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Abkan connections - The relationship between the Abkan culture in the Nile valley and Early Nubian Sites from the Laqiya Region (Eastern Sahara, Northwest-Sudan)

Introduction

The main part of this paper is a description of finds and sites of a newly discovered cultural entity from the 5th millennium BC in the Laqiya region in the Eastern Sahara. The aim is to analyse its relationship to the contemporary Abkan culture of the Nile valley. Since the emphasis is on a comparative approach we think it is appropriate to start with an account of the characteristic features of the original Abkan.¹

Abkan in the Nile valley

Remains of the Abkan culture were originally discovered and defined by Oliver Myers who, at the end of the 1940s, excavated habitation remains in the Second cataract area near the Abka village. The major site, designated Site IX, consisted of a multiple pothole with stratified habitation remains combined with some rock drawings. He described his results in preliminary form in two papers in KUSH (Myers 1958 and 1960; cf. Nordström 1972: 239). The lithic material was analysed by Palma di Cesnola (1960). Unfortunately Myers did not get the opportunity to finish his task before his premature death in 1966 – he was actually working on a book called “Neolithic Nubians”.

¹ The first section, “Abkan in the Nile valley”, has been prepared by H.-Å. Nordström. The second part, “Early Nubian sites in the Laqiya region”, has been written by M. Lange. The short “Conclusion” is a joint responsibility.

During the 1960s, in connection with the international Nubian campaign, the Combined Prehistoric Expedition and other missions continued to find and analyse a number of Abkan sites in Lower Nubia. Joel Shiner, who actually coined the term “Abkan”, recognised two different phases, the Early and the Developed Abkan (Shiner 1968). The present writer added a few years later a final stage, called the Terminal Abkan, while summarising the Abkan sites in the Second cataract area and in Batn-el-Hagar (Nordström 1972: 12-17).

In 1968 Oliver Myers’ notes and analytical charts on Abka were sent over by Mrs Myers to the Scandinavian Joint Expedition in Uppsala where the volumes of the rock drawings in the area and the sites of the Early Nubian period were prepared for publication (Hellström & Langballe 1970; Nordström 1972). A few years ago I transferred most of Myers’ ceramic data on to computer sheets (Excel and FileMaker Pro) in collaboration with Maria Carmela Gatto, who subsequently re-analysed the Abkan pottery in Khartoum, especially from Myers’ Site IX. An account of this is in preparation.

Pottery fabric as a cultural marker

An important part of the find material from Abkan sites consists of pottery. The bulk is broken in sherds and the nature of the vessel shapes is poorly known. More than 80% of the pottery is undecorated. However, the sherds are rather easy to identify with the help of a simple technical analysis. It is very fortunate that a reasonably proper identification can be made without the use of decoration. Instead we can rely on the concept of pottery fabric, i.e. on technical properties of the ceramic material: type of clay, composition of tempering materials, firing, porosity, colour of the fired paste. These are analysed separately from the vessel surfaces that form another important group of properties in this context: surface texture (rough, smooth, burnished etc.) and surface colour. In addition there may be some decoration present. Fabric is always there; even when the surfaces are plain or eroded or the sherds are too small for any other analysis.

Myers recognised long ago, when working with the ceramic material from Armant in Upper Egypt, that we can use technical features as a cultural marker (Mond & Myers 1937). We know that ancient potters tended to choose clays and tempering materials and techniques of manufacture very carefully, in order to suit the purpose and the function of the pots they made, and they followed rather strict traditions from generation to generation. Distinct patterns can be discerned from this behaviour. The concept of fabric was developed in a systematic way especially during the Nubian campaigns of the 1960s (Nordström 1972: 48ff; Adams 1986: Ch. 8.) and in connection with the so-called Vienna System for Egyptian pottery (Nordström & Bourriau 1993; Bourriau, Nicholson & Rose

2000). With fabric we have one important tool for understanding the major pottery traditions in the Nile basement. The most significant in this cultural context are the Egyptian Predynastic, the Abkan, the A-Group, the Sudan Neolithic, and the Pre-Kerma complex.

The characteristics of the Abkan culture

The Abkan culture developed in the southern part of Lower Nubia and in Batn-el-Hagar in the 5th millennium BC and it is likely that its terminal phase was contemporary with the Early A-Group further north, i.e. during the first half of the 4th millennium BC. The Abkan may be regarded as a regional development related to a widespread culture group with its centre in the Middle Nile basin (cf. Conclusion below).

The special, sandy fabric (Fabric IC in Nordström 1972: 49) is combined with a medium-grade burnish on the exterior surfaces, a brownish grey colour, and a wall thickness of 5-10 mm – these form together the characteristic features of the pottery of the Developed Abkan. The non-plastic inclusions consist mainly of angular, sub-angular and sub-rounded grains of quartz and feldspar in size fractions up to 0.5 mm, while there are characteristic sub-rounded grains in fractions between 0.5 and 1 mm. Mica, fine-grained limestone and granitic rock may also be present in addition to irregular carbon particles. In sum, the paste consists of a rather silty ferruginous clay with a heterogeneous temper and the firing can be estimated to max. 700°C. The pottery is generally plain and undecorated – usually more than 80% is undecorated. The sparse decoration consists of impressed zigzag designs and some other patterns on the exterior or at the rim only (Fig. 1). The lithic assemblage of the Developed Abkan shows a characteristic array of traits, consisting of borers, groovers and denticulates. There is a high proportion of quartz in the debitage (Håland 1972).

The Terminal Abkan displays a lithic picture similar to the Developed Abkan, but with more microlithic inclusions, probably parts of composite tools. The pottery is now more differentiated than before, always of the sandy fabric (IC, described above) characteristic of the Abkan tradition, but displaying a more complete range of wares, from sherds with coarse or scraped exterior to vessels of black mouthed red polished, plain or rippled wares, often with milled rims (especially Ware Group M4 in Nordström 1972: 59-60). Other decoration is sparse. On a few sites there are inclusions of Naqada I and early Naqada II pottery, with its characteristic fabric and surface properties, for example on Site 429 in the Second cataract area (Nordström 1972: 221).²

² M. C. Gatto has later identified, in the collections of the Scandinavian Joint Expedition in Uppsala, more Predynastic potsherds in these Early Nubian contexts.

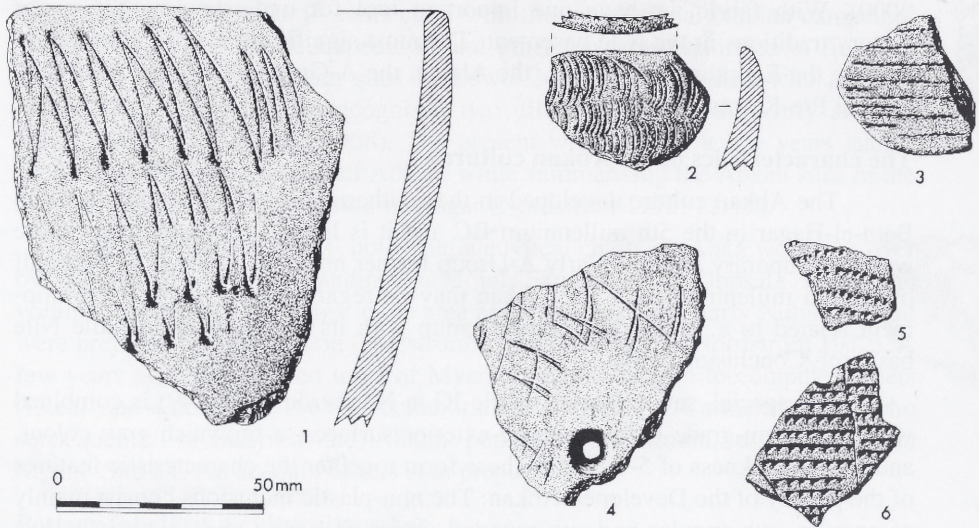


Fig. 1: Some sherds of Ware Group M1 with impressed decoration of Abkan date. Site SJE 365 in the district of Abka at the Second cataract (from Nordström 1972: Pl.139).

The geographic extent of the Abkan, as defined by its lithic tool kit and its pottery, remains to be established in more detail. The core area of the Developed Abkan still appears to be around the Second cataract and Batn-el-Hagar. Its distribution around this core is more clear now than before thanks to Maria Carmela Gatto's multi-dimensional analysis of the ceramic traditions in Nubia (Gatto 2002). As regards Lower Nubia, however, one very important task remains and that is the analysis of the finds from the so-called "Archaic camp" recorded by Reisner in Meris Markos, an extensive habitation area with numerous finds of stone implements and pottery (Reisner 1910: 215). This material is now stored by the Museum of Fine Arts in Boston – it would not be surprising if abundant Abkan connections were found there. Our lack of settlement data in Lower Nubia is otherwise a bit disturbing – partially it can be explained by prevalent archaeological strategies during the older campaigns before the 1960s with their emphasis on cemeteries. It may also be due to the fact that a rise of the Nile level at a time around 4 000 calBC may have covered, with alluvial silt, many habitation remains in Lower Nubia from the Terminal Abkan and Early A-Group phases (Nordström 1972: 15).

In the south there are numerous Abkan sites or inclusions of both Developed and Terminal Abkan pottery in Batn-el-Hagar and on Sai Island (Couartou

1999), where the habitations appear to follow the ancient shoreline. How far south the Abkan assemblages can be found is not established, nor its relation with the Sudan Neolithic. Gatto (2002: 15-16) has shown that there are clear ceramological affinities between the Abkan and the Karat group in Upper Nubia. The distribution in the East is not yet clear but this can be settled through a ceramological analysis of the findings of the Italian mission sponsored by the Castiglioni brothers (cf. Sadr 1997). An Abkan connection is definitely established in the regions to the west of the Nile, especially in the Laqiya complex analysed by Mathias Lange (see his account below).

Gathering and fishing may have been the basic subsistence activities of the Abkan while hunting may have declined in comparison with the earlier cultures. Fish bones are certainly common in the occupation debris. There is only weak evidence for animal husbandry (goat). As regards Lower Nubia, a certain polarity may have existed between the Early A-Group and Abkan, due to differences in terms of cultural ecology (environment, subsistence economy, social structure, external contacts). One enigmatic trait of the latter group is the absence of cemeteries - there is no single grave published so far that may be attributed with certainty to the Abkan. But it is likely that a fruitful exchange of material and ideas took place in Lower Nubia during this formative stage which led to the emergence of the A-Group proper.

Early Nubian sites in the Laqiya region

Material

In the years 1982 and 1983 two campaigns of the B.O.S.-Project of the University of Cologne were carried out in the Laqiya Region in Northwest-Sudan. During these two campaigns a large number of archaeological sites were found, which contained ceramics of different chronological phases (Cziesla 1986; Francke 1986; Schuck 1989). Wavy-line pottery was accompanied by a pottery showing the surface-covering decorations of so-called „Laqiya-type“ (Schuck 1989: 423). These two types are tempered with high amounts of angular quartz-grains of up to 2 mm. The distribution of this pottery connects the Laqiya-region with the Wadi Howar in the south (Jesse 2003: 189, Fig. 38). Apparently, the pottery with decorations of the Laqiya-type did not occur in the Nile valley. This pottery facies is related to a hunter-gatherer subsistence-pattern (Hoelzmann et al. 2001: 210). By ca. 4500 calBC a new ceramic style appeared in the Laqiya-region. It is characterized by a well burnished, hardly decorated pottery with a less coarse, sandy fabric with small amounts of organic temper material. The sites and finds of this new assemblage group are described in detail here.

Wadi Shaw 82/82-2

This site is situated in the eastern part of Wadi Shaw, where it is crossed by the Wadi Sahal. In an excavated area of 17 m² pottery sherds, stone artefacts,

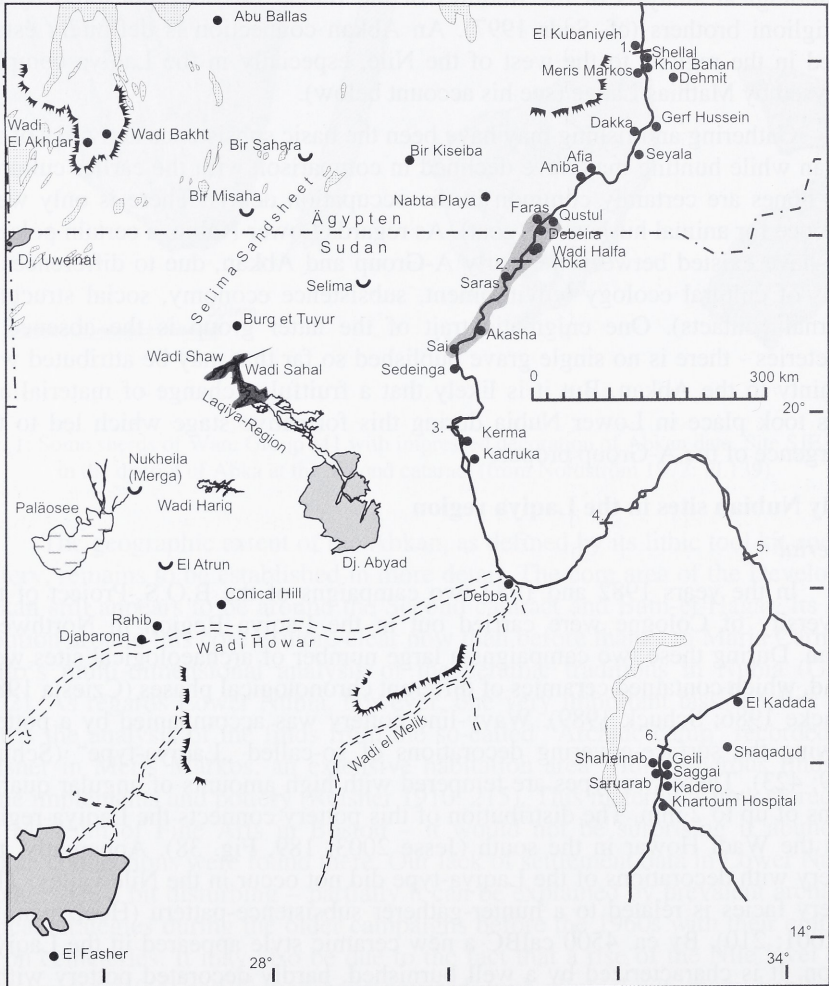


Fig. 2: Distribution of the Abkan (light grey) and the Early Nubian-related group of the Laqiya-Region (dark grey).

bones and two fireplaces with remains of charcoal were found. Radiocarbon dates obtained from these have median values ranging between 4600 and 4500 calBC (KN-3080: 5730 ± 160 BP = 4587 ± 170 calBC; KN-3854: 5710 ± 140 BP = 4563 ± 149 calBC; KN-3877: 5680 ± 130 BP = 4535 ± 139 calBC).

Pottery

The pottery finds consist of 31 sherds larger than 1 cm^2 , which could be assigned to eight vessel units. The general state of preservation was bad. Only three vessel units have rimsherds, which allow a minimum exaggeration of the vessel form. Three vessel units are damaged by abrasion, so that one of the wall surfaces is completely destroyed.

The vessel units could be grouped into two kinds of fabrics. Six vessel units are made of a fabric containing a high amount of angular sand grains of a size fraction up to 0,5 mm and small amounts of plant material. This fabric was named fabric "SP1" (from sand and plant). It is rather compact and hard and well-fired. The colour of the break varies from grey or brownish grey to dark grey and black.

The vessels show mostly greyish brown to brown or brown and black surfaces on the outside, although they do not appear to have been blackened systematically. The inner surfaces are mostly dark grey or brown to black. Two vessels seem to have been fired much stronger, resulting in a pinkish surface colour on the outside and light brown colour on the inside (one vessel unit shows only the outside) and a light grey or brown core.

Two other vessels contained a somewhat higher amount of plant material and more rounded grains of sand of average size fractions up to 1 mm. They were assigned to a fabric, which has been named "SP2" It appears to be rather identical with the fabric ID of the classification of Nubian pottery by Nordström (1972: 50). The surfaces, as far as preserved, are well burnished, but also burnishing marks or streaks occur. Decoration of the sherds is confined to simple impressions of oblique lines on the rimtop. It appears on all three vessels, where the rimsherds have been preserved.

Stone artefacts

According to Schuck (in pr.) altogether 2373 stone artefacts were found on this site. Almost 5 % of these are retouched (n=114). The debitage is dominated by flakes (n=1582), only seven artefacts can be classified as blades. Additionally there are 10 cores, 320 chips (flakes < 1 cm) and 340 pieces of debris. Almost 88 % of the artefacts were made of quartz or quartzite. Other raw materials are chalcedony, flint and fossil wood (12 %, n=285). But only 13 of the 114 retouched pieces are made of quartz or quartzite, while chalcedony, flint and fossil wood were preferred for making tools. The most frequent tools are

borers with 41 pieces (= 36 % of the tools). All of these are very small, almost microlithic, none of them being longer than 3 cm. Other tool types are scrapers (4 endscrapers and 3 side scrapers) notched pieces (n=6) and lunates (n=8).

Wadi Shaw 82/66

This site is situated in the area where the Wadi Shaw and Wadi Sahal cross each other. Around two structures of large sandstone slabs an area of 30 m² was excavated. The structures were covering two pits, 50 cm south of the first structure there was a third, uncovered pit. This pit yielded charcoal, giving a radiocarbon age of 4354±208 calBC (KN-3331: 5530±180 BP). In the pit under the second structure more charcoal was found, dated to 4218±98 calBC (KN-3180: 5410±65 BP).

Pottery

The pottery of this site consists of only one vessel-unit, made up of 22 sherds. It is made of the same sandy fabric with mostly angular grains of a size below 5mm. Plant remains are only a minor constituent. The vessel can be assigned to a brown polished ware with a blackened interior. No rim sherds were preserved and no sherd shows decoration. As this vessel unit does not comprise very detailed data to classify the site, the lithic artefacts again should be considered to get more information from this site.

Stone artefacts

The total number of stone artefacts coming out of the excavation area is 320. The retouched artefacts are 7,8 % (n= 25) of the total number of artefacts. The debitage is dominated by flakes, which make up 56% (n= 179), but the percentage of blades is with 10,9 % (n=35) considerably higher than at site Wadi Shaw 82/82-2. On the other hand, the small total number of artefacts might have a statistical influence on the sample. The dominant raw materials are different kinds of quartzite and quartzitic sandstones with 88,5 % (n=283). 37 Artefacts (11,6 %) are made of different varieties of flintstone. Despite this, half of the 24 retouched pieces are made of flint, so, in the tool kit, quartzitic raw materials are underrepresented. Three modified pieces could be joined together to give one retouched flake, and additionally two pieces of a retouched blade could be refitted as well. The assemblage lacks any kind of borer. Instead, the tools are dominated by pieces with continuous edge-retouch (n=7) and other retouched pieces.

Further tools are two burins (one with a primary and one secondary burin spall fitting to it) and additional burin spalls from four more burins, so altogether 6 burins have been used here. As so many burins appear, maybe this site was used to carry out a specific activity.

Laqiya Valley 83/125

The only other excavated site from the Laqiya Region bearing the same kind of pottery is of special interest, as it is a grave-site. Unfortunately, the site was deflated heavily. It consisted of two concentric stone-circles, the outer being ca. 12 m in diameter and the inner one (named "Stelle 1" or location 1) ca. 2,5 m. The outer circle was constructed mainly of local granite boulders and cobbles of sizes up to 50 cm and some sandstone and quartzite boulders as well. Most of the boulders of the construction were lying on the playa surface, but two were still standing upright. The inner construction consisted of similar pieces of rock. A few broken grinding stones were also used. This inner circle consisted of at least two layers of stone forming a small heap of ca. 50 cm height. Probably the outer stone circle was the enclosing of a tumulus which was once built over the grave in the centre, but was totally eroded later.

In the northeast of these structures, another round concentration of smaller cobbles and pebbles was found, called location 2 ("Stelle 2"). Its stratigraphic position and relation in comparison to the tumulus cannot be determined any more. Around the inner construction of location 1, an area of 4 x 4 m was excavated. In the centre of the inner construction a grinding stone of 60 cm length and a palette-like object of rough sandstone were uncovered. The grinding stone was covering some bones, which were probably preserved by this circumstance. A few fragments of these bones have been determined by H. Berke (Cologne) as part of a human skull-base from the region close to the ear. These bone fragments clearly indicate the interpretation of this site as a grave. Other bone fragments might be parts of humerus and tibia of a gazelle.

As most sherds from this area were found below or between the stone boulders of the inner stone circle, their stratigraphic position might suggest that they could have been deposited here before the grave was built. This would mean that the site consists of two different stratigraphical units. On the other hand, the sherds may also have been part of the grave goods. The twelve sherds from location 1 were reconstructed to eight vessel units. All of these except one are made of fabric SP1. They are all well burnished and show brown to greyish brown outer surfaces, while some inner surfaces are grey or grey-black and some others light brown. One small rim sherd shows a rounded rim top. One sherd contained a high amount of rounded sand grains and was described as a sandy fabric.

Under the second stone layer, which was also removed, a sterile layer of sand and gravel followed. Location 2 was excavated in an area of 2 x 2,5 m. The finds from this section included six sherds, two of which could be regrouped to one vessel unit. This vessel unit contained round sand grains and organic material and was assigned to fabric SP1. One of these two sherds was decorated with parallel comb impressions. Three sherds were made of fabric SP1 and one again

of a sandy fabric. The stratigraphic position of the sherds in comparison to the stone structure above again allows two interpretations, although in the case of location 2, it is very questionable, whether it could have been a grave. Other finds from this site were upper and lower grinding stones and a few dozens of stone-artefacts, some of which were retouched.

Finds from other sites

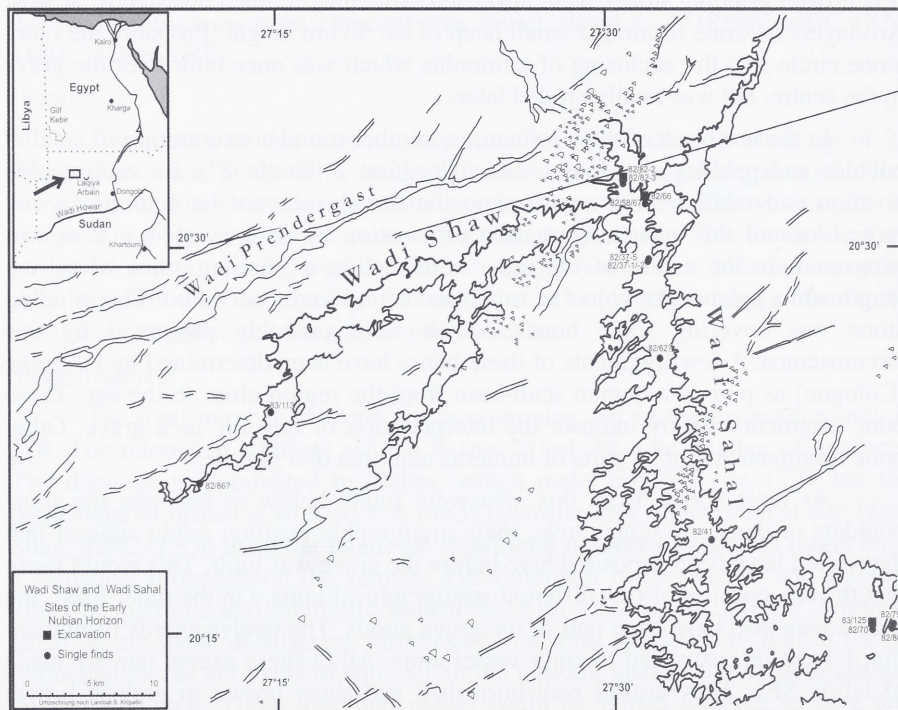


Fig. 3: Sites in the Laqiya-Region with pottery of the Early Nubian Horizon

All other sites from the Wadi Shaw and Wadi Sahal, which contained sherds of the fabric SP1 are survey sites, where only samples were taken. Altogether 11 sites can be put in this group. Sometimes there are only single sherds, sometimes up to ten sherds from two or three vessels. Site Wadi Sahal 82/37-1 comprised 82 sherds from an area of ca. 10 m². These could be assigned

to five vessel units, all except one belonging to fabric SP1. Two of these show a red coating of the surface. Another sherd shows a decoration of short oblique, thin incised lines, probably pending from the rim (Fig. 3. 6). The proposed rim is heavily abraded though, and therefore it remains questionable if this is a rim decoration.

Several more sampled sites comprised decorated sherds. Site Wadi Sahal 82/37-5 contains 11 sherds from 2 vessel-units, all from fabric SP1. One rim sherd shows a decoration with oblique, short (6 mm), incised parallel lines, pending from the rim (Fig. 3. 7). The same motif appears on a rim from site Wadi Shaw 82/82-3. Here, also another sherd with small comb impressions was found. They were apparently arranged in the same way, but the top of this sherd is too eroded to allow a definitive conclusion.

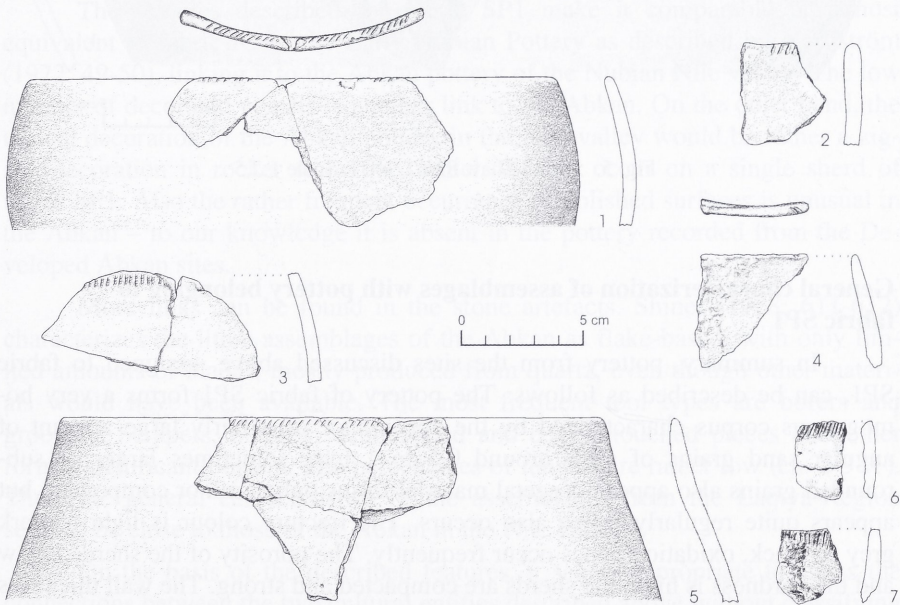


Fig. 4. 1: Wadi Shaw 82/82-2, VU1 ; 2: Wadi Shaw 82/82-2, VU2 ; 3: Wadi Shaw 82/82-3 VU3; 4: Wadi Shaw 82/82-2, VU3, 5: Wadi Shaw 82/82-3, VU1 ; 6: Wadi Sahal 82/37-1/2, VU3; 7: Wadi Sahal 82/37-5, VU1. Scale ca. 1:2.

Finally, some large sherds from site Wadi Shaw 82/62 must be mentioned (Fig. 5.). These are the only ones to be assigned to Fabric SP1 showing a rippled surface. The rippling was restricted to the body, while at the rim a zone of one to

two centimetres was left plain. This vessel was quite large with a rim diameter of ca. 25 cm.



Fig. 5. : Wadi Shaw 82/62, VU1. Scale 1:2,5

General characterization of assemblages with pottery belonging to fabric SP1

In summary, pottery from the sites discussed above, assigned to fabric SP1, can be described as follows: The pottery of fabric SP1 forms a very homogenous corpus characterized by the appearance of a fairly large amount of angular sand grains of sizes around 0,5 to 1 mm, sometimes larger or sub-rounded grains also appear. Vegetal material forms only a minor component, but appears quite regularly. Mica also occurs. The fracture colour is light to dark grey or black, oxidation zones occur frequently. The porosity of the sherds is low and the hardness is high, the sherds are compacted and strong. The wall thickness has an average of 6 to 7 mm.

Surface treatment was generally carried out very carefully, most sherds show a very well burnished surface, some are even polished. Red coating of the surfaces occurs, but is rare. One example shows a rippled surface. Decoration is restricted to the rim zone or rim top and consists of oblique incised lines only.

Stone artefacts have been described from only two inventories from Laqiya-Region, from sites Wadi Shaw 82/82-2 and Wadi Shaw 82/66. Both assemblages are characterized by a large portion of coarse raw materials like

quartz, quartzitic sandstone or quartzite, which have been used to produce flakes mainly, with only a limited percentage of blades. On the other hand, among the retouched tools, the frequency of finer raw materials like flint or chalcedony is much higher. Types of tools include lunates, borers and burins, as the most frequent well defined types, and scrapers, edge-retouched pieces and notches.

Radiocarbon dates of two of the sites with pottery of fabric SP1 from Laqiya-Region suppose an age of ca. 4500 to 4200 calBC, thus, these sites appear to be contemporaneous with the Abkan in the Nile valley. It seems appropriate therefore to compare these two groups of assemblages, in order to understand their relationship.

Conclusion

Abkan connections between Laqiya and the Nile valley

The features described for fabric SP1 make it comparable or almost equivalent to fabric IC of the Early Nubian Pottery as described by Nordström (1972: 49-50), linking it to the Abkan pottery of the Nubian Nile valley. The low number of decorated vessels is another link to the Abkan. On the other hand, the typical decoration of the Abkan pottery in the Nile valley would be rather a zig-zag decoration in rocker technique, which did not occur on a single sherd of fabric SP1. Also the rather frequent occurrence of polished surfaces is unusual in the Abkan – to our knowledge it is absent in the pottery recorded from the Developed Abkan sites.

More links can be found in the stone artefacts. Shiner (1968: 611-612) characterizes the lithic assemblages of the Abkan as flake-based, with only limited amounts of blades, mostly produced from quartz, even though other materials would have been available. The most frequent tool types are borers and groovers. Scrapers, notches, denticulated and edge-retouched pieces altogether form a significant portion. The percentages of lunates are rather low (ca. 2-3 %). Thus, the general characteristics of the assemblages from the Laqiya-Region seem to be close to those of the Abkan in the Nile valley.

On the basis of the described features, it seems appropriate to stress the connections between the two cultural entities described above without classifying them as belonging to the same archaeological culture. We would propose to call the finds from the Laqiya region as “Early Nubian-related group of the Laqiya region” in order to make clear, that there is a connection between the Nile valley and the eastern Sahara. It can be seen from other finds and sites that this connection is kept and strongly intensified during the 4th millennium calBC, when the Laqiya region becomes part of the settlement area of the Lower Nubian A-Group (Lange 2000).

A step further: An Abkan culture group

David Clarke's term "culture group" refers to "a family of transform cultures" displaying a conspicuous level of affinity of characteristic features between interlinked assemblages (Clarke 1968: 317-320). It is a concept displaying closer affinities between traits than the much wider spatial and temporal term "technocomplex" (cf. Clarke 1968: Ch. 8).

We would like to introduce the term "Abkan culture group" for different regional cultures related in different ways to the Abkan as described above, combining the following features:

1. High or medium-level affinity with the pottery of Family M (Nordström 1972: 58-60), characterized especially by sandy fabrics, and with the ceramic tradition called the "Nubian Group, Phase 2", sharing attributes "such as the decorative technique, the stylistic motif, the surface treatment, the shape and the fabric, or more than one together", as defined by Gatto (2002).
2. High or medium-level affinity of the lithic traits, characterized by the use of the same range of techniques and raw materials. Quartz and quartzite are abundant in the debitage. The index for blade tools is typically low. Borers and groovers are usually abundant. Other retouched tools may include scrapers, edge-retouched pieces, notches pieces, and lunates.
3. Similarities in the settlement pattern and the economic structure. In this context, we wish to leave open, for example, the possibility of finding Abkan graves.

We emphasise that all three of the feature groups above should be included. We suggest that in space and time this culture group was characteristic of the Middle Nile basin during the 5th and early part of the 4th millennia BC.

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