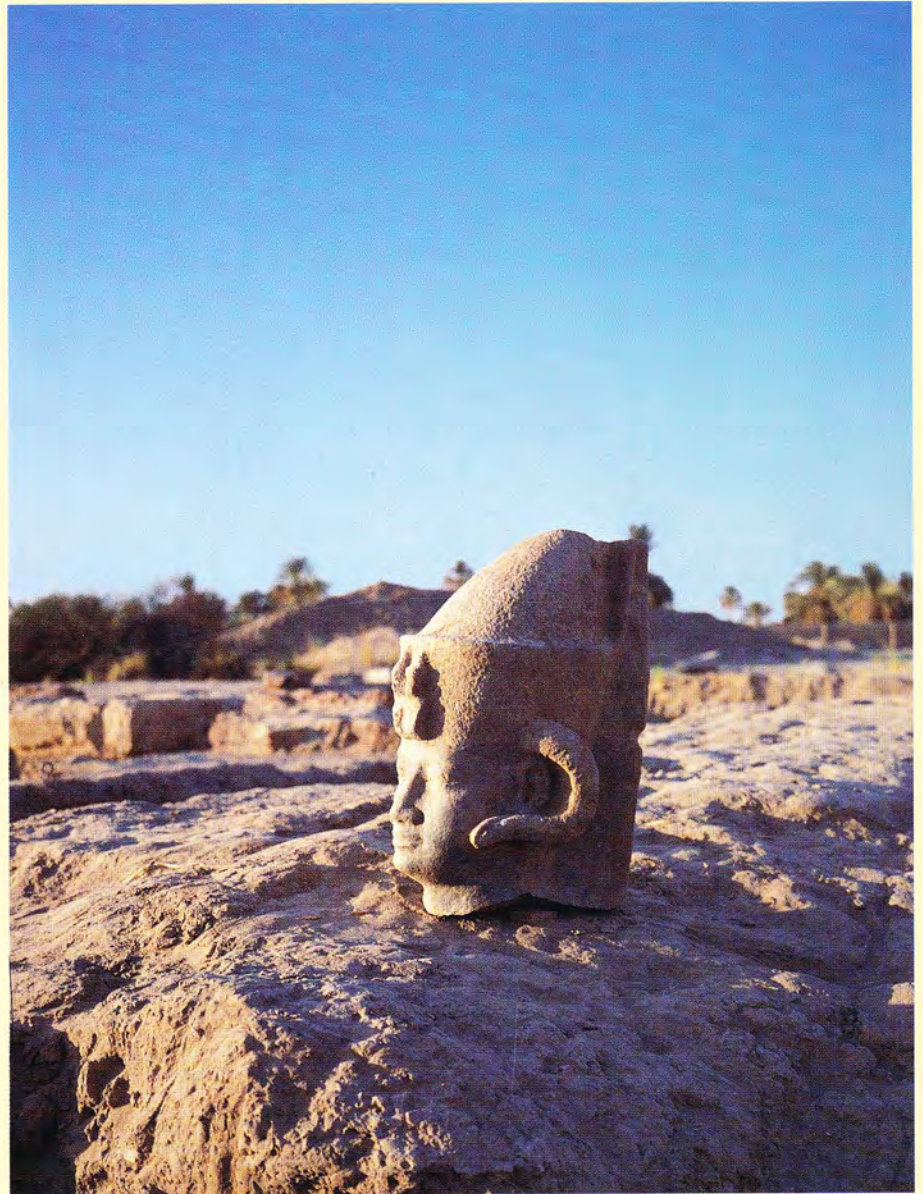


K E R M A

2001-2002 2002-2003

SOUDAN

Charles Bonnet · Matthieu Honegger · Dominique Valbelle



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Once again we are able to report on major discoveries made at the site of Kerma. The town is situated in a region that has been densely occupied since ancient times, and is rich in remains that illustrate the evolution of Nubian cultures and its external relations and contributions. The expansion of cultivation and urbanisation threaten this extraordinary heritage that we have for many years worked to protect. Our research on the origins of Sudanese history has attracted a great deal of interest, and protecting and bringing to light these monuments remain priorities. Several publications have completed the work in the field¹, and have been the source of fruitful exchanges with our international colleagues.

The discovery on 11 January 2003 of a deposit of monumental statues was an exceptional event for Sudanese archæology and *a fortiori* for our Mission. These sculptures of the great Sudanese kings of the 25th Dynasty are of very fine quality, and shed new light on a period at Doukki Gel about which we previously knew very little. As a result of these finds, the site has gained in importance; it is of further benefit that they can be compared with the cache excavated 80 years ago by G. A. Reisner at the foot of Gebel Barkal, 200 kilometres away². It will doubtless take several years to study and restore these statues; they were deliberately broken, most probably during Psametik II's destructive raid into Nubia.

We must thank the Swiss National Fund for Scientific Research, which regularly awards us a grant, and also the museums of art and history of the town of Geneva. The loyal support of Professor Michel Valloggia, President of the Excavations Commission of the University of Geneva is also very precious to us; our undertaking has been made his responsibility. We should also like to make known that, from the 2002-2003 season onwards, Matthieu Honegger, who has been actively involved with the Mission since 1995, has become formally responsible for the project. The establishment of a co-direction makes it possible, with the agreement of the Swiss National Fund, to contemplate the continuation of the project. There are two main research foci: the pre- and protohistory of the Kerma Basin³ directed by Matthieu Honegger, and the excavations of the Egyptian town, about which numerous questions remained unanswered. Our overall understanding of the site depends on these results. Work on the ancient Nubian town and its necropolis was limited to a few small excavations designed to clarify matters in respect of forthcoming publications.

The most recent excavations took place from 4 December 2001 to 5 February 2002 and from 2 December 2002 to 5 February 2003. Between 60 and 150 workmen were directed by Raïs Gad Abdalla, Saleh Melieh, Abdelrazek Omer Nouri and Idriss Osman Idriss. Once again we were supported by the directorate of the Department of Antiquities and the National Museums of Sudan (NCAM); we thank Hassan Hussein Idriss and also Salah El-Din Mohamed Ahmed, who has taken part in our work for many years. Inspectors Al Kazafi Youssif Is 'Hag and Abdel Hai Abdel Sawi were particularly effective in dealing with the many problems posed by the excavations, in particular taking on the supervision of the site during a very difficult period. The benevolence of the Sudanese authorities was of very considerable value and we thank them most warmly.

1. BONNET 2000, BONNET 2001.1, BONNET 2001.2, BONNET 2002.1, BONNET 2002.2, BONNET 2002.3, BONNET *et alii* 2000.1, BONNET *et alii* 2000.2, BONNET *et alii*, in press

2. REISNER/DUNHAM 1970, pp. 17-23, pl. I-XXII

3. HONEGGER 2002, HONEGGER 2003.1

Our work on the prehistoric period included survey work more than 10 kilometres from the banks of the Nile into the eastern desert, and also research on the pre-Kerma and neolithic sites of the eastern necropolis. At El-Barga, we examined a site of very considerable interest that was threatened by a lorry route. The results are discussed by Matthieu Honegger in the report that follows⁴. Marc Bundi, Daniel Conforti, Sarah Gaffino and Sophie Meytan worked on site, and Louis Chaix undertook the study of the animal and human bone remains. Work in the ancient Nubian town was concentrated in the north-eastern sector, where a rounded fortification provided more information about the defence system. We discovered a collection of huts and granaries dating to the end of the Ancient Kerma period, together with a number of tombs; it is rare to find remains of this date in an outlying quarter. Finally, at Doukki Gel, the analysis of the religious complex shed further light on the period of the New Kingdom. Continuation of the excavation of the temple of Aton was complicated by the presence of the earlier Tuthmosis IV building and numerous later rebuildings. A ceremonial path connected the entrance to the cult building to a mud brick structure preceded by a monumental stone structure. The site of another building, situated to the west of the temple, was indicated by some brickwork. Further information about the architectural evolution of the site was provided by finds of many inscribed and decorated fragments.

Dominique Valbelle⁵, assisted by Marc Bundi and Françoise Plojoux-Rochat, undertook the inventory and detailed analysis of the stone fragments from the temple, and Françoise Plojoux-Rochat also assisted in the preparation of the architectural inventory. Thomas Kohler, Gérard Deuber and Alain Peillex each made detailed recordings of structures that were particularly difficult to interpret. Pascale Kohler-Rummler was responsible for the photographic record of the penultimate season. Dominique Valbelle, Françoise Le Saout, Béatrice Privati, Nora Ferrero and Patricia Berndt⁶ took on responsibility for editing a publication on the religious quarter and the Nubian town. The computerised management of the documentation were undertaken by Marion Berti. They are all thanked.

The ancient Nubian town

In order to improve our understanding of the way that the north-eastern corner of the first enclosure was built, we continued our study of the north side of the fortifications of the Nubian town, around and beneath buildings 69 and 70, which were first investigated in 1988⁷. After the clearance of the terraces built to the north, we hoped to reveal the main phases in the development of several buildings (fig. 2). Many postholes indicated a collection of rounded and rectangular structures which, right from the outset, seemed to have been independent of the town. There was a small rectangular structure (3.30 m long by 2 m wide) at the centre, strengthened on the northern side by posts of a good diameter. A hearth marked the central axis of the room whose proportions recalled those of the funerary chapels C2 and C3⁸.

The small building was replaced by a brick structure with sides of 4.80 m overall. From this period date the partitioned buildings and the porticos that surrounded them; traces of fire and of a large ash pit attested craft activities, bakeries or breweries. A fairly large door (1.80 m) opened onto an interior courtyard on the southern side. There still seemed to be bastions on the same side even though there was a rounded wall defending the buildings. Then the central building and its annexes were enlarged, and the door moved to the south. A new, thicker, wall flanked by many bastions placed side by side protected the sector. The area delimited by the ditches is about 50 m in diameter.

4. HONEGGER 2003.2

5 See below, VALBELLE 2003

6. BONNET *et alii*, in press

7. BONNET 1991, pp. 5-6, fig. 2

8. BONNET 2000.1, pp. 28-32

Other changes took place ; the ditches that ran past the foot of the bastions were gradually filled in, and from then on a direct route connected buildings 69 and 70 to the centre of the town. To the north a new and more imposing fortified defence was developed, signalling clearly to visitors the power of the kingdom. Although the general chronology from the Ancient to the Classic Kerma periods seems fairly clear, the function of the central building remains uncertain (fig. 3). Its development is fairly similar to that of most of the chapels that have been studied ; the permanence of occupation that is demonstrated militates in favour of a religious interpretation. But, if this is the case, how can the extraordinary defensive structure around such a modest sanctuary be explained ? Is it due to the use of this sector for sealing, demonstrated by finds of many small rolls or lumps of sigillary clay, some of them still arranged in a circular or rectangular cavity ?

A little further to the south-west large surface cleanings confirmed that wind erosion had destroyed almost all the remains, with the exception of postholes and pits which provided some information about this quarter. They indicated a group of huts with sunken granaries, originally constructed on an alluvial terrace. The surface uncovered occupied an area of 80 m from north to south and at least 40 metres from east to west. Although to the north the remains of structures had vanished, it was still possible to trace where they had been as the bottoms of the food storage pits remained. In contrast, to the south, close to the rectilinear defensive wall of the Middle Kerma town, two or three circular structures and segments of palisades were indicated by postholes. One structure had a distinctive plan, formed of two concentric circles of posts that supported an enlarged roof⁹. The house was slightly oval in shape, with a diameter of 6 to 7 m.

The grain storage pits had been very quickly reused for rubbish ; the discarded material was mainly animal bones and large fragments of everyday pottery. The fauna identified were the usual animals found at Kerma, cattle, caprines and dogs ; there was also evidence for donkey. The presence of graves dug right beside the huts should be noted. Within the town only one inhumation – a foetus in a jar – has been found, in contrast to the six found in this modest eastern quarter. Originally there must have been many more : bones found close to the surface must have been disturbed by later building. The burials uncovered were of three females and three newborn infants. The bodies were in either flexed or contracted position, head pointing to the east and face to the north. Despite the erosion of the structures, two bowls, still *in situ*, and a fired clay feeding bottle were preserved (fig. 4).

The pottery finds indicated an occupation dated to the Ancient Kerma and early Middle Kerma periods. A population was thus established outside the main urban area, along the route linking the fortified sector to the cult area. We had often noted previously the presence of ancient material that did not seem to be related to the later suburban areas. It is likely that satellite settlements existed on the other roadways into the town, occupied by class that was different from the elites living in the centre. The layout of the Ancient Kerma town was perhaps not as deliberately planned, although the corner found in 1988 seems to have been fortified from the outset with earth walls consolidated with posts.

The site of Doukki Gel

The research undertaken in the New Kingdom religious complex during these last two seasons proved particularly complicated to interpret. The relative chronology of the structures posed multiple problems, the Napatan and Meroitic restorations or reconstructions

9. For a comparable example, see :
STEINDORFF 1937

making it difficult to interpret the masonry. The post-Meroitic destruction layers did not provide any precise information, but they seemed to be relatively recent. The *sebbakhin* had dug to a considerable depth in order to recover both stone blocks and alluvium. Between these enormous destruction trenches, several 18th Dynasty layers provided a coherent stratigraphic sequence that helped to relate the remains of the New Kingdom to the Napatan and Meroitic temples that have been studied for several years.

The central New Kingdom temple originated from a larger building, which we know only from some mud brick walls. This central temple had been built during the reign of Tuthmosis IV, as we suggested two years ago¹⁰. The discovery of a second foundation deposit corroborated this attribution (fig. 5). In order to better discern the scale of the changes made during the Amarna reform, it was essential to discover the plan and the remains of the elevations of the Tuthmosis monument. The destruction seems to have been radical as only one part of the settings for the earlier foundations had been kept. While many of the blocks were reworked or cut up to make the *talatat*, others bore traces of blows from an adze that seem to be as much the result of deliberate destruction as of reuse.

The temple of Tuthmosis IV

The building measured 39 m by 12 m (fig. 6), and there were foundation deposits at the two southern corners of material characteristic for this period. The deposit at the southeast corner was intact, and contained more than 50 miniature pots and 13 faience plaques with the names or epithets of Tuthmosis IV. Some very large stones still *in situ* comprising an eroded torus, provided the plan of a tripartite sanctuary preceded by a corridor that gave access to side rooms. There were very few traces of the vestibule or pronaos. Further to the north, a central square structure had massive foundations dug to a considerable depth and placed on a thick bed of sieved sand. The irregularity of the traces defined by both the stones of the first foundation settings that were preserved *in situ* and the foundation trench, suggest that this masonry was built to support columns or pillars; there was also an enormous circular base with its surface recut into a square that had been tipped over in the later levels (fig. 7).

A monumental stone door abutted a transverse wall that isolated the portico courtyard from the rest of the temple. The columns had too small a diameter to support heavy architraves and we can envisage a lightweight roof for this space. The side walls had an overall thickness of 2.50 m, which seems over large and could indicate that the masonry of an earlier building was incorporated into the temple of Tuthmosis IV. The main doorway was also faced with stonework while the piers of the pylon were in mud brick. Only the central passage was paved; it led to the exterior and joined the main roadway leading to a ceremonial or cult building. The pylon remains to be further studied as it had seen a number of alterations; at the level of the foundations, the piers were around 4 m thick beside the doorway and 3 m at the extremities. The total length, including the doorway, must have been around 24 m.

The temple of Aton

Akhenaton's reconstruction seems to have respected the earlier plan. Within the layers of sandstone fragments of the Amarna building site, postholes that preserved road alignments were clearly visible; they were covered over by the raised floor of the new temple (fig. 8). This

10. BONNET 2001.1, pp. 209-210

floor of settled earth had in its turn been paved with thin slabs, traces of which were preserved in several places. The plan of the sanctuary and its two annexes, which were reached by a small corridor, repeated the original proportions. The pronaos was reorganised and, while some structures built with *talatat* could be distinguished, the overall layout was more difficult to understand. Then there is the deeply excavated sector with a foundation system that was sufficiently well shored up to support powerful supports, very few traces of which remained. At the site of the intermediate doorway to the portico courtyard, a thick foundation of *talatat* showed that they had attempted to monumentalise the passageway.

At right angles, a road dating to the period of Akhenaton, or perhaps a little earlier, ran east to a courtyard and west to an elongated chapel. Access was through a large stone doorway of which only the Meroitic remains were found. However, following the excavation of the Armana doorway, we were able to study more ancient structures beneath the northern lateral wall. Mud brickwork was associated with a New Empire level over the destroyed Tuthmosis IV temple. A second doorway opened from the other side of the temple courtyard to one with four columns. This doorway was recognisable to the north from the foundations of a door jamb 2 m wide. While we were trying to find the traces of the southern jamb we came across some sort of foundation deposit protected by a circle of sandstone characteristic of the Armana period. An alabaster dish in the form of a duck or a bird was placed beside two jars (fig. 9) and an almost illegible fired clay seal. Other dishes or ceramic lamps had been abandoned around the deposit.

The eastern lateral wall of the temple and the corresponding ground surface could be followed for about ten metres. A column base 1.30 m in diameter also formed part of this Armana structure. The base had been placed on a foundation of mud brick which was still preserved to the west; it was thus possible to reconstruct the general plan of the courtyard with its porticos supported by four large columns; the column shafts were fixed to the stone bases with plaster. The pylon was thickened by the addition of 3 m of masonry to the north and 1.50 m in the courtyard. Although we were not able to test this systematically, it seems that the mud brickwork of the earlier building, like the lateral walls, had been razed. The walls of the pylon and the door embrasure of the entrance were rebuilt. Several *talatat* alignments were preserved to a greater or lesser extent as negative traces or very worn blocks. Mud brickwork supported the stone facing, characterised by the rare use of plaster as mortar.

The processional avenue is associated with this temple. The sandstone paving stones had been restored several times; their orientation curved slightly so that they lined up with those of the alley that led to the New Empire palace to the east. Two levels were found. The pier of the pylon had altered many times subsequently, so it was difficult to relate each of the changes to a particular period of construction. A later rebuilding of the first courtyard seemed to be indicated by the presence of rectangular foundations and a column base made from two semi-circular halves. The superimposition of compacted surfaces also indicated the different phases of the temple portico; the eroded Napatan and Meroitic levels and the robber trenches of the 'sebbakhin' are of particular note.

The chapel or annex of the *favissa*

The eastern pier of the pylon reconstructed under Akhenaton was dismantled to make way for an L-shaped room 11 m in overall length and 7 m at its greatest width (fig. 10).

It was part of distinctive grouping consisting, on the eastern side, of a doorway leading to a narrow space bounded by the wall and pylon of the neighbouring temple; this had certainly already been built by the time of the New Kingdom. These structures were thus part of the religious complex; their central position gave them a particular importance, in view of the orientation of the two temples and the axis of circulation. There was access through a large doorway opening to the south to the portico courtyard that linked the two temples. We should note again that this room, whose function is yet to be determined, remained in use for a long time as the wall of its northern façade was modified during the Napatan and Meroitic periods. The southern wall was also enlarged.

The mud brickwork of the L-shaped room was very carefully laid and very robust. It had a homogeneous appearance and so later additions could easily be distinguished: there was a thick wall that extended from the narrowest part to near the middle of the elongated room. It seems to be some sort of foundation laid on a surface made up with silt. Later on, the space was modified again with the addition of a narrower wall or partition that extended to the entrance of the main temple, replacing in some way the ancient pier of the pylon. Fragments of an undecorated offering table were found amidst rubble that had accumulated in a very long rectangular pit, near the southern entrance to the L-shaped room. On the other side, in front of the southern entrance, a low wall had been built in the courtyard with the transverse portico, within which was a ceramic pipe ending in a spout. Libations or offerings were perhaps made on this little construction abutting the room, but this was much later, perhaps in the Meroitic period.

Other investigations remain to be carried out in this difficult sector; in particular we need to understand the relationships between the room and the doorway of the temple. The excavations have still not reached the deepest levels, and stratigraphic relationships remain intact. In the elongated section, we uncovered the remains of the Armana pylon and three rounded pits. The one to the north, within the remains of the pylon, seems to have been sealed with a very hard cap of brick fragments. This has not yet been excavated. A test pit dug into the one to the south revealed destruction levels of little interest. In contrast, the central pit, which was 3 m by 2m, soon attracted our attention, and was completely excavated, preserving an east-west stratigraphy. To judge by the material recovered and by the relative chronology of the structures, the L-shaped room must have been constructed during the 25th Dynasty, but it is possible that the building replaced an earlier one whose traces remain to be found.

The *favissa*

Two years ago we observed in the superficial layers of this L-shaped room, along the eastern edge, fragments of plaster some of which had gold leaf still adhering to them. We suspected the existence of a richly decorated chamber or the presence of precious objects in wood, damaged as a result of pillage. These deposits seemed to be bounded by a partition, and so we thought it best to wait until we were able to investigate the whole sector. Cleaning in the room undertaken in January 2003 revealed a greater concentration of plaster and gold leaf in a large central pit. As soon as the level of the fill was reached, the dorsal support of a monumental granite statue with cartouches of the king Taharqa appeared (fig. 11). The piece was broken at the head and knees but its proportions indicated a weight of around two tonnes. Fragments of other statues appeared and we understood that we were dealing with a *favissa*, where fragments of venerated sculptures were kept in safety (fig. 1).

The deposit had been made carefully; this was indicated by the absence of surface splinters that would have resulted if they had been roughly treated. It was evident that the sculptures were deliberately broken, in order to destroy the 'power' of the pharaohs represented. They had all been broken at their heads and knees; some included arms, a nose or *uraei*. Despite these breakages, the pieces were in relatively good condition and only rarely were pieces missing. At the time of burial, most of the heads were placed at the bottom and were as if protected by the bases which were found closer to the surface. More or less throughout the fill of loose silty soil were fragments of plaster and gold leaf, and many lapis lazuli and glass plaques (fig. 12).

There were seven monumental statues, representing the pharaohs Taharqua, Tanutamou, Senkamanisken, Anlamani and Aspelta. Tanutamou and Senkamanisken were each represented twice (fig. 13). The largest is the statue of Taharqua, measuring 2,70 m in height; the smallest was that of Aspelta, measuring 1.23 m. Preliminary examination indicated surface traces of black paint and of a red and white wash on the *pschent* (Senkamanisken). The hieroglyphs of the dorsal pillar still bear traces of yellow ochre in places. The granite is carefully polished, but some details of the clothing, jewellery or headdress have a hammered surface. This treatment provided better adherence for the coloured pigments, and especially for the covering of a thin layer of gilded plaster, some traces of which still remained on one of the heads (fig. 14).

Other pieces of more ancient statues had also been placed in the pit: the head of a falcon in sandstone, a beautiful head of a king or a prince, the lower part of a seated statue of a leader of the cavalry and a small fragment of a statuette representing a woman holding a flower. This group of fragmentary pieces seems to be mainly of New Kingdom date. This remarkable collection was brought together in a storehouse specially built for the purpose. Transport of the collection was particularly difficult to organise because of the weight of the pieces and the fragility of the stone surfaces and the traces of paint or stucco decoration.

The New Kingdom palace and ceremonial avenue

The avenue paved with flagstones of brown sandstone, leading from the large central temple, was almost completely uncovered. It was interrupted close to the entrance to the Meroitic and Napatan temple, where a later earthen dromos leading towards the north had been built. In front of the temple of Tuthmosis IV and Akhenaton, the pavement had been repaired many times, and the flagstones were of different quality. They had been laid at an angle and seemed to turn with respect to the axis of the roadway that led towards the east (fig. 15). This road also took on greater importance than the temple dromos that must have existed within the monumental complex. The avenue was almost 70 m long and can thus be compared with that found at Gebel Barkal¹¹. There, the original foundations of low walls defined the road in some places and seemed to be part of the earliest development, while at Doukki Gel, there were no traces left. Temples B 600 and B 700 were in all likelihood associated with Tuthmosis IV¹² and the road at Gebel Barkal could bear some relationship to these buildings, which had been altered many times.

A large collection of pottery was found along the length of the avenue, consisting mainly of fragments of plates, bread moulds and vessels for beer. All the archaeological material, including the pavement, was at a fairly deep level, incompatible with the later occupation. The whole construction must thus be dated to the New Kingdom, and the layers of sand

11. REISNER/DUNHAM 1970, plan V

12. REISNER/DUNHAM 1970, pp. 63 (399a-d and 340) and 67 (16-2-134)

that covered the remains, and the state of preservation of the flooring, indicated a period of utilisation during the 18th and 19th Dynasties. In places, postholes cut into the sandstone were cleaned. Near the middle of the roadway two double settings were recognised that seemed to indicate a sort of dais, perhaps used for some ceremonies (fig. 16). The avenue was slightly sloping and climbed a little close to the monuments. To the east there were also paving stones in the interior of the doorway, within the building.

The eastern building consisted of a central stone structure around which were several annexes in mud brick. The foundation trenches of the main building were laid out with care: a low brick wall held in place the sand in which the first settings of large stones were laid (fig. 17); impressions of these were uncovered. These remains were reminiscent of work undertaken for the main temple under Tuthmosis IV. At the back, after a doubling of the wall, perhaps for the entrance, there was an elongated room whose roof was supported by an arch or two simple pilasters. A second room occupied the back of the building. There were other annexes along the side walls, and the small southern doorway provided secondary access to them. It was not possible to determine the layout of the northern side, as the very degraded segments of wall and fragments of beaten earth floor did not provide sufficient information.

The construction site of the yellow-grey building occupied a large area where a layer of fragments of stone chippings was clearly visible. Scaffolding holes in the low wall must be related to activities connected with the execution of a sculpted relief on the walls. The construction was again refurbished by the Napatans and the Meroites. The irregularity of the foundations did not provide enough information to determine the nature of the works undertaken with the creation of new internal partitions. However, the fired brick facings of the Meroitic period respected the central building extending to the east. It thus seems as if the building had preserved its function, justifying these reconstructions.

The particular layout of this monument and its unique architecture does not help the interpretation of this complex. There is a direct relationship between the room made of stone, a sort of doorway of large proportions, and the main mud brick room at the back. The many secondary rooms seemed to have general functions that were not of a religious nature. Although several chapels belonging to sacred centres such as Karnak in Egypt resemble our example, the annexes here are different and their proximity to the later Napatan and Meroitic palace could well indicate a continuity of functions in the vicinity of the temple. This general layout, found at Gebel Barkal, with palaces constructed more or less at right angles to the dromos, provides slightly later comparable examples.

A ploughed field of the Kerma Classic period

During work on the consolidation of the palace, we excavated a narrow trench in the southwest corner of the building. Under a layer of 0.60 m of wind-blown sand, traces of the furrows left by a wooden plough were preserved, hardened by water and in good condition. Imprints of the hooves of cattle that must have pulled the plough were also very clear. It is hard to understand why this field remained in this state and was not cultivated. Had they just simply wished to prepare the ground before starting on the construction of a neighbouring building? However, the most unexpected find is the presence in the alluvium of a large number of Classic Kerma sherds; this latter is a period that is not at all well represented at Doukki Gel.

The southern well

The well noted in our previous report¹³ was examined to a depth of 7.50 m. The hardness of the compacted soil and logistical problems prevented further work. The top part of the well was made from beautiful fired brickwork employing alternating layers of bricks laid flat and on edge ; below, from a depth of 4 m, the construction was of stone blocks of different size and shape, some of which were reused. The spiral staircase, which led into the interior of the structure led to the second, older well of smaller diameter (fig. 18). We think that these successive wells must have served the temples. Neighbouring bakeries certainly required large quantities of water, right from the time of the construction of the religious centre. Continuation of use of these different structures is once more clearly demonstrated. We note the quality of the Meroitic achievement, remarkable both for its technical mastery and for its æsthetism.

At the foot of the staircase, in the interior of the earlier well, there was a magnificently decorated block with a relief of a votive foot. The two lateral faces were engraved with the figure of a Nubian prisoner with a characteristic coiffure and hands ligatured with the hieroglyph *sema*. It could only be a representation of a royal foot, perhaps originating from one of the temples where this kind of representation is common. Archaeological material dated the fill of the upper part of the well to the classic Meroitic period. Two broken statuettes of the Middle Kingdom were found in the lower levels, but sherds of ordinary pottery could not provide a precise date. However, the earlier well seems to date to the New Kingdom, to judge by its construction technique, position and depth.

An official building

To the north of the well a vast mud brick construction with 15 m sides was found. During the excavation of the temple of Akhenaton, we noted in the stratigraphy the superimposed levels of a building that had been restored many times ; it clearly dated back to the New Kingdom. We only studied the Napato-Meroitic layout. It was originally built beside a north-south enclosure wall, 5 m thick. The latest phases of occupation witnessed the destruction of the town wall and the construction in the ruins of a workshop that was perhaps used for metal-working or firing pottery. A scarcity of material prevented positive identification of its function. The remains of an oven indicated usage at high temperatures. This sector was bordered by a courtyard, along which there were several rooms. Three hearths were found near the well ; these could have been used to make bread offerings as there were broken moulds lying all around. Potsherds dated to the 5th and 6th centuries BC were collected together with fragments of Classic Meroitic jars (fig. 20 *bis*).

The northern well

An enigmatic circular structure 18 m in diameter is being excavated to the north west of the temples. Filled with sand, it descends in fairly steep slope to a depth so far of 6 m (fig. 19). There are piles of collapsed mud brick and 'galous' on the edges where we have with some difficulty cleared several of a type of buttress supporting terraces dug into earlier levels. Walls of several structures, including a potter's oven, had been cut by the well. On the eastern side three stone facings sunk to a depth of several metres delimited a trapezoid space open in the direction of the well. Several reused stones were decorated : in particu-

13. BONNET 2001.1, p. 212

lar there was the head of a king, Amon's feather, and the roughout of a face. The excavations are not yet sufficiently advanced to allow us to understand this structure, which, on the south side only, had been filled with bread moulds. Its date must lie in the first century AD, or a little earlier, as the abundant material within the stratigraphy corresponds to the classic Meroitic period (fig. 20).

Conservation and restoration

The continuation of the work undertaken to restore the Nubian town took a great deal of our attention. Research undertaken for the publication of a book on the religious quarter associated with the deffufa helped to clarify the complex appearance of the structures situated to the west. The plans of the ceremonial palace and some of the chapels are now clearly visible from the top of the deffufa. The continual degradation of the monument also prompted us to shore it up on the northern side with a substantial wall that also marks the limits of the main temple. Houses of the important dignitaries discovered to the east were also restored to a height of 0.30 to 0.50 metres.

At Doukki Gel, part of the fired brick wall of the southern well collapsed as result of the large number of visits, and so demanded urgent attention. Here also we opted to heighten the ancient structures. In order to avoid any danger of further collapse, we built a sort of balcony from which there is a very good view of the structure of this well. The new coping is made from mud brick while the interior walls have been reconstructed from fired bricks. We used bricks of a smaller size so that it is easy to distinguish the restoration from the original. The overall effect is satisfying and it has already been praised by the Antiquities Service and by the political authorities, who came to the site on the occasion of the discovery of the hoard.

The remains of the palace at the end of the ceremonial avenue were also rather eroded and required urgent restoration. The three main stages of the building were restored. The Meroitic facings are signified by fired bricks whitened with mortar, while mud brickwork was used for the body of the building and its annexes. The main stone doorway remains to be completed. The paving of the avenue must also be protected.

A new storehouse must also be rapidly built to make sure that the statues of the *favissa* are well protected (fig. 21). These have been laid horizontally on a concrete surface covered with many layers of chipboard. They have been stabilised with planks and wooden wedges. Restoration will be undertaken when a decision has been made about where they are to be displayed. A site museum would provide the opportunity to bring together all the statues of the *favissa*.

Bibliography

- BONNET 1991 Charles Bonnet, “Rapport préliminaire sur les campagnes de 1988-1989, de 1989-1990 et de 1990-1991”, *Genava*, n.s., XXXIX, 1991, pp. 5-20
- BONNET 2000 Charles Bonnet, “Kerma · Trenta anni di scavi e le scoperte recenti”, *Scienze dell'Antichità Storia archeologia antropologia*, 10, 2000, pp. 575-581
- BONNET 2001.1 Charles Bonnet, “Kerma · Rapport préliminaire sur les campagnes de 1999-2000 et 2000-2001”, *Genava*, n.s., XLIX, 2001, pp. 199-218
- BONNET 2001.2 Charles Bonnet, “Kerma, capitale du plus ancien royaume ‘africain’”, *Historia*, 69, January – February 2001, pp. 64-67
- BONNET 2002.1 Charles Bonnet, “Au sujet de nos fouilles au royaume de Kerma · De quelques survivances aux traditions nubiennes”, *Mare Erythraeum*, V, 2002, pp. 79-87
- BONNET 2002.2 Charles Bonnet, “La Nubie et le Soudan, Égypte et Afrique”, in *Au fil du Nil · Le parcours d'un égyptologue: Jean Leclant*, Colloque de la Fondation Singer-Polignac, Paris, 12 November 2001, Paris 2002, pp. 107-113
- BONNET 2002.3 Charles Bonnet, “The 2001-2002 Season of Excavation at Kerma · A Summary”, *Sudan & Nubia, The Sudan Archaeological Research Society*, 6, 2002, p. 30
- BONNET *et alii* 2000.1 Charles Bonnet, avec la collaboration de Dominique Valbelle, Louis Chaix et Béatrice Privati, *Édifices et rites funéraires à Kerma*, Paris 2000
- BONNET *et alii* 2000.2 Charles Bonnet, Dominique Valbelle, avec la collaboration de Salah El-Din Mohamed Ahmed, “Les sanctuaires de Kerma du Nouvel Empire à l'époque méroïtique”, *Académie des inscriptions et belles-lettres, Comptes rendus de l'année 2000, juillet – octobre*, Paris 2000, pp. 1099-1120
- BONNET *et alii*, in press Charles Bonnet, in collaboration with Dominique Valbelle and Béatrice Privati, *Le Temple principal de la ville de Kerma et son quartier religieux*, in press
- HONEGGER 2002 Matthieu Honegger, “Évolution de la société dans le bassin de Kerma (Soudan) des derniers chasseurs cueilleurs au premier royaume de Nubie”, *Bulletin de la Société française d'égyptologie*, 2002, pp. 12-27
- HONEGGER 2003.1 Matthieu Honegger, “Grupo A y pre-Kerma”, in Silvia Fauquet, Sara Vilalta (coord.), *Nubia · Los reinos del Nilo en Sudan*, Exhibition Catalog, Barcelone, Fondation «La Caixa», April – August 2003, Barcelone 2003, pp. 35-40
- HONEGGER 2003.2 Matthieu Honegger, “Peuplement préhistorique dans la région de Kerma”, *Genava*, n.s., LI, 2003, pp. 281-290
- REISNER/DUNHAM 1970 George Andrew Reisner, Dows Dunham, *The Barkal Temples Excavated by George A. Reisner*, Boston 1970
- STEINDORFF 1937 Georg Steindorff, *Aniba*, vol. 2, Service des antiquités de l'Égypte · Mission archéologique de Nubie, 1929-1934, Glückstadt – Hamburg 1937
- VALBELLE 2003 Dominique Valbelle, “Kerma · Les inscriptions et la statuaire”, *Genava*, n.s., LI, 2003, pp. 291-300

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During the last two years, research on the prehistory of the Kerma region concentrated on the excavation of two sites and on the continuation of survey work (fig. 1). Two of the sites were already known: they are settlements of the Pre-Kerma and neolithic periods. In contrast, the third was discovered recently¹; it dates to the Mesolithic and consists of a settlement and several dozen graves. Our efforts were focussed on this latter site as it is threatened with destruction by erosion, and the many roads that cut across it. Excavation revealed exceptional remains for this period that dates approximately back 10,000 years.

In the medium term, our research has several objectives:

- the establishment of a chronological and cultural framework, serving as a reference for Upper Nubia;
- the reconstruction of settlement from the Mesolithic (8th millennium BC) to the beginning of the Kerma civilization (3rd millennium BC);
- an understanding of the socio-economic functioning of human groups between the 8th and 3rd millennia, based on the analysis of settlements, cemeteries, and the nature of their occupation of the territory.

Overall, the outcome of this work should be a better understanding of the background to the emergence of the Kerma civilisation, the first Kingdom of black Africa.

Archaeological survey

The survey project is still in its early stages and the number of sites recently discovered is limited to several occupation sites, close to the mesolithic settlement in course of excavation. The most notable finds are remains from the middle Palaeolithic (more than 30,000 years old), another mesolithic site, and a vast neolithic occupation, very rich in remains, which is probably a major settlement of this period. Finds from this site include, amongst others, remains of a domestic fauna and pottery with incised decoration of motifs reminiscent of a style that is widespread across the Sahara and the middle valley of the Nile. This assemblage seems very likely to be earlier than the 5th millennium BC and could represent an important landmark in the understanding of animal domestication in Africa.

Another aspect of the research concerns the geography of the environs of Kerma. In the absence of precise maps of the region, it was necessary to construct a detailed topographic document using aerial photographs and satellite images. The result, shown here in a simplified form, also integrates current knowledge of the geomorphology of the sites and the paleochannels of the Nile² (fig. 1). Between 8000 and 3000 BC, the climate was much wetter than today, resulting in a rise in the flow of the river and the formation of channels to the east. In the rainy season, rivers formed from the higher ground to flow towards the alluvial plain. The precise location of these ancient watercourses takes on a particular importance, guiding future survey work, as prehistoric sites are generally located close to ancient water sources.

1. HONEGER 2001, pp. 225-227

2. MARCOLONGO/SURIAN 1997, WELSBY 2002

Knowledge of the way that prehistoric populations exploited the landscape also provides very valuable evidence for the research on new sites. Using models developed in regions where archaeological work is more advanced³, together with ethnographic information⁴, it is possible to understand the economic functioning of the mesolithic, neolithic and pre-Kerma groups. This is based on a more or less significant mobility of the members of the community, related to hunting, fishing and the search for animal pasture. The principal settlements of these populations is commonly found on the edge of the plain flooded by the Nile, while the temporary encampments might be found far into the desert (rainy season) or close to river courses (dry season). From this perspective, future surveys will no longer be limited to the alluvial plain, but will also cover the desert zone. It will also be essential to establish a hierarchy of the settlements discovered (main settlement/encampment) and to try to determine their season of occupation, which might perhaps be revealed by a study of the fauna.

Neolithic and pre-Kerma settlements

Excavations were undertaken on two settlements of the neolithic and pre-Kerma periods, both situated within the ancient necropolis at Kerma. Several hundred square metres were opened in a sector of the neolithic occupation that had escaped erosion. We were able to add to the pre-existing plan⁵, showing the eastern extension of several palisades whose plan seemed to suggest an enclosure. Work on this site was not pursued, as it would require the removal of many hundreds of centimetres thickness of hardened alluvium before the occupation level could be reached. This task, undertaken by hand, represents too great an investment in respect of the expected results.

New excavations were also undertaken in the eastern sector of the pre-Kerma settlement, where two tombs and a large round house, six metres in diameter had been discovered several years earlier⁶. However, no further traces were found, and it seems that the limits of the village have really and truly been reached in this direction. Originally, the number of pre-Kerma tombs must have been very much greater than the two discovered: it seems that the majority had been destroyed by erosion and by the operation of the necropolis of the Kerma period. In fact it is only the northern sector of the settlement that is likely to yield further remains, but excavation of this area is not envisaged at the moment as considerable resources will be required to uncover the occupation level, buried under a thick layer of sand.

A tentative architectural reconstruction has already been attempted, inspired by comparisons with modern settlements in the southern valley of the Nile⁷ (fig. 2). The convergence of the archaeological data and of plans of certain villages of agro-pastoral populations is astonishing, contributing to an enrichment of our understanding of the socio-economic functioning of the pre-Kerma community. Although we now recognise that the agglomeration is not an archaic form of African urbanism, it nonetheless marks an important stage in the emergence of permanent settlements, where sedentism conditioned by agriculture progressively overtakes the mobility linked to animal husbandry.

3. As is the case in central Sudan (cf. CANEVA 1988, HAALAND 1987)

4. In particular information about contemporary groups of shepherds south of the Nile valley (cf. EVANS-PRITCHARD 1994, Hazel 1979)

5. HONEGGER 2001, pp. 223-225.

6. HONEGGER 2001, pp. 221-222.

7. For example the villages of the ethnic groups Jie or Teso in Uganda (cf. DENYER 1978, GULLIVER 1965)

The Mesolithic settlement of El Barga

The major discovery of these last two years was a Mesolithic site known as El Barga: a term borrowed from the name of a mountain a few hundred metres away. The site is on

an elevation formed by an outcrop of the rocky substrata (Nubian sandstone) a little less than 15 metres from the Nile as the crow flies. It consisted of a habitation zone and several dozen tombs broadly divided into two sectors, one to the north and the other to the south (fig. 3). The site had suffered from wind erosion and the majority of the tombs and the finds were discovered directly on the ground surface. Numerous tracks of lorries and trucks cross the site from one side to the other and these had sometimes badly damaged the archæological remains.

We first excavated the burials that were at most risk of destruction and collected finds in the central zone of the settlement, dividing up the area into metre squares. At the end of the 2001-2002 season, a particularly dense distribution of artefacts within a 5 meter circle suggested the presence of a habitation structure. The following year, efforts were focussed on the excavation of further tombs and the excavation of this structure, which was radio-carbon dated to c. 7500 BC.

Several clearings were necessary to completely empty what we interpreted as the bottom of a hut dug into the sandstone substratum (fig. 4). It consisted of a sub-circular cavity a little less than five metres in diameter, with a maximum depth of just over 50 cm (fig. 5). On the eastern side the walls were almost vertical, while on the west a sort of intermediate bench interrupted a more gentle slope. To the south an elongated depression was clearly visible; constructed away from the prevailing wind, it probably corresponded to the entrance to the hut. To the north-east, an oval pit with a depth of around 30 cm, abutted the central depression. Three male graves were associated with the building. One was within the building, at the level of the western bench, while the other two were situated just alongside it (fig. 5 and 9).

Within the first 30 centimetres of the cavity there was much occupation material: pottery, grinding equipment, flint objects, faunal remains, shells, ostrich shell beads, two bone armatures and a mother-of-pearl pendant (fig. 6 to 8). These objects were found with a grey powdery and slightly ashy sediment, including some wind blown material. Some of the finds were burnt and some charcoal was also recovered, which suggested that there had been a fire in the hut even though no hearth structure was found. The last 25 centimetres of the fill was a compact silt that contained far fewer artefacts. It is still difficult to determine precisely which phase of occupation or of construction of the hut this layer corresponds with. It may relate to one or more successive hut floors, unless this compact layer was a first phase of occupation, partly filled in by a Nile flood, or at least by a deposit of damp soil. A sample for micromorphological analysis has been taken in order to try to resolve this question.

It is still too early to provide a precise reconstruction of this hut and we must hope that the site will reveal other structures of the same type to provide further information. The sides of the cavity may have been heightened with a low wall of alluvium supporting a covering made of branches. It is also possible that there was a conical roof consisting of a wooden framework resting directly on the edges of the pit. There are very few comparisons with other mesolithic or neolithic structures. The huts at Nabta Playa⁸ in the western Egyptian desert, which are a little later in date, are of a relatively similar construction, with foundations dug into the ground at a depth oscillating between 10 and 60 cm. The semi-sunken houses of the Neolithic of Lower Egypt⁹ offer too good similarities, but they belong to a completely different cultural and economic context. Otherwise, the most common neolithic constructions are built from posts sunk into the ground; they are usually huts similar to those excavated at the site of the Kerma necropolis.

8. These huts are dated between 7000 and 6000 BC Cal. (WENDORF/SCHILD 2001).

9. The houses of Mérimdé Beni-Salamé are dug several dozen centimetres into the ground and their circumference is heightened by a low wall made of alluvium (VANDIER 1952).

The Mesolithic of the Nile valley is best known from central Sudan, the impetus deriving from the pioneering research of A.J. Arkell in the 1940s¹⁰. This period is characterised by a economy of predation focussed on the collection of wild grasses and the exploitation of aquatic resources: fish, molluscs and large vertebrates¹¹ (crocodiles, hippopotamuses etc.). The communities of this period display a clear tendency to sedentism, even if members of the group had to move seasonally to undertake certain activities (hunting, fishing). Archaeologically, this phenomenon is demonstrated by the presence of settlements with a significant density of artefacts, often accompanied by several burials. The habitation structures are however rarely preserved; a few hearths and depressions filled with artefacts are reported. The pottery produced by these communities is some of the oldest in Africa. It has stylistic affinities with contemporary production in the Sahara¹². While it is difficult to define cultural zones from the ceramic decoration of this period, researchers distinguish an 'Early Khartoum' horizon between the 3rd and 6th cataracts, and a 'variant Khartoum' assemblage in the region of the 2nd cataract.

The site of El Barga shows characteristics similar to those of the Mesolithic of central Sudan: artefacts that are stylistically similar, faunal remains demonstrating the importance of aquatic resources, grinding equipment confirming the collection of grasses, hut foundations consistent with some concept of sedentism, and, finally, many burials situated within the habitation zone. However, El Barga is distinguished by the exceptional preservation of its semi-buried structure, as well as by the large number of tombs and the quality of the information that they provide.

The El Barga graves

Forty one graves have been excavated to date, with six others found and many indications of the presence of several dozen more. This assemblage might represent one of the most important funerary complexes of the Nile valley for this pre-neolithic period¹³. However, there is some doubt about the date of some burials. The tombs in the northern sector, that is to say the zone of the mesolithic occupation, are incontestably contemporary with the latter. They rarely contain grave goods, consistent with our current understanding of the funerary rites of this period. In contrast, the individuals found in the southern sector are usually accompanied by offerings, which could indicate a slightly later date. Radiocarbon dating is currently being undertaken in order to settle this matter.

The graves of the northern sector comprise at least eleven individual inhumations, most of which are adult males. Several skeletons are of an impressive size and robustness: pronounced muscle attachments, very thick cranial bone, particularly well developed mastoid processes and occipital crests, and femora more than 50 cm long. Only one individual was accompanied by an offering: he was a male buried with a bivalve. The corpses were usually buried in graves, sometimes dug into the rocky substrata. They were laid on their right or left sides, in a random orientation. The most remarkable finding concerns the position of the limbs of some adults (fig. 9). In three tombs, the leg bones, and more rarely those of the arms, were in an unnatural position as if the body had been forced into too small a space. The tomb of the male buried on the edge of the hut is particularly telling (fig. 9, left). He had been placed in a very large pit while the bones of his skeleton occupied a very small and circumscribed area. Before being buried, he must have been placed in some sort of sack, probably made of leather, with his knees bent up on his abdomen in a forced position. The orientation of his femurs and tibias is so unusual that it is possible that they had been deliberately cut from the lower limbs.

10. The excavation of a site in Khartoum in 1944-1945 revealed the existence of a mesolithic horizon known as 'Early Khartoum'. It is characterised by the presence of pottery and an economy focussed on the exploitation of aquatic resources (ARKELL 1949).

11. For recent work on the Mesolithic of central Sudan cf. CANEVA *et alii* 1993, HAALAND/MAGID 1995

12. MOHAMED-ALI/KHABIR 2003

13. Only the epipaleolithic cemetery of Djebel Sahaba (2nd cataract) with its 59 burials represents a more consistent assemblage (WENDORF 1968). The sites in central Sudan only rarely have graves.

The tombs of the southern sector include all the other burials. Here, males are rarer, while females and children are in the majority. The skeletons are generally less robust than those in the north of the site. Although some of the bodies are very contracted, none have their limbs in a forced position. Most of the individuals were laid on their right or left sides, with an orientation that varied from case to case. In the area of densest concentrations, some superimpositions were recorded, together with one example of intercutting¹⁴. The excavation also revealed a double grave of a woman and a baby. Many of the tombs of adults and children contained grave goods. These were mostly bivalves, ostrich shell bead necklaces and bracelets of hippopotamus ivory (fig. 10). More rarely there were stone beads, and, exceptionally, pottery: the only example of the latter is from a child's grave. The most surprising grave goods were from the graves of adults. In particular there were partially polished pebbles with a slight depression in the centre. They correspond to prototypes of palettes for pigment, to go by the discovery in slightly later context of a similar model bearing traces of ochre. Two burials were accompanied by rounded pebbles that had probably served as grinders. Pigment palettes are frequently found in neolithic and protohistoric tombs, where they can attain a greater degree of sophistication¹⁵. In comparison, those from El Barga are still fairly crude, but they include examples of the earliest ever found in the Nile valley.

The other category of grave goods found in adult graves is represented by a series of stone labrets. These are systematically found at the level of the individuals' mouths, confirming that they were indeed inserted into their upper or lower lips. Labrets are especially rare in pre- and protohistoric Egypt¹⁶. In contrast, they are frequently recorded from Sudan, particularly in later contexts in the last millennium BC. To our knowledge the examples from El Barga are the earliest from north-east Africa.

Further research on the prehistory of Kerma will concentrate on the continuation of excavation at El Barga, where extensive clearings are planned with the aim of uncovering any traces of habitation structures and tombs. We know that it is very difficult to detect tombs from the surface, as not a single bone has been uncovered by erosion. At the same time, survey work will be continued, particularly into the desert, and excavation will be undertaken at sites from periods that are still poorly understood. Finally, analytical work will play an important part in our programme of research; it will involve the collaboration of many specialists (archaeozoologists, micromorphologists, anthropologists and pottery specialists) and of students in training.

14. It was a tomb in which a male was first buried. Subsequently the pit had been reused for the burial of a female, with the bones of the male first arranged on the side of the pit.

15. For neolithic palettes, cf. REINOLD 2000, and for later examples, cf. BONNET 1990, p. 200 and NORDSTRÖM 1972

16. BONNET 1990, p. 166, HENDRICKX/MIDANT-REYNES/VAN NEER 2001, pp. 87-88

Bibliography

- ARKELL 1949 Anthony J. Arkell, *Early Khartoum · An Account of the Excavation of an Early Occupation Site Carried Out by the Sudan Government Antiquities Service in 1944-1945*, London 1949
- BONNET *et alii* 1990 Charles Bonnet *et alii*, *Kerma, royaume de Nubie · L'Antiquité africaine au temps des pharaons*, Exhibition Catalog, Geneva, Musée d'art et d'histoire, 14th June – 25th November 1990, Geneva 1990
- CANEVA 1988 Isabella Caneva (éd.), *El Geili : the History of a Middle Nile Environment 7000 BC – AD 1500*, Cambridge Monographs in African Archaeology, 29, British Archaeological Report, Oxford 1988
- CANEVA *et alii* 1993 Isabella Caneva, Elena A. A. Garcea, Achille Gautier, Wim van Neer, “Pre-pastoral Cultures Along the Central Sudanese Nile”, *Quaternaria Nova*, 3, 1993, pp. 177-252
- DENYER 1978 Susan Denyer, *African Traditional Architecture · An Historical and Geographical Perspective*, London 1978
- EVANS-PRITCHARD 1994 Edward Evan Evans-Pritchard, *Les Nuer · Description des modes de vie et des institutions politiques d'un peuple nilote* (French Translation of the 1937 original version), Paris 1994
- GULLIVER 1965 Philip H. Gulliver, “The Jie of Uganda”, dans James L. Gibbs, *Peoples of Africa*, New York 1965, pp. 157-196
- HAALAND 1987 Randi Haaland, *Socio-Economic Differentiation in the Neolithic Sudan*, Cambridge Monographs in African Archaeology, 20, British Archaeological Report, Oxford 1987
- HAALAND/MAGID 1995 Randi Haaland, Anvar Abdul Magid, *Aqualithic Sites Along the Rivers Nile and Atbara, Sudan*, Bergen 1995
- HAZEL 1979 Robert Hazel, “Les formes traditionnelles du pastoralisme en Afrique orientale · Pratiques économiques et normes idéologiques”, *Anthropologie et Société*, 3, 2, 1979, pp. 23-54
- HENDRICKX/MIDANT-REYNES/VAN NEER 2001 Stan Hendrickx, Beatrix Midant-Reynes, Wim van Neer, *Mahgar Dendera 2 (Haute-Égypte), un site d'occupation Badarien*, Louvain 2001
- HONEGGER 2001 Matthieu Honegger, “Fouilles préhistoriques et prospection dans la région de Kerma”, *Genava*, n.s., XLIX, 2001, pp. 221-228
- MARCOLONGO/SURIAN 1997 Bruno Marcolongo, Nicola Surian, “Kerma · Les sites archéologiques de Kerma et de Kadruka dans leur contexte géomorphologique”, *Genava*, n.s., XLV, 1997, pp. 119-123
- MOHAMED-ALI/KHABIR 2003 Abbas S. Mohamed-Ali, Abdel Rahim M. Khabir, “The Wavy Line and the Dotted Wavy Line Pottery in the Prehistory of the Central Nile and the Sahara-Sahel Belt”, *African Archaeological Review*, 20, 1, 2003, pp. 25-58
- NORDSTRÖM 1972 Hans-Åke Nordström, *Neolithic and A-Group Sites*, Scandinavian Joint Expedition to Sudanese Nubia, 3, Stockholm 1972
- REINOLD 2000 Jacques Reinold, *Archéologie au Soudan · Les civilisations de Nubie*, Paris 2000
- VANDIER 1952 Jean Vandier, *Manuel d'archéologie égyptienne*, tome 1, *Les époques de formation*, Paris 1952
- WELSBY 2002 Derek A. Welsby, “Human Responses to Holocene Environmental Changes in the Northern Dongola Reach of the Nile, Sudan”, dans Jennerstrasse (éd.), *Tides of the Desert: Contributions to the Archaeology and Environmental History of Africa in Honour of Rudolph Kuper*, Cologne 2002, pp. 28-38
- WENDORF 1968 Fred Wendorf, *The Prehistory of Nubia*, 2 vol., Dallas 1968
- WENDORF/SCHILD 2001 Fred Wendorf, Romuald Schild, *Holocene Settlement of the Egyptian Sahara*, vol. 1, *The Archaeology of Nabta Playa*, New York 2001

Figure captions

Fig. 1. Map of the Kerma region showing the distribution of sites discovered during survey work and the location of rivers and ancient channels of the Nile, active during the last wetter climatic period (8000-3000 BC). The three sites that were excavated are indicated by larger symbols.

Fig. 2. Reconstruction of the Pre-Kerma village based on both archaeological finds and ethnographic comparisons (drawing: Alain Honegger)

Fig. 3. Plan of the site of El Barga located on a small hill beside the alluvial plain. To the north is the zone of mesolithic occupation accompanied by burials. To the south is a second, probably more recent, burial zone. Contour lines are at 10 cm distances.

Fig. 4. House structure at El Barga in the course of excavation.

Fig. 5. Plan of the house structure at El Barga with three burials in the interior or in close proximity. Contour lines are at 10 cm distances.

Fig. 6. El Barga pottery with decoration impressed or incised with a comb.

Fig. 7. Harpoon and double bone point from the fill of the El Barga hut. Length of the double point: 5.3 cm.

Fig. 8. Perforated mother-of-pearl pendant from the fill of the El Barga hut. Length: 2.6 cm.

Fig. 9. Graves of males found in the El Barga settlement. The corpses had been buried after having been placed inside leather sacs, no longer preserved. The particular placement of some of the limbs results from the fact that the bodies were interred in a forced position.

Fig. 10. Tomb from the southern sector of El Barga containing a child of around 6 years accompanied by two hippopotamus ivory bracelets.

Fig. 11. Stone labrets found in tombs in the southern sector of El Barga.

With the exception of figure 2, all the photos and illustrations are by the author.

More than 750 decorated blocks and fragments have been recorded to date (fig. 1). As has been noted before in respect of the various archaeological contexts of the site of Dukki Gel, the main characteristic of this evidence is that not a single epigraphic or iconographic find came from its original place. The successive reuse of decorated blocks that had come from various different religious buildings of this town are nevertheless most frequently found in fairly coherent series, showing the main reuse operations undertaken by successive foremen for new constructions. Thus the excavation of the temple of Aton revealed only very few fragments that could be attributed to the Amarna period, while many decorated pieces from the walls of the Thutmosis temple used as a quarry by the agents of Akhenaten were found in the foundation levels of the temple and its immediate vicinity.

For the later periods, the discovery of statues dated by complete protocols of the last kings of the 25th Dynasty and the first Napatan kings informed us initially of the importance that they brought to the site of Kerma, but also provided ample evidence for the name of the principal god and that of the site; at the same time they provided very valuable epigraphic information for dating fragments of inscriptions that had been found previously.

Blocks and fragments from the temple of Thutmosis IV

The majority of monumental epigraphic finds recovered during the 2001-2002 and 2002-2003 seasons were from the temple of Thutmosis IV. There were abundant traces in the stratigraphy and over the surface of the monument of the massive destruction by the agents of the heretic king. This had reduced to fragments, even to small splinters, a large part of the beautiful reliefs of this temple. The fact that not a single complete cartouche of Thutmosis IV has been found is clearly deliberate. The cutting up on site of the original blocks for the talatats required by the Amarna temple is without doubt partly responsible for this destruction. We have previously noted rare evidence of reuse on the stones themselves and the discovery of impressions of Thutmosis reliefs in the mortar used to joint the talatats.

On the other hand it is important to note that name of the kings who ordered the construction of the temples has not been found hammered out on any fragments found to date, and that the rare indications of the re-engraving of a royal name can probably be attributed to the conflicts between Hatshepsut and Thutmosis III, as has been noted in many Egyptian and Nubian temples¹. A fragment bearing the main part of the forename of Thutmosis I – Aakheperkare – (fig. 2) seems to have been re-engraved, like many examples in numerous locations at the temple of Buhen where it replaced that of the queen. Several clearly different styles can be observed in the Thutmosis remains and the discovery, in December 2002, of a lintel with the name of Amenhotep II², indisputably implies a structure earlier than the reign of Thutmosis IV, which confirms the archaeology³.

Some of the largest fragments of the decoration of this monument were found during the last two seasons of excavation. One block in particular preserved the traces of its original

1. For example in the temples of Semna (CAMINOS 1998, vol. I, pp. 27, 78 et 79); Koumma (CAMINOS 1998, vol. II, pp. 4, 15, 28 et 46 *sq.*); and Buhen (CAMINOS 1974, vol. I, p. 86; CAMINOS 1974, vol. II, pp. 2, 4-5, 24-26, 34, 43, 46, 76).

2. VALBELLE 2001, pp. 229 et 231, fig. 3

3. BONNET 2003, p. 261

decoration in relief on two opposite sides. It showed the thickness of an internal wall : about 66 cm. We now have many remains of relief decorations from the interiors of buildings, but also of the characteristic sunken reliefs of the exterior parts and courtyards (fig. 3). One is struck by the number of fragments decorated on two contiguous faces, deriving in the main from pillars (fig. 4 a and b). A notable quantity of borders of scenes and friezes of khakeru make possible comparisons with other contemporary monuments.

The faience plaques from the foundation deposits of the temple of Thutmosis IV

In 2001 we were able to attribute the large sandstone foundation blocks of the temple to Thutmosis IV, thanks to the faience plaques found in a foundation deposit situated at the south-west corner of the building⁴. The majority indeed bore the inscription “Menkheperurê”, the name of the king of Upper and Lower Egypt of Thutmosis IV. However, some of them did not have the three strokes of the plural and therefore seem to read “Menkheperê”, the name of the king of Upper and Lower Egypt of Thutmosis III. The plaques found in a new foundation deposit in January 2002 at the south-eastern angle of the monument bore only the name “Menkheperurê” sometimes accompanied by the epithet “Khâkhâu”⁵. If Thutmosis IV has wished to associate Thutmosis III with the foundation of the temple for reasons that remain to be determined, he presents himself as the real responsible of the building.

Fragments of stelæ and statues found during excavation of the temple

As well as the contents of the favissa and the stela of Aspelta discussed below, eleven fragments of statues and statuettes, one stela and several fragments of another were recorded during the last two campaigns. Amongst the former, there is a pretty anepigraph statuette, representing a kneeling figure holding an offering table before him ; this was discovered in the destruction levels of the Thutmosis temple (fig. 5). There is also a standing vizier, whose head and feet are missing. The stelæ are additional part of the deposit of private monuments devoted to the cult of Amon already been reported⁶. A small stela is dedicated to the ram of Amon accompanied by the flabellum and the incomplete second stela figures several members of his clergy.

The statues of the favissa

The pit found under an annex of the Napatan level of the eastern temple contained fragments of several black granite monumental statues representing the two last kings of the 25th Dynasty – Taharqua and Tanutamon – and three of the first sovereigns of the Napatan period – Senkamanisken, Anlamani and Aspelta – as well as four intrusive fragments.

The oldest, that of Taharqa, is of particular interest in that the almost complete face shows the features of the young king. This is exceptional as on other known sculptures of the sovereign the nose and the uraei have been broken. The sandals of the king rest on the Nine Bows. The inscription engraved on the dorsal pillar bears the protocol of the king and the epithet “beloved of Amon-Ra who lives at Pnubs” (fig. 7). The two statues of Tanutamon are the only genuine portraits of the king found to date whose features are preserved in the round, apart from very crude ushebtis and a canopic vase head⁷ that we

4. BONNET 2001, p. 209 et fig. 10

5. BONNET 2003, p. 261 et fig. 4

6. VALBELLE/BONNET 2003, in press

7. LECLANT 1985, and part. col. 212, notes 30-31

now find bears very little relationship to his physiognomy⁸. The inscriptions on the back and base of each of the statues consist of more or less elaborated protocols ending with the epithet “beloved of Amon of Pnubs” (fig. 6).

While the quality of their sculpture is undeniable, the style of the four other statues is very different. In contrast to their predecessors, the direct influence of the Theban workshops is no longer apparent. From the time when the kings of Napata were finally ousted from Egypt by Psammeticus I, a new art style developed in Upper Nubia. However the royal Egyptian insignia of power remain in use, such as the pschent on one of the statues of Senkamanisken and on that of Anlamani. This latter also bears an attribute that we can see for the first time in the round: the horns of Amon (fig. 8) evoking the divine character of the sovereign⁹. There also, the sovereign’s epithet, which can be read on the dorsal pillars of the statues as well as on the bases of one of those of Senkamanisken and on that of Aspelta, is “beloved of Amon of Pnubs”.

Overall these provide confirmation, if this is still required, that under the 25th Dynasty and during the Napatan period, Kerma = Pnubs¹⁰. All these precisely dated inscriptions also provide palaeographic information of great value for dating isolated examples of the toponym on various isolated fragments of blocks found at the site of Doukki Gel.

The intrusive fragments

Amongst the fragmentary monuments that are earlier than the seven statues and were placed at the bottom of the pit¹¹, there are two pieces at the moment that merit particular comment. Despite its broken nose, the black granite head of a king (fig. 9) is evidence of the very high quality of the royal statuary of the first half of the 18th dynasty. The sovereign wears the “ibes”, a round short wig with curls, that was probably already present on some effigies of Thutmosis III¹², but certainly attested from the time of Thutmosis IV¹³. Indisputable portraits of this king are rare, but the evolution of styles and the knowledge that we have of the physiognomy of other sovereigns of this period allow certain attribution of this new sculpture to Thutmosis IV, to whose name are ascribed the foundation deposits of the Thutmosis temple.

The lower part of a grey granite seated statue which lay in close proximity to the royal head also provides information of considerable importance. The statuette is in every detail comparable to that of the fan-bearing Heqaemsasen, only the lower part of which was found by G. Reisner amongst the debris in front of temple B 700 at Gebel Barkal¹⁴. The two individuals wear a long coat. A medial inscription runs from the belt to the base of the clothing. The sides of the cuboid seat carry several columns of inscriptions – 5 on the statuette from Gebel Barkal, 4 from that of Kerma – but those on one of the sides of our statuette are scarcely decipherable in places, and illegible on the other. The beginning of the frontal inscription comprises the formula “All that come from the altars of [Amon] of Pnubs”¹⁵ where the name of Amon is clearly hammered out, despite the poor quality of the engraving and its modest size (fig 10).

The name of Amon had also been hammered out on the reliefs of the Thutmosis temple, where it never appears. One block from the middle part of the bottom of the main sanctuary or, possibly, of that of another chapel, bear clear traces of the hammering out of the name of Amon, which had appeared there in two different forms: the epithets “he who presides over Nubia” and “he who presides over [...]” can still be read.

8. It is the same for the small head of Amon

9. BONNET/VALBELLE 2003, in press

10. On the history of the place name, see VALBELLE 2003

11. Noted by C. Bonnet, see BONNET 2003, p. 269

12. LABOURY 1998, p. 409

13. VANDIER 1958, p. 311 ; BRYAN 1987

14. REISNER/DUNHAM 1970, pp. 28 et 30, fig. 24 et pl. XXVII

15. For the examples of this epithet of Amon datable to the New Kingdom cf. VALBELLE, 2003

Two black granite fragments of a stela of the third year of the reign of Aspelta should be noted. They were found to the west of the temple during the previous campaign and most likely belong to the same monument as two other fragments of granite found before. The appearance of the stone, the engraving and the size of the signs are similar on the four fragments, but the first ones found belong respectively to the body and the bottom of the text and out of context do not provide any significant information; the last two to be found include the coronation name of the king “Merikare” and the beginning of a date.

Bibliography

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|--------------------------------|---|
| BONNET 2001 | Charles Bonnet, “Kerma · Rapport préliminaire sur les campagnes de 1999-2000 et 2000-2001”, <i>Genava</i> , n.s., XLIX, 2001, pp. 199-218 |
| BONNET 2003 | Charles Bonnet, “Kerma · Rapport préliminaire sur les campagnes de 2001-2002 et 2002-2003”, <i>Genava</i> , n.s., LI, 2003, pp. 257-280 |
| BONNET/VALBELLE 2003, in press | Charles Bonnet, Dominique Valbelle, “Un dépôt de statues royales du début du VI ^e siècle av. J.-C. à Kerma”, <i>Comptes rendus de l'Académie des inscriptions et belles lettres (CRAIBL)</i> , May 2003 (in press) |
| BRYAN 1987 | Betsy Bryan, “Portrait Sculpture of Thutmose IV”, <i>Journal of American Research Center in Egypt</i> , 24, 1987, pp. 3-20 |
| CAMINOS 1974 | Ricardo Augusto Caminos, <i>The New-Kingdom Temples of Buhen</i> , 2 vol., Londres 1974 |
| CAMINOS 1998 | Ricardo Augusto Caminos, <i>Senna-Kumma</i> , 2 vol., London 1998 |
| LABOURY 1998 | Dimitri Laboury, <i>La Statuaire de Thoutmosis III · Essai sur l'interprétation d'un portrait royal dans son contexte historique</i> , <i>Aegyptiaca Leodiensia</i> 5, Liège 1998 |
| LECLANT 1985 | Jean Leclant, “Tanutamun”, <i>Lexikon der Ägyptologie</i> , VI/3, 1985, col. 211-215 |
| REISNER/DUNHAM 1970 | George Anrew Reisner, Dows Dunham, <i>The Barkal Temples Excavated by George A. Reisner</i> , Boston 1970 |
| VALBELLE 2001 | Dominique Valbelle, “Kerma · Les inscriptions”, <i>Genava</i> , n.s., XLIX, 2001, pp. 229-234 |
| VALBELLE 2003 | Dominique Valbelle, “L'Amon de Pnubs”, <i>Revue d'égyptologie</i> , 54, 2003, pp. 191-211 et pl. X-XII |
| VALBELLE/BONNET, in press | Dominique Valbelle, Charles Bonnet, “Amon-Rê à Kerma”, <i>Mélanges Fayza Haikal</i> (in press) |
| VANDIER 1958 | Jacques Vandier, <i>Manuel d'archéologie égyptienne</i> , vol. III, Paris 1958 |

Figure captions

- Fig. 1. Blocs on the shelves of the stone magasin in Dukki Gel
- Fig. 2. Fragment of a cartouche of Thutmose I bearing the marks of re-engraving.
- Fig. 3. Fragments of a block with sunken engraving, belonging to the exterior decoration of the Thutmose temple.
- Fig. 4. a and b. Fragment of two adjacent sides of a pillar of the Thutmose temple.
- Fig. 5. Statuette from the beginning of the 18th dynasty.
- Fig. 6. Inscription on the base of one of the statues of Tanutamun.
- Fig. 7. Inscription on the dorsal pillar of the statue of Taharqa reading “Amon-Ra who lives at Pnubs”.
- Fig. 8. Head of the statue of Anlamani bearing the horns of Amon.
- Fig. 9. Royal head from the favissa attributable to Thutmose IV.
- Fig. 10. Mention of Amon of Pnubs on the statuette of a cavalry director hammered out during the reign of Akhenaton.

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Administration

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Téléphone : +41 (0)22 418 26 00 | Télécopie : +41 (0)22 418 26 01
Messagerie électronique: genava.mah@ville-ge.ch

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