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The Late Neolithic at Qalaat Shanansite within Shendi Reach

Introduction

The Qalaat Shanan site is located approximately 176 km north of Khartoum (Fig. 1) in south-western Shendi town, south-west of the El-Kadada Neolithic, approximately 800 m east of the Nile River (Fig. 2).

The site was discovered during the cooperative survey carried out by the Sudan Antiquities Service and the French Archaeological Research Units, from Khartoum to Shendi in 1984 – 1987 seasons. The Qalaat Shanan site is noted as Shendi Neolithic site. One test pit (3 x 3 m) has been dug on the site, which revealed late Neolithic evidence (Geus 1984: 17).

The site of Qalaat Shanan lies amongst a group of Neolithic sites in the Shendi area (Fig. 1) and it reflected a succession of various Neolithic activities from the early to the late horizons (Geus 1984; Sadig 2005; Reinold 2008).

In 1999 a survey was carried out by the National Corporation of Antiquities and Museums (NCAM) and Shendi University at inclusive of many local sites in the Shendi area. In 2001 the Qalaat Shanan site was defined by Salah Omer Alsa-dig who divided it into 3 Mounds based on archaeological surface materials and four test pits were excavated under his supervision.

The site extends onto a high open land from the south to the north, encompassing an area of 500 x 200 m crossed by several water channels (Fig. 2). A systematic excavation carried out in different parts of this site revealed the following:

- Mound A situated on the highest elevation of the northern part of the site: a test pit revealed Islamic graves.
- Mound B in the central part of the site: 18 test squares (2 x 2 m) were excavated. They showed a complex Neolithic culture.
- Mound C in the eastern part of the site: 32 test squares were excavated which revealed early Neolithic artifacts (Nassr 2012: 9-11).

The excavations suggested that the site contains various stratified materials from the early to the late Neolithic (Nassr 2012: 11). Here I would like to discuss the general attributes of the late Neolithic culture at Qalaat Shanan.

Landscape of the site

In recent years archaeological studies have recognized the importance of the landscape in the distribution of late Neolithic sites. This is clear in close proximity of the Nile River and evident in the distribution of late Neolithic artifacts in Mound B at Qalaat Shanan on the highly elevated area near the Nile, very similar on the bank of a big wadi called Um Gigjama and upon the open land east of the Mound A (Fig 2). This situation indicates a very important adaptation pattern of the late Holocene settlement in central Sudan (Mohammed-Ali 1982: 107).

From a geographical point of view it seems that Qalaat Shanan communities exploited the Nile River's environmental resources. Their remains indicate a hunter-gatherer, pastoral and farm settlement activities.

According to the landscape of the site and the late Neolithic sites discovered in Shendi area, a clear phenomenon has been seen. Most of the early Neolithic sites lie at a considerable distance from the present course of the Nile River (Geus 1981; Marks and Mohammed-Ali 1991). This suggests that the flooding of Nile's banks covered a significant portion of the surrounding plain, at least seasonally. Swamps and possibly small lakes could have existed there. Most of the late Neolithic sites that still exist today are generally close to the Nile and were even closer at the time of occupation, thus indicating spatial activities and permanent settlement, with an exception of that at the Shaqadud site in the hinterland (Marks and Mohammed-Ali 1991).

Late Neolithic attributes in stone tools industry

A large quantity of stone tools have been discovered at Qalaat Shanan. They represent different techniques and raw materials. Relatively large artifacts and the raw material from which they are made could possibly be indicative of the macro-lithic tradition (both in terms of typology and technology).

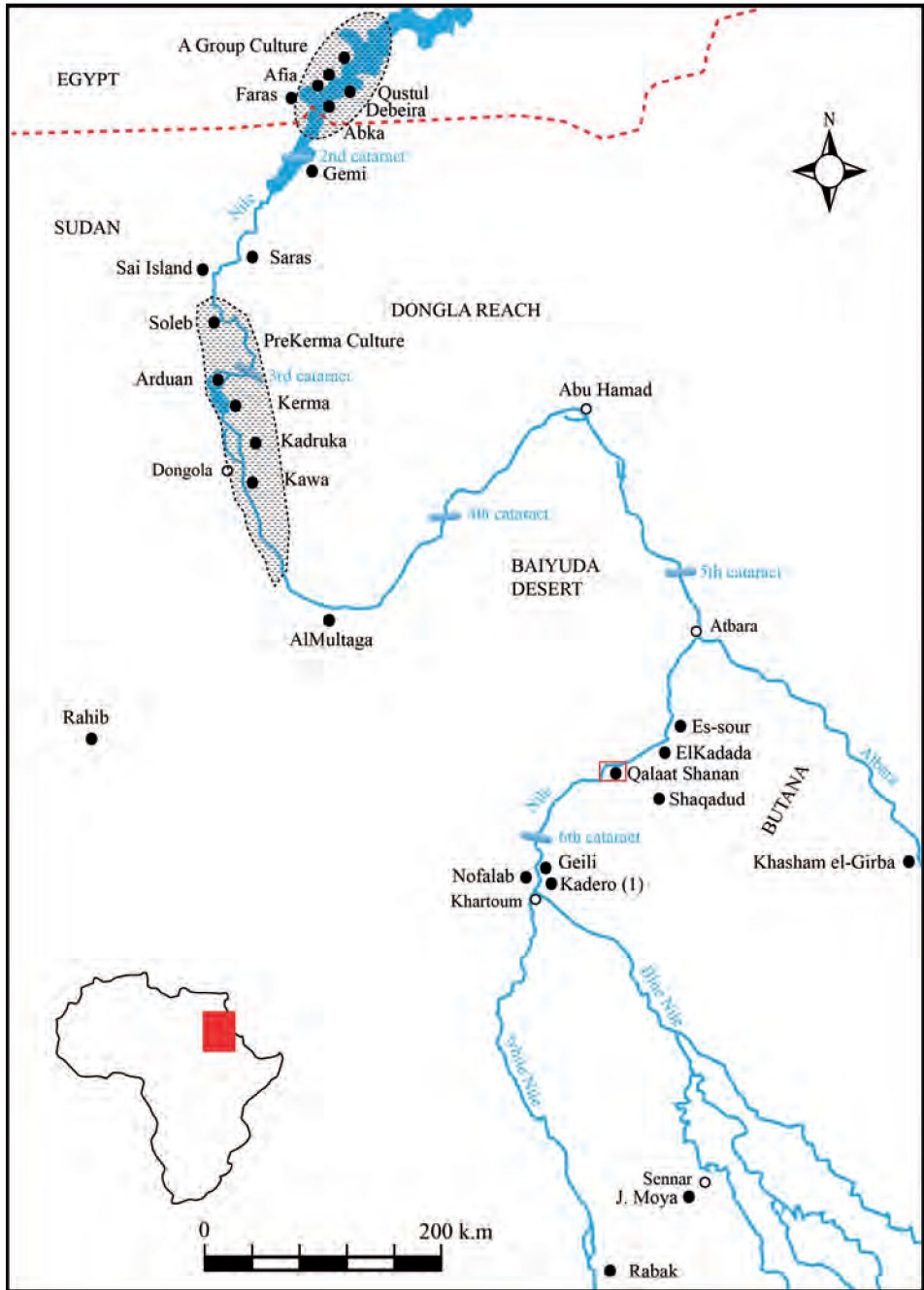


Fig. 1. Main sites show late Neolithic attributes (illustration by the author)

During the late Neolithic a diagnostic polished stone tools were found distributed throughout the site, some in settlement levels and others in graves. There were numerous sandstone grinder tools (upper and lower parts) of different sizes, and heavy quartz flakes, associated with finished tools and retouched pieces.

Denticulate tools were the most important class of the assemblage. Some of them were more alternating rather than "toothed". The tools were retouched on the ventral and dorsal surface of the blank. The tool distribution also included scrapers - convex and concave in shape. Side-scrapers were represented by small forms - simple, rounded and highly retouched only on the side surface of the blank.

Small deposits and waste pieces made from quartz, rhyolite and agate also occur. There was insufficient typological evidence to perform accurate dating and classification of the Neolithic horizon at the site. There were common traits based on lithic technology in the Neolithic site in Shendi area and the Butana (Geus 1984: 30-36; Marks and Mohammed-Ali 1991:34-62).

Objects clearly related to the late Neolithic techniques, represented by polished stone tools (i.e. a bracelet and amulet) made from flint and granite, with a highly smoothed surface were found in a grave but such examples are limited in the late Neolithic context.

A fragment of a grinder stone and a complete form of palette was found in a child's grave. It belongs to the same technical traditions as discovered at El-Kadada (Reinold 2008: 176).

The site provided also examples of polished stone axes made from flint, which seemed unique considering other types found in the late Neolithic sites in central and northern Sudan. They were very small (100 mm) in length and (40 mm) in width, with cutting edges ranging from 30 to 40 mm and polished surface carefully retouched on a portion of the butt end. (Fig 3). They are commonly connected with cemeteries and are rarely found on the surface and in the settlement levels. Other fragments of polished axes were found on the surface, similar in type to the form of those discovered in the three late Neolithic sites: El-Kadada, Kadero and Handikka (Krzyzaniak 1992: 243; Reinold 2008: 153; Sadig 2010b: 194).

Another group of polished stone tools found in the cemeteries includes a diagnostic tool made of granite and broken quartz pebbles, an amulet, mace-head, discs and a polished stone ring (Fig. 4). The majority of these types are made from different raw materials and during a process of production various techniques were used. They were finely smoothed, some of them are connected to grave goods, whenever found with skeletal remains.



Fig. 2. Aerial photo of the Qalaat Shanan site (from Google Earth 2013)



Fig. 3. Polished axe (photo by the author)



Fig. 4. Polished stone ring and mace-head (photo by the author)

Currently a major re-evaluations of the evidence of lithic technology of the late Neolithic culture has been made (Geus 1984; Reinold 2001; Honneger 2004; Sadig 2012) based between the others on the indication of the spread of cultural traditions and the relationship between different cultural areas and sites within the same region points to a consistent homogeneity. On the other hand, individual features of lithic typology in the Qalaat Shanan site could be a sign of a local cultural tradition at Shendi Reach in the late Neolithic period.

No bone tools such as harpoon or fish hooks have yet been found, only fish bones were used in some activities in a similar way as burins, while some pieces appear to be lip-plugs.

Late Neolithic pottery attributes

A large amount of pot sherds and complete vessels have been found at Qalaat Shanan, attributed either to early or late types. A remarkable number of the late Neolithic pottery was identified, mainly black ware, plain and decorated, and large mouth bowls, of various in shapes and sizes. This reflects a high degree of independence of creativity exhibited in burnishing and variations in decorative patterns.

In general, there are clearly distinct attributes of ceramic industries in Qalaat Shanan that shed light on the late Neolithic pottery production traits, as summarized below:

1. A variety of vessel shapes, bowls - both large and small - along with cups, decorated with parallels lines of dots highlighted with finely placed incision lines (Fig. 5). These vessels are similar to those which have been found at El-Kadada (Geus 1984: 26 - 32).
2. The textures of pottery include fine and hard coarse ware, most of which are decorated with geometric patterns both outside and inside of the vessel, with smoothed rims. These appear similar to pottery found in the settlement levels and as grave goods (Fig. 6). These traits are the same as that recorded on the late Neolithic bowls from Wadi Hawar (Wildung 1997). It is also typical of the A Group bowls and Pre-Kerma bowls in Northern Sudan (Nordström 1972; Honneger 2004).
3. Rippled and combed surface pottery are also represented in high percentage. The surface treatment and motifs are present on the entire object.
4. Pots deposited in burials, mostly open mouth, occur in a large variety of shapes. Decoration covers the entire surface of the vessel and is also present

inside on the rim in the form of geometric patterns (Fig. 7). The decorations/markings are generally large and hemispherical. They are typical of pot-burials in El Kadada in shape and decoration motifs (Reinold 2008:73-78).

5. Black topped wares are rare and a fragment of a brown-coloured pot with black line around the inside rim was recorded. Other - light brown – vessels are decorated with a thin black rim line on the interior and exterior. These traits are regarded as a phenomenon linking the late prehistoric tradition in Sudan. The Sudanese typical pottery vessels are red or brown in color and have a black rim. This includes both Abkan and A Group culture in lower Nubia, late Neolithic and Pre-Kerma wares in Upper Nubia (Geus 1984; Reinold 2001; Honneger 2004; Gatto 2006).

Above described attributes are very important to detect and clarify possible connections to the late Neolithic, the Cooper Age and the Bronze Age in the Sudan. In addition, these traits indicate the development pottery at Qalaat Shanan, which exhibits similar traditions of El-Kadad and Es-Sour pottery, especially in the case of small bowls decorated with the use of geometrics patterns (Geus 1984: 30-34), while the open mouth bowls and fragments of



Fig. 5. Fine surface small bowls (photo by the author)



Fig. 6. Parallel cord lines of the late Neolithic decorated bowl (photo by the author)



Fig. 7. Geometric decorated pot-burial (photo by the author)

decorated cups (Calceiform vessel) show similarities to Kadirka pottery (Reinold 2001: 8). On the other hand, the rippled decorations and topped ware are close to those of Pre-Kerma and A Group pottery (Honneger 2004: 42-46).

Finally, common features of pottery production are an indication of a large similarity of ceramic cultures of the late Neolithic and the origins of Chalcolithic Age in the Sudan, while at the same time individual traits revealed a local diversity among the regions (Sadig 2010b: 98-112).

Economic indications

Several graves and settlement levels yielded remains of animal bones. No specific study has been conducted on these remains, however preliminary observations and classification of bones revealed many types of animals, both domesticated and wild.

The most important of these were bones of goat, sheep as well as cattle. The fish remains have poorly ossified skeletons, except for the characteristic tooth plates in the form of sharp cutting ridges made of dentine covered with enamel. Besides skeletons, shells of different shapes were found in both cemeteries and settlement levels.

It is difficult to illustrate the flora in the site before micro-wear analysis of the soil strata, however the decorations on the pottery indicates a possibility of designs inspired by plants found in the area and found at the excavation site.

Generally speaking, the Qalaat Shanan site yielded diverse fauna and flora consisting of mollusks, fish, reptiles and mammals. These can be divided in various taxonomic groups and a similar Neolithic economy was recorded on several sites in central Sudan (Krzyżaniak 1992; Reinold 2008). However, the one most related to the late Neolithic period is that of domesticated animal remains.

Late Neolithic cemeteries

Cemeteries occupied a vast part of the site. Excavations brought into light a number of Neolithic cemeteries with primary and secondary burials accompanied by grave goods. A number of graves are connected with the late Neolithic tradition, in some aspects similar with the late Neolithic cemeteries discovered in the Northern and Central Sudan but different when considering other attributes.

The late Neolithic burials are adult or children graves. The grave pits are either a circular or oval in shape, without clear superstructures other than unidentified stone. On the basis of spatial distribution of burial contents these graves could be divided into three classes or types:



Fig. 8. Skeleton in contracted position without offering (photo by the author)

1. Six burials that contain no furniture, only skeletal remains laid in a contracted position of both sexes and few children (Fig. 8). Many scholars argued that poor grave is an indication of social position (Krzyżaniak 1992: 271), while others assumed that they indicate a Neolithic horizon (Reinold 2008: 203).
2. Five single furnishing burials. They contain a single vessel and two of them contain lithic tools. Numerous beads were found around the neck and legs of the skeleton with a polished bracelet on the arm of the deceased, while other burials just contain a polished stone ring and a mace-head found close to the legs. These attributes of burials as well as its contents are similar to those discovered in Kadero (Krzyżaniak 1992). However, Krzyżaniak dated them to the early Neolithic period. Based on attributes of the burials

it is quite possible that social status played a major role in the differentiation of burials, which may be reflected in cultural development. Many scholars argued that the differentiations among the burial's furniture in the late Neolithic proves gender diversity, which is represented by the richest tombs in personal adornments (Geus 1991: 59; Reinold 2008: 187-205; Sadig 2008: 17-21). Krzyżaniak has argued that the findings suggest the presence of specific furnishings, like a mace-head with male grave as a symbol of power, which is an aspect of the late Neolithic culture (emergence of chiefdom) (Krzyżaniak 1992: 274).

3. Group burials of double skeletons: another version of a transitional burial construction. Three types of content were discovered: (i) represented by two skeletons buried in one grave. The shape of the grave seemed circular and the depth ca. 100-130 cm from the surface. There is no separation between the skeletons. One grave of this class was found in Qalaat Shanan: two skeletons in a close contracted position, one is an adult and the other is a child, no furniture was present; (ii) two deceased present in one pit. The first is in contracted position in a circular shaft with the head to the east, the other was extended with the head to the south, laid on the back, a lot of beads around the neck and fragments of a bowl are close to the body (Fig. 9). The extraordinary aspect in this case is that the two bodies are on one level in different positions, which is an unmatched trait of the late Neolithic burials in Shendi Reach (Reinold 2008; Sadig 2012); (iii) the third case of this class are two skeletons in one pit, where one is in contracted position with a burnished bowl placed close to the head, while the other deceased is laid in a hyper-contracted position. The body appears to have been tied or inserted in a bag before being laid in the pit (Fig. 10).

This case is similar to another two, from Kadruka (grave 240-41) interpreted as a sacrificed female and male (Wildung 1997) and El-Kadada (Reinold 2008). The most important observation of those cases concerns the imposed confinement. A comparative study of these burials seems to indicate the presence of human sacrifice in the late Neolithic cemeteries (Sadig 2008: 18). This can provide us with a link to the comparisons between the late Neolithic in central Sudan and the origins of the Cooper and Bronze Age in Northern Sudan (Bonnet 1988: 16).

The major attributions of the late Neolithic burials at Qalaat Shanan were the occurrence of children graves which could reflect some kind of social status in the late Neolithic period. Two types of child graves were found, essentially bordering the inhabited area, Their distribution is very sparse and cannot be attributed to general cemeteries.

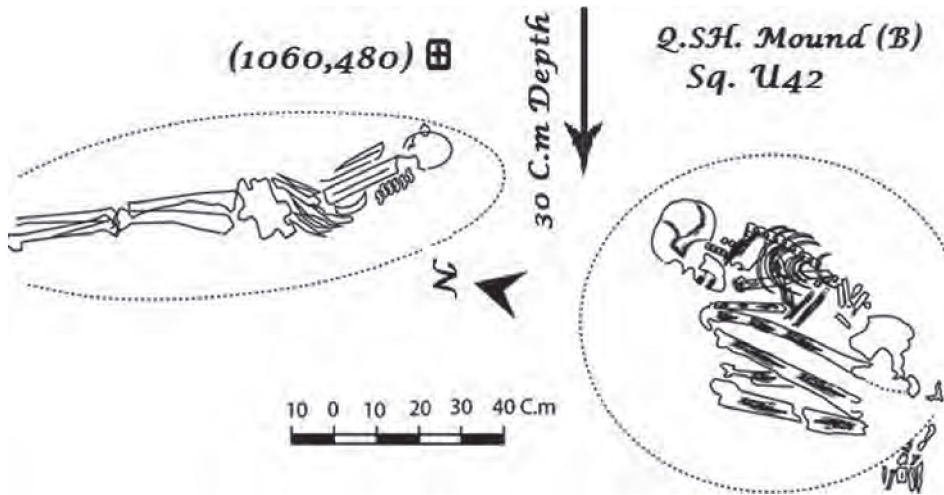


Fig. 9. Double skeleton grave; each skeleton in different positions (illustration by the author)

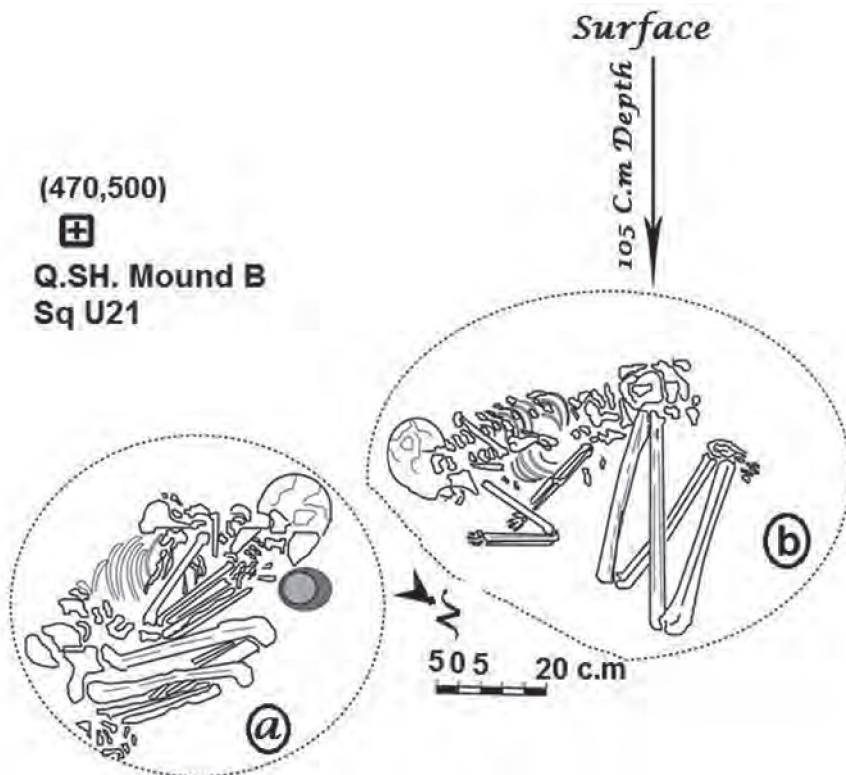


Fig. 10. Double skeleton grave with one carrying an offering (illustration by the author)

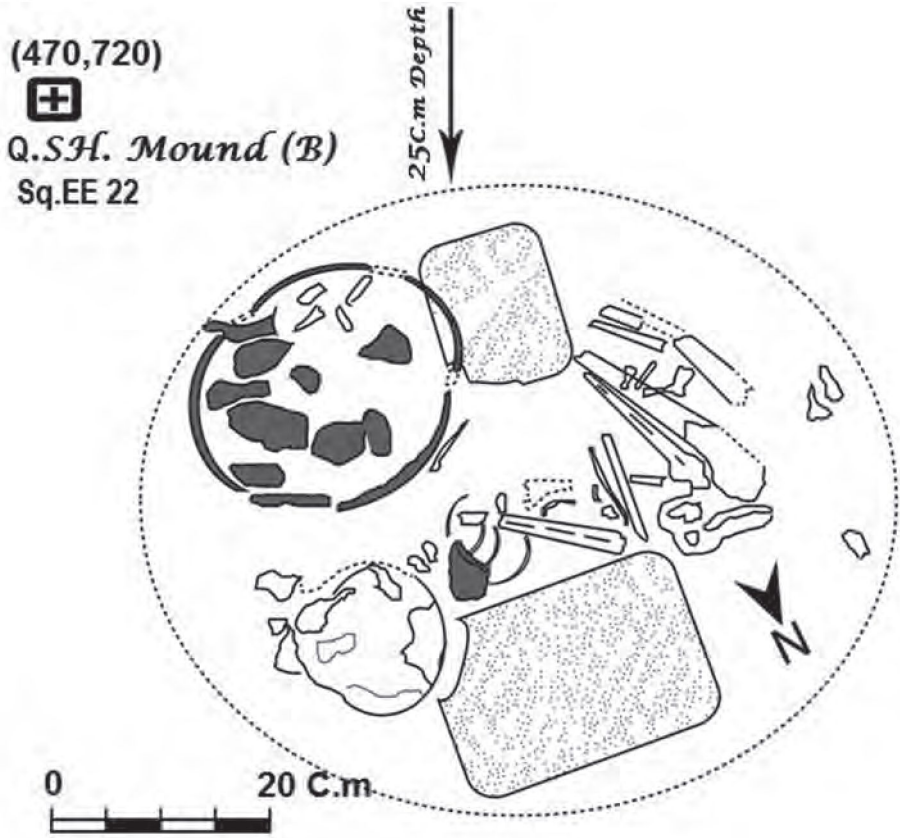


Fig. 11. Child burial with offerings: bowl and palettes (illustration by the author)

One of these types includes children c.a. 6-10 years old discovered in small circular pits. The first skeleton was found in a contracted position without furniture. The second was laid in a contracted dorsal lateral position and in the grave two polished palettes, rocker-decorated bowls and some fine circular beads have been found (Fig. 11). The third is the skeleton of a child in contracted position and consisting furnished with three small very burnished bowls found close to the body (Fig. 12). In my opinion these examples brought to light the late Neolithic burials differing from the other known locally at Shendi Reach and contemporary burial sites.

The last type of the late Neolithic burials discussed here is infant pot burials. Five such graves have been discovered at the site with the skeleton found inside a large open mouth vase. Some vessels were decorated with a rocker and geometric patterns. This type could be divided into four categories according to the offerings in the burial:



Fig. 12. Burial of a child containing four bowls (photo by the author)

1. A vase containing a skeleton of a child without furnishing.
2. A vase containing a skeleton placed inside a large vase (Fig. 13).
3. A vase containing an interior and exterior offering. Interior offering includes beads and a small bowl, exterior one includes a small palette found just beside the pot.
4. A large vase with the skeleton and offering put directly inside a funeral vase, including an offering of large objects: two complete burnished bowls placed above, one red, burnished and completely decorated bowl and three large *Etheria Elliptica* shells and beads (Fig. 14).

The most significant information obtained from the examples of pot-burials is the determination of the ages of the infants interred in pots. The preliminary study of Qalaat Shanan children pot burials' attributes showed a similarity to those recorded at El-Kadada and Es-Sour sites, although those in Es-Sour were not associated with this cemetery and have not yet been identified. On the other hand, the pot-burials at Qalaat Shanan and El-Kadada contain the remains of an infant laid in large pot found within the settlement site. However, some differentiations have been observed in this case between the two sites in the offerings and the location of pot-burials.

Reinold argued that it is possible to determine the method of burial applied to children up to the age of five or six, which is probably a step in the life of the adolescent (Reinold 2008: 280-281). Sadig, who discussed children burials and a funerary practice in the Middle Nile region, argued that the pot-burials from Es-Sour constitute the oldest evidences of that type in the Nile Valley (Sadig 2010a, in press).

Elsewhere examples of late Neolithic burial practices are limited to Shendi Reach, which could be associated with a local culture and connected with that pot-burials discovered in A Group and Pre-Kerma in Northern Sudan (see Nordström 1972; Honneger 2004).

Conclusions

The above description of the late Neolithic finds at Qalaat Shanan site have revealed invaluable archaeological information and showed many late Neolithic cultural features, which could be consistent with those known from the late Neolithic sites in Central and Northern Sudan, thus confirming their significance in understanding the cultural regional diversity in the late Neolithic period. On the other hand this information has indicated new Neolithic horizons, from the early to the late, and raised questions about the relationship of these late Neolithic com-



Fig. 13. Pot-burial inside a large vase (photo by the author)



Fig. 14. Pot-burial rich in offerings (photo by the author)

munities in Central Sudan with those in Northern Sudan as well as the cultural link among the Neolithic and Chalcolithic Age in Sudan.

Whatever conclusions can be drawn from the late Neolithic examples at the Qalaat Shanan site, they provide a concept of the development of culture in late Prehistory in Central Sudan, differing in some traits and similar in the other. The Qalaat Shanan site is similar to some sites in its main characteristics: polished stone tools, burnished pottery, indications of food production or various cemetery traditions. In addition there is an evidence at Qalaat Shanan that doesn't match other areas, which could be attributed to local traditions.

This perception requires a recognition that, while El-Kadada and Es-Sour represented a model culture of late Neolithic period, there was an extensive evidence of the late Neolithic culture at Qalaat Shanan, in Shendi Reach, which differ from other Sudanese Regions.

In summary, the following conclusions may be drawn about the late Neolithic culture at Qalaat Shanan:

1. Presence of polished stone tools, both in settlement levels and in graves, such as stone axes, mace-heads, stone rings, bracelets and amulet. In other words, deposits consisting of finished, flaked, retouched forms are common.
2. Large quantity of burnished pottery and small decorated bowls are common, together with large vessels richly decorated with finely treated and smooth surface.
3. While there is a lack of bone tools and figurines, a lot of bone beads and types of lip-plugs were found at the funerary of graves.
4. The cemeteries show a complex funerary tradition and a substantial differentiation between age and sex. Child pot-burials are common as well as grave goods in a single and double skeleton graves.
5. The occurrence of some burials inside the settlement indicates different occupations during the Neolithic period on the site, while in the later period the graves were placed following a spatial distribution pattern: adult graves in the western part of the site and children graves in the eastern part within the settlement. Despite the occurrence of some systematic patterns in burial customs, some variations are seen.

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