

The Meroitic Cemetery at Berber

Discussion on Funerary Practices and Implications for Understanding the Role of Sorghum and Trade in the Meroitic Society in the Middle Nile Region.

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The Meroitic Cemetery at Berber: Discussion on Funerary Practices and Implications for Understanding the Role of Sorghum and Trade in the Meroitic Society in the Middle Nile Region.

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Thesis presented to the degree of philosophia (Ph.D.)

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Date: 21 October 2014

DECLARATION

I hereby declare that this thesis is my own independent work, and is being submitted for the degree of philosophia (Ph.D.) at the University of Bergen, Norway. I never submitted it for any degree or examination at any university before.

Signature of Candidate: . . .

A handwritten signature in blue ink, consisting of a long horizontal stroke followed by a large, stylized loop that crosses back over the start of the stroke.

Bergen 21 October 2014

Abstract

The recent discovery of a large, well-preserved Meroitic cemetery at Berber together with a similar cemetery at Dangeil is of considerable interest, and possesses great research potential for Meroitic funerary traditions. The tombs in both cemeteries have lost their superstructures due to weathering agents such as seasonal rains and prevailing winds; therefore, it is impossible to identify these tombs by simple surface observations. Human activities have been responsible for their chance discovery. The Meroitic cemetery at Berber was discovered when archaeological materials consisting of pottery jars, bowls and human bones were found while digging foundation trenches for a factory for plastic production, while the discovery of the Meroitic cemetery at Dangeil was the result of digging a drainage canal beside the neighboring village of el-Fereikha.

The tomb structures and the burial practices in the Meroitic cemeteries in Berber and Dangeil show the same Meroitic funerary tradition of that era. However in some aspects there are more similarities between the Meroitic burials in the region of Berber with those located further north. The archaeological fieldwork in the cemetery site at Berber has revealed large number of finds with variety of types and materials. The exceptional well state of preservation makes these finds unique. Pottery vessels decorated and painted with different pattern have been found in a large quantity. Small finds of different materials and source were also well represented among the archaeological objects recovered at Berber. In general the grave good shows clear richness of the Meroitic cemetery at Berber that raises the status of its associated settlement to an elite community.

The variety of the recovered materials from Berber and Dangeil together with their different sources has been related to trade and exchange of prestigious items among elites societies which is a mechanism controlled by the royals as means of power. The presence of such items together with the important geographical location of the region of Berber as corridor linking the Nile and the Red Sea and the southern part of the kingdom of Kush with its northern part make the region cross-road for trade caravans. This argument has been supported by archaeological evidence including the discovery of ancient routes passing by Berber and some way-stations located along the desert route to Berber. Some historical sources have also noted the presence of Berber as

trade centre and well established market since the early Islamic period. These sources have been used to support the ancient role of the region that continues from the early Kushite Napatan period to the modern history.

The archaeological finds from Berber provided some exceptional objects that represent more evidence for the special association of the Kushite society with sorghum. The motif of sorghum plants has been noted as a feature appeared in number of pottery jars found at Berber. The long history of sorghum and its important role in Sudanese food culture had been well documented through archaeological, ethnographical and epigraphic evidence. The presence of such Meroitic distinctive motifs that considered symbols of identity in number of the recovered pottery from Berber seems to indicate the importance of the society and mark the significant role of the region during the Meroitic Period.

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Chapter I

Introduction

1. 1. Historical Background:

Meroe was a powerful state and had a distinctive culture of its own. Its emergence as an influential kingdom becomes evident when the royal burial place of Kush shifts from the region of Napata (including the sites of Nuri, El-Kurru and Jebel Barkal) at the end of the 4th century BCE to the fertile region of Meroe in the south; a region known to the Classical writers as the Island of Meroe because of its geographical position between the Nile, Blue Nile and the Atbara River.

Meroe was geographically far from the Classical World, but it was known to that world, and there was clear contact between Meroe and the Mediterranean (Shinnie 1967, 13). The first ancient writer who mentions Meroe was Herodotus when he describes the trip from Aswan to Meroe based on information from Meroitic traders, probably met at Aswan. The most important of his writings describe the rocks in the river which obstruct the use of boats all the way upstream and necessitate some travel overland to get to Meroe (Shinnie 1967, 15). Later Diodorus Siculus mentions the cataracts along the Nile and describes Meroe as an 'island' because of its location surrounded on three sides by rivers. He also noted the tradition of the ritual murder of the king of Meroe by the priests (Shinnie 1967, 16).

Among the other Classical writers who mentioned Meroe was Strabo, who described the life of the people noting that they eat sorghum and also made a drink of it. This is the first classical written record of Meroitic food culture (Shinnie 1967, 19; Welsby 1996, 160). One of the important issues addressed by Strabo was the growth of sorghum (in Arabic called *dhura*) which was considered the main grain in Nubia. The presence of sorghum has been recorded from different contexts and its long history and extraordinary importance in Nubia clearly has been evident from archaeology and in early food studies. Its importance and association with rituals and royalty during the Meroitic period is indicated by the depiction of sorghum heads in royal reliefs and its presence in ritual deposits such as those found at Qasr Ibrim (Welsby 1996, 160). Strabo's most important information was about the Meroitic queen [the Candace] and the war between Meroe and the Romans. This war was recorded by a number of classical writers like Pliny, who went further in describing Meroe as being ruled by a

queen [Candace] and who also mentioned that elephants and green vegetation could be seen in Meroe (Shinnie 1967, 20).

The fact that Meroe was ruled by powerful queens during some periods is mentioned by a curious number of Classical writers. A reference to Meroe is also made in the New Testament "*where in the Acts of the Apostles VIII 26-39 the story is told of how Philip baptized a man from Ethiopia, a eunuch of great authority under Candace queen of Ethiopia*" (Shinnie 1967, 21). The importance of the queen in the Meroitic society can be seen in the reliefs on temples and in the funerary chapels of the pyramids where queens were depicted as warriors and hunters carrying weapons, capturing and slaying captives in the same fashion as kings; a clear presentation of equality.

It is clear from archaeological research that Meroe Royal City was the political capital of Kush before the beginning of the royal cemetery at Meroe (Welsby 1996, 8). Meroitic political control covered vast areas of central and northern Sudan, from the area of the Second Cataract in the north to the area of Jebel Moya in the south (Figure 1). There are also several well-known settlement complexes and religious centers within the region of Meroe beside the Royal City itself (Welsby 1996, 8; Edwards 2004, 141). However, the site at Dangeil is the only large Meroitic royal settlement centre located thus far outside the Island of Meroe in the Middle Nile region. There are also scattered cemeteries dated to the Meroitic period in this region for which associated settlements are not evident or have not been yet located.

Archaeological evidence shows that the Meroitic kingdom was culturally and politically a continuation of the Kingdom of Kush based at Napata (Welsby 1996, 8). However, Meroitic culture was oriented more towards local indigenous traditions, from which many original features developed. For example, new types and styles of pottery, one of the major features of Meroitic culture, were introduced. The Meroitic pottery that is mainly associated with burial contexts, is distinctive and shows similarities with the traditional pottery of Nubia, that is to say Meroitic pottery borrowed its styles from the distinctive pottery of the Kerma and C-Group Cultures (2500 BCE–1500 BCE) (Welsby 1996, 164; Edwards 2004, 170). Meroitic pottery included fine wares of a high technical quality, and the pots were highly decorated. The elaborate decoration incorporated Meroitic symbolism and patterns such as human and animal figures, as well as floral elements and could be painted or stamp impressed.



Figure 1. General map showing the location of some sites mentioned in the text

Pottery is one of the main cultural artefacts of Meroitic society, which are usually found on archaeological sites; however, burial contexts normally contain unique

pottery styles that were made specifically for funerary purposes to be deposited in graves. The most common type found is beer jars. These represent the majority of ceramic pots recovered from both royal and non-royal cemeteries of the Meroitic period.

Some burial traditions from the earlier Napatan phase were also practiced during the Meroitic phase of the Kingdom of Kush. Meroitic royal burials were influenced by Egyptian and early Kushite funerary traditions. For example, there was continuity in burying royalty in chambers beneath pyramids of sandstone; however this was practiced on a large scale and hundreds of pyramids were erected during the Meroitic period.

Recent archaeological excavations in a Meroitic cemetery at the city of Berber in the Middle Nile region have uncovered unique finds which have important archaeological research potential. The recovered objects show a high artistic value and were found in exceptional contexts thus opening a new avenue of research through the questions that they have aroused. The newly discovered cemetery (designated BMC) lies on the east bank of the Nile about 12km south of the Kushite site at Dangeil. It is located east of the center of Berber city. No evidence of ancient occupation has been found previously in the immediate vicinity of the site (Figure 2) and moreover, no traces of tomb superstructures have been recognized. Seasonal rains and wind erosion most probably removed any surface indications. Such a site is impossible to identify by surface observation and normally a wide range of human activities are responsible for their chance discovery. In fact, the Meroitic cemetery of Berber was discovered when archaeological material consisting of pottery jars, bowls and human bone, were found while digging foundation trenches for a factory planned for plastic production. The good state of artefact preservation in this cemetery is important particularly when compared to similar cemeteries with poorer preservation located in the surrounding region.

The cemetery shows the same burial traditions and elements of tomb structure common to burials dating from Meroitic period in Central Sudan such as those found at Gabati, Kadada and Meroe (Edwards 1998, 195; Mahmoud el-Tayeb and Kolosowska 2005, 53). Nevertheless, the newly discovered Meroitic cemetery at Berber shows considerable richness in grave offerings, raising the status of the cemetery to that of an elite community.

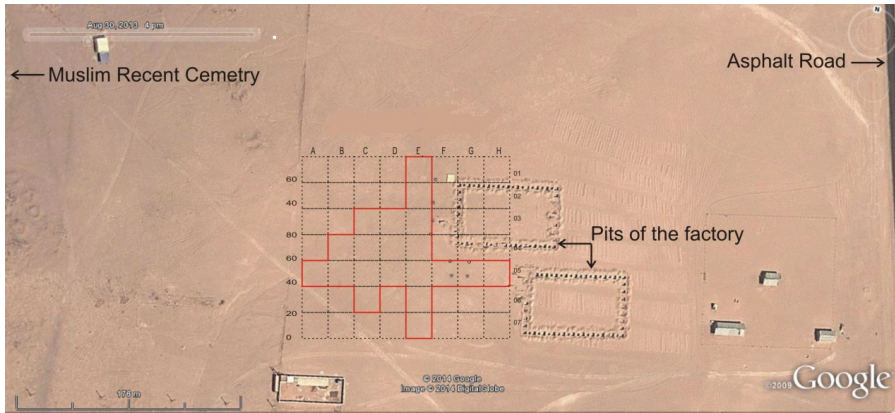


Figure 2. The cemetery site at Berber with magnetometry survey grid

The excavated tombs from this cemetery provided quite a large number of objects, with a great diversity in both the types of material and the quantity found in each tomb. Numerous pottery vessels were recovered including many Meroitic fineware vessels and large numbers of jars. The recovered ceramics point to strong links between Meroitic funerary practices and sorghum and its products, and a number of beer jars and bowls from the cemetery show clear depictions of sorghum heads.

In view of the recovered materials from the excavated tombs, it is important to take brief note of the significance of Berber's location. The site is situated in the region north of the numerous Meroitic centers in the Island of Meroe, and south of the major sites around Napata as well as those much further to the north. It is in a strategic position for trade and can be seen as a crossroads. In the recent history of the Sudan, the city of Berber was known as one of the main caravan stations on the road between the Red Sea and Egypt and from early Islamic times as a stop on the pilgrimage road to Mecca. It is probable that in the past the region of Berber played the same role in linking the Eastern Desert with the Nile and the Island of Meroe with the northern part of the kingdom; but the most important factor in this matter is the position of the Berber area at one end of the road stretching across the Bayuda Desert between the region of Napata and the north, and that of Meroe in the south. In such a position we believe that it may bring different ethnic groups together with their different cultural backgrounds.

1. 2. Research Aims

The research aim herein is to hypothetically reconstruct the social organization of the Meroitic society in the region of Berber by analyzing the burials and artifacts from the site. There is a number of published works concerning the importance and relevance of researching the archaeology of burials. For example, Dark has suggested that the social archaeology of burial and the use of burial evidence is an approach often used in reconstructing social and cultural structures of ancient communities (Dark 1995, 90). It is important in this research to use archaeological, historical anthropological and ethnographical approaches to get an understanding of Meroitic society at Berber because this provides comparable material and evidence strengthening our arguments. Towards this end, in this work, I will use ethnographical information to try and gain further understanding of the role of sorghum and its products in the archaeological record, as well as the archaeological material itself including the finds and samples from the excavated tombs at Berber. The objective of this research is to attempt to identify and study the Meroitic funerary practices in the cemetery of Berber with emphasis on discussing the role of sorghum as a unique and common motif clearly evident in the archaeological materials from this cemetery. Moreover I will propose in the discussion, the role of Berber in the trade network based upon its geographic location. The variety of possible trade items that have been recovered from Berber cemetery may be indicative of its position and relationship to the Meroitic trade structure.

These objectives may be achieved through the following;

- Documentation and classification of the tomb chronology, spatial distribution, and funerary practices in the excavated Meroitic burials in Berber cemetery.
- Consideration of questions arising from ceramic studies concerning the function and fabric of different vessel forms as well as the wider social significance of pottery, and from combining ceramic studies, funerary traditions, and the social approaches to the study of subsistence and early food systems.
- Investigation of the role of sorghum through archaeological, anthropological, and ethnographical investigations in the Meroitic culture with more emphasis on the Meroitic society at Berber.

- Understanding the role of Berber in trade, bearing in mind its geographic location, by investigating archaeological and historical resources.

1. 3. Study Area, Materials and Period

The site is located in Berber city on the east bank of the Nile about 40km north of the confluence of the Atbara River and the River Nile. The size of the cemetery and total number of the tombs is still unknown and may be obtained only through intensive fieldwork in the future; however, the ongoing archaeological excavation project at Berber cemetery has provided quite a large number of objects upon which we can base this discussion. This was due to the excellent state of preservation of artifacts in the cemetery; a feature rarely found in Meroitic burials.

1. 4. Literature Review of Meroitic Non-royal Cemeteries

Archaeological research in the field of Kushite funerary practices reveals a lack of information concerning the Meroitic phase of the Kingdom of Kush. The large cemeteries of the ‘common people’ at Karanog and Faras thus far provide the best-published information concerning Meroitic burial traditions. The often-excellent preservation of Meroitic cemeteries in Lower Nubia has provided information about burial practices and the construction of graves that shows clearly the nature of the elite communities in the north, but because of many reasons is not the case in the Meroitic heartland in the south (Edwards 2004, 175). Some burials were excavated to the east of the Royal City at Meroe by Garstang but much more extensive cemeteries must have existed for such a large urban population (Edwards 2004, 147). For instance, in the Island of Meroe two large cemeteries which may be related to common people have been excavated, the first at Kadada to the south of Meroe (Geus 1982 – Lenoble 1994) and the second at Gabati (D. N. Edwards 1998) to the north. Both cemeteries were in use for a long time, and there are no known settlements associated with either of them.

Stone pyramids with attached chapels were the main mark of royal and elite tombs of the Meroitic period. However, mud brick mastabas or pyramids (also with chapels for offerings) were common for less important tombs. Such superstructures made of mud bricks were rare outside Lower and Middle Nubia and they are a typical feature of Meroitic cemeteries in the north (Geus 1991, 70). Some have been identified at

Kerma (Bonnet and El-Tayeb 1991, 32). At Gabati a few mud brick superstructures were found, however some graves show traces of tumuli and most show no remains of superstructures (Edwards 2004, 175).

Meroitic mortuary practices show a series of cultural changes over time across the different provinces of the kingdom. During the Early Meroitic period (between early 3rd to late 2nd BCE) what appears to be a deeply rooted indigenous burial practice - the contracted skeletal position - was the common tradition in the southern part of the kingdom. However during the Classic Meroitic period (between late 2nd century BCE to 1st early 2nd century CE) the extended position of the skeleton became more common in the region. Thereafter, the Late Meroitic period (early 2nd century CE to CE 360) witnesses a revival of use of the contracted skeletal tradition (El-Tayeb 2012, 76). The Meroitic period appears to have two different burial traditions originating from rival sources; one is the extended skeleton, an imported Egyptian tradition; and the second is the indigenous contracted skeletal position which is in evidence from prehistory (Geus 1991, 70). The two Meroitic cemeteries at Karanog and Faras show that most common position was the extended where the body was laid on the back. In most of these tombs there was no use of coffins and the bodies were not mummified (Shinnie 1967, 152). In contrast, at Kadada and Gabati, the widespread burial position is the contracted position, with the deceased oriented north-south laid in an oval-shaped niche located at the western end of a sloping ramp (Edwards 2004, 175).

In the Faras and Karanog cemeteries, the funerary furniture found in the graves consisted of pottery and bronze vessels, as well as personal ornaments such as beads of different types, and rings. Offering tables, stelae and *ba* statues were also common finds. The *ba* statue, a half-human, half-bird figure representing the soul, is associated with Meroitic burials in the north and offering tables indicate a deep ritual association with the cults of Isis and Osiris (Geus 1991, 70). There is no clear idea about where these objects usually were placed in the grave, but it seems likely that they were placed somewhere attached to the funerary chapel (Shinnie 1967, 152). The excavated tombs from non-elite cemeteries in the Meroitic heartland at Kadada and Gabati show that superstructures were very rare and no offering tables, stelae or *ba* statues were found. This may be interpreted as a regional difference (Edwards 2004, 175; Geus 1991, 70). Concerning the association of offering tables and stelae with Meroitic cemeteries in the north, D. Edwards stated that "*it is perhaps noteworthy that the*

highly elaborate records of familial relationships recoded in funerary inscriptions seem to be largely a feature of lower and Middle Nubian contexts" (Edwards 2004, 175). But there is not yet a clear answer to Edwards' question as to why this was not practiced in the Meroitic heartland. The differences and similarities between mortuary practices in elite tombs in the Meroitic provinces in the north and south may have been considered important to mark social identities (Edwards 2004, 175). It is probable that the rare presence of offering tables and stelae in Meroitic cemeteries in the south related to the limited archaeological work that has been done and to the few Meroitic cemeteries that have been excavated in the region.

Frances Geus in his presentation of funerary practices in ancient Sudan pointed out in brief detail the shortage of information available when discussing Meroitic non-royal cemeteries (Geus 1991, 69). However, here in this discussion, recent archaeological research in the field of Meroitic burial tradition will be considered the main source for comparative study.

At Kawa, recent excavations in the late Kushite cemetery site revealed mounds of earth and remains of square structures, possibly mastaba or pyramids, some built of mud brick and some of stone. The elite tombs at Kawa included remains of pyramid superstructures built of dressed sandstone blocks, a type of tomb associated with the royal cemeteries at el-Kurru, Nuri, Jebel Barkal and Meroe. The excavated tombs also show the same standard typology with an east-west descendary with cut steps or slope leading down to an east- west burial niche. An east west orientation of the body, laid extended on its back with head to the west, is the main burial tradition found in the excavated Meroitic burials at Kawa (Welsby 2014, 27).

At Sai Island most of the excavated tombs at the Meroitic cemetery have pyramid superstructures made of mud brick with an east west sloping descendary and an oval-shaped east west chamber at the western end. Traces of multiple burials and robbing were clearly noticed. Also evidence for the use of a funerary bed was observed in the primary burials (Francigny 2010, 56).

The recovered objects from Sai cemetery suggest the presence of a rich community with a clear different social status, where the elite had a separate burial place. The elite tombs included glass objects, copper alloy and fragments of ba statues which

were found on the surface of the site, and are common finds in Meroitic cemeteries in Middle Nubia (Francigny 2010, 59).

At Sedeinga, tombs in the Meroitic cemetery have an east west descandary leading to an east west oval- to rectangular-shaped burial chamber. Most of the excavated tombs were plundered and later reused as well. The tomb superstructures consisted of mud brick pyramids and a number of sandstone pyramid capstones were found (Rilly and Francigny 2010, 63). The site is considered to be the largest concentration of mud brick pyramids discovered in Sudan so far.

At Sedeinga, features similar to those found the Meroitic cemeteries in the north have been observed. The tradition of reuse of burials was clearly noted in the excavated tombs, and *ba* statues, offering tables and sandstone stelae were found (Rilly and Francigny 2012, 61).

1. 5. Methodology

The methodology used in this research consisted of the classification of finds from archaeological excavations together with a comparative study of archaeological materials from other sites within the Meroitic period (4th century BCE – 4th century CE). Historical and ethnographical approaches to the interpretation of the archaeological evidence were applied.

1. 5. 1 Excavation and field activities

Four short fieldwork seasons of intensive rescue excavations were carried out in the Meroitic cemetery at Berber. The rescue operations started in July 2009 and continued for two weeks. The second rescue campaign was conducted in April 2010, also for two weeks. The third season was conducted in October 2012 for duration of two weeks. The fourth field season was conducted in September 2013 and continued for ten days. Logistic and financial support for the first and the second seasons was covered by the National Corporation for Antiquities and Museums (NCAM), Sudan. The third and fourth seasons were fully funded by the Sudan Archaeological Research Society (SARS) and during the second, third and fourth seasons, the French Archaeological Unit of the Sudanese Antiquities Service (SFDAS) provided a car for the mission.

The first study of the Meroitic ceramics unearthed during the archaeological campaigns of 2009 and 2010 was conducted in 2011. The project involved a student from the Khartoum University, Suzan Adil, (as a training course) and Romain David from the SFDAS. The study focused on 75 complete bowls and jars from 15 excavated tombs. This first examination led to the publication of an article co-signed by the researcher and Romain David in the periodical *Der Antike Sudan* 2011. As the most recent archaeological investigation provided numerous materials, further study was conducted in October 2013 by Romain David in order to analyze all the funerary ceramics revealed thus far by the rescue excavations. The study examined 131 complete bowls and jars from 12 excavated tombs.

1. 5. 2 Documentation

The first task was to carry out a topographical survey of the site and its surroundings in order to understand the spatial layout of the remains. To facilitate recording in such a rescue operation we adopted the factory foundation trench numbers as well as assigned tomb numbers. In order to record the excavation stages and the stratigraphy of the site a single context recording system was used. A photographic record of the site was made including documentation of all of the processes of excavations and of the archaeological finds.

In the later phases of the rescue project, after completion of the digging of all of the fully and partially disturbed tombs, a systematic stage of excavation was initiated in season 2012. At this point sections and top plans of the excavated tombs were made. In addition, drawings of the small finds and pottery vessels were made which comprise an important part in the documentation, and assist with comparisons with materials from other sites. A geophysical survey using a magnetometer was conducted during the fourth season of fieldwork. The main objectives were to identify the size of the cemetery, as well as locating tombs and traces of possible superstructures.

1. 6. Organization of the Thesis

The thesis is organized into eight chapters. The first chapter provides a general historical background to the Meroitic period and introduction to the Meroitic cemetery at Berber. This chapter also presents the research aims, a literature review of Meroitic non-elite burials, methodology and approaches.

The second chapter discusses the data acquisition methods, archaeological excavation procedures, and includes a description of all the excavated tombs from the Meroitic cemetery at Berber. I have in this chapter also presented the tomb structures, burial traditions and comments on the excavated skeletons.

Chapter three presents details of the archaeological finds excavated from the cemetery at Berber. The Meroitic pottery from the excavation is presented in chapter four and a discussion of chronological perspectives is presented in chapter five.

Chapter six discusses the implications for understanding the role of Berber in the Meroitic trade network using archaeological and historical resources. In chapter seven, a discussion on the role of sorghum in the Meroitic society is presented based on the presence of sorghum plants as depicted on pottery jars from Berber. In chapter eight, discussions of the results and a concluding summary of the thesis are presented. This chapter discusses such major issues as common Meroitic burial traditions and features recorded from Berber with a comparison to other regions, the role of the region in trade and the strong association of sorghum with Meroitic society.

Chapter Two:

The Archaeological Excavations at Berber Cemetery

2. 1. Introduction:

The Berber Meroitic cemetery (BMC) was excavated since July 2009 by the Sudan National Corporation for Antiquities and Museums (NCAM) team headed by the researcher. The NCAM team visited the site in order to identify the exposed tombs and to estimate the cost of rescuing the remains cleared by the digging of a total of 112 trenches 2 x 2m in size and 2m deep for the factory foundation.

A total of 35 tombs have been destroyed partially or completely during the digging of these trenches. As a result of this visit, the cemetery has been so far the object of rescue operations carried out by the researcher, and plan comprising three phases of rescue excavation has been proposed.

During the first phase of the rescue operation in 2009, the main focus was on digging 7 tombs whose burials had been cut by the factory's foundation trenches which had left archaeological materials visible. In the second season, conducted in 2010, the focus of the rescue excavation was on digging 8 tombs which had been partially cut by the factory foundation trenches. A third season of the rescue excavations, held in 2012. In this season the focus of the rescue excavations was on digging 15 tombs the foundation trenches assist in identifying their locations.

The third season witnessed the completion of the rescue program and the beginning of a systematic excavation project. The main focus in this phase of archaeological investigation at Berber cemetery was to identify the size of the cemetery. Two trenches were randomly proposed for surface clearance in order to locate tomb shafts. Later these trenches have been incorporated within square grid system applied to the site.

In continuation of the systematic archaeological investigation at Berber cemetery we conduct a short season in 2013, the main objective was carrying out a geophysics survey using magnetometer in order to identify the size of the cemetery and to locate tombs shafts. Also work concentrated on digging 4 tombs.

In general the excavations from seasons 2009, 2010, 2012, and 2013 explore total of 38 tombs and three mud brick pyramids (Figure 3). The methodology developed is labeling tombs with the code name of the site Berber Meroitic Cemetery (BMC) followed by grave number.

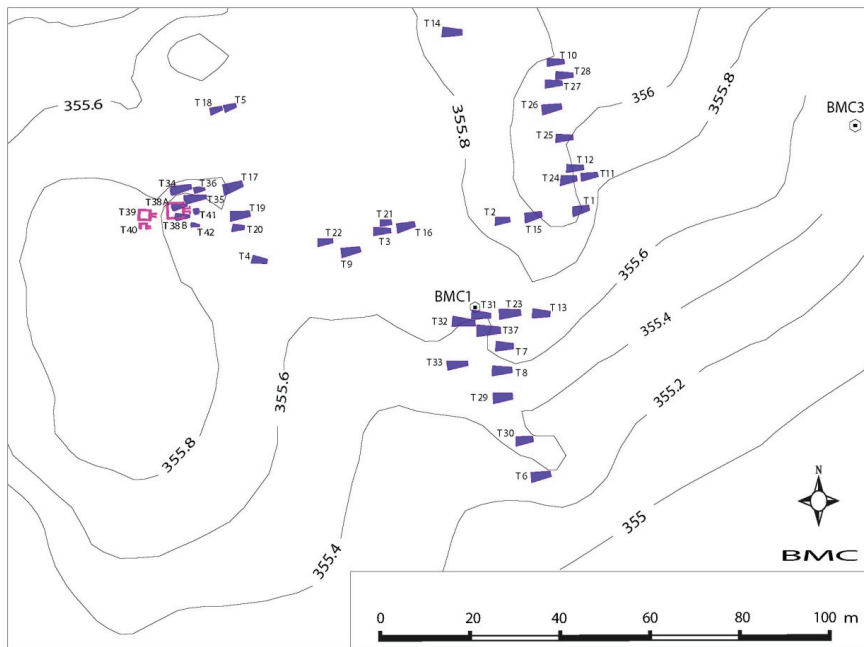


Figure 3 Topographical map showing distribution of excavated tombs at Berber and the location of the recovered mud brick pyramids

2. 2. Description of the Excavated tombs:

2. 2. 1. The Rescue Excavation:

BMC 1

This tomb had been observed in trench no. 1. A pottery jar was found inside the trench indicating large scale damage in this tomb. The foundation trench cuts through the northern side of the burial niche and its blockage. However, the southern side retained part of an entrance blocking wall of fired bricks consisted of four courses 400mm high. The clearance of the blocking wall has revealed evidence of ancient

robbing activities. A base of a pottery jar has been found in the filling over the blocking wall.

The burial niche was oval in shape, oriented north-south. An articulated skeleton was found in flexed position oriented north-south, the head in the south facing west. The hands rested in front of the body the right on top of the left in front of the pelvic area.

In addition, the upper part of the skeleton was bent toward the west.

The funerary furniture consisted of one copper and three pottery bowls found around the body, together with three big pottery jars between the skeleton and the blocking wall. One of the jars is black in colour and decorated along the neck with a geometric pattern. A wooden kohl container was found in front of the hands on the western end in the burial niche.

BMC 2

In trench no. 54 a burial chamber located on the western side has been affected. The trench cuts through the eastern side of the burial niche, therefore no remains of a blocking wall have been found. The rescue operations consisted of removing the fill of the burial niche and revealed an oval shaped burial niche oriented north – south and about 1.7m deep.

A well preserved skeleton has been recovered buried in a semi-flexed position on the left side oriented south-north, the head to the south facing west. The right hand was placed over the left one in front of the face. Some remains of textile have been observed in the fill in association with the body, probably remains of wrapping of the body.

Three pottery jars were found beside the head on the southern side in the burial niche. A bottle of green glass was found under the right hand. A cylindrical wooden kohl pot of ebony has been worked in a decoration of a series of 11 round shaped patterns, with the upper and lower frames decorated in incised lines. This object was found to the south of the skull beneath one of the jars. In addition, a kohl stick made of copper has also been found in the fill of the burial niche, and another two small wooden pots with lids (probably kohl containers) were also found, one behind the body and the other between the jars.

BMC 3

This tomb is located in trench no. 45. The damage has affected the western part of the sloping descandary just before the burial niche entrance. Traces of a blocking wall of mud bricks, human remains and part of a broken pottery jar have been observed in the western section in this trench.

The clearance of the fill over the blocking wall revealed human bones from a disturbed skeleton and part of a pottery jar indicating earlier robbing activities. A copper finger ring was found *in situ*, and a complete light coloured pottery bowl found over the bones.

After lifting the bones and continuing the excavation of the mud-brick blocking wall, a complete articulated skeleton was recovered, buried in a flexed position on the left side oriented south-north, head to the south facing west, with the hands in front of the face. In addition, three large pottery jars were found in the northern side of the burial niche, two of them are painted in floral decoration patterns in white. The third has a long neck partially broken. Three pottery bowls were also found on the northern side of the burial niche.

BMC 4

This tomb has been cut by trench no. 37 which partially damaged the burial niche. The south-east corner of the trench retained part of a mud-brick blocking wall. In addition, a complete pottery bowl was found in that corner (Plate 1). The clearance of the fill in the disturbed side of the burial niche revealed undisturbed deposits in the southern side of the trench. After removing the fill in this area of the burial niche human bone fragments and a painted pottery jar with floral patterns, together with three pottery bowls, were discovered. The damage caused by the trench in this tomb permits us to see the burial entrance blocking wall from the inside, which is not possible in a normal archaeological excavation, but on the other hand, part of the burial contents were lost, since the trench cuts partly through the burial niche. The blockage consists of three courses of mud bricks, the upper row laid vertically to allow the closing of the oval-shaped burial niche.

An articulated skeleton has been found in the southernmost end in the burial niche at a depth of 1.6m. The body was in a semi-flexed position on the left side facing west;

the head to the south, with the hands in front of the face, the right over the left. Behind the body, two fineware pottery bowls were found. One of them has been painted and stamped along the rim. Beads of faience were observed under the neck area.

The finds recovered from this tomb suggest the existence of multiple burials, but the damage caused by digging the trench affected the northern part in the burial niche where a second skeleton may have been placed.



Plate 1: Disturbed tomb by a Factory trench

BMC 5

In trench no. 31 we observed remains of a completely destroyed burial. A mud-brick blocking wall can be seen on the eastern side in the trench. After clearance bone fragments were found in the northern side in a niche about 1.6m deep and 2.1m long (north-south) together with a fragmented pottery jar, some beads of faience and remains of textile. The damage caused by the trench in this tomb allows us to see the details of the blocking wall from the inside. All bricks are placed in a vertical position.

BMC 6

This tomb was observed in trench 63. The trench revealed part of the northern side of the burial niche. Bone fragments and potsherds were visible in the profile of the southern side in the trench. To identify the limits of the grave we started the clearance inside the burial niche. Thus, bone fragments of the lower parts of a skeleton, and three complete pottery bowls have been found. In the most southerly edge of the burial niche, we found a cylindrical kohl pot of black wood, probably ebony. While continuing digging inside the burial niche, a second kohl pot of wood designed in series of rounded shape was found made of the same type of wood. In addition, a complete pottery jar came from the fill on the western edge of the burial niche, together with a flat piece of wood of which the function is unknown.

As excavation continued we realized that the burial extended to the south and only a small part of the northern side in the burial niche had been destroyed by the trench. However, traces of robber activities were also observed through the disturbance in the burial contents. Therefore, checking the fill of the robber pit was useful, since at a depth of 100mm the northern edge of the descandary was identified, and at 320mm in the robber pit fill we discovered a sandstone offering table measuring 250 ×220mm inscribed in Meroitic.

Traces of looting appeared more clearly when we found bone fragments of a disturbed skeleton inside the burial niche. After lifting all the bones, we found a well preserved cylindrical kohl pot made of ivory with a lid, and nearby wooden kohl stick (probably of ebony) was also found.

BMC 7

This tomb is situated in area B and cut by trench no. 58. The damage affected the descandary near the blockage; in fact, the blockage and the burial niche are intact and parts of it can be seen clearly. The fill in the descandary at the south-west corner of the trench is consisting of light coloured soft sand, gravel and pebbles. The blocking wall was revealed at a depth of 1.4m. It consisted of four courses of mud bricks, oriented north-south and measuring 1.6m long and 300mm high. A robber pit has been identified in the southern part of the wall, where a number of bricks are missing

and sherds were recovered from the fill in that area. In the intact side of the blockage to the north, four bricks have been found on top of the wall set vertically.

Inside the burial, seven pottery jars were found: four of on the northern side and three in the middle of the burial. In addition, six pottery bowls, one of which was painted, have also been recovered in the centre between the two groups of jars.

A disturbed skeleton was found in the southern side of the burial, its destruction is a result of possible robbing activities. The position of the skeleton, based on the observation of the preserved bones, suggests that it was an extended position with the body lied on its left side. The body was oriented north-south, head to the south facing west and the hands in front of the face. The legs were overlain by one of the jars deposited in the middle of the tomb. The burial chamber measured 3.08m north-south and 1.63m east-west and was 1.63m deep.

BMC 8

Traces of this tomb have been observed in the south-west corner in trench no. 59 in area B. The trench cuts the middle part of the descendary. A blocking wall of mud bricks consisted of five courses has been found. The southern end of the blocking wall shows traces of a robbing pit, where only two rows of bricks were preserved. However, the fill over the missing part of the wall contained potsherds and fragments of mud brick, which is an indication of ancient robbing activities.

After removing the mud-brick wall, we identify the boundaries of a large oval-shaped burial chamber oriented north-south containing 13 pottery jars, five bowls, one censer, and one bowl of copper-alloy. In addition, the skeleton in an extended position oriented south-north the head in the south has been found buried between two large slats of wood. The later may be the remains of a coffin.

The pottery jars show differences in form and colour, as well as decorative motifs. The finest example is a handmade black jar shaped as a double pot one above the other and decorated with incised geometric patterns.

BMC 9

This tomb is located in the south-west corner of trench 43 in area A. The damage caused by the trench affected mainly the descendary and the northern part of the

burial niche. Traces of ancient looting have been recognized on the basis of the existence of potsherds and a piece of copper-alloy, probably part of box fastener, in the fill in front of the remaining part of the mud-brick blocking wall.

Inside the burial niche two articulated skeletons have been found, one at the southernmost side of the burial and the second in the middle toward the west end of the niche. Both are in a semi-flexed position laid on their left side with the heads to the south. Only potsherds, a number of faience beads and a second part of the copper-alloy fastener were recovered from this tomb.

BMC 10

The clear defined fill of the descandary of a tomb was observed in the north-west corner of trench no. 7 in area A. Remains of a mud-brick blockage consisted of four rows have been found. Traces of ancient robbing in this tomb were evident, since a complete pottery bowl together with fragments of bone was found in the fill over the blocking wall. However, three pottery jars and a bowl with internal painted decoration were found in the middle of the burial and four pottery bowls were located on the northern side. One jar is red in colour with painted lines along the rim and shoulders, another is a black jar decorated with incised lines along shoulders. The skeletal remains were completely disturbed as a result of looting process.

BMC 11

This tomb was located in the south-east corner in trench no. 3 in area A. The damage affected partly the burial niche. In addition, recent robbing activities have destroyed the burial contents. Broken pottery vessels were found inside the trench. As a result of the ancient and recent robbing activities, together with the damage caused by digging the trench no remains of any skeleton were observed. This tomb provides another example where mud-brick blocking wall could be viewed from inside the tomb.

BMC 12

This tomb has been identified in the north-west corner inside the same trench as BMC 11. After identifying the limits of the burial niche, we found that the damage caused by the trench affected the descandary but modern robbing has also affect other parts, especially on the northern side of the burial niche.

Inside the burial niche, which is narrow and small in size compared to the other excavated examples, four pottery bowls and a small jar, two wooden kohl containers, and a number of beads of faience, quartz and gilded beads were found.

Two skeletons were recorded. The first was found in the southern side of the burial niche in a semi-flexed position on its left side with the head to the south facing west. The second is a disturbed skeleton piled on the northern side of the burial niche.

BMC 13

This tomb was identified from the observation of a number of finds on the ground surface. The material consisted of potsherds and a fragment of an object of faience around trench no. 111. This tomb has been almost completely destroyed by that trench. Apparently, the damage affected the burial and its contents have been left on the surface. Only a pottery cup was found at the western end of the remaining part of the burial niche. This situation encouraged us to check the piles of sediments around the trench where bone fragments were found. A pottery bottle and a cup have been completely restored.

BMC 14

A tomb has been located in the south-west corner of trench no. 15. The trench cuts part of the descandary, but modern robbing activities have also caused damage mainly on the northern side of the burial niche. Remains of the mud-brick blocking wall were found; they consisted of two courses with two bricks remaining of the upper row laid in vertical position.

Digging inside the burial niche recorded traces of ancient robbing activities and later water penetration through the robber pit. However, a well preserved articulated skeleton has been found on the southern side in a contracted position, on its left side with the head to the south and with the hands in front of the face. One pottery bowl has been found behind the body. Textile and leather, probably the remains of the wrapping materials, have been observed around and under the body.

BMC 15

This tomb has been cut completely by trench no. 55 in area B. What remains is the southernmost end of the burial niche. The southern profile of the trench showed a clear section of the descandary, the mud-brick blockage as well as the burial niche. A pottery bowl and the skull were the only remains preserved in the grave.

BMC 16:

This tomb is situated in area A and cut by trench no 46. The damage affected almost the middle part of the descandary near the blockage; in fact, the blockage and the burial niche are intact and not being touch by the factory trench. The fill in the descandary consists of mixture of clay soil, lime gravels, and pebbles. The blocking wall was revealed at a depth of 0.86m. It consisted of three courses of mud bricks, oriented north-south and measuring 1.26m long and 0.43m high. An oval shaped robber pit has been identified in the north-west part of the wall, where bricks of the upper part of the blocking wall were moved and sherds of pottery jar were recovered from the fill in that area. It seems that's the robber's cuts directly over the northern part of the burial.

Inside the burial, two articulated skeletons were found, both at the southern side of the burial, one for a male at the eastern side and the second for a female in front of it. Both are in a semi-flexed position, laid on their left side oriented north-south with the heads to the south facing west with the hands along the sides in the male skeleton and in the second skeleton the right hand is extending across the chest and the left extended between the legs.

The funerary furniture consisted of two pottery jars, one hand made black in colour and the second red wheel made jar and both are located in front of the legs. Also four bowls with ledge rim are found in the northern part of the burial and two other bowls with no ledge are located, one on the right knee of the female skeleton and the second is in front of the left tibia. A fineware stamped small bowl was found in front of the feet of the skeleton and between the jars.

BMC 17:

This tomb is located in area A and cut by the factory trench no 34. The damage affected almost the middle part of the descenary near the blockage while the burial and blockage area remained intact. The fill in the descenary consists of mixture of clay soil, lime gravels, and pebbles. Apparently, this tomb has been reused by burring of a child body found disturbed with two broken hand made pottery jars on top of the mud bricks blocking wall of the main burial. However, some of the intact bone shows that the skeleton oriented north-south laid on semi-flexed position on the right side the head at the north facing west. Some soft tissues were found indicate that the body more likely been wrapped on skin. The blocking wall was revealed under this skeleton at a depth of 0.80m. It consisted of mud bricks built in vertical position, however only one brick found intact and the rest destroyed by robbers.

The burial is small oval shaped niche measuring 0.90m long and 0.46m wide. An articulated skeleton was found in contracted position oriented north-south, the head at the south on higher level compared to the rest of the body, and the entire body was facing down. There are clear remains of human hair on the head and it seems that the body was wrapped in skin.

BMC 18:

This tomb is located in area A and cut by the factory trench no 31. The damage affected only the eastern part of the descenary. The fill in the descenary consisted of light colour soft sand and pebbles. The blocking wall was revealed at depth of 0.72 m. It is consisted of line of mud bricks built in vertical position covering small egg shaped burial oriented north-south measuring 0.69 m long, 0.26.m high, and 0.42m wide.

Inside the burial an articulated skeleton of a child was found in contracted position on the left side oriented north-south the head to the south facing west. No finds have been found in association with this child burial.

BMC 19:

This tomb is located in area A and cut by the factory trench no 35. The damage affected only the middle part of the descenary. The fill in the descenary consisted

of soft clay soil. Potsherds and bones fragment were noted in this filling including an identifiable parts of a female skeleton. A blocking wall consisted of mud bricks built in vertical position was found disturbed at depth of 1.20m. Incomplete skeleton of a male was found in front of the blockage oriented northwest-southeast, the head at the northwest facing west. This tomb has been clearly disturbed by robbers. Therefore, inside the burial only parts of a right foot was found in the southern part and remains of a left foot were found in the northern part of the burial niche. The burial oriented north-south measuring 1.20m long, 0.65m wide, and 1.65m in its maximum depth.

BMC 20:

A child burial located in area A and cut by the factory trench no 36. The damage affected the middle part of the descandary, but the blocking area remains intact. The blocking wall revealed at the depth 0.38m consisted of three mud bricks built in vertical way. The burial is small in size oriented north-south measuring 0.40m long and 0.22m high.

Inside the burial an articulated skeleton of infant was found wrapped in poorly preserved material possibly textile. The skeleton oriented north-south laid in semi-flexed position on the left side the head to the south facing west. Remains of hair are clearly observed.

BMC 21:

A child burial located in area A and cut by the factory trench no 45. The damage affected the middle part of the descandary and the blocking wall area. The northern side of the trench cuts along the southern part of the tomb including the burial niche. The burial found disturbed and bones fragment are scattering in the filling of the burial and the descandary as well. Mud bricks from the destroyed blockage were found in the descandary.

BMC 22:

This tomb was hardly distinguished it was completely disturbed by the factory trenches no. 41 and 42.

BMC 23:

This tomb is situated in area B and cut by trenches no 57 and 112. It is a large tomb with a long descandary. The fill in the sloping descandary consisted of soft clay soil mixed with gravels and pebbles. Five pottery jars were found at depth 1.5m three are wheel made and two hand made all are complete but broken. The Blocking wall revealed at 1.70m depth under these pottery jars consisted of three courses of mud bricks with vertical row on top covering the burial niche. There are missing bricks in the southern part as a result of tomb plundering.

The burial found disturbed by robbers. Two skeletons were found disarticulated and disturbed, one probably in flexed position and the other extended and more likely associated with a coffin. In fact, remain of a long panel of a wooden coffin was found on the western end inside the burial niche.

The funerary furniture consisted of six pottery bowls four of them found in the northern side together with two jars and two bowls revealed in the southern part. Small finds were also recorded in this tomb consisted of beads of probably quartz and smashed bottle of white glass and well preserved gold ear stud.

BMC 24:

This tomb is situated in area A and cut by the factory trench no 3. The damage affected only the eastern part of the descandary. The fill in the descandary consisted of clay soil mixed with whitish lime graveled soil. Archaeological materials consisted of sherds and fragments of wood were noted in this filling. The blocking wall was revealed at the depth 0.70m measuring 1.80m long and 0.60m wide, consisted of three courses of mud bricks the fourth row built in vertical way to allow closing of the burial niche. A robber pit was observed on the southern side of the blockage cuts part of the wall and some bricks from the upper row are missing and some potsherds found over the remain wall.

This tomb is considered as partially intact, the northern side of the burial was empty with no fill. Inside the burial an articulated skeleton was found well preserved laid inside a poorly preserved wooden coffin in a box shape with no cover on the top. The skeleton for an old female laid in extended position oriented north-south the head to the south rising up and rest on the chest facing north. The hand extended along the

sides near the pelvic area. The knees are almost attached to each other. However, according to the position of some bones it seems that the coffin was too small for the body.

The funerary furniture consisted of twenty ceramic vessels including fine ware decorated cups and wheel made jars found surrounding the coffin from the north, east, and the southern side and the coffin attached to the western end of the burial.

A poorly preserved box of textile found in the northern end of the burial over the pottery bowls measuring about 0.20m long, 0.10m wide, and 0.10m high. In addition, remains of textile were recorded probably used as covers for the pottery jars.

Pieces of glass of smashed white bottle were found in the filling inside the burial, and also a bead of faience was found on the neck area and some beads near the hands and along the pelvic area.

BMC 25:

This tomb was located in the factory trench no. 4, but it has been completely destroyed.

BMC 26:

This tomb is situated in area A and cut by the factory trench no 5. The damage affected only small part of the eastern end of the descandary. The fill in the descandary consisted of clay soil mixed with lime gravels. Concentration of fourteen ceramic vessels was revealed at the depth of 1.20m including six jars and eight bowls. The blocking wall was found under these ceramic vessels consisted of three courses of mud bricks. The southern side of the blockage was cut by robber pit, which is apparently located over the burial.

Inside the burial two articulated skeletons were found; the first in the northern side of the burial laid on semi flexed position on the left side the head to the south facing west the hand in front of the face. The second skeleton in the southern side of the burial laid on contracted position on the left side the head to the south facing west, the hand holding the legs. It is most probably that the body was wrapped in skin.

The funerary furniture found in the burial was consisted of two pottery jars; both are found on the back of the skeleton in the southern side. One is black handmade jar decorated with incised dots in triangular shape. The second is whitish in colour painted with clear depiction of sorghum heads. In addition, some copper alloy fastening parts were noted near the skeleton in the northern side of the tomb.

BMC 27:

This tomb is situated in area A and cut by the factory trench no. 6. The damage affected the middle part of the descendary near the blocking area. The fill in the descendary consisted of mixture of clay soil and lime gravels. The blocking wall was revealed at the depth 0.60m consisted of four courses of mud bricks the upper one built in vertical position closing the burial niche. A robber pit located cuts the upper part in the northern side of the blocking wall where some bricks are missing.

Inside the burial an articulated skeleton was found in the southern part laid on semi-flexed position oriented north-south the head to the south facing up and the upper part of the body is almost laid on its back. The right hand over the pelvic and the left hand extended under the legs holding the left knee.

The funerary furniture consisted of thirteen ceramic vessels including imported painted ointment, five jars, two are handmade and three wheel made, and seven bowls. Most of the pottery is displayed in the northern side in the burial. In addition, a kohl pot was found in front of the body, it is turned cylinders of worked dense wood has a wide convex carved surface and a flat back, found together with a kohl wooden rod as well. Different types of beads were also recorded in this burial including faience beads found around the neck area, and rounded gilded beads found on the right hand.

BMC 28:

This tomb has been noted during the first visit cut by the factory trench no. 6. The excavation revealed a filling of a modern pit and no grave was found.

BMC 29:

This tomb is situated in area B and its filling appeared in the south- west corner of the factory trench no. 60. The damage affected only small part of the descendary eastern

end. The fill in the descandary consisted of whitish colour clay soil mixed with lime gravels. The blocking wall was revealed at the depth 0.73m consisted of two courses of mud bricks. A robber pit cuts the top part of the blockage and penetrates through the burial niche.

Inside the burial an articulated skeleton was found in the southern side of the burial laid in contracted position on the left side oriented north-south the head to the south the entire body is twisted towards down and head almost facing down, the hands in front of the face.

The funerary furniture consisted of nine ceramic vessels found in the northern half of the burial including five jars one is black handmade jar and four bowls.

BMC 30:

This tomb is situated in area B and cut by the factory trench no. 62. The damage affected the descandary and approached the blockage area. In fact, part of the mud bricks blocking wall was clear on the north-west corner of the trench. The blocking wall was revealed at the depth 0.45m consisted of five courses of mud bricks, only its northern part found intact. The robber pit was located on the northern side where most of the blockage bricks are missing.

The burial is an oval shaped niche oriented north-south measuring 2.40m long and 0.80m wide. Inside the burial an articulated skeleton was found in the southern part of the burial oriented north-south laid in semi-flexed position on the left side, the head to the south facing west, the hands in front of the face. Two pottery bowls were found in the west side in front of the body.

2. 2. 2. The Systematic excavations:

Trench 1:

Trench 1 is 20 x 20m square located to the west of the factory trenches in area B. In this trench a total of 3 tomb shafts could be distinguished after the clearance of about 20cm of hard soil which consisted of gravel and pebbles.

BMC 31:

This tomb in its structure is accessible through a sloping, east-west orientated entrance descendary 4.50m long leading to an oval shaped north-south orientated burial chamber situated on the western end of the grave. The fill in the eastern part of the descendary considered as the original filling consisted of whitish colour soft clay soil mixed with lime gravels and pebbles, however, towards the south-western part it change to hard clay soil because of the presence of a clear robbers pit. The blocking wall was revealed at the depth of 1.5m consisted of three courses of mud bricks and fired bricks as well. This wall built by displaying the lower two rows horizontally and the upper in vertical way supported by row of bricks lay horizontally to close the burial niche. A robber pit cuts part of the southern side of the blockage was observed where some bricks are missing and a complete black handmade pottery jar was found in front of the wall.

The burial was found intact on its northern side, the cavity was completely empty of rubble. An articulated skeleton was found in the southern side of the burial laid on semi-flexed position on the left side oriented north-south the head to the south facing west, the hands in front of the face.

The funerary furniture found in this burial consisted of nine ceramic vessels; four bowls are found in the northernmost side of the burial covered by remains of organic material probably leather or probably these bowls have been hold in a basket. Three jars are located on the middle near the legs one is black handmade covered by a fine ware painted cup and two red wheel made. A black bowl found behind the back of the body.

Small finds were revealed in this burial include a wooden kohl pot was found in the southern side near the head, it is a turned cylinder of worked dense wood has a wide convex carved surface and a flat back. Also a wooden kohl stick with a handle was found in the filling inside the burial.

Beads of cylindrical shape with ledges at both ends made of glass and gilded were found around the hands, and well preserved different types of beads found together in one string including faience beads found around the neck together with rounded gilded glass beads.

Metal objects are also among the finds in this tomb including a well preserved copper-alloy bowl and two signet rings with bezel one of copper found *insitu*, and one of iron found in the filling together with some broken iron pieces one look like a part of copra figure. Also copper-alloy fastening parts were found including a lock probably of a box.

BMC 32:

Traces of this tomb were distinguished on the surface by the whitish colour in the soil. The fill in the descandary consisted of lime gravels and soft clay soil in the eastern side and hard clay soil include potsherds and human bones fragment in the western side, where traces of robber pit was located. The blocking wall was revealed at the depth 0.55m consisted of three courses of mud bricks the upper built in vertical way. The robber pit cuts through the northern part from the surface to the blocking wall where some bricks in that side are missing. Some modern materials including plastic bags and papers were noted in the filling of the robber pit, which is indication to the use of the pit for garbage.

Inside the burial an articulated skeleton was found intact in the southern side of the niche laid on flexed position in the left side oriented north-south, the head to the south facing west, the hands in front of the face. On the northern side of the burial skeletons of two children were found disturbed as a result of plundering activities which has clear affect on this side of the burial. One is laid on flexed position in the left side oriented northwest-southeast, the head to the southeast facing west. Some remains of soft tissues probably of skin wrapping the body were observed on the bones. Beneath its pelvic bones, the skull of the second child skeleton was found.

The funerary furniture consisted of one pottery beer jar found in the middle of the burial and four bowls two are scattered in the middle, one behind the back of the adult skeleton, and one between the jar and the body.

The small finds in this burial include a unique type of rectangular gilded-glass bead. This type was found associated with the child skeleton consisted of a total of 7 visibly gold-coloured beads, 1 broken and 6 complete, were recovered. There is a mat impression on one side and on the other human figures portrayed in a Greco-Roman style.

BMC 33:

This tomb has been distinguished by the whitish colour of its filling after the clearance of the surface. In its structure this tomb has east-west sloping entrance descendary 4.55m long leading to an oval shaped north-south burial niche in the western end. The fill in the descendary consisted of soft clay soil mixed with white lime gravels in the eastern side and hard clay soil mixed with sand in the western side, where traces of a later pit were noted. A later burial has been revealed showing the reuse of the tomb by displaying skeleton accompanied by funerary furniture over the blocking wall. The skeleton was laid in flexed position on its left side oriented north-south, the head to the south facing west, the hands in front of the face. The goods accompanied the deceased is consisted of ten ceramic vessels including seven bowls and three jars.

The blocking wall was revealed under the later burial at the depth 1.8m consisted of three courses of mud bricks the upper row built in vertical way. In addition, some potsherds and fragment of grinder stone were used in the blockage as well. The southern side cuts by robber pit presumably associated with the reuse of the tomb.

Inside the burial a disturbed skeleton was found laid in semi-flexed position on the left side oriented north-south the head to the south probably facing west, but it has been moved away.

The funerary furniture consisted of eight ceramic vessels including three jars and five bowls. One of the jars is painted, found in the middle over the legs, a large rounded jar found in the northernmost end together with the third one. The bowls are found in the middle including a fine ware painted stamped bowl with a line of copra figures along its upper part.

The small finds recovered from this tomb are white colour cylindrical shaped beads with ledges in both ends made of glass, black beads looking somewhat "A bell shape", rounded gilded-glass beads, two beads of stone, ear stud of gold has a clear depiction of the god Bes on its exterior surface, and well preserved coloured glass bottle. These finds shows clear richness of this grave.

BMC 37

This tomb has been distinguished by the clear whitish colour of its filling after the clearance of the surface. It has an east-west sloping entrance descenary 380cm long leading to an oval shaped north-south burial niche in the western end. The fill in the descenary was mixture of soft clay soil and pebbles contain potsherds and fragments of human bones. The blocking wall revealed at the depth 50cm consisted of three rows of mud bricks built horizontally, and one more row of mud bricks on vertical position to allow closing the burial entrance. The upper part of the wall was cut by a robber pit and some bricks from the middle part were moved out.

The burial found disturbed, bones of an adult are scattered in the fillings with clear concentration on the southern side. A child bones were found in the northern side. Potsherd and fragment of mud bricks were also among the fillings. An articulated part of the vertebrae found on the tomb bed soil level shows north-south orientation with the head to the south.

Trench 2:

Trench 2 is 20x 20m square located to the west of the factory trenches at area A, and only tomb BMC 34 was excavated. However, traces of more tomb shafts can be observed in this trench.

BMC 34:

This tomb has been distinguished by the clear whitish colour of its filling after the clearance of the surface. Structurally this tomb has presented a different tomb type consisted of east-west sloping entrance descenary 4.5m long leading to a rectangular shaped east-west burial niche in the western end. The fill in the descenary was mixture of soft clay soil and pebbles. The blocking wall revealed at the depth 1.45m consisted of irregular wall of mud bricks. The upper part of the wall was cut by a robber pit and the bricks were moved out. Apparently, the plundering has an effect on the eastern side of the burial.

The burial cavity found empty of rubble and its roof was intact. The skeleton was found partially articulated laid on its back buried on a wooden bed or coffin with no

legs or more probably a bier in extended position oriented east-west, the head to the west.

The funerary furniture consisted only of three handmade pottery beer jars with decoration in incised lines along the rim, shoulders, and the neck in one example. The pottery jars found on the southern side one on top of the right leg and it seems they moved from their place during plundering.

BMC 35

This tomb has been identified by the clear whitish colour of its filling after it had been a victim of recent plundering activities. An east west descendary 385cm long has been revealed. The fill in the descendary was mixture of soft clay soil and pebbles. The blocking wall revealed at the depth 1.5m consisted of a row of mud brick built in vertical position followed by row of half bricks with a use of stone in the middle. The southern part seems to be affected by plundering activities.

The burial is an oval shape pit, small in size oriented north south 125cm long and 60cm width, and 182cm depth from the ground surface. Inside the burial pit, a disturbed skeleton was found laid in contracted position on the left side oriented north-south the head found in the western side. Only scatter potsherds were found in the filling inside the burial.

BMC 36

This tomb has been distinguished by the clear whitish colour of its filling after the recent plundering activities. In its structure this tomb consisted of narrow east-west sloping entrance descendary leading to an oval shaped north-south burial niche in the western end 104cm long, 40cm width, 172cm depth. The fill in the descendary was mixture of soft clay soil and pebbles. The blocking wall revealed at the depth 1.10m consisted of irregular wall of mud bricks. The northern side of the wall was cut by a robber pit and the bricks were moved out.

Inside the burial a well preserved skeleton found articulated lied in contracted position on the left side oriented north-south, the head to the south facing west, hands are over the knees, the right leg over the left one. Remains of hair, skin and soft tissues were observed on the skeleton. No grave goods were found in this burial.

BMC 38

This tomb has been distinguished by the clear mud brick superstructure found after clearance of the surface. This is the first evidence for a presence of superstructures at the cemetery, which we will discuss later in this chapter. The discovered superstructure is a foundation of mud brick building probably a pyramid (303cm EW-310cm NS) consisted of about three rows, with a funerary chapel located on the eastern side (Plate 2). Two tombs have been distinguished by the clear whitish colour of their filling beneath the mud brick pyramid; BMC 38a and BMC 38b.

BMC 38a

In its structure this tomb has presented the different tomb type consisted of east-west sloping entrance descendary 510cm long leading to an oval shaped east-west burial niche in the western end. The fill in the descendary was mixture of soft clay soil and pebbles. A disturbed blocking wall revealed at the depth of 105cm consisted of mud bricks, stones, and pebbles. The middle part of the wall was cut by a robber pit and the bricks were moved out.

Inside the burial an articulated skeleton was found lied on extended position on the right side oriented east-west, the head to the west facing south. The right hand extending by the body and the left hand extended over the ribs and twist over the pelvic to rest on the right hand. The left leg over the right in semi flexed position. There are clear traces of a wooden coffin poorly preserved.

Beside the skeleton attached to its back a complete well preserved copper alloy bowl was found. Also a sharp blade of iron and wooden kohl pot were found in front of the body.

In this tomb a fire place located on the southern side of burial entrance was found with remains of charcoal, which have also been found beneath the skeleton under the ribs and hands. Charcoal samples from this tomb have been used for dating, which we will discuss in details in chapter five.

2. 3. Dangeil Cemetery WTC

This discussion will incorporate similar materials from the Meroitic cemetery at Dangeil, which is an ongoing excavation project directed by the researcher. Dangeil cemetery (Wad Toun Cemetery WTC, 1st century BC – 1st century AD) is situated less than a kilometer to the north of the main site of Dangeil and was discovered in 2003 during the excavation of a drainage canal. There are no archaeological features visible on the surface. The site is endangered by the expansion of the modern Muslim cemetery. The goal of the mission is to excavate the area surrounding the Muslim cemetery in order to save the Kushite graves from destruction caused by the digging of modern graves.

2. 4. Magnetic Survey at Berber Cemetery and the Discovery of Tomb Superstructures

With the exception of three tombs so far, the cemetery site at Berber shows no traces of any visible built superstructures covering the graves. However, it is likely that the tombs were covered by a low mound of gravel, which is a common feature in some Meroitic cemeteries such as Gabati (Edwards 1998, 11). In fact, low mound of gravel is covering the ground surface of the cemetery site at Berber, which is clearly different from the soft sand of the surrounding area.

A geophysical survey method had been incorporated in order to identify the size of the cemetery at Berber and to recognize its boundaries. The survey was objected to discover extension of the cemetery and locating graves in the surveyed area. Magnetic prospection was carried out at the Berber Cemetery site during the fourth season in 2013. The magnetic survey was carried out using a Geoscan Fluxgate Gradiometer (FM256). The survey was laid out in a squared grid pattern (20x20 m). The measurements of each grid were collected in parallel traverses 0.5 m apart with a sample interval of 0.25 m. The survey covered an area of about 9600 sq. meters (ca. 1 hectare) (Figure 4).

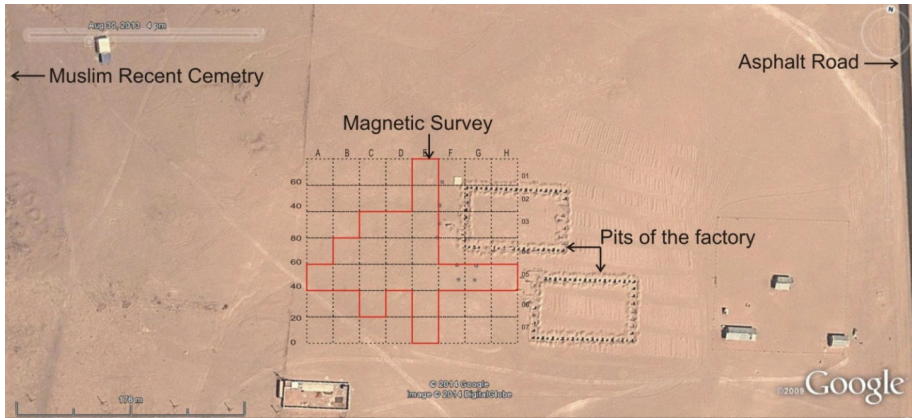


Figure4: Magnetic Survey Grids at the Cemetery Site

The magnetic show some interpretation, the black and white colour in cluster area indicates anomalies associated with red-burned bricks. These areas showing cluster of graves, some of these graves may contain red burned bricks. The anomalies are probably associated graves, which are confirmed by the excavated graves nearby. The enhanced regular anomaly in E03, shown by yellow circle it is a grave regular structure, confirmed by the excavation in the grids. In fact, total of three mud bricks pyramids foundation varied in size have been discovered (Figure. 5).

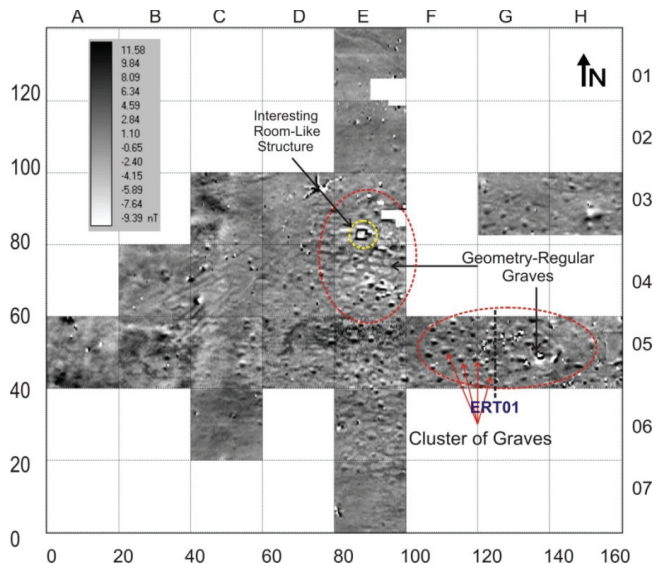


Figure 5. Magnetic map showing some anomalies associated with burned bricks and the square shaped pyramid.

The pyramids are square in shape have an offering chapels facing the east (Plate 2). The pyramids were built in mud brick jointed with a whitish mortar (Plate 3). It has been well documented that royal and elite tombs are well known with their substantial stone pyramid superstructures. However, less important tombs have been noticeable by mud brick pyramids, which accompanied by inscribed offering tables (Edwards 2004, 174).



Plate 2. Square shaped Pyramids have offering chapels facing the east

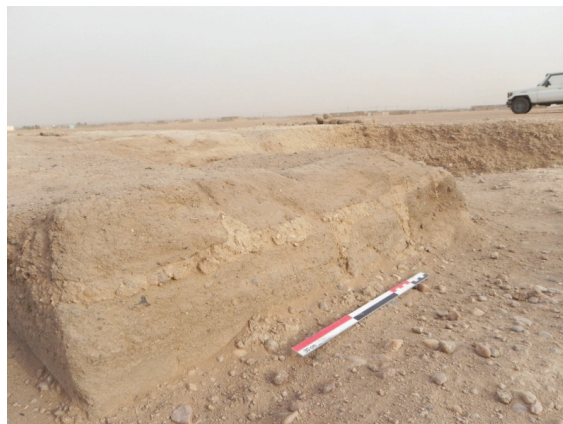


Plate 3. Mud brick jointed with a whitish mortar

The Meroitic cemetery at Dangeil, which is the nearest example to Berber, suffered also heavy surface damage and no traces for tomb superstructures and gravel are noticed in the area, the ground surface is consisted only of clay soil (Anderson and Ahmed 2011, 85). In view of the nature of the Meroitic cemeteries at Berber and Dangeil they were geographically and chronologically the same but presenting different types of tomb superstructures, since it is possible to have gravel mound at Berber and no visible evidence for tomb superstructures have been noted at Dangeil.

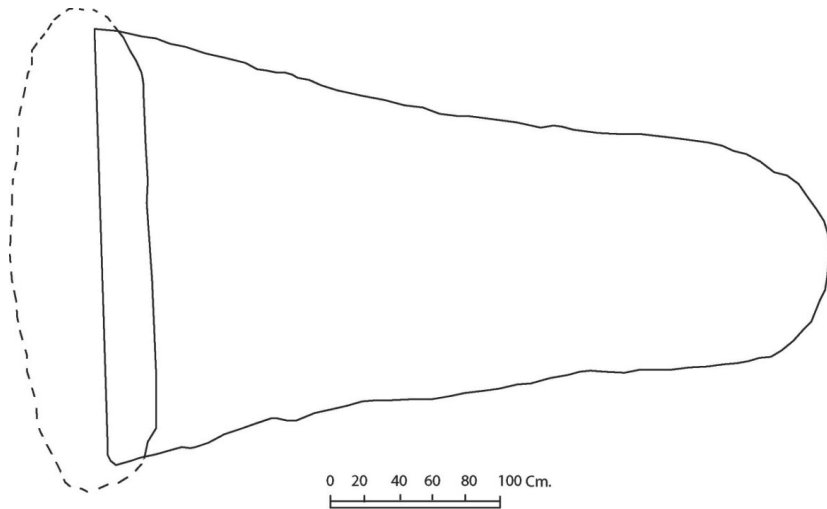
In the Meroitic burials in some rural areas it seems that mounds were the main structure of the tomb superstructures. But also mud-brick superstructures have been noted in four graves at Gabati in the Meroitic heartlands outside Meroe (Edwards 1998, 13). However, in the north, the presence of mud-brick superstructures is common in Meroitic cemeteries for example such as Sai and Sedenga (Rilly and Francigny 2010, 63, 56), Amir Abdalah, and Faras (Welsby 1996, 88).

In short, the Meroitic burials in the region of Berber including Dangeil were presenting different types of superstructures when compared to the Meroitic cemeteries in the north and in the region of Meroe itself. With the presence of mud brick pyramids as clear superstructure the cemetery at Berber combining both northern and southern burial traditions.

2. 5. Tomb Substructures

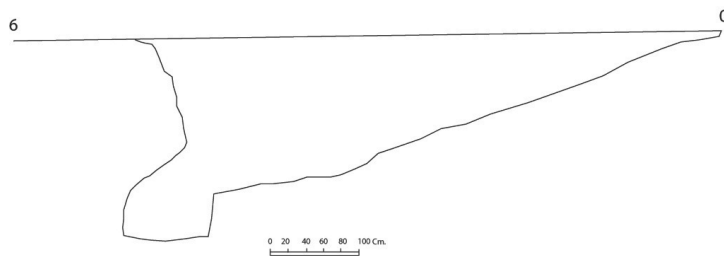
Regarding the tomb structures: All of the excavated tombs at Berber cemetery were accessible through a sloping, east-west orientated entrance descendary leading to an oval shaped north-south orientated burial chamber situated on the western end of the grave (Figure 6, 7). Only a few examples show different tomb structure. It has a similar east-west descendary, but the burial niche is rectangular in shape, looking somewhat 'foot-shaped' in its section (Figure 8, 9). This rectangular axial, east-west chamber is one of the two forms of grave substructure also known from the Meroitic cemetery at Gabati (Edwards 1998, 196), together with the oval shaped north-south chambers, which were the norm at Gabati and Dangeil (Anderson and Ahmed 2011, 85) and in Berber as well (Bashir 2010, 74). In all the excavated tombs at Berber there was a vertical step down into the chamber at the base of the shaft. The burial are generally varied in size both descendaries and burial chambers are presenting different length. The smallest is 0.40m - 0.90m long burial niche. However, the

largest burial niche is 2.40m – 2.60m long. All descendaries are 4m to 4.60m long. Generally, small tombs are used for children such as in tombs BMC 20. However, there are examples of adult had been buried in small burials like BMC 17.



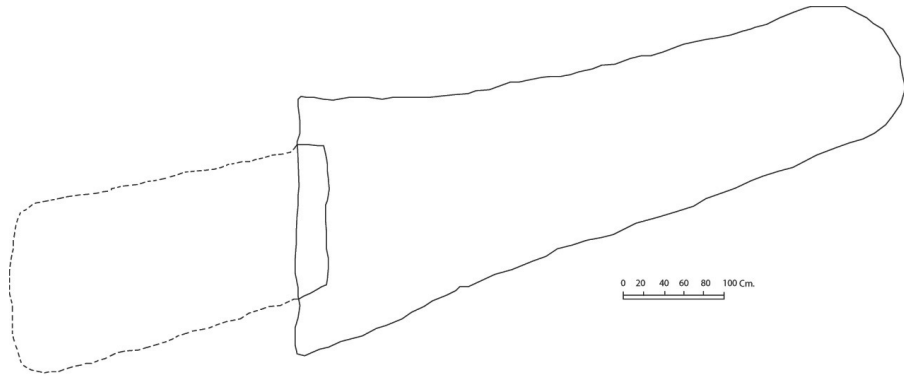
BMC. 31, Top Plan

Figure 6: Top plan of the common burial type at Berber



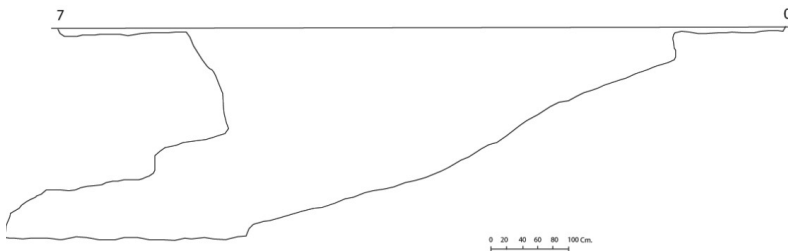
BMC. 31, Section

Figure 7: Section plan of the common burial type at Berber



BMC. 34, Top Plan

Figure 8: Top plan showing rectangular axial, east-west burial



BMC. 34, Section

Figure 9: Section plan showing rectangular axial, east-west burial

2. 5. 1. Blockage:

In all the excavated tombs at Berber cemetery burial chambers had been sealed with blocking wall located at the end of the descandary. The wall is consisted of mud bricks with some examples of fired bricks. The standard type took the form of number of rows of mud bricks wall with the upper row being built in vertical position to allow closing the burial niche (Plate 4).



Plate 4: The standard type of blockage

The use of bricks in the blockage is indication of a possible higher social status of the deceased in Berber cemetery. In general, stones are widely used for this purpose in common Meroitic tombs as it has been noticed at Gabati for instance (Edwards 1998, 195). But there is no use of stone slabs had been noted at Berber.

The damage caused by the trenches in some tombs like BMC 4 and BMC 6 allows us to see the blocking wall of the burial entrance from the opposite side, which is usually not possible in a normal excavation, but on the other hand we lost the burial contents, since the trenches cuts directly the burial niche.

According to the recorded tombs at Berber it is clear that the well built blocking wall is associated with the north-south oval shaped burials. However, the blockage in tombs with an east-west rectangular shape chamber was consisted of a crude wall of incomplete mud bricks bonded with a mud mortar.

2. 6. Positions

The position of the deceased in the recorded tombs at Berber cemetery was related to the two forms of burials chambers in use. The common semi-flexed and contracted

positions were associated with the north-south oval burials, and the extended position is normally found in east-west burials. However, there are exceptional examples, and some unique positions had been recorded.

The positions documented thus far are first, an extended position, with the body lying on its back and the hands resting on the pelvic area. The skeletons were orientated north south with the head to the south. Normally, this position has been found in association with wooden coffins (Plate 5).



Plate 5: Extended burial with wooden coffin

The skeleton in tomb 34 was found in an extended position on its back orientated east west with the head in the west. The body was buried on a wooden bed with no legs or more probably a bier. This could be a unique example of such a stand with its frame made of long wooden panels.

Second, the body was placed in a semi-flexed position, laid on the left side and commonly orientated north south, with the head to the south facing west (Plate 6). In such graves, the burial of more than one skeleton was often observed, which raises the importance of conducting a detailed physical anthropological study in order to identify relationship between the individuals.



Plate 6: Semi-flexed burial

In the third position found, the body is orientated north south, contracted on the left side with the hands around or holding the legs, with the head to the south facing west (Plate 7).



Plate 7: Contracted burial

In one example the deceased was buried in contracted position with the entire body facing down (Plate 8). This example considered unique, it is an adult female had been buried in small burial niche with no grave good. Such small tombs with no materials accompanying the deceased were very rare at Berber and this tradition can only be seen in children tombs.



Plate 8: Unique example with the entire body facing down

Position and orientation of the burials are elements usually pointed to the different cultural traditions. However, it is clear that the general east-west orientation of the tomb shaft and north-south or east-west orientation of the burial chambers is dominated at Berber cemetery. The use of different burial tradition indicate the long use of the cemetery, which have been evident through the magnetic survey results that show clear extensions for the cemetery.

2. 7. Some Comments on Skeletons Preliminary Studies

Physical anthropological study of the human remains from Berber was established under the umbrella of Amara West Workshop for Physical Anthropology in 2011; however, the well preserved skeletons from Berber encouraged our colleagues

Michaela Binder and Mohammed Saad Abdalah and Anna Pieri to initiate the Bio-archaeology of Berber Meroitic Cemetery Project. In fact, all skeletons were at least 90% complete and in several cases, considerable amounts of hair and other soft tissues were preserved as well.

The excavation records identified total of 42 Skeletons in the 38 excavated tombs at Berber. Physical anthropologists examine 34 of them¹. The study of human remains from Berber is focusing on the identification of sex and age, palaeo-pathology, infectious disease, trauma and dental pathologies.

The distribution of the excavated tombs at Berber on the basis of identification of sex on the burials provided evidences shows no gender differentiation. The feature of the tombs re-use had been documented in most of the excavated tombs at Berber and multiple burials include two or three skeletons were recorded in most of the excavated tombs with an average of two skeletons per tomb are considered as the common phenomenon at Berber cemetery. However, in some examples male and female were buried in the same grave and also male or female and a child in one tomb was also noticed (Bashir 2013, 99).

The reuse of burial by reopening the tomb to insert a second body is clearly recorded in three different examples from the Meroitic cemetery at Berber. Similar example was found at Gerf-Hummar in Dongola reach where a disarticulated skeleton had been deposited over blockage of stone sealing the original burial. So whether reused burial or the depositing of skeleton in burial it seems that it is a matter of keeping family members together because probably of association with some local beliefs (El-Tayeb 2012,77). In the first example from Berber at tomb BMC 3 an articulated skeleton of an adult male was revealed in the main burial niche, and in later period an adult female had been buried over the blocking wall of the first burial. A similar example in tomb BMC 33 shows a disturbed skeleton of an adult female was found accompanied by rich funerary furniture and a later burial had been revealed displaying an adult male skeleton with his grave goods over the blocking wall of the earlier burial. These two examples are presenting a female had been buried after a male and a male was buried after a female, which indicate kind of family burial place. However

¹ Some skeletons were lost in a fire accident in one store at National Corporation for Antiquities and Museums in Khartoum (2010).

it is important to notice that female burials were most probably the richest, since when the earlier tomb was a female burial it has been found disturbed as a result of plundering, which was not the same case in tomb BMC 3 example.

The third example of this type is tomb BMC 17. This tomb has been reused by displaying of a child over the blocking wall of a burial of an adult female buried in extraordinary position. It is an articulated skeleton found in contracted position and the entire body was facing down.

In tomb BMC 32 an articulated skeleton of an adult male was found in the southern side in the burial niche and on the northern side two child skeletons were found, one of them was wearing necklace of unique glass beads (see in the following chapter). Also in tomb BMC 37 a disturbed skeleton of an adult male was found in the southern side in the burial niche and a child bones were found in the northern side.

Multiple burials of the same gender had also been observed at Berber. In tomb BMC 16 two articulated skeletons for adult females were found, both at the southern side of the burial, one at the eastern side and the second in front of it. It seems more likely that both were buried at the same time? Also in tomb BMC 23 two adult females were found disarticulated and disturbed. A third example from tomb BMC 26 shows two articulated skeletons for adult males, one in the northern side of the burial laid on semi-flexed position and the second in the southern side on contracted position.

Among the excavated tombs at Berber there are some examples for single burials. In tombs BMC 4, 27, 29, 30, 31 the skeleton was found in the southern side of the burial niche. However, in tomb BMC 4 a female skeleton was found in the southern side and the display of the finds recorded from this tomb suggest the existence of multiple burial, but the damage on the site affected the northern part where a second skeleton has probably been placed.

Child burials were recorded in tombs BMC 18, 20, 21. All had been found in small burial niches with no finds, and it seems that there was no identified part of the cemetery for child burials.

The extended burials had been revealed in the excavated tombs at Berber are often single burials. Also they were associated with wooden coffins and biers. Such examples are tombs BMC 8, 24, 34, 38. The example of BMC 24 shows an articulated

skeleton of an old female found in a rich tomb in a poorly preserved wooden coffin. In BMC 8 sex has not been identified, but it is a rich tomb with wooden coffin as well. Tombs BMC 34 and 38 shows single burial with east-west orientation for the body and it contain a wooden bier.

Multiple burial were common tradition in Meroitic mortuary practices recorded at the excavated tombs in Lower and Middle Nubia apparently reflecting the reuse of tombs most probably for related individuals. The Meroitic cemeteries witness clear disturbance as a result of the reuse of the same grave and the tomb robbing which was a widespread feature of that period (Edwards 2004, 174). It seems that rich graves were robbed soon after burial by people who knew the nature of the materials buried with the deceased.

At this point, the skeletons from the excavated tombs represent only a very small sample which may not be representative of the entire group therefore any results can only be seen as preliminary. With more skeletons available it is hoped to extend this study and to integrate further contextual data about subsistence and modes of settlement in order to obtain a better understanding of health and living conditions of the people inhabiting the Berber Region during the late Kushite period.

Modern archaeological studies using multi disciplinary approaches have thrown more light on the social structure of the past communities, and gender archaeology is part of the study of this social structure. In fact, funerary archaeology is a crucial element of any research into past gender categorizations. Physical anthropological analysis of the skeletal remains is the main method in the identification of sex and age, and the recovery of ancient DNA provides new precise method of sex determination. The studies of physical anthropological analysis can detect trauma, which can be interpreted according to the archaeological context. Thus, further researches on the recovered material from the Meroitic cemetery at Berber can be used to demonstrate the structure of the Meroitic society in the region of Berber,

Chapter Three

Description and Classification of the Archaeological Finds from Berber Cemetery

3. 1. Introduction

The present work deals with different objects recorded from the archaeological site at Berber dated to the Meroitic period. The objects have been recovered during the ongoing archaeological excavations in Berber cemetery from the last four field seasons (2009, 2010, 2012, and 2013). The materials are dated to the period between the 4th century BCE and the 4th century CE as a wide range of date. These objects are stored in Sudan National Museum in Khartoum and some has got SNM object number. In addition, materials from the excavated tombs from a similar Meroitic cemetery at Dangeil 12 km north of Berber will be incorporated for comparative objective. The ongoing excavations at Dangeil cemetery have been carried out by the researcher since 2003 and the discovered finds are still under study and stored in the site at Dangeil.

The excavated tombs from Berber cemetery yielded a large number of objects, with great diversity in both the type of material and the quantity found in each tomb. There are large amount of pottery vessels recovered from Berber. Their classification is based on fabric type. However, the presentation and classification for finds other than the pottery is based on the criteria i.e. type and material. I used an inventory form, which I designed for recording and identifying the archaeological finds during excavation (see appendix. 2).

This chapter will deal with a brief description for the different types of materials and discussion of the various finds showing their significant in comparison with materials from Dangeil as a similar geographical region and other Meroitic north and south of Berber. Their measurements are listed in a catalogue of finds attached to this work (see appendix 3).

3. 2. Jewelry and Ornaments

The presence of personal adornments in the excavated tombs at Berber does appear to be a common phenomenon. Beads of different materials were the most frequent

among the finds; however, a considerable amount of other artifacts had also been recorded.

3. 2. 1. Beads:

Over 1055 beads of different types were found in 14 of the 38 excavated tombs at Berber. Largely of faience and glass represented in different forms similar to collection from Meroitic cemeteries at Gabati (Edwards 1998, 63), and Dangeil (Bashir and Julie 2014, 17). The criteria I used for beads classification is based on raw material, since beads of different materials can occur in one context.

Beads of Glass:

Berber cemetery provided some unique forms and types of beads of glass. Among the recovered beads is a unique type of rectangular gilded-glass bead (BMC 32) (Plate 9). These beads are so called gold-in-glass beads with figurative design. Gold-in-glass means they were made of two layers of glass with gold foil between. Beads have a net pattern on one side and a figurative motif of Hippocrates with finger in mouth. Gold-in-glass beads with figurative motifs are rare on the whole and they have been found primarily in Egypt and Nubia but also in southern Russia and even Iran. It said to have been produced in Egypt, although their production has been also laboratory confirmed from Pakistan (Personal contacts with Joannah Then- Obluski 25 June 2014).



Plate 9: gold-in-glass beads

There are also large numbers of other types of gilded glass beads. Among them is a unique type of cylindrical bead, with ledges at both ends, several of which, found around the hands in an intact burial (BMC 31), possibly represented the remains of a bracelet (Plate 10). The common rounded gilded glass beads are often found in large

quantity in intact burials at Berber (BMC 12, 31, 33), which probably from single necklaces or bracelets.



Plate 10: Gilded cylindrical shaped beads

Beads of Faience

Beads of Faience were the most common type of beads found in 9 of the 14 graves with beads (BMC 2, 4, 5, 9, 12, 17, 27, 30, 31). Both cylindrical and disc shaped beads of faience were found (Plate 11).



Plate 11: Different types of beads including cylindrical and disc shaped faience beads

Beads of stone

Beads of stone represented by quartz and carnelian beads were found in (BMC 1, 9, 12, 17, 27, 31, 32). There were often rounded in shape but also some conical shape beads of quartz and carnelian have been found attached to other types of beads in a well preserved part of a necklace shows its original layout (Plate 12).



Plate 12: Conical shaped beads of quartz and rounded of carnelian

3. 2. 2. Ear Stud

Two gold ear studs in a good state of preservation were found in the fill of the burial chambers of BMC 23 and BMC 33; one has a clear depiction of the god Bes on its exterior surface, which makes it unique (Plate13). The second represented a form very similar to two ear studs the first was found in pyramid Beg. W. 453 at Meroe (Dunham 1963, 154), currently at the Museum of fine Arts in Boston and the second in Garstang excavations at Meroe (Wenig 1978, 248).

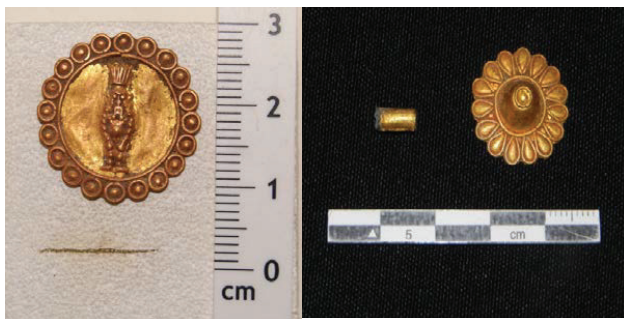


Plate 13: Ear studs of gold

There are other two ear studs similar in shape to those of gold, but they are smaller in size and made of copper alloy: one has traces of gold foil found in BMC 16, and the second found in BMC 10.

3. 2. 3. Signet rings

Copper alloy rings:

There are three signet finger rings of copper alloy have been found at Berber cemetery. Numerous examples of copper alloy signet rigs are well known from both royal and non-royal cemeteries at Meroe. A signet ring with flat top surface found in BMC 3. The oxidation has made it very difficult to determine what (if anything) was inscribed in the flat oval top. The finest example is a signet ring painted on its flat square flat top surface found in BMC 31 (Plate 14). The third example is a signet ring with inscribed flat oval shaped top, but the oxidation has made it difficult to identify that.



Plate 14: Copper signet ring painted on its flat square flat top surface

Iron rings:

Only two iron rings were found at Berber: one is complete signet ring found in tomb BMC 31 (Plate 15). It is a signet ring with inscribed flat oval shaped top, but the corrosion has made it difficult to identify the decoration. The second is a top corroded part of iron signet ring with flat inscribed oval shaped top found in BMC 9.



Plate 15: A signet ring of iron with inscribed flat oval shaped top

3. 3. Objects of Wood

Containers of wood probably ebony, such as kohl pots are common finds in many Meroitic cemeteries, however the well preserved examples from Berber are among the few found in central Sudan. Five well preserved examples of kohl pots have been recovered at Berber cemetery. In addition, three small containers of wood were also found. In fact, we don't know what they were containing.

3. 3. 1. Wooden kohl-pots

All the five wooden kohl pots were identified by remains of kohl inside them. These objects have been recorded from four tombs (BMC 1, 6, 12, 27) two of them were found in BMC 12. The recovered kohl pots are well preserved black worked dens wood cylindrical in shape with flat base. Some have flat back like oil lamp, which indicate that they can be attached to another surface. The decorative sections in some examples are consisted of number of spheres stuck together, or wide convex carved facets decorated in incised lines. Some have clear neck part and in one example we found a lid attached to the kohl pot (Plate 16).



Plate 16: Wooden kohl pots

3. 3. 2. Wooden kohl-Sticks

Kohl sticks of wood are also represented in Berber Meroitic cemetery. Six kohl rods in poor state of preservation were found in five tombs (BMC 6, 12, 15, 27, 31), two rods found in BMC 6. Three are simple thin rods, and the others have clear handle parts take the shape of a forge or flat end or rounded end.

3. 3. 3. Wooden Containers

Among the three recovered wooden containers one is a rounded shape wood object probably a lid of a container or it can be container itself. It has a flat base with pointed part on the middle recovered from BMC 6. Two Small containers of wood found in BMC 2. Both pots are decorated in incised lines in circular shape, and they have lids, and along the lids are relief lines as well (Plate 17).



Plate 17: Small wooden containers

3. 3. 4. Wooden Coffins

Wood is also represented in this cemetery in the form of coffins. Three further examples indicating the uses of coffins were noticed (BMC 8, 24, 34). In BMC 8 example, two long pieces of wood were found beside the body. In BMC 24 it appears to look like a box (Plate 18). The third example is probably a bier in tomb 34.

However, remains of wood have been noted in number of the disturbed tombs, which indicate possible common use of coffins in Berber Meroitic Cemetery.



Plate 18: Remains of wooden coffin

3.3.5. Unidentified wooden objects

Well preserved cylindrical shaped piece of wood 22cm long by 4.5 wide carved wooden object found in BMC 2 (Plate 19). It is worked in series of rounded discs consisted of 11 parts 16mm wide convex carved facets and at either end a 1cm thick 4.5cm in diameter base with a lip carved on the two ends. Function unknown, but probably a bed leg.



Plate 19: Cylindrical shaped piece of wood (bed leg)

3. 4. Textile

There is one object of textile has been recovered at Berber cemetery. It is a poorly preserved box of textile which was found in the partially intact tomb BMC 24. Its function is unknown (Plate 20). Also traces of textile were observed in some of the burial associated with pottery, which we think it may used as a cover for these pottery jars.



Plate 20: Box of textile

3. 5. Copper alloy Bowls

Three copper-alloy bowls were discovered in this cemetery. All are in an excellent condition and are also considered among the most well preserved finds from the cemetery of Berber. The three examples of copper alloy bowls are simple in design. There are similar to the imported vessels found at the elite cemeteries at Meroe and to the a few examples from Gabati and Kadada (Edwards 1998, 62) and from Dangeil (Bashir and Anderson 2014, 20). The first example BMC 1 is a complete and well preserved bowl of copper alloy showing only limited evidence of oxidation decorated in floral patterns, and along the rim is geometric pattern of decoration (Plate 21). The second BMC 8 is well preserved bowl of cooper showing only limited evidence of oxidation decorated with pairs of concentric lines spaced 1mm apart running around

the perimeter of the bowl. The first set is 1cm below the rim and the other pair of lines is 11mm below the first set. There are also two circles at the base of the bowl on the inside. The third one BMC 38a showing clear evidence of oxidation and no visible decoration have been observed.



Plate 21: Copper alloy bowl decorated in floral patterns

3. 6. Copper alloy fittings and fastening

Fragment s of copper alloy fittings were found in seven tombs at Berber (BMC 1, 9, 12, 15, 26, 30, 31). Most were broken pieces and they would all appear to have been folded and nailed onto wooden sheet. It seems likely that they were fitting on small boxes (Plate 22). Such similar fittings fragments were recovered from Meroe (Shinnie and Bradley 1980, 188), Musawwarat Es Sufra (Hintze 1962, 185) and from Dangeil (Bashir and Anderson 2014, 20).



Plate 22: Copper alloy fittings

3. 7. Glass

Glass bottles are also among the finds found in the excavated tombs at Berber. Two complete glass bottles and remains of smashed objects of glass were found in five tombs (MBC 1, 2, 23, 24, 33). The complete two bottles are classic well preserved examples: one of a coloured glass bottle from BMC 33 (Plate 23) similar to well-known example from Meroe, now in the Sudan National Museum SNM 525. The second is a complete well preserved long neck glass bottle light green in colour found in BMC 2, and similar smashed green glass bottle was clearly noted in BMC 1.

It is well known that very little glass has been found in Meroitic cemeteries south of the Third Cataract and very little found at Meroe (Edwards 1998, 65). None being found at Kadada and only one vessel and two fragments were found at Gabati. However, some similar glass bottles were found from Dangeil (Bashir and Anderson 2014, 20).



Plate 23: Coloured glass bottle

3. 8. Iron

There was little iron other than finger rings found at Berber cemetery. There were fragmentary pieces found in four tombs (BMC 1, 12, 13, 15). There were mainly fittings part, one nail, and unidentified pieces.

3. 9. Faience

Faience object other than beads and pendants are not common finds in Meroitic cemeteries. Fragmentary pieces and part of vessel were the only recorded faience from Gabati (Edwards 1998, 67). A few faience vessels are documented at Meroe city and other object from temple context. In the Meroitic cemetery at Berber only incomplete faience part of an object was found on the surface of a disturbed tomb decorated with floral pattern measured 5 cm x 2, 5 cm (Plate 24). However, in the Meroitic cemetery at Dangeil a vessel of faience and a complete fine box of faience decorated and painted in Hourus head were found (Plate 25).



Plate 24: Fragment of faience



Plate 25: Decorated box of faience from Dangeil

3. 10. Ivory

Well preserved cylindrical kohl container of ivory with a lid was the only object of ivory has been recorded in the excavated tombs at Berber. It has small black rounded handle measures H. 21 cm, D. 4,5 cm thick found in MBC 6 (Plate 26).



Plate 26: Kohl pot of ivory

3. 11. Meroitic Graffiti

An offering table, with an inscription in cursive Meroitic running around the spout, was found in BMC 6 (Plate 27). It is considered one of the most important objects in this collection. Dr Claude Rilly the director of the French Archaeological Unit (SFDAS) studied the offering table and reports as follows:-

Sand stone offering table (BMC 6 / 46). Height: 276mm, Width: 274mm. The lower part, including the initial invocation and the beginning of the name of the deceased, is badly abraded. The decoration is attested from the mid 2nd to the middle 3rd century AD.

The paleographic style stands at the border between Transitional C and Late A. These elements fit with a date around the middle of the 3rd century (*c.* AD 250). If my reading of the personal name of the deceased is correct his name would be *Sobt* (pronounced Sobata). *Sob* is known from different texts, particularly Kharamadoye's inscription at Kalabsha, and is used to describe an unknown deity, whether it was actually the name of a god or an epithet is uncertain. *Sob-se-l* should mean "he (she) belongs to *Sob*".



Plate 27: Offering table, with an inscription in cursive Meroitic

Chapter Four

Meroitic Pottery from Excavations of the Cemetery at Berber

4. 1. Introduction

A first mission of study of the Meroitic ceramics unearthed from Berber cemetery during the archaeological campaigns 2009 and 2010 was conducted in 2011. The project involved a student from the Khartoum University, Suzan Adil, as a trainee and Romain David from the SFDAS. The first examination led to the publication of an article co-authored by the researcher and Romain David. As the last archaeological investigations in 2012 and 2013 provided numerous materials, another mission was planned in October 2013 in order to analyze all the funerary ceramics revealed by the rescue excavations. The study of ceramics has been carried out by Romain David and the researcher and financed by SFDAS.

The study of the ceramics from the excavated tombs at Berber examined in general total of 206 complete bowls and jars from 27 excavated tombs. Each complete pot was labeled with the first letter of the site followed by two numbers: the first is the grave number and the second corresponds to the single objects. The last one includes all the objects, ceramic and other items, found in each single grave. In fact, findings of large amount and well preserved pottery constitute an important feature for the Meroitic cemetery at Berber. Complete pots have been classified according to a fabric typology. Variation in clay, temper, inclusions and surface treatments were taken into account to establish the fabric typology.

4. 2. Ceramics fabric and form

The quality of the intact pottery from the excavated tombs at Berber for ceramologists used to deal with broken pieces has disrupted our capacity to distinguish the different types of fabric. But the variety of ceramic shapes as well as the exceptional preservation of the contexts offers a good understanding of Meroitic funerary ceramic in that region. Partly broken pots serve as bases for description of each fabric type. We had to use the chipped part of rim or scratched area on ceramics to attempt to fit a pot into one or another category. Hand lens with 10x magnification has been used to examine samples. Microscope with 40x magnification helped us to complete the general description. Variation in clay, temper, inclusions and surface treatments were

taken into account to establish the fabric typology. A wider study embracing all the sherds found within the site area is needed to obtain a real overview of the site's productions but we are still able to distinguish at least ten groups or sub-groups of fabrics linked with peculiar shapes.

4. 2. 1. Silt ware bowls

The most common fabric type is a rather fine, quite hard and dense silt ware (named fabric B1). When broken, light reddish-brown fringes with a fine light grey core or rarely a black core can be seen. Medium to frequent fine straw temper, sparse scratched particles of limestone, some fine to very fine sand, mica and red ferric particles are the main inclusions quoted. Only bowls of various shapes are made in that fabric. They are all red-slipped on both faces and can be burnished (B1a), smoothed (B1b) or polished (B1c). Different productions linked with the Meroe region can be isolated. Simple ledge-rimmed bowls are the most familiar among the funerary ceramic furniture (fabric B1a-B1b). Their rim can be elongated rather triangular and even quite rounded. The base appears sometimes flat or with a very low foot just sketched by the finger or a sharp tool. Three of them bear decoration at the top of the rim, one molded, another incised and the last one is painted. Numerous bowls have cracked bottoms. That characteristic marks appear during the drying phase, when the bowl is made by "throwing off the hump" (Robertson and Hill 2004 111-115).

4. 2. 2. Fine ware bowls

Fine ware samples are well represented among the Berber material. Two different groups have been distinguished. The first one is made from kaolinitic or white clay, smooth, quite hard and dense. The color range is from white to pinkish white. Sparse to medium inclusions of fine sand, some fine mica, limestone (0.5 to 1.5 mm), small red ferric particles (0.2 to 0.5 mm.) have been noticed. According to the different types of surface treatment, we separated this fabric in two sub-categories. Painted and sometimes stamped wheel-made bowls enter in B3a. Wheel-made bowls only red slipped outside and painted inside are in B3b. Parallels can be established with Nubia (Griffith 1924, 162) even the main distribution seems to be limited to Meroe region (Edward 1998, 146). Their presence in Nubia might bring to light trade activities from the South to the North, which we will discuss in later chapters.

4. 2. 3. Silt ware Jars

Jars made in silt ware (B6) are quite common. The break shows mainly light red outer fringes and a dark grey core. Some variability in the color has been quoted. Fringes can be redder with a black core. Frequent fine to coarse straw temper, fine limestone inclusions in medium frequency, little fine to very fine white, black, red particles and mica have also been quoted. Most of jars are coated with light red-orange slip. That type of container is usually found in graves as well as in domestic context (Edwards 1998, 146; Shinnie and Bradley 1980, 114).

One jar displays mark on the shoulder. It has been roughly traced by the potter's finger when the pot was still wet and just covered by a red slip. After firing, the prints remain the only unslipped area of the pot. Such marks might be cautiously compared to engraved motifs on stone in Beg N. 17. Most of the peculiar signs applied to ceramic are realized after the firing and would express the property of elite and a religious symbol within a funerary context. We can interpret our sign as an original mark of craftsman, maybe from a royal production center (Torok 1972, 42-44).

As we could not find fresh breaks on each pot, three jars classified beforehand as fabric B6 are liable to enter other categories. They seem to have been manufactured by coiling on a slow wheel and their shape is close to hand-made samples.

4. 2. 4. Hand-made bottles and jars

Hand-made production appears in some tombs of the Berber necropolis. Two fabrics have been isolated but sherds are missing to precise our observation. The first fabric (B7a, b) is a silt ware hackly, quite hard and medium to dense. We can observe light brown outer fringes and dark grey to black core in the fracture. Fine to coarse straw temper in medium quantity, some rather coarse limestone, fine sand and mica are the main inclusions.

Fabric (B8) is typical from the region south of Meroe. It is found in large quantity in Muweis and Wad Ban Naga and is attested as far as Qasr Ibrim (Rose 1996, 121). The color of the break is grey on the fringes with a wide brownish-red core. A lot of angular small to coarse quartz and white mineral inclusions are the main characteristics. Some micas and ash (?) are also visible. One jar with inward-sloping

short neck and globular body is the only sample quoted so far. It bears short lines and crosses incised before the firing.

4. 2. 5. Fabric Types

B1: Nile silt, rather fine, quite hard and dense. When broken, fringes light reddish-brown (7.5YR 6/4) with a fine light grey core (2.5YR N6) and rarely black core (2.5YR N 2.5) can be seen. Medium to frequent fine vegetable temper, sparse scratched particles of limestone, some fine to very fine sand, mica and red ferric particles are the main inclusions quoted. The surface treatment let us to distinguish five different types which can be named B1a, b, c, d, and e:

B1a is the most represented among our samples. It corresponds to a red slipped and burnished surface (Figure 10).

B1b can be seen as a coarser version, with a light red wash simply polished. This ware is used for the numerous wheel made ledge-rimmed bowls found within the graves.

B1c is a finer version of B1a and is associated with thin walled bowl with a rounded base. The ware is slipped and burnished in a better way. This variant might constitute a full category after further analyses (Figure 11).

B1d its surface is covered by a cream slip and sometimes painted in imitation of fineware bowls of similar shape.

B1e which differs by a reducing atmosphere of the post-firing, giving a black surface to the vessels previously burnished.

B2: Nile silt, irregular texture, quite hard and crumbly. The break is homogenous light brown (7.5YR 6/4) in color. Frequent fine to coarse vegetable temper, some limestone particles, few fine quartz, very fine red ferric particles and mica are present. We observe that fabric on only one painted wheel-made jar (figure 14).

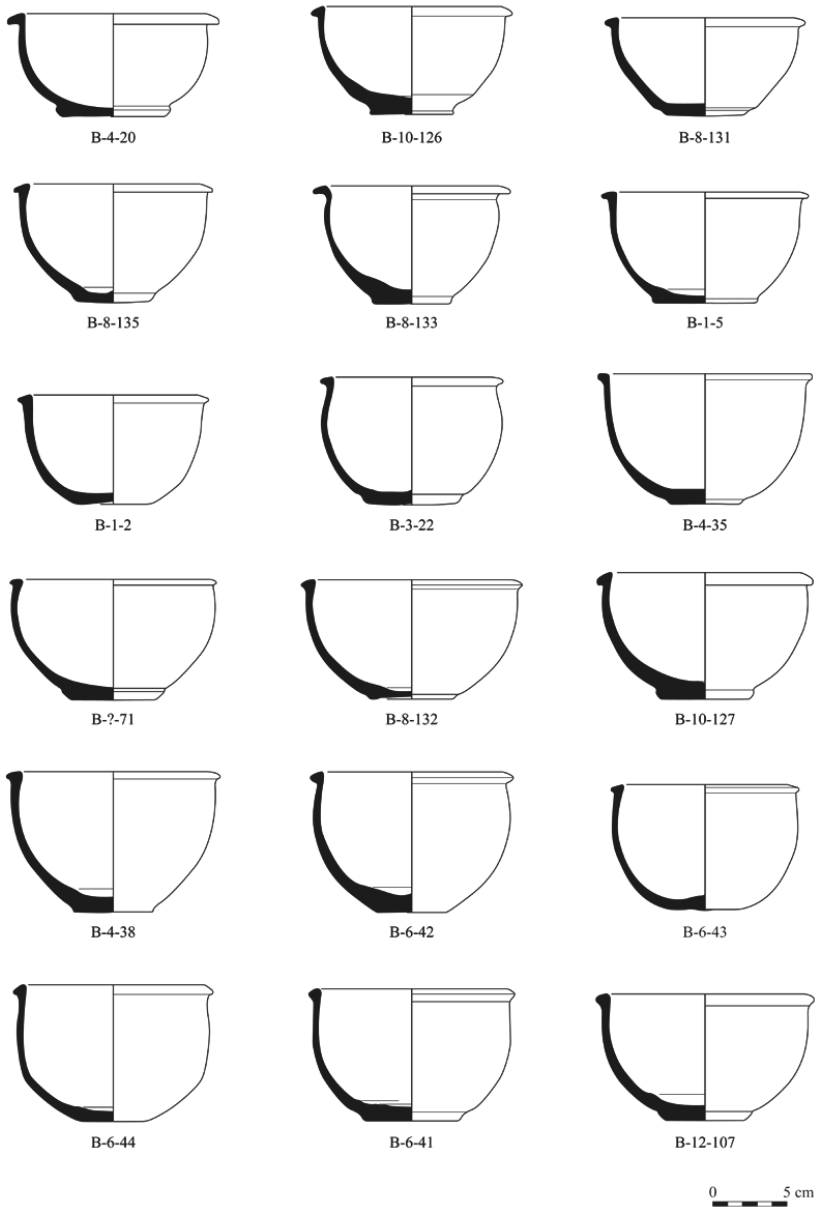


Figure 10: Ledge rimmed bowls in Fabric B1a.

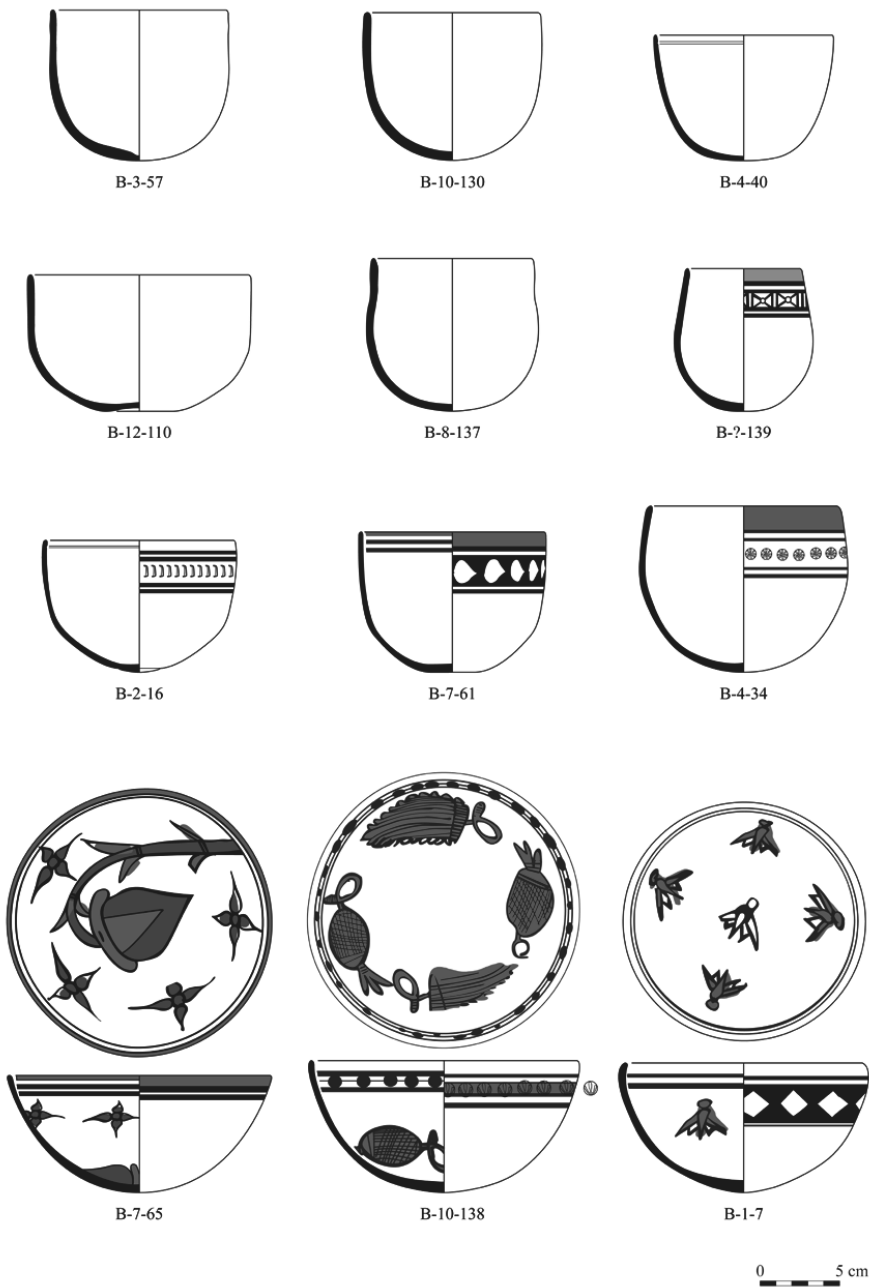


Figure 11: Plain bowls in Fabric B1c, Fine Ware cup and open bowls in Fabric B3a.

B3: Kaolintic clay, smooth, quite hard and dense. The color range is from white (10 YR 8/2) to pinkish white (5 YR 8/2). Sparse to medium inclusions of fine sand, some fine mica, limestone (0.5 to 1.5 mm), red and black small ferric particles (0.2 to 0.5 mm.) have been noticed. According to the different types of surface treatment, we separated this fabric in two sub-categories named B 3a, b.

B3a Painted and sometimes stamped wheel-made bowls (Figure 11).

B3b Wheel-made bowls only red slipped outside (2.5 YR 6/8) and painted inside (Figure 12).

These two categories have a common typology and might be mixed after further study.

B4: Kaolintic clay, fine, hard and dense. White (10 YR 8/2) in color, this fabric can be recognized by medium to frequent inclusions of fine sand, little fine mica, limestone (0.5 to 1.5 mm), red and black small ferric particles (0.2 to 0.5 mm.). This group includes wheel-made ledge-rimmed, footed bowls and one bottle with well polished surface. Painted motives can be applied on outer face (figure 12).

B5: Residual clay, fine, very hard and dense. The red color (2.5YR 6/6) of the break is due to the oxidizing atmosphere during firing. Very fine to fine limestone, black ferric particles and sand are found in medium quantity, fine sparse vegetable temper, red ferric and white mineral particles as well as mica are also present. This type is reminiscent of granitic inclusion and a source close to a mountain can be therefore suggested. This fabric is represented by a single wheel-made jar (Figure 13).

B6: Nile silt, irregular texture, hard and medium to dense. The break shows mainly light red (2.5YR 6/8) outer fringes and a dark grey core (2.5YR N4). Some variability in the color has been quoted. Fringes can be redder with a black core. Frequent fine to coarse vegetable temper, fine limestone inclusions in a medium frequency, little fine to very fine white, black, red particles and mica have also been quoted. This group remains quite heterogeneous because we could not find fresh breaks on each of the pots. Some samples classified beforehand as fabric B6 are liable to enter other categories. B-7-51, B-7-55, B-4-49 and B-2-15 would be the first concerned by this new appraisal (Figure 13).

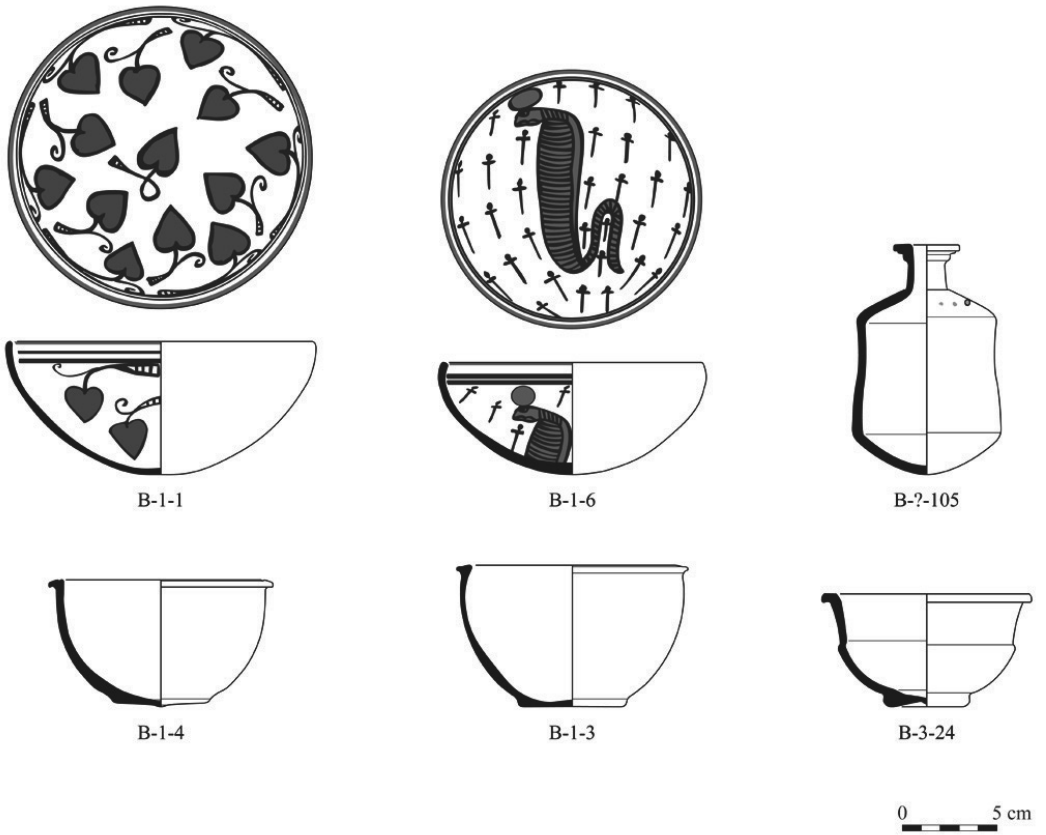
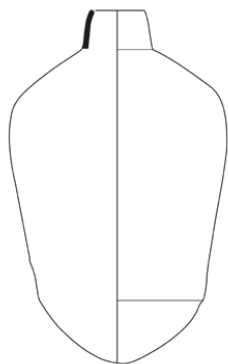
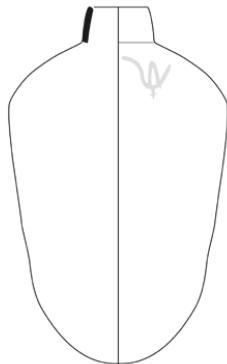


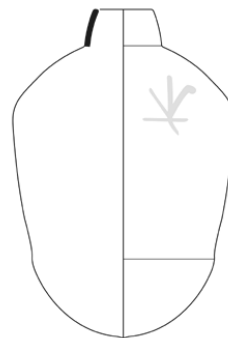
Figure 12: Open bowls in Fabric B3b, bottles and ledge-rimmed bowls in Fabric B4.



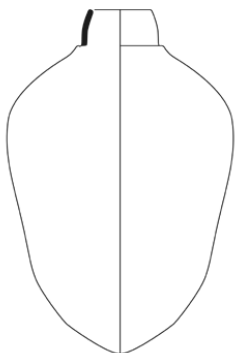
B-8-116



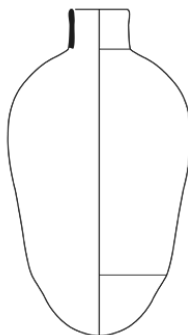
B-7-59



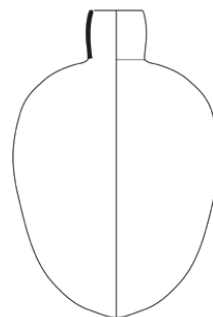
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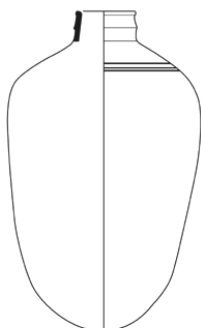
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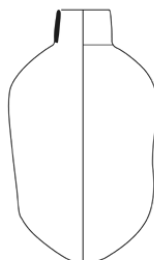
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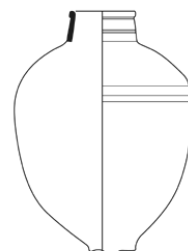
B-7-52



B-7-54



B-?-83



B-2-53



Figure 13: Different jars in Fabric B5-B6.

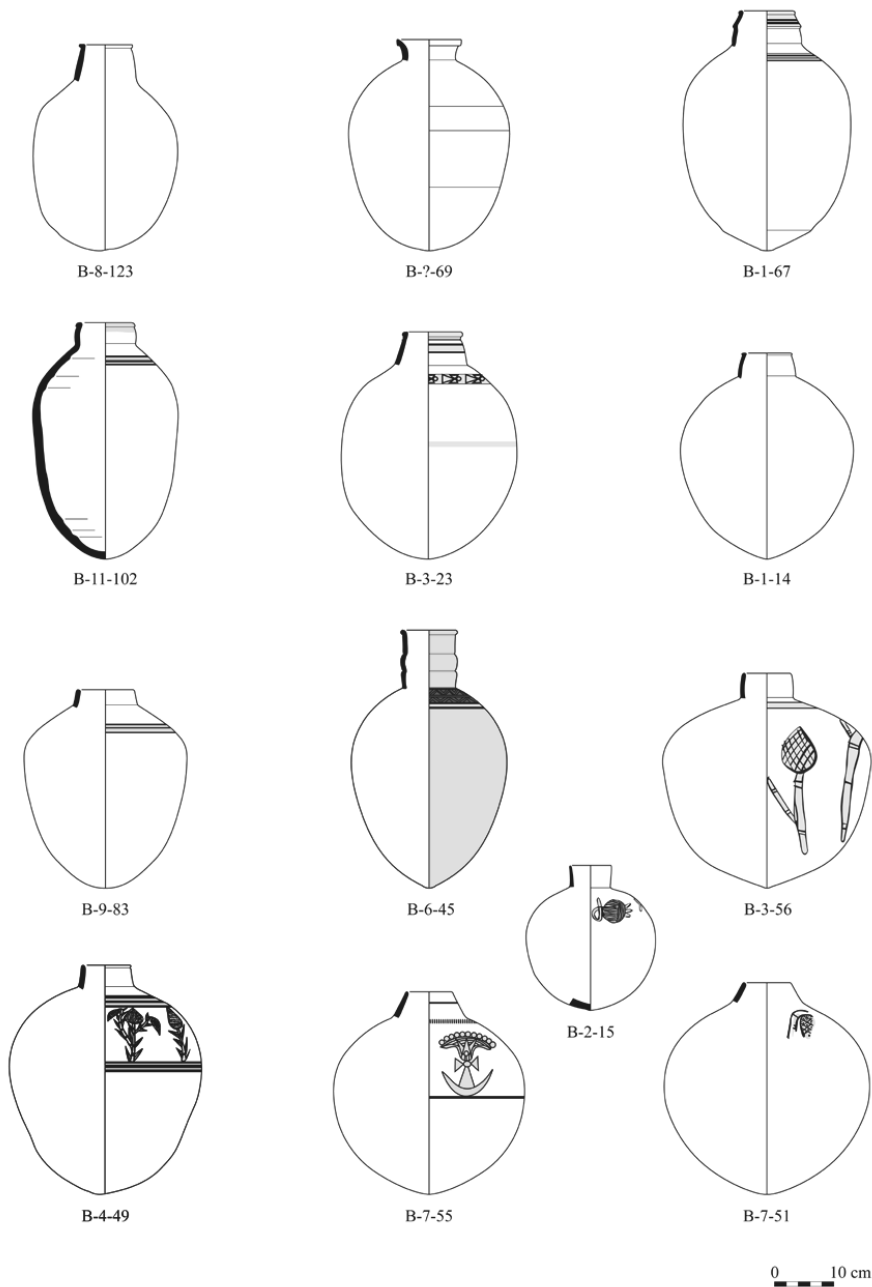


Figure 14: Various type of jars in Fabric B2 and B6.

B7: Nile silt, hackly, quite hard and medium to dense. Zoned fracture with light brown (10YR 6/3-4) outer fringes and dark grey to black core (7.5YR N3 or N2.5). Fine to coarse vegetable temper in medium quantity, some rather coarse limestone,

fine sand and mica are the main inclusions. Two hand-made jars correspond to that type. Description has to be completed with sherds (Figure 15).

B7a corresponds to black burnished surface often decorated with comb impressed designs.

B7b is less carefully finished, surfaces only being smoothed or without any surface treatment.

B8 is made with uncommon clay, hackly, quite hard and dense. The color of the break is grey YR5/1-6/1) on the fringes with a wide brownish-red (5YR 4/6) core. A lot of angular small to coarse quartz and white mineral inclusions are the main characteristics. Some micas and ash (?) are also visible. Some exemplars from Mouweis and Wad ban Naga are made in the same fabric. We can also suppose that the X-ware described in Dunham's publication is close to our B8.

B9 is recognizable by its fine, quite hard and dense Nile silt clay, black coloured core in which micas are the dominant inclusions. Some quartz, ferric oxides and limestone particles are also visible.

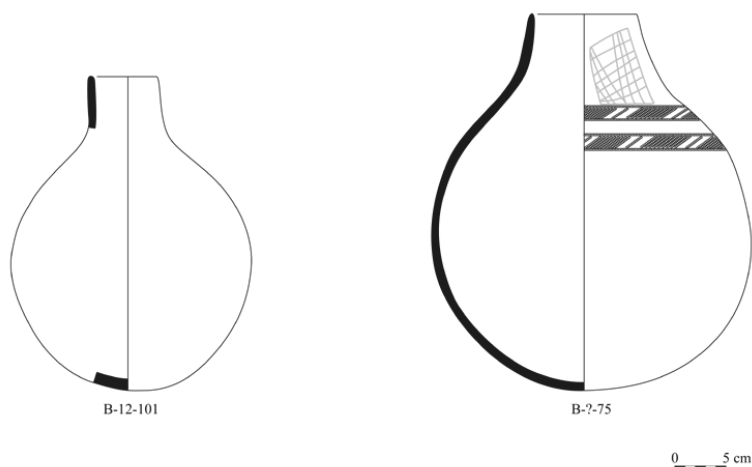


Figure 15: Hand-made jars in Fabric B7

4. 3. Presentation of the material from selected tombs

4. 3. 1. BMC 8

This tomb was excavated in 2010. Even if traces of robber's activities have been noticed, ceramic material as well skeleton remained untouched. The deceased, within a coffin, lies in extended position, ceramics being located at his feet, his head and on the western part of his cavity (Figures 16, 17).

B 8 - 131: Ledge rimmed wheel made bowl, very low foot, flat base. Red (10R 5/6) slipped burnished surface. **B1a**, but fabric was not seen.

H. 66 mm ; D. rim 136 to 139 mm ; Th. 4 to 8 mm.

B 8 - 132 : Ledge rimmed wheel made bowl, flat base. Red (10R 5/6) slipped burnished surface. **B1a** but fabric was not seen. Black traces of firing.

H. 80 mm; D. rim. 149 to 150 mm; Th. 5 to 9 mm.

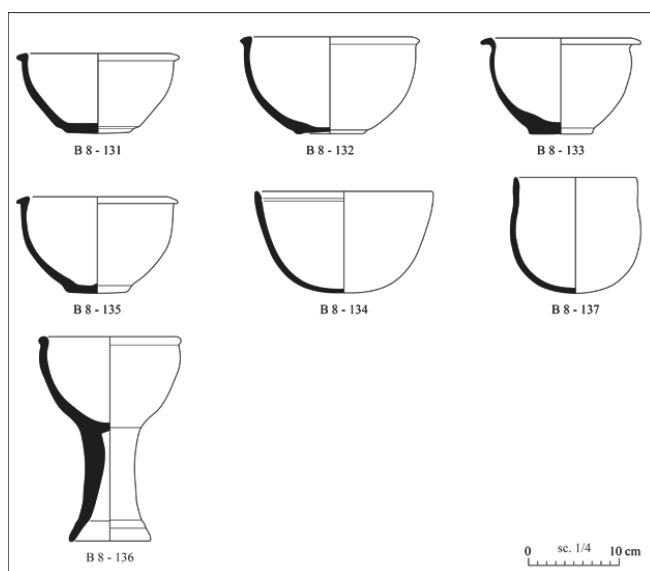


Figure 16: Open forms from BMC 8

B 8 - 133 : Ledge rimmed wheel made bowl, low foot, flat base. Red (10R 5/6) slipped burnished surface. **B1a** but fabric was not seen. Grey traces of firing.

H. 80 mm ; D. rim. 133 to 134 mm ; Th. 3 to 17 mm.

B 8 - 135 : Ledge rimmed wheel made bowl, low foot, flat base. Red (10R 5/6) slipped polished surface but mostly eroded. **B1a** but fabric was not seen.

H. 80 mm ; D. rim. 135 mm ; Th. 4 to 7 mm.

B 8 - 134 : Wheel made plain bowl, rounded base. Incised line below inner rim. Red washed polished surface. **B1b** but fabric was not seen. Grey traces of firing.

H. 85 mm ; D. rim. 148 to 150 mm ; Th. 3 to 5 mm.

B 8 - 137 : Wheel made plain bowl, rounded base. Irregular walls. Red (10R 5/6) slipped burnished surface. **B1c**, fabric confirmed.

H. 96 mm ; D. rim. 104 to 112 mm ; Th. 4 to 5 mm.

B 8 - 136 : Wheel made chalice, partly broken. Surface just smoothed without any surface treatment. No mica seen. Fabric **B1b** has been attributed for the moment.

H. 170 mm ; D. rim 120 mm ; Th. 6-15 mm.

B 8 - 103 : Jar, straight neck, globular body, surface smoothed. Comb impressed frieze at shoulder. Paddle and anvil fashioning? Rim has been modeled. **B7b** fabric confirmed.

H. 374 mm ; D. rim 96 to 101 mm ; D. max. 305 mm ; Th. 6 to 8 mm.

B 8 - 119 : Jar with straight neck, and globular body. Surface black burnished. Two friezes of comb impressed designs at shoulder. Irregular surface may be due to fashioning technique paddle and anvil? **B7a** fabric uncertain.

H. 361 mm ; D. rim 94-97 mm ; D. max. 314 mm ; Th. 8-9 mm.

B 8 - 115 : Jar with inward sloping neck, and globular body. Surface black smoothed. Three friezes of comb impressed designs at shoulder and another one under the rim. Irregular surface may be due to fashioning technique : paddle and anvil ??? **B7b** fabric confirmed.

H. 368 mm ; D. rim 94 to 96 mm ; D. max. 343 mm ; Th. 9-10 mm.

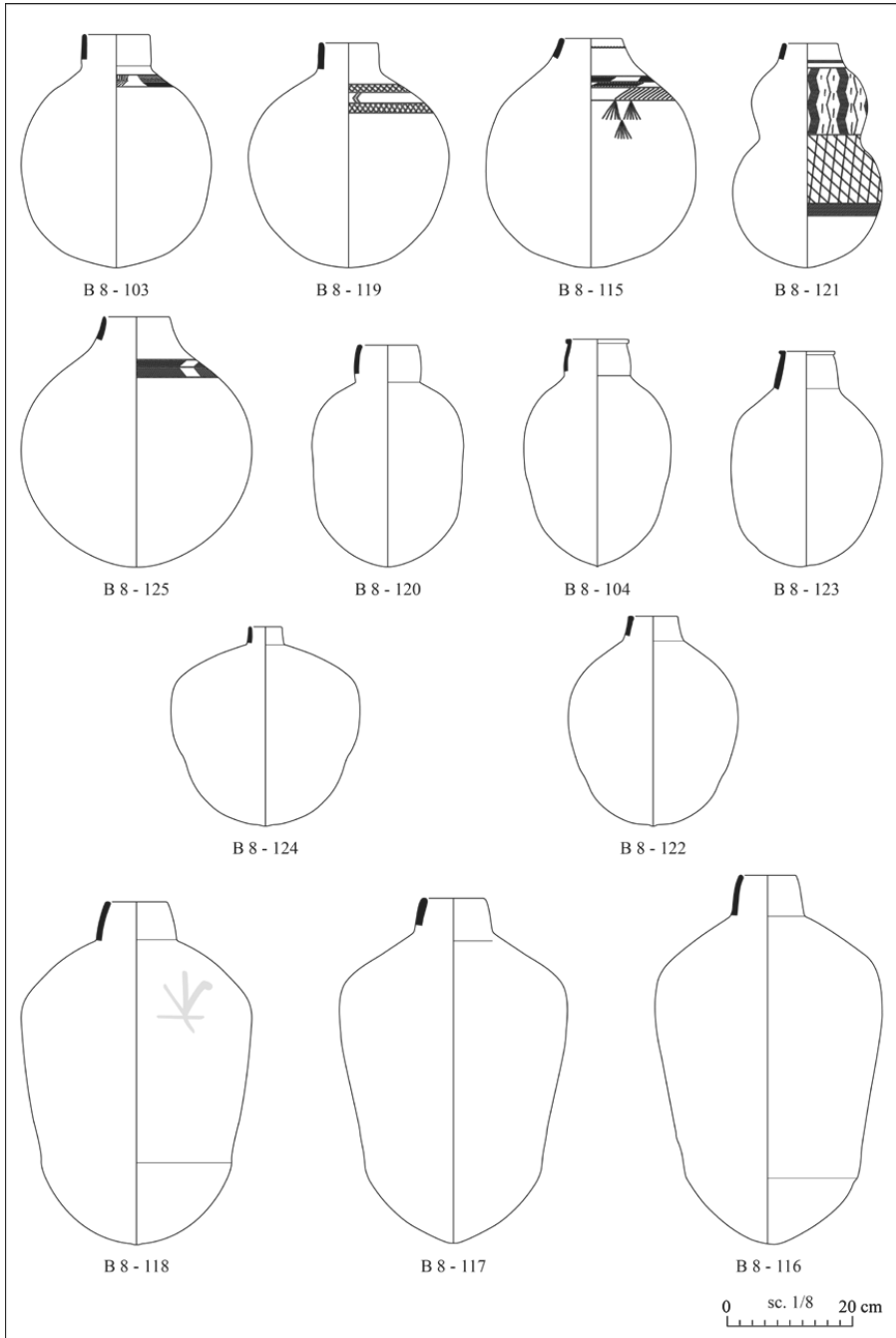


Figure 17: Jars from BMC 8.

B 8 - 121 : Gourd in shape of calabash, short neck, black burnished. Different comb impressed decoration all along the neck and body. Maybe paddle and anvil method of fashioning. **B7a** fabric confirmed.

H. 360 mm ; D. rim 88 to 91 mm ; D. max. 237 mm ; Th. 8 mm.

B 8 - 125 : Jar with inward sloping neck and globular body. Surface black burnished. Frieze of comb impressed designs at shoulder. Irregular surface may be due to fashioning technique: paddle and anvil ??? **B7a** fabric uncertain.

H. 502 mm ; D. rim 100-102 mm ; D. max. 378 mm ; Th. 7 mm.

B 8 - 120 : Jar, straight neck, ovoid body, red slipped, surface just smoothed. Fashioned by coiling on a wheel. **B6** fabric uncertain.

H. 355 mm, D. max. 253 mm, D. mouth 88 to 91 mm, Th. 7 mm.

B 8 - 104 : Jar, straight neck, globular body, surface smoothed. Comb impressed frieze at shoulder. Paddle and anvil fashioning ? Rim has been modelled. Reconstructed jar. **B7b** fabric confirmed.

H. 374 mm ; D. rim 96 to 101 mm ; D. max. 305 mm ; Th. 6 to 8 mm.

B 8 - 123 : Wheel made plain irregular jar, flat rim. Red smoothed slip on the outer face Fabric not seen. **B6** has been attributed but information are missing.

H. 345 mm ; D. rim 88 mm ; D. max. 239 mm ; Th. 9 mm.

B 8 - 124 : Bottle with short straight neck, pyriform body, red slipped just smoothed on the outer surface. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. 320 mm ; D. rim 55 to 58 mm ; D. max. 283 mm ; Th. 5 mm.

B 8 - 122 : Jar with medium straight neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. Irregular body and neck. **B6** fabric confirmed.

H. cons. 348 mm ; D. rim 80 to 90 mm ; D. max. 265 mm ; Th. 6 to 8 mm.

B 8 - 118 : Wheel made plain jar, red slipped, surface just smoothed. As B 7 - 59, a pot mark has been executed just by removing the slip on before firing. **B6** fabric uncertain.

H. 545 mm ; D. rim 96 mm ; D. max. 357 mm ; Th. 8-9 mm.

B 8 - 117 : Jar with medium straight neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 554 mm ; D. rim 97 mm ; D. max. 364 mm ; Th. 9 mm.

B 8 - 116 : Wheel made plain jar, red slipped, surface just smoothed. Traces of string on the lower part, made during the manufacturing process. B6 fabric uncertain.

H. 565 mm ; D. rim 90 mm ; D. max. 364 mm ; Th. 9-10 mm.

4.3.2. BMC 10

This tomb was excavated in 2010. It has been looted and the skeleton was completely disturbed. Except one bowl found outside the cavity (B 10 - 130), the rest of the material has been discovered in situ. Six bowls and cup and three jars were associated to this burial (Figure 18, 19).

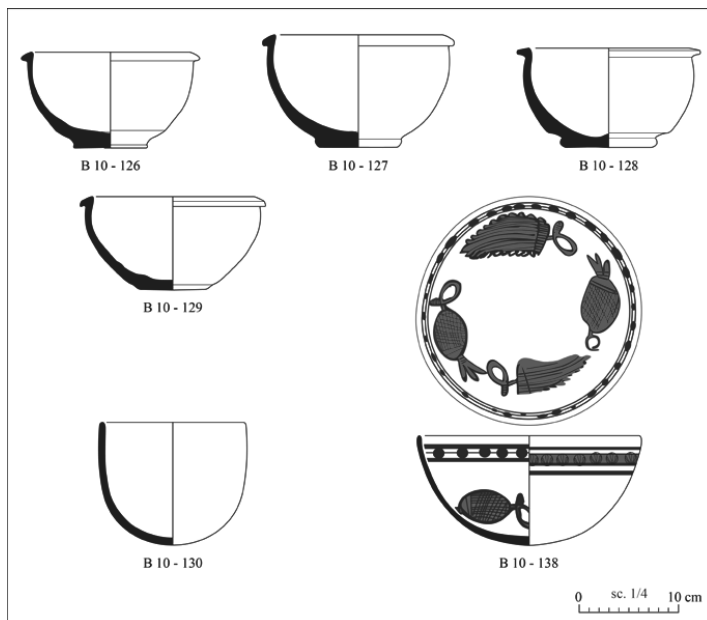


Figure 18: Open forms from BMC 10.

B 10 - 126 : Ledge rimmed wheel made bowl, low foot, flat base. Red (10R 5/6) slipped polished surface. **B1a** fabric uncertain.

H. 73 mm ; D. rim. 136 mm ; Th. 3 to 13 mm.

B 10 - 127 : Ledge rimmed wheel made bowl, low foot, flat base. Red (10R 5/6) slipped polished surface. **B1a** fabric uncertain.

H. 85 mm ; D. rim. 146 to 147 mm ; Th. 5 to 15 mm.

B 10 - 128 : Ledge rimmed wheel made bowl, low foot, flat base. No surface treatment. **B1b** fabric uncertain.

H. 75 mm ; D. rim. 134 to 140 mm ; Th. 5 to 15 mm.

B 10 - 129 : Ledge rimmed wheel made bowl, flat base. Red (10R 5/6) washed polished surface. **B1b** fabric uncertain.

H. 72 mm ; D. rim 142 to 143 mm ; Th. 5 to 11 mm.

B 10 - 130 : Wheel made plain bowl, rounded base. Red (10R 5/6 for outer face, inside lighter) slipped polished surface. Fabric with a different color, fringe light red (10R 6/6) black core (2.5YR N 2.5) indicating a bad condition of firing (to fast and not enough). **B1c** fabric confirmed.

H. 93 mm ; D. rim 111 to 114 mm ; Th. 5 to 6 mm.

B 10 - 138 : Wheel made bowl, rounded base. Outside decorating with a wide red band surrounded by two black lines. A frieze of stamped motives (vegetals?) has been executed on the red band. On the interior, vegetal motives (three) painted in dark brown and filled in light red. Below the rim, frieze of plain black circles between black lines. **B3a** fabric confirmed.

H. 80 mm ; D. rim 172-175 mm ; Th. 3 to 5 mm.

B 10 - 112 : Jar with inward sloping neck, and globular body. Surface black burnished (vertically) after decoration. Frieze of comb impressed designs at shoulder (motif seen on same shape in B 8 - 125). Irregular surface may be due to fashioning technique: paddle and anvil? **B7a** fabric uncertain.

H. 330 mm ; D. rim 97 to 98 mm ; D. max. 298 mm ; Th. 7-8 mm.

B 10 - 113 : Jar with a flange rim, medium straight neck, ovoid body, red slipped and burnished on the wheel. Black and cream bands are painted on the neck and at shoulder. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 372 mm ; D. rim 86 to 88 mm ; D. max. 282 mm ; Th. 7 to 9 mm.

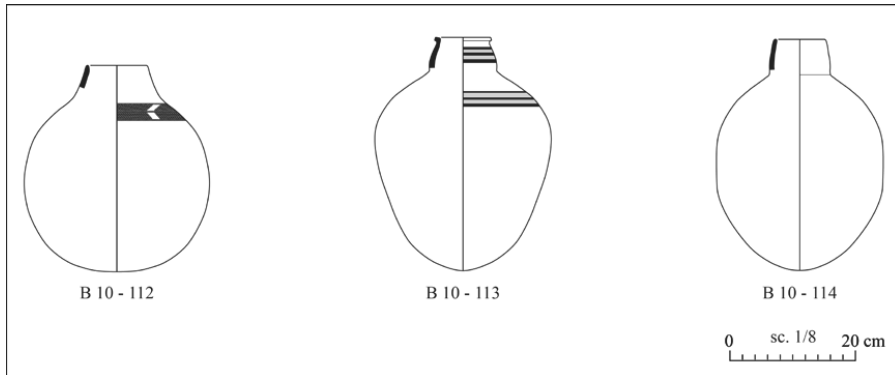


Figure 19: Jars from BMC 10.

B 10 - 114 : Jar, straight neck, ovoid body, red slipped, surface just smoothed. Fashioned by coiling on a wheel. B6 fabric uncertain.

H. 370 mm ; D. rim 82 to 91 mm ; D. max. 264 mm ; Th. 6 mm.

4. 3. 3. BMC 16

As the other, this tomb has been opened but neither the ceramic material nor the deceased were removed. Two contracted bodies stand in the middle of the cavity, probably buried together at the same time. Material, composed of two jars, four ledge rimmed bowls, two plain bowls and a fine pot, is considered as contemporaneous (Figure 20, 21).

B 16 - 192 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. B1a fabric uncertain.

H. 82 mm ; D. rim. 141 to 146 mm ; Th. 4 to 11 mm.

B 16 - 193 : Wheel made, ledge rimmed bowl with low foot and flat base. Surface just polished. B4 fabric is uncertain.

H. 77 mm ; D. rim 129-130 mm ; Th. 4 to 6 mm.

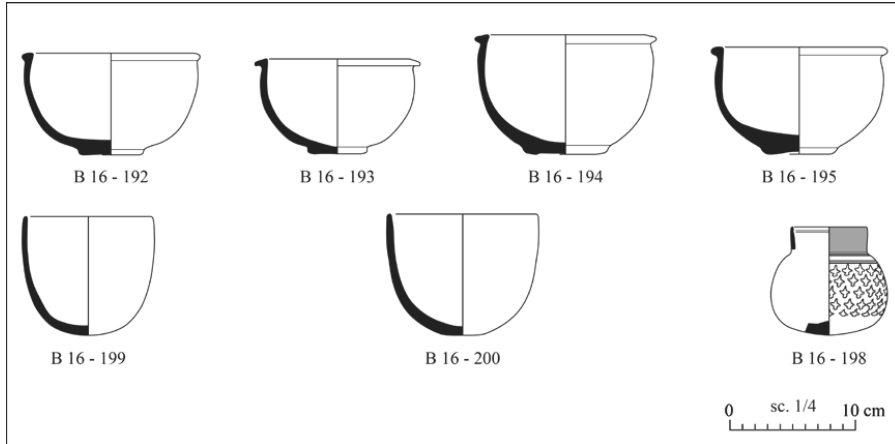


Figure 20: Open forms from BMC 16.

B 16 - 194 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 96 mm ; D. rim 144 to 148 mm ; Th. 5 to 11 mm.

B 16 - 195 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 86 mm ; D. rim 137 to 140 mm ; Th. 5 to 13 mm.

B 16 - 199 : Wheel made plain bowl, rounded base. Red slipped burnished surface. **B1a** fabric uncertain.

H. 95 mm ; D. rim 105 to 106 mm ; Th. 4 to 8 mm.

B 16 - 200 : Wheel made plain bowl, rounded base. Red slipped burnished surface. **B1a** fabric uncertain.

H. 98 mm ; D. rim 120 to 124 mm ; Th. 5 to 8 mm.

B 16 - 198 : Wheel made pot, wide straight neck, globular body. Neck painted in red and below four black lines, stamped lozenges on five registers. B1a fabric uncertain.

H. 87 mm ; D. rim 59-60 mm ; D. max. 91 mm ; Th. 2 to 11 mm.

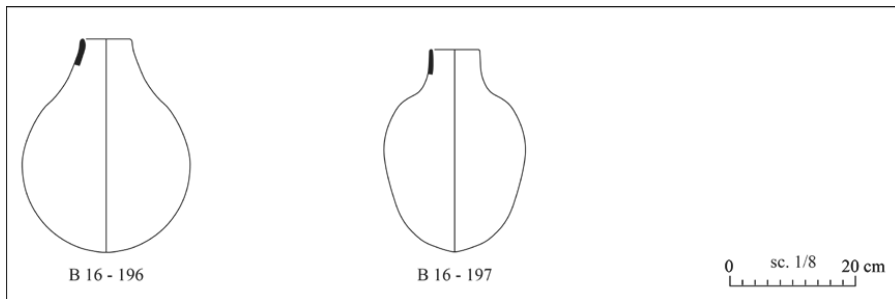


Figure 21: Jars from BMC 16.

B 16 - 196 : Handmade black bottle, bag shaped, no surface treatment. Surface irregular might be due to paddle and anvil fashioning. Rim has been modelled very coarsely. **B7b** fabric uncertain.

H. 342 mm ; D. rim 70 to 82 mm ; D. max. 267 mm ; Th. 8 mm.

B 16 - 197 : Jar with medium straight neck, ovoid body, irregularly washed on the outer surface. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 324 mm ; D. rim 74 to 77 mm ; D. max. 223 mm ; Th. 6 to 12 mm.

4.3.4. BMC 23

Two distinct assemblages were found in this tomb. The first one has been unearthed in the descandary and was composed of five jars (Figure 22). The inventory of the examined material revealed that two of them remain unstudied. The cavity was damaged by robbers: two skeletons whose original position is unknown were accompanied by eight bowls and two jars (Figure 23).

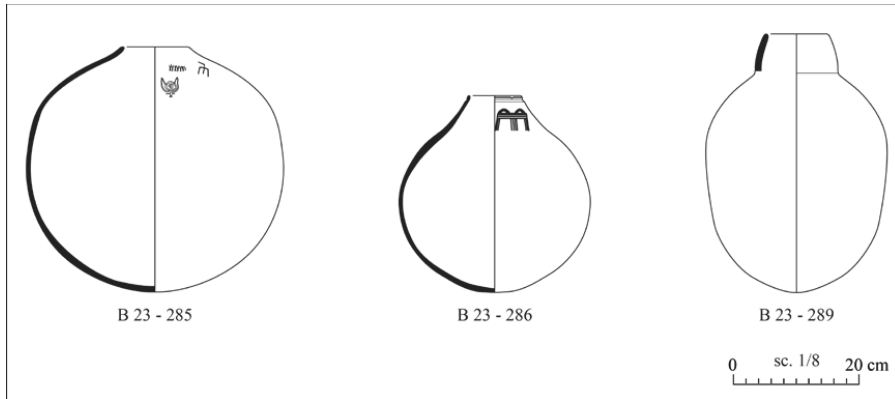


Figure 22: First assemblage in the descandary of BMC 23.

4. 3. 4. 1. First assemblage in the descandary

B 23 - 285 : Jar in few pieces, fabric confirmed. Lower part molded on convex form, upper part (maybe also molded) added after. Brownish surface smoothed. Sign XXXXXI, IXXXXX, IXXXXXXI, incised at shoulder before firing. Isis sign and another strange one engraved on body after firing. Two perforations under the rim after firing (for a cover or to be hung up). **B8** fabric confirmed.

H. 392 mm, D. rim 103 to 105 mm, D. max. 396 mm, Th. 4 to 8 mm.

B 23 - 286 : Bottle with inward sloping neck, globular body, black burnished. Decoration impressed ("roulette" ? or comb) under the rim and at shoulder and filled with red pigment (just traces preserved). **B9** fabric confirmed. Molded on convex form.

H. 315 mm, D. rim 85 to 90 mm, D. max, 301 mm, Th. 4 to 9 mm.

B 23 - 289 : Jar with medium sloping neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. B6 fabric confirmed.

H. 512 mm ; D. rim 85 to 88 mm ; D. max. 262 mm ; Th. 6 to 8 mm.

4. 3. 4. 2. Second assemblage

B 23 - 227 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 80 mm ; D. rim 134 to 137 mm ; Th. 4 to 10 mm.

B 23 - 276 : Ledge rimmed wheel made bowl, flat base with a very low foot. Cream washed smoothed surface. Rim red slipped, two black bands painted below the outer rim, one black band below the inner rim. **B1d** fabric uncertain.

H. 76 mm ; D. rim 126 to 130 mm ; Th. 4 to 9 mm.

B 23 - 278 : Wheel made plain bowl, carinated base. Incised line below the rim. Red slipped burnished surface. Surface eroded. **B1a** fabric confirmed.

H. 91 mm ; D. rim 121 to 125 mm ; Th. 5 to 10 mm.

B 23 - 279 : Ledge rimmed wheel made bowl, flat base with a very low foot. Cream washed smoothed surface. Rim red slipped and two black bands painted under rim. **B1d** fabric confirmed.

H. 83 mm ; D. rim 128 to 132 mm ; Th. 4 to 12 mm.

B 23 - 280 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1d** fabric uncertain.

H. 81 mm ; D. rim 139 to 141 mm ; Th. 4 to 10 mm.

B 23 - 281 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped (?) smoothed surface. **B1b** fabric confirmed.

H. 82 mm ; D. rim 132 to 165 mm ; Th. 5 to 12 mm.

B 23 - 282 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric confirmed.

H. 91 mm ; D. rim 136 mm ; Th. 4 to 12 mm.

B 23 - 283 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric confirmed.

H. 86 mm ; D. rim 131 to 133 mm ; Th. 4 to 12 mm.

B 23 - 287 : Jar with flanged rim, medium neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. B6 fabric confirmed.

H. 430 mm ; D. rim 92 to 94 mm ; D. max. 290 mm ; Th. 7 to 9 mm.

B 23 - 284 : Bottle, straight neck, globular body, black smoothed (no traces of polishing). Comb impressed frieze at shoulder. Fashioned by paddle and anvil ? **B7b** fabric uncertain.

H. 294 mm ; D. rim 80 to 85 mm ; D. max. 295 mm ; Th. 4 to 7 mm.

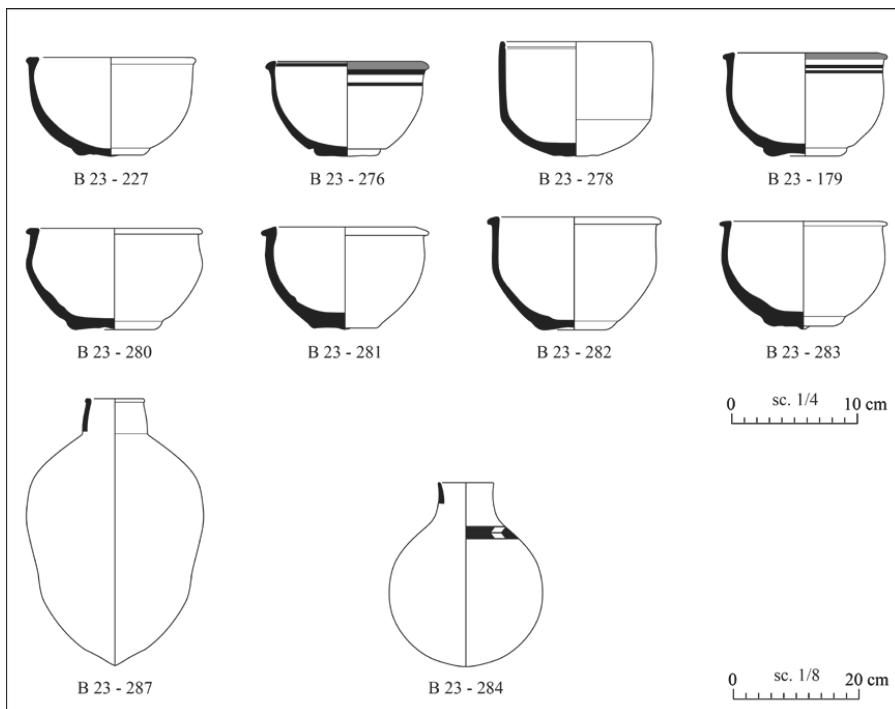


Figure 23: Second assemblage in the cavity of BMC 23.

4.3.5. BMC 24

Despite a robber's pit, burial was discovered in a very well preserved context. Twenty ceramics has been deposited along side of a woman in extended position, within a coffin. Bowls and cup are presented before the jars (Figure 24, 25).

B 24 - 147 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 83 mm ; D. rim 148 to 152 mm ; Th. 5 mm.

B 24 - 148 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished outer surface. Inner surface only polished, typical of late production. **B1a** fabric uncertain.

H. 74 mm ; D. rim 142 to 146 mm ; Th. 5 to 12 mm.

B 24 - 149 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 69 mm ; D. rim 121 to 130 mm ; Th. 5 to 12 mm.

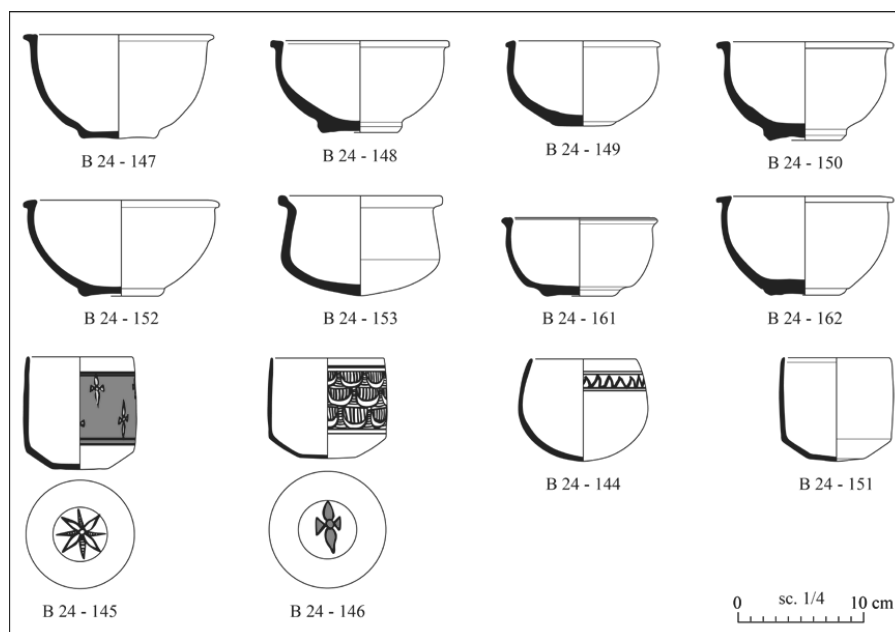


Figure 24: Open forms from BMC 24

B 24 - 150 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. Surface eroded. **B1a** fabric uncertain.

H. 79 mm ; D. rim 140 to 143 mm ; Th. 4 to 10 mm.

B 24 - 152 : Ledge rimmed wheel made bowl, flat base. Black burnished surface. Carefully executed. **B1e** fabric uncertain.

H. 78 mm ; D. rim 154 mm ; Th. 5 to 10 mm.

B 24 - 153 : Ledge rimmed wheel made bowl, carinated base, rounded bottom. Black burnished surface. Carefully executed. **B1e** fabric uncertain.

H. 81 mm ; D. rim 127 to 130 mm ; Th. 6 to 9 mm.

B 24 - 161 : Ledge rimmed wheel made bowl, flat base with a very low foot. Cream washed smoothed surface. Rim red slipped. **B1d** fabric uncertain.

H. 63 mm ; D. rim 123 to 125 mm ; Th. 4 to 12 mm.

B 24 - 162 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 80 mm; D. rim 142-143 mm ; Th. 4 to 12 mm.

B 24 - 145 : Wheel made goblet, flat base. two registers of stylized ankh signs painted in black and filled with white on a red background. On the base stylized star, painted in black. **B3a** fabric uncertain.

H. 90 mm ; D. rim 84-85 mm ; Th. 3-4 mm.

B 24 - 146 : Wheel made carinated goblet, flat base. Three registers of black painted crescents, between them horizontal and vertical black lines. On the base stylized ankh sign painted in black and filled in red. **B3a** fabric uncertain.

H. 81 mm ; D. rim 85-86 mm ; Th. 3-4 mm.

B 24 - 144 : Wheel made bowl, sloping rim, rounded base. Black painted frieze of zig zag between two black lines below rim. **B3a** fabric uncertain.

H. 83 mm ; D. rim 82-84 mm ; D. max. 102 mm ; Th. 3-4 mm.

B 24 - 151 : Wheel made goblet, flat base. Red polished slip on the outer surface and on the inner rim. **B3a** fabric uncertain.

H. 84 mm ; D. rim 82-86 mm ; Th. 3-4 mm.

B 24 - 143 : Bottle with flattened rim inward sloping neck, and ovoid body. It has been red slipped and burnished on the wheel. Black and whites bands are painted on the neck and at shoulder, a frieze of ankh sign painted in black and filled in red at shoulder too. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. 370 mm ; D. rim 84 to 90 mm ; D. max. 268 mm ; Th. 6 mm.

B 24 - 154 : Jar with a flattened rim, collar neck, ovoid body and ringed base. It has been red slipped and burnished on the wheel. Black and whites bands are painted on the neck and at shoulder. Fashioned by coiling on the wheel. Irregular shape. **B6** fabric uncertain.

H. 355 mm ; D. rim 98 to 102 mm ; D. max. 283 mm ; Th. 8 mm.

B 24 - 155 : Jar with a rounded rim, inward sloping neck, ovoid body, red slipped and burnished on the wheel. Black and whites bands are painted on the neck and at shoulder. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. 327 mm ; D. rim 84 to 87 mm ; D. max. 265 mm ; Th. 7 to 11 mm.

B 24 - 156 : Jar with inward sloping neck, and globular body. Surface black burnished. Two friezes of comb impressed designs at shoulder. Irregular surface may be due to fashioning technique: paddle and anvil ??? **B7a** fabric uncertain.

H. 310 mm ; D. rim 90 to 92 mm ; D. max. 321 mm ; Th. 7-8 mm.

B 24 - 160: Bottle with inward sloping neck and globular body. It has been red slipped and burnished on the wheel. Rim is chipped but the form looks like complete. Fashioned by coiling (?) and maybe finished on a slow wheel but traces are really difficult to see. **B6** fabric is uncertain.

H. 264 mm ; D. rim 52 to 53 mm ; D. max. 243 mm ; Th. 5 to 16 mm.

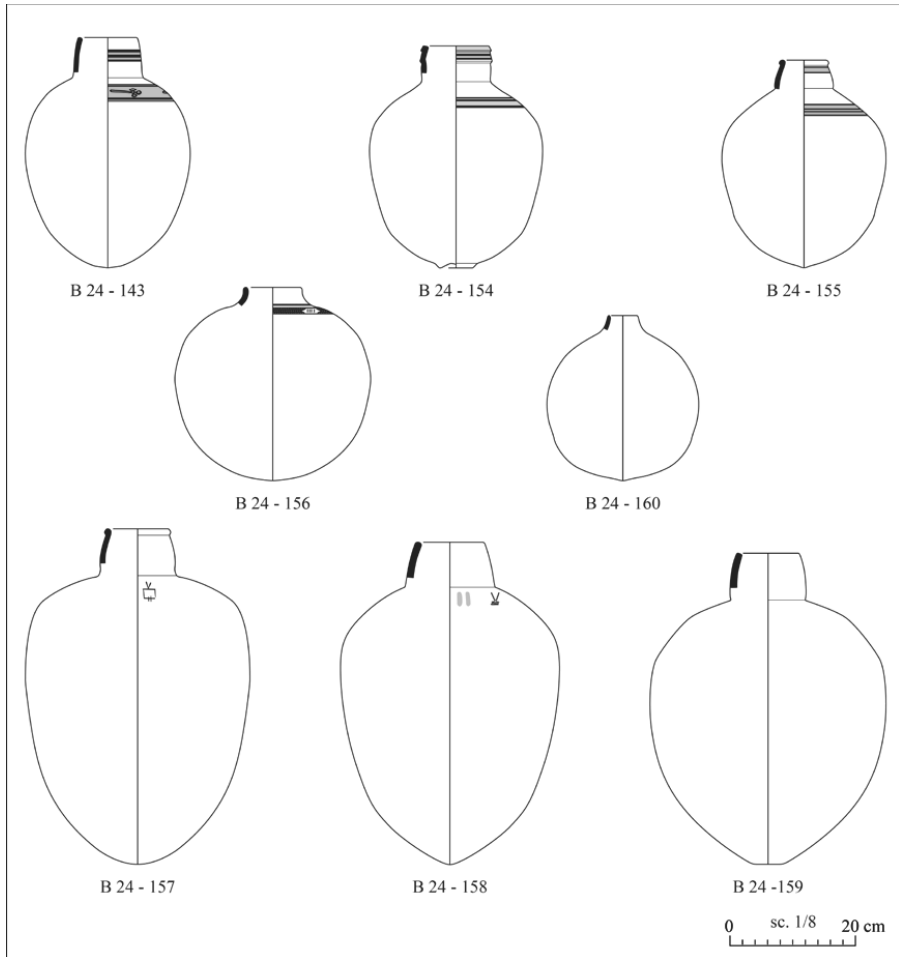


Figure 25: Jars from BMC 24.

B 24 - 157 : Wheel made plain jar, short straight neck, ovoid body with a offering table engraved at shoulder after firing. Red slipped. **B6** fabric uncertain.

H. 536 mm ; D. rim 105 to 108 mm ; D. max. 352 mm ; Th. 9 mm.

B 24 - 158: Wheel made plain jar, short straight neck, ovoid body, red slipped. Two cream bands painted vertically on shoulder. On the other side, an offering table engraved after firing. Fashioned by coiling on a wheel. **B6** fabric is uncertain.

H. 517 mm ; D. rim 96 to 102 mm ; D. max. 361 mm ; Th. 9 to 10 mm.

B 24 - 159 : Wheel made plain jar, short straight neck, ovoid body, red slipped. Fashioned by coiling on a wheel. **B6** fabric uncertain.

H. 498 mm ; D. mouth 100 to 102 mm ; D. max. 347 mm ; Th. 8 to 10 mm.

4. 3. 6. BMC 26

Two different assemblages were unearthed in this tomb. The first one is composed of the majority of the ceramic finds. The second is connected to the burial of two individuals found in a contracted position (Figure 26, 27, 28).

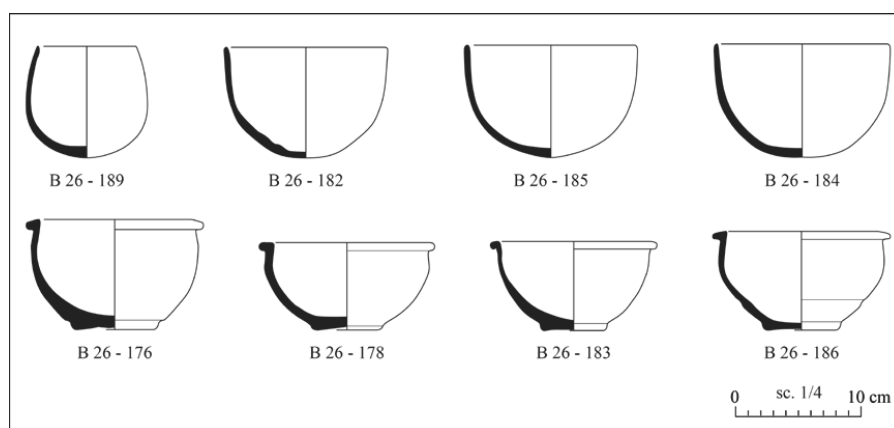


Figure 26: Open forms from the first assemblage in the descendency of BMC 26.

4. 3. 6. 1. First assemblage

B 26 - 189: Wheel made plain bowl, inwards sloping rim, rounded base. Red slipped polished surface. **B1c** fabric uncertain.

H. 89 mm ; D. rim 92 to 96 mm ; Th. 3 to 9 mm.

B 26 - 182 : Wheel made plain bowl, rounded base. Red slipped burnished outer surface, the inside became black probably during the firing. **B1a** fabric uncertain.

H. 89 mm ; D. rim 130 to 132 mm ; Th. 4 to 7 mm.

B 26 - 185 : Wheel made plain bowl, rounded base. Red slipped burnished surface. Rim chipped. **B1a** fabric confirmed.

H. 91 mm ; D. rim 137 to 139 mm ; Th. 4 to 7 mm.

B 26 - 184 : Wheel made plain bowl, rounded base. Red slipped burnished surface. Surface eroded. **B1a** fabric confirmed.

H. 91 mm ; D. rim 140 to 142 mm ; Th. 3 to 7 mm.

B 26 - 176 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 89 mm ; D. rim 139 to 142 mm; Th. 4 to 15 mm.

B 26 - 178 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 70 mm ; D. rim 139 to 141 mm ; Th. 5 to 11 mm.

B 26 - 183 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric confirmed.

H. 71 mm ; D. rim 132 to 136 mm ; Th. 3 to 10 mm.

B 26 - 186 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1b** fabric uncertain.

H. 79 mm ; D. rim 142 to 146 mm; Th. 4 to 8 mm.

B 26 - 177 : Jar, straight neck, globular body, surface burnished after decoration of comb impressed frieze at rim and shoulder. Paddle and anvil fashioning (lower part, traces of addition of mass in the middle part, maybe coiling until the neck) ? Rim has been modelled. **B7a** fabric uncertain.

H. 321 mm ; D. rim 92 to 94 mm ; D. max. 287 mm ; Th. 7 to 10 mm.

B 26 - 181 : Jar with rounded rim, short neck, ovoid body, red slipped polished on the wheel. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. cons. 340 mm ; D. rim 93 to 95 mm ; D. max. 268 mm ; Th. 10 mm.

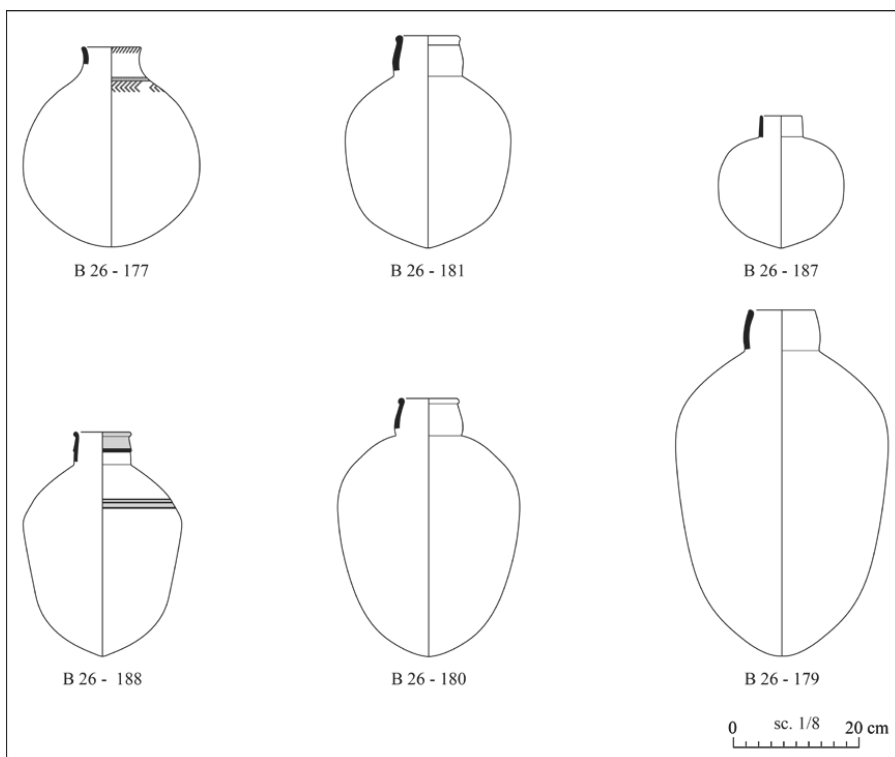


Figure 27: Jars from the first assemblage in the descendency of BMC 26.

B 26 - 187 : Bottle, straight short neck, globular body, red slip carefully polished. Fashioned on the wheel. **B6** fabric uncertain (close to **B1a**).

H. 212 mm ; D. rim 62 to 64 mm ; D. max. 200 mm ; Th. 3 to 10 mm.

B 26 - 188 : Jar with a rounded rim, collar neck, ovoid body. It has been red slipped and burnished (???, maybe just smoothed) on the wheel. Black and whites bands are painted on the neck and at shoulder. Fashioned by coiling on the wheel. Surface too damaged to see exactly bands and surface treatment. Reconstructed. **B6** fabric confirmed.

H. 360 mm ; D. rim 86 mm ; D. max. 250 mm ; Th. 7 to 10 mm.

B 26 - 180 : Jar with rounded rim, short neck, ovoid body, red slipped just smoothed. Surface eroded. Fashioned by coiling on the wheel. B6 fabric confirmed.

H. 413 mm ; D. rim 96 mm ; D. max. 282 mm ; Th. 8-9 mm.

B 26 - 179 : Jar with a slightly sloping neck, ovoid body, red slipped and burnished on the wheel. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 555 mm ; D. rim 102 to 104 mm ; D. max. 348 mm ; Th. 9-10 mm.

4. 3. 6. 2. Second assemblage

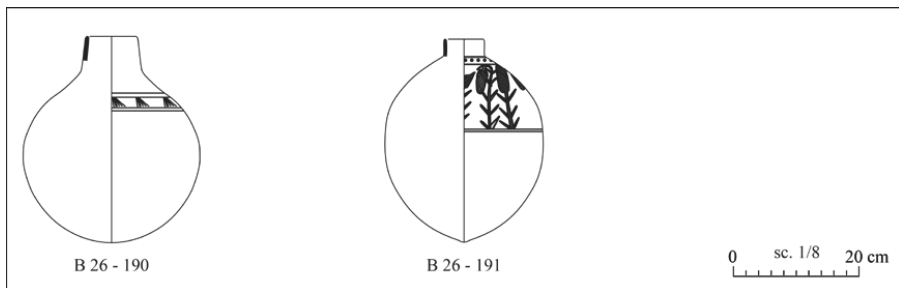


Figure 28: Material from the second assemblage in the cavity of BMC 26.

B 26 - 190 : Jar, straight neck, globular body, surface burnished after decoration of comb impressed frieze at shoulder. Paddle and anvil fashioning ? Rim has been modelled. **B7a** fabric uncertain.

H. 330 mm ; D. rim 80 to 84 mm ; D. max. 281 mm ; Th. 6 to 20 mm.

B 26 - 191 : Bottle with short straight neck, ovoid body. Frieze of beads in red surrounded by bands in black and red under the neck, frieze of sorghum alternating black and red plants on the body. Rim partly chipped and surface eroded. B3a fabric confirmed.

H. 325 mm ; D. rim 60 mm ; D. max. 257 mm ; Th. 4 to 6 mm.

4. 3. 7. BMC 27

Like the others graves in the sector, BMC 27 has been opened by robbers, even maybe plundered but all the ceramic material has been found close to its original location, mostly at the feet of the deceased who was lying on his side, in a contracted position. Seven bowls, a Lekythos and five jars compose his funerary ceramic equipment (Figure 29, 30).

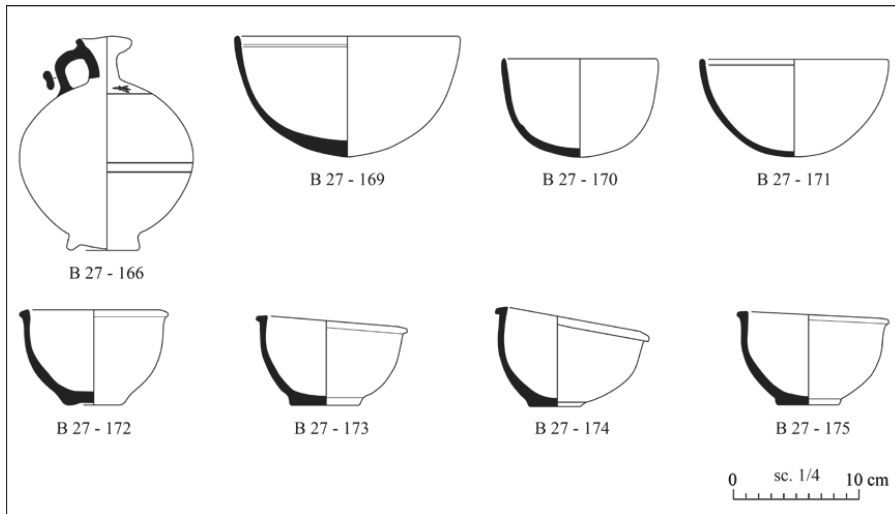


Figure 29: Open forms from BMC 27.

B 27 - 166 : Wheel made lekythos, restricted neck, globular body, ringed base. Originally decorated but the painted motives disappeared. A flower is nevertheless visible on shoulder. Frieze of stylized motives of beads painted in black and filled in red. **B3a** fabric uncertain.

H. 171 mm ; D. rim 137 mm ; Th.4 mm.

B 27 - 169 : Wheel made plain shallow bowl, rounded base. Red slipped burnished surface. Incision below the rim. **B1a** fabric uncertain.

H. 97 mm ; D. rim 175 to 180 mm ; Th. 4 to 13 mm.

B 27 - 170 : Wheel made plain bowl, rounded base. Red slipped burnished surface. Surface eroded. **B1a** fabric uncertain.

H. 80 mm ; D. rim 120 to 124 mm ; Th. 5 to 7 mm.

B 27 - 171 : Wheel made bowl, rounded base. Surface light red painted more than slipped. **B3b** fabric uncertain.

H. 78 mm ; D. rim 148 -151 mm ; Th. 4-5 mm.

B 27 - 172 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 76 mm ; D. rim. 114 to 119 mm ; Th. 4 to 10 mm.

B 27 - 173 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 70 mm ; D. rim 121 to 123 mm ; Th. 4 to 9 mm.

B 27 - 174 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 76 mm ; D. rim 122 to 124 mm ; Th. 4 to 11 mm.

B 27 - 175 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 74 mm ; D. rim 118 to 126 mm ; Th. 4 to 9 mm.

B 27 - 163 : Jar, straight neck, globular body, surface smoothed. Comb impressed frieze at shoulder. Paddle and anvil fashioning ? Rim has been modelled. **B7b** fabric confirmed.

H. 442 mm ; D. rim 83 to 85 mm ; D. max. 370 mm ; Th. 10 mm.

B 27 - 167 : Bottle, bag shaped, no surface treatment (maybe a crude smooth). Surface irregular might be due to paddle and anvil fashioning. Rim has been modelled very coarsely. **B7b** fabric uncertain.

H. 368 mm ; D. rim 85 to 90 mm ; D. max. 302 mm ; Th. 6-8 mm.

B 27 - 165 : Jar with a rounded rim, sloping neck, ovoid body, partially red slipped but no traces of polishing. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 382 mm ; D. rim 93 mm ; D. max. 257 mm ; Th. 6 to 10 mm.

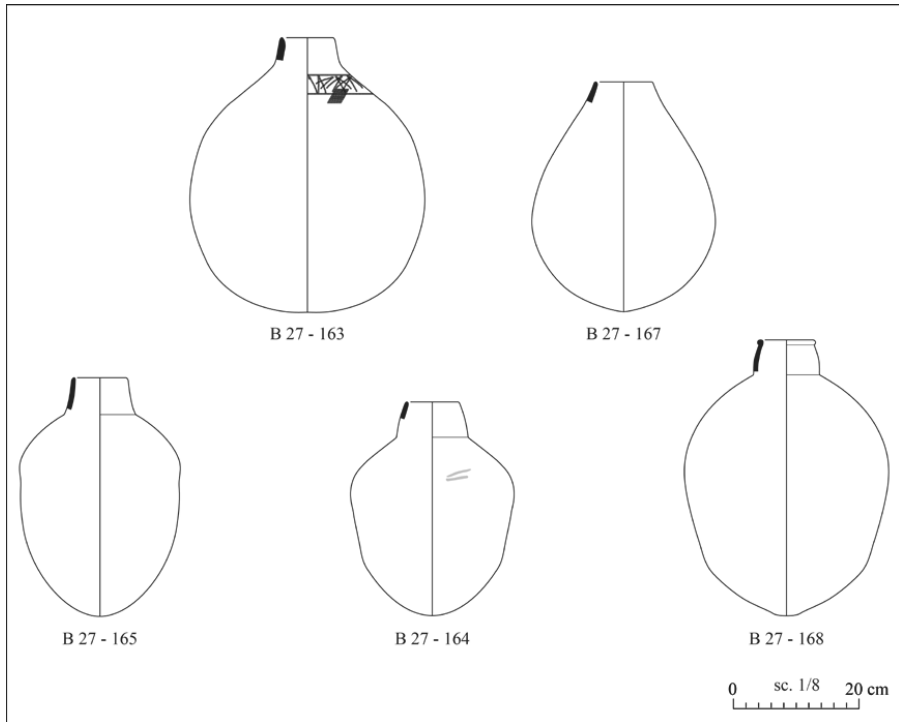


Figure 30: Jars from BMC 27.

B 27 - 164 : Jar with a rounded rim, sloping neck, ovoid body, red slipped but no traces of polishing, surface eroded. Fashioned by coiling on the wheel. Two small lines painted in cream at shoulder. B6 fabric uncertain.

H. 342 mm ; D. rim 84-85 mm ; D. max. 249 mm ; Th. 6 to 10 mm.

B 27 - 168 : Jar with rounded rim, short neck, ovoid body, red slipped partially polished on the wheel. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. cons. 442 mm ; D. rim 90 to 96 mm ; D. max. 321 mm ; Th. 8-9 mm.

4. 3. 8. BMC 29

An skeleton in contracted position was found in BMC 29. Published report mention nine ceramic vessels within the grave but ten objects were attributed to this burial, two of them bearing the same number (B 27 - 233). So the study focused on four bowls and six jars (Figure 31, 32).

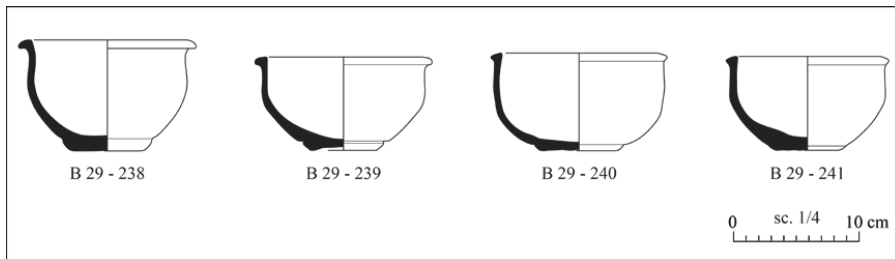


Figure 31: Open forms from BMC 29.

B 29 - 238 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 90 mm ; D. rim 138 to 140 mm ; Th. 5 to 12 mm.

B 29 - 239 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 75 mm ; D. rim 137 to 141 mm ; Th. 4 to 12 mm.

B 29 - 240 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 78 mm ; D. rim 137 to 141 mm ; Th. 4 to 8 mm.

B 29 - 241 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. Partially burnt in the outer surface (during firing). **B1b** fabric uncertain.

H. 76 mm ; D. rim 129 to 130 mm ; Th. 5 to 12 mm.

B 29 - 236 : Bottle, straight neck, globular body, surface polished. Paddle and anvil fashioning ? Rim has been modelled. Calcitic deposit on surface. **B7a** fabric uncertain.

H. 342 mm ; D. rim 86-87 mm ; D. max. 287 mm ; Th. 8 mm.

B 29 - 237 : Jar with medium straight neck, ovoid body, red slipped burnished on the wheel. Fashioned by coiling on the wheel. Bad state of preservation, reconstructed.

H. cons. 372 mm ; D. rim 86 to 88 mm ; D. max. 280 mm ; Th. 6 to 10 mm.

B 29 - 233 : Jar with flanged rim, medium sloping neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. **B6** fabric confirmed.

H. 404 mm ; D. rim 96 to 98 mm ; D. max. 290 mm ; Th. 8 to 11 mm.

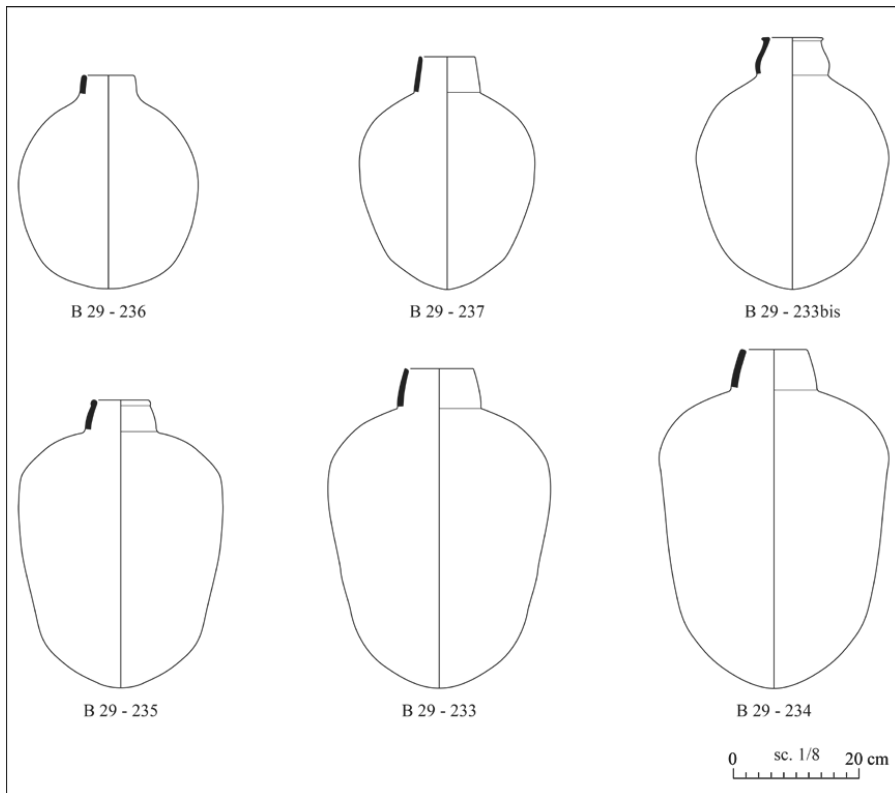


Figure 32: Jars from BMC 29.

B 29 - 235 : Jar with rounded neck, medium sloping neck, ovoid body, red slipped just smoothed. Fashioned by coiling on the wheel. B6 fabric uncertain.

H. 460 mm ; D. rim 92 to 94 mm ; D. max. 322 mm ; Th. 10 mm.

B 29 - 233 : Jar with medium sloping neck, ovoid body, red slipped just smoothed. Small hole at the base (maybe not intentional). Fashioned by coiling on the wheel. B6 fabric confirmed.

H. 510 mm ; D. rim 105 to 110 mm ; D. max. 361 mm ; Th. 7 to 13 mm.

B 29 - 234 : Wheel made plain jar, short straight neck, ovoid body, red slipped. B6 fabric uncertain.

H. 542 mm ; D. rim 103 to 106 mm ; D. max. 360 mm ; Th. 8 mm.

4.3.9. BMC 31

This tomb was particularly preserved even if a robber's pit was detected. The deceased laid in contracted position and ceramic material has been deposited on his back and at his feet. One jar (B 31 -242) was discovered outside the blocking system, likely in its original position. Five bowls and four jars are associated with this burial (Figure 33, 34).

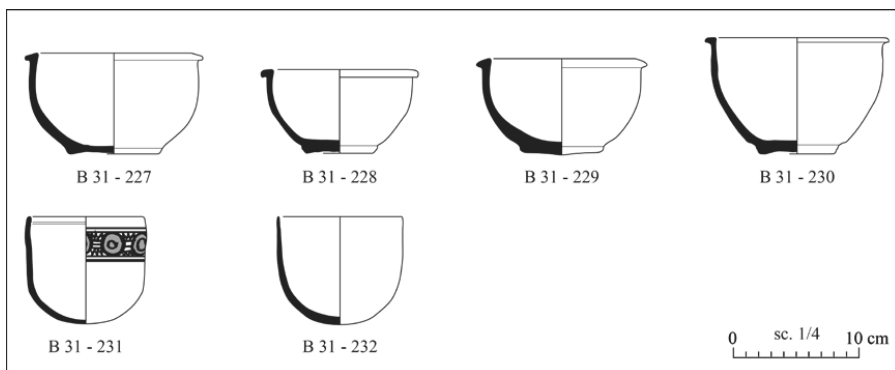


Figure 33: Open forms from BMC 31.

B 31 - 227 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 81 mm ; D. rim 139 to 142 mm ; Th. 5 to 7 mm.

B 31 - 228 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 67 mm ; D. rim 124 to 127 mm ; Th. 4 to 9 mm.

B 31 - 229 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 77 mm ; D. rim 133 to 138 mm ; Th. 5 to 10 mm.

B 31 - 230 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 93 mm ; D. rim 145 to 147 mm ; Th. 3 to 8 mm.

B 31 - 231 : Wheel made bowl, rounded base. Frieze of stylized motives of beads painted in black and filled in red. **B3a** fabric uncertain.

H. 86 mm ; D. rim 90-91 mm ; Th. 3-4 mm.

B 31 - 232 : Simple plain bowl, black burnished, really fine and well made. Handmade fashioning method not known (molded, modelled ???). Fabric not seen but lots of mineral inclusion observed at the base : **B8** fabric uncertain.

H. 87 mm ; D. rim 100-101 mm ; Th. 3 to 7 mm.

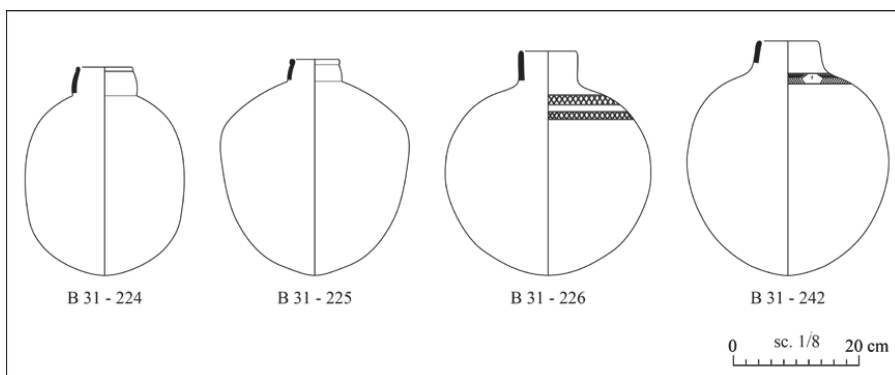


Figure 34: Jars from BMC 31.

B 31 - 224 : Bottle with a rounded rim, sloping neck, ovoid body, red slipped and burnished on the wheel. Fashioned by coiling on the wheel. Quite coarsely made. **B6** fabric uncertain.

H. 333 mm ; D. rim 80 to 82 mm ; D. max. 256 mm ; Th. 7 to 12 mm.

B 31 - 225 : Jar with rounded rim, short neck, ovoid body, red slipped polished on the wheel. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. cons. 346 mm ; D. rim 75 to 77 mm ; D. max. 314 mm ; Th. 7 to 10 mm.

B 31 - 226 : Jar with straight neck, and globular body. Surface black burnished. Two friezes of comb impressed designs at shoulder. Irregular surface may be due to fashioning technique: paddle and anvil ??? Bad preservation of the surface. **B7a** fabric uncertain.

H. 360 mm ; D. rim 95-96 mm ; D. max. 330 mm ; Th. 8 mm.

Jar with straight neck, and globular body. Surface black burnished. Frieze of comb impressed designs at shoulder. Irregular surface may be due to fashioning technique: paddle and anvil? **B7a** fabric confirmed.

H. 376 mm ; D. rim 90 to 92 mm ; D. max. 328 mm ; Th. 6 to 10 mm.

4. 3. 10. BMC 32

Despite a northern side totally disturbed by robbers, the main burial of this tomb, consisting in a adult laid in a contacted position associated with five pots has been unearthed in well preserved conditions (plate 20). Two infant skeletons were partially removed by robbers. No ceramic material seemed to be connected with them (Figure 35).

B 32 - 219 : Wheel made plain jar, short straight neck, cylindrical body, red slipped. Fashioned by coiling on a wheel. **B7a** fabric uncertain.

H. 640 mm ; D. rim 98 to 102 mm ; D. max. 326 mm ; Th. 8 to 10 mm.

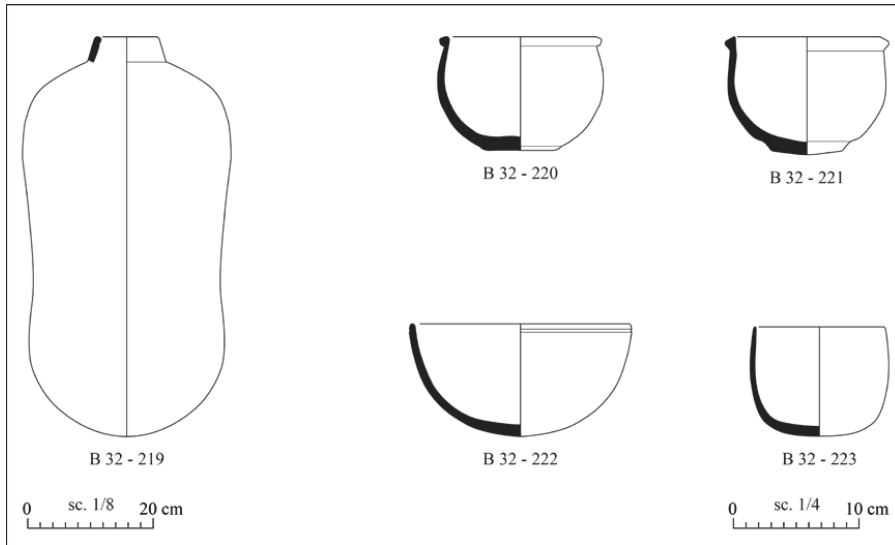


Figure 35: Complete material from BMC 32.

B 32 - 220 : Ledge rimmed wheel made bowl, flat base. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 91 mm ; D. rim 129 to 133 mm; Th. 4 to 11 mm.

B 32 - 221 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 95 mm ; D. rim 128 to 131 mm ; Th. 5 to 10 mm.

B 32 - 222 : Wheel made plain bowl, rounded base. Incised line below the rim. Red slipped burnished surface. Surface eroded. **B1a** fabric uncertain.

H. 90 mm ; D. rim 166 to 169 mm ; Th. 5 to 10 mm.

B 32 - 223 : Wheel made plain bowl, rounded base. Red slipped polished surface. **B1c** fabric uncertain.

H. 88 mm ; D. max. 105 to 110 mm ; Th. 3 to 8 mm.

4. 3. 11. BMC 33

Two different burials took place in this tomb. The first one, located in the descenary, is considered as a re-use of the tomb. Fortunately, it did not disturb the second burial in the cavity. So, two assemblages with a clear chronological sequence compose the funerary ceramic material (Figure 37, 38). As ledge rimmed bowls are present in both burials, we are not sure about the attribution of some of them. So we gather them in a single entity before tackling the two sure groups of material (Figure 36).

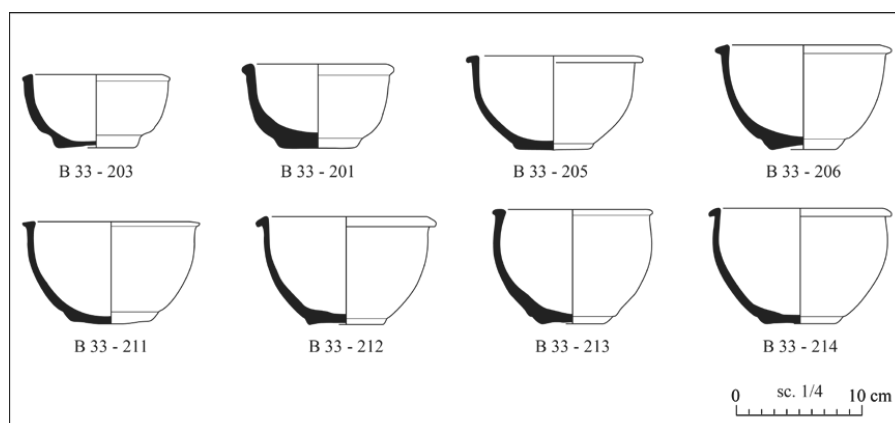


Figure 36: Bowls from BMC 33 with uncertain provenance.

4. 3. 11. 1. Bowls from BMC 33 with uncertain provenance

B 33 - 203 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. Shape of such production is unusual and the fashioning is rather coarse, like made by a student in pottery fashioning. **B1b** fabric uncertain.

H. 59 mm ; D. rim 116-117 mm ; Th. 3 to 7 mm.

B 33 - 201 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. Surface eroded. **B1a** fabric uncertain.

H. 67 mm ; D. rim 120 to 122 mm ; Th. 6 to 15 mm.

B 33 - 205 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 76 mm ; D. rim 136 to 138 mm ; Th. 4 to 9 mm.

B 33 - 206 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 84 mm ; D. rim 138 to 140 mm ; Th. 5 to 12 mm.

B 33 - 211 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. Irregularly shaped. **B1b** fabric uncertain.

H. 82 mm ; D. rim 125 to 143 mm ; Th. 4 to 8 mm.

B 33 - 212 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped smoothed surface. **B1b** fabric uncertain.

H. 86 mm ; D. rim 144 to 148 mm ; Th. 4 to 10 mm.

B 33 - 213 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. **B1a** fabric uncertain.

H. 91 mm ; D. rim 136 to 139 mm ; Th. 5 to 12 mm.

B 33 - 214 : Ledge rimmed wheel made bowl, flat base with a very low foot. Red slipped polished surface. Surface eroded. **B1a** fabric uncertain.

H. 93 mm ; D. rim 143 to 150 mm ; Th. 4 to 10 mm.

4. 3. 11. 2. First assemblage within the descendency of BMC 33

B 33 - 202 : Wheel made plain bowl, rounded base. Incised line below the rim. Red slipped burnished surface. Surface eroded. **B1a** fabric uncertain.

H. 82 mm ; D. rim 124 to 128 mm ; Th. 5 to 9 mm.

B 33 - 208 : Wheel made plain bowl, rounded base. Incised line below the rim. Red slipped burnished surface. **B1a** fabric confirmed.

H. 93 mm ; D. rim 140 to 142 mm ; Th. 4 to 8 mm.

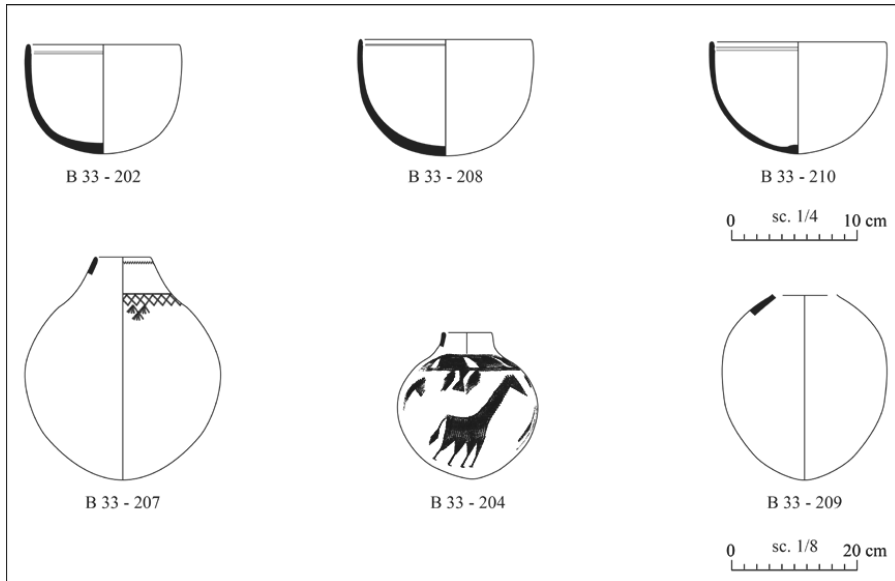


Figure 37: Complete material from the first assemblage within the descendency of BMC 33.

B 33 - 210 : Wheel made plain bowl, rounded base. Incised line below the rim. Red slipped burnished surface. **B1a** fabric confirmed.

H. 90 mm ; D. rim 166 to 169 mm ; Th. 4 to 8 mm.

B 33 - 207 : Jar with inward sloping neck, and globular body. Surface black burnished. Two friezes of comb impressed designs at under rim and shoulder. Irregular surface may be due to fashioning technique : paddle and anvil ??? **B7a** fabric uncertain.

H. 356 mm ; D. rim 95 to 97 mm ; D. max. 325 mm ; Th. 8 to 14 mm.

B 33 - 204 : Jar with inward sloping neck, and globular body. Surface black burnished. Comb impressed designs at shoulder and body. Giraffes motives finely executed on body. Irregular surface may be due to fashioning technique : paddle and anvil ??? **B7a** fabric uncertain.

H. 233 mm ; D. rim 77 to 79 mm ; D. max. 222 mm ; Th. 6 to 8 mm.

B 33 - 209 : Jar with ovoid body, neck and rim missing, red slipped but no traces of polishing. Fashioned by coiling on the wheel. **B6** fabric confirmed.

H. cons. 296 mm ; D. max. 262 mm ; Th. 7 to 10 mm.

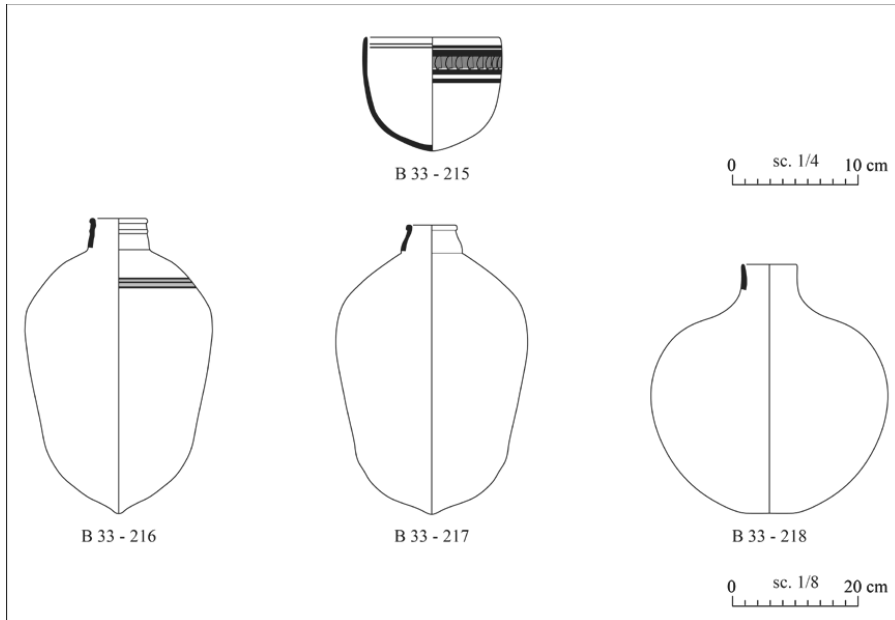


Figure 38: Complete material from the second assemblage within the cavity of BMC 33

4. 3. 11. 3. Second assemblage within the cavity of BMC 33

B 33 - 215 : Wheel made shallow bowl, rounded base. Stamped frieze between red and black painted bands on the outer face. Two black lines under rim in the inner face.

B3a fabric uncertain.

H. 91 mm, D. 110 mm, Th. 3 to 5 mm.

B 33 - 216 : Jar with a rounded rim, collar neck, ovoid body. It has been red slipped and just smoothed. Black and whites bands are painted on shoulder. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. 470 mm ; D. rim 96 to 98 mm ; D. max. 310 mm ; Th. 7-8 mm.

B 33 - 217 : Jar with flanged rim, medium neck, ovoid body, red slipped polished on the wheel. Surface eroded. Fashioned by coiling on the wheel. **B6** fabric uncertain.

H. 462 mm ; D. rim 92-93 mm ; D. max. 313 mm ; Th. 10 mm.

B 33 - 218 : Jar with medium straight neck, large shoulder, globular body, red slipped(?).Undoubtedly molded (as WBN jars) and maybe coiling for the upper part. **B8** fabric uncertain.

H. 392 mm, D. rim 84 to 88 mm, D. max. 378 mm, Th. 5 to 7 mm.

4. 3. 12. BMC 34

This tomb was looted but most of the ceramic material remained in situ. The axial chamber, which is scarce in Berber cemetery, was occupied by a skeleton lying in an extended position within a coffin. On his side, three handmade jars were found (Figure 39).

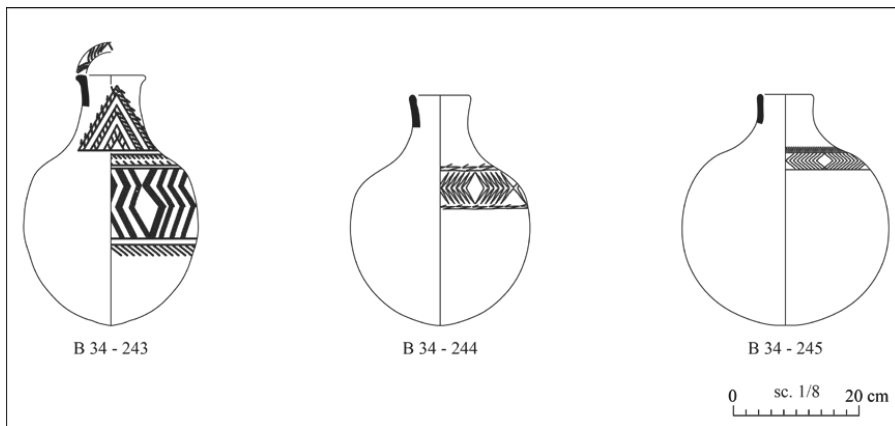


Figure 39: Complete material from BMC 34.

B 34 - 243: Jar, averted rim, straight neck, globular body, surface smoothed. Comb impressed designs at neck, shoulder and body. Paddle and anvil fashioning? Rim has been modeled. **B7b** fabric uncertain.

H. 400 mm ; D. rim 105 to 108 mm ; D. max. 299 mm ; Th. 10 mm.

B 34 - 244: Jar, straight neck, globular body, surface smoothed. Comb impressed frieze at shoulder. Paddle and anvil fashioning? Rim has been modelled. **B7b** fabric uncertain.

H. 369 mm ; D. rim 92 to 94 mm ; D. max. 289 mm ; Th. 9-10 mm.

B 34 - 245 : Jar, straight neck, globular body, surface polished. Comb impressed designs at shoulder. Paddle and anvil fashioning ? Rim has been modelled. **B7a** fabric uncertain.

H. 368 mm ; D. rim 85 to 90 mm ; D. max. 316 mm ; Th. 7-8 mm.

4. 4. Discussion

Geometrical, animal and vegetal motives used to decorate Meroitic ceramic. If the Berber ceramic show very common signs as *ankh* signs (B-1-6, B-3-23), some others are rare. The sorghum ears painted on three different jars (B-3-56, B-4-49 and B-7-51) are not frequent in Meroitic decoration for ceramic (Griffith 1925, XXV), but appear regularly on sculptures and reliefs. They might refer to the rebirth theme (Francigny 2009, 77). The motif on jar B-7-55 combines a crescent surmounted by an *ankh* sign and a bouquet similar to those offered by Apedemak to the royal family in the Lion temple at Naga (Lepsius 1849, 61). Association between *ankh* and crescent seem also to conjure up Apedemak's image, as the numerous graffiti found at Mussawarat es Sufra tend to prove (Wolf 1999, 11).

Pomegranates are represented in two ceramics (B-2-15 and B-10-138). They are possibly linked with Dionysiac rituals and could have the same property as the vine scrolls in the Meroitic art (Ward 2003, 529).

Chapter Five

Discussion on Dating

5. 1. Introduction

The emergence of Meroe as a powerful kingdom is dated back when the royal cemetery of Kush shifted from the region of Napata (the area of Nuri, Sanam Abu Dom, El-Kurru and Jebel Barkal) in the third century BCE to the fertile region of Meroe in the south known as the Island of Meroe because of its geographical position between the Nile, the Blue Nile and the Atbara River.

The Meroitic period has been divided further into early Meroitic between early 3rd to late 2nd century BCE, middle Meroitic between late 2nd century BCE to late 1st early 2nd century CE, and late Meroitic between early 2nd century CE to CE 360 (Torok 1997).

In the discussion on chronology of Berber cemetery and in order to fit the excavated tombs into the Meroitic period I will use main datable items consisting of the finds revealed from those tombs, structure of the tombs, and the burial tradition has been practiced, together with radiocarbon dating which has been obtained from Berber cemetery.

The extraordinary good state of preservation of the ceramic materials revealed from the excavated tombs at Berber assist in presenting tombs chronology.

5. 2. Tombs Chronology Based on Pottery

BMC 1:

The presence of painted fine ware bowls and hand-made jar suggests a range date before the end of the second century CE. On the other side, ledge-rimmed bowl and prototype of Meroe L03 jar appear at the end of the first-beginning of the second century CE. Finally, the tomb could fit into an end of the first - mid-second century CE.

BMC 4:

We do not possess enough element to precise the chronology of that tomb but, based on the previous materials, we can expect that the last burial took place after the end of

the first century CE. The red rim stripe on the fine ware bowl might be considered as a criterion to define a late fine ware production, towards the mid-second century CE. Thus a second century CE. date seems to be secure.

BMC 7:

Material from BMC 7 seems to be rather late. The hand-made jar is usually attested in third century context except in one case (broken piece in W 453). The same range date should be attributed to the ledge-rimmed bowl with a round bottom, as proposed for the identical shape in BMC 12. The wheel-made jar can be considered as a transitional type between type L03 and K05 from the western cemetery of Meroe. And the fine ware bowls, both bearing a red rim stripe, could be produced before the end of the second century. Hence we can ascribe a mid-second-beginning of the third century CE. date.

BMC 8:

The three jars with ovoid body in fabric B6 (B 8 - 116/117/118) associated with the ledge rimmed bowls give a date range towards the second and the first half of the third century CE (Bashir and David 2011, 122). Jar (B 8- 120) with cylindrical body that corresponds to 107 Dunham typology (Dunham 1963, 107) has been found especially in tombs W125 and W374 in the western cemetery of Meroe. Both tombs were included in Edwards' serration of material from Meroe (Edwards 1999, 36). They appear to be chronologically close to Beg N 28, dated towards the second half of the third century CE. Jar with flange rim (B 8-104) is paralleled with ceramic from Gabati found in Grave 55 and dated broadly towards the second century CE (Edwards 1998, 30). These data from other sites fix the burial from the second to first half of the third century CE.

BMC10:

Ledge rimmed bowls give a broad date range towards the second-third century CE. Handmade jar (B10 - 112) is identical to B 8 - 125 in shape as well as impressed decoration. Band painted jar (B 10 - 113) should be compared to exemplar from Gabati's Tomb 57, for which radiocarbon results give a precise dating, towards the end of the first century CE (Edwards 1998, 23). The presence of a fine ware bowl (B 10 - 128) does not allow us to give a date after the end of the second century CE.

Hence the chronological outline of this assemblage would fit within the end of the first- second century CE.

BMC 12:

Three objects from that tomb find their counterpart in Gabati Tomb 41 dated to the third century CE. So the same range date can be surely attributed to BMC 12.

BMC 16:

Ledge rimmed bowls give a broad date range towards the second-third century CE. Handmade jar (B 16 – 196) is similar to J12 form in Dunham typology (Dunham 1963, 346). This shape appears in tomb W341 which was placed in Edwards' phase IV, at the end of the Meroitic period. This first dating does not match with the stamped fine ware exemplar (B 16 - 198) that is supposed to disappear at the end of the second century CE. We are not able to conclude if B 16 - 198 has been re-used or if the production of the handmade bag shaped jar begin earlier than expected. So only an imprecise dating from the second to the third century CE can be attributed to these two inhumations.

BMC 23 a:

A jar similar to B 23- 285 was discovered in 2009 in BMC 7 for which a dating towards the mid second - beginning of the third century CE has been proposed (Bashir and David 2011, 125). The other hand made jar (B – 23 – 286) does not find exact parallel and the wheel made container could be get closer to B 8 -120, dated towards mid-third century CE. So we can suggest a date from the third century CE.

BMC 23 b:

Given the archaeological data, this assemblage might be earlier or contemporaneous to the previous one. Ledge rimmed bowls, sometimes painted, ascertain date towards the second-third century. The handmade jar (B 23-284) bears the same motif as B 8-125 and B – 10 -112) but of a different shape. The wheel-made jar B 23-287 is quite similar to B – 104, except has a more ovoid body. Such exemplar is paralleled to a jar from Gabati T55 for which radiocarbon indicates a second century CE dating (Edwards 1998, 30). The location of this grave within the necropolis tends to precise chronology from the end of the first to the beginning of the second century CE. So we

can only ascribe a date range between the second-beginning of the third century CE to this assemblage.

BMC 24:

The best chronological marker of this tomb is the wheel made jar B 24-154 which has been found in the western cemetery at Meroe as well as in Sedeinga unlooted grave I T 087 (Dunham 1963, 347). This production ensures a chronological frame between the mid-firsts to the beginning of second century CE. Another wheel-made jar (B 24-155) is similar to B 10-113 which dating is quite close (end of first-second Century CE). Open form do not help to give a precise dating: ledge rimmed bowls with flat and rounded bottom confirm a date range later than the mid-first century CE (Bashir and David 2011, 122). Fine ware painted goblets (B 24-145, B 24-146) are typical of first-second century CE production. Large wheel made jars (B 24-157, B 24-158 and B 24-159) are supposed to be introduced within the Meroitic ceramic repertoire at the end of the first century CE (Bashir and David 2011, 123). According to these data we can ascribe a precise dating towards the end of the first-beginning of the 2nd century CE to this material.

BMC 26a:

A Terminus Post Quem of the end of first-beginning of second century CE should be assigned to this assemblage with the presence of large ovoid wheel made jar (B 26-179). Painted jar with a collar rim may be considered as a mix between B 24-154 and B 24-155 (or B 10-113) that confirm a date towards the early second century CE. The rounded rim of B 26-180 is paralleled with B 23-287 and ledge rimmed bowls are best represented in second-third century context. So a dating of the second century CE seems to be secure.

BMC 26:

The two jars found inside the burial are not good as chronological markers so we can only suggest that this burial could be dated earlier if not contemporary with the previous assemblage.

BMC 27:

The fine ware Lekythos B 27-166 is the most imported type found in the Meroitic area. Such shape is usually discovered in Nubia within a second century CE context (Adams 1991). The plain bowls (B 27-169 and B 27-171) are also attested in BMC 8 (B 8-134). Jar B 27-168 is paralleled with B 26-180 and B 24-157. These elements allow us to propose a broad dating towards the second century CE.

BMC 29:

Material from this tomb share some similar shapes to BMC 8 and BMC 24 (B 29-233bis compared to B 8-104 and B 8-123 ; B29-234 and B 29-234 are similar to B 8-116, B 24-158 ; B 29-235 is paralleled with B 24-157, amongst others). A second century CE date would be considered as secure.

BMC 31:

The handmade jar B 31-242 is similar to B 24-156 and give us a good indication of the chronological outlines of this assemblage, towards the end of the first-beginning of the second century CE. The rim of B 31-225 is similar to those of B 29-235, B 27-168 and B 26-180 all of them belonging to an assemblage dated towards the second century CE. Another type of evidence for the dating is the handmade jar B 31-226 which can be compared to B 8-119. So we can predict a first half of the second century CE date for this burial.

BMC 32:

Some of the material from this burial is different from what has been observed within the cemetery First, cylindrical jar B 32 - 219 has no parallel in Berber but is rather close to K05-L08 exemplar of Meroe cemeteries (Dunham 1963, 348). Neither the private tomb in the western cemetery nor the royal burial in the northern necropolis can be dated before the mid-second century CE. That point is confirmed by the bowl B 32-222 which corresponds to type E09 in Dunham's typology and has also been discovered in Aryesbokhe' tomb in Beg. N16 (Dunham 1957, fig. 91). According to these data, this assemblage should be placed after the mid-second century CE perhaps during the third century CE.

BMC 33 a:

Simple bowls with an incised line under the inner rim (B 33-202, B 33-208, B 33 - 210) are also attested in BMC 8 (B 8-134) and BMC 27 (B 27-169). Both tombs are dated towards the second century CE (a broader dating has been proposed for BMC 8 including the first half of the third century CE). This *Terminus Post Quem* can be confirmed by the presence of ledge rimmed bowls.

BMC 33b:

This assemblage has to be dated prior to the burial of the descendency. The painted jar with a collar rim (B 33-216) is quite similar to B 26-188 and a simple jar B 33-217 is similar to B 31- 225,29,235, B 27-168, B 26-180 and B 23-287 all of them dated towards the second century CE. This burial is expected to have taken place during the second century CE, may be in its first half.

BMC 34:

The general shape of the jars from BMC 34 can be compared to those from T 11 in Gabati cemetery, dated before the mid-first century CE (Edwards 1998, 13). As other evidence is lacking, we tend to follow this proposal.

5. 3. Chronology Based on Meroitic Graffiti

The sandstone offering table with an inscription in cursive Meroitic has been found in BMC 6 is considered one of the important datable objects in this collection. Claud Relly studied the object and stated that the decor is attested from the middle of the second century to the middle of the third century CE (Bashir 2010, 73). These elements fit with a date around the middle of the third century CE. So, when compared to the dated ceramics provided in BMC 6 it seems to correspond to the same later date.

5. 4. Radiocarbon Dating

However, for more secure date of the cemetery at Berber, total of three radiocarbon samples of charcoal and bone from BMC 38a were submitted for analysis. The samples are based on two charcoal samples from context 19 layer under the skeleton and a third sample of bone from context 11 an articulated skeleton. These samples

provide valuable information to a general date of the cemetery. The three samples from BMC 38a provide a date in the second century BCE: 2155 ± 30 BP, 2160 ± 25 BP, and 2170 ± 25 BP (see appendix 4).

5. 5. Discussion

In conclusion, even if we have suggested broad range of date to most of the studied tombs, comparison between all the ceramic materials excavated allow us to suggest a relative chronology based on similarity to other dated collections.

Toward the end of the first century-mid second century CE, BMC 1 should be more or less contemporary with BMC 3, BMC 8, BMC 10, BMC, BMC 24, and BMC 31.

These tombs could also be relatively close to the assemblage within the burial niche of BMC 23, BMC 26, BMC 27, BMC 29, the two assemblages of BMC 33 which might succeed each other quite quickly, BMC 7, the second assemblage in the descendary of BMC 23, and BMC 4 for which a second century CE dating should be suggested. We could also add BMC 16 to this group.

As the context description is lacking and some jars have to be attributed to graves, we are not able for the moment to produce an in-depth chronological study of the burials. However, some considerations about the general date of the material are possible. In the previous analyses, we brought to light that the material from Berber cemetery would fit in with a wide date range between the second half of the first century CE. and the mid-third century CE. The earliest dates are inferred from the distribution of Fine Ware painted bowls and the latest from the end of the production of common jars and bowls. Tombs containing Fine Ware painted bowls could be dated prior to the second half of the second century and the graves that include common jars have been used after the beginning of the second century.

Thus according to the dating of pottery collections from Berber excavated tombs we can say that; pottery vessels from tombs BMC 6, BMC 12 and BMC 32 are associated with material that seems to correspond to a later date, toward the end of second century beginning of the third century CE. However, pottery from tomb BMC 34 shows that it might be dated to earlier period probably beginning of the first century CE or earlier.

Tomb BMC 39 and BMC 40 remaining unexcavated, but they have similar square shape structure of mud brick which have been identified and documented. Their location adjacent to BMC 38 and the similar tomb superstructure are quite clear evidence which can suggest a similar date for such unique type of tombs. Also in tomb BMC 34 located beside BMC 38a the three pottery jars that have been found are dated before the mid-first century CE.

According to additional potentially similar date from BMC 34, BMC 38, BMC 39, and BMC 40, I will suggest that grave in this area of the cemetery are earlier and may fall within the late second century BCE. In fact, the presence of mud brick pyramids with offering chapels and the east-west burial tradition together with less or non grave goods were element of early and middle Meroitic tombs. Therefore, in addition to the radiocarbon result I believe that the evidence for a possibly correct date for this part of the cemetery is confirmed.

It is too early to suggest an accurate date for these tombs; however, based on the size of the cemetery and the available evidence, the site can be temporarily dated between the late 2nd BCE to the mid 3rd century CE.

Chapter Six

Implications for Understanding the Meroitic Society at Berber and its Association with Trade: Archaeological, Historical and Geographical Perspectives

6. 1. Introduction

In the discussion on the emergence of Meroe, Adams has emphasized that Meroe owed probably its existence mainly to the control over trade routes (Adams 1977, 303). In fact, the geographical location of Meroe represents an important point on this overland trade. The same was the case of Napata and Kawa who achieved economic power through the control of the Meheila Desert road (Adams 1977, 303, Welsby 1996, 171). The location of the city of Meroe at the upstream end of the Bayuda Desert road, avoiding the hazards of the 5th and the 4th Nile cataracts, gave Meroe such economic power. This overland route played a major role in connecting the northern and the southern districts of Kush. The development of the Korosko Road to Egypt as a second overland trade route enabled Meroe, also to have further control over long distance trade. This desert road became the main link between Meroe, central Sudan and the Mediterranean World (Adams 1977, 304).

Before the recent discoveries from the archaeological exploration of Dangeil and the discovery of the large Meroitic cemetery at Berber there were certainly no identified major Kushite sites at Abu Hamad and very little evidence for Kushite activity in this region of the Nile Valley to support the significant role of the desert road to Egypt (Welsby 1996, 171). The Berber region is located in the area north of the numerous Meroitic centers in the Island of Meroe, and it is southeast of the major sites around Napata as well as those much further to the north. This geographic position has given the region an advantage as a cross-road which could have played a role in controlling the Korosko road between Egypt and Meroe.

Trade is directly related to the available transportation facilities, and water transport is cheaper than land transportation. But the geological formation of the area and the existence of cataracts along the Nile obstruct the use of the river and makes the use of water transportation very limited (Welsby 1996, 171). Therefore, long-distance trade will have probably gone by land. In fact there is a brief record of Kushite officials at

Philae that makes clear that routes across the desert were the main passage for travel between Egypt and Meroe (Welsby 1996, 172).

Ancient caravan routes of the Kushite period were the reason behind the establishment of some Kushite towns (Adams 1977, 303). This fact is often based on the geographic location and topographical nature of the areas that form these routes. In fact, Sudan is almost entirely flat. Therefore, it should be possible to travel around with little difficulty as almost everywhere good going for animals (Count Gleichen 1905).

The recent archaeological work in the Meroitic cemeteries at Berber and Dangeil revealed quite varied materials that provided information of possible different sources of origin. Some may be associated with areas to the south such as objects made of ivory and dense ebony wood, as well as some pottery types including hand-made pottery (Edwards 2014, 53). There are also metal ware, mainly vessels, jewelry, worked stone, glass ware, faience and wine and oil containers, some of which most probably were imported items. The following discussion will emphasize materials considered mainly as trade and exchange items during the Kushite period and in particular during Meroitic times. The discussion will also focus on presenting some similarities between objects which were often found in Meroitic cemeteries located north of the Second Cataract and those which have recently been discovered in the Meroitic cemeteries at Berber and Dangeil south of the Fifth Cataract.

6. 2. Meroitic Trade Items and Some Berber Collection

There is clear evidence for presence of both imported trade goods into Meroe and export items from Meroe. A large quantity of imported Egyptian pottery has been revealed from Meroitic sites, indicating a foreign origin for the content of these containers. Such items have been found as far south as Meroe and Wad ben Naga (Welsby 1991, 174). Storage deposits of export items such as ivory and ebony were found at Wad ben Naga in a store room of the palace as well as at Sanam. The fact that ivory was a well-documented trade item has been noted in Welsby 1996 "*Kushite ivory, more likely spoils of war or tribute, was used by the Persian king Darius to decorate his palace at Susa in Iran. This literary source makes it clear that the Ptolemies obtained war elephants from Kush and some of these may have been supplied via trade contacts with the Kushites*" (Welsby 1996, 175-176).

Hard wood such as ebony was associated with a southern origin and considered prestigious items for exchange. The presence of wooden products in long distance trade is a tradition that continues into modern history. Items of such hard wood were often recorded in historical sources as commercial goods being brought to Egypt by caravans coming from Sinnar and Darfur (Hassan 1977, 207).

Wooden items were very common in the Berber tombs and their exceptionally good state of preservation makes them unique (plate 28). The majority were ebony cosmetic containers used as kohl pots (Bashir 2013, 78). Similar to those found in Berber is a tall slender container carved in the form of six flattened spheres standing on a flaring base found in Karanog grave 521 (Wenig 1978, 267).



Plate 28: Wooden Kohl pot from Berber (Left) and from Karanog (Right. After Wenig 1978, 267)

Finds of glass were very rare in the excavated cemeteries of common people around Meroe, but it was often recorded from royal cemeteries (Edwards 1998, 65). In general very little glass has been found in cemeteries south of the Third Cataract; however, a considerable number of glass objects were found in the Berber and Dangeil cemeteries. The glass objects recorded from Berber were found in two forms: First, glass bottles, among them a coloured glass bottle similar to those from Sedeinga in the north (SNM no. 20407) and those found in the royal tombs at Meroe (SNM no. 525). The second form is the glass beads which are often gilded. Among the recorded beads of glass from Berber is a unique type (Plate 29). This type of beads

is the so-called 'gold-in-glass' beads with figurative design. 'Gold-in-glass' means they were made of two layers of glass with gold foil in between. The beads have a net pattern on one side and a figurative motif on the other of Harpocrates with finger to the mouth. Gold-in-glass beads in general (there are diverse shapes of gold-in-glass beads) are said to have been produced in Egypt, although their production has also been confirmed in Pakistan by laboratory analysis (Personal contact with Joanna Then-Obluski 25 June 2014). Generally, such beads are rare on the whole and they have been found primarily in Egypt and Nubia but also in southern Russia and even Iran. This again brought to light the possible Kushite contact with the Persians. The origin of the Berber beads can be established with further laboratory analysis.



Plate29: Gold-in-Glass Beads from Berber

Metal objects consisting of copper-alloy bowls, rings, fastening and nails are often found in the tombs. Among the discovered metal objects from the region of Berber are signet rings made of silver, copper-alloy and iron. These rings together with the commonly found bowls of bronze were considered prestigious items associated with trade and exchange.

Fittings of iron and copper were very common finds in the excavated tombs at Berber and Dangeil; they can be associated with trade as well. Similar finds have been recorded from sites such as Musawwarat es-Sufra; they were probably fittings for boxes. The majority of these objects have been found in burial contexts, but also in temples (Hintze 1962, 185). Some well-preserved examples of wooden boxes from Karanog in graves 521 and 445 demonstrated that fittings consisting of copper sheets and nails seem to be used for patching cracks; however, copper alloy rings were also used as handles for the wooden boxes (Wenig 1978, 270) (Plate 30).



Plate 30: Wooden Box with metal fittings from Karanog (After Wenig 1978, 270)

Faience objects are also among the finds associated with exchange and trade and considered prestigious items as well. Their presence was rare in Meroitic cemeteries in the south, however faience items have been recovered from a number of cemeteries in Karanog and Faras located north of the Second Cataract. Some unique faience objects have been recovered from Berber and Dangeil cemeteries. A faience box lid with a partly preserved reclining leopard was found in the fill of the descendary of one of the tombs at Dangeil. It has parallels with another lid from Kubar, near Aksha in northern Sudan, dated to the 1st century CE, now in the Sudan National Museum (SNM 23159) (Ali and Anderson 2013, 88, no. 78). The faience box to

which the lid belonged was also in the descenary's fill (Plate 31). The ends of the box are decorated with rosettes flanked by uraei wearing white and red crowns and two *udjat* eyes adorn each side. The box legs are in the form of duck heads and holes were pierced through the ends and sides to facilitate the attachment of the lid.

The presences of such boxes of different materials in the Meroitic cemeteries at Karanog and Faras, in the far north, is a tradition common to the northern province and one rarely found in the region of Meroe. However, a box made of textile from Berber (BMC 24) looks similar to those of wood found in Karanog (Wenig 1978, 270).



Plate 31: Faience Box from Dangeil

Pottery vessels recovered from the excavated tombs at Berber cemetery show the variety in pottery types that accompanied the deceased. Some examples suggest different origins which I will assume is a result of trade and exchange of items among an elite community occupying the region of Berber.

Some distinctive hand-made pottery jars such as those recovered at Berber in tomb BMC 34 has been found across the Meroitic Kingdom. These hand-made jars confirm the existence of a centre of production and a mechanism facilitating their wide distribution (Edwards 2014, 54). Such mechanism could be through organized trade and exchange for distinctive local products. However, both trade and the production of indigenous items were probably controlled by the state.

Hand-made, globular pottery jars without necks and of a typical fabric from the region south of Berber discovered in BMC 7 and 23, illustrate trade within the kingdom during the late Meroitic period (Edwards 1991, pl. VII). This may also be indicative

of a southern origin for the deceased; however, both interpretations support the argument that Berber was a trade centre and can be seen as a cross-road for caravans and that the structure of the community settled in Berber comprised people of different origins.

Examples of imported pottery vessels from the Mediterranean world have been noted among the finds in the excavated tombs at Berber. A wheel-made lekythos was found in BMC 27 and small bottle probably oil container was found at Dangeil (Plate 32). A lekythos is a type of Greek pottery vessel used for storing oil, particularly olive oil. It has one handle attached to the neck of the vessel. This fine ware vessel was clearly imported into the Meroitic area but such a shape has been usually discovered in the Meroitic Northern Province in the area of the Second Cataract. In fact some of the discovered Lekythos from the Meroitic cemetery at Sai Island had been identified as a locally made and others were imported from Aswan region. These various productions have been interpreted as indication of large scale trade (David 2010, 60).



Plate 32: A lekythos from Berber (Left) and small oil container from Dangeil (Right)

Meroitic iron production appears to have been under centralized control by the ruler (Haaland and Shinnie 1985, 160). This argument is based on the large concentration of remains of iron working recovered in around the royal palaces and temples at the City of Meroe. Without iron weapons and an army, the state would not have been able to maintain a stable and safe trade. However, since trade was one of the main

economic foundations of the Meroitic Kingdom iron objects have been categorized as Meroitic trade goods exported to the neighboring kingdoms, especially Egypt.

6. 3. Berber a Possible Meroitic Trade Centre

6. 3. 1. Archaeological Evidence

Adams pointed to the possible existence of a trade route connecting the Middle Nile region with the Eastern Desert and the Red Sea by putting a track for that road with a question mark (Adams 1977, 302) (Figure 40). This route emerges from the area north of the confluence of the Atbara River with the Nile.

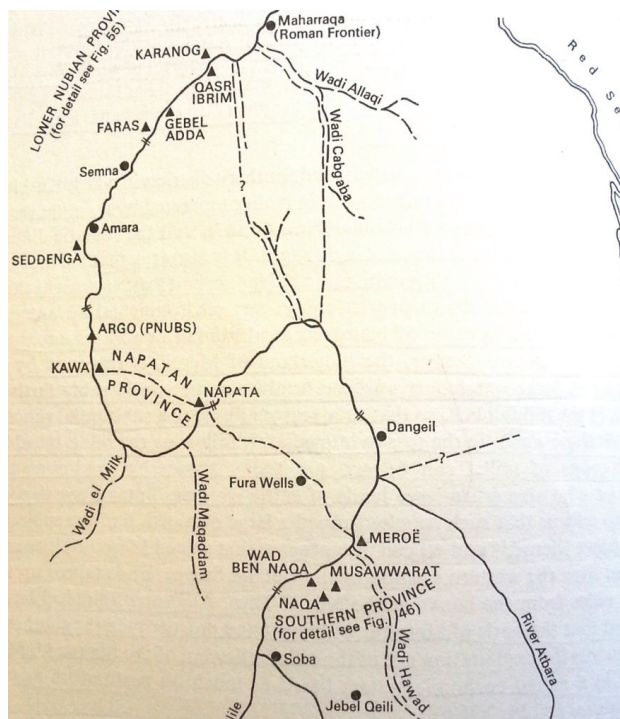


Figure 40: Overland Trade Routes (After Adams 1977, 302)

In support of Adams' assumption I will rely on archaeological, historical and ethnographical evidence to suggest the existence of a trade route between the region of Berber and the Red Sea across the Eastern Desert. Also I will present the possible

role of the Meroitic sites of Berber and Dangeil on the control over the Korosko road to Meroe.

There is archaeological evidence from a site, whose function supports this argument for Berber as a trade center. To the east of Berber, is a site at Tabot, whose geographic location and function as identified by artifacts confirm that it was a way-station for caravan routes dated to the Meroitic period (Magid et al. 1995, 177) (Figure 41).

The site is a large settlement complex discovered in a survey project conducted in 1992 (Magid et al. 1995, 166). One of the survey objectives was to trace old caravan routes connecting the Nile with the east. "*The caravan routes, among them the Berber route; enter the plain from the desert to the west; and travelers moving east along this line of communication find here the first green area with fodder and water*" (Magid et al. 1995, 166).

The site at Tabot contained stone structures of different types encompassing stone walled rooms and enclosures that were scattered over the site. Datable materials from Tabot suggested that the site was in use for a long period of time however, the earliest evidence suggested dates in the Meroitic and Greco-Roman periods (Magid et al. 1995, 177).

It was a way-station along the caravan routes which led to areas further south, to the area of gold mines, eastwards to the Red Sea, westwards to the Nile and north to Egypt. Some sources on the ancient caravan routes hypothesized that the site of Tabot was most probably located along one of the well-established routes and in particular the route of Berber-Musmar-Sinkat-Suakin (Magid et al. 1995, 168).

In fact, most of the ancient routes were still in use in Sudan if not being little used after building of rail ways or asphalt roads. There were a number of main cross-country roads recorded by the Anglo-Egyptian Government in 1905 (Count Gleichen 1905). These roads included some leading to outside the Sudan were in use since ancient time. The Anglo-Egyptian records included the roads of Korosko–Abu Hamad, Berber–Suakin, Berber–Kassala, and Kassala–Massawa routes. The existence of roads from Berber to Suakin and to Kassala clearly indicates connections between Berber and the Middle Nile region with the Red Sea and the Eastern Desert.

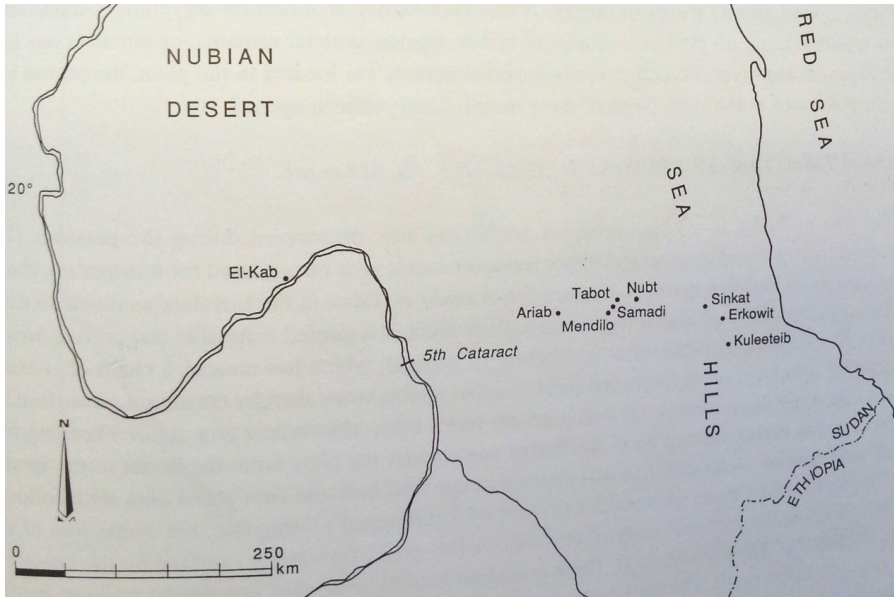


Figure 41: The Location of Tabot (After Magid et al. 1995, 165)

6. 3. 2. Evidence from Historical Sources

To provide more evidence that might suggest the existence of a trade centre at Berber and its role in controlling trade routes I will use some historical references where Berber is mentioned as playing such a role. During the Sultanate of Sinnar, luxury goods from Egypt and India were carried to the Darfur and Waday kingdoms from Sinnar. Sinnar controlled the long distance trade between Egypt and Suakin via Dongola or Berber and later through Shendi (Hassan 1977, 207).

Between 1700 -1820, there were well-established trade caravans coming to Egypt and which were categorized as either western or eastern caravans depending on whether they came from the Kingdom of Darfur, or from the Fung kingdom. Darfur caravans usually travelled along the Darb al-Arbain, the Forty Days Road; however, the Sinnar caravans used several routes some of which joined the Forty Days Road. Among the routes from central Sudan to Egypt is one that left the Nile at Berber (as one established end of this route), crossed the Nubian Desert approaching Egypt near Daraw, south of Aswan. Other caravans that transported goods that originated from Berber, to Cairo began in northern Sudan in places like Wadi as-Sebua and Wadi al-Arab (Walz 1978, 10).

Special references to horses will here be made since horses seem to have been of special importance in trade at Berber from the Kushite period to recent times. The importance of horses and the great admiration for horses held by Kushite rulers during the Kingdom of Kush has been clearly evident from both burial context and textual sources. Graves for horses had been recorded from the royal cemetery at el-Kurru as well as at Meroe and the iconographical record shows the depiction of horses on several Kushite royal monuments.

Travelers who visited Sudan in the eighteenth and nineteenth centuries reported that the horses of Dongola were considered a main item of trade in the trade centers of Sudan among which, Berber is mentioned as one of the well-established markets. J. L. Burckhardt noted that the Dongola horse was well-known even in the Near East (Heidorn 1997, 112). In fact, Kushite horses were mentioned in Assyrian records as being used in military battles and a clear statement concerning the import of Kushite horses and horse trainers into Assyria is associated with the mention of Nubian horse experts in the Nimrud wine list (Dalley 1985, 45). This fact demonstrates the long history of horses as being considered trade items. It seems that the use of such animals in trade is a well-established tradition in Sudan because this type of trade is ongoing and has shifted from horses to camels, which are considered now to be one of the main exports from Sudan to Egypt, using the ancient route of the Darb al-Arbaeen (Forty Days Road), and to the Gulf countries via the Red Sea.

Communication along inland routes is restricted by the question of water supply. These are mainly wells, and represent established way-points. Therefore, ancient caravan routes can be traced by first, by locating wells and wadis. Other way-stations along these routes are certainly waiting to be discovered. Trade routes were mainly along the major wadi systems, and wells usually marked the main routes across the desert (Edwards 2004, 155).

It is probable that the region of Berber played the same role in the Kushite period linking the Eastern Desert and the Red Sea with the Nile, and the Island of Meroe with the northern part of the kingdom; but the most important factor in this context is the position of the Berber area at one end of the route across the Bayuda Desert between the region of Napata and the north, and that of Meroe in the south.

Furthermore, the location of Berber roughly halfway along the road running from Meroe towards the Abu Hamad–Korosko road should be noted.

6. 4. Discussion

Adams argued that during the Meroitic phase of the Kingdom of Kush there were three distinct provinces. The region of Meroe is the southern province, extending downstream as far as the Fifth Cataract. The Napatan region (Barkal and Sanam) including Kawa is the middle province extending from the Fourth to the Third Cataract of the Nile. The third province is the northern one extending from the Second Cataract downstream to the Roman Egyptian frontier (Adams 1974, 41).

Archaeological work in the three provinces has shown different features for Meroitic settlement in the Northern Province from that in the Island of Meroe and its hinterlands. In short, there were much fewer royal monuments in the far north as compared to those scattered throughout the region of Meroe and Napata. However, the presence of settlements of common people and of cemeteries is more frequent in the north, which is not the case at Meroe and its hinterlands (Adams 1974, 44).

The level of wealth appears to be much higher in Northern Nubia than in the South which can be seen in the quality and quantity of grave goods. This fact had been interpreted to the advantage of the geographical location of the Northern Nubia being close to Egypt (Welsby 1991, 173). In fact, the Meroitic settlements north of the Third Cataract gained considerable importance from their function as major control points over trade between Meroe and Egypt. The nature of this settlement was to function as centre managing and controlling trade along the Nile and the inland routes (Edwards 2004, 156). Some Meroitic buildings associated with the Meroitic villages in the north have been identified at Faras, Meinarti and Karanog as official buildings most probably storehouses related to trade (Edwards 2004, 159). The population in the Meroitic villages in the north, which was considered not as productive an area, was small and it seems that was dependent on imported livestock (Edwards 2004, 156). In a way, these trade centers controlled the food supply for the population living in the northern provinces of the kingdom.

Textual evidence revealed also the role of the Meroitic settlements in the north found north of the Second Cataract. Some well-known titles were linked to trade

administration (diplomatic and trading roles are reflected in the quite common title of *Apote* (envoy), some times more specifically *Apote Aromelis* (envoy to the Romans)) (Edwards 2004, 161, Adams 1977, 354).

Evidence supporting the interpretation of the Meroitic settlements in the north as a series of trade control points is to some extent clear. These centers linked the Meroitic centers of the southern province and middle province with the Ptolemaic and Roman frontier (Edwards 2004, 163).

The region of Berber represents the shortest link between the river and the Red Sea in the whole Nile Valley. Considering that the geographic location of the region of Berber includes the Meroitic city at Dangeil, the only established Meroitic centre north of the Island of Meroe and south of the 5th cataract, this region probably links the three Meroitic provinces as stated by Adams (1974, 41) Routes linking south and north and leading to all provinces can pass via the region of Berber making this area a cross-roads and most probably a trade centre.

Magid has excavated Tabot, a site which he interprets as a way station. Remains of the so called desert ware pottery were recorded from the site which links it to the Nile and the Red Sea area, indicating cultural and trade contacts (Magid et al. 1995, 177). Way stations were significant for trade and they are important archaeological remains to look for to substantiate trade networks.

Trade was an important activity of the Meroitic state. Trade goods consisted of luxury goods. This type of trade formed an important part of a wider prestige goods economy where the exotic artifacts were controlled by the ruler and redistributed to the elite (Edwards 1999, 42). The political economy was thus based on a redistributive system, where control of iron industry played an important role in strengthening the state military power and securing trade items whose internal circulation served to link different people within the kingdom to its political centers.

The different trading routes needed to be protected from different tribal groups such as Cushitic speaking pastoralists. Jacke Phillips 1997, has emphasized that different tribal groups might have exerted some control of the overland trade routes, and that the Meroitic state had an interest in constraining their power. An indication of the importance of centralized control over trade routes can be seen at Jebel Qeili, located

on the road between Khartoum and Kassala, with its relief of king Shorkaror, in full royal regalia, holding in one hand weapons, spear, and a bow and arrows, while in his other hand a long cord with several tied captives. Torok interprets this as an indication of war and conflict, and an attempt to pacify the region in a period when maintenance of undisturbed trade contact within the region was very important (Torok 1997, 466). Haaland in press has also argued quite extensively on the importance of this topic (Haaland forthcoming). Shorkaror ruled during the 1st century CE, at a time when this trade was at its peak, and access to luxury trade goods from the interior of Africa was vital. The scene of Shorkaror is also important in a later context when discussing sorghum, where the king is offered a bunch of sorghum from a solar god, this scene suggesting both the fertility aspects of the king as well as aspects of war and conflict.

The rise of Axum has certainly weakened the role of Meroe in trade through its access to the goods of central Africa, and in the later Kushite period Axum appears to have been a strong opponent for Meroe in controlling trade routes to the Red Sea, which may have been an important cause for the decrease of Meroitic trade (Welsby 1996, 172, Munro-Hay 1982, 107-126). That together with the desert tribal threat to the caravan routes made it unstable and not safe trade. The end of Meroe was most probably result of losing control over trade.

Chapter Seven

The Role of Sorghum in the Kushite Society: More Evidence from Berber

7. 1. Sorghum and the Kushite Society

The excavated tombs from Berber cemetery provided quite a large number of objects, with a great diversity in both the types of material and the quantity found in each tomb. Numerous pottery vessels were recovered including many Meroitic fineware open dishes with internal floral painted decoration. In addition, large numbers of pottery jars have also been found. Among them were painted jars with floral patterns as well as some unique forms. The deposition of large pottery jars is a common tradition in Meroitic tombs.

Among the recovered pottery vessels from the excavated tombs at Berber are painted jars with floral patterns, four of which show clear painted depictions of sorghum heads. The vessels were recovered from four different tombs at Berber cemetery (B-3-56, B-4-49, B-7-65 and B-26-191; Bashir 2013, Bashir and Davied 2011).

The first example (B-3-56) is a wheel made jar with a short neck, wide shoulder, and pointed base. It is red slipped and polished. On the shoulder is a white band between dark lines. The sorghum plants are painted in dark lines and filled with white (Plate 33).



Plate 33: B-3-56

The second (B-4-49) is a red slipped polished jar. A frieze of sorghum is painted in dark lines and filled with white. Above and below are two large painted bands alternating white and dark (Plate 34).



Plate 34: B - 4 - 49

The third (B-7-65) is a bowl. On the inner surface is a stalk with a hanging sorghum head filled with light purplish and red surrounded by four “flowers” (Plate 35). The top of the rim is painted in light red. On both inside and outside are two reddish-black lines below the rim.



Plate 35: B-7-65

The fourth; (B-26-191) is a jar with short straight neck and ovoid body. The painted decoration consists of a row of red dots surrounded by bands in black and red under the neck. Below that, a frieze of sorghum alternates black and red plants on the body (Plate 36).



Plate 36: B-26-191

Ceramic jars of this type from the Meroitic period are well known as beer jars. They usually form the major component of grave goods and their presence is a clear indication that liquids (beer) were the main item of offering to the dead (El-Tayeb 2012: 82). So offering of drinks is attested by deposition of beer jars of different size and forms with their mouth in most cases covered with pottery or copper cups and bowls (El-Tayeb 2012: 82, Bashir 2010).

Such clear sorghum ears painted on pottery vessels are rare in Meroitic ceramic decoration and no similar decorative motif had been recorded from any other cemeteries so far. There are examples from Wad ben Naga and Kadada of sherds with what may well be stylized sorghum motifs, also appear in a vessel from Amir Abdallah (Edwards 2014, 56). However, depiction of sorghum appears clearly on sculptures and reliefs. The most important depiction of sorghum ears is the King Shorkaror rock carving on a granite boulder at Jebel Qeili east of Khartoum (Referred to in page 130). It is a royal victory relief depicting King Shorkaror apparently

receiving a bundle of sorghum heads from a god in return for captives (Figure 42) (Hintze 1957, Edwards 1996: 75). In the Egyptian iconographic records from the New Kingdom there is no depiction of sorghum, however wheat and barley were clearly shown (Conwy 1991, 194). The important role of sorghum in religious rites is also suggested by the bunches of sorghum deposited as ritual offerings in pits for at the important cult centre of Qasr Ibrim dated to the Late- Post-Meroitic period (Conwy 1991, 194). Also bunch of sorghum has been documented in the hands of the god Apedemak appear to be depicted on temple reliefs at Naga (Edwards 1996: 74).

Several archaeological excavations in Sudan have provided evidence for presence of sorghum from different contexts. For instance it had been recorded in the excavation of a domestic habitation site dated to Early Kushite period at Kawa in the Dongola Reach (Fuller 2004, 72). Such context provides evidence for the role of sorghum for food. However, in different example sorghum had been identified among the grain found during the excavations of number of grain-pits at Tanqasi (Shinnie 1954, 73). This evidence was from a burial context which shows the role of sorghum in rituals.



Figure 42: King Shorkaror rock carving from Jebel Qeili (After Hintze 1959, 190)

The recovered ceramics pots from the Meroitic cemetery at Berber points to strong links between the Meroitic funerary practices and sorghum and its products, since total of three pottery beer jars and a bowl from the cemetery at Berber have shown clear sorghum heads. The depiction of sorghum on a beer jar that have been made on the first place to be used in rituals practices is a clear prove of the importance and the role of sorghum in the local believes and traditions. Revealing of three jars with decoration of sorghum within the excavated tombs at Berber is considered as high proportion for presence of such decorative motif. These types of pottery jars were well known finds from Meroitic cemeteries elsewhere.

Evidence of the role of sorghum in rituals in the Meroitic period comes from the temple site of Dangeil north of Berber. Excavation in a mound located to the east of Amun temple revealed large number of cone-shaped ceramic moulds. This type of mould has often been found in association with Amun temples and it has been suggested that ceramic cones of this type are moulds for temple bread offering (Anderson et al. 2007, 89). The grain used in Dangeil mould to produce bread was initially assumed to be wheat following Egyptian models, but archaeobotanical analyses of phytoliths revealed that sorghum was the grain used for bread, not wheat or barley (Anderson et al. 2007, 89).

The excavations in the Meroitic cemetery at Berber provided some fragments of bread moulds found in the filling of tomb BMC 38. This tomb has a mud brick pyramid with clear funerary chapel on the eastern side where funerary ceremonies usually took place. However, the presence of bread moulds is a clear indication of offerings to the dead, which is most probably made of sorghum as in the Amun temple at Dangeil. So the question then is, "*what sort of bread product can be made in a mould with sorghum, or is bread being made at all?*" (Anderson et al. 2007, 90).

Concerning the bread mould from the Amun temple at Dangeil, there is clear evidence that porridge was the sort of food product made of sorghum. Anderson 2007 conducted ethnoarchaeological study and experiments making of food items of sorghum. So since, *asida* is the only form of sorghum porridge, "*an experiment was conducted wherein some of the sorghum asida mixture was added to a Kushite bread mould that was nearly complete. Were the mould complete, it could have been necessary to break it to remove the contents, but in this case, it was not required. The*

asida took the shape of the mould, becoming somewhat cone-shaped. The production of asida or an asida-type firm porridge may be suggested as one possibility for the use of the bread moulds" (Anderson 2007: 91).

In addition, it is important to say that sorghum in modern times represents the main cereal for bread and local beer making, and is considered as the main item in the region of Berber food culture. Some traditional alcoholic beverages are based on sorghum; the well known type over all Sudan is Merissa , which is considered part of subsistence regimes as well as playing social and cultural roles in a number of societies in Sudan (Dirar 1993; El Tayeb 1974).

7. 2. Why Sorghum?

Sorghum has a clear association with the ancient and present cultures of Sudan. There is a considerable record of sorghum in the daily life of Sudanese. Its important role as the main item in our food culture is clearly evident. The old history of sorghum as the main food item in the Nubian past has been supported by archaeological, iconographical, and ethnographical studies. Also the strong link between the Meroitic rulers and sorghum and its role in rituals had been evident from the inscription of the royal monuments (Edwards 1996, 76). However, further studies on sorghum and the nature of its products has provided more characters supporting its strong role not only as a main food item but also in rituals and social life.

Sorghum has been recorded in archaeological records from the Sudanese Nile Valley as the main grain since the period dated between 8000 and 4000 BC (Haaland 2007, 174). Plant impressions in pottery sherds indicate sorghum was recorded from several sites (Pope 2013, 3). The first presence was in a form of plant impression that indicates the cultivation of wild sorghum. However, domestic sorghum has only been found in much later contexts, in Meroitic sites including Jebel Tomat, Meroe and Qasr Ibrim (Haaland 2007, 174).

Today, beer is of fundamental importance, in large parts of Africa. Based on material from Nubia dated to CE 350_ 550, Armelagos (2010) has argued that the consumption of beer had important health benefits because it contained antibiotic tetracycline. Beer was made from grain kept in mud stores where it had been contaminated by the bacterium Streptomycin, which produces tetracycline. Armelagos observed

tetracycline, even in two-year old children. He believes that tetracycline protected these ancient Nubians from bone infections, since all the bones were infection-free (see Haaland 2012 for further discussion). Beer was thus important both nutritionally and medically. Furthermore, it is commonly used on occasions expressing and fostering social solidarity that tie people together and reinforce hospitality and communality in everyday life. In a wide range of African communities one sees that the two food items, porridge and beer, along with the activities involved in their preparation, serve as important sources for symbolic elaborations. Beer provides the occasion for an important expression of sociability, especially beer drinking connected with communal work, and rituals (see Karp 1980 for extensive references). The importance of beer in cultural history has only recently been recognized (see above). Dirar has argued that fermented foods such as beer made of sorghum have a long time depth in the Sudan since the latter occurs in some 30- 50 different varieties (Dirar 1993, 30). Interestingly, when in the late first century BCE the Greek geographer Strabo wrote on the life of the people from the island of Meroe he described the importance to them of beer made from the local millets (Shinnie 1967, 18- 19).

Comparative ethnography indicates that the consumption of alcohol takes place a variety of contexts: in daily household consumption, in the mobilization of labor for different productive tasks, on ceremonial occasions and in reciprocal exchanges in agricultural communities. An important change occurs with political centralization. This is generally accompanied with the redistribution of surpluses accumulated by political leaders. Political rivalry between leaders in order to attract followers is accompanied by rivalry in the distribution of goods and in symbolism when redistribution takes place on festive occasions. Such symbolism, including the symbolic expression of leaders' rank and power, is very often expressed in alcoholic drinks and in the vessels in which they are served. Even in simple farming communities we may see how incipient political centralization is manifested not only in the amount of beverages served, but also in some elaboration of serving vessels. Beer is served both as a sense of communal identity for those drinking together and as a sense of differences and boundaries from others. It often has a heightened valuation in ritual contexts and is often served as a component of rituals. As noted by Justin Willis (1999, 61) quoting one of his informants: *'If there is beer there is no ritual'*.

Evidence from different field studies support the long history of sorghum in Sudan had been revealed. For instance, a study of bones from Ballana cemetery dated to the Post-Meroitic period (CE. 350 to 550) has revealed evidences for the occurrence of tetracycline, which has been analyzed as a result of storing crops in mud containers that provided good condition for tetracycline-producing bacteria (Bassett et al. 1980: 1533). This fact demonstrates the importance of fermented crops probably sorghum as main item in the ancient Nubian food culture. However, it is important to note that all sorghum products are fermented (Dirar 1994), Edwards 1996).

Sorghum in modern times is used in making different kinds of food. The most popular is *kisra*, which, is the modern bread-type products. It is flat, thin and usually cooked on a hot griddle *doka*. Ceramic *doka* are often found in archaeological sites dated from the Medieval period. The second main product of sorghum is *asida*, which is the only sorghum product in a form of porridge that currently made in Sudan (Anderson et al 2007, 91). However, sorghum beer traditionally called *merissa* or *assaliya* is the most common type of sorghum products. Brewing of sorghum beer has a long history and is a common practice all over Sudan. In fact, there are about 30 to 50 different kinds of *merissa* (Dirar 1993, 30). It has been associated with cultivation of cereals since ancient time until present day. In fact Merissa is considered as one variety of food not just as a stimulant (Bjorkelo 2009, 76).

7. 2. 1. Porridge

Haaland 2007 has formed on the bases of ethnographical studies regional differences in the preparation system of food comparing Sub-Saharan African ways with those in Egypt and the Near East. Haaland stated that porridge and pot as a way of food production is associated with Africa south of the Sahara, compared to a culinary regime based on bread and oven that distinguished Egypt and the Near East. Haaland's argument was based on the crops used in food preparation in both regions, which are summer crops such as sorghum and millets in Sub-Saharan Africa and those of winter crops such as emmer, wheat and barley in the Near East. It is in savannah climate sorghum could survive with summer rain. Morphologically domesticated sorghum has often been recovered from such an environment in different parts in Sudan. However, wheat and barley are associated with the Mediterranean environment with winter rain (Haaland and Haaland 2013, 550).

Ethnographic observation of food preparation in both regions shows that making a variety of porridges in pots is associated with summer crops because there is no possibility to make dough for baking from sorghum for instance because it contains gluten, while baking a variety of bread in an oven is associated with winter crops (Haaland 2007: 177).

In addition, it has been observed that no ovens were found at Dangeil so far, unlike other sites where bread mould is associated with ovens (Anderson 2007: 92). This fact indicates that Dangeil moulds were not cooked, but used to follow the style associated with the use of such bread mould as offerings in Amun temples.

Edwards 1996 addressed interesting questions concerning sorghum, beer, and the Kushite society where a potential for social archaeology has been developed when he noted the social significance of sorghum in Kushite food culture. He stated that the role of sorghum in the Kushite food culture is significant when considering the long use of its products that beer and porridge as main foodstuffs (Edwards 1996: 68).

Edwards's argument was based on the absence of that flat pottery *doca* used for making bread in the Kushite contexts and its common presence in medieval Nubia as evidence for important change in food culture (Edwards 1996: 72). So, on the basis of archaeological evidence, porridge prepared on a ceramic pot was one type of food distinctive of Kushite society. Therefore, archaeological materials used in food preparation can provide evidence for the changes and development of food culture.

Jeremy Pope 2013 added evidence from epigraphy to support the hypothesis developed by Haaland and Edwards that Nubian food culture was based on eating cooked porridge of sorghum (Pope 2013: 3). Pope shows a number of Egyptian papyri that present an expression used by Egyptians to identify Nubian by calling them "eater of *3ws*" and "eater of *qmy*" (Pope 2013: 14). So, taking in consideration the convincing archaeological evidence for the widespread food tradition, which differentiates Nubians from Egyptian, he translated these texts as "eater of porridge". In addition, Pope presented evidence from a translation of an inscription from Sanam supporting the idea that Egyptian used the type of food to refer to Nubian in their inscriptions. This inscription was found in the Amun temple built by king Taharqo at Sanam (7th century BCE). So, quoting Pope 2013; "*Just as the Sanam Historical Inscription provides our first epigraphic evidence of porridge consumption in a text*

commissioned by Nubians themselves, the epithets contained in Egyptian papyri would seem to represent our clearest evidence thus far that the culinary contrast between Sahelian and Mediterranean Africa was noticed by Egyptians and explicitly invoked by them during the first millennium BC as a marker for social identity" (Pope 2013: 17).

7. 2. 2. Beer

Consumption of beer in the Kingdom of Kush is well evident. Several sources have provided indications of the use of beer by the Kushites. Evidence for the large-scale consumption of beer increased during the Kerma period, but is even more evident during the Meroitic period when it is manifest in a number of massive deposits of broken jars, as well as smaller bowls and cups, on hilltop locations in the Meroe area (Lenoble 1997). Masses of sherds material, sometimes associated with burnt animal bones that probably accumulated over an extended period were almost certainly deposited during ceremonial feasts and sacrifices, followed by the deliberate destruction of pottery vessels. The location of feasting and drinking appears to have taken place at significant points on the landscape; outside the city and temples. Sacrificial rituals and banquets would also have taken place at temples and palaces. This may be indicated by the large deposits of pottery totaling some 3,000 sherds of the beautiful Meroitic fine ware, including drinking cups and goblets (Edwards 2004, 146) with some additional 25,000 sherds found at Musawwarat es Sufra in connection with this site's so-called great enclosure, construction of which may have been related to its function as the main centre for the worship of the royal god Apedemak, the god of war but also of fertility (Edwards 2014, 51).

Beer jars are common item found in archaeological context such as in ancient burials to keep the deceased supplied with beer in the afterlife. Its role in Meroitic rituals and in the social life can be seen in the representation of beer and its consumption in different Meroitic contexts.

The clearest representation of beer *merissa* is a Kushite graffito dated to the Meroitic period at Musawwarat es-Sufra depicting two men drinking beer from a jar through a straw (Hintze 1979, 140-141; Edwards 1996, 71; Pope 2013, 4) (Plate 37). However, archaeological evidence from iconographies from Egypt has provided much earlier date for the tradition of using a straw for beer drinking has been recovered from a

funerary stela from el Amarna dated to the time of Pharaoh Akhenaton. The stela depicting man "quaffing his brew through a drinking tube added by a servant boy" (1350 BCE) (Mc Govern 2009, 247).

Later ethnographical studies proved that the tradition of drinking beer from a jar through straw is well adopted method for drinking beer in central Sudan (Dirar 1993, 22). This fact had been noticed in several African communities as well (Haaland 2006, 6). Drinking beer through a straw is an ancient tradition that continues today in Africa. It is a custom throughout modern Africa that unfiltered beer usually drunk with a straw to avoid solids. This custom is well documented in Africa through ethnographical studies in different African societies.

Some beer jars from Meroitic burials show evidence of grain beer which appear very clearly in "wear corrosion patterns with beer jars, probably reflecting the increased acidity of fermented products" (Edwards 2014, 59). Such example of heavy erosion on the bases of beer jars had been recorded at Gabati (Edwards 2014, 59).



Plate 37: Depiction of two men drinking beer from a jar through a straw at Musawwarat es-Sufra (Cornelia Kleinitz, Musawwarat Graffiti Project)

Therefore, when the Meroitic beer jars are decorated with painted sorghum grain that is a notable feature shows the type of beer as a fermented alcoholic beer of sorghum, which known traditionally as *merissa*. However, further archaeobotanical analysis will provide more clear evidence. Edwards pointed to the historical sources that confirmed a long history of beer of sorghum. These sources including the early European travelers reports and the medieval Arabic sources (Edwards 1996, 73).

Generally, Nubians used crops intensively to produced porridge and beer as main part of their diet, since Merissa is liquid food considered as a main food aspect. The long history of this food tradition in Nubia has been evident through several archaeological and ethnographical studies. Some of these studies have also revealed important discussion points on the consumption contexts of sorghum products.

7. 2. 2. 1. Social Context

The social role of beer is clearly evident in its association with work parties as beer in general has often been distinguished in African contexts. These parties have similar concepts and known as *nafeer* or *fazaa*, which is a widespread social tradition across Sudan. This phenomenon has been noted in Darfur by Barth (1967) and Haaland (2007) and in the northern part of Sudan by Al Bataal 1994 (Edwards 1996, 69). However, this tradition is also known in African societies and this practice has been explored. Dietler 1990 in his pioneer contribution in studying the social significance of alcoholic beverage has shown that it is a social act with deep history and almost universally common behavior. Dietler has shown that drinking of alcoholic beverage is in the first place a social performance all over the world and since the dawn of history. The universal field where alcohol as social act can be seen are in social interaction, social relation, hospitality and ceremonies (Dietler 1990, 360).

The socio-cultural role of pottery and its association with beer drinking is a topic has been attested in African archaeological research. However, there are clear similarities for instance between pottery pots of those used in the mutual beer drinking which is presented by Nigel Barley 1987 to one in Sudan National Museum dated to Kerma period (2500 BCE-1500 BCE). It is a large pottery vessel with multiple spouts (Plate 38). This one was used by Bagishu people in Uganda (Barley 1987, 30). Each participant inserted a drinking –straw in a mouth of the vessel. The depiction at Musawwarat (mentioned above) provided evidence for such mutual beer drinking.

Therefore, on the basis of these facts my research then will emphasis more on dealing with the pottery beer jars from the Meroitic period in a wider African framework. Ivan Karp pointed to the social role of the common beer drinking tradition among African communities such as the Iteso in Kenya, which is a model of African beer drinking culture that can be put forward in our interpretation of the materials from the excavated Meroitic cemeteries (Karp 1994, 88).

The consumption of beer in social gathering can also be through the small ceramic cups and bowls including the ledge-rimmed bowls, which are a common finds in the Meroitic burials. These beer drinking vessels I will assume have later been replaced by calabash pots. It seems that the size and capacity of both of them are almost the same. The use of calabash for drinking Merissa is well known tradition in different parts of the Sudan.



Plate 38: Left: Large pottery vessel with multiple spouts from Uganda (After Barley 1987, 30).

Right: Jar from Kerma Sudan National Museum.

7. 2. 2. 2. Ritual Context

The role of beer in the Meroitic mortuary practices is a feature that has been noted and documented in all the excavated cemeteries. However, the deposition of pottery beer jars in burials has a long history in Kush. The large number of pottery beer jars found in the excavated Meroitic burials at Berber has focused our attention on the possibilities for dealing with this practice within the African context. However, the

use of alcoholic drink in Africa and its association with mortuary practices and rituals is well attested in both ancient and current African societies.

Moreover, the symbol of the floral patterns especially sorghum on the painted pottery dishes like the example from B-7-65 with internal painted decoration demonstrates a symbolic and ritual meaning, since such dishes were used for pouring liquids in libation practices. The colored images will then be noticeable when pouring the holy liquids (Bashir 2010, David. 2011: 127).

Lenoble discussed libation practices providing interpretation for the ledge-rimmed bowls often found in Later Meroitic burials that were served in the funerary banquet. Which is a meal usually cooked and consumed during the funerary process (Lenoble 1994: 95). The archaeological evidence provided to support this interpretation are the fire places usually observed beside the tombs, which is a feature often observed in Meroitic and Post-Meroitic Burials.

Berber cemetery has also provided example of fire place which has been observed on the ground surface in front of the offering chapel in BMC 38 (Plate 39). However, there is another interpretation provided by El-Tayeb 2012 for the function of the fire places associated with Meroitic burials as funerary purification. He stated that the funerary banquet is a well-documented mortuary practice with long history in Nubian ancient culture. But the estimation of the recovered fire places so far suggest limited heat lasted for a short time, therefore it can be used for purifying the burial by smoke, but not for cooking a meal (El-Tayeb 2012: 84).

Both interpretations for the function of the fire place associated with burials suggest that a kind of a party took place in the funerary practices. Such gathering is often associated with beer consumption, since the main grave goods will accompany the deceased are pottery jars of beer.



Plate 39: Fire Place in front of the offering chapel in BMC 38

7. 3. Discussion

Thus following the discussion on the long history of sorghum in Sudan and the important role of its products in Nubian food system, rituals and social life, the discovered pottery jars painted in clear depiction of sorghum heads provides further support to the hypothesis that developed by Haaland and Edwards and later supported by epigraphic evidence provided by Jeremy Pope.

The long history of sorghum and its important role in Sudanese food culture had been well documented through different research. However, more archaeological evidence such as the pottery jars from Berber further suggests the special role of such crop as sorghum in the past and present of Sudanese society.

There is continuity in the use of sorghum porridge, bread and drinks as main food items in our current life. That because as noted above sorghum fermented products are healthy and provide the body with natural antipoetic. In fact, the continuity is even for the drinks produced from sorghum and as Sudan is a Muslim country that can't allow brewing *meressa* for instance, which was a main part of ceremonies associated

with the life passages. However, non-alcoholic sorghum drinks have been developed-- the most popular is *aprih* that its consumption is associated with the holy month of Muslims Ramadan.

Chapter Eight:

Concluding Remarks

The newly discovered cemetery at Berber shows its clear integration in the burial tradition of central Sudan during the Meroitic period, especially if we consider the orientation and the position of the body, and the burial structure. Concerning the tomb structure all the excavated tombs have an east-west descendary about 4m long leading to an oval shaped north-south or east west rectangular burial chambers. The position and the orientation of the bodies reflect differing traditions, indicating a long period of usage for the cemetery, possibly from the middle to late Meroitic periods (second century BCE to late third century CE).

The magnetic survey results show an extension of the cemetery at Berber with clear distribution of tombs in a large area. The number of the excavated tombs at Berber cemetery is very limited and can be considered only a sample compared to the total size of the cemetery that has been identified. However, this sample of excavated tombs has provided important research potential. The discovered cemetery shows considerable richness in grave offerings, raising the status of the site to that of an elite cemetery. In addition, the offerings and the grave goods show considerable proportion of prestigious objects and some unique finds attracted the attention of our research to discuss important Meroitic cultural and social aspects in order to understand the community at Berber and its role and contribution to the Meroitic Kingdom.

The first feature that has been noticed during the post-excavation process is the similarities of the materials to tombs excavated further to the north. This observation has been noted in the description of the finds from Berber referring to examples from similar sites in the region of Meroe, since the only excavated non-royal Meroitic cemeteries that can provide comparable material are those at Meroe, Gabati, and Kadada. The statement that: finding of these objects are common in cemeteries in the north and their presence in the south are rare was often found in reports describing some objects from these cemeteries. However, finding of such objects is common in the Meroitic cemeteries at Berber and Dangeil.

The burial practices and the funerary offerings at Berber show similarities to Meroitic tombs excavated further to the north. The recent archaeological work conducted both

at Dangeil and Berber provided clear evidence for similarities to some funerary traditions and associated funerary items with Meroitic cemeteries in the area around and north to the 2nd cataract.

Meroitic funerary practices show significant regional diversity and considerable changes over time (Edwards 2004, 176). In the Meroitic heartlands there are no tomb superstructure, no offering tables or inscription, however these were common in lower Nubia.

The recovered mud brick pyramids at Berber show a similar tradition well known in the Northern provinces. That can be seen as clear mark of social differences, since such funerary monument has been associated with elite burials (Relly and Francigny 2010, 63). Tombs superstructure of mud brick pyramids is a widespread feature in Meroitic elite burials which have been recorded at Kawa, Sai Island, Sedeinga, Amir Abdalah, Karanog and Faras.

Multiple burials and the reuse of tombs for family members is also a tradition that has been noticed in Meroitic cemeteries at Kawa, Sai Island, Sedeinga and other Meroitic cemeteries in the north. This tradition is clearly associated with elite tombs, which is the status of the Meroitic cemetery at Berber. In fact most of the excavated tombs at Berber had more than one burial except the extended burials which are normally accompanied with a wooden coffin.

The presence of inscriptions and offering tables in the Meroitic tombs downstream of the 5th cataract in the northern part of the kingdom can be interpreted as a manifestation of Meroitic cultural feature in the north. In fact, recording for example an offering table in Meroitic cemeteries seems largely to be a feature of Lower and Middle Nubian contexts (Edwards 2004, 175). The most numerous, funerary inscription, are almost always written on stone offering tables and stele. Most of these come from cemeteries north of the Third Cataract. (Edwards 2004, 177).

Concerning dating of the cemetery, the finds indicate a long period of use. The sand stone offering table, for instance, can be dated to the middle of the third century (CE 250). The fine ware pottery (stamped, painted etc.) is well known from the middle Meroitic period. However, the distinctive hand-made black pottery jar indicates earlier dates, (1st century BCE – 1st century CE). The position and the orientation of

the bodies show different traditions indicating a long usage for the cemetery, possibly from the middle to the late Meroitic periods. Based on the size of the cemetery and the available evidences, the site can be preliminarily dated around the middle of the second century BCE to the middle of the third century CE.

The discovery of this cemetery adds new data to the already known Meroitic cemeteries south of the 5th cataract: Meroe, Gabati, Kadada, and Dangeil. However, no settlement or occupational area has been found in association with this cemetery.

The question of an associated settlement with such an elite cemetery at Berber is important to incorporate in future work, and only be answered through intensive archaeological and ethnographical survey at Berber city. It is apparently that such an old town like Berber has continuity in the use of land for cultivation, settlement and for burials. In fact the discovered Meroitic cemetery is located beside the Modern Muslim cemetery and the same at Dangeil and most probably in some point they may overlap as it has been evident at Dangeil.

The Meroitic settlement site is most likely situated under the modern houses at the city of Berber. The oral traditions of the locals provided valuable stories brought to our attention the existence of red brick walls in the vicinity which may indicate the presence of settlements. Therefore the uses of ethnographical and historic approaches are indispensable method to locate traces of ancient settlement in the area.

The future plans in the ongoing project at Berber will be to incorporate ethnographical survey followed by archaeological investigation in order to test the survey results. The cemetery has provided much valuable information, and further archaeological investigations at the site will bring more promising data about the Meroitic occupation in the region.

The discovered cemeteries at Berber and Dangeil are related to settlement sites located somewhere in the region waiting to be recovered. Such settlement can explain the presence of those massive remains of bread mould in Amun temple at Dangeil as a result of a large number of visitors. Bread moulds were containers of offering presented to the temple by different people and also by traders who probably used to stop at Dangeil giving offerings to the temple for a successful and safe trip, or to pay

attribute to the temple. Also the arriving caravans from Korosko road or those from the eastern desert routes will stop at Dangeil for the same reason.

The recent archaeological excavations at Dangeil have revealed clear evidence that the Meroitic temple had been founded on an earlier mud-brick building of early Kushite date. There are three identified statues of the early Kushite Napatan kings Taharqo, Senkamanisken and Aspelta, who ruled between the 7th and early 6th century BC that were found in the fill of the early building.

The discovered finds strongly suggest that the Napatan statues were originally carved for and erected in an earlier temple at Dangeil. In fact Dangeil is considered the southernmost site of such a statue group of early Kushite rulers has been discovered (Anderson and Ahmed 2009, 84). These statues contains "*a reference to a toponym MS (T) that Zyharz has tentatively identified as a port on the Red Sea coast*". To quote from Randi Haaland this indicates a trade connection between the two corridors (Haaland in press 2014).

This discovery has provided evidence for an earlier presence of the site and indicates that the region of Berber was probably played the role of controlling the southern parts of the Kingdoms since the early Kushite Napatan period. Therefore, I will consider this discovery as evidence supporting the argument that the region of Berber was an administration centre controlling trade routes. The advantage of the important geographical location of the region of Berber and its easy access to main land routes yield to the significance of the site to be controlled by the state and the presence of such royal symbol like the royal statues is evidence for the direct control of the state over trade since the early Kushite time and continue to the late Kushite Meroitic period.

Understanding the archaeological finds and its context is providing direct information on the societies and the life style. Rich tombs of high class traders were often contained coffins, rich imported grave goods. Tradable materials such as; ivory, glass, ebony, bronze from different sources were also found in elites tombs.

Historical sources have information on most of the trade between Sinnar and its commercial centers such as Darfur and Kordofan as well as those carried through the Forty Days Road to Egypt was largely controlled by the recent Jallaba, who came from Northern Sudan (Hassan 1977, 207). So, trade is an economical activity

monopolized by people of the north. This was most probably the same situation during the Meroitic period, since we have clear social and cultural similarities between Berber community and those to the north well known as trade control societies.

This kind of geographical location usually has a great attraction to different peoples from various regions to come and live. Therefore, the social structure and the cultural impact consisted normally of different exported elements compared to the relatively closed Meroitic communities within the Island of Meroe. Berber city, during the early Islamic period in the 16th century CE, was known as a commercial centre and has received several migrants. Burckhardts (1822) described Berber by saying: "*There are very few houses of people, considered respectable, in which such women are not lodged. They are generally librated slaves, who have no means of procuring a living except by prostitution and the preparation of the intoxicating liquor called bouza*" (Burckhardts, 1835, 485). Similar situation I believe could have been a result of the structure of the Meroitic community at Berber some 2000 years earlier, because under such circumstances society will act the same on the basis of the presence of social stratification and differences.

Kushite Funerary Ceramics

The recovered funerary ceramics from the Meroitic cemetery at Berber show diversity in fabric and consisted of both hand-made and wheel-made pottery vessels. The variation of forms and types indicate different sources of the ceramic assemblage. Hand-made pottery shows a high standard manufacture with distinctive early Meroitic decoration patterns. Some examples are matching the widespread hand-made pottery noted by Edwards 2014 in his presentation of the Meroitic hand-made pottery and the question of its manufacture and the mechanism of its distribution all over the kingdom (Edwards 2014, 54).

The recovered hand-made pottery jars shows highly distinctive decoration patterns (Plate 40). Among these a special representation of giraffe has been noticed on a small jar found in tomb BMC 33. Also the motif of sorghum plants has been noted as a feature that appeared on four pots from Berber, however some of them were wheel-made.



Plate 40: Hand-made pottery Jars from Berber

Edwards 2014 stated that representation of wild animals and sorghum plants in Meroitic hand-made pottery seems to be related to Sudanic symbolic world (Edwards 2014, 57). In the late centuries of the Meroitic period some special Sudanic motifs were encountered on wheel-made pottery in the form of sorghum (Edwards 2014, 58). In fact the representation of animal motif can be associated with the surrounding environment during the Meroitic period where wild animals were part of the daily life and it has been noted by some classical writers such as Pliny that even elephants were normally seen around Meroe (Shinnie 1967, 20). Representation of sorghum in pottery jars can be associated with the importance and the long history of sorghum and its strong role in the Meroitic society.

The cemetery site at Berber provides further support to the discussion on the long history of sorghum in Sudan (Haaland 1995, 160) and the important role of its products not only in rituals and social life but also in constructing our identity based on the type of food that we live with. The discovery of pottery jars painted in clear depiction of sorghum plants at Berber considered further important evidence revealing the role of sorghum in the Kushite society.

Beer or traditionally Merissa is considered the main sorghum product and its consumption during the Kushite period was evident from the iconography, burials and several other sources. The contribution of the region of Berber in strengthening the role of beer in rituals was presented in the large number of beer jars that have been recorded in the excavated tombs and in the depiction of sorghum plants on some of these jars.

The consumption of beer is a universal act that has its social, economical, political and ritual importance (Dietler 2006, 1). The social role of beer during the Kushite period has been represented through mutual commensality same as current African communities (Karp 1980, 83).

The continuity in brewing and consumption of Merissa in Sudan has been related to its consideration as food in the first place, not only as an alcoholic drink. On the other hand the archaeological evidence has shown that fermented sorghum products especially beer has an important health benefits. It is supplying the body with antibiotic tetracycline and protects from bone infections. In fact now in Sudan people who drink Merissa and it is part of their diets they never suffer from anemia or any blood disease.

Therefore, the presence of these Meroitic distinctive motifs that can be considered symbols of identity in number of the recovered pottery from Berber seems to indicate the importance of the society and mark the significant role of the region of Berber during the Meroitic period.

The late Kushite Meroitic culture has clear distinctive aspects of Sudanic indigenous roots, however although the representation of these aspects is relatively rare that marks them as having specific significances (Edwards 2014: 57) which is the case for the sites where they are present.

The burial practices associated with funerary ceramic noted at Kadada considered one of the main contributions towards better understanding of the Meroitic funerary tradition in Meroe and its surroundings. The evidence of burial practices associated with Isis cult was overwhelming. P. Lenoble (1991) points out to a custom consisting of bowls deposited on a basket-tray. It is a tradition of depositing number of bowls over the deceased legs that was noted at Kadada. However discovery of seven bowls in

serial shaped of six bowls surrounded the sevens one in the middle at Kadada was the important example (Lenoble 1991, 247). The presences of these bowls were noted only at Kadada and there is no example from the Northern Cemetery at Meroe, however, an example of four bowls has been recorded from the Western cemetery.

P. Lenoble has greatly contributed to the understanding and identification of the role of ceramic within the Meroitic mortuary practices. Many of the aspect he has defined using material from Kadada and Meroe has been noticed in the ceramics from Berber necropolis. The numerous ledge-rimmed bowls found in each graves of the Berber cemetery could be connected to the custom consisting in bowls deposit on a basket-tray (Lenoble 1991, 247).

Ledge rimmed pottery bowls are found in most of the excavated tombs at Dangeil and in all graves at Berber except BMC 34 and BMC 38a. Both tombs were probably in use before the introduction of such production within the burial traditional equipment. However it seems that the systematic presence of these types of bowls is significant and this custom is apparently widely followed by people buried at Berber and Dangeil.

The burial tradition in the Meroitic cemeteries at Berber and Dangeil show clear association in funerary practices with Isis cult. That ritual seems to be common within the Meroe region during the last centuries of the Meroitic period. The large number of the ledge-rimmed red bowls with flat base or low foot in Fabric B1a and B1b found almost in each graves of the Berber cemetery could be connected to this practice. These bowls are also most common at Dangeil and are usually found in the northern side of the burial in group of 4 to 7 bowls. The finest example is of 7 bowls found attached to each other with one vessel in the middle surrounded by six on the exterior (Plate 41). This is a unique example found only in Dangeil thus far (Bashir and Anderson 2014, 16).

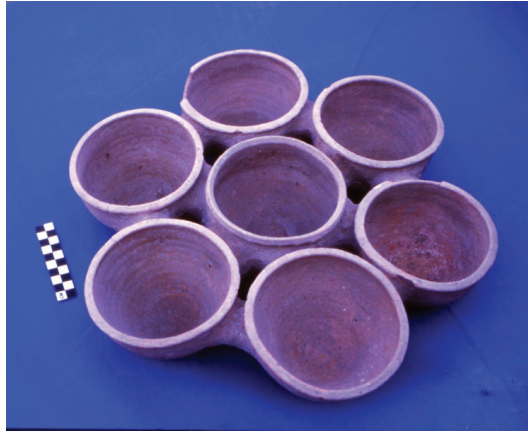


Plate 41: Ledge rimmed bowls (party tray) from Dangeil

The offering tables yield more precise iconographic data indicating in particular a deep influence of rituals related to the cults of Isis and Osiris (Geus 1991, 70). Therefore, with the clear presence of offering tables at Berber and Dangeil then rituals associated with the cult of Isis were practiced in the Meroitic region of Berber. Such a practice is also linking the region of Berber with Meroitic settlement in the north where the burial traditions are highly influenced by the cult of Isis. The libation scene is common on the offering tables from the north and also those from the western cemetery at Meroe demonstrate the influence of the worship of Isis at Philae (Welsby 1996, 94).

There is a limited number of fully documented tombs in the excavation because of the damage on the cemetery caused by the factory construction. Only tombs BMC 31 to 38 were systematically documented. Therefore, we are not yet in a solid ground to present a comprehensive documentation for the burial tradition in this cemetery. However, as mentioned above the extraordinary finds together with the consideration of the geographical location were the main aspects encouraged conducting this research.

This research has shed light on some aspects and raised new questions which might be answered through further excavations in the Meroitic cemeteries at Berber and Dangeil and its surroundings.

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Appendix 1

Berber Meroitic Cemetery Archaeological Excavation Project (BMC)

Type of Feature: **Area:** **Room:**

Context:

Dimensions

Length: **Depth:** **Width:**

Diameter:

Description:

Risk of Contamination: **Low** **Medium** **High**

Relationship to other features:

Under: **Filled by:**

Over: **Fill of:**

Cut by: **Shape:**

Cuts: **Colour:**

Same as: **Composition:**

Plan numbers: **Scale:** **Section:** **Sketch:**

Photograph number:

Finds:

Small Finds: **Bone:** **Pottery:**

Sample: **C 14:** **Other:**

Date Excavated: **Excavator:** **Method of
Excavation:**

Appendix 2

Berber Meroitic Cemetery Archaeological Excavation Project (BMC)

Object:	Field Number:	Present Location:
Photo Refs:	Drawing Refs:	
Find Spot:	Date:	
Dimensions:		
Material:	Recorded:	
Description:		

Berber Meroitic Cemetery Archaeological Excavation Project (BMC)

Object:	Field Number:	Present Location:
Photo Refs:	Drawing Refs:	
Find Spot:	Date:	
Dimensions:		
Material:	Recorded:	
Description:		

Appendix 3

Classification of Small Finds from Berber Cemetery

Iron Objects

Object: Iron chain

Field Number: B – 12 - 89

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: D. 1, 4 cm

Description: Iron chain consisting of 6 pieces 4 are rounded and 1 hook shaped and 1 U shaped.

6 iron pieces, all except 1 are loops with approximate circular cross sections. Attached to these loops are a thin 4mm wide and 15mm long flat pieces of bronze folded around the loop and folded back together to create the base of a "T" like form with the two arms of the "T" curved down. Two of the loops and "T" like connections are linked together in the original form.



Object: Iron nail

Field Number: B – 15 - 95

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: L. 5,5 cm

Description: Fragments of iron most probably parts of a nail.



Object: Unidentified iron pieces

Field Number: B – 31- 271

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: -

Description: 3 Fragments of iron pieces with traces of gold foil.



Object: Iron ring

Field Number: B – 9 - 98

Find Spot: Skeleton B

Date: Meroitic

Dimensions: Diameter 1,3 cm

Description: Broken iron finger ring the remained part is the upper part found in bad state of preservation.



Object: Iron ring

Field Number: B – 31 - 270

Find Spot: Found east to the pelvic probably where hands are rest

Date: Meroitic

Dimensions: Diameter 1,3 cm

Description: Complete ring with decorated rounded shaped bezel.



Object: Iron fragment

Field Number: B – 38a - 500

Find Spot: Under the right humorous Tomb 38a

Date: Meroitic

Dimensions: W. 2,1 cm. L. 4,5 cm

Description: Fragment of broken sharp sheet of iron.



Object: Iron ring

Field Number: B – 37 - 501

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: D. 2, 8 cm

Description: Iron ring with ends overlapping over each other and attached to a kind of bezel.



Object: Iron piece

Field Number: B – 1 – 13

Find Spot: Burial Niche

Date: Meroitic

Dimensions: L. 3,5 cm

Description: Unidentified iron piece



Copper Alloy Objects:

Object: Chain

Field Number: B – 1 – 9

Find Spot: Burial Niche

Date: Meroitic

Dimensions: ??

Description: Fragmented chain of copper alloy



Object: Bowl of Copper alloy

Field Number: B – 1 – 10

Find Spot: Burial Niche

Date: Meroitic

Dimensions: D. 13,5cm H. 7,5cm

Description: Complete and well preserved bowl of copper alloy decorated in floral patterns, and along the rim is geometric pattern of decoration. **B-1-10**

Bronze bowl in excellent condition, showing only limited evidence of oxidation. Measuring 138mm in diameter and 67mm deep. It has a band of 6mm wide running around the circumference of the bowl 12mm below the rim. It is made up of diamonds placed end to end with interior lines making a "x" like form touching the sides. It could also be described as quartered squares turned on their points with their ends touching. Below this are a series of "spear" shaped designs measuring 42mm wide narrowing to a point pointing up towards the rim. "Behind" these spear shapes forms which have further inscribed decoration are "leaf" like forms that are 28mm

wide at their last visible point. Their base is hidden by the "spear" like images which appear to be in front.



Object: Finger Ring

Field Number: B - 3 - 21

Find Spot: Burial Niche

Date: Meroitic

Dimensions: D. 2 cm H. 2, 3 cm

Description: Copper alloy finger ring found in its original position, well preserved rounded shape bezel. Finger rings is characterized by the presence of bezel. Most of the bezels are of a square, oval, or circular shape as seen from the front. Signet ring with flat top service. Oxidation has made it in possible to determine what (if anything) was inscribed in the flat 13mm by 11mm oval top.



Object: Finger Ring

Field Number: B – 33 - 272

Find Spot: Burial Niche i

Date: Meroitic

Dimensions:

Description: Incomplete copper alloy finger ring with rounded decorated bezel.



Object: Finger Ring

Field Number: B – 31 - 269

Find Spot: Burial Niche

Date: Meroitic

Dimensions:

Description: Complete and well preserved copper alloy finger ring with painting square shape decorated bezel.



Object: Cooper Bowl

Field Number: B – 8 - 84

Find Spot: On top of a pottery jar in the burial niche

Date: Meroitic

Dimensions: D. 14,5 cm, H. 7cm

Description: Well preserved bowl of cooper decorated with 2 lines along the upper part closed to the rim and another similar one 1 cm below.

Bronze bowl in excellent condition, showing only limited evidence of oxidation. The only decoration is two Pairs of concentric lines spaced 1mm apart running around the perimeter of the bowl. The first set is 1cm below the rim and the other pair of lines is 11mm below the first set. There is also tow circles at the base of the bowl on the inside.



Object: Cooper Bowl

Field Number: B – 38a - 505

Find Spot: Burial niche attached to the back of the deceased

Date: Meroitic

Dimensions: D. 13 cm, H. 8,5 cm

Description: Small bowl of copper. Remain of textile is found attached to it probably part of the body wrapping material. There is small hole on the base result of the corrosion. No decoration is noted.



Object: Copper Fastener

Field Number: B – 9 - 92

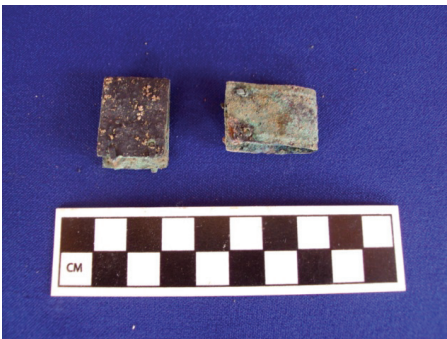
Find Spot: Fillings

Date: ?

Dimensions: ?

Description: Total of 2 pieces of copper fastener one found in the fillings of the slopping way and the other inside the burial niche. These pieces are probably used for fastening wood boxes; in fact, there are remains of wood within the pieces. B-9-92

Two bronze fastener made of a thin bronze sheet 2cm wide and bended over with small piece on bronze on the end that goes through a hole of each side and fastens them together.



Object: Copper Fastener

Field Number: B – 12 - 93

Find Spot: Burial niche fillings

Date: ?

Dimensions: ?

Description: Fastener with an iron nail on the middle



Object: Kohl Stick

Field Number: B – 2 – 18

Find Spot: Burial Niche

Date: Meroitic

Dimensions: H. 12,8cm

Description: Kohl stick of bronze well preserved, decorated on the lower part with rounded shapes.

A bronze rod has a 1.5cm by 0.5cm bulbous head and a rounded spear like head with a convex rounded notch midway through the spearhead. The first 2.5cm of the shaft below the bulb is smooth before a twirled pattern begins and continues another 7cm until the beginning of the spearhead end.



Object: Copper Fastener

Field Number: B – 30 - 262

Find Spot: Fillings

Date: ?

Dimensions: ?

Description: Total of 2 pieces of copper fastener.. These pieces are probably used for fastening wood boxes; in fact, there are remains of wood within the pieces.



Object: Copper Fastener

Field Number: B – 31 - ?

Find Spot: Fillings

Date: ?

Dimensions: ?

Description: Total of 13 pieces of copper fastener and nails found in the fillings inside the burial niche. These pieces are probably used for fastening wood boxes; in fact, there are remains of wood within the pieces.



Object: Copper Fastener

Field Number: B – 26 - ?

Find Spot: Burial fillings between the leg and left hand

Date: ?

Dimensions: ?

Description: Total of 5 pieces of copper fastener one found inside the burial niche. These pieces are probably used for fastening wood boxes.



Object: Ear Stud

Field Number: B- 16 - 275

Find Spot: Burial niche

Date: Meroitic

Dimensions:

Description: Ear stud of copper alloy with clear traces of gold well preserved.



Object: Copper Fastener

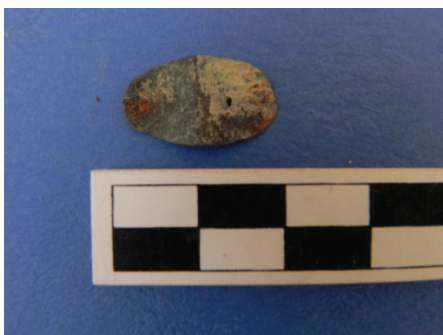
Field Number: B – 504

Find Spot: Surface of the site

Date: Meroitic

Dimensions: L. 2 cm. W. 1 cm

Description: Almost oval shaped with two visible holes for nails



Glass Objects

Object: Glass Bottle

Field Number: B – 1 – 8

Find Spot: Burial Niche

Date: Meroitic

Dimensions: ??

Description: Fragmented glass bottle light green colour.

There are 97 fragments of glass ranging from a few millimetres in diameter to 2 large pieces which are described below. These pieces make up the base and thin flute like neck of the glass object. They are light blue in colour although the glass has not really developed a patina. One of the two big pieces which is 93mm long and has a 42mm flat top base with a 19mm diameter neck. The glass of the neck is 3mm wide. The base also has a slight lip extending around the base on what would be considered the bottom. The other large piece of glass is part of the base and the bottom is concave in form, budding up to likely attach to the neck from the other large piece. Here the glass of the side of the neck is 5-6mm thick. This piece represents about 60% of the base of the object which likely has a rounded part at the base extending up into a flute like neck to the flat top. Based on the curve of the glass at the base, it likely had a height when whole of 130mm to 150mm.



Object: Glass Bottle

Field Number: B – 2 - 17

Find Spot: Burial Niche

Date: Meroitic

Dimensions: L. 17,5cm D. 3,8cm Base Diameter 6,5cm

Description: Complete and well preserved long neck glass bottle light green in colour.



Object: Glass Bottle

Field Number: B – 33 - 251

Find Spot: Burial Niche

Date: Meroitic

Dimensions: H.12,3cm D. 4,5cm top, 6,5cm base.

Description: Complete and well preserved short neck glass bottle painted in different colours.



Object: Fragments of glass

Field Number: B – 23 - 264

Find Spot: Burial Niche

Date: ?

Dimensions:

Description: Fragments of glass whitish in colour.



Object: Fragments of glass

Field Number: B – 24 - 252

Find Spot: Burial Niche south of the skeleton

Date: ?

Dimensions:

Description: Fragments of most probably glass bottle whitish in colour.



Object of Stone

Object: Offering Table

Field Number: B – 6 - 46

Find Spot: Robber pit filling

Date: Meroitic

Dimensions: W. 27,4 cm, H. 27,6 cm

Description: Sand stone offering table with an inscription in cursive Meroitic running around the spout.



Wood Objects

Object: Wooden Kohl Pot

Field Number: B – 1 – 11

Find Spot: Burial Niche

Date: Meroitic

Dimensions: L. 19,5cm W. 3,5cm

Description: Well preserved, black in colour, decorated on the upper and the lower parts. The object, which appears to be a "leg" or stand, which is consistent with the presence of burial beds in Post-Meroitic burials. It is worked dense wood and is has suffered some degradation due to drying out. Below the straight portion of the leg comes the decorative section and and measures 20cm long and is 3.5cm at it widest place. The wood shows evidence of having termite damage or other limited rot, but is generally in good condition. The object is hallow on the presumed upper half, likely due to post usage damage. It has two clear deep groves or indentations which are just under 1cm wide each running around what appears to be the base. On the presumed top part, there are another two groves which are also 1cm wide. There may also be vertical groves of 0.5cm, although they may be the product of weathering as opposed to being man made. The object has a flat back has a "pear like" or "oil-lamp" like profile above the first two groves on the base. A small piece of the same wooden material was also found in the bag and is assumed to be from the primary object.



Object: Kohl pot

Field Number: B – 38a - 502

Find Spot: Burial fillings

Date: Meroitic

Dimensions: L. 9 cm

Description: Wooden kohl pot with possible handle. Poorly preserved and incomplete kohl container. Remains of kohl are still in the container.



Object: Wooden bed leg?

Field Number: B – 2 - 19

Find Spot: Burial Niche

Date: Meroitic

Dimensions: L. 22 cm D. 4,5 cm

Description: Well preserved cylindrical shaped piece of wood worked in series of rounded discs consisted of 11. Function unknown.

22cm long by 4.5 wide carved wooden object. Perhaps a bed leg. It has 11 16mm wide convex carved facets and at either end a 1cm thick 4.5cm in diameter base with a lip carved on the two ends. It also has a 16mm indented circle with a 2mm shallow hole. The entire object is partially split on one side likely caused by the drying out of the wood.



Object: Piece of wood

Field Number: B – 6 - 26

Find Spot: Burial niche

Date: Meroitic

Dimensions: L. 35 cm, W. 8, 5 cm

Description: Flat piece of wood



Object: Kohl pot

Field Number: B – 6 - 28

Find Spot: Burial

Date: Meroitic

Dimensions: L. 16 cm W. 4, 5 cm

Description: Kohl pot of wood probably ebony cylindrical shaped worked in series of 3 rounded parts. The pot decorated in regular lines in half circle shape. **B-6-28**

15.5cm long wood "leg" made up of a flat thin base and three spheres between 4-4.5cm stuck together with a thin neck opposite of the base that is 25mm wide and extends 12mm high.



Object: Kohl pot

Field Number: B – 6 - 29

Find Spot: Burial niche

Date: Meroitic

Dimensions: H. 5, 5cm, D. 4, 5cm

Description: Rounded shape woods object probably a lid of a container. It has a flat base with pointed part on the middle.

Best described as resembling a "nob" it clearly has a cone shaped attachment piece to into a grove on a matching object. It is made of wood and is shows some evidence of decay. The "nob" or attachment piece extends 6mm from the base. The base is 42mm wide. On the top of the base which is 5-6mm thick is a "bud" shaped form resembling a sphere with the bottom and top cut off and it has a diameter of 55mm. It is a part of the same piece of wood as the base and extends out from the centre of the base which also has a 11mm lip around the point at which the "sphere" extends up

from the base. At the top, it has a 5mm deep recess which appears to be original and not the product of decay. The object is 53-54mm long.



Object: Kohl stick

Field Number: B – 6 - 30

Find Spot: Filling in burial niche

Date: Meroitic

Dimensions: L. 8 cm W. 0, 4cm

Description: Black colour wooden kohl stick



Object: Wooden pot

Field Number: B – 2 - 31

Find Spot: Behind the body

Date: Meroitic

Dimensions: D. 5, 3cm H. 3, 4cm

Description: Small container of wood decorated in incised lines in circular shape. The pot has a cover, and along the lid are relief lines as well.



Object: Wooden pot

Field Number: B – 2 - 32

Find Spot: Burial niche

Date: Meroitic

Dimensions: H. 2, 8 cm D. 3, 8 cm

Description: Smaller container of wood decorated in incised lines in circular shape. The pot has a cover, and along the lid are relief lines as well.



Object: Kohl stick

Field Number: B – 6 - 48

Find Spot: Burial niche

Date: Meroitic

Dimensions: H. 24,3 cm. W. 0,5 cm

Description: Kohl stick of wood brown in colour.



Object: Kohl Pot

Field Number: B – 12 - 85

Find Spot: On top of the body in the burial niche

Date: Meroitic

Dimensions: L. 17 cm, D. 3, 8 cm

Description: Well preserved Kohl container of wood cylindrical in shape with flat base (some remains of kohl still inside).

It is partly hollow, with a 1.5cm in diameter hole extending part way down the shaft.

The rounded piece shows evidence of one end having been a base (opposite of the end with the hole) and in total it is 17cm long and 4cm in diameter.



Object: Kohl pot of wood

Field Number: B – 12 - 86

Find Spot: Burial niche

Date: Meroitic

Dimensions: H. 19 cm, D. 3,9 cm

Description: Well preserved kohl container of black wood designed in a shape of series of 7 rounded parts with a flat rounded base and clear rim. The back side is flat which indicate that it may used to attach to something.

19cm long by 4.3cm wide carved wooden object. It has 6 40mm to 43mm wide convex carved facets 25-30mm high and at one end a 1cm thick 3cm in diameter. It also had a flat side and on the top is a protrusion that currently only extends 0.5cm above the last carved facet and it is hollow inside and 2cm in diameter.



Object: Kohl Stick

Field Number: B – 12 - 90

Find Spot: Burial niche fillings

Date: Meroitic

Dimensions: L. 10 cm

Description: In complete kohl rood of wood with a forge shaped handle. The rood is broken in 4 pieces.



Object: Kohl Stick

Field Number: B – 15 - 91

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: L. 9,3 cm

Description: Kohl rood of wood in a very poor state of preservation. There is a clear handle side.



Object: Wooden Coffin

Field Number: B – 8 - 140

Find Spot: Burial niche

Date: Meroitic

Dimensions: L 179 – 180 cm W. 24,7 – 9 cm Th. 3 cm

Description: 2 Pieces of wood light brown in colour found surrounding the body from the east and the west sides. It is remains of wooden coffin there are holes indicated that it could be nailed in a box shape. One of the piece in a good state of preservation, the second is broken.



Object: Kohl pot of wood

Field Number: B – 27 - 246

Find Spot: Burial niche west to the head of the body

Date: Meroitic

Dimensions: H. 19,5 cm, W. 3,5 cm

Description: Kohl container of black wood with a lid in fair condition of preservation designed in a shape of series of 12 rounded parts with a flat rounded base.



Object: Kohl Stick

Field Number: B – 31 - 257

Find Spot: Burial niche north to the skeleton

Date: Meroitic

Dimensions: L. 5,3 cm

Description: Kohl rod of wood in a poor state of preservation. There is a clear handle side.



Object: Kohl Stick

Field Number: B - 27 - 249

Find Spot: Burial niche north to the skeleton

Date: Meroitic

Dimensions: L. 6, 8 cm

Description: Kohl rod of wood in a poor state of preservation.



Object of Ivory

Object: Kohl Pot

Field Number: B- 6 - 47

Find Spot: Burial niche

Date: Meroitic

Dimensions: H. 21 cm, D. 4,5 cm

Description: Well preserved kohl container of ivory with a cover has small black rounded handle. **B-6-47**

Bone cylinder made up of two detachable pieces which combined are 21cm long and 4.5cm thick. The two main pieces as concentric circles carved on the base and a nob formed on the opposite end that is 12mm wide and 20mm high and hollow. The "top" has a 20mm hole to connect to the nob and has two thin carved lines spaced very close together on the top near the edge and another similar set just below the top circling the top. On the base of the top, there is a little round bed with concentric carved groves. It is 1cm in diameter and likely acts as an aid to lift the "top" off.



Object of Faience

Object: Incomplete faience object?

Field Number: B - ? - 88

Find Spot: Surface of a disturbed tomb

Date: Meroitic

Dimensions: 5 cm x 2, 5 cm

Description: Incomplete piece of faience decorated with floral pattern



Gold Object

Object: Ear Stud

Field Number: B- 33- 273

Find Spot: Burial niche

Date: Meroitic

Dimensions:

Description: Well preserved ear stud with a depiction of god Bes on one surface



Object: Ear Stud

Field Number: B- 23 - 274

Find Spot: Burial niche near the hands

Date: Meroitic

Dimensions:

Description: Ear stud of gold well preserved, but broken into two parts



Classification of Beads

Object: Beads

Field Number: B – 1 – 12

Find Spot: Burial Niche

Date: Meroitic

Dimensions: ??

Description: Beads of quartz about 75 pieces 43 are rounded shape and 32 rectangular shape



Object: Beads

Field Number: B – 2 - 20

Find Spot: Burial Niche under the right hand

Date: Meroitic

Dimensions: ??

Description: Group of beads of different shape and type consisted of faience, quartz, and carnelian.



Object: Beads

Field Number: B – 4 - 35

Find Spot: Burial niche neck area

Date: Meroitic

Dimensions: ??

Description: Small beads of faience rounded in shape



Object: Beads

Field Number: B – 5 - 39

Find Spot: Burial niche

Date: Meroitic

Dimensions: ??

Description: Group of 13 beads found under the left hand 8 are rounded and 5 rectangular shapes. There are white and blue and light brown colours



Object: Beads

Field Number: B – 9 - 87

Find Spot: Fillings before the blocking wall

Date: Meroitic

Dimensions: ??

Description: Group of beads, 128 small in size rounded shape made of faience. 6 beads of stone brown in colour, rounded in shape the biggest one measured 1 cm high and the smallest 0,4 cm high. Also there are 2 white rounded shaped beads.



Object: Beads

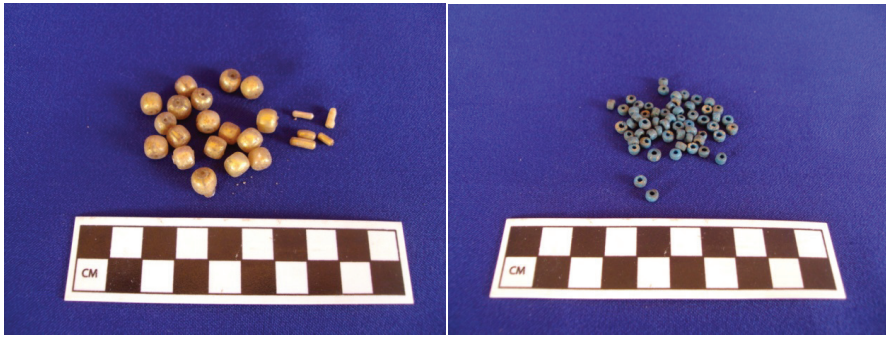
Field Number: B – 12 - 94

Find Spot: Burial niche filling

Date: Meroitic

Dimensions: Different size

Description: 18 Rounded gilded beads – 41 Cylindrical gilded beads – 144 Rounded beads of faience – 23 Beads of stones – 20 Brown + faience beads.



Object: Beads

Field Number: B – 12 - 96

Find Spot: Burial niche

Date: Meroitic

Dimensions: Different size

Description: 13 Beads of different materials found together in one side attached to each other.



Object: Beads

Field Number: B – 10 - 97

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Group of beads small in size and rounded shape + piece of copper in a shape of flower 5mm in diameter.



Object: Beads

Field Number: B – 33 - 256

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Group of beads of alabaster 54 small fine complete bead in cylindrical shape, and 18 broken. Also with 5 beads of unidentified material, and 145 rounded fine beads of gilded glass.



Object: Beads

Field Number: B – 32 - 256

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Group of beads of different materials 26 small fine complete bead rounded shape, and in different colour. Also with 4 small ones.



Object: Beads

Field Number: B – 32 - 254

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: These beads are so called gold-in-glass beads with figurative design. Gold-in-glass means they were made of two layers of glass with gold foil between. Beads have a net pattern on one side and a figurative motif on the other. The female (?) figure is most probably Isis (?) with horn of plenty. Such gold-in-glass beads with figurative design have been found in contexts dated to: second half of the 1st century BC - first half of the 1st century AD.



Object: Beads

Field Number: B – 30 - 263

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Two cylindrical beads of faience



Object: Beads

Field Number: B – 17 - 253

Find Spot: Burial niche found around a child skeleton

Date: Meroitic

Dimensions: -

Description: Beads of different materials: faience, stone, and glass



Object: Beads

Field Number: B – 27 - 266

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Beads in different shape and of different material include cylindrical faience beads and rounded gilded glass, and rounded stone beads



Object: Beads

Field Number: B – 23 - 268

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Total of 14 rounded white glass beads probably was gilded. Two of faience, and other two small of stone.



Object: Beads

Field Number: B – 31 - 259

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Total of 57 rounded gilded glass beads. Two broken and other. Total of 7 small faience beads.



Object: Beads

Field Number: B – 31 - 258

Find Spot: Burial niche

Date: Meroitic

Dimensions: -

Description: Group of different types of beads found intact attached to string. Some are conical shape made of stone attached to small beads of different materials. Also there are faience beads attached to string.



Appendix 4



Centre de
Datation par le
Radiocarbonate

<http://carbon14.univ-lyon1.fr>

40 boulevard Niels Bohr
69622 Villeurbanne Cedex

T 04 72 44 82 57
F 04 72 43 13 17
UMR 5136

S.F.D.A.S - M. RILLY Claude - KHARTOUM
ABS. VALISE DIPLOMATIQUE
13 RUE LOUVEAU
92438 CHATILLON CEDEX

Résultat d'analyse par le Radiocarbonate

MESURE PAR ACCELERATEUR

Identification de l'échantillon :

39256

Nom du site : CIMETIERE DE BERBER

Commune / Pays : BERBER / SOUDAN

Niveau / Couche : N°1 - COUCHE 19 - BMC T38

Nature de l'échantillon : CHARBON

Observations
sur le traitement
effectué au laboratoire : R.A.S

Résultat de l'analyse :

Code laboratoire attribué : Lyon-10660(OxA)

Activité ¹⁴C par rapport
au standard international : 76,47 % ± 0,27

Rapport isotopique

¹³C / ¹²C (‰) : valeur non disponible

Age ¹⁴C BP : 2155 ± 30

Age calibré : de 357 à 97 av. J.-C.

Sous la co-tutelle



Lyon 1

AVERTISSEMENTS

SUIVANT LES CONVENTIONS INTERNATIONALES

- La date donnée sur le résultat d'analyse est exprimée en années radiocarbone B.P. (Before Present : avant 1950).
- La marge statistique indiquée est la déviation standard (1 sigma), c'est à dire qu'elle définit un intervalle dans lequel l'âge radiocarbone exact a deux chances sur trois de se trouver. Pour avoir une quasi-certitude (environ 95%), il faut doubler cette marge statistique.
- Le résultat tient compte des éventuels fractionnements isotopiques.

CONVERSION DES DATES RADIOCARBONE B.P. EN ANNÉES RÉELLES

- Le calcul des intervalles des dates Centre de datation de Lyon par Philippe Galet. Ce logiciel qui utilise un algorithme classique de distribution de probabilités, s'appuie sur la dernière courbe de calibration connue (IntCal13 atmospheric curve de Reimer et al. parue dans le vol 55, No 4 de Radiocarbon (Université d'Arizona). La courbe couvre de 0 à 46400 années B.P. par pas de 5 à 20 ans ; une interpolation cubique permet d'obtenir une valeur par année.

- Pour les matériaux marins, un âge apparent de l'eau de mer de 400 ± 0 ans a été choisi (soit un $\Delta R = 0$) et une courbe de calibration "Marine" (Courbe Marine 2013 de Reimer et al).

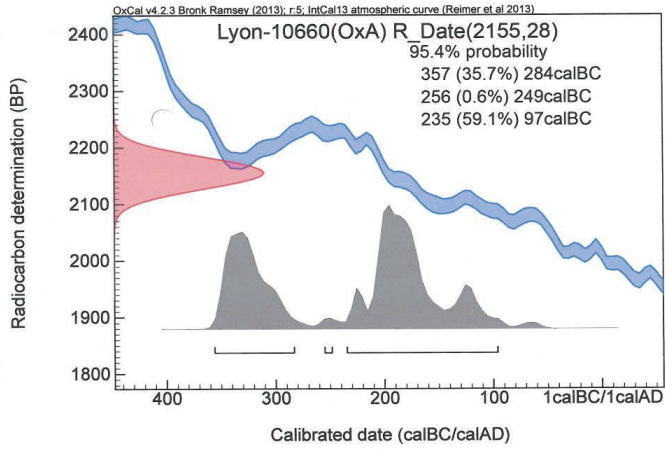
RECOMMANDATIONS

- La date doit toujours être publiée avec son numéro de comptage, soit le **CODE LABORATOIRE**, exemple: Ly-1995

- La terminologie B.P. doit être exclusivement réservée à la date non corrigée, tandis que les expressions " av. J.-C." ou " ap. J.-C." ne doivent s'appliquer qu'aux âges en années réelles, c'est à dire après correction.

- S'il s'agit d'une datation concernant l'archéologie française, dès son obtention, ce résultat sera incorporé dans la banque nationale de données radiocarbone (BANADORA) qui peut être consultée par Internet à l'adresse: <http://www.archeometrie.mom.fr/banadora/>

- Si l'expéditeur de l'échantillon ne désire pas que son résultat apparaisse immédiatement dans la banque de données, il peut demander sa suppression provisoire pour un délai de deux années en téléphonant au 04 72 43 13 15.





Centre de
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Radiocarbone

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40 Boulevard Nels Bohr
69622 Villeurbanne Cedex

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F 04 72 43 13 17
UMR 5138

S.F.D.A.S - M. RILLY Claude - KHARTOUM
ABS. VALISE DIPLOMATIQUE
13 RUE LOUVEAU
92438 CHATILLON CEDEX

Résultat d'analyse par le Radiocarbone

MESURE PAR ACCELERATEUR

Identification de l'échantillon :

39257

Nom du site : CIMETIERE DE BERBER

Commune / Pays : BERBER / SOUDAN

Niveau / Couche : N°2 - COUCHE 19 - BMC T38

Nature de l'échantillon : CHARBON

Observations
sur le traitement
effectué au laboratoire : R.A.S

Résultat de l'analyse :

Code laboratoire attribué : Lyon-10661(OxA)

Activité ^{14}C par rapport
au standard international : 76,43 % \pm 0,25

Rapport isotopique

$^{13}\text{C} / ^{12}\text{C}$ (‰) : valeur non disponible

Age ^{14}C BP : 2160 \pm 25

Age calibré : de 356 à 111 av. J.-C.

Sous la co-tutelle



Lyon 1

AVERTISSEMENTS

SUIVANT LES CONVENTIONS INTERNATIONALES

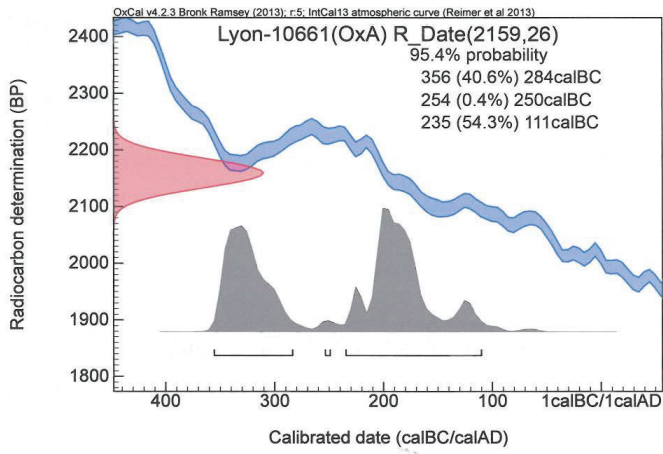
- La date donnée sur le résultat d'analyse est exprimée en années radiocarbone B.P. (Before Present : avant 1950).
- La marge statistique indiquée est la déviation standard (1 sigma), c'est à dire qu'elle définit un intervalle dans lequel l'âge radiocarbone exact a deux chances sur trois de se trouver. Pour avoir une quasi-certitude (environ 95%), il faut doubler cette marge statistique.
- Le résultat tient compte des éventuels fractionnements isotopiques.

CONVERSION DES DATES RADIOCARBONE B.P. EN ANNÉES RÉELLES

- Le calcul des intervalles des dates Centre de datation de Lyon par Philippe Galet. Ce logiciel qui utilise un algorithme classique de distribution de probabilités, s'appuie sur la dernière courbe de calibration connue (IntCal13 atmospheric curve de Reimer et al. parue dans le vol 55, No 4 de Radiocarbon (Université d'Arizona). La courbe couvre de 0 à 46400 années B.P. par pas de 5 à 20 ans ; une interpolation cubique permet d'obtenir une valeur par année.
- Pour les matériaux marins, un âge apparent de l'eau de mer de 400 ± 0 ans a été choisi (soit un $\Delta R = 0$) et une courbe de calibration "Marine" (Courbe Marine 2013 de Reimer et al.)

RECOMMANDATIONS

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- La terminologie B.P. doit être exclusivement réservée à la date non corrigée, tandis que les expressions " av. J.-C." ou " ap. J.-C." ne doivent s'appliquer qu'aux âges en années réelles, c'est à dire après correction.
- S'il s'agit d'une datation concernant l'archéologie française, dès son obtention, ce résultat sera incorporé dans la banque nationale de données radiocarbone (BANADORA) qui peut être consultée par Internet à l'adresse: <http://www.archeometrie.mom.fr/banadora/>
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13 RUE LOUVEAU
92438 CHATILLON CEDEX

Résultat d'analyse par le Radiocarbone

MESURE PAR ACCELERATEUR

Identification de l'échantillon :

39258 Nom du site : CIMETIERE DE BERBER

Commune / Pays : BERBER / SOUDAN

Niveau / Couche : N°3 - COUCHE 11 - BMC T38

Nature de l'échantillon : OS

Observations
sur le traitement
effectué au laboratoire : R.A.S

Résultat de l'analyse :

Code laboratoire attribué : Lyon-10662(OxA)

Activité ¹⁴C par rapport
au standard international : 76,32 % ± 0,24

Rapport isotopique
¹³C / ¹²C (‰) : valeur non disponible

Age ¹⁴C BP : 2170 ± 25

Age calibré : de 359 à 164 av. J.-C.

Observations sur ce résultat :

Sous la co-tutelle Rendement faible en collagène : < 10mg/g



Lyon 1

AVERTISSEMENTS

SUIVANT LES CONVENTIONS INTERNATIONALES

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- Le résultat tient compte des éventuels fractionnements isotopiques.

CONVERSION DES DATES RADIOCARBONE B.P. EN ANNÉES RÉELLES

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- Pour les matériaux marins, un âge apparent de l'eau de mer de 400 ± 0 ans a été choisi (soit un $\Delta R = 0$) et une courbe de calibration "Marine" (Courbe Marine 2013 de Reimer et al.)

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