

These last two field seasons have been rich in major discoveries, which improve our documentation for Prehistory as well as for the later periods. We greatly devoted ourselves to the layout of the site museum built near the western *deffufa*. In addition to the restorations carried out on several monumental ensembles of the Nubian town or that of Doukki Gel, we had to redefine the whole enhancement of our works, initiated a long time ago. The seven royal statues uncovered in 2003 are now entirely reassembled and installed on a podium in the central room of the Museum. The layout of the permanent exhibition is currently underway.

The Swiss National Science Foundation provided us with a decisive support to the continuation of our works and their publication. We are indebted to the Swiss Confederation, Mr. Pascal Couchepin as well as the Federal Office of Culture for a significant grant, allowing us to propose a museographic project of quality. The Museums of Art and History of Geneva have also contributed to the financing of our researches. The Institute of Prehistory of the University of Neuchâtel offers a collaboration as efficient as it is sustained, and the contribution of the students in prehistory is particularly appreciated. Our thanks are also addressed to the University of Paris IV-Sorbonne for its precious contribution in the building up of the epigraphic file. Finally, we would like to stress the active part taken in every step of our project by Mrs. Andréa Reichlin, Swiss chargé d'affaires in Sudan; her radiant personality, the interest and generosity she has shown during her invitations and trips have enabled fruitful exchanges between the concerned partners. May the Federal Department of Foreign Affairs and the Embassy find here the expression of our deepest gratitude.

Like in these last years, we benefitted from the support of Mr. Hassan Hussein, Director of the Sudanese National Corporation for Antiquities and Museums (NCAM). His two assistants, Messrs Salah Eddin Mohamed Ahmed and Abdel Rahman Ali, were also with us, notably on the occasion of a trip made last spring (from 6 to 13 June 2006) in order to prepare the exhibition at the Museum of Kerma. In fact, this trip was partly devoted to investigating the theft of one of the royal statues of the cache, that of Aspelta, which had just occurred. An absolutely incredible journey led us on the right trail on time and the statue, untouched, is now back in its place in the Museum.

The two field seasons began on 1 December 2005 and 30 November 2006, ending on 3 February 2006 and 2 February 2007 respectively. Once more, the *rais* Gad Abdallah, Saleh Melieh, Abdelrazek Omer Nuri and Idriss Osman Idriss directed about a hundred workers, among whom there are now several specialists. The inspectors Chadia Abdou Rabou and Abdel Hai Abdel Sawi devoted themselves without stint, particularly during the last season, as the works carried out within the Museum occasioned additional tasks. The restoration of the remains of the ancient town went on; some masonries, damaged by careless visitors, had to be repaired. A guard post and a 'Nubian' door of traditional architecture now show the modern entrance to the site. The door side, made of massive acacia wood and worked by an old craftsman of the inland navigation, has been equipped with an 'old-style' latch.

The prehistorical researches were concentrated, on the one hand, on the prospecting of the Kerma region and, on the other hand, on the excavation of three major sites. The prospecting enabled the discovery of 135 sites more or less well preserved, their dating ranging from the Lower Palaeolithic (one million years) to the Palaeochristian era. The distribution of these sites is particularly interesting, as it is linked to the climate changes that have affected the Saharan region. As to the excavations, they were concentrated on the Pre-Kerma town, where large-scale strippings allowed to clear fortifications made of six parallel rows of fences which could be followed over a length of 160 m. In parallel with these works, researches were pursued on the site of El-Barga, which comprises two cemeteries belonging to the most ancient necropolises known on the continent (7300-5500 BC). The discovery of 18 tombs gives us precisions on the funerary ritual and the organization of these cemeteries. Finally, a new excavation began on a vast site named Wadi El-Arab, covering more than two hectares. This place was occupied during about two millennia by Mesolithic and Neolithic populations (8300-6500 BC). Soundings and the excavation of a sector of 24 m² have revealed numerous stratified remains of habitations as well as burials. The presence of domestic ox bones in particularly ancient levels brings fundamental information on the beginning of African pastoralism.

Our researches rely on the experience of several collaborators who contribute to the smooth running of operations. Louis Chaix is in charge of studying the fauna and of establishing basic anthropological identifications of the human skeletons. Marion Berti and Daniel Conforti play an active part in the fieldwork and make the drawings. Michel Guélat is in charge of the geological studies on the different sites. Three students from the University of Neuchâtel have also taken part in the fieldwork: Jérôme Dubosson, Aixa Andreetta and Bastien Jakob. Stine Rossel, a student in archaeozoology from Harvard University, is entrusted with the analysis of the fish remains found at some sites. Sandro Cubeddu gave his assistance in activities linked to the management of supplies and the excavation. Finally, the study of the pottery benefits from the skills of Maria Gatto, a scholar associated with the British Museum.

At Doukki Gel, in the town founded by the Egyptians, the clearing of the religious quarter and its precincts was pursued, giving new elements on the many transformation phases that followed one another in the course of centuries. The different levels can be determined, since the buildings are not preserved in elevation. Moreover, late destruction trenches favour the analysis of the deep strata. In this way, we could discover the existence of an ambitious architectural programme attributable to Queen Hatshepsut, including the construction of a temple of Amun to the west and of porticos around the central temple. In the eastern temple, works by Thutmose III and then by Akhenaten have been identified. Lastly, more to the east, a temple of circular shape (Fig. 1) and a series of rounded bastions associated with the original precinct of the town evoke, in many respects, the Kerma traditions.

It remains to underline the excellence of our collaborators, who all put their heart and soul into their work. Our colleague Dominique Valbelle, assisted by Patricia Jaheger and Marc Bundi, analyses hundreds of decorated or inscribed blocks, thus giving us the means to replace them in a historical perspective and to get an idea of the original splendour of the uncovered monuments. The photographic coverage is provided by Jean-Michel Yoyotte. Philippe Ruffieux goes further into his study of the pottery collected during the excavation. The archaeological drawings are made by Inès Matter-Horisberger, Alain Peillex and Marion Berti; their quality is all the more remarkable since the climate conditions were relatively hard – strong wind of sand or heavy sun. The nature of some offerings

and food reserves could be determined thanks to the researches of Louis Chaix, archaeozoologist. In Geneva, the elaboration of the documentation benefits from the skills of Béatrice Privati, Nora Ferrero and Patricia Berndt.

The finishing works of the Museum of Kerma and the layout of its surroundings had to stand delays caused by some corps of workers. But we could count on the devotion and support of Mr. Sir el-Khatim and of the Committee responsible for the project. It is to Markus Bloedt that we owe the reassembling of the royal statues and their positioning in the central space. He was efficiently assisted by Marc Bundi, the operation being extremely thorough: on the one hand, the interior layout works were creating additional dust, and on the other hand the temperature, exceptionally low at the moment of the reassembling, was slowing down the drying of the special glue used for this type of restoration. Because of their weight, the stone fragments glued together tended to come apart... Fortunately, the know-how of the restorer enabled to overcome every obstacle and today, all the statues are in their final location (Fig. 2 and 3). The inauguration was nevertheless postponed, so as to be able to complete the inner and outer installations.

1. BONNET 2006; BONNET in press; BONNET/CASTIGLIONI in press; BONNET/FERRERO 2006; BONNET/VALBELLE 2006.1; BONNET/VALBELLE 2006.2; BONNET/VALBELLE 2006.3; CHAIX 2006; CHAIX in press; HONEGGER 2006.1; HONEGGER 2006.2; HONEGGER 2006.3; HONEGGER 2006.4; VALBELLE 2006; VALBELLE in press

The results obtained by the Swiss Mission have been widely publicized, through publications or during congresses and scientific meetings in which the members of the Mission participated¹. The regular publication of our excavation reports in the *Genava* journal constitutes a precious asset, as well as the new layout of the room of Nubian antiquities at the Musée d'art et d'histoire, under the responsibility of Jean-Luc Chappaz, curator, and with the assistance of Nora Ferrero.

The last discoveries made on the site of the ancient town of Pnubs/Doukki Gel allow us to precise the history of the early Egyptian colonization (18th dynasty) and, much later, that of the military campaign of Psammetichus II (26th dynasty). The numerous modifications to which the temples were subject testify to the large-scale building sites opened at the instigation of the great pharaohs of the New Kingdom. The evolution of the precinct walls suggests that the Nubian population of Kerma participated in the achievement of some works. However, the most interesting element uncovered during the last campaign is a circular temple made of mud brick, to the south-east, a little bit away from the religious quarter of the Egyptian town. This unique monument remains there during the whole occupation period; in all likelihood, it was built at the beginning of the 18th dynasty, perhaps in a transitional period in the course of which a Nubian king would have managed to temporarily recover the power. Thus a local cult could have been maintained during this period of turmoil.

The fortified precincts

We have noted that the town was protected by a precinct made of several walls joined side by side, reaching a total thickness of up to 6 m. Small rectangular projecting parts would flank the exterior side. A very levelled wall, showing a slight angle, was preserved in depth and it seemed useful to follow it westward, in a sector forming an extension in relation to the usual plan of towns in this period. The strippings have unveiled bastions related to this old wall². Material characteristic of the Classic Kerma was spread all over the place, suggesting that a campaign of destruction of the fortifications is to be associated with a king of Kerma. But new and mightier walls are very soon rebuilt, with a rectilinear layout.

The precincts seem to be kept in place during the centuries of Egyptian domination. Then the Nubian pharaohs take over the fate of the Nile valley and the defence of Pnubs. After the reunification of Egypt under the Saites (26th dynasty), a military intervention led by Psammetichus II overwhelms the town: its walls are pulled down and levelled once again. The destructions are impressive, particularly in the western extension, where a door is destroyed up to an important depth (Fig. 4). The pottery and the datings obtained by the C₁₄ method³ place the destruction campaign in 593 BC, thus corroborating the historical data.

The resumption of the excavations in the eastern temple gave us the opportunity to work at the southern limits of the site. Under the remnants of the New Kingdom precinct appeared the remains of an older fortification, which can be associated with the founding of the town, at the beginning of the 18th dynasty. Often restored, this fortification is composed of a series of close bastions which were progressively expanded, up to a length of 8 m (Fig. 5). Although we can't discern all of its states, it is clear that the turmoils accompanying the conquest of Nubia by the pharaonic forces motivated these defensive efforts. The character of these fortifications is unexpected. If the large fortresses built by the Egyptians at the second cataract during the Middle Kingdom are equipped with rounded bastions⁴,

2. BONNET 2005, pp. 227-228

3. Calibrated age: 760-380 BC, which corresponds to 570 ± 190 BC and 860-480 BC, that is around 640 ± 160 BC.

4. SMITH 1966; for the exterior precinct at Buhen, see EMERY 1965, Fig. 19-24

these are usually spaced at intervals of around 20 m. From the New Kingdom onward, the walls are coupled to rectangular projecting parts, and so until the late periods⁵.

In the Nubian town of Kerma, semi-circular bastions built at close intervals were extremely widespread. They represent a traditional way of building which, by the way, will be in use until the modern times, as much for prestige constructions as for military works. During the excavation, we had been able to notice that their construction started with a circular foundation, of which only one half was then raised up to the desired height. The mud brick structures cleared this season at Doukki Gel show the same features, which could translate as a will of the Egyptians to adapt to the local realities, particularly to the fighting techniques of Nubian soldiers. One must also wonder to what extent the inhabitants of the region participated directly in these works. Linked to the final phase of this bastioned fortification, an inscribed block was uncovered, reused as facing at the front side. This block pertains to a monument of Thutmose II. In spite of a short reign (four years), this king certainly intervened at Kerma to ensure the pacification of the territory. But the end of the important Nubian rebellions will only come with the reign of Hatshepsut.

The circular temple

The discovery of a circular temple is interesting in two ways: first, such a plan is rare at that time; secondly, it constitutes a link with the Kerma traditions (Fig. 6). A circular wall made of mud brick, with a thickness varying between 92 cm and 1 m, defines a building with an inside diameter of 10.5 m. All around it were small semi-circular bastions joined side by side, relatively irregular, giving it a festooned outline. The state of conservation does not allow us to understand all the phases of reconstruction or modification to which the structure was subject. At a distance of 3 or 4 m there are several series of post holes, whose general line follows that of the circular wall. It could have been a portico supporting the lower part of a conical roof or a fence of small-diameter posts. Only surface clearings have been carried out, and it will need many other strippings to study the hundreds of visible post holes. Some of them are more distant from the building and belong to other flimsy constructions. The preliminary dating given by the pottery indicates a long period of occupation, ranging from the New Kingdom to the Napatan period (Fig. 7). Among the New Kingdom sherds caught in the bulk of the bastions' mud bricks were also noticed a few Classic Kerma sherds.

The interior installations date back to the Napatan period, during which the building was newly laid out after a violent fire. They are unusual for a sanctuary. To the north, a large circle drawn by posts of significant diameter (20 to 30 cm) seems to constitute a dedicated site (Fig. 8). It is isolated by circular bases which were perhaps meant to support earthen stands forming a partition. The door to the west, relatively narrow (opening of about 1 m), is extended inside by a straight wall. Numerous post holes and a semi-circular space occupy the southern part. In the reserved sector to the east, a granary made of faintly fired earth, measuring about 80 cm in length, surmounted a pit, the digging of which had damaged the circular wall. In its sand and soil filling, a significant amount of gold leaves (Fig. 9) and small lapis-lazuli plaques (Fig. 10) was recorded, as well as a bronze fragment of cornice to which one of these plaques was still stuck (Fig. 11). On the same fragment, depressions meant to receive other inlays enable the recognition of a winged disc. Two bronze rods pierced with a hole, one of them still with a nail, and remains of acacia wood and of plaster suggest that this material is linked to a richly adorned wooden naos⁶.

5. WELSBY 2005

6. MACADAM 1949, no. 28; MACADAM 1955, 7.Q. (Portable shrine), p. 178, Pl. 49, 50, 58 b-c

Once again, we must turn to the Nubian town to find a parallel to this circular temple. In the Classic Kerma, not long before the capital was abandoned, there existed a circular chapel with a diameter of 11 m, to the north of the *deffufa*. Its centre was marked by a column base made of dolomitic marble, a rock which at Kerma seems to have been devoted mainly to religious buildings⁷. Not far from it, towards the north-east, a way led to a second chapel of rectangular shape, surrounded by a vast circular precinct supported on its exterior side by a series of bastions built at close intervals⁸. In the past, this group had been considered as a fortified element⁹; but, in the present state of our research, we tend to see it as a religious complex that has been enlarged by stages. One should note that, if we extend the axis of the way beyond the Nubian town, it leads to the circular temple of Doukki Gel.

Several huts were pitched to the north-west of the temple entrance. The smallest one, which is also the latest, has a diameter of 6 m. Along its western wall, 1150 mud jar stoppers of conical shape were uncovered (Fig. 12). Some of them are stamped, but their reading remains difficult, due to the state of disintegration of their material¹⁰. In the same sector there were lots of jars broken on the floor. The sherds studied pertain mainly to the 25th dynasty and the early Napatan period. Another deposit, of lesser importance, can be related to the Ramesside period (19th dynasty).

The western temple

The two wells of Doukki Gel pertain to the initial urbanization of the Egyptian town¹¹, and may even precede it. The design of the vast architectural ensemble started at the beginning of the 18th dynasty takes account of the two wells; it comprises a western temple, a large central temple and an eastern temple. Although it is too early to present all its development phases, it seems acceptable to assume that the first Thutmoses originated the project, as much on the basis of the epigraphic evidence (Thutmose I and Thutmose II) as of the archaeological analysis. However, in the restoration of the plan, we only used the elements attributable to Queen Hatshepsut, whose achievements, though related to the earlier monuments, define a new organization (Fig. 13). In this respect, the western temple is impressive, with a pylon and a first courtyard with porticos leading to a hypostyle hall¹². Two central colonnades and some engaged columns are identified by rounded bases surmounted by square stands with 68 cm of side (Fig. 14). Close to these, a few small inscribed fragments allowed the discovery of part of the cartouche of Hatshepsut near the pillars of the monuments.

In the south-west corner of the hypostyle hall was a free space reserved for an altar, the base of which was found along with a basin. A narrow staircase opening onto this space is linked up to an underground vaulted corridor leading to the southern well. This corridor, with approximately 1.2 m of height, sinks at a depth of 4 m and thus shows a steep slope. Its vault is made of mud brick and is covered by a filling of barren alluvial soil. Its line follows the western lateral wall of the sanctuary. The latter shows a rectangular elongated plan; its brick pavement is covered by a lime wash, equally preserved in the hypostyle hall. Several offering deposits are associated with the sanctuary. In addition to earthenware vessels, one will note the presence of a private stela mentioning the ‘Amun-Re, Lord of Pnubs¹³’, gold or stone representations of ears, and objects used in the cult, among which the beautiful protome of a ram. A small channel coming from the northern well, and the presence of a previous wall under the staircase opened in the corner of the hypostyle hall, testify to the antiquity of a water ritual.

7. BONNET 2004, p. 150

8. BONNET 1991, pp. 5-6

9. BONNET 2003, pp. 259-261

10. See RUFFIEUX 2007

11. BONNET 2005, pp. 227-231

12. VALBELLE 2006

13. VALBELLE 2003, pp. 201-202

The central temple

Pertaining to the same period of transformation were found the remains of a large-size portico developing on an axis that is transverse to that of the temples. Enormous blocks, placed in square pits, were used as substrata to the circular bases, the surface of which had been cut to receive square pillars (Fig. 15). Two of these bases are preserved in situ, they were included in a wall of Thutmose III. The right angle of another portico built southward is testified by five pits: we could observe that the supports had been broken to pieces and that most of the bases had been dismantled before the following construction (Fig. 16). These pits cut through circles of bricks, which can be associated with earlier columns, as well as the wall bordering the portico.

We are in no position to precise the plan of these temples. However, the preserved elements of the portico and of its right angle suffice to allow comparisons with famous buildings erected under the reign of Hatshepsut¹⁴. The destructions suggest that Thutmose III preserved nearly nothing from the temples of the regent, his aunt: under his aegis, a vast hypostyle hall is indeed established in the middle of the previous works (Fig. 17). The western temple is abandoned, while a new access stairway to the southern well leaves free the entrance axis to the new chamber, which is reached through a large-size lateral door. A second door opens to the east, pertaining to a transverse axis which remains marked through time. The hypothesis according to which the hypostyle hall could have belonged to the constructions of Thutmose IV¹⁵ was not confirmed by the successive clearings. The presence of a third foundation deposit with the name of this king, at the boundary between the sanctuary and the hypostyle hall, suggests that he probably intervened only in the vestibule and the sanctuary, which was entirely rebuilt in stone according to a tripartite plan (Fig. 18).

The eastern temple

During the excavation of the Napatan and Meroitic temples to the east, we could realize to what extent the archaeological levels were disturbed. We inferred from it that there would only remain bakeries under the central space or under the sanctuary¹⁶. But soundings made to an important depth (about 2.5 m) at the beginning of the last season allowed to uncover remains of the Amarna and Ramesside periods. A portico between the central and eastern temples is testified by column bases made of brick mixed with silt. The study of two of them, up to the first foundation bed, cleared the negative of a square beam which had been used for the elevation of the shaft, which was probably entirely made of mud. Of course, the upper parts could have been made of stone but the situation of the bases, established very close to the walls, seems to invalidate this last hypothesis. One must also note the presence of traces of plaster or gypsum on these bases.

Under the Meroitic hypostyle hall, three rows of five columns are attested by the presence of circular bases with a diameter of 1 to 1.2 m, made of mud bricks arranged in concentric circles. Several of these bricks show the negative of a central beam used for the erection of the supports and maybe also as a marker during the works. Some rare Ramesside sherds bring a chronological indication for this level. One notes that layers made of small sandstone fragments pass underneath the bases; they certainly correspond to the destructions of the Amarna period; the layer of occupation has been located under the hypostyle hall (Fig. 19).

14. RANDALL-MACIVER/WOOLEY 1911, pp. 19-82; EMERY 1965, Fig. 137; KAISER 1998, pp. 20-25

15. BONNET 2003, pp. 261-264

16. BONNET 1999, p. 74

To the south of the latter, several pottery concentrations were found in ducts of irregular layout, as well as in a rounded basin made of brick: they probably are of ritual origin. The sanctuary of the temple is better preserved; it consists of a rectangular chamber equipped with four columns (Fig. 20). Such an uncommon plan is attested in the region on the site of Sessibi, 40 km to the north, where remains of a fortified town founded by Amenhotep IV-Akhenaten are found. The sanctuary of the main temple indeed shows an identical tripartite plan¹⁷; it is preceded by a vestibule which resembles our example at Doukki Gel.

One can suppose that the enormous walls cleared around this sanctuary of Aten belong to a large-size temple built by Thutmose III on the dismantled remains of a previous cult monument. With a thickness of about 2 m, the lateral walls are linked to the corners of the sanctuary by circular foundations. To the south-west corner, a small cavity has delivered two small uninscribed sandstone bricks wrapped in gold leaves (Fig. 21). To the west, a lateral wall, probably the temenos, is also erected on an older portico.

The eastern temple thus partially recreated is linked to a long period of use and testifies to an architectural development as intricate as that of the central temple. Indeed, from the reign of Thutmose I, New Kingdom pharaohs seem to have attached a particular importance to the ancient Pnubs. It remains to understand how each of the different phases tie in with those of the neighbouring circular temple of Nubian tradition. The buildings have all undergone destructions, soon followed by major reconstructions. During this season, we could note how the envoy of Thutmose III removed the stone elevations of Hatshepsut. The supports of the porticos were thus broken to pieces, in the same way as later, in the Amarna period, the temple of Thutmose IV was completely levelled.

The Napatan buildings and the annexes

In the late outbuildings of the temples to the west, a central building had been cleared, whose functions were linked to the distribution of the offerings among the sanctuaries. After the excavations, it is possible to complete the plan of this sector with a second administrative building established to the south-west of the town¹⁸. The latter, carefully built, is made of two distinct bodies. The first one, to the west, probably served as a residential space; it is composed of a series of rooms, of which two, of elongated shape, are connected by a small interior courtyard. In this courtyard there was a deposit of beef quarters, protected by a large circular mud stopper, which could constitute an offering. Two other rooms contained rounded grain bins made of mud (of the same shape as the modern *gousseba*); the larger one still sheltered an oven placed at the north-west corner. The second body of the building is composed of a vast courtyard and of two rooms to the north, where numerous pieces of furniture were discovered. Sealing imprints, with several different seals, attest to more administrative functions in this sector.

If most of the recorded material pertains to the Napatan period, it seems certain that the occupation of the building is maintained during the Meroitic times. The space to the north of the building is progressively invaded by bakery workshops, while two or three annexes are added to facilitate the administrative tasks. In the classic Meroitic, the project supervisor in charge of the reconstruction of the southern well doesn't hesitate to create a large access ramp for this large-scale construction site. He cuts through the workshop to meet a courtyard to the south of the outbuildings, but bypasses the residential and administra-

17. FAIRMAN 1938, pp. 151-156

18. BONNET 2005, pp. 232-23

tive building. At the end of the works, the pulled down partitions are rebuilt and the different constructions are rehabilitated.

As we mentioned before, the circular temple established to the east of the town was devastated by a violent fire during the Napatan period, as is shown by the thick layer of ash and reddened soil observed under the interior installations. In the present state of the investigations, it seems plausible to link this destruction to the passage of the troops of Psammetichus II. The small hut neighbouring the temple, the jar debris and the innumerable stamped jar stoppers show that the place retains its importance after the conflict, since rituals involving libations are performed there. On the periphery of the temple, other clues, such as a hearth or vessels, attest to the frequenting of the surrounding space. It seems that a sanding up brutally occurred: indeed, it is on 80 cm to 1.5 m of aeolian sand that a new building is installed a few dozens of metres to the south, still in the Napatan period. Its plan comprises two long rooms, the northern one being equipped with a granary. Several jars and large bowls were discovered in this area. A portico is built to the south, while a rounded fence forms the boundary of a courtyard opening into an annexe paved with bricks. New Kingdom mud bricks were reused to erect a significant precinct to the east of the building. At a certain depth, the modest remains of a foundation could be part of the 18th dynasty precinct at the south-east corner.

On the vast field lying to the east of the large Egyptian temples and to the south of the palaces, around forty sandstone blocks prepared in a quarry are scattered close to places used as a construction site. A huge precinct wall was cleared, which is to be linked to one of the states of the eastern Meroitic temple. By analogy with the western ceremonial court, marked by the two wells, it seems possible to reconstitute a second court, even bigger, which was perhaps related to the circular temple and the huts. We will also note the presence, in this corner of the town, of traces left by a swing-plough drawn by an ox; the furrows, which are found at the level of the natural ground, seem to turn around the temple and the neighbouring hut.

Conclusion

These last field seasons have proved that ancient Nubians were playing a major part when the Egyptians arrived beyond the third cataract. The effort sustained from the reign of Thutmose I to create a religious centre there is a way of asserting the conquest, threatened by rebellions. It is not impossible that, with a pacificatory intention, a place was granted to the religious traditions of this ancient kingdom; the extraordinary circular temple could thus have been reserved for the gods of the Kerma cultures. In any case the general topography of the site shows that the south-west quarter of this town is occupied on all its width by an impressive series of Egyptian temples of classic design, whereas on the eastern side, an architectural ensemble of a very different nature is developed, as much in regard to the organization as to the type of structures. We hope that the ongoing researches in this sector will allow us to verify this hypothesis and to refine chronologies.

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Research on the Pre- and Protohistory of the Kerma region enables us today to paint an ever detailed picture of the millennia preceding the emergence of the first kingdom of Black Africa, even though it might be punctuated by non-documented periods. With the exception of survey work that is for all intents and purposes completed, excavations continued at three exceptional sites: the Pre-Kerma agglomeration, the El-Barga cemeteries and the far-reaching site of Wadi El-Arab, occupied on several occasions between the 9th and 7th millennia BC.

Archaeological surveys made possible the identification of 135 sites, whose dates cover all periods (Fig. 1). Without pretence of having been exhaustive, it can be said that the most important were identified and that the territory's occupation dynamics have been established. The climatic variations that marked the Holocene Period had considerable influence on human settlements; the contrasts between the settlements in the desert and those in the alluvial plain have already been noted¹. Multiple radiocarbon dates now give 5000 BC as the date when human populations left desert regions and move closer to the river, then more accessible due to increasing aridity². Although globally valid for the last 10,000 years, this system cannot be applied to older periods, dating back to the Palaeolithic. Indeed, Lower Palaeolithic remains located on pebble beaches along the current course of the Nile are at least 500,000 years old and cannot easily be integrated into a climatic scenario that is little-known for these remote periods. During the Middle Palaeolithic, on the other hand, numerous sites discovered east of the alluvial plain must correspond to a period during which the climate was more humid, approximately between 60,000 and 130,000 years ago³. The majority of these sites are badly eroded and revealed only a few tools and flint flakes. A single site, discovered during the 2005-2006 season, makes exception to this rule by the abundant quantity of artefacts it revealed. It consists of a series of knapping workshops located at the summit of a volcano, 30 kilometres from the Nile, as the crow flies (Fig. 2). Populations of the time visited this rather unusual site to exploit basalt formations in order to produce tools using a technique similar to that of the Levallois tradition. Several circular areas were discovered; they form depressions littered with thousands of flakes and nuclei. Sedimentation being non-existent in such a site, the totality of the remains are found directly on the ground's surface, still in their original location after tens of thousands years. The lithic material sought were points obtained using the so-called Nubian method (Fig. 3). At the moment, no sites corresponding to the next period, the Upper Palaeolithic, were discovered. It is possible that the particularly arid climate characteristic of this period incited human groups to settle very near the Nile, at sites now covered by several metres of silt.

The discovered sites dated from the 9th millennium BC onwards are more numerous. Using them, it is possible to follow the evolution of human groups as well as the fundamental economic and social transformations brought about by the adoption of husbandry and agriculture, and later by the development of trade along the axis of the Nile. During the last few years, research focused particularly on the transition phase between the period of the last hunter-gatherers (Mesolithic) and the beginning of the Neolithic.

1. HONEGGER 2005

2. This observation partly corroborates a more recent study based on 150 dated sites in the Western Desert and in the Nile Valley (KUPER/KRÖPELIN 2006). Indeed, it is from 5300 BC onwards that most Egyptian desert areas are abandoned and that populations moved to the Nile Valley, a date analogous to that of the move noted in the Kerma region. However, the Sudanese desert climate was still humid enough to accommodate populations between 5300 and 3500 BC. Our observation can be considered to allow, first and foremost, the dating of the moment when the alluvial plain becomes inhabitable, due to a decrease in the Nile flow and in the magnitude of the flood.

3. See VERMEERSCH 2002

Wadi El-Arab

The site of Wadi El-Arab is located in a now desert region (Fig. 4). It was discovered a few years ago and, in 2005, its potential was evaluated by a preliminary sondage⁴. Since then, four other trial trenches were dug and a surface area of 20 square metres was cleared. Occupied on several occasions between 8300 and 6600 BC, the site covers a significant area measuring more than three hectares. While certain sectors revealed only a single occupation layer a few centimetres thick, others showed a stratigraphic sequence more than 0.50 metres thick, with successive and continuous settlement remains. Within an African context, such a level of preservation is exceptional considering that it is rare to find for this period open-air sites that are not totally eroded.

Such a site is interesting not only in the study of the settlement's structure, but also in the reconstruction of the economy as well as the technical and cultural characteristics of material production. Besides flint tools and flakes, pottery sherds and ostrich eggshell beads, the site reveals numerous shells, mollusc remains, animal bones, and fish vertebrae. The preliminary faunal analysis performed by Louis Chaix reveals a spectrum linked to a wooded environment. Furthermore, a few domesticated ox bones were discovered within the stratified levels dated to approximately 7000 BC. The importance of this discovery is crucial to the question regarding the beginning of animal domestication in Africa. Indeed, it confirms the controversial discoveries at the sites of Nabta Playa and Kiseiba in Southern Egypt⁵. Additionally, it reinforces the idea of the local domestication of the African ox from aurochs living in the Nile Valley. Analyses of the ceramic and lithic industries will allow us to draw parallels with other contemporary cultural assemblages. Already, first comparisons show affinities with the Second Cataract region and sites in the south of Egypt⁶.

The excavation of the 20 square metres area revealed settlement remains, their complicated interpretation residing in the subsequent superposition of occupations and disturbances. These must have been light constructions that left little evidence on the ground. A few rare postholes and wattle remains have been identified together with larger concentrations of stones and a pit. Within one of the occupation levels, these observations allow us to distinguish a circulation zone and a habitation area. Near the latter, fragments of a complete ostrich egg with an opening highlighted by incisions were discovered (Fig. 5). This specimen, which probably served as a vessel or a flask, is not unique, insofar as other such decorated fragments were also discovered during the excavation. Once again, they evoke similar discoveries made at the sites at Nabta Playa⁷.

While survey work revealed nothing concerning burials in the last several years, this season was deemed successful in this regard. Indeed six in-ground burials were discovered in three different locations. The bodies were placed on their side, their orientation varied. Two burials contained grave goods. The first contained three perforated Red Sea shells that once were part of a necklace and the second, which was disturbed by a later occupation, held a bone object with finely incised decorations that might be a cosmetic container (Fig. 6). According to available chronological data, these burials date to a period between 7000 and 6600 BC. These complete the information obtained from El-Barga, fitting between the two funerary episodes at that site. In every instance, we are dealing with the first Neolithic burials known on the continent.

4. HONEGGER 2005, p. 247

5. WENDORF/SCHILD 2001

6. Maria Gatto (British Museum), research in progress

7. GATTO 2002

El-Barga

Excavations continue at El-Barga, where the surfaces cleared within the last two years total up to practically 1200 square metres. This site, of which the surface stratum is eroded, reveals burials dated to two distinct periods. In the southern sector was exposed a Neolithic cemetery (6000-5500 BC), numbering a hundred graves, of which the excavation is almost complete. Practically two-thirds of the graves contained goods such as adornment, pottery, tools or weapons. Overall, the burials are organised in two groups within which they concentrate around two or three tombs featuring wealthier furnishings, a sign of a society with social distinctions⁸.

In the north, more than thirty graves are studied. Dated to circa 7000 BC, they are attributed to the end of the Mesolithic and generally do not contain any furnishings. The first graves were located around and inside a semi-subterranean hut a few centuries older (Fig. 7)⁹. While it would have expected that it should be accompanied by similar structures – thus forming a sort of embryonic village – this hut remains at the moment an isolated example. However, the possibility that much lighter shelters, which leave less hard evidence, could have been set up around this semi-subterranean habitation should not be excluded. In any case, remains such as sherds, flint, grinding stones, and mullers were discovered over a large area and are indicative of the vastness of the settlement. The presence of numerous pits hewn in the bedrock reinforces the idea of the relatively dense occupation of the site. Often similar to burial pits, these are distinguished by their fill comprised of a few sherds and animal bones and the total lack of human remains (Fig. 8). These must therefore be storage features related to the occupation of the site. In one case, the pit is much narrower and dug deeply into the rock (Fig. 9). It is tempting to compare it with a slightly more recent village at Nabta Playa and interpret it as a well.

The burials bring together a population relatively well balanced gender-wise: twelve men and eight women were identified. However, with only five individuals, immature subjects are under represented. Bodies are placed on their side – with a preference for the right side – and the legs are flexed. Pottery sherds found in the fill confirm a date around 7000 BC and their decoration is distinct from that of the sherds found in the semi-subterranean hut¹⁰. In addition to the cases of bone manipulation already noted a few years ago, two female burials present special situations. The first held in the belly area the bones of a foetus near term, indicating that the woman died during childbirth or shortly before (Fig. 10 a). The second, in an excellent state of preservation, presented a hole in the frontal bone (Fig. 10 b and 11). According to the study of the state of the bone, we are not dealing with the stigma resulting from the strike of a sharp weapon, but with intentional trepanation. The bone did not bear healing marks and it might thus be presumed that the procedure resulted in the death of the patient. Such an ancient necropolis containing this many individuals is exceptional in Northeast Africa. Therefore, the clearing of large surfaces is necessary in order to obtain a representative picture of this funerary assemblage, and perhaps also to discover other habitations related to an earlier use of the site.

8. Contrary to Neolithic necropolises, Mesolithic cemeteries do not present such distinctions (see ANDRETTA 2007).

9. HONEGGER 2003

10. The pottery discovered in the hut was the subject of a detailed analysis, which highlights the differences with sherds found near the burials (see JEANBOURQUIN 2007).

Pre-Kerma Agglomeration

Extensive excavation of the agglomeration continued in the fortification area in order to understand better its structure and extension. Thus, two sectors were cleared; one measured 1000 square metres, the other 600 square metres. The former revealed the remains

of a series of rather well preserved palisades. The important accumulation of sand and the proximity to the great tumuli of the Kerma civilisation contributed to the protection of this surface. While the interpretation of the first section of the enclosure cleared three years ago was difficult¹¹ because of the superposition of several phases of construction that were barely discernible due to intense erosion, the new discoveries have revealed a single construction phase with a remarkably clear layout¹². Postholes are organised in six parallel palisades at 1 metre to 1.50 metre intervals and form a fortified unit eight metres wide (Fig. 12). Remains of added-on earth preserved to a thickness of 0.30 metres were clearly associated with this structure, which presupposes a wood and earth construction. The palisades must have served as framework or casing, the earth filling the space between each row of posts. We are therefore dealing with an imposing construction. Its elevation is difficult to reconstruct because it cannot be excluded that the first course – which must have measured at least two metres high – could support a second one. There are no equivalents to this device among the rare enclosures known from this time (circa 3000 BC) in the Nile Valley. Ethnographic parallels were then sought in the vernacular architecture of Black Africa¹³. Although certain similarities exist¹⁴, none of the examples examined were an exact parallel to ours. The enclosures are either made from adobe or are essentially made of wood. However, the use of both earth and wood – which exists in the case of certain buildings and dwellings – is unknown with regards to fortifications.

The Pre-Kerma parallel palisades join in an area where they form a border of semi-circles in order to accommodate a second entrance that is four metres wide (Fig. 13). The first entrance, which was identified three years ago, measures eight metres wide. A group of six huts measuring close to four metres in diameter were cleared near the second entrance, within the agglomeration itself (Fig. 14). These show that a second habitation area developed within this zone and can be added to the forty or so huts already cleared further south.

The presence of very large funerary tumuli of the Kerma civilisation impeded the excavation of this very promising sector. Thus, a new unit was opened 35 metres west of the excavation limits along the enclosure's axis, which follows a west/north-west, east/south-east orientation.

The continuation of the parallel palisades was positively identified, even though the density of Kerma tombs allowed us to find only five of the six palisades (Fig. 15). These do not show a return in the southern direction, which allows us to envision an extremely large enclosure that surrounds a far-reaching agglomeration. At this time, the fortifications were identified along 160 metres, the two entrances being 60 metres apart (Fig. 16). The size of the Pre-Kerma agglomeration is now demonstrated and the concern for its defence is obvious. It is possible that it marks a first step in the future development that the region will know with the emergence of the city of Kerma, capital of the kingdom bearing its name. However, archaeological data are rather rare in Upper Nubia during the period between 3000 and 2500 BC, and we cannot go beyond general observations. While we know that Pre-Kerma populations must have had contacts – notably trade – with their northern neighbours of the A Group, much information is missing with regards to the territorial expansion of this culture, its social organisation and its trajectory¹⁵. At this time, the few settlements sites located and, most importantly, the rarity of necropolises do not allow for more precise insight on its importance, notably concerning its population. With the noteworthy exception of this site, are we dealing with a dispersed population that left very little evidence behind? Or has the expansion of agricultural fields in the last forty years destroyed the majority of the Pre-Kerma remains? Hope in better understanding this unit

11. HONEGGER 2005, p. 242

12. Additional excavations in this sector would probably reveal previous construction phases at the moment buried under the added-on earth associated with the last state of the fortifications.

13. See CONNAH 1989, DENYER 1978, FOSBROOKE 1954

14. HONEGGER 2005

15. For the latest concerning the question of Pre-Kerma and A-Group, see GATTO 2006 and HONEGGER 2006

may reside in the development of research projects north of Kerma, between the Third and Second Cataracts. Logically, we should find in that region – today less populated – more evidence, if the discoveries on the islands of Sai and Arduan, and the reports of recent survey work are anything to go by.

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Figure captions

- Fig. 1 [page 202] Map of the Kerma region including the location of site under excavation and sites located during survey work. Black symbols indicate sites older than 5000 BC, located in the desert, while white symbols refer to later occupations, most located in the alluvial plain
- Fig. 2 [page 202] Middle Palaeolithic knapping workshops discovered at the summit of an ancient volcano
- Fig. 3 [page 202] Levallois point of Nubian tradition obtained from a basalt flake
- Fig. 4 [page 203] Wadi El-Arab | Surface during excavation
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- Fig. 6 [page 204] Wadi El-Arab | Incised wooden tool associated with a burial, probably equating a cosmetic container
- Fig. 7 [page 205] El-Barga | Northern sector with the semi-subterranean hut (circa 7300 BC) and part of the tombs dated to the end of the Mesolithic (circa 7000 BC)
- Fig. 8 [page 206] El-Barga | Pit resembling a grave that must have served as storage space.
- Fig. 9 [page 206] El-Barga | Deep pit possibly equating a well
- Fig. 10 a and b [page 207] El-Barga | Mesolithic burials of women. On the left, the deceased, who was in her twenties, died during childbirth or slightly before. On the right, the deceased of more than 35 years underwent a trepanation procedure, which seems to have been fatal.
- Fig. 11 [page 207] El-Barga | Detail of the cranium displaying the oval-shaped trepanation
- Fig. 12 [page 208] Pre-Kerma agglomeration | Parallel rows of palisades creating a fortified line eight metres wide. The hollowed circular structures are the remains of Kerma burials hewn a millennium after the abandonment of the agglomeration.
- Fig. 13 [page 209] Pre-Kerma agglomeration | Four metres wide entrance flanked by fortifications
- Fig. 14 [page 209] Pre-Kerma agglomeration | Group of circular huts located within the agglomeration, behind the fortifications
- Fig. 15 [page 210] Pre-Kerma agglomeration | Continuation of the fortifications during clearance; they are located 35 metres west of the secondary entrance.
- Fig. 16 [page 211] Pre-Kerma agglomeration | General plan of the Pre-Kerma agglomeration with the burials, huts, rectangular buildings, palisades, wall and fortifications

Every field season brings its share of reliefs, stelae and statues. At the end of January 2007, the inventory of the decorated or inscribed blocks and fragments from Doukki Gel has reached the number 1,077. The study of this documentation provides archaeology with valuable chronological and contextual information. Thus, the western temple, which still contained modest but indisputable epigraphic remains from the pillars of its hypostyle hall, could be attributed to the reigns from Thutmose I¹ to Hatshepsut², whose names have been identified on small fragments. The numerous pieces of cult furniture coming from the sector of its sanctuary suggest that it was dedicated to the local form of Amun, the ‘Amun of Pnubs³’.

At the same time, a large block was uncovered in the stones reinforcing the masonry of one of the semi-circular bastions of Kerma type, placed against the exterior facing of the southern segment of the town precinct. It was inscribed with the remains of a common inscription, which helped precise the scope of pharaonic interventions in the region during this period, an issue on which documentation is still lacking⁴. The block, which corresponds to the inferior right part of a large lintel, could immediately be connected to a small fragment found in January 2001, during the excavation of the sanctuary of Thutmose IV, on which the end of a cartouche of Thutmose II⁵ had been identified (Fig. 1). The bringing to the fore of this large-size and very high quality monument, erected by this king before being destroyed and soon reused within defensive structures that can hardly be posterior to the reign of Hatshepsut, enhances the wonderful collection of religious monuments built at Doukki Gel by the sovereigns of the 18th dynasty, and suggests that the rebellions mentioned in the Aswan stela did reach the new town founded at Kerma by Thutmose I. It also confirms the allusions to campaigns of the queen in Upper Nubia⁶.

During the 2005-2006 season, Charles Bonnet discovered a third foundation deposit bearing the name of Thutmose IV at the south-east corner of the vestibule of the central temple, which allowed him to dissociate chronologically the construction of the hypostyle hall, which must be attributed to Thutmose III, from that of the sanctuary, which was rebuilt under Thutmose IV. Thanks to the double inscription preserved on a block belonging to the decoration of the back of this sanctuary, we now know that the central temple was dedicated to two forms of Amun: ‘Amun who presides over Ta-Seti’ and ‘Amun who presides over Ipet-Sut’, in other words the Nubian Amun and the Amun of Karnak (Fig. 2).

It is also in 2006 that a large block, bearing a cartouche of Amenhotep III, was uncovered under the entrance of the transverse chapel situated to the west of the courtyard preceding the hypostyle hall of the central temple. This block constitutes a sufficient evidence for the existence of a construction under this reign, maybe a state of the transverse chapel anterior to its preserved Napatan state of the present day. The name of the king ‘Amenhotep’ had been erased before being transformed into ‘Neb-Maat-Ra’ by the henchmen of Akhenaten⁷. A fragment of the right door upright of a private individual (Fig. 3 a) was lying two more metres to the east, with the remains of a pillar-base from a colonnade anterior to the facade of the hypostyle hall of Thutmose III. It also bears an erased part of

1. VALBELLE 2005, p. 251, Fig. 2

2. VALBELLE 2006.1, pp. 39-40, Fig. 5 and 6; VALBELLE 2006 in press, Fig. 2 and 3

3. VALBELLE 2005, pp. 251-252, Fig. 3 and 4; VALBELLE 2006 in press

4. GABOLDE 2004; VALBELLE 2006.1

5. Nos. 578 and 1075

6. HABACHI 1957; REDFORD 1967, pp. 57-59; VANDERSLEYEN 1995, p. 281; REDFORD 2003, p. 190, note 23, and REDFORD 2004, p. 38; DAVIES 2005, p. 51; VALBELLE 2006.1, pp. 45-50

7. See below, p. 218 [xix], and Fig. 6

its inscription, carved in sunken relief. The remaining text – ‘1/[...] living according to Maat so that he will give every good and pure thing, offerings of all [sorts of] fresh plants and a good burial place [...] 2/[...] he opens his heart [...] cartouche] He is told [...]’ – is not legible anymore in this place, but the general outline of a cartouche seems likely (Fig. 3 b). It could be the door frame of a private individual chapel or of a temple outbuilding, like those found for example at Amara⁸. As to the identification of the erased cartouche, the archaeological context suggests a level anterior to the works of Thutmose III, who built the front wall of his hypostyle hall on the line of this colonnade. But one can hardly see, in the minute shadows one might detect on a latex imprint made on the spot of the erased text, one of the two names of Hatshepsut.

Reconstruction of the decoration of the Egyptian temples

The last two campaigns have revealed the existence of at least three pre-Amarna Egyptian temples and several associated chapels, most of them rebuilt and modified several times until the Meroitic period. The identification of their decorated blocks and fragments becomes all the more complex, as these were discovered in destruction strata or as reuses since the excavation of the religious quarter began. The style and paleography of the reliefs do not evolve much during the Thutmosid period, and these possible differences are even less perceptible when one must compare restricted and loose fragments. Even the size of the figures is not necessarily a determining criterion, insofar as there are sometimes noticeable differences within the same monument. Moreover, the modest dimensions of most of the preserved fragments make the size of the represented sovereigns and divinities hard to estimate.

If it is likely that the majority of the fragments lie on the place where they were sawed up, in piles or in layers of stone cutting waste, near their original position, when we are dealing with reused blocks, however, the place of their discovery depends above all on where they were integrated within a new building, an information of little use to determine their initial position. On the other hand, the identification by Charles Bonnet of two distinct stratigraphic levels of sawing up corresponding to two radical destruction campaigns – one attributable to the reign of Thutmose III, concerning the monuments of Hatshepsut, the other from the Amarna period, reusing and removing the monuments from Thutmose III to Thutmose IV – contributes to isolate the two fragment categories in some sectors which have witnessed successive constructions of these three periods.

Since the seven monumental statues discovered in 2003 in a cache between the central temple and the eastern temple are now displayed at the new Museum of Kerma, the warehouse at Doukki Gel, which had been built to store their fragments before restoration, was free and allowed us to classify the blocks and fragments according to the assemblages already identified. This operation should firstly allow us to compare similar elements and establish parallels between them, as well as to find a few new joins. Thus, a group of white-grey sandstone fragments of columns bearing remains of sunken relief inscriptions painted blue, all of it later repainted white, could be gathered and associated to the blocks of Shabaka⁹ discovered in 1999-2000. One of these column fragments¹⁰ bears the bottom of a cartouche ending with the sign *k3*. It could be either the end of the Nubian birth name of this sovereign, that of his Egyptian throne name Neferkare, or that of another sovereign of the 25th dynasty: Shabataka or Bakare (Tanutamun). In any case, this clue confirms the stylistic and paleographic diagnosis of the decoration and the inscriptions.

8. SPENCER 1997, pp. 53-97

9. No. 91 (VALBELLE 1999, p. 85, Fig. 4) and No. 136; and perhaps No. 249

10. No. 341

From season to season, the excavation of the New Kingdom levels in the whole religious quarter give us an accurate idea of the architecture of the vanished structures. Rapid progress of our knowledge of the foundations of these buildings naturally constitute a major asset for the reconstruction of their respective decoration. Under the reigns of Thutmose I to Hatshepsut, vast temples – probably three – are erected, mostly made of mud brick. Stone elements of the western temple seem to be limited mainly to the pillars of the hypostyle hall. Most of the fragments gathered in this sector were lying directly on the levelled foundations of the pillar bases or in their immediate vicinity. The recognizable elements mostly consist of pillar corners (Fig. 4), cornices and architraves. The excavation of the heaps of stone debris from a portico which bordered the contemporaneous central temple to the north and east are in progress. On the site of the eastern temple, the uncovered remains of this period are still few and limited to mud brick walls appearing under those of Thutmose III.

This king rebuilt only two temples. After destroying the western temple of Hatshepsut he erected, on the levelling of its eastern part, the exterior western wall of the hypostyle hall of the central temple. It is in the remains of the stone door uprights, which in turn had been sawed up during the Amarna period, that the only irrefutable segment of cartouche of this king was found. The pillars of the hypostyle hall of the central temple are probably also attributable to him, although several modifications hard to date precisely but anterior to the Amarna period, are perceptible in the north-east corner of this chamber, thanks notably to the discovery of a small group of inscriptions carved in a fairly protruding raised relief and painted with brilliant colours – blue, red, yellow. This could be the decoration of a door posterior to the one whose doorstep is still in place. Not far from there, several fragments of a lintel bearing the cartouches of Amenhotep II carved in sunken relief had been discovered¹¹. Could all these fragments pertain to the two faces of the same door¹²? When no inscriptions are preserved, it is sometimes difficult to attribute to a precise reign some decorations, like those shown on the two sides of a large sandstone block (Fig. 5) reused to cover a duct installed during the Amarna period. The vestibule and the sanctuary of the central temple were rebuilt under Thutmose IV, as is indisputably shown by the three foundation deposits found at the south-west, south-east and north-east corners respectively. But the reuse of a sandstone cornice in the foundations of the sanctuary suggests that its previous state, built by Thutmose III, was also made of stone. As to the eastern temple, it seems that it was made of mud brick, since no Thutmosid stone fragment was collected therein.

The only identifiable remnant of the reign of Amenhotep III is a large block (Fig. 6) discovered in January 2006¹³ under the floor of the Napatan transverse chapel rebuilt in the Meroitic period on the north part of the hypostyle hall of Hatshepsut, to the west of the entrance door. It suggests that a chapel perpendicular to the main north-south axis could have existed under the reign of this king already. This season, the uncovering of the right door upright of a private individual mentioned above, to the east of the Napatan chapel door, associated with a set of fragments attributable to the construction phase from Thutmose I to Hatshepsut, implies that a private cult facility already existed in this sector as soon as the early New Kingdom.

During the Amarna period, it is the central temple that supplied most of the stones for the talatat, as is shown by the numerous decoration imprints of Thutmosid blocks – Thutmose III and Thutmose IV – preserved in the plaster that linked the talatat and the thick layers of cutting waste covering most of the monument. The stone foundations of the Thutmosid sanctuary and hypostyle hall are also reused, as shown by many foundation talatat still in

11. No. 348 (VALBELLE 2001, pp. 229 and 231, Fig. 3)

12. The sandstone of the different fragments is fairly similar; it breaks up and crumbles.

13. See above, p. 213 [xvii-xviii]

place. But almost all decorated talatat discovered at Doukki Gel come from the basement of the eastern temple, where they were reused as paving in the Napatan period. However, the identifiable foundations of the Amarna period, uncovered in the rear part of the eastern temple, where the Napatan and Meroitic remains are destroyed, are entirely – walls and columns – made of mud brick. One can then imagine that the only stone temple erected for Aton is the central temple, the decoration of which has undergone important hammering in the post-Amarna period, and which was probably still standing when the Napatan temple was built. Several fragmentary talatat have been uncovered in the destroyed sanctuary of the Meroitic eastern temple. Another one, representing the queen, was rehewn in the Napatan era (Fig. 7). It was discovered to the west of the hypostyle hall of this temple, in a Napatan level.

It is more difficult to associate the few Ramesside blocks and fragments collected during the previous excavation campaigns, identified as such, with one or several architectural structures of the site. In the three fragments bearing the name of Seti I¹⁴, one comes from the rear of the eastern temple, another from a sounding made up to the level of the transverse way between the latter and the central temple, and the third from the filling of the northern well. One can probably link them to some other stone fragments¹⁵, the top of the stela of Ramses II¹⁶ discovered in the pit situated immediately south of the cache, between the eastern temple and the central temple, and mention that a jar handle from the ‘Mansion of Menmaatre in Abydos’ was found to the west of the hypostyle hall of the western temple¹⁷. Philippe Ruffieux tells me that last year, sherds of Ramesside beer jars were found nearby, and that this year another beer jar of this period was present in the pottery uncovered in the large hut to the north-west of the round temple. As to the block dated to the reign of Ramses III¹⁸, it comes from the south of the eastern temple. Thus, the dispersion area of the clues at disposal is large. The related stratigraphy, in the central and eastern temples, indicates a continuous occupation of these two monuments, from their first foundation under Thutmose I until the Meroitic period inclusive.

Another group of blocks and fragments poses a location problem: they are made of yellow, sometimes reddish, sandstone and bear a slight sunken relief decoration, painted white, adorned for the most preserved parts with segments of inscriptions and of *kheker* friezes. One of these blocks, bearing the top of a white crown and the epithet ‘*khenty*’ which could denote the sovereign or Osiris (Fig. 8), was reused, upside down, in the lower part of a brick column of the first courtyard of the Meroitic eastern temple. Ten other blocks and fragments belonging to the same set were found in the same courtyard, but four others were collected near the naos of this temple, around twenty in the transverse chapel situated to the west of the naos and eight in a sounding opened immediately north of this chapel. The foundations of the latter, still in situ, are also made of yellow sandstone blocks. It would then be tempting to imagine that the decoration pertained to this chapel, which would imply a dating from the course of the Napatan period. But, on the one hand, the existence of a cartouche of Neferibre (Ariake-amanote) carved in raised relief on two adjacent blocks of yellow sandstone, apparently of a style different from most of the others, and on the other hand, that of a bust of Horus of the 25th dynasty style suggest that several buildings of different periods were built in this material.

The first temple erected on the site under the 25th dynasty is the temple of Shabaka. Again, one notes a dispersion of the blocks coming from it, since the upper part of the royal cartouche¹⁹ is found on a big block reused in a bench seat at the fore of the Meroitic eastern temple, while the lower part of the cartouche was carved on a small block²⁰ found at the

14. No. 144 (Seti-Merenptah [see VALBELLE 2001, p. 232, Fig. 6]); No. 602 (Menmaatre) and 738 (Seankhtawy: Horus name of the king)

15. Nos. 224, 541 and 635 (?)

16. VALBELLE 2005, p. 253, Fig. 7

17. VALBELLE 2005, pp. 252-253, Fig. 5

18. No. 140 (see BONNET/VALBELLE 2000, pp. 1113-1115, Fig. 12)

19. No. 91 (see above, note 9)

20. No. 136

rear of the same temple. A third block of modest dimensions, bearing the beginning of the same cartouche²¹, was collected in a sounding carried out to the west of the building. As to the column fragments identified as pertaining to the same monument²², they come from a sounding opened to the west of the chamber of the Meroitic eastern temple. Curiously enough, it is almost easier to follow the history of the decoration of the 18th dynasty temples than that of the Kushite and Napatan temples of the site, whose architectural elements, reused under the Meroitic sovereigns, seem to have been rather scattered over the whole religious quarter. However, the seven monumental statues found in the cache are there to remind us that such sculptures must have been erected in temples of a certain importance, of which only few monumental traces are left²³.

21. No. 249

22. See above, p. 216 [xviii]

23. BONNET/VALBELLE 2005, pp. 201-204

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Figure captions

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|---------------------|---|
| Fig. 1 [page 214] | Left part of a lintel of Thutmose II |
| Fig. 2 [page 214] | Block belonging to the decoration of the back of the central temple sanctuary |
| Fig. 3 a [page 215] | Door upright from the chapel of a private individual |
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| Fig. 8 [page 220] | Block reused in the Meroitic eastern temple |

During the 2005-2006 and 2006-2007 field seasons at Doukki Gel, several sectors of the site revealed important pottery sets from the Napatan period.

1. Administrative building and zone of destroyed fortifications (sectors 17 and 12 B)

To the south-west of the southern well, an administrative and residential building (Fig. 1) was erected, partly on the remains of the New Kingdom precinct wall¹. Made of several units including ovens, granaries and meat storerooms, it probably housed important figures, judging by the seal imprints discovered there².

The excavation of this building (sector 17) uncovered some 650 sherds. Wheel-made ware represents approximately 78 % of the whole. A large majority of the ware is made of Nile silt³, probably of local origin, whereas the vessels made of marl clay⁴, probably of Egyptian origin, are few.

To the north-west of the site, the fortification area (Fig. 1) excavated during the 2004-2005 season⁵, where large ceramic deposits from the New Kingdom had been found⁶, was the subject of new clearings in its western part (sector 12 B), so as to reach the preserved structures. A set of about 1,200 sherds has been collected in the conglomeration of material deposited after the destruction of the fortifications. Wheel-made ware represents about 75 % of the whole. Again, an overwhelming majority of the pieces are made of Nile silt, marl clay pieces being rare.

We shall present here the main shapes met in the two assemblages, the most significant shapes for a possible dating, as well as some pieces apparently pertaining to the local tradition.

Administrative and residential building (sector 17)

Nile silt

17-20. Large jar with rolled rim and pear-shaped elongated body. Traces of a red slip⁷ on the exterior surface. Similar examples are found at Qustul⁸ and Missiminia⁹. Rims of this kind are very frequent and show many variations, particularly in the angle between neck and body (Pl. 1.1 and Fig. 2).

17-19. Jar with moulded rim¹⁰, elongated body and two vertical handles. Parallels are found notably in the royal necropolis of Nuri¹¹ as well as in Missiminia¹². Rim and body-shape vary greatly (Pl. 1.6 and Fig. 3).

17-17. Jar with wide rolled-out lip, without neck, with thick walls and deep striae¹³ near the rim. Present in the Napatan town of Kerma¹⁴ (Pl. 1.2).

1. See BONNET 2007, pp. 196-197 [viii-ix]

2. See RUFFIEUX 2007, pp. 241-242 [xxxiii-xxxiv]

3. According to the classification of the Vienna System (see NORDSTRÖM/BOURRIAU 1993).

4. Also according to the Vienna System. This type of clay is very frequent in Upper Egypt, notably in the region of Thebes, its likely production centre (see FRENCH 1986, pp. 167-168).

5. See BONNET 2005, p. 227

6. See RUFFIEUX 2005, p. 262

7. The slip is a surface coat obtained by dipping the pot in liquid clay or by a wash, before firing.

8. WILLIAMS 1990, no. W 85-2, p. 8 (table 5 and note e), Fig. 21, p. 70

9. VILA 1980, no. 2-V-6/46/4, Fig. 29,1, p. 46, and Fig. 175, p. 159

10. Moulding is a pottery decoration technique which consists in applying a pressure on the walls to get a raised and/or sunken relief design.

11. DUNHAM 1955, no. 2RW, Fig. 93, p. 125, from tomb Nu. 9 (Amtalqa [568-555 BC])

12. VILA 1980, no. 2-V-6/314/1, p. 122, and Fig. 130,1, p. 123

13. We use the term 'striae', pl. 'striae', to refer to horizontal incisions or marks, more or less accentuated, voluntarily made by the potter.

14. MOHAMED AHMED 1992, type I A16, Fig. 16, dated from end of 7th to mid-6th century BC

15. MOHAMED AHMED 1992, type I A26, Fig. 18, dated from early 7th to mid-6th century BC
16. MOHAMED AHMED 1992, types I D8d, Fig. 20, and II A10, Fig. 24, both of them dated from end of 7th to mid-6th century BC
17. WILLIAMS 1990, no. W 75-1, p. 8 (table 5 and note b), Fig. 20 b, p. 68
18. VILA 1980, no. 2-V-6/332/3, Fig. 144, 3, p. 133
19. MOHAMED AHMED 1992, type II B4c, Fig. 25, dated from early 7th to mid-6th century BC.
20. WILLIAMS 1990, no. W 70, p. 9 (table 6), Fig. 19, p. 68
21. GRIFFITH 1923, type IIIc, Pl. XVII
22. WILLIAMS 1990, no. W 46-1, p. 9 (table 6 and note c), Fig. 13 b, p. 63
23. RUFFIEUX 2005, p. 258 and note 15. For the Napatan cemetery of Kerma, see BONNET 1996, Fig. 7, no. 6, p. 16
24. For example Sanam: GRIFFITH 1923, type IIIi, Pl. XVII; Kawa: MACADAM 1955, type Ic [2060], Pl. XXXII; Hillat el-Arab: VINCENTELLI 2006, no. 166, p. 48, and Fig. 2.29, p. 50
25. In the Theban region: MYSLIWIEC 1987, no. 399, p. 60; SEILER 2003, type C (ZN 99/20), p. 366, and Fig. 19.3, p. 365; exemplars dated from the second half of the 7th century BC. At Elephantine, rims of this type are still found between the mid-6th and the end of the 5th century BC, see ASTON 1999, no. 2077, Pl. 75 and p. 238
26. For example at Qurna, see MYSLIWIEC 1987, no. 398, p. 60
27. GRIFFITH 1923, type IIIId, Pl. XVII
28. MACADAM 1955, type 14b [2020], Pl. XXXII, dated from the reign of Taharqa or his successors, see pp. 208-210
29. GRIFFITH 1923, type XIIIn, Pl. XVIII

17-29. Handmade jar (?) with rolled rim, thick walls and decoration consisting in a wide stripe in slight raised relief with two rows of fingerprints. A similar decoration appears on a jar coming from the Napatan town of Kerma, the shape of which is, however, appreciably different¹⁵ (Pl. 1.4).

17-31. Jar with moulded rim, without neck and with handles (only one is left) attached to the lip. Two vessels discovered in the Napatan town of Kerma showed a similar treatment of the rim¹⁶ (Pl. 1.3).

17-02. Goblet with thin walls, exterior surface covered with a red slip and vertical burnishing traces. Several exemplars were discovered in the necropolises of Qustul¹⁷ and Missiminia¹⁸. Other exemplars with a larger or smaller diameter show horizontal burnishing traces, sometimes in the interior too (Pl. 1.5).

17-08. Large bowl with moulded rim, adorned with a red stripe, the interior surface covered with a cream-white slip. Shape present in the Napatan town of Kerma¹⁹ (Pl. 2.8).

17-14. Deep large bowl, strongly striated near the rim, with the exterior adorned with a red stripe. A comparable shape is attested at Qustul²⁰ (Pl. 2.9).

17-23. Big large bowl with accentuated striae near the outer rim, adorned with a row of finger impressions on a rope (Pl. 2.7).

Marl clay

17-01. Small jar with almond-shaped rim facing slightly inward, ovoid body with two vertical handles, strong turning-marks and thin walls. This type is notably present in the Napatan cemeteries of Sanam²¹ and Qustul²² (Pl. 2.13).

17-21. Jar with almond-shaped rim, with a moulding near the lip and accentuated striae on the belly. This type is very frequent at Doukki Gel²³, but also in other Nubian²⁴ or Egyptian²⁵ sites (Pl. 2.11).

17-22. Jar with moulded rim, thin walls, and accentuated turning-marks or striae. This shape known in Egypt²⁶ is also found in Nubia, notably at Sanam²⁷. Variations in the diameter of the opening or the dimensions of the belly are frequent (Pl. 2.12).

Each of these three jar types (17-01, 17-21, 17-22) has equivalents made of a brown to red-brown clay, relatively dense and hard, containing numerous mica inclusions, which could be local imitations of marl clay vessels.

17-11. Small vase with slight rolled-out lip, thin walls, elongated and strongly striated neck, rounded body. Similar examples exist at Kawa²⁸ and Sanam²⁹, among other sites (Pl. 2.10).

Nile silt

30. MOHAMED AHMED 1992, type II A6a, Fig. 24, attested from the early 7th to the early 5th century BC

31. FRENCH 1986, type SJ2.6.1, Fig. 9.9, p. 175, dated from around the 25th dynasty

32. ASTON 1999, n. 1723, Pl. 58 and p. 191, dated from Phase III, that is between the mid-8th and the end of the 7th century BC.

33. This is the hypothesis proposed by Peter French on certain Nile silt jars decorated with white stripes. See FRENCH 1993, pp. 85-86. This kind of 'imitation' is absent from the residential building.

34. MOHAMED AHMED 1992, type II A12, Fig. 24, dated from the end of the 7th to the mid-6th century BC

35. Which may bring us back to the above-mentioned remark on type 12 B-60, see also note 33.

36. FRENCH 1986, type SJ4.4.2, p. 177

37. MYSLIWIEC 1987, nos. 443 and 444, p. 64. Note, however, that these two vessels are made of marl clay!

38. MOHAMED AHMED 1992, types I A22, Fig. 18, I D8e, Fig. 20 (dated from the end of the 7th to the mid-6th century BC) and I A24c, Fig. 18 (dated from the mid-6th to the early 5th century BC)

39. WILLIAMS 1990, no. W 1-3, p. 8 (table 5 and note c), Fig. 2 c, p. 54, the latter shows horizontal turning-marks. This type of wheel-made Kushite pottery is comparable to type 17-02.

40. VILA 1980, no. 2-V-6/46/2, p. 44 and Fig. 28, 1, p. 45; 2-V-6/46/12, p. 47 and Fig. 28, 7, p. 45

41. DUNHAM 1955, no. 17-4-1156 RW, Fig. 111, p. 148, from tomb Nu. 26 (Queen Amanitakayé [555-542 BC]). See also at Elephantine, ASTON 1999, nos. 1937-1945, Pl. 66 and p. 218.

42. VILA 1980, nos. 2-V-6/46/5, p. 44 and Fig. 28, 3, p. 45; 2-V-46/9, p. 44 and Fig. 28, 5, p. 45

43. MOHAMED AHMED 1992, type I D13b, Fig. 21, dated from the mid-6th to the early 5th century BC

44. See above, type 12 B-24, and note 38

12 B-15. Jar with rolled-out lip, more or less pronounced. This type comprises several variations in shape and dimensions, and can be compared to the large jar 17-20 described above. One will also note the resemblance to specimens from Kerma³⁰, Amarna³¹ and Elephantine³² (Pl. 2.14).

12 B-60. Jar with almond-shaped rim and a moulding near the lip. With a profile close to that of type 17-21, this jar with thicker walls is generally covered with an exterior cream-white slip, maybe applied so as to imitate the original models made of marl clay³³ (Pl. 2.16).

12 B-05. Jar with moulded rim and marked striae on the belly. Close to types 17-21 and 12 B-06, this model is adorned with more accentuated and more angular mouldings. The treatment of the body, with pronounced striae, is identical (Pl. 2.15).

12 B-10. Jar with moulded rim and accentuated striae on the belly, sometimes equipped with vertical handles. The mouldings situated close to the rim and at the shoulder level are more or less deep and rounded. Its presence is attested in the Napatan town of Kerma³⁴. One can compare it to type 17-19, and note that some specimens show a white colouring on their external surface³⁵ (Pl. 2.18).

12 B-18. Jar with outward folded lip, without neck. The wall is perforated under the fold of the lip. It is somehow similar to a specimen from the Amarna region³⁶ (Pl. 2.17).

12 B-23. Jar with inward facing thickened lip, equipped with vertical twin handles. This profile is reminiscent of that of two vessels found in the temple of Seti I at Qurna³⁷ (Pl. 3.19).

12 B-24. Jar with a slightly projecting rim and a flat lug with fingerprints. The interior surface of the vessel is covered with a red burnished slip. We shall mention three specimens from the Napatan town which are equipped with the same kind of lug³⁸ (Pl. 3.21).

12 B-20. Elongated vase showing strong turning-marks inside. Orange-red slip outside and on the exterior rim; traces of vertical burnishing on the external surface. This kind of ware is well attested at the Napatan sites of Qustul³⁹ and Missiminia⁴⁰ (Pl. 3.25).

12 B-11. Small goblet with disc base and flaring walls. Models of this kind are found in the royal tombs of Nuri⁴¹ (Pl. 3.20).

12 B-21. Bowl with convex walls, decorated with two horizontal incisions near the exterior rim. The exterior surface and the interior rim are covered with an orange-red slip. By way of comparison, we will mention two bowls discovered in a tomb of Missiminia⁴² (Pl. 3.22).

12 B-27. Large bowl with an exterior moulding near the rim. It bears some resemblance to a specimen from the Napatan town of Kerma⁴³ (Pl. 3.23).

12 B-25. Very large bowl with inward facing rolled-out lip and a flat lug with fingerprints. It is the same kind of lug as that of type 12 B-24⁴⁴ (Pl. 3.24).

12 B-33. Conical bread mould. Numerous exemplars bear a mark incised on the exterior surface before firing. They are identical to the moulds from the Napatan town⁴⁵ and come within the scope of the typology established by Jacquet-Gordon⁴⁶ (Pl. 3.27).

12 B-49. Flat bread mould. Like conical moulds, flat ones are very frequent. If their diameter is generally of around 25 cm, it can reach 40 to 50 cm in some cases. Also present in the town⁴⁷ (Pl. 3.26).

The two types of bread moulds are also found in the residential building, though in lesser amount.

Marl clay

12 B-06. Jar with almond-shaped rim, showing a moulding near the lip and accentuated striae on the belly⁴⁸ (Pl. 4.28).

12 B-17. Jar with vertical tapering rim, to be compared to exemplars from Elephantine⁴⁹ and Qurna⁵⁰ (Pl. 4.29).

12 B-52. Pointed base of jar with thin walls. This kind of marl clay vessel is notably attested at Thebes⁵¹ (Pl. 4.30).

As mentioned before, the proportion of wheel-made ware is slightly superior in the administrative and residential building; marl clay pottery is also proportionally more abundant there. Small-size vessels, such as type 17-11 vases, made of marl clay, or goblets and type 17-02 bowls, of local tradition, attest a certain degree of refinement little surprising in such a building⁵².

In the zone of destroyed fortifications, however, bread moulds, jars and large-size vessels are more abundant, which suggests that these rejects could possibly come from the bakery quarter situated to the east of this sector⁵³. Moreover, some shapes frequently found here are absent from the administrative and residential building, for instance the type 12 B-05 jars or type 12 B-60, which could be derived forms or imitations.

However, convergence points between the two assemblages are important, as is shown notably by shapes 17-20, 12 B-15, or 17-21 and 12 B-06.

On the other hand, pottery from the two assemblages allows numerous comparisons with that from the Napatan sites of Sanam, Qustul and Missiminia, all three contemporaneous and dated from the end of the 8th to the beginning of the 6th century BC approximately⁵⁴.

The pottery discovered in buildings of the neighbouring Napatan town also gives examples mainly dated from between the beginning of the 7th and the mid-6th century BC⁵⁵, and until the beginning of the 5th century for some shapes present in the zone of destroyed fortifications⁵⁶.

This is also valid for the other Nubian and Egyptian sites mentioned above (25th dynasty – mid-6th century, until 5th century for some specimens from sector 12 B).

45. MOHAMED AHMED 1992, types I F 1a and I F 1b, Fig. 23, dated from the end of the 7th to the mid-6th century BC

46. JACQUET-GORDON 1981, nos. 2, 3, 4 and 5, Fig. 6, p. 20. See also the discussion on incised marks, p. 22.

47. MOHAMED AHMED 1992, type I F 2, Fig. 23, abundantly attested between the end of the 7th and the mid-6th century, more rarely until the early 5th century BC

48. See above, type 17-21, and notes 23-25, and type 12 B-60, and note 33

49. VON PILGRIM 1999, no. 48, Fig. 22, p. 138, 139 and 127; ASTON 1999, no. 2040, dated from Phase V, that is between the mid-6th and the end of the 5th century BC.

50. MYSLIWIEC 1987, nos. 490-492, p. 65

51. MYSLIWIEC 1987, no. 682, p. 70 and 71

52. See above, note 2

53. The stratigraphic link between the level of accumulated material at issue and the bakery quarter in its Napatan state being unknown to us, our material could as well be either slightly anterior to it or contemporaneous.

54. See VILA 1980, p. 169-170; WILLIAMS 1990, pp. 1-4 and pp. 41-45

55. See MOHAMED AHMED 1992, pp. 62-63, which corresponds to Phases I and II of building I.

56. See MOHAMED AHMED 1992, pp. 62-63, Phase III of building I

We can then imagine a period of occupation of the administrative and residential building included between the early 7th and mid-6th century BC, that is perhaps from the reign of Taharqa (690-664) until the reign of Amtalqa (568-555)⁵⁷. This hypothesis implies a dismantling (maybe partial) of the New Kingdom precinct wall as soon as in the 25th dynasty⁵⁸.

As to the zone of destroyed fortifications – which seems to have undergone a destruction rather than a mere dismantling, reaching a level extremely low in relation to the rest of the precinct – it shows a stratification going on at least until the 5th century BC. C₁₄ analyses have been carried out on coals taken in the stratigraphy to the eastern side of the zone, which shows the accumulation of material, from the remains of the levelled New Kingdom precinct up to the stratum of the first Meroitic structures⁵⁹. So this destruction could have taken place during the campaign of Psammetichus II in 593 BC. One could then suppose that the administrative and residential building was deserted in the aftermath of this event, that is under the reign of Aspelta (593-568).

2. Zone of the circular temple (sectors 26, 27 and 28)

During the 2006-2007 season, a circular temple to the east of the site (sector 27) was uncovered, bordered to its north-west by another circular structure of smaller size, probably a chapel (sector 26)⁶⁰ (Fig. 1). These two structures, of Nubian tradition and the origin of which goes back to a time far beyond the Napatan period, have each revealed about 600 sherds, coming from the latest levels. The surroundings of these two buildings (sector 28) also uncovered an abundant material (around 2,800 sherds).

The local tradition to which this religious compound pertains is well illustrated by the proportion of handmade ware, clearly superior to that of the two sectors mentioned above, notably in the small circular structure and in the surroundings of the two buildings⁶¹.

There again, an overwhelming majority of the pottery is made of Nile silt, with a minority made of marl clay.

57. For the dates of reign of Kushite sovereigns, see WELSBY 1996, pp. 207-209

58. Besides, this possibility has been proposed by Charles Bonnet, see BONNET 2005, p. 233

59. See BONNET 2007, p. 187 [viii-ix]

60. See BONNET 2007, pp. 191-192 [ix]

61. In this way, the proportion of handmade ware is about 33 % in the small structure (sector 26), 53 % around the structures (sector 28), but only 24 % in the circular temple.

62. See above, type 12 B-10, and notes 34-35

63. See above, type 12 B-60, and note 33

64. MOHAMED AHMED 1992, type I D26a, Fig. 22, dated from Phase I (between the beginning and the end of the 7th century BC)

Small circular structure (sector 26)

Nile silt

26-26. Jar with moulded rim and accentuated striae on the belly. The mouldings situated close to the rim and at the shoulder level are more or less deep and rounded. This type of jar is identical to type 12 B-10⁶² (Pl. 2.18).

26-34. Jar with almond-shaped rim, with a moulding near the lip. Similar to type 12 B-60⁶³ (Pl. 2.16).

26-16. Jar (or cooking-pot [?]) with convergent walls and slightly thickened rim. The exterior surface bears soot marks in places, which suggests that it was used as a cooking-pot. Common shape, also present in the Napatan town⁶⁴ (Pl. 4.31).

26-18. Jar with slight moulded rolled-out lip, throwing striae well marked up to 3 cm below the rim. Exterior surface covered with a red slip bearing light traces of horizontal burnishing (Pl. 4.32).

26-20. Jar with thickened flaring lip. This shape is comparable to that of a smaller vessel discovered in the Napatan town of Kerma⁶⁵, and to jars discovered at Elephantine⁶⁶ (Pl. 4.33).

26-23. Jar with thickened flaring lip, interior and exterior surface covered with a red slip. Very close to the previous shape, though with a more convex body profile (Pl. 4.35).

26-27. Handmade jar, with thick walls and rounded vertical lip (Pl. 4.34).

26-11. Large handmade jar (or cooking-pot [?]), with slightly convex neck and inconspicuous shoulder. Traces of horizontal burnishing from the rim to the neck base. Remnants of a red slip on the lip (Pl. 4.36).

26-24. Small bottle with rolled-out lip. Red slip on the exterior surface. A very similar vessel was discovered in a tomb at Missiminia⁶⁷ (Pl. 4.37).

26-19. Bowl with convex walls, decorated with two horizontal incisions near the exterior rim. The exterior and interior rims are covered with an orange-red slip. Although slightly bigger, this type of bowl is identical to 12 B-21⁶⁸ (Pl. 5.45).

26-02. Handmade bowl, decorated with a red slip on the exterior and interior rim. The surface shows marks of manual burnishing. To be compared with exemplars from cemeteries at Qustul⁶⁹ (Pl. 5.44).

26-03. Small bowl with rounded base, comparable to a vessel from the royal necropolis of Nuri⁷⁰ (Pl. 5.38).

26-04. Goblet, also to be compared to a specimen from Nuri⁷¹ (Pl. 5.39).

26-05. Goblet, close to the two previous types, especially 26-04 (Pl. 5.40).

26-08. Small handmade bowl, with flaring rim, decorated with a red stripe (interior and exterior). The very irregular interior surface shows finger-marks of modelling. Traces of manual burnishing on the interior and exterior rim. Some exemplars, probably used as incense-burners, still bore soot marks inside. Also present in the Napatan levels situated to the west of the western temple (Pl. 5.41).

26-07. Small handmade bowl, with a red stripe on the interior and exterior rim (Pl. 5.42).

26-06. Small handmade bowl, close to type 26-07, but without red stripe (Pl. 5.43).

Marl clay

26-17. Jar or vase with thickened rim and rounded lip. It could correspond to some shapes discovered near the southern tombs at Amarna⁷² (Pl. 5.46).

65. MOHAMED AHMED 1992, type II A1, Fig. 24, dated from the beginning and the end of the 7th century BC

66. VON PILGRIM 1999, nos. 11-14, p. 130, and p. 126, dated from the 7th century BC to the Persian era

67. VILA 1980, no. 2-V-6/36/5 and Fig. 25, 2, p. 42

68. See above, type 12 B-21, and note 42

69. WILLIAMS 1990, no. VH 111-6, p. 7 (table 4), Fig. 30 d, p. 81, and VF 72A-2, p. 7 (table 4), Fig. 27 c, p. 77

70. DUNHAM 1955, no. 17-4-483 RW, Fig. 123, p. 164, from tomb Nu. 7 (Karkamani [519-510 BC])

71. DUNHAM 1955, no. 17-4-791 2RW, Fig. 151, p. 198, from tomb Nu. 11 (Malewiebamani [463-435 BC])

72. FRENCH 1986, types MJ5.1.1, MJ5.4.1 or MJ5.4.2, Fig. 9.18., p. 184

26-35. Pointed base of jar with thin walls. Identical to type 12 B-52⁷³ (Pl. 4.30).

Circular temple (sector 27)

Nile silt

27-04. Jar with slightly moulded rolled-out lip. Identical to types 17-20 and 12 B-15⁷⁴ (Pl. 2.14).

27-09. Almond-shaped jar rim, facing slightly inward. Identical to the rim of marl clay vessel 17-01⁷⁵ (Pl. 2.13).

27-06. Handmade jar, with red slip on the interior and exterior rim (Pl. 5.48).

27-05. Large jar (or cooking-pot [?]) with convex walls and moulded rolled-out lip. A perforation with a diameter of nearly 2 cm was made before firing approximately 6 cm below the rim (suspension-hole [?]). To be compared to finds from the Napatan town of Kerma⁷⁶ (Pl. 5.47).

27-02. Base of miniature beer jar. This shape, a small-size copy of New Kingdom models, is frequent at this period. It is found for instance at Elephantine⁷⁷ (Pl. 5.50).

27-07. Large bowl with rolled-out lip surmounting a wide moulding. A similar treatment of the rim appears on a smaller vessel from the Napatan town⁷⁸ (Pl. 5.49).

27-01. Handmade goblet, with a flaring shape reminding that of 'tulip' vases of the *Classical Kerma* period. The rim is adorned with a red stripe on its two faces. Some specimens show soot marks inside, sign of a possible use as incense-burner (Pl. 5.51).

Marl clay

27-08. Jar with almond-shaped rim, with a moulding near the lip and accentuated striae on the belly. Identical to types 17-21 and 12 B-06⁷⁹ (Pl. 4.28).

27-03. Jar with slightly moulded rim, thin walls and wide body. This shape is well-known in Egypt, notably at Elephantine⁸⁰ and Amarna⁸¹. It is also found in Nubia, in the necropolis of Hillat el-Arab⁸² (Pl. 5.52).

Surroundings of the circular temple and small structure (sector 28)

Nile silt

28-01. Jar with slightly moulded rolled-out lip. Identical to types 17-20 and 12 B-15⁸³ (Pl. 2.14).

73. See above, type 12 B-52, and note 51

74. See above, type 17-20, and notes 8-9, and type 12 B-15, and notes 30-32

75. The body of this vessel, which is lost, was perhaps elongated, like a jar with an identical rim found at Sanam (see GRIFFITH 1923, type IIIj, Pl. XVII).

76. MOHAMED AHMED 1992, type I D28, Fig. 22, dated from between the beginning and the end of the 7th century BC, or type I D8b, Fig. 20, smaller, dated from between the early 7th and the early 5th century BC

77. ASTON 1999, nos. 1578-1585, Pl. 50 and p. 170, dated from the mid-8th and the end of the 7th century BC.

78. MOHAMED AHMED 1992, type I D10b, Fig. 20, dated from between the beginning and the end of the 7th century BC

79. See above, type 17-21, and notes 23-25, and type 12 B-06, and note 48

80. ASTON 1999, no. 1698, Pl. 56 and p. 186, and nos. 1736-1743, Pl. 58 and p. 191, dated from the mid-8th to the end of 7th century BC

81. FRENCH 1986, types MJ1.1.1, MJ1.1.3 and MJ2.1.2, Fig. 9.17, p. 183

82. VINCENTELLI 2006, no. 534, p. 126, and Fig. 2.82, p. 131

83. See above, type 17-20, and notes 8-9, and type 12 B-15, and notes 30-32

28-28. Jar with thickened rim, covered with a red-brown slip on the exterior surface and interior rim. This shape could correspond to some specimens of marl clay discovered at Amarna⁸⁴ (Pl. 6.53).

28-23. and 28-24. Beer jars (?), comparable to a series from the southern tombs at Amarna⁸⁵, and to exemplars from Elephantine⁸⁶ (Pl. 6.56 and 6.55).

28-26. Base of miniature beer jar, similar to type 27-02⁸⁷ (Pl. 5.50).

28-11. Large jar with very short neck and vertical rim, showing a deep stria at the base of the neck. A jar from the Napatan town of Kerma, of smaller diameter, shows an identical rim and the same stria⁸⁸ (Pl. 6.54).

28-04. Handmade jar (or cooking-pot [?]), without neck, with horizontal manual burnishing on the rim and perforations made before firing (Pl. 6.63).

28-15. Large handmade jar with irregular rolled-in rim. Traces of manual burnishing on the exterior rim and the interior surface (Pl. 6.66).

28-29. Carinated large bowl with thin wall. Shape also found at Amarna⁸⁹ (Pl. 6.64).

28-06. Goblet, identical to type 26-04⁹⁰ (Pl. 5.39).

28-07. and 28-08. Small handmade bowls, close to type 26-06 (Pl. 6.59 and 6.60).

28-10. and 28-18. Small handmade bowls with flaring rim, with a red stripe on the interior rim. Some specimens with the interior surface partly covered with soot were probably used as incense-burners (Pl. 6.61 and 6.62).

84. FRENCH 1986, types MJ5.2.1, MJ5.3.1 and MJ5.4.1, Fig. 9.18, p. 184

85. FRENCH 1986, types SJ6.3, Fig. 9.14, p. 180

86. See above, note 77

87. See above, type 27-02, and note 77

88. MOHAMED AHMED 1992, type I A24c, Fig. 18, dated between the mid-6th and the beginning of the 5th century BC

89. FRENCH 1986, types SB4.3.1, SB4.4.1 and SB4.5.1, Fig. 9.15., p. 181

90. See above, type 26-04, and note 71

91. From the necropolis of Missiminia comes an incense-burner with a rather resembling foot, see VILA 1980, no. 2-V-6/259/1, Fig. 115, 1, p. 111, and Fig. 173, p. 158.

92. FRENCH 1986, type MJ3.1.1, Fig. 9.17., p. 183

93. See RUFFIEUX 2007, pp. 225-226 [xxxiv-xxxv]

28-05. and 28-16. Small lids (or goblets [?]). The presence of a narrow and irregular part applied to the base, which seems unsuitable for stabilizing the object, suggests that it was used as a lid (Pl. 6.57 and 6.58).

28-25. Jar stand (?) or incense-burner foot (?) with thick and slightly flaring walls⁹¹ (Pl. 6.65).

Marl clay

28-27. Jar with thickened vertical rim, pointed lip and globular body. To be compared, again, to a vessel from the southern tombs at Amarna⁹² (Pl. 6.67).

A deposit of mud jar stoppers (sector 28)

A deposit of more than one thousand jar stoppers made of mud (approximately 1150 units) was uncovered immediately to the west of the small circular chapel. Although many of them were originally stamped, only a few exemplars bore recognizable traces, the interpretation of which proves to be tricky⁹³. The tracing of a few imprints of vessel rims could be made from some stoppers, clearly dating the deposit to the 25th dynasty or the Napatan era (Fig. 4).

Profiles 1, 2, and 3 (Fig. 4) apparently correspond to jar rims of types 17-21, 12 B-06 and 12 B-60. As to profile no. 4 (Fig. 4), it could come from a jar rim of type 17-01 or 27-09. Lastly, some stoppers, the fragility of which prevented to pick up the rim imprint, could have been applied to jars with a less sophisticated rim, such as types 17-20, 12 B-15 or 28-01.

The material gathered in these last three sectors finds, again, many comparison points in the Napatan town of Kerma, in the Nubian necropolises of Missiminia and Qustul, as well as in some Egyptian sites. Certain shapes are known in contexts from the 25th dynasty in Egypt and Nubia⁹⁴, other specimens are attested in contexts contemporaneous with the reigns of the Napatan sovereigns⁹⁵.

If handmade ware testifies, by its large amount, to a return to a local tradition after centuries of Egyptian influence, its simple shapes only seldom give significant evidence as to the dating of its discovery context.

Small handmade bowls and goblets of types 28-07 and 28-08, found in very large amount in the vicinity of the small circular structure, near the deposit of jar stoppers, suggest the existence of religious celebrations or rituals, using the contents of the jars, which could take place either in the small structure or in the circular temple itself. Vessels used as incense-burners fit perfectly in such a context.

94. For instance types 26-26, 27-08, 27-03 and 28-27

95. Notably goblets 26-03, 26-04, 26-05

96. The level excavated to this day corresponds to the most recent preserved level. Earlier levels are still to be cleared.

We can then imagine, according to the different comparison points mentioned above, a last level of occupation of these three sectors⁹⁶ spanning from the 25th dynasty to the reigns of its Napatan successors, that is approximately between the end of the 8th or the beginning of the 7th until the 5th century BC.

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Figure captions

- Fig. 1 [page 224] Doukki Gel | Area of the temples with location of the sectors considered for pottery analysis
- Fig. 2 [page 224] Doukki Gel | Large jar with rolled rim and pear-shaped elongated body, end of the 8th until the mid-6th century BC | Nile silt, traces of a red slip on the exterior surface, Ø rim 10.0 cm, Ø max. 28.5 cm, height 44.5 cm (inv. 17-20)
- Fig. 3 [page 224] Doukki Gel | Jar with moulded rim, elongated body and two vertical handles, end of the 8th until the mid-6th century BC | Nile silt, Ø rim 8.5 cm, Ø max. 18.5 cm, height 45.5 cm (inv. 17-19)
- Fig. 4 [page 232] Doukki Gel | Tracings of jar rim profiles made from mud stoppers from the 25th dynasty or Napatan deposit

1. Seal imprints from an administrative building

In January 2006, during the clearing of a building situated to the south-east of the Napatan and Meroitic outbuildings of the temples of Doukki Gel, numerous fragments of mud sealings were uncovered, some of them bearing seal imprints¹.

The existence of a well-organized administrative system at Kerma is known since the discoveries made in the Nubian town by George A. Reisner², then by Charles Bonnet³. This sealing practice, attested at least since the mid-second millennium BC⁴, might have been transmitted from Egypt to the Kingdom of Kush through the fortresses of the second cataract⁵, and then perpetuated during the Egyptian occupation of the New Kingdom.

At Doukki Gel, 15 imprints have been preserved, coming from 8 different seals. Three design categories can be proposed :

- imprints with floral or geometric designs (nos. 1 and 2)
- imprints with royal or divine decoration (nos. 3 to 9)
- imprints with hieroglyphic signs (nos. 10 to 15)

Imprints nos. 2 to 7 apparently pertain to seals of the scarab type, the others to quadrangular or oval seals.

Due to the poor state of conservation of the sealings, it was difficult to determine the nature of the sealed objects : basketwares, door or chest locks as is shown by the negative of a small chain link recognizable on one exemplar, or jar stoppers like those recorded in this same building.

In general, the decorations represented remind of the ‘ scaraboids ’ discovered by Francis L. Griffith in the necropolis of Sanam⁶. Furthermore, several motifs are well attested in the Egyptian assemblages of the New Kingdom.

Description of the imprints

Imprint no. 1. Rectangular seal representing a floral design in rosette shape with eight leaves, four of them with a curved end (Pl. 1.1). This motif is frequently found among the plaques and scarabs of Sanam⁷. The most alike exemplar is a rectangular plaque⁸, but another plaque of oval shape shows the same design more nicely drawn⁹, probably to be regarded as the replica of a much more ancient seal, which is notably found at Askut and Uronarti in the Middle Kingdom¹⁰.

I would like to warmly thank Nora Ferrero for her careful re-reading of this paper, and Pierre Tallet for his valuable suggestions.

1. See the excavation report BONNET 2007, pp. 197-198 [viii-ix]. For the location of the building (sector 17), see RUFFIEUX 2007, Fig. 1, p. 223

2. See REISNER 1923, Part. I-III, pp. 38 and 265-266, Pl. 2 and 3 ; Part. IV-V, pp. 70-88, pl. 40 and 41

3. See BONNET 1991, p. 11 ; BONNET 1993, p. 16 ; GRATIEN 1991 ; GRATIEN 1993 ; see also BONNET 2001

4. See GRATIEN 1993

5. See SMITH 1998

6. See GRIFFITH 1923

7. See notably : GRIFFITH 1923, Pl. XLV, no. 52 ; Pl. XLVI, nos. 10 and 13 ; Pl. XLVII, no. 12 ; XLIX, no. 9 ; Pl. LIII, no. 7 ; Pl. LIV, no. 14

8. GRIFFITH 1923, Pl. LIII, no. 7

9. GRIFFITH 1923, Pl. XLVII, no. 12

10. For Askut, see SMITH 1990, Pl. XL a, no. A12 ; for Uronarti, see REISNER 1955, Fig. 9, nos. 202-210. This type of motifs is also present in the Near East (see TUFNELL 1975, pp. 72-73 ; TUFNELL/WARD 1966, Pl. XIV, no. 65).

Imprint no. 2. Oval seal (scarab [?]) with carefully engraved geometric design (Pl. 1.2). There is no exactly matching exemplar for it, but we can mention three scarabs discovered by Griffith, with fairly similar patterns¹¹.

Imprints nos. 3 – 7. Five imprints from the same seal or from identical seals, representing a divine bark surmounted by a scarab beetle flanked by two stems or flowers (lotus [?]). Under the bark, two *uraei* encircle a solar disc and a square sign, likely a simplified representation of a royal name (Pl. 1.3-7). Indeed, several scarabs from Sanam bear a royal name, encircled by two cobras¹²; on two exemplars the royal name is encircled by the *uraei*, above a *neb*-basket and under a solar bark¹³. From the 18th dynasty and more particularly from the reign of Thutmose III onward, the motif of a royal cartouche flanked by two cobras occurs very frequently on scarabs¹⁴. The prenomen of this king (Men-Kheper-Ra) as well as the representation of the bark belong to the signs used at that time for a possible cryptographic writing of the name of Amun¹⁵.

11. GRIFFITH 1923, Pl. XLV, nos. 47 and 48; Pl. XLVII, no. 4

12. This is the case, for instance, for two scarabs bearing the name of Nefer-ka-Ra (Shabaka [see GRIFFITH 1923, Pl. XLII, nos. 19 and 20]).

13. These scarabs bear the name of Ny-maat-Ra (Amenemhat III) and Men-kheper-Ra (Thutmose III). GRIFFITH 1923, Pl. XLI, nos. 21 and 24 respectively.

14. See for example: HORNUNG/STAEHELIN 1976, p. 242, no. 256; SCHLICK-NOLTE/DROSTE ZU HÜLSHOFF 1990, pp. 41-44, nos. 17-19; GIVEON 1985, pp. 26-27, no. 14 (inv. L.694). For several variants in the disposition of signs, see JAEGER 1982, p. 100.

15. See JAEGER 1982, p. 94

16. GRIFFITH 1923, Pl. XLVI, no. 2

17. See for example: GIVEON 1985, pp. 142-143, no. 15 (inv. 48246). One can also note a similarity with some Middle Kingdom seals discovered at Uronarti, where the sign *'ankh*, the cobras and the *neb*-basket are represented (see REISNER 1955, fig. 12, no. 300, and fig. 13, no. 321).

18. A comparable representation is shown on an Egyptian scarab from Medinet Habu, dated from between the 19th and the 21st dynasty (see TEETER 2003, p. 70, no. 96).

19. See imprints nos. 1 and 8

20. This is for example the case for imprints nos. 10-13.

21. The Sanam tombs have been dated by Griffith to the 25th dynasty and the following period, contemporaneous with the 26th dynasty (see GRIFFITH 1923, p. 82).

22. There was a great amount of pottery sherds in the building at issue (see the report on pottery RUFFIEUX 2007, pp. 223-225 [xxvii-xxviii]).

Imprint no. 8. Oval-shaped imprint showing a well-marked decoration in raised relief (Pl. 1.8). In the middle there is an *'ankh*-sign, flanked by two cobras, surmounting a *neb*-basket. The top of the imprint is not preserved. The excavations of Griffith have delivered a scaraboid with a fairly similar decoration¹⁶. This composition is also frequent during the New Kingdom¹⁷.

Imprint no. 9. Near circular seal, showing a divinity identifiable as the god Ptah: tight-fitting skull cap, legs joined together in mummy posture, arms holding a *was*-sceptre, necklace counterpoise in the back. In front of the god, one can see an elongated sign, probably a Maat feather¹⁸.

Imprints nos. 10-13. Four imprints of elongated oval shape from similar seals. The decoration is an alternation of two vertically arranged hieroglyphic signs: *mn* (three times) and *n* (twice), roughly executed. The group could be read as an archaic plural form for *mnw* (Pl. 1.10-13).

Imprint no. 14. Only a half of this imprint is preserved. On the right top are three vertically arranged signs: *š – n – mn*, separated from the rest of the seal by a vertical and horizontal line. At the bottom is an unidentified sign or motif, partly missing (Pl. 1.14).

Imprint no. 15. Regular-shaped imprint, partially preserved, showing a series of signs, among which a solar disc (Pl. 1.15).

Thus, each imprint shows characteristics testifying to a strong Egyptian influence. Some designs have their origin at least as early as the Middle Kingdom¹⁹. At the same time, the 'local' character of some pieces is indisputable²⁰, as is clearly shown by the comparison to exemplars from Sanam.

We are then obviously in a context from the beginning of the Napatan period²¹, which is further confirmed by the study of the pottery²².

It is all the more plausible to suggest the presence of administrative officials, or at least that activities related to the administration took place in the building where these sealings have been found, if we consider its location, close to both the imposing complex of bakeries and the temples. In the present state of our knowledge, however, we cannot give any detail on its exact function or that of its occupiers.

It is interesting to stress that this discovery is the first of this kind at the site of Doukki Gel. Moreover, the practice of mud sealings has spread and survived since its introduction in the region during the *Kerma* period, even evolving from its Egyptian and Egyptianizing form into a purely local repertoire, as found at Jebel Barkal in the Meroitic period²³.

2. A deposit of jar stoppers near the circular temple

During the 2006-2007 season, a deposit of around 1150 mud jar stoppers was uncovered to the west of the small circular structure adjoining a temple of local tradition, in the eastern part of the site²⁴.

A thorough examination of this assemblage allowed to isolate about forty pieces, on which one or several seal imprints were still visible. A maximum of six imprints could be found on one piece, the average being one or two. Unfortunately, the poor state of conservation of the stamps prevented us from recording more than six imprints, distributed among four stoppers.

Apart from these stamps, traces of ties, probably vegetal, were also present on a great part of the forty specimens selected (Fig. 1).

Most of the stoppers had a conical shape (Fig. 2), rare exemplars being distinguished by a rather irregular hemispheric shape.

The negative of the openings of the once sealed jars gave us the means to estimate a diameter generally comprised between 7.5 and 10 cm. Moreover, some rim profiles could be identified on some sufficiently well preserved stoppers, associating them with a typology from the 25th dynasty and the Napatan period²⁵.

The stoppers were stamped with seals, mostly of quadrangular (~ 60%) or oval shape, of scaraboid type (~ 40%). Among the imprints presented here, one shows a design of symbolic character (no. 16), and the other five bear hieroglyphic signs (nos. 17-21).

23. See VINCENTELLI 1994; VINCENTELLI 2001

24. See BONNET 2007, p. 192 [vi]. For the location of this structure (sector 26), see RUFFIEUX 2007, Fig. 1, p. 223

25. See RUFFIEUX 2007, p. 232 [xxix-xxx] and Fig. 4

26. GRIFFITH 1923, Pl. XLVII, no. 12

27. GRIFFITH 1923, Pl. LIII, no. 5; Pl. LIV, no. 13. This divine epithet ('Lord of the Offering') is attested from the Middle Kingdom until the Greco-Roman period, and appears on the sarcophagus of a priest contemporaneous to the 25th and 26th dynasty (CG 41001 bis). See LEITZ 2002, p. 705; MORET 1913, p. 33 and Pl. V.

Imprint no. 16. Of rectangular shape, it comes from a conical stopper bearing two other imprints of identical shape, illegible but probably bearing the same pattern. A winged scarab is carved in sunken relief, facing left (Pl. 1.16). This solar symbol is found on a small faience plaque from Sanam²⁶.

Imprints nos. 17 and 18. Two imprints of rectangular shape from the same seal, present on the same stopper. Several hieroglyphic signs are carved in raised relief: a *nb* (*neb*) basket, the *htp* sign (*hetep*), a solar disc, then an unidentified sign with its upper part resembling the horns of ox *wp* (*wep*) (Pl. 1.17-18). The name *Neb-Hetep* appears on several small plaques from Sanam²⁷.

Imprint no. 19. Several signs in raised relief are preserved on this rectangular seal imprint: to the left, a sitting figure – with its upper part apparently incomplete (woman, king or divinity [?]) – above the signs *mn* and *n*; to the right, a first incomplete sign, followed by another vaguely oval, badly stamped or damaged sign, perhaps a scarab (?), then a (solar [?])

disc. Hence the only certain element is the group *mn*, which could perhaps transcribe the name of Amun²⁸ (Pl. 1.19).

28. Divine names are frequently represented on plaques and scarabs from Sanam, as well as the royal names of the 25th dynasty or of the Egyptian dynasties of the Old to the New Kingdom.

29. See above, note 25

30. MURRAY 2000, p. 596

31. For example at the palace of Amenhotep III at Malqata (see HAYES 1951, pp. 156-162; HOPE 1978)

32. See FAIRMAN 1951, pp. 143-150 (Vol. 1), Pl. LXXXI-LXXXIII (Vol. 2)

33. See SMITH 1976, pp. 162-175 and Pl. XLV-XLVIII

34. At Malqata, many of them state the year of production (according to the royal reign), or the name of the person responsible for the production and the domain of provenance (see MURRAY 2000, p. 598).

35. HAYES 1951, p. 162

36. One cannot exclude that some of these inscriptions did mention the provenance of the product, but their simplicity seems more suitable for personal names or divine epithets.

37. See imprint no. 16

38. WILLIAMS 1977, p. 138

Imprints nos. 20 and 21. Two similar imprints, rectangular, from the same stopper. The signs represented have been roughly made and their poor state of conservation does not make the interpretation easier. From top to bottom: a rectangular sign (*š* [?]), followed by a low horizontal sign taking half of the width, then the *htp* sign (*hetep*), and finally two apparently identical horizontal signs, the end of which is lost (Pl. 1.20-21).

As mentioned about the sealings from the administrative building, here we are also dealing with a strongly Egyptianized repertoire which reveals, however, a local character in its execution.

The dating of these stoppers to the beginning of the Napatan period, as the study of jar negatives suggests²⁹, seems confirmed by the style of the stamps.

The marking of jars, notably of wine jars, is attested as soon as the Old Kingdom in Egypt³⁰. Important assemblages of marked stoppers of the New Kingdom were discovered, among other sites, at Thebes³¹, Amarna³² or Buhen³³. The labels state the contents and often the origin of the product³⁴ with formulas such as ‘ wine of such domain ’; most of the vessels contained wine, but other products, such as beer, were also marked³⁵.

At Doukki Gel, the stamps present on jar sealings do not seem to have conveyed such detailed information. If some exemplars give restricted hieroglyphic inscriptions³⁶, others only represent symbolic patterns³⁷.

Most of the imprints – from the administrative building or the jar stoppers – seem to stem from a reuse of prophylactic objects (scarabs, small plaques, etc.) as seals, without any concern for the formula conveyed, according to a practice which seems attested in Egypt since the Middle Kingdom³⁸.

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Figure captions

- Fig. 1 [page 243] Mud stopper on which a seal imprint and two traces of ties are visible
- Fig. 2 [page 243] Two stamped mud stoppers of conical shape