

Documentation and excavation of dome and crevice graves in Kirbekān¹

Julia Budka

During the second season of work carried out by the Humboldt University Nubian Expedition (H.U.N.E.) in the area of Kirbekān², remarkable achievements were made in the field of funerary archaeology (cf. Budka in this volume). A considerable amount of so-called dome graves³ and crevice graves, isolated or arranged in groups, was found during the field reconnaissance in 2005 (44 sites with a total of 119 graves). Dome graves have already been identified by other missions working in the Fourth Cataract area (GAME, SARS).⁴ As H. Paner has pointed out, this particular type of grave might be a regional tradition since, as of yet, it has only been found sporadically elsewhere.⁵ Although most of the graves were looted in antiquity, pottery has sometimes been found in the surrounding area. These ceramics comprise both Kerma and distinctive Napatan shapes and wares. Some tombs within H.U.N.E.'s concession were selected for excavation, to prove the connection of this material with the date of the structures.⁶

A tentative typology of dome graves

The particular type of tomb which is called dome grave is characterized by “*a domed chamber raised directly on bedrock*”⁷. Some variations of this grave structure are recognized. The dome graves documented during the Kirbekān survey are classified into three main types according to their design, construction and location.

-
- 1 I am indebted to Robert Schiestl for reading a draft of this article which is the revised version of a paper presented in poster form at the conference. The final text was proofread by Amy Butner, whom I thank for her valuable suggestions.
 - 2 The area called Kirbekān covers the region from Gebel Musa in the south up to the village Kereiti in the north (a stretch of 10 km); see Budka 2005.
 - 3 This name was suggested by H. Paner in 2000; see Paner 2003b: 18.
 - 4 Paner 2003a and 2003b; Welsby 2003; Wolf 2004; Wolf and Nowotnick 2005.
 - 5 Paner 2003a: 169. See also Paner and Borcowski 2005: 95, n. 3: “The only other known grave of this type was discovered at Gerf Husein, c. 60 miles south of Aswan (Firth 1912: 125), and was attributed to the B-group.” In contrast to the dome graves in the area of the Fourth Cataract, these graves at Gerf Husein are not set on the bedrock, but into mud plaster, see Firth 1912: 125, grave 116, fig. 94: “circular grave, 120 x 120-135 cm, vaulted or roofed with six courses of rubble, or rather masonry set in mud, narrowing towards the mouth.” Firth describes this particular type of vaulted stone superstructures as follows (1912: 123): “The graves of Cemetery 77/100 are circular, mud-plastered inside, and were originally covered with beehive rubble domes, either in imitation of certain graves of beehive section and typical of the Early Dynastic or Late Predynastic period in Nubia, or because the soft strata in the desert were too shallow to accommodate deep graves of this form. This stone-work, which may be compared with the corbel vaulting in mudbrick of Early Dynastic graves in Egypt, would serve both as a protection of the burial and as a monument marking the sites of the grave, and may possibly have suggested the superstructures of C-group graves.” Williams 1990: 43 also mentions for Nubia particular grave types which may be equated with dome grave-like structures, see below.
 - 6 Graves of GAME's concession yielded some ¹⁴C-dates from the second half of the first millennium BC, thus suggesting a (re-)use of dome graves in the Meroitic period; see Paner and Borcowski in this volume.
 - 7 Paner and Borcowski 2005: 112.

Type	Description	Sites
I	Typical dome grave – igloo shaped	
Ia	Isolated dome grave	KIR 088.1, KIR 206, KIR 221, KIR 235, KIR 287, KIR 291.1-2, KIR 291.6, KIR 338.1, KN 048.3a-c, KN 048.4, 5, 7, MN 020k, UJ 010, KIR 341.6
Ib	Collective of several dome graves	KIR 236.2, 4-6, KIR 252.4, KIR 291.3-4, KIR 334.1-4, MN 020.5-12, MN 020a-b, MN 020.d-g, MN 020.21-29
II	Semi-dome grave (same as type I, but incorporating a large boulder)	KIR 087, KIR 008.1, KIR 088.2, KIR 218, KIR 252.1, KIR 252.5, KIR 266(?), KIR 286.1-2, KIR 286.3-4, KIR 288, KIR 291.5, 7 and 8, KIR 337.4, KIR 341.5, KN 048.6, UJ 004, MN 020h, MN 020.30
III	Domed stone ring (flat summit?)	
IIIa	Semi-domed stone ring (incorporating rock boulder)	KIR 195.2, KIR 208.1-2, KIR 252.2, KIR 281.1-4, KIR 295.1-3, KIR 331.1 (?), 332.2-3, KIR 337.3
IIIb	Free-standing domed stone ring (without major rock)	KIR 195.1, KIR 208.3, KIR 252.3, KIR 327.1, KIR 330, KIR 334.5, MN 020c
IIIc	Domed stone ring within cluster of graves	KIR 208.4, KIR 208.5, KIR 332.1

Tab. 1: Typology of dome graves according to the evidence from Kirbekān.

Similar to dome graves are crevice graves. These form a separate group of structures but are very often associated with dome graves. Some seem to be contemporary to dome graves.⁸ In contrast to the latter, crevice graves represent no independent structures, but depend largely on the local topography and the natural boulders that are available.⁹ Thus, no clear typology for these structures is possible; every single one is slightly different depending on the shape of the boulders used. Nevertheless, they are here subdivided into two main categories, a subdivision called by Paner and Borcowski “*crevice grave*” in contrast to “*graves formed from natural rock alcoves*”¹⁰. To set a date for the later is often impossible and this type of grave was probably in use for a very long period; in Lower Nubia comparable structures were found and assigned to various time periods, including the Christian period.¹¹

Type	Description	Sites
IV	Crevice grave capped by a stone built dome (flat stone slabs)	KIR 208.6, KIR 238, KIR 239, KIR 252.1, KIR 265.11, KIR 294, KIR 318, KIR 328, KIR 336, KIR 341.1
V	Crevice grave, blocked on one or both ends by stones	KIR 208.7-8, KIR 222, KIR 232, KIR 240, KIR 243, KIR 249, KIR 339, KIR 341.2-4, MS 048

Tab. 2: Categories of cleft-boulder and fissure graves.

8 Cf. Paner and Borcowski 2005: 113 (type II.8 crevice graves).

9 I am indebted to Derek Welsby for pointing out this important difference to me.

10 Paner and Borcowski 2005: 113.

11 Williams 1990: 43f.

From a total of 119 documented graves, 94 can be classified as dome graves (colour pl. 24), 22 as crevice graves. The majority of dome graves, 51 examples, are type I graves (18 are type Ia, 33 Ib). 21 examples within the area of Kirbekān fall into type II, semi-dome graves.¹² 24 graves can be classified as type III (15 are type IIIa, 7 IIIb, 3 IIIc).¹³

Within the group of crevice graves 10 tombs are type IV and 12 type V. The later two variants are closely related and sometimes cannot be differentiated. The division is based on a characteristic feature of type IV: the use of flat stone slabs to create the dome of the structure. This technique is very similar to type I and not found within type V.¹⁴ Thus, type IV is partly similar to free-standing dome graves (type I), but incorporates large stone boulders as substantial part of the structure.¹⁵

According to the evidence from Kirbekān, three major categories of burial arrangements can be differentiated. Within type I and II, the bodies are generally placed on the natural surface of the ground.¹⁶ No pit has been dug; the burial level is the same as the surrounding rocky surface.¹⁷ This is the main innovation within this group of graves and may be considered characteristic for dome graves. According to the dimensions, either a sitting or flexed position of the skeletons is possible.¹⁸ Type IV and V are in most cases comparable to type I concerning the burial level. A stone pavement made with flat stone slabs covers the floor of the crevice graves, usually just a few centimetres above the bedrock and on a similar level as the surface outside the grave. In rare cases, the burial within cleft-boulder graves may be found below the stone layer in a sandy pit above the bedrock (cf. KIR 239).

The burials of type III are, as a rule, characterized by a two-level construction. Similar to types IV and V, the superficial part of the dome – the stone ring – is sealed with a stone pavement. The burial is usually placed below this stone setting, on the bedrock or in a shallow pit in the bedrock, and is thus comprised of two storeys within the structure – separated by the stone layer.¹⁹ Concerning the position of the skeletons, both contracted and extended burials are attested within dome graves.²⁰ Since extended bodies are only possible in pits, these are limited to type III.

Type I, the characteristic igloo shaped grave, is most often situated on rocky terrain, on slopes of hills or tops of gebels (colour pls. 24, 25). The same holds true for type II, the semi-dome grave set against large boulders (fig. 1). Type III may also be found at the foot of gebels and placed against natural rocks, ridges and boulders (cf. fig. 4).²¹ Due to their prominent locations, graves of type I and II are more or less exposed to all passers-by,²² whereas

12 This is similar to the evidence from GAME's concession where semi-dome graves are much rarer than dome graves; see Paner and Borowski in this volume.

13 Cf. Wolf 2004: 21, fig. 2.

14 Cf. the above mentioned division into *crevice tomb* and *rock alcoves*, see note 10.

15 Examples classified as type I like KIR 221 may also incorporate large boulders. In contrast to type IV, these rocks are only part of the superstructure and not dominating the entire grave construction. Type I and IV can be contemporary.

16 Cf. Paner 2003a: 169f.; id. 2003b: 18.

17 See also Welsby 2005: 161: "Some of these are well constructed with large stones set radially around the curve of the monument. No attempt was made to dig a grave into the outcropping bedrock, instead the body must have been placed on the ground surface within the tomb monument and presumably covered with earth. Associated with these cemeteries were udjat eyes, scarabs and pottery characteristic of the early Kushite period including imported wares from Egypt and others in the Kerma tradition."

18 Paner 2003a: 170. In GAME's concession evidence for multiple burials within a single dome grave were found; see Paner and Borowski in this volume.

19 Cf. Wolf 2004: fig. 21; it is still questionable whether the upper storey functioned solely as room for burial equipment/pottery vessels, or whether burials took place as well.

20 All of the excavated examples, which are known to me, fall into type III; cf. the evidence from KIR 208 (graves 1, 2, and 3) as well as Wolf 2004: 21, fig. 2 (contracted burial).

21 Type IIIb, tumulus-like dome graves, was recently found by P. Wolf (2004: 21, fig. 2) near Dar el-Arab and dated to Kerma Moyen.

22 Paner 2003a: 169.

type III graves are sometimes well hidden and not visible from a far distance. Cleft tombs of type IV incorporate as a rule large boulders and are, therefore, most often located on rocky slopes or plateaus (fig. 2). Type V is found in identical settings and locations. Suitable rocks are essential for the group of fissure graves, which are sometimes difficult to locate due to their rocky surroundings (fig. 3).²³ Within the area of Kirbekān, dome graves were frequently discovered on the western slope of hills and gebels – looking towards the Nile or ancient water courses.

Regarding both location and morphology of the superstructure, type III is different from all other types. To conclude, the architecture of dome and crevice graves is dependent on the local topography (natural alcoves, clefts, bedrock, boulders, etc.). The natural surroundings influence the burial and body position within dome graves as well. This strong influence by the environment may partly explain the frequent use of dome graves within the area of the Fourth Cataract and its particular landscape. Nevertheless, it seems to be a cultural phenomenon as well. Both crevice graves and dome grave-like structures are also associated with Napatan burial types in Nubia, as Williams observed: “Many burials were made in the cliffs or gebel, either put into a cleft and surrounded on one side with stones [= type V] or put into a shallow hole and entirely surrounded with a circular superstructure [= type I?]. Although most burials of this type cannot be dated by associated grave goods, some of them contain Twenty-Fifth Dynasty/Napatan period pottery”.²⁴

By analyzing the position of the skeletons within the cleft-boulder graves, he concluded: “To some extent, this mode of burial, like the sand-pit burial, probably represents a cultural tradition distinct from the two (bed and “mummy”) burial traditions of Kush”.²⁵ The rich material from the Fourth Cataract contributes to our understanding of these burial types and their cultural setting.

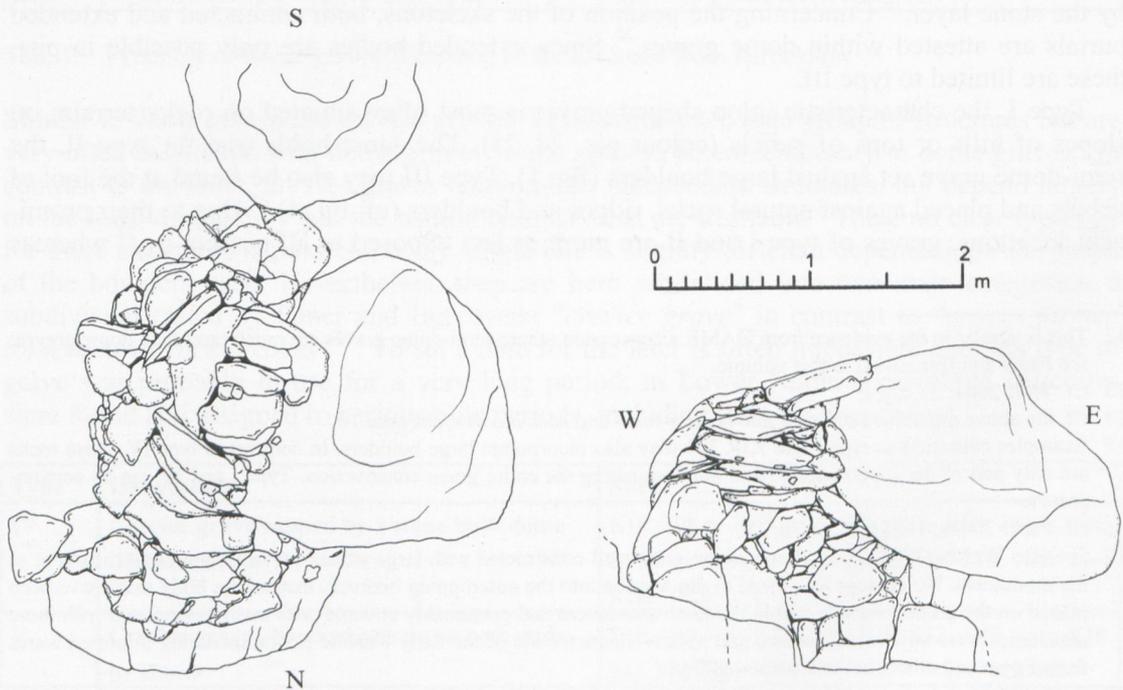


Fig. 1: Dome grave type II as illustrated by KIR 087. Right: elevation of north side, left: plan (drawing: J. Budka).

23 Consequently, these graves were dubbed “*hidden tombs*” by Claudia Näser (see her contribution in this volume). Despite of this, as of yet no unplundered burial of this type was found.

24 Williams 1990: 43.

25 Williams 1990: 44.

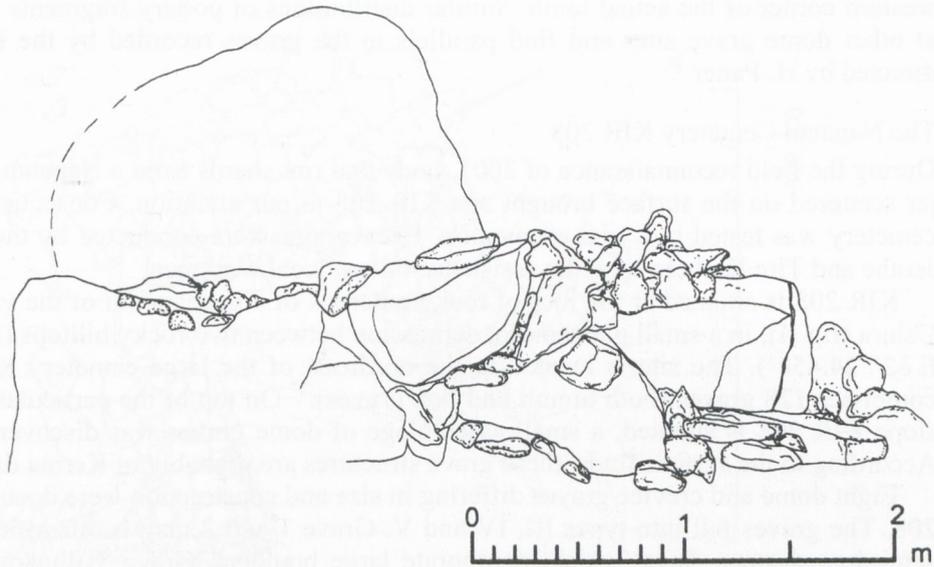


Fig. 2: Cleft-boulder grave type IV as illustrated by KIR 208.6 (elevation east side; drawing: J. Budka).

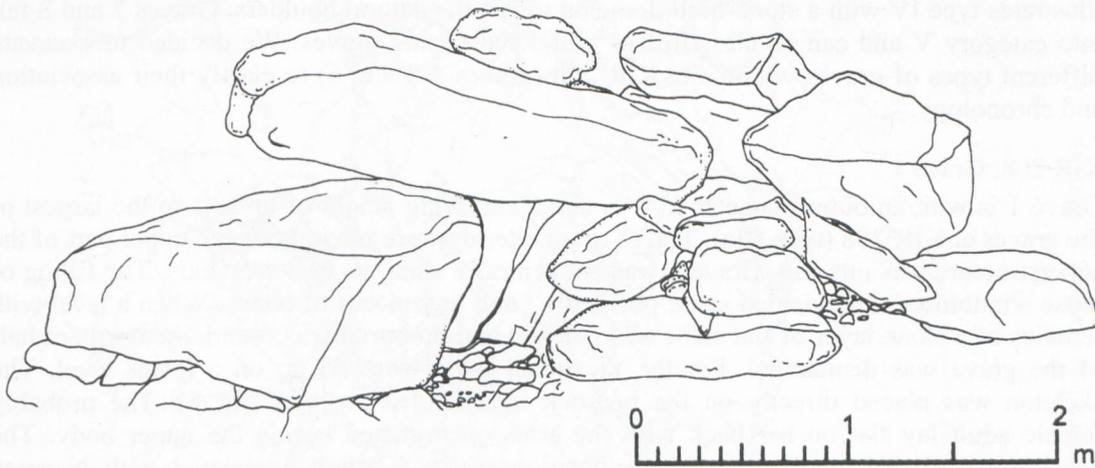


Fig. 3: Fissure grave type V as illustrated by KIR 208.8 (elevation west side; drawing: J. Budka).

The evidence from Kirbekān (H.U.N.E.'s concession)

Four isolated dome and crevice graves (KIR 087, KIR 221, KIR 222 and KIR 239) were excavated in 2005; all proved to be heavily plundered. One contained solely pottery sherds and not one piece of human bone (KIR 222), the others yielded some skeletal remains and scarce traces of pottery. According to these pottery fragments, the Napatan period is the most likely date for the structures. It is safe to reconstruct flexed burials because of the inner dimensions of the graves. Within the sandy filling of graves KIR 087 (type Ia), KIR 221 (type Ia) and KIR 239 (type IV), tiny fragments from textiles were found. These might be of antiquity but could also belong to more recent tomb robbers. At KIR 239 a small concentra-

tion of potsherds was found in a natural shelter created by large boulders beside the north-western corner of the actual tomb. Similar distributions of pottery fragments were observed at other dome grave sites and find parallels in the graves recorded by the Polish Mission directed by H. Paner.²⁶

The Napatan Cemetery KIR 208

During the field reconnaissance of 2005, body and rim sherds from a Napatan ribbed storage jar scattered on the surface brought site KIR 208 to our attention. Consequently, the small cemetery was tested in a trial excavation. Excavations were conducted by the author, Clara Jeuthe and Tim Karberg with the assistance of two local workmen.

KIR 208 is situated at the foot of rocky outcrops of a *gebel* south of the village of Umm Ushira (fig. 4), in a small plateau-like depression between two rocky hilltops (N 18° 56.256', E 32° 24.454'). The site is located to the northeast of the large cemetery KIR 090 which comprises 128 graves (both tumuli and box graves).²⁷ On top of the particular hill on whose slope KIR 208 is situated, a small assemblage of dome graves was discovered (KIR 324). According to the surface finds, these grave structures are probably of Kerma date.

Eight dome and crevice graves differing in size and construction were documented at KIR 208. The graves fall into types III, IV and V. Grave 1 and 2 may be classified as type IIIa, semi-domed stone rings, which incorporate large boulders. Grave 3 illustrates the variant type IIIb, a freestanding stone ring with a domed summit which was once covered with flat stone slabs.²⁸ Quite similar to grave 3 are the structures referred to as graves 4 and 5. Since they abut each other and grave 2, they are classified as type IIIc, domed stone rings within a cluster of graves.²⁹ Both variants of crevice graves are attested at KIR 208. Grave 6 illustrates type IV with a stone-built dome on top of the natural boulders. Graves 7 and 8 fall into category V and can be classified as plundered fissure graves. We decided to excavate different types of graves within site KIR 208 (graves 1-3 and 6) to clarify their association and chronology.³⁰

KIR 208, Grave 1

Grave 1 is with an outer diameter of 4 m and a surviving height of up to 1 m the largest of the graves at KIR 208 (type IIIa). Traces of plundering were obvious, as the upper part of the superstructure was missing. Grave 1 was cut centrally along its east-west axis. The filling of loose windblown sand yielded some potsherds³¹ and tiny pieces of bones. When a level with remains of a stone layer of flat slabs was reached and no burial was found, the northern half of the grave was dismantled. Finally, the intact burial showed up on a lower level. The skeleton was placed directly on the bedrock in extended position (fig. 5). The probably female adult lay flat on her back with the arms outstretched beside the upper body. The hands were placed on the pelvis – a position which is often associated with Napatan burials.³² The head (lying in the southwest, looking northnorthwest) was placed on a flat stone and therefore forms the highest part of the skeleton. A single faience ring-bead was

26 Paner 2003a: 177.

27 For cemetery KIR 090 see Budka in this volume.

28 Since the upper part of the superstructure is not preserved, this reconstruction is based on the morphology of the remains of KIR 208.1 as well as on parallels found by Wolf 2004: fig. 2.

29 The superstructures of graves 4 and 5 are badly destroyed; therefore their classification is hypothetical.

30 Graves 7 and 8 were heavily plundered; the stone pavement within the structures was partly dismantled and the surface was scattered with undiagnostic pottery sherds.

31 Sherds in Kerma tradition but clearly of Napatan date (cf. Welsby 2004: 3).

32 Many parallels for this position of the skeleton can be named: Williams 1990: 43; both extended and contracted burials are known from Sanam (Griffith 1923: 81), as well as from Missiminia (Vila 1980: 69, fig. 59, 78, fig. 73, 95, fig. 97).

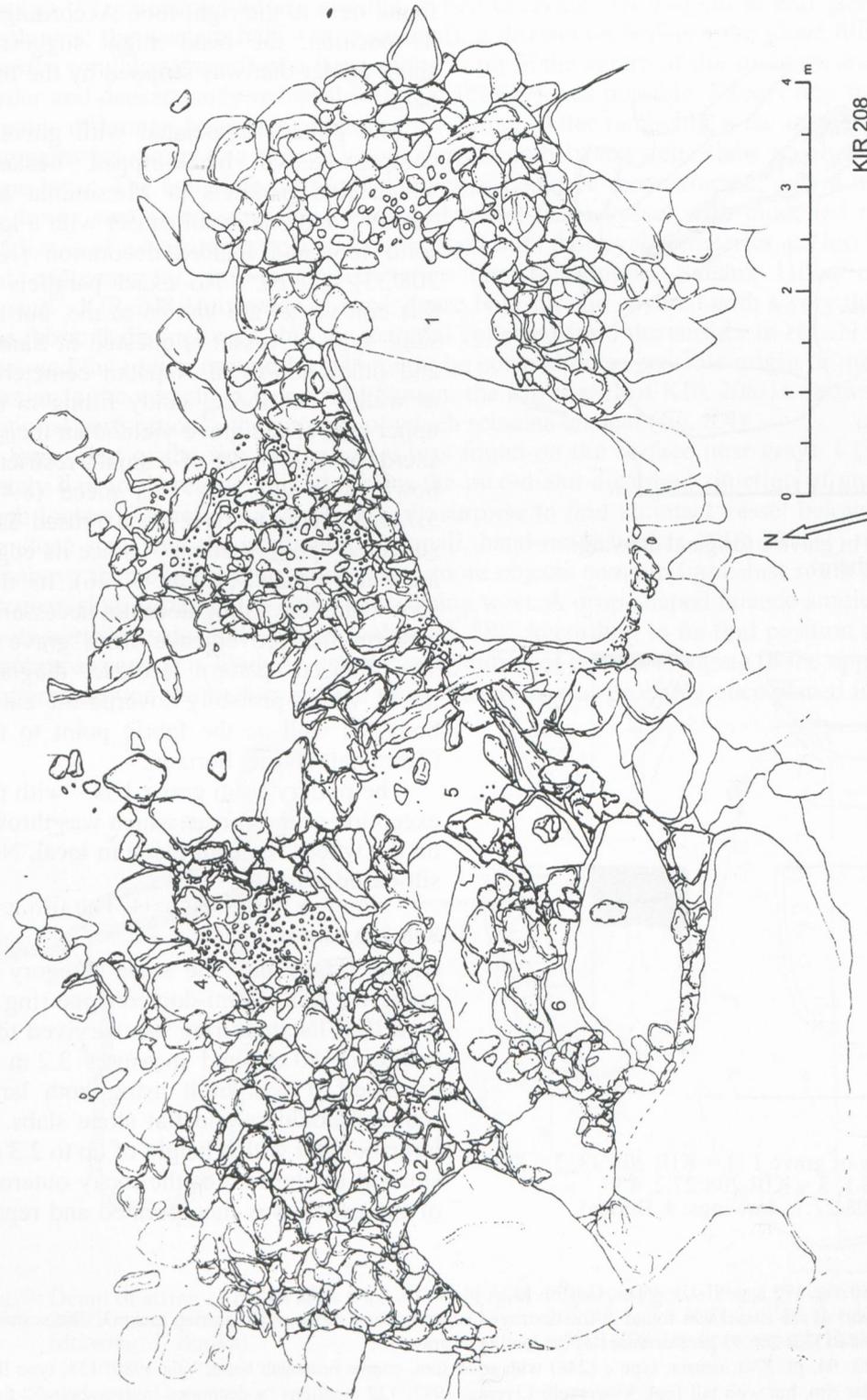


Fig. 4: General plan of KIR 208 (graves 1-6; drawing: J. Budka).

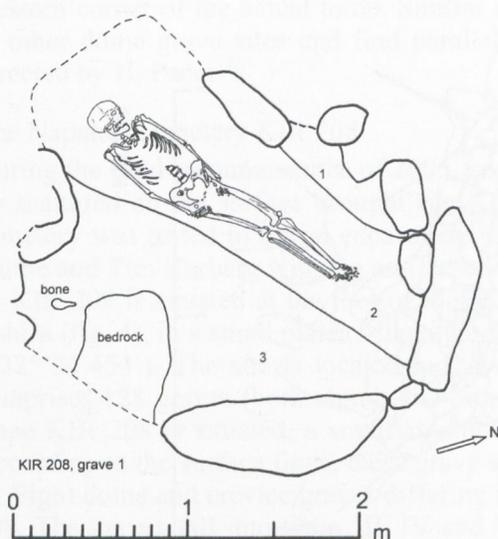


Fig. 5: Burial in grave 1 (original drawing: T. Karberg).

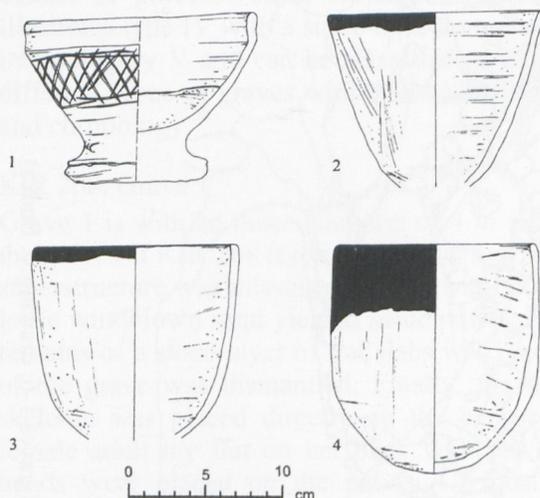


Fig. 6: Pottery of grave 1 (1 = KIR 208/33, 2 = KIR 208/38.1, 3 = KIR 208/27.2, 4 = KIR 208/27.1; drawings: J. Budka).

found next to the right foot. According to its position, the bead might suggest a small anklet that was stripped by the robbers.

The pottery associated with grave 1 comprises two black-topped beakers, which find parallels at Missiminia and Sanam³³ and one small censer with a low, solid foot and incised decoration (KIR 208/33) (fig. 6).³⁴ No exact parallels to this cult vessel are known to me, but the same type of vessel is attested in Sanam and other non-royal Napatan cemeteries as well.³⁵ The loose, sandy filling in the upper part of the grave yielded an incised sherd, probably part of a small, restricted bowl (KIR 208/29). This piece (8.4 x 5.7 cm) seems to have been reused as a so-called “pottery comb”³⁶ since its edges are much eroded (colour pl. 26). Its find spot within the filling does not necessarily confirm the provenience from grave 1. The incised pattern (coarse diagonal lines), which probably covered the entire body, as well as the fabric point to the (Terminal) Kerma horizon.³⁷

The pottery from grave 1 is – with the exception of the censer which was thrown on the wheel³⁸ – hand-made in local, Nile silt-based wares.

KIR 208, Grave 2

Grave 2 falls into the same category as grave 1 – it is a semi-domed stone ring of type IIIa. Its stone ring has survived to a height of 80 cm and measures 3.2 m in diameter. It was built using both large rounded boulders and flat stone slabs. A large boulder with a height of up to 2.3 m, situated on the foot of the rocky outcrops of the gebel, was incorporated and repre-

33 Cf. Vila 1980: fig. 170, type II-1B, 46/14; Griffith 1923: pl. XVIII, types XIIe, XIIg.

34 The upper part of the vessel was found in the destroyed superstructure of the neighbouring grave 3. The scattered find positions of KIR 208.33 give evidence of the looting of grave 1.

35 Griffith 1923: 94, pl. XVI: censer, type c (248) with solid foot, coarse brownish ware; Vila 1980: 158, type II-e, 259/1: similar rim, but with tall foot. Vincentelli Liverani 1997: 122 mentions “a decorated incense-burner” from ARA 8, dated to the 25th Dynasty, but no illustration is given.

36 See Kołosowska, el-Tayeb and Paner 2003: 22f., pl. 1.

37 Similar pottery brushing tools are known from the Middle and Classic Kerma period, see Kołosowska, el-Tayeb and Paner 2003: 22.

38 The upper part of this vessel is wheel-made; the short foot was modelled (string impressions still visible).

sents the southwestern corner of the superstructure. The grave was clearly plundered since parts of the superstructure are missing. When excavated (it was cut in half along its north-south axis; the western half was excavated), a distinction between the loose filling material (mostly windblown sand) of a large robber's pit in the centre of the structure and areas with harder and denser sandy material (original filling?) was possible. Except tiny fragments, no remains of human bone were found in the filling. After removing some of the debris, large fragments belonging to a storage vessel showed up between stone slabs which once formed a stone layer. The complete profile of the vessel could be reconstructed; only a minor part in the lower area is missing. This elongated wheel-made vessel with modelled rim and two handles is of a Napatan type well known from both the royal cemeteries at Nuri und Kurru³⁹ and contemporary, non-royal cemeteries like Missiminia, Sanam, Hillat el-Arab and Qustul⁴⁰. KIR 208/16 is made of hard, dense Nile silt and covered with a very thin red wash. The fabric is distinctive within the material collected from the surface in H.U.N.E.'s concession, and the region around Napata might be considered as possible origin of manufacture.⁴¹ Similar to the vessels in Egypt and Sanam, the lower part of KIR 208/16 shows a small intentional perforation⁴², the purpose of which remains unclear (fig. 8.4).

Since part of the rim of the vessel was found on the surface near grave 1 (i.e. approximately 6 m to the east!), this illustrates the mixed and disturbed situation of grave 2 due to tomb looters. Therefore, it came as a big surprise to find an intact vessel below the level of the stone slabs and the storage jar. A small, hand-made beaker (KIR 208/31) rested only 2 cm above the bedrock. During clearance more objects came to light. Just south of the vessel a human skull rested on its lower jaw, facing west. A drop-shaped faience amulet was found on its northern side (KIR 208/24, colour pl. 28). According to its find position and shape, a function as earring is likely. A small concentration of bones belonging to the upper body was scattered around the beaker and the skull. The body was probably once placed in a crouched

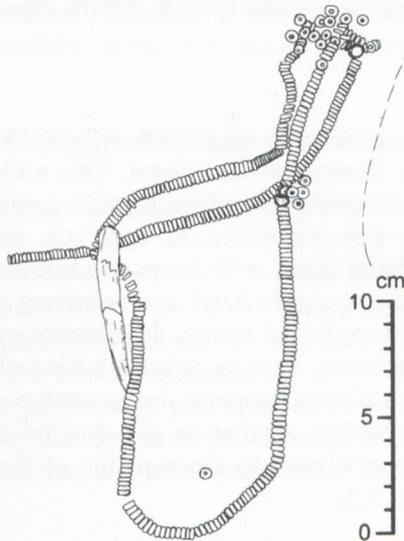


Fig. 7: Detail of string of beads KIR 208/30 next to beaker *in situ* (drawing: J. Budka).

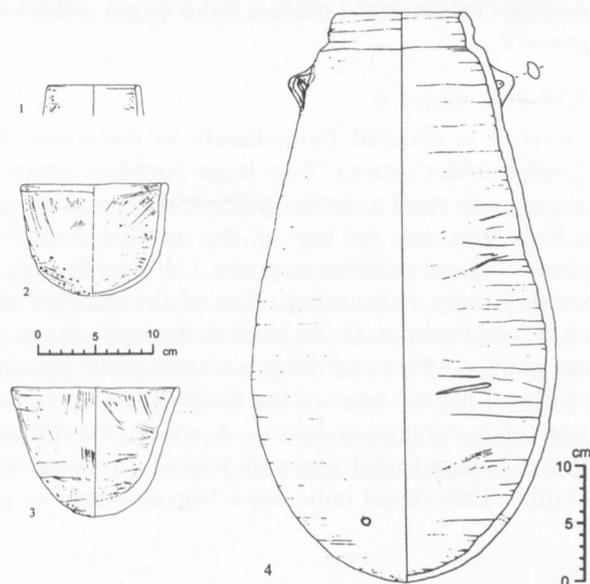


Fig. 8: Pottery of grave 2 and grave 6 (1 = KIR 208/42.1, 2 = KIR 208/45, 3 = KIR 208/31, 4 = KIR 208/16; drawings: J. Budka).

39 Dunham 1950 and 1955, *passim*.

40 Vila 1980; Griffith 1923; Vincentelli 2002; Williams 1990.

41 It may be equated with what Dunham 1950 called "red ware" (cf. p. 94, Ku. 55, 19-3-1459) and Griffith 1923: 96 "coarse reddish ware" (type III j). The Egyptian vessels of this type are mostly made of Marl A4, variant 2.

42 Cf. Griffith 1923: 96.

position with the head in the south and partly resting on the hands since remains of fingers were found next to the beaker. Close to the beaker, a string of 385 ostrich eggshell ring-beads, one faience bead ('Spulenperle') and two globular stone beads were found just above the bedrock in what seemed to be an *in situ* situation (fig. 7).⁴³

The pottery from grave 2 (fig. 8; in addition another tiny rim sherd of a small, uncoated hand-made beaker in coarse ware) as well as parts of the personal adornments find close parallels in Sanam and other Napatan cemeteries and indicate as date of the burial the second half of the 7th century BC.⁴⁴

KIR 208, Grave 3

The superstructure of grave 3 represents a circular domed stone ring with a diameter of 2.8 m, surviving to a maximum height of 50 cm. In contrast to grave 1 and 2, the superstructure does not incorporate a boulder (type IIIb). It is primarily built of rounded large stone blocks and was badly dismantled. Grave 3 was cut centrally along its north-south axis. Its eastern half was excavated and found to be completely empty after it had been cleared to the bedrock. The section of the western part revealed some stone slabs and debris on the same level as the bedrock on the eastern side, thus indicating a hollow. Excavation proved that these stones originally belonged to the cover of a burial pit set between the bedrock. The slight hollow contained a complete crouched burial (head in the south, looking west), placed on sand, only a few centimetres above the bedrock (colour pl. 29).⁴⁵

The filling of grave 3 yielded some potsherds which suggest a Napatan date for the burial. By analysing both the diagnostic and undiagnostic sherds (KIR 208/33: 2 rim sherds, 6 body sherds; KIR 208/34: 1 rim sherd, 3 body sherds) a minimum of four vessels could be reconstructed. These are two small, hand-made beakers (one of which is uncoated, the other one red slipped); one black-topped bowl or beaker in fine, sandy ware resembling pottery of the Kerma horizon and finally a red washed, wheel-made storage jar similar to KIR 208/16 from grave 2.

KIR 208, Grave 6

Grave 6 is situated immediately to the south of grave 2 and can be classified as type IV (cleft-boulder grave). Two large boulders create a tent-like fissure between them. This rock alcove was used as burial place and capped by stones. The blocking resembled a small dome which was set on top of the natural rock.⁴⁶ Grave 6 was excavated to ascertain its chronological relation to grave 2. It was heavily plundered and filled with loose windblown sand. Finally, substantial relics of the skeleton remained on one single level to reconstruct a crouched burial with the head in the west. Some flat stones were found around the remains of the skull – either implying a former stone pavement on the burial level or at least a kind of "pillow" for the head of the deceased. The shape of the rock alcove supports the reconstruction of a contracted burial. A small, hand-made pottery beaker, similar to the one from grave 2, was found more or less *in situ* (but broken to pieces) next to the remains of the skull.⁴⁷ This vessel indicates a Napatan date for grave 6 (fig. 8.2).

43 For the shape of the ring-beads cf. Spencer 2002: pl. 17, a-c, g, i, j, k.

44 Especially KIR 208/16 can be used as dating evidence since this type of vessel is well known from cemeteries in the north and most common during the second half of the 7th century; parallels are found in Nubia (Nuri, Kurru and Sanam) and in well dated contexts in Egypt (e.g. Thebes, see Mysliwiec 1987: 61, n. 87 and – more recently – Seiler 2003: 366; the Egyptian parallels are Marl vessels).

45 A similar burial of Napatan date was found in Abri, Vila 1978: 60, fig. 21.

46 For the same type of grave see Paner and Borcowski 2005: 112, fig. 37.5.

47 This vessel can be equated with round based beakers from tomb 8 in Hillat el-Arab, dated to the early Napatan period, cf. Vincentelli 2002: fig. 2.7.

Preliminary results

Dome graves are constructions characteristic of cataract areas and landscapes with rocky clefts and outcrops. They are predominantly associated with the Kerma and Napatan periods.⁴⁸ The small excavated cemetery KIR 208 displays the characteristic features of this group of graves – in terms of architecture as well as of inventory.⁴⁹ According to its finds, KIR 208 was used during the Napatan period (approximately between 850–650 BC). The individual tombs are close to each other in date; though graves 1 and 3 seem somewhat older than grave 2. Since the graves form a small cluster, it is possible that KIR 208 was a family/clan graveyard. Another small assemblage of five dome graves (type Ib, KIR 334) is located on top of the gebel just 20 m south of KIR 208, literally overlooking the site. Possible models of kinship and the chronological relationship between these neighbouring sites remain to be checked by future research and anthropological analysis of the skeletal relics.

KIR 208 displays the tradition of two level burials which can be frequently associated with dome graves of type III. According to the evidence from grave 2, the upper level was probably used for the storage of grave goods (pottery vessels like KIR 208/16), whereas the lower level, sealed by the stone cover, was the original burial level.⁵⁰ No general rules for the orientation of the bodies could be observed. Similar as in Sanam, both extended and contracted burials are attested – without notable difference concerning the equipment.⁵¹ This is a very remarkable feature concerning the cultural tradition and burial customs of dome graves. In this respect, the pottery found within the graves is of special importance as well. Two traditions are notable within the ceramics – a local tradition with coarse, hand-made wares clearly related to Kerma horizon pottery, but of lower quality,⁵² and an Egyptianizing tradition with wheel-made vessels in slightly different fabrics, wares and forms.⁵³ These two traditions as well as all vessels from KIR 208 have close parallels in Napatan cemeteries further north. Additional material from future excavations within the area of the Fourth Cataract will potentially add valuable information about many open questions related to Napatan pottery, burial customs and ceramic industry.

Addendum: Pottery from dome graves

Ceramic material coming from Napatan cemeteries within the area of the Fourth Cataract is on one hand very distinctive (ribbed wheel-made storage jars, imported Egyptian wares), but on the other hand extremely difficult to classify (figs. 9, 10). As Welsby has already pointed out: “Although clearly dating from the earlier 1st millennium BC many of the forms could be paralleled among the repertoire of the Kerma Classic potters although the quality of production was significantly lower”.⁵⁴ This holds especially true for the black-topped beakers of the type found in graves 1 and 3. As stated above, two traditions of pottery can be differentiated within the material coming from dome graves – wheel-made, Egyptianizing wares and shapes, and local wares in the tradition of the Kerma horizon. Other missions discovered real

48 Some skeletons from the GAME concession were dated to the Meroitic period according to ¹⁴C-analysis; see Paner and Borcowski in this volume.

49 Egyptian imports, which are missing at KIR 208, were found by other missions (e.g. Paner and Borcowski 2005: 97, figs. 12f.) as well as scarabs and udjat-amulets (Welsby 2005: 161).

50 At the moment it cannot be excluded that the upper level was used for burials as well, since the Polish mission found evidence for multiple burials within one dome grave; see Paner and Borcowski in this volume.

51 Cf. Geus 1991: 69.

52 Cf. Welsby 2003: 32.

53 Within the SARS concession Egyptian vessels were found associated with burials of the Kushite period, see Welsby 2005: 161 “including imported wares from Egypt and others in Kerma tradition”.

54 Welsby 2003a: 32. See also Philipps and Klimaszewska-Drabot 2005: 119.

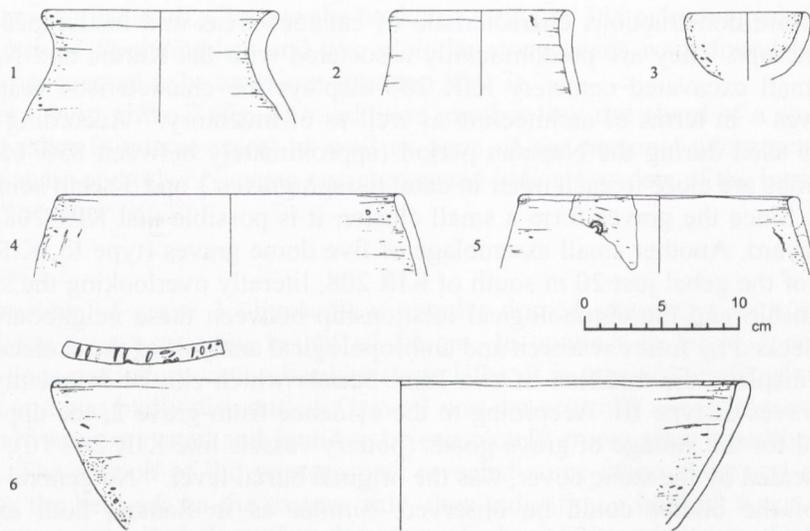


Fig. 9: Pottery from surface of KIR 208 (1 = KIR 208/12.1, 2 = KIR 208/2.1, 3 = KIR 208/13.1, 4 = KIR 208/13.2, 5 = KIR 208, 6 = KIR 208/8.1; drawings: J. Budka).

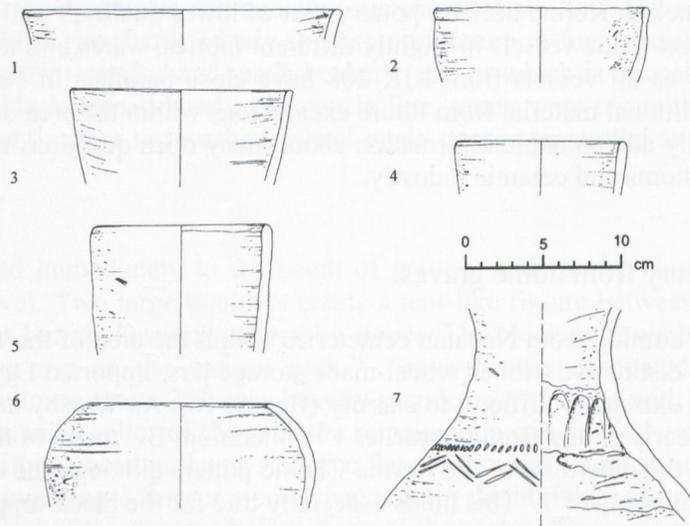


Fig. 10: Pottery: selected examples from several dome grave sites (1 = KIR 241/2.2, 2 = KIR 236/1, 3 = KIR 241/2.1, 4 = KIR 337/2.2, 5 = KIR 337/2.1, 6 = KIR 236/2, 7 = KIR 238/1; drawings: J. Budka).

Egyptian imports as well, which are still missing within the H.U.N.E. material of the time period in question.⁵⁵ The difference of these two traditions is not only based on the technique (wheel vs. hand) but also on the fabrics and wares. The first group, the one in Egyptian tradition, comprises Nile silt-based clays which may be called Nubian Nile variants in reference to the “Vienna System”, which was established for the classification of Egyptian fabrics.⁵⁶ These fabrics are similar to Egyptian Nile silts and are often covered with a thin red wash. In contrast, the second group, closely related to the Kerma horizon, consists of clearly local

⁵⁵ Cf. Philipps and Klimaszewska-Drabot 2005: 119; Wolf and Nowotnick 2005: 25.

⁵⁶ See Nordström and Bourriau 1993: 168ff. For Kushite pottery of Egyptian tradition see Williams 1990: 8.

fabrics – these Nile silt clays are mostly tempered with inorganic particles, dominated by quartz and mica.

Fabrics and wares – preliminary analysis

Each sherd was examined according to its fabric and surface treatment.⁵⁷ The main fabric groups were identified from fresh breaks with the aid of a 1:10-magnification hand-lens. Three wheel-made Nile silts of Egyptian tradition (group I) were identified. The designations employed for the groupings are based on those used within the “Vienna System” to express the similarities to these fabrics (Nile B2 and Nile D2); relevant differences are noted separately. Group I comprises a single fabric which may be called “desert clay”.⁵⁸ This fine and sandy clay is similar to the ones ascribed to the “Vienna System” Marl A-group. The single sherd of a wheel-made storage jar represents pottery in Egyptian tradition.

The range of fabric within group II, the Kerma horizon tradition, is remarkably larger. Within eleven hand-made Nile silt-fabrics the following were identified: two local equivalents of Nile B and C2 according to the “Vienna System”, three Nubian variants of Nile B and C (which are in contrast to the before mentioned variants fired in a reducing environment, evident on the sherd by a dark fracture without zones) as well as three mostly inorganic (mica and quartz) based fabrics and three black-topped wares. The latter represent quite dense, fine Nile silts, which are sandy and include very little vegetable fibre. These variants are closely related to known fabrics of Kerma pottery.⁵⁹

Several surface treatments are attested. Within group I, the majority are covered on the exterior with a thin red wash. Uncoated wares are common within group II, sometimes with incised or impressed patterns. A single piece, KIR 336/1, a deep, wet-smoothed bowl with restricted rim, which was recovered from the interior of a plundered grave, displays a tightly basket-impressed surface. A date within the later Kerma horizon seems likely for KIR 336/1. The hand-made beakers of group II are most often red slipped (burnished) and black-topped.

Without scientific analysis, the provenience of the dome and cleft-boulder grave pottery in the H.U.N.E. concession cannot be certain. Nevertheless, the coarse wares, especially the Nubian variants, fired in reduced atmosphere, with lots of inorganic inclusions, suggest a local manufacture.⁶⁰ For the wheel-made vessels of red washed, medium hard Nile silts of group I, I would assume the area around Napata (Gebel Barkal) as the most likely production site.⁶¹

Fabrics – preliminary classification of dome grave pottery H.U.N.E. 2005

Based upon the visual examination of the sherds, the following groupings are proposed. A basic distinction between the coarse Nile clays, which are fired in a reducing environment, and finer, oxidized Nile clays is possible. The latter are often wheel-made and are much less common than hand-made wares of the other group.

This differing frequency is also displayed by the total numbers of hand- and wheel-made fabrics:

- 4 wheel-made Nile silts (Egyptianizing, similar to Nile B2 and D2)
- 1 wheel-made Marl silt (Egyptianizing, similar to Marl A4/2)
- 11 hand-made Nile silt fabrics:
 - 2 equivalents of Nile B and C2

57 KIR 208 yielded a total of 154 pottery sherds (both diagnostic and undiagnostic); in addition, parallels from other dome graves were analysed.

58 Williams 1990: 5.

59 Cf. Gratien 1978: 210ff.; ead. 1986: 388ff.

60 Cf. Daszkiewicz, Bobryk and Schneider 2003: 88 for the local use of alluvial sediments for Meroitic, post-Meroitic and Christian domestic wares according to chemical analysis.

61 Cf. the parallels found at Sanam and Nuri, see notes 41 and 44.

- 3 Nubian variants of Nile B and C
- 3 mostly inorganic (mica and quartz) based fabrics
- 3 black-topped ware variants – quite dense, fine, sandy Nile silts

The black-topped wares are cautiously assigned to the Kerma horizon; the others seem to belong to the transitional period Kerma to Napatan (especially the micaceous quartz-fabrics) with an emphasis on the Napatan period (in particular the wheel-made wares).

Abbreviations: v.f. = very fine; f. = fine; m. = medium; c. = coarse; red. = reduced; ox. = oxidized

Scale for amount of inclusions: 1 = few (< 5 per cm²), 2 = medium (5-10), 3 = many (>10)

Wheel-made wares = Group I

Nile silt wares – oxidized

Fabric Nile B2 variant: Medium dense, medium hard to hard (2-3), wheel-made fabric; the fracture tends to be 5YR6/6-2.5YR6/8 (no zones or narrow greyish core); the clay is tempered with some vegetable and chaff. Characteristic inclusions: vegetable m. 2, chaff 10 mm 1-2, sand f. 2, quartz m. 1 (sub-rounded, poorly sorted), mica v.f. 2. Examples: storage jar KIR 339/2; very similar, with chaff up to 5 mm: KIR 208/6.1 (beaker).

Fabric Nile B2 variant with white particles: Medium dense, medium hard to hard (2-3), wheel-made fabric, oxidized, brown-red brown zones with grey core; characterized by some vegetable and chaff and some white particles. Characteristic inclusions: vegetable m. 1, f. 2, chaff 7 mm 1, sand f. 2, quartz m. 1, f. 1 (sub-rounded), mica v.f. 2, f. 1, white particles m. 1, f. 2, rotten particles m. 1 (poorly sorted). Examples: KIR 208/16 ribbed storage jar (fig. 8.4; red ware, 2.5YR5/6 wash, clay surface 5YR6/6; interior and core grey); KIR 337/2.1+2 beaker (red ware, figs. 10.4 and 10.5); KIR 208/33 censer/burner (fig. 6.1; wheel-made upper part, foot modelled; sandy clay, with some chaff 1, porous, mica v.f. 2, f. 2, white particles f. 1, vegetable m. 2).

Fabric Nile D2 variant: Medium dense, medium hard to hard (2-3), wheel-made fabric, oxidized with no zones; some white particles (= limestone?). Characteristic inclusions: vegetable m. 1, sand f. 2, quartz m. 1, f. 1, mica v.f. 2, white particles m. 1, f. 2. Examples: MN 020/3; KIR 208/2.1 (fig. 9.2).

Fabric Nile D2 variant with some chaff: Rather poorly sorted, medium hard, wheel-made fabric, oxidized with no zones; tempered with some coarse chaff inclusions and some limestone (coarser than Nile D2 variant). Characteristic inclusions: chaff 10 mm 2, vegetable m. 2, f. 2, quartz m. 1, f. 2, mica v.f. 2; some limestone particles f. 1-2. Example: KIR 337/3, storage jar (red ware).

Marl/“Desert clay” – oxidized

Fabric Marl A variant: Hard fabric (2-3), ox., wheel-made, fine, sandy, sand f. 2, mica f. 1, v.f. 2, black particles f. 1; voids f.-m. 1; outer surface pinkish to light redbrown. Example: KIR 334/1 (very tiny, not diagnostic body sherd, most likely storage jar. Probably identical with Williams 1990: 8-9: Form Group V, “Qena ware”).

Hand-made wares = Group II (all medium hard, 2)

Nile silt wares – oxidized

Fabric sandy Nile B2 variant: MN 020/1: not unlike Egyptian Nile B; but hand-made, surface smoked in. Characteristic inclusions: black particles f. 2, white particles f. 1, sandy, feldspar 1, mica v.f. 2, vegetable m. 1; 5YR6/6-2.5YR6/8; similar MS 048/1 (red slipped, burnished in and out, red rim

ware); same KIR 238/1 storage jar (fig. 10.7), red ware, incised, coiling?; white particles, some chaff and vegetable, porous, poorly sorted (possibly of later date).

Similar fabric, sandy variant: KIR 339/1, storage jar with incised pattern (coiling?): dominated by vegetable and chaff, not well sorted, vegetable m. 2, f. 2, some chaff, sandy, quartz f. 2, mica v.f. 2, f. 1 (like KIR 238/1 later in date?).

Similar fabric, coarser variant: uncoated beakers from KIR 208 (KIR 208/31 = fig. 8.3, KIR 208/42.1 = fig. 8.1 and KIR 208/26): sandy with mica and feldspar, some chaff 5 mm 1, vegetable m. + f. 2, quartz f. 2, m. 1, v.f. 2, 5YR5/4-5YR6/6.

Fabric Nile C2 variant: porous, rough, poorly sorted, hand-made: KIR 208/45 (fig. 8.2): sandy, much mica v.f. 3, f. 2, quartz 2 mm 2, sandy f. 2, some chaff 8 mm 2; local.

Nile silt wares – reduced

Fabric Nubian Nile B variant: This fabric comprised both inorganic and organic inclusions; it is hand-made, a local ware, me.-red., medium hard, medium dense with a gritty surface and medium porosity. Characteristic inclusions: vegetable m. 2, chaff up to 15 mm 2, sand f. 2, quartz m. 2, f. 2, mica v.f. 3, feldspar f. 2, white particles f. 1. Examples: KIR 239/1; KIR 208/29 (incised bowl/pottery comb, colour pl. 26).

Similar fabric, variant: KIR 241/2.3, grey core, nat. 5YR6/6, similar to Egyptian Nile B: Quartz and vegetable appear equally dominant; quartz m. 2, f. 2, vegetable m. 2, f. 2, chaff 10 mm 1, mica v.f. 2, white particles f. 1-2.

Similar fabric, variant: KIR 208/27.1 + 2 – black-topped beakers (fig. 6.3-4): Nile B2 variant, sandy; quartz m. 2, mica v.f. 3, f. 2, vegetable m. 2 (similar to black-topped medium, see below).

Similar fabric (post-Meroitic variant): Umm el-Hagar 1, bottle, some chaff up to 7 mm, mica, sandy, and Umm el-Hagar 2, bowl, incised, chaff up to 5 mm.⁶²

Fabric Nubian Nile C2 variant: This local fabric is dominated by chaff and was primarily used for storage jars, hardness 2, coarse porosity. Characteristic inclusions: vegetable m. 2, chaff 10 mm 2, m. 2, sand f. 2, quartz m. 1, f. 1, mica v.f. 2. Examples: MN 020/3; KIR 241/3.1 + 5 bodysherds, bowl/cooking pot.

Similar (more organic than inorganic): KIR 229/2, uncoated, hand-made bowl; soft, poorly sorted, porous, much mica v.f. 3, sand f. 2, chaff 15 mm 2, vegetable m. 2, quartz m. 1.

Similar: MN 020/3.1, sandy, poorly sorted, mica, feldspar and chaff.

Similar with rotten red particles: MN 020/3.6, but more chaff than quartz, red., hand-made, incised pattern.

Fabric Nubian Nile C3 variant: This coarse fabric is characterized by large pieces of chaff and some quartz; hardness 2, very coarse porosity, vegetable m. 2, chaff 15 mm 2, m. 2, sand f. 1, m. 2, quartz 2 mm 1, m. 3, f. 1, mica v.f. 3, feldspar 1. Examples: KIR 088/1 (uncoated); KIR 236/1.2 (poorly sorted; red slipped); KIR 241/2 (chaff + quartz; = fig. 10.1).

Fabric Quartz-micaceous I (QM I): This hand-made fabric is a local ware and dominated by inorganic inclusions (both quartz and mica); red., hardness 2, medium dense, gritty, medium porosity. Characteristic inclusions: vegetable f. 1, m. 1, sand f. 2, quartz m. 2, f. 2, 1 mm 1, mica v.f. 3, f. 2, feldspar f. 2, greyish stone particles f. 2, m. 1. Example: MS 048, hand-made beaker.

Variant QM Ia: much inorganic, no visible organic inclusions. Characteristic inclusions: mica v.f. 2, feldspar 1, quartz 2 mm 2, rotten orange particles (chaff?) 10 mm 1. Example: KIR 334.1, Kerma?; hand-made, incised decoration.

62 For these vessels see Budka 2005: fig. 7.

Similar QM Ib: dominated by quartz, mica v.f. 3, feldspar 2, quartz 6 mm 1, m. 2, orange particles m. 1, black particles 1. Example: MN 020/3.2: Kerma, hand-made, red slipped, black-topped; MN 020/3.3 and MN 020/3.4-5: beakers and cooking pots, all hand-made.

Similar QM Ic: KIR 241/2.1 (= fig. 10.3), no vegetable visible, but some chaff on surface, quartz, mica, feldspar, red., hand-made.

Similar QM Id: KIR 236/1.1: (= fig. 10.2): Black-topped (red slip and burnished; smoked rim)⁶³ coarse, hand-made; similar to KIR 241/2.1, but some chaff, white particles 1 mm 1; KIR 208/34.1: impressed pattern, dominated by quartz, sandy, white particles f. 2, hand-made, red.

Similar QM Ie: KIR 236/2 (= fig. 10.6): red., hand-made, mostly mica v.f. 3, f. 2; quartz 4 mm 2; feldspar f. 2, some chaff m. 1.

Similar QM If: Black-topped beaker KIR 208/38.1 (fig. 6.2), mostly mica, feldspar, quartz, some vegetable.

Fabric Quartz-micaceous II (QM II): This fabric is characterized by numerous mica, quartz and some white particles, which are also visible on the surface; hand-made, local; hard 2(-3), medium dense. Characteristic inclusions: quartz m. 2, f. 2, mica v.f., white particles f. 1-2, some vegetable m. 1, sandy; black core, zones 5YR5/6-5/5: self slipped burnished in KIR 343/1 (Kerma).

Variant QM IIa: This fabric is very gritty, poorly sorted, dominated by mineral inclusions; some chaff 8 mm 1, mica v.f. 2, quartz 4 mm 2, m. 1, black pebbles m. 1, grey pebbles m. 1. Example: KIR 294/1, Kerma bowl?

Fabric Quartz (Q): Numerous, coarse quartz particles characterize this hand-made, local fabric; hardness 2, coarse density, medium porosity, vegetable m. 1, f. 1, chaff 7 mm 1, quartz 5 mm 1, m. 2, mica v.f. 3, feldspar f. 2, red. Example: KIR 337/2, uncoated, coarse.

Fabric Black-topped I (BT I): A sandy, fine fabric similar to Nile A with some additional organic inclusions and characteristic pebbles: hardness 2, vegetable f. 1, sand f. 2, quartz m. 1, f. 2, mica v.f. 3, f. 2, feldspar f. 2, greyish stone particles f. 2, m. 1, black particles f. 2. Example: KIR 236/3.

Fabric Black-topped II (BT II): A sandy, medium fine ware, hand-made, reduced, similar to BT I, but more porous and with chaff (BT II); not unlike Nile B but with characteristic pebbles: hardness 2, vegetable f. 1, chaff 7 mm 2, sand f. 1, quartz m. 1, f. 1, mica v.f. 3, feldspar f. 1, greyish stone particles f. 2, m. 1. Example: KIR 088/1.

Fabric Black-topped III (BT III): Sandy coarse fabric, hardness 2, similar to Nile B with characteristic particles: vegetable m. 1, chaff 10 mm 2, sand f. 1, quartz m. 2, f. 2, mica v.f. 2, f. 2, feldspar f. 2, reddish particles 5 mm (= grog?) 1. Examples: KIR 241/3; KIR 241/3.1.

References

- Budka, J.
2005 H.U.N.E. 2005: Survey und Grabungen in Kirbekan, *Der Antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin* 16: 69-81.
- Daszkiewicz, M., E. Bobryk, and G. Schneider
2003 Continuity and change in pottery making from the Mesolithic to Christian period in the Fourth Cataract region (Sudan), *Gdańsk Archaeological Museum African Reports* 2: 81-89.
- Dunham, D.
1950 *El Kurru. The Royal Cemeteries of Kush I*. Cambridge, Massachusetts.
1955 *Nuri. The Royal Cemeteries of Kush II*. Boston.

63 After finishing this paper, the complete profile of this vessel was recovered during excavation in 2006; therefore the drawing (fig. 10.2) will be supplemented. Only by fitting KIR 236/1.1 on better preserved sherds it was visible that the small bowl was once black-topped (coarse variant).

- Firth, C. M.
1912 *The Archaeological Survey of Nubia*. Report for 1908–1909. Vol. 1. Cairo.
- Geus, F.
1991 Burial customs in the Upper Main Nile: An overview. In: Davies, W. V. (ed.), *Egypt and Africa. Nubia from Prehistory to Islam*. London: 57-73.
- Gratien, B.
1978 *Les cultures Kerma. Essai de classification*. Lille.
1986 *Saï I. La nécropole Kerma*. Paris.
- Griffith, F. Ll.
1923 Oxford excavations in Nubia: XVIII-XXVI. The cemetery of Sanam, *Liverpool Annals of Archaeology and Anthropology* 10: 73-171.
- Kołosowska, E., M. el-Tayeb and H. Paner
2003 Old Kush in the Fourth Cataract region, *Sudan & Nubia* 7: 21-25.
- Nordström, H.-Å. and J. Bourriau
1993 Ceramic technology: Clays and fabrics. In: Arnold, Do. and J. Bourriau (eds.), *An Introduction to Ancient Egyptian Pottery*. Sonderschrift Deutsches Archäologisches Institut Abteilung Kairo 17. Mainz: 142-190.
- Paner, H.
2003a Kerma culture, rock art, dome graves and other discoveries in the Fourth Cataract region, *Gdańsk Archaeological Museum African Reports* 2: 163-183.
2003b Archaeological survey on the right bank of the Nile between Kareima and Abu Ahmed: a brief overview, *Sudan & Nubia* 7: 15-20.
- Paner, H. and Z. Borcowski
2005 Gdańsk Archaeological Museum Expedition. A summary of eight seasons' work at the Fourth Cataract. In: Paner, H. and S. Jakobielski (eds.), *Proceedings of the "Archaeology of the Fourth Nile Cataract". Gdańsk – Gniew, 23-25 July 2004*. Gdańsk Archaeological Museum African Reports 4: 89-115.
- Philipps, J. and E. Klimaszewska-Drabot
2005 Saffi Island, 2004: An overview of the ceramics. In: Paner, H. and S. Jakobielski (eds.), *Proceedings of the "Archaeology of the Fourth Nile Cataract". Gdańsk – Gniew, 23-25 July 2004*. Gdańsk Archaeological Museum African Reports 4: 117-123.
- Seiler, A.
2003 Die spätzeitliche Keramik. In: Bericht über die 9. bis 12. Grabungskampagne in der Nekropole von Dra' Abu el-Naga/Theben-West, *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 59: 363-369.
- Spencer, P.
2002 *Amara West. II. The Cemetery and the Pottery Corpus*. London.
- El-Tayeb, M. and E. Kołosowska
2005 Burial traditions on the right bank of the Nile in the Fourth Cataract region. In: Paner, H. and S. Jakobielski (eds.), *Proceedings of the "Archaeology of the Fourth Nile Cataract". Gdańsk – Gniew, 23-25 July 2004*. Gdańsk Archaeological Museum African Reports 4: 51-74.
- Vila, A.
1978 *La prospection archéologique de la Vallée du Nil, au sud de la cataracte de Dal (Nubie Soudanaise)*. Fasc. 9: L'île d'Arnyatta, Le district d'Abri (Est et Ouest), Le district de Tabaj (Est et Ouest). Paris.
1980 *La prospection archéologique de la Vallée du Nil, au sud de la cataracte de Dal (Nubie Soudanaise)*. Fasc. 12: La nécropole de Missiminia. I. Les sépultures napatéennes. Paris.

Vincentelli Liverani, I.

- 1997 Recent excavations in the Napatan cemetery of Hillat el Arab. In: Actes de la VIII^e Conférence Internationale des Études Nubiennes. Lille 11-17 septembre 1994. Vol. II: Découvertes archéologiques. *Cahier de Recherches de l'Institut de Papyrologie et d'Égyptologie de Lille* 17/2: 119-127.
- 2002 An Early Napatan cemetery in the Jebel Barkal region. In: Bács, T. A. (ed.), *A Tribute to Excellence. Studies Offered in Honour to Erno Gaal, Ulrich Luft, László Török*. Budapest: 487-492.

Welsby, D. A.

- 2003a The Amri to Kirbekān Survey: the 2002–2003 season, *Sudan & Nubia* 7: 26-32.
- 2003b *Survey above the Fourth Nile Cataract*. Sudan Archaeological Research Society Publication 10. British Archaeological Report International Series 1110. Oxford.
- 2004 The Merowe Dam Archaeological Salvage Project. The SARS Amri to Kirbekān Survey. Excavations at the pyramid, Site 4-F-71, *Sudan & Nubia* 8: 2-3.
- 2005 The Merowe Dam Archaeological Salvage Project. The Sudan Archaeological Research Society's concession. In: Paner, H. and S. Jakobielski (eds.), *Proceedings of the "Archaeology of the Fourth Nile Cataract". Gdańsk – Gnień, 23-25 July 2004*. Gdańsk Archaeological Museum African Reports 4: 157-165.

Williams, B. B.

- 1990 *Excavations between Abu Simbel and the Sudan Frontier. Part 7: Twenty-Fifth Dynasty and Napatan Remains at Qustul: Cemeteries W and V*. The University of Chicago Oriental Institute Nubian Expedition 7. Chicago.

Wolf, P.

- 2004 The SARS Anglo-German Expedition at the Fourth Cataract of the Nile: the 2003/04 season, *Sudan & Nubia* 8: 17-26.

Wolf, P. and U. Nowotnick

- 2005 Second season of the SARS Anglo-German Expedition to the Fourth Cataract, *Sudan & Nubia* 9: 23-31.