

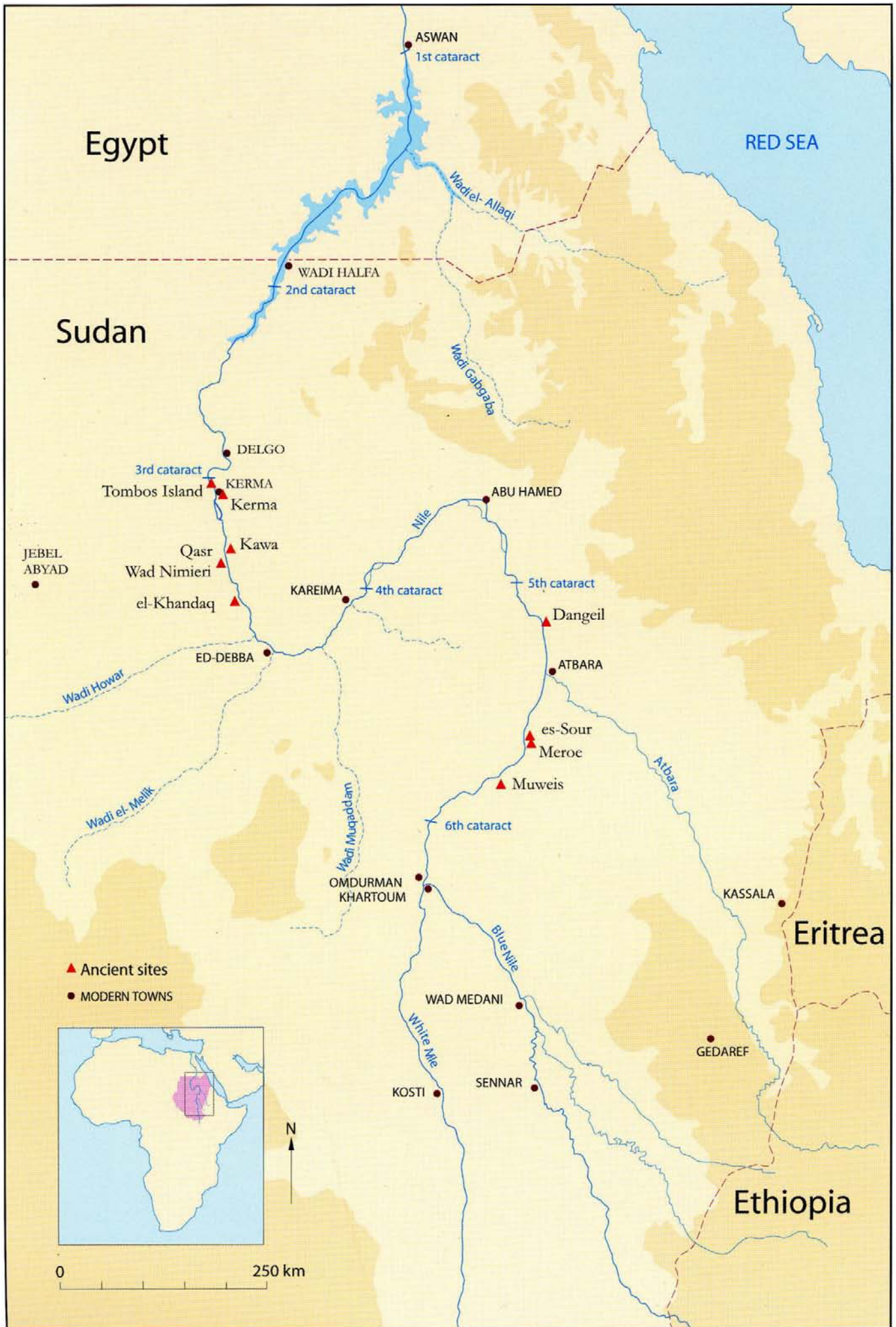
SUDAN & NUBIA

The Sudan Archaeological Research Society



Bulletin No. 12 2008





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2008

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Front cover: Rescuing rock art from the Sudan Archaeological Research Society's concession at the Fourth Nile Cataract. This collaborative project between the British Museum, Iveco and New Holland was undertaken in November 2007 and resulted in the removal, from the SARS concession, of over 50 boulders bearing rock art or used as rock gongs. The pyramid, offering chapel and enclosure wall from site 4-F-71 were also relocated. Here the work is being filmed by a cameraman from the Italian TV news channel Rei Due (photo D. A. Welsby).



The Kushite Kiosk of Dangeil and Other Recent Discoveries

Julie R. Anderson and Salah Mohamed Ahmed

Dangeil is situated approximately 350km north of Khartoum along the Nile on the eastern bank in Nile State, Sudan. The site is surrounded by a modern village and is quite extensive, measuring 300 x 400m, though there is evidence to suggest it extends further westward under the village. A large enclosure (150 x 125m) dominates the centre of the site and excavations during previous field seasons have exposed a large Amun temple within this temenos (Colour plate XIV). AMS and C¹⁴ dating of the charred temple roof beams have placed construction of the most recent incarnation of the temple in the 1st century AD.¹ This date is further confirmed by associated ceramics and fragments of cartouches of Queen Amanitore, a late Kushite ruler.

During the 2007 excavation season in the Amun temple precinct², the Berber-Abidiya Archaeological Project investigated a kiosk, situated on the processional way running between the Amun temple and the main gate into the temenos enclosure. Work also continued in the southern room of the Amun temple on Kom H and in the associated cemetery WTC, situated north-west of the site on the northern edge of the modern village.³

Exploration of the processional way between the Amun temple and the temenos gate began in 2003 with the excavation of a 6.5 x 13.5m trench. It was designated ET and situated to the west of the temple, roughly 26m in front of its main pylon. At this time a portion of the processional road, which was constructed of well-laid sandstone flagstones, was uncovered. It ran east-west and was flanked on either side by two low red-brick pedestals that had served

as the bases for statues (Plate 1). These podia were set back approximately 1.7m from the flagstone path and the remains of broken and crumbling sandstone statues were scattered both over and alongside them. Identification of the statues as rams was made from the remains of small pieces of fleece and eyes. It was by no means easy, as the majority of fragments were small and featureless; however, it may now be suggested that an avenue of rams bordered the processional route.⁴

The remains of a large structure straddling the processional way, as made evident by the foundations of two north-south orientated red-brick walls, was discovered along the western baulk edge of the ET excavation area. These walls were substantially larger than the red brick statue podia and abutted the processional road, which appeared to run east-west between them. As the season was coming to a close, this new red-brick building was not further investigated at this time.



Plate 1. The processional way, flanked by red-brick pedestals, covered with sandstone fragments of rams.

The mission returned to the site of this structure in 2006 and recently completed work there in autumn 2007. The initial ET square was extended a total of 12.5m westward along the processional route. Prior to excavation, there was little on the surface to suggest the presence of a building beneath. Unlike other portions of the site, the surface was relatively flat and level. It consisted of light brown sandy earth, with small pebbles, red brick and painted plaster fragments. Few potsherds were visible.

⁴ Along with historical inscriptions, the association of rams or criosphinxes with a temple forms one of the main criteria for the identification of a temple's principle deity as Amun, as this animal was the god's earthly embodiment (Rocheleau 2005, 148). This association aided in the identification of the Dangeil temple as one dedicated to Amun.

¹ 2 sigma calibrated result (95% probability) of the first sample was Cal BC 30 to Cal AD 130 and of the second sample was Cal AD 10 to 240. The analyses were performed by Beta Analytic Radiocarbon Dating Laboratory, Florida.

² The team consisted of Julie Anderson (co-director), Diana Harlow (archaeologist), Houiam Khalid (archaeologist), Mahmoud Soliman (archaeologist), Rihab Khider (pottery specialist, archaeologist), Caroline Rocheleau (artist, archaeologist), Salah Mohamed Ahmed (co-director), Yassin Mohamed Saeed (surveyor), Elsa Yvanez (archaeologist).

³ For further information regarding earlier field seasons at Dangeil, see Anderson and Salah Mohamed Ahmed 2006-2007, 2006a, 2006b, 2006c, 2002a, 2002b, 2002c, 1998-2002, 2000; Salah Mohamed Ahmed and Anderson 2005; 2000; Anderson *et al.* 2007.

Excavations exposed a rectangular kiosk along the processional way aligned with the axial orientation of the Amun temple and temenos gate. It measures 9.76m north-south and 11.94m east-west (Colour plate XV). The lower portions of the walls were constructed of three engaged columns connected by a screen wall on either side, and four rounded corners consisting of similarly engaged columns.⁵ The kiosk is of *pyncostylos* form in which the columns are spaced one and a half column diameters from one another. In this case, the intercolumniation is approximately 1.55m, while the columns are roughly 1.05m in diameter. A low ledge runs around the exterior and interior edge of the screen walls. As it is not fully preserved, the original height of this screen wall is uncertain, but it may be suggested that it was topped with a cavetto cornice and torus moulding, as in the Amun temple kiosk at Naqa (Naqa 151), as small red-brick cornice fragments were recovered. Based upon examples of other kiosks, only the lower portion of the kiosk was walled, while the upper part would have been open and the columns free-standing.⁶ It is also likely that the doorways would have had broken lintels in a fashion similar to other kiosks, such as the Trajan kiosk at Philae, where this part of the structure is preserved.

The kiosk was constructed of red brick and covered with painted plaster. The foundations were laid on a specially prepared surface of fine brown earth and small rounded pebbles just under 100mm thick. Bricks within the walls are a variety of sizes and forms with architectural features which normally are represented in stone being recreated here out of red brick. For example, the columns were made from a series of stacked layers of red-brick quarter circles, while torus mouldings and niches were created in a similar fashion from specially-shaped bricks (Plate 2). The floor within the kiosk consisted of well-laid, regular sandstone flagstones. Shortly after the building ceased

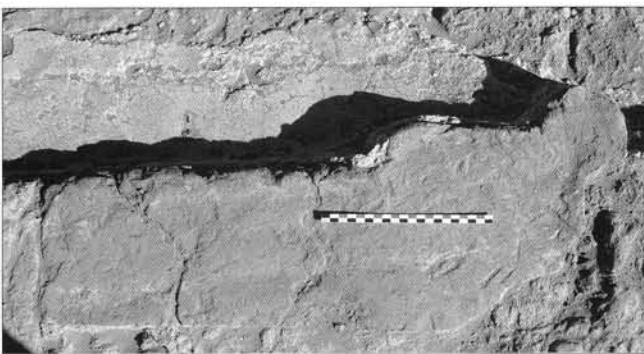


Plate 2. *Torus mould brick.*

⁵ The walls running east-west are 1.38m thick, while the north-south walls are a little thicker and slightly more inconsistent in width, ranging between 1.44m and 1.48m.

⁶ Cf. Hinkel 1989 and Ahmed 1988 for a list of late Kushite kiosks in Egypt and Sudan.

to function, a large pit was dug through the northern section of the floor and the flagstones destroyed or removed (Figure 1). Unlike the Amun temple nearby, where the remains of countless roof beams were discovered, no evidence was uncovered that would suggest the kiosk had been roofed. No traces of interior columns were found and without them, the distance to be spanned (10m) is too great. The kiosk at Meroe (M280) does contain columns and may have been roofed, whereas the kiosk at Naqa (Naqa 151) does not, so it may be implied that the presence or absence of a roof in a kiosk is optional rather than a required feature.

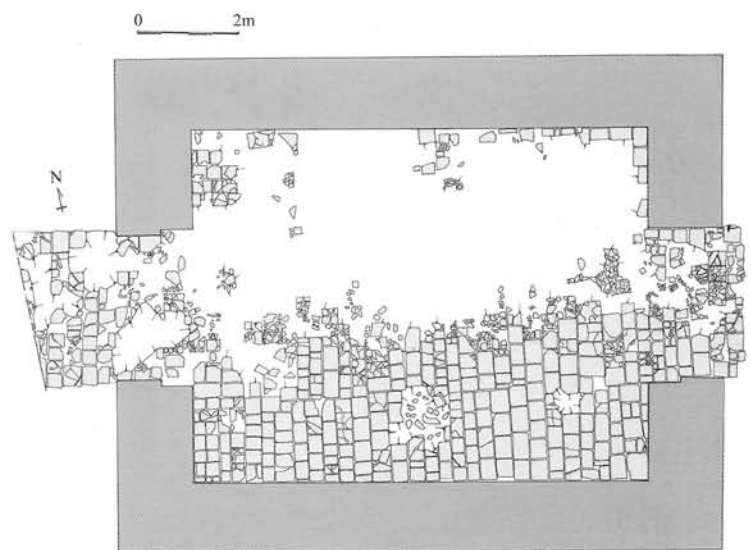


Figure 1. *Kiosk floor, square ET2 and ET3, 2007 (scale 1:150).*

The basic unit of measurement used in the kiosk's construction was the Egyptian cubit (*c.* 523mm) rather than a module based upon wall, or column width, as was used in Hellenistic planning practice. The cubit was also used in Kushite temples dedicated to Egyptian gods such as the Amun temple at Naqa, Meroe M720 and the Amun temple at Meroe (M260), whereas those buildings dedicated to indigenous deities such as the Lion Temple at Musawwarat es-Sufra (MUS 1000) were constructed using modules according to Greco-Roman architectural theory (Hinkel 1991, 221-222, 225, fn. 26). When the dimensions of the Dangeil kiosk are calculated in cubits, it is evident that the structure was laid out precisely. The measurements reveal clear harmonic proportions, symmetry and regular architectural planning principles. The interior of the kiosk is proportionally constructed at a ratio of 8:5 (Figure 2). The basic conceptual element used in construction is a rectangle whose sides exhibit this ratio, or the repetition of several such rectangles to create variations in room shape (Hinkel 1991, 221). When measured from the centre of the corner columns, the kiosk interior consists of two adjacent rectangles, each 16 x 10 cubits in size, thus giving the proportions of 8:5. The exterior of the kiosk, taken from the centre of



the corner columns, is 20 x 16 cubits giving a proportion of 5:4,⁷ and in keeping with the harmonic proportions of the building, the original height of the kiosk would have been 16 cubits or 8.37m.

However, as with elsewhere on the site, while there is evidence for work conducted by a professional builder and architect, there is also evidence for work completed by his less accomplished assistants. The layout of the kiosk and the positioning of column and torus mould segments are well-executed, thus suggesting a professional builder. A number of red-brick courses, particularly in the area of the south-east side of the east doorway, are not particularly well-

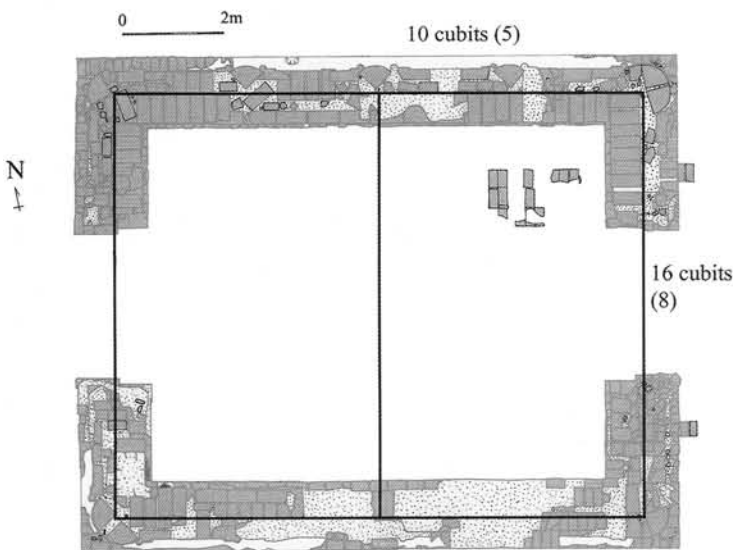


Figure 2. Kiosk walls with rectangles with 8:5 proportions indicated, square ET2 and ET3, 2007 (scale 1:150).

laid, suggesting a construction by an individual or individuals less skilled. In some cases, this may be attributed to repair, or rebuilding, but not in every instance. Further examples may be found within the temple complex. Bricks within the interior of both the temenos gate and the Amun temple pylon were laid in a haphazard, irregular fashion, which in the case of the temenos gate led to a lack of bonding between the outer brick face and the core. This may be contrasted with the precisely laid walls, foundations and columns of the temple sanctuary and dais room. This variance in the quality of construction within a single temporal building phase has been noted at other contemporary sites of the Late Kushite period, such as el-Hassa (V. Rondot 2007, pers. comm.).

Objects discovered within the kiosk were very few, amounting to 10 in total. They included a stone bead (3/07), a quartzite hammerstone (11/07) and a grinding stone (7/06), a couple of faience fragments (16/07) (5/06), part of a faience vessel (4/06) and most interestingly a finely

carved sandstone fragment with the ear and part of the face and hair of a king or fecundity figure (10/03) (Plate 3). The proportions of the ear and face are smaller than those of the sandstone figures discovered on the columns and sanctuary facings in the Amun temple suggesting that the block came from elsewhere. If the upper walls of the kiosk were faced with sandstone blocks set on red-brick foundations, it is possible that this block originated there. The discovery of a couple of sandstone cornice corners indicates that sandstone blocks were utilized in parts of the kiosk superstructure, but whether they were more widely used in the upper portions of the screen walls remains unknown. It also appears that the kiosk's column capitals were of sandstone. The worn remnant of a capital was discovered adjacent to the processional way in 2003, to the south east of the kiosk. The usage of mixed building materials, including mud brick, red brick and sandstone, in the associated Amun temple indicates that this option need not be precluded.

Plaster, painted yellow (Munsell 10YR 7/8), red (Munsell 10R 5/8), light blue, or some combination thereof, was the most common find during excavation with over 6000 fragments being recorded in 2007 alone. The pigments used have been identified by Raman spectroscopy, with the red and yellow being haematite and a highly crystalline goethite ochre respectively and the blue, a copper-silica compound (CaCu[S¹⁴O¹⁰]) commonly known as Egyptian blue. Two plaster layers were evident on the architectural fragments and *in situ* architecture; an underlying layer of thicker, coarse, white plaster, scored with striations, over which a finer, finishing layer was applied and later painted. The striations on the under-layer improved the adherence of the finer, upper layer.

From traces of painted plaster remaining on the walls and architectural elements and from the distribution of the various colours within the site, it is possible to suggest part



Plate 3. Carved sandstone fragment depicting the ear of a king or fecundity figure.

⁷ For an extensive discussion of harmonic proportions in late Kushite architecture see Hinkel 1989; 1991; 1997.

of the decorative programme of the kiosk. That the structure was very brightly coloured is somewhat of an understatement. On the exterior, each engaged column was sandwiched between two torus-bead mouldings. The exterior screen walls, ledge and the torus-bead mouldings were yellow, while the columns were blue. A blue band, 180mm wide, abutted the torus moulding on the side opposite the column and a thinner red band, 10-15mm wide, ran adjacent to the blue band opposite the moulding (Colour plate XVI). The entire structure was topped by a cornice, painted with alternating stripes of red and blue enclosed within yellow borders (Colour plate XVII) and column capitals that were red and blue. Apart from the broad application of colour, there is no indication of decorative scenes on the kiosk exterior. There is less evidence for the decorative programme on the kiosk interior. It is, however, evident that the ledge and wall background were blue, at least on the lower section of the walls. A decorative red and white *ḥ*-knot frieze, sitting on top of a broad, yellow, horizontal band, ran along either the top or bottom of the wall, but as no elements of this design were found *in situ*, its exact position is uncertain.

Data collected on site, including the painted plaster, architectural fragments and *in situ* archaeological remains, as well as the application of architectural harmonic proportions and analogies drawn from other contemporary kiosks, such as the one at Naqa, make it possible to reconstruct much of the original appearance of the Dangeil kiosk, as is shown in Colour plate XVIII. It may have appeared even slightly brighter. Of this reconstruction, the precise architectural flourishes and colour distribution on the sandstone capitals are unknown, though there is evidence to indicate they were blue and red. The architrave beneath the cornice is also inserted. It may have been constructed of sandstone or wood, though at this point archaeological evidence is lacking. That it existed is certain. The majority of the cornice was constructed of individual moulded red bricks placed side by side, thus an underlying solid base would have been required to provide support.

The kiosk is situated not quite halfway along the processional route from the temenos gate to the Amun temple and was certainly the focal point of the cult in this area.⁸ The structure was fully incorporated into the overall plan of the temple precinct and was constructed as a cohesive unit within it. The construction technique and materials used suggest that it was built in the 1st century AD, at the same time as the latest incarnation of the Amun temple, and presumably formed part of Amanitore and Natakamani's overall building programme.

The early Kushite rulers, beginning with Taharqo, embarked on an ambitious construction project wherein, among other things, entrance porches and kiosks were added

to several major temples in Egypt, notably at Thebes, and in Sudan. In addition to the kiosk, there appears to be a porch in front of Dangeil's Amun temple, consisting of at least two rows of two columns on each side of the processional way (Figure 3). D. Arnold notes that these features become characteristic components of Egyptian Late Period (747BC ff.) temples, although they are attested earlier (1999, 282) (i.e. White Chapel of Senwosret I at Karnak). That this practice also continued into the late Kushite phase in Sudan long after Kushite withdrawal from Egypt indicates that these structures formed an integral functional part of Kushite cultic rites. The question remains as to what purpose they actually served. Though within the temple temenos, the position of the kiosk (being situated in the middle of the paved route, clearly devised for traffic between the temple and the monumental temenos entrance), suggests that it was a more public space than the sacred space of the temple itself and one to which the surrounding population likely had access, at least at certain designated times. Thus the kiosk could have served as a point of engagement between the local people, Amun, and the power of the state as represented by Amun.

Kiosks, or kiosk-like structures, appear in Egyptian tomb paintings and reliefs such as that found in the tomb of Amenmose at Dra abu'l Naga (c. 1300BC) (Wilkinson and Hill 1983, pl. 36). In these representations, kiosks are shown as small sanctuaries situated along processional routes. They served as rest stops and places of protection, for the god's sacred boat, during festivals at which time the god, housed within a shrine on the barque, left the safety and sacred space of the temple to travel, visit other gods, participate in festivals, etc. It may be suggested that the kiosk served a similar function in Kush.

It is evident that this practice of procession continued during the Kushite 25th Dynasty in the 7th century BC. Several relief blocks, from the Amun temple at Sanam Abu Dom, probably constructed by Taharqo, depict a procession, or processions, of the sacred barque of Amun (Griffith 1922, 95-6, pls XXV, XXVII) as identified by the ram-headed aegis on the prow and/or stern of the vessel (Figure 4). The barque is carried upon the shoulders of several individuals, presumably priests, and preceded by a priest wearing a double-plumed headdress with a uraeus(?) on the forehead and streamers trailing down behind. This crown type, consisting of a skullcap, diadem, uraeus (uraei), streamers and a superstructure of two tall plumes, is specifically associated with the god Amun (Török 1987, 18). The celebrant holds a tablet(?) from which he appears to be reciting and the procession is greeted by an individual offering incense. In one scene, the sacred boat appears to be heading towards a grove of trees and a small shrine or kiosk (Griffith 1922, pl. XXV) wherein presumably the god would have rested. Furthermore, reliefs in Temple B700 at Jebel Barkal depict the barque of Amun of Napata leaving the Great Amun temple (B500) and arriving in Temple B700.

⁸ The kiosk is located 31.5m in front of the entrance to the Amun temple and 23.5m from the main gate into the temenos.

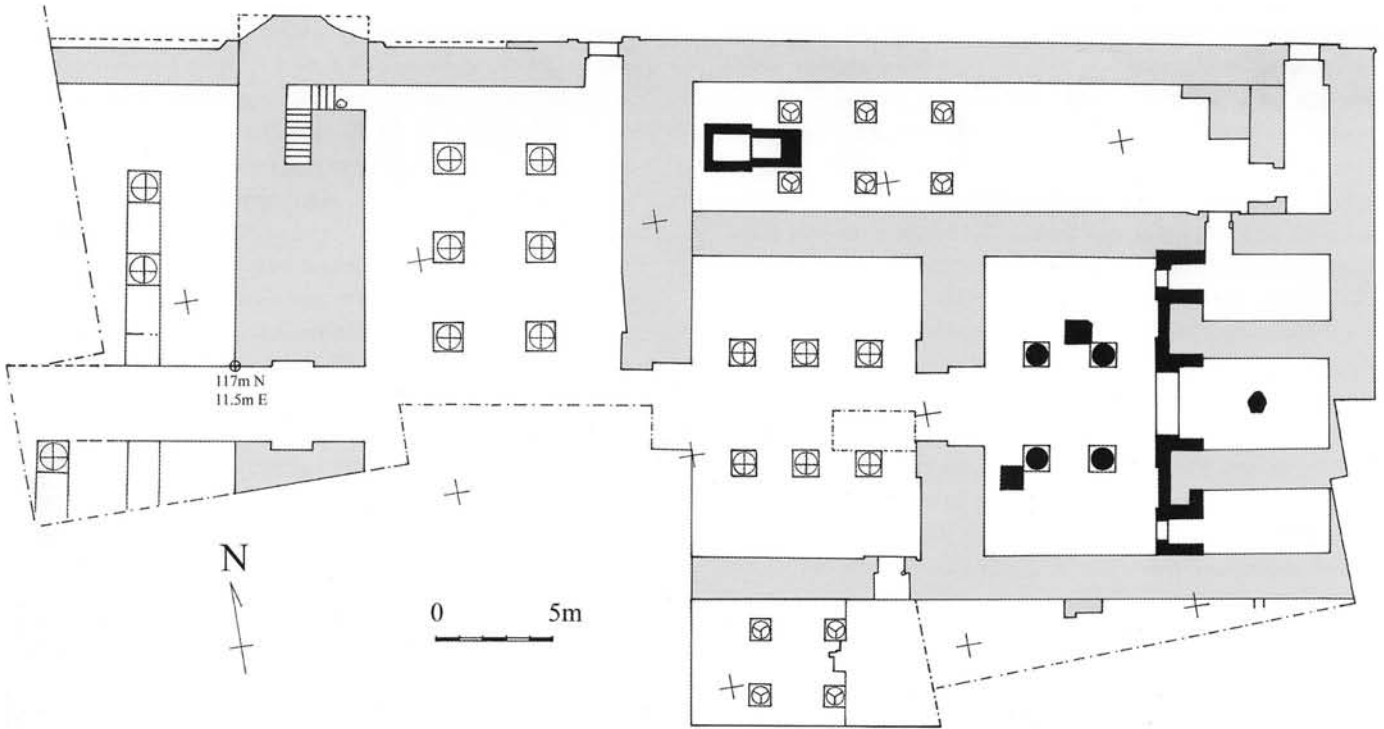


Figure 3. Kom H, Amun temple plan with the entrance porch on the left.

The inscription on the B700 barque stand indicates that it was specifically made for the barque of Amun of Napata (Török 2006, 236). This indicates that the Nubian Amun moved around the sacred landscape, at least during the early Kushite period.

Of Late Kushite date,⁹ reliefs on the west lower podium wall of the Sun Temple (M250) at Meroe (cf. Hinkel 2001, I.2b, pl.C5) have long been thought to represent the Sun Temple itself, along with its pylon, processional way and kiosk standing in front (Garstang 1912, 48; Török 1997b, 108). In the image, the kiosk, situated in the middle of the relief, is approached by soldiers on foot and horsemen from the right. No barque or sacred procession appears to be depicted.

The Sun Temple has been hypothesized as being dedicated to the god Amun, largely based upon the use of the Egyptian cubit in its construction (Hinkel 2001, I.1, 6-7). As the structure itself does not conform in plan to that of other securely identified Amun temples, it is debatable whether it was dedicated to Amun or to another god, perhaps of Egyptian origin.¹⁰ Fur-

ther, the kiosk associated with the Sun Temple differs from those found with other firmly identified Amun temples in that it is situated outside the temenos enclosure, and is not directly in line with the processional way into the temple.

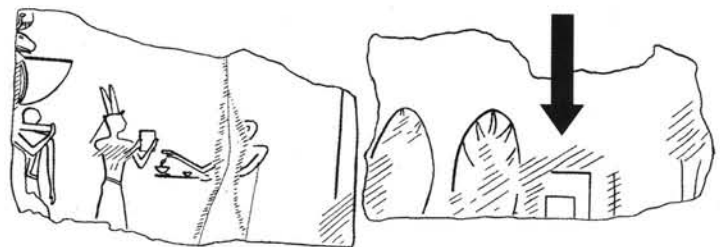
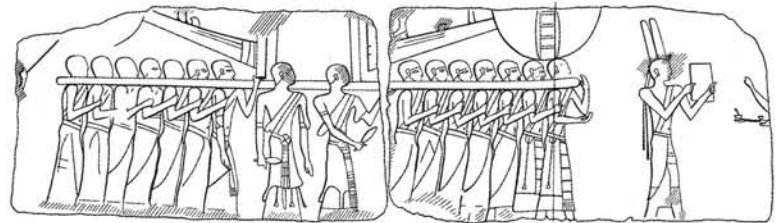


Figure 4. Relief blocks from Sanam Abu Dom depicting the procession of the sacred barque of Amun (Griffith 1922, pls XXV, XXVII).
The arrow indicates a possible kiosk.

⁹ The date of the Sun Temple and various structural features has been much debated; however, the current structure likely dates between 2nd-1st centuries BC (Török 1997b, 110-111).

¹⁰ Cf. C. Rocheleau 2005, for a discussion of the criteria for identifying Amun temples in Nubia.

The kiosk could only be entered from the west side and as such its function has been postulated as that of a small chapel, rather than for transitory usage in a barque or other procession (Török 1997b, 112). It is uncertain as to whether the function of a kiosk was cult-specific or if they each

fulfilled a similar role in relation to their associated temples. In light of the differences in architecture and position within the sacred landscape, it seems that the first option is more probable.

No traces of a stone, or brick, socle upon which to place the sacred boat were discovered within the Dangeil kiosk, but considering the extent of damage to the floor, this is not necessarily surprising (Figure 1). Alternatively, a barque stand may have been made of a perishable material such as wood and thus not survived or it may have been portable. Consequently, it is not inconceivable that the Dangeil kiosk could have housed the god in his sacred boat when he travelled around for various festivals.

However, the inherent danger with this theory is that it makes the assumption that cultic ritual was not modified over time. In examining kiosks associated with securely identified Amun temples, both the Sanam Abu Dom and Jebel Barkal evidence comes from the 7th century BC whereas the Dangeil kiosk is of a much later date (1st century AD). A combination of Egyptian, Greco-Roman and indigenous influences become apparent in many aspects of Kushite culture around the 3rd century BC. At this time, the cults of Kushite gods become more visible and there is a “reemphasis on the Kushite features of the Nubian Amun gods” (Török 1997a, 500). At this time, L. Török notes that the most dominant feature of the Kushitic Amun becomes his warrior-hunter quality, a characteristic shared with the indigenous gods such as Apedemak, Arensnuphis, and Sebiuwerker (1997a, 500).¹¹ Further, late Kushite funerary chapels include non-Egyptian scenes which “suggest(s) a Meroitic reinterpretation of borrowed rites” (Török 1997a, 514). In light of the increased prominence of local culture and religion, it is not beyond possibility that the liturgy, use of the kiosks and indeed of the Amun temples themselves also changed, or underwent modification in response to the needs of the indigenous cult. As a consequence, parallels drawn from early Kushite cult practices or from rituals conducted in Egypt which appear to be similar may in fact be incorrect, superficial or misleading. One such example of this may be derived from Dangeil itself, where the usage of offering moulds in the Amun temple was initially taken to imply that wheat bread was being produced for the god as in Egypt; however, archaeobotanical analysis of the moulds indicated that either a sorghum porridge or beer was being offered (Anderson *et al.* 2007). In this case, the offering ritual borrowed from the Egyptians was reinterpreted by the late Kushites to suit their own requirements. Essentially, because rites and practices are contextual, at this point, the extent to which the emergence of local influences affected or changed the liturgy of the cult of Amun and subsequent usage of the god’s buildings is unknown.

¹¹ P. Wolf has also discussed the expression of the warrior aspect of Amun at the late Kushite site of Hamadab (2006, 252).

Bibliography

- Ahmed M. Ali Hakem. 1988. *Meroitic Architecture*. Khartoum.
- Anderson, J. A. C. D’Andrea, A. Logan and Salah Mohamed Ahmed. 2007. ‘Bread Moulds from the Amun Temple at Dangeil – An Addendum’, *Sudan & Nubia* 11, 89-93.
- Anderson, J. and Salah Mohamed Ahmed. 2006-2007. ‘The ‘Throne Room’ and Dais in the Amun temple at Dangeil, Nile State Sudan,’ *CRIPEL* 26, 29-39.
- Anderson, J. and Salah Mohamed Ahmed. 2006a. ‘Bread Moulds and “Throne Halls”’: Recent Discoveries in the Amun Temple Precinct at Dangeil’, *Sudan & Nubia* 10, 95-101.
- Anderson, J. and Salah Mohamed Ahmed. 2006b. ‘Revealing Terra Incognita: Dangeil, Sudan’, *Current World Archaeology* 19, 23-30.
- Anderson, J. and Salah Mohamed Ahmed. 2006c. ‘Painted Plaster: A Glimpse into the Decorative Programme Used in the Amun Temple at Dangeil, Sudan,’ *Journal of the Society for the Study of Egyptian Antiquities* 32, 1-15.
- Anderson J. and Salah eldin Mohamed Ahmed. 2002a. ‘Recent Excavations at Dangeil, Nile State,’ *A Tribute to Excellence. Studies Offered in Honor of Ernö Gaál, Ulrich Luft, L. Török. Studia Aegyptiaca* XVII, 45-52.
- Anderson, J. and Salah eldin Mohamed Ahmed. 2002b. ‘Archaeological Reconnaissance in the Berber-Abidiya Region, 1997. A Post-Meroitic Double-Shaft Tomb in El-Fereikha,’ *Archéologie du Nil Moyen* 9, 15-29.
- Anderson, J. and Salah eldin Mohamed Ahmed. 2002c. ‘Recent Fieldwork conducted by the Berber-Abidiya Archaeological Project,’ in D. Welsby and V. Davies (eds), *Uncovering Ancient Sudan*. London, 44-45.
- Anderson, J. and Salah eldin Mohamed Ahmed. 1998-2002. ‘Archaeological Reconnaissance in the Berber-Abidiya Region,’ *Kush* 18, 25-34.
- Arnold, D. 1999. *Temples of the Last Pharaohs*. New York and Oxford.
- Garstang, J. 1912. ‘Second Interim Report on the Excavations at Meroe in Ethiopia. Part I. Excavations’, *Liverpool Annals of Archaeology and Anthropology* 4, 45-65.
- Griffith, F. Ll. 1922. ‘Oxford Excavations in Nubia’, *Liverpool Annals of Archaeology and Anthropology* 9, 67-124.
- Hinkel, F. 1989. ‘Säule und Interkolumnium in der meroitischen Architektur. Metrologische Vorstudien zu einer Klassifikation der Bauwerke’, *Meroitica* 10, 231-268.
- Hinkel, F. 1991. ‘Proportion and Harmony the Process of Planning in Meroitic Architecture’, in W. V. Davies (ed.), *Egypt in Africa. Nubia from Prehistory to Islam*. London. 220-33.
- Hinkel, F. 1997. ‘Meroitic Architecture’, in D. Wildung (ed.), *Sudan Ancient Kingdoms of the Nile*. Paris-New York, 392-416.
- Hinkel, F. 2001. *The Archaeological Map of the Sudan. Der Tempelkomplex Meroe 250*. Supplement I.1; Supplement I.2b. Berlin.
- Rocheleau, C. 2005. *Amun Temples in Nubia. A comparative study of New Kingdom, Napatan, and Meroitic temples*. PhD Thesis. University of Toronto.
- Salah eldin Mohamed Ahmed and J. Anderson 2000. ‘Prospections archéologiques et fouilles de sauvetage dans la région de Berber-Abidiya (1997 et 1999),’ *CRIPEL* 21, 17-37.
- Salah Mohamed Ahmed and J. Anderson. 2005. ‘Le temple d’Amon à Dangeil (Soudan),’ *Bulletin de la Société Française d’Égyptologie* 162, 10-27.
- Török, L. 1987. *The Royal Crowns of Kush*. BAR International Series 338. Oxford.
- Török, L. 1997a. *The Kingdom of Kush. Handbook of the Napatan-Meroitic Civilization*. Leiden.
- Török, L. 1997b. *Meroe City. An Ancient African Capital. Part I. The Text*. London.



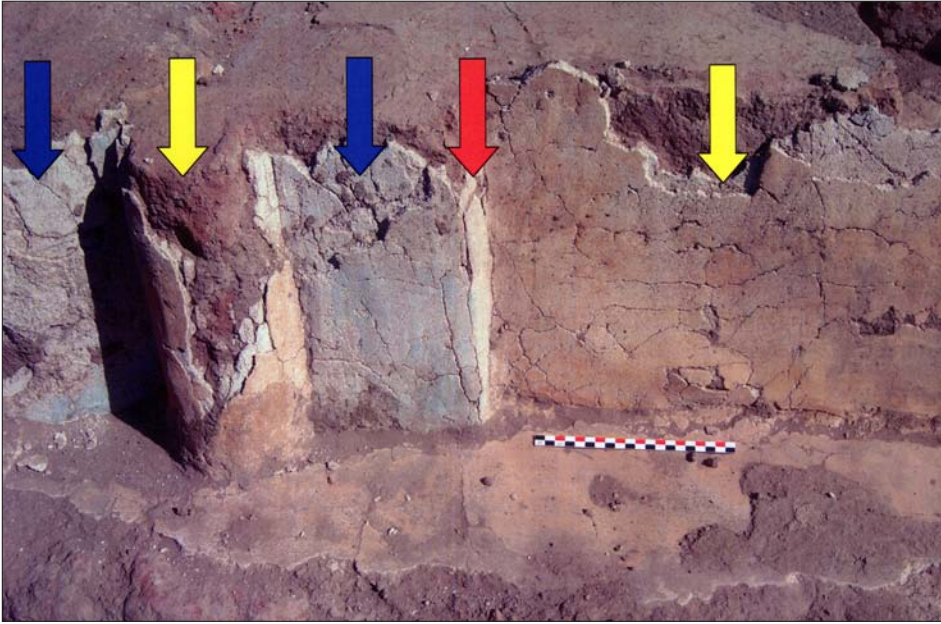
-
- Török, L. 2006. 'Space, temple, and society. On the built worldview of the Twenty-Fifth Dynasty in Nubia', in I. Caneva and A. Rocatti (eds), *Acta Nubica. Proceedings of the 10th International Conference of Nubian Studies. Rome 9-14 September 2002*. Rome, 231-238.
- Wildung, D. and S. Schoske. 1999. *Die Stadt in der Steppe*. Berlin.
- Wilkinson, C. and M. Hill. 1983. *Egyptian Wall Paintings*. New York.
- Wolf, P. 2006. 'Temples in the Meroitic South – Aspects of Typology, Cult and Function', in I. Caneva and A. Rocatti (eds), *Acta Nubica. Proceedings of the 10th International Conference of the Society of Nubian Studies, September 9-14, 2002*. Rome, 239-262.



Colour plate XIV. Dangeil. Satellite image of Dangeil, with the temenos enclosure indicated.



Colour plate XV. Dangeil. The kiosk at the end of excavation, with the gate into the temenos in the background.



Colour plate XVI. Dangeil. Painted plaster traces on an engaged column and torus moulding. The colour of each area is indicated by a similarly coloured arrow above.

Colour plate XVII. Dangeil. Sandstone cornice fragment with traces of painted plaster.



Colour plate XVIII. Dangeil. Reconstruction of the decorative programme on the exterior of the Dangeil Kiosk. (Kiosk diagram after F. Hinkel's reconstruction of Naqa kiosk 151 in Wildung and Schoske 1999, 58).

