothed. The decorative patterns include wavy lines, dotted wavy lines, dotted straight lines, some zigzag decorations, and linear impressions. The wavy line decoration accounts for about 63.7% to 75.8% of the total while the plain ware accounts for about 6.6% to 20.9% of the total. On the other hand, there are only 7 potsherds having wavy line decoration at the Third Cataract sites. This means that these sites are totally different from Khartoum Hospital site and more related to Shaheinab site.

When the Third Cataract sites are compared with Abkan and the Khartoum Variant in Lower Nubia, major similarities and differences are found. The differences between Khartoum Variant and Third Cataract pottery indicate that they must be considered as separate traditions. The Khartoum Variant is characterized by its unburnished impressed decoration ceramics. It is believed to be a local derivation from the Shamarkian and/or the Arkinian Final Paleolithic industries (Shiner 1968a). Whilst the two industries exhibit similarities in certain ceramic styles (especially zigzag impressions and dotted straight lines), they also differ very markedly; for among the ceramics the incised straight lines, the Vees impressions, the rippled ware and the smoothed plain potsherds were absent from the Khartoum Variant, and the wavy line and the dotted wavy line styles of Khartoum area were unknown in northern Sudan.

On the other hand, the Abkan pottery fabric is described as having 'a relatively dense and homogenous groundmass containing a high proportion of silt' (Nordstrom 1972: 49). The fabric is fired to colours ranging from dark gray to grayish brown or, in a few instances, black. It is generally characterized by coarse texture. If the surface is treated before firing, it is either burnished or lightly rippled. A few potsherds have the outer surfaces coated with red ochre (Shiner 1968b). Decoration is relatively scarce. When it exists it consists mainly of parallel dotted lines and zigzag impressions, made with a rocker stamp (Nordstrom 1972: 74-77). The fabric at Myers Abkan sites V and IX were made of sandy Nile silt. The ware was crudely combed or perhaps wiped with grass. It was fired to a black or fawn colour (Myers 1960: 174-81).

In comparison, the Third Cataract fabrics suggest that they are made from sandy clay and Nile silt varying from fine to coarse depending on the amount of quartz included. The ware has thick walls. The majority of the potsherds are decorated and are fired to a brown or black colours. The decoration is characterized by impressed dots, impressed combed, impressed complex dotted straight lines, and zigzags. Other decorative patterns include impressed Vees, rippled, and impressed wavy lines, among others.

This discussion suggests the following main points:

- a. The fabrics of the Third Cataract sites and the Abkan sites are different. That of the Third Cataract sites is sandy clay or Nile silt and it is dark brown or black in colour. That of Abkan has a high proportion of silty clay and it is dark in colour.
- b. Third Cataract pottery may be smoothed or

burnished in some cases, but no burnished potsherds have come from any assemblages of the Khartoum Variant group. On the contrary, the Abkan and Third Cataract sites shared some similarities in surface treatment (more than 15.2% of the potsherds were burnished).

- c. The great majority of Third Cataract potsherds are decorated, while those of Abkan are relatively plain.

When the Third Cataract sites are compared with Karat, Tergis, and El-Melik industries in Korti-Debba area, major differences are found. Unlike the Third Cataract sites, the Tergis fabrics were tempered with quartz and slipped in red. None of the decorative designs of the Third Cataract sites were known from the Tergis sites. On this basis the Third Cataract sites and the Tergis group can hardly be considered related to the same tradition.

Another group in the Korti-Debba region which could be compared with the Third Cataract sites is the Karat group; its pottery lacks the incised straight lines and rippled ware of the Third Cataract sites. The information available from El-Melik group of sites in the same region does not allow making reliable comparisons owing to the lack of detailed studies of this "group." Garcea (2000) restudied this group and suggested a late Neolithic date for it. Still the group lacks the rippled pottery and the decorative styles that characterized the Third Cataract sites.

The general characteristics shared by the Third Cataract, Tergis and Karat sites may be partly due to similarities in ecological adaptations determined by the similarities in the environmental setting. Despite their general affinities each of them has different diagnostic features, and they cannot be grouped into one

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ملخص: خلال أربعة مواسم لمشروع المسح الآثاري لمنطقة المحس (مشروع قسم الآثار- جامعة الخرطوم)، كُشف ٤٧ موقعاً، من فترة ما قبل التاريخ، في منطقة الشلال الثالث (الجزء الجنوبي من منطقة المحس)، كان ١٧ منها تعود إلى فترة العصر الحجري الحديث. سيشار في هذا البحث، إلى المواد الفخارية، من تسعة من هذه المواقع. يشير تحليل هذه القطع إلى وجود عدد من الاختلافات الملاحظة، من موقع إلى آخر. ومن خلال التحليل الوصفي، يلاحظ التشابه الواضح، بين مجموعات القطع الفخارية من مواقع الشلال الثالث، ومثيلاتها في مواقع العصر الحجري الحديث الأخرى، في السودان. في الجانب الآخر، تتطلب الاختلافات، في بعض المواقع، دراسات إضافية مفصلة، قد تكون مفيدة في تطوير تسلسل زمني، لفخاريات الشلال الثالث.

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