Sudan & Nubia

The Sudan Archaeological Research Society

Bulletin No. 18 *2014*


LIBYA
EGYPT
SUDAN
CHAD
ERITREA
ETHIOPIA
KENYA
UGANDA
ZAIRE
SOUTH SUDAN
CENTRAL AFRICAN REBUBLIC
Red Sea
ASWAN
1st cataract
2nd cataract
3rd cataract
4th cataract
5th cataract
6th cataract
Korosko Road
Wadi Allaqi
Wadi Gabgaba
Dal
Kawa
H29
H25
Magashi
Dam-Debba
Kurgus
Dangeil
Meroe
Hamadab
Musawwarat es-Sufra
Wad ben Naqa
KHARTOUM
Wadi Howar
El Milk
Wadi Muqaddam
Atbara
Blue Nile
White Nile
Dhang Rial
Jebel Tukyi
Maridi
JUBA
Lulubo
Jebel Kathangor
Jebel Kachinga
Lokabulo
Itohom
Laboré
Ancient sites
MODERN TOWNS
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Contents

Front cover: Examining the pharaonic inscriptions at Khashm el-Bab on the Korosko Road, November 2013 (photo: D. A. Welsby).

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Dangeil 2013-14: porches, ovens and a glimpse underground

Julie R. Anderson, Mahmoud Suliman Bashir and Salah Mohamed Ahmed

Excavations at Dangeil, Nile State, between October and December 2013 focused upon features within the temenos enclosure of the 1st century AD Amun temple and upon the nearby cemetery WTC. In addition, the preparation of a site management and presentation plan for the temple site was initiated (Plates 1 and 2).[1] Further work conducted between February and March 2014 concentrated on ground penetrating radar and magnetometry surveys on the temple site and WTC cemetery and upon an evaluation of the previous autumn's finds on *Kom* K.

Amun temple temenos wall

The Amun temple's temenos wall is visible on the surface as a low ridge that rises over half a metre above the surrounding plain.[2] In order to better understand the construction of this wall, a 10 x 10m excavation square (designated R -NW) was opened over the north-west corner of the enclosure. The external wall faces and foundation are constructed of red bricks while the core is of mud brick. The north and west walls are 1m thick and preserved up to 11 courses high (*c.* 1.1m) above the foundations (Figure 1). The bricks used in the wall's construction were a standard size (340-360 x 180 x 80-90mm), the size also used in the Amun temple and kiosk. Evidence of timbering used lengthwise was found in the lower courses presumably to add strength and elasticity to the overlying structure (Plate 3). No evidence for the use or inclusion of transverse wooden beams in the foundations has been discovered thus far. A red-brick channel was constructed through the west wall presumably for drainage as it would have enabled water to flow through the wall from east to west during the rainy season thus preventing flooding.[3]

Abutting the corner on the west side was another wall, running east to west, of similar construction, materials and dimensions. It shared the same alignment as the north temenos wall and was contiguous with it. This appears to be the north wall of a second enclosure related to *Kom* A, a large unexcavated mound south west of the Amun temple (*Kom* H). The foundation trench dug for this later wall was clearly visible and cut through a hard-packed surface associated with the Amun temple enclosure wall. Following the addition of this second enclosure wall, the corner of the Amun temple temenos was reinforced on the north and west sides with two subsidiary walls which increased the wall width at the corner to *c.* 1.4m.

Evidence for secondary reuse of this area came in the form

Plate 1. Kite photograph of the Amun temple temenos enclosure, from the north east (photo: Y. Guichard).

[1] Dangeil is located on the right bank of the Nile about 350km north of Khartoum. It is in the Berber-Abidiya region south of the Fifth Nile Cataract. The 2013-2014 team consisted of Julie Anderson (co-director), Salah Mohamed Ahmed (co-director), Mahmoud Suliman Bashir (acting co-director, archaeologist), Abdelhaleem Haroun Abou (magnetometry) Matt Berry (ground penetrating radar/magnetometry), Rebecca Bradshaw (anthropologist), Agnieszka Dobrowolska (architect), Jaroslaw Dobrowolski (architect), Fakhri Hassan Abdula Hassan (archaeologist), Yves Guichard (kite photography), Francesca Guiducci (conservator), Roksana Hadjuka (archaeologist, artist), Sophie Hay (ground penetrating radar/magnetometry), Hind elBadwy (archaeologist), Stephen Kay (ground penetrating radar/magnetometry), Sébastien Maillot (archaeologist), Mohamed Abdelwahab Mohamed-Ali (magnetometry), Mohamed Saad Abdalab (bioarchaeologist), Musaab Hussein Eltoum (magnetometry) Osman elFadl (conservator), Anna Pieri (bioarchaeologist), Tracey Sweek (chief conservator), Julian Reade (registrar), Rihab Khidir (archaeologist), Rowide Rashid (archaeologist), Yassin Mohammed Saeed (surveyor).

[2] A similar enclosure wall, though slightly earlier in date, has been noted at Hamadab where it has been referred to as a town wall or fortification wall (Wolf *et al.* 2014, this volume pg. 106).

[3] Similar channels are constructed through modern walls in the region for this purpose.

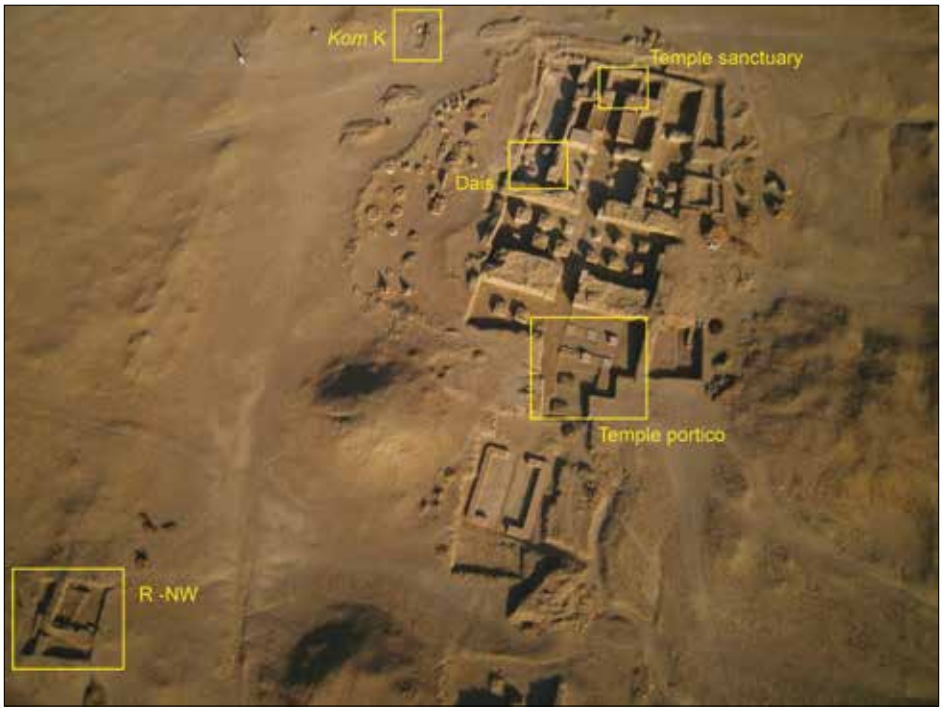

Plate 2. Kite photograph of the Amun temple temenos enclosure with 2013-2014 excavation areas marked (photo: Y. Guichard).

Plate 3. Timber beam in lower red-brick facing of the western temenos wall.

of a somewhat irregular, mud-brick wall that abutted the west enclosure wall creating a small room in the corner within the enclosure. Occupation debris and traces of organic materials suggest this space had been used to house animals. Removal of this secondary wall revealed another yet earlier mud-brick wall, oriented at a slightly different angle from the later one. It also formed a small room within the corner and abutted the northern and western temenos walls. This structure stood up to four courses high and was a single brick wide. On its east side was a small grinding installation suggesting this area had been used for food processing (Plate 4). The bricks in both walls were the same size as those used in the temenos wall.

The corpus of pottery from R -NW primarily contained late Kushite forms of which a significant number were kitchen vessels and storage jars. There were also a significant number of animal bones, stone grinders, pounders and small querns and a few early Christian sherds. Among the finds associated with the secondary occupations were two Meroitic ostraca and one Greek ostracon reading …H/I?]NOC (Plate 5). Work on the secondary occupation deposits and foundations in this area will continue next season.

Kom **K**

Work also continued on *Kom* K, a low mound situated behind, and to the east of, the Amun temple. Excavations initiated here in 2005 uncovered over 1,200,000 temple offering cone fragments, ash, charcoal and grinding stones but little evidence of cooking installations (Anderson and Salah 2006a).[4] A 6 x 2m trench, oriented east to west and designated K1 was opened on the north-west edge of the mound. The surface consisted of loose earth and sand, mixed with ash, numerous offering mould sherds, gravel (30-40mm in size) and some red-brick fragments. Over 20,000 offering cone sherds were recovered from the upper layers of this small trench.[5]

At 200mm below the surface, the top of three cooking installations

Plate 4. Secondary occupation and grinding installation within the north-west corner.

[4] Ceramic offering cones have been referred to elsewhere as bread cones or bread moulds (i.e. see Jacquet-Gordon 1981); however, as it has been demonstrated by various archaeobotanical analyses of these ceramics and associated artefacts that sorghum was the grain used for offerings at Dangeil (thus excluding the possibility of a leavened bread product, see Anderson *et al.* 2007) , they are described here as offering cones.

[5] Initially buckets of sherds were counted so that an estimate of number of cone sherds per bucket could be established. On average each bucket contained 890 ceramic cone fragments of which 1.3% were bases (e.g. approximately 12 bases per bucket).

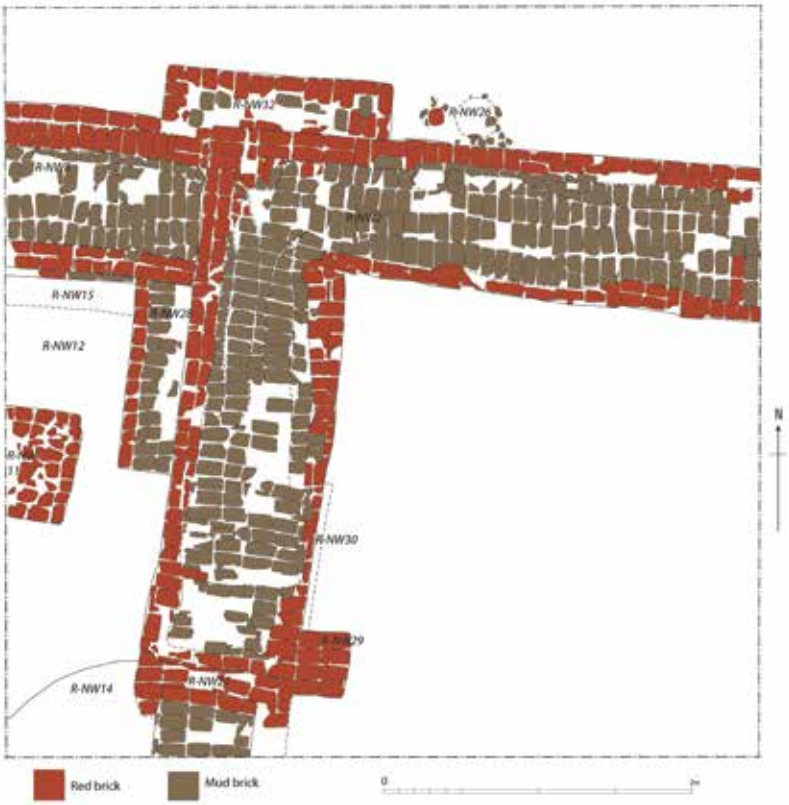

Figure 1. North-west corner of the Amun temple enclosure (R -NW) (drawn by R. Hadjuka, illustrated by C. Thorne) (scale 1:50).

Plate 5. Greek ostracon from settlement debris within the north-west corner of the temenos enclosure.

were uncovered. Further excavation revealed four more. All were found in the middle of the trench surrounded by ash and mould sherds (Plate 6). The latter four ovens were sealed beneath an irregular mud surface and belonged to an earlier phase than the first three discovered. These ovens have a diameter of 300mm to 350mm and were set into the surrounding compact surface.

One oven (K1-8) was sectioned and excavated. It was a reused amphora with its upper half removed (Plate 7). A potsherd secured with mud had been placed beneath the vessel's conical base to serve as a support. Initially, a hole had been dug to accommodate the amphora and support. This hole was filled with loose earth that became fire-reddened presumably as a result of heat produced within the ceramic. The vessel exterior does not exhibit direct signs of charring. The interior of the vessel was filled with ash, charcoal and mould fragments.

Amun temple processional way and porch

Excavations were also conducted in front of the temple on the south side of the processional way. A rectangular red brick and plaster ram plinth, the top of which had been excavated in 2012 (ET6-11), was further exposed in order to examine its foundations (Anderson and Salah 2013, 70-71). Excavations were extended eastward towards the temple pylon and a second plinth was unearthed (ET6-24) (Plate 8). Two foundation courses of red brick extended beyond the north and south upper faces of the ram plinths and were not laid precisely in line with the overlying brickwork. Yellow painted lime plaster was preserved on both bases. The sandstone processional way running between the kiosk and the

Plate 6. The tops of ovens in K1 exposed (photo: S. Maillot).

Plate 7. Section of oven K1-8 (photo: S. Maillot).

Plate 8. Statue plinths on the south side of the temple processional way. (Left ET6-24, Right: ET6-11) (photo: S. Maillot).

Amun temple was constructed before the statue plinths and the plinths' foundation trenches cut through the layer upon which the processional way was founded. South of the paved processional way the circulation level between the kiosk and the avenue of rams was of packed earth.

In front of the temple's pylon, abutting both the west face of the pylon and the processional way on its south side, were a series of substantial low red-brick walls and column bases which formed a portico or porch leading to the temple's entrance (Plate 9). Remains of burnt palm beams, charcoal and ash deposits suggested that this area had been covered with a wooden roof. The low walls stood four courses high

Plate 9. Portico in front of the Amun temple.

(*c.* 0.4m), were 1.30m thick and had been plastered with white lime. These walls were founded upon two courses of headers that projected half a brick (*c.* 170mm) outward beyond the upper wall face. This type of stepped foundation is found throughout the temple.

The bricks used in the screen walls are the same size as those within the temple proper (340-360 x 180 x 80-90mm). The construction of the columns, using drums consisting of red-brick quarters mortared together with mud and galletting, is also the same as that within the temple. This suggests that the porch was constructed as part of the overall temple complex and not added as an afterthought. The columns were constructed and finished with lime plaster prior to the addition of the upper courses of the screen walls.

The southern screen wall continued westward beyond the portico suggesting that there might be a colonnade running between the Amun temple pylon and the gate into the temenos, thus potentially flanking the avenue of rams and the kiosk.[6] This remains to be confirmed by further excavation. A substantial hole had been dug into the southern screen wall at its exposed west end. This hole contained charcoal, ash and some large wood fragments possibly suggesting that, should a colonnade have existed, it may partly have been of wood (Plate 10).

Plate 10. Excavated western end of the southern screen wall of the portico, with hole in the west end (photo: S. Maillot).

Few objects were recovered from the area of the portico. Those that were included ceramic drainpipe fragments from the temple pylon, part of a faience amulet of a deity (likely Amun) consisting of part of a sun disc and two uraei, one with a white crown and the other with a red crown, a Meroitic ostracon and a game-piece or child's toy.

In the 7th century BC, Taharqo embarked on a construction plan wherein porticos and kiosks were added to several temples in Sudan and Egypt.[7] These structures must have formed an integral part of Kushite cultic rites and the Kushites continued to build them even after they had withdrawn from Egypt, but what function did they serve?[8] 'Meroitic

[6] Colonnades have been noted at several Kushite temple sites. See further Welsby 1996, 120.

[7] I.e. the Kushite and Ptolemaic portico on the temple of AmunRa-Montu at Karnak (Arnold 1999, fig. 30; Leclant 1953). For a list of porches build in Egypt during the Kushite period see Arnold 1999, 57-8, 282-285. See also Török 2002, 159, n. 542 for further examples of Kushite porticos and their prototypes in Egypt and Sudan. Porticos and kiosks become characteristic components of Egyptian temples of the Late Period (747 BC and following) although they are attested earlier (Arnold 1999, 282).

[8] For further discussion of the kiosk and its function at Dangeil, see

sacred architecture retains features inherited from the 25th Dynasty and the Napatan period, like the cult of Amun and its relation to the legitimation of royal power, resulting in the design of traditional temple structures related to his cult – as an element of continuity and tradition' (Wolf 2006, 237). According to D. Arnold, 'entrance porches and kiosks of late Egyptian temples were later transformed into the *komasterion* for the grouping of the participants in processions (Arnold 1999, 313),[9] and further, 'the theatrical role of church portals in the Middle Ages, not only as the background for processions but also as a place of judgement and completion of treaties, has its forerunners in the 'site of giving *maat* ' that was attached to Egyptian temple gates' (Arnold 1999, 313).

Archaeological evidence indicates that during the early Kushite period, the Kushites conducted processions. Several relief blocks from the Amun temple at Sanam Abu Dom depict a procession or processions of the sacred barque of Amun (Griffith 1922, 95-6, pls XXV, XXVII), while reliefs in temple B700, dedicated to Amun of Pnubs, at Jebel Barkal depict the barque of Amun of Napata leaving temple B500 and arriving at B700. An inscription on the B700 barque stand indicates it was made for Amun of Napata, the resident of B500, not for Amun of Pnubs (Török 2006, 236). While later evidence is somewhat lacking, L. Török observes that the large number of Kushite kiosks demonstrates the important role processions played within Kushite society throughout the entire Kushite period (Török 2002, 273).

A temple portico may have been used by the Kushites for numerous purposes.[10] At the very least a porch forms a place to escape into the shade out of the hot desert sun. A portico is an intermediary space being more public and accessible than the sacred area within the sanctuary itself and thus more available to the populace. Situated on the processional avenue it was interconnected with the temple, kiosk and with the secular world outside the temenos. Like the kiosk, it may have served as a place for the general population to engage with the god Amun and with the business of the state as represented by Amun.

Amun temple sanctuary

In antiquity, robbers dug a large hole through the sandstone floor in the main sanctuary of the Amun temple. The hole and floor surface were subsequently sealed by debris from a fire that appears to have been started in the staircase of the southern half of the main entrance pylon and which consumed the temple (Anderson and Salah Mohamed Ahmed 2006b, 30; Anderson *et al.* 2012, 72, 74) and by associated destruction debris. There were rectangular lever marks on the flagstones around the edges of the hole and displaced floor slabs, loose brown earth and small sandstone fragments within its fill. Beneath the flagstone flooring were two substantial sandstone blocks bearing chisel marks on their surfaces, the largest measuring 1.24 x 0.60 x 0.20m (Plate 11). The westernmost slab had a circular depression carved in it, slightly offset from centre (250 x 240mm; depth 90mm).

Plate 11. Robber hole in the sandstone floor of the Amun temple sanctuary.

These blocks likely served as a foundation for a heavy installation, such as an altar or barque-stand, formerly positioned on top. The extant flagstone floor had been laid on top of an earlier sandstone surface. Fragments of this earlier surface ran beneath the later flooring and were contemporary with the large sandstone slabs.

One of the finds associated with the sanctuary area was a sandstone block (540 x 440 x 210mm) with two rectangular slots on the upper face (161/13). It may have served as a statue base supporting a striding figure possibly of wood or mixed materials (Plate 12).[11]

Ground penetrating radar and magnetometry surveys

In 2009, several substantial mud-brick walls were discovered

Anderson and Salah Mohamed Ahmed 2008. For a list of Kushite kiosks see Hinkel 1989; 1984, 295; Helck 1979, 441-442, and for a discussion of the types of Kushite kiosks and their potential function see Török 2002, 273-277.

[9] Archaeological work by the British Museum between 1980 and 1990 at Hermopolis Magna (Hermopolis) Egypt uncovered a columned building that the excavators propose is a *komasterion*. One of the functions of the *komasterion* was for the assembly of sacred processions (Bailey 2012, 193-194; 1986).

[10] For example, in 158 BC at Krokodilopolis Egypt, a *komasterion* was used not only for assembling processions but also as a location for government auction sales (McKenzie 2007, 152).

[11] The dimensions of the rectangular slots are as follows: 1. 150 x 50mm; depth: 110mm. 2. 135 x 50mm; depth: 110mm. Though excavated in 2003, the function of this block was identified in 2013.

Plate 12. Sandstone base (161/13) for striding statue (?).

running underneath the south-east room of the temple indicating it had been founded on an earlier structure (Anderson and Salah Mohamed Ahmed 2009; 2010). As it is not possible to remove the standing late Kushite temple to see much of the stratigraphy beneath, ground penetrating radar and magnetometer surveys were conducted, with the assistance of the British School in Rome and the University of Southampton on the temple site, and with the Faculty of Earth Science and Mining from the University of Dongola on cemetery WTC. The magnetometry survey of the cemetery was very successful; however, due to the large quantity of red-brick fragments mixed with the earth matrix there was too much interference for the magnetometer to produce good results on the temple site.

The GPR survey provided clear indications of structures beneath the surface within the temple's sacred precinct.[12] To the south of the temple, two large areas were surveyed with structures visible in the eastern part at approximately 310-510mm depth below ground and in the western area at approximately 290-470mm depth below ground (Plate 13). All of the responses received by the GPR appear within 1.5m of the ground surface and there appears to be little below this depth. Within the temple, the second court, dais room and main sanctuary were surveyed but few anomalies were detected and little evidence of earlier structures was found.

In the two areas surveyed to the south of the temple, the temple's enclosure wall served as a control. Excavation of part of the wall as discussed above has established that it is constructed of a mud-brick core and red-brick outer facing. In unexcavated areas across this wall, the GPR reads clear high amplitude and low amplitude anomalies. Low amplitude linear anomalies (shown in white) are probably remains of mud-brick buildings while high amplitude anomalies (shown in black) are probably red brick or sandstone.

A building, oriented perpendicular to the Amun temple's processional way, was visible in the south-west corner within the temenos. It appears to be a small temple with a substantial pylon and possibly a forecourt. The exterior wall faces appear to be of red brick. Between this small temple and the temenos enclosure wall is another substantial building. In the south-eastern corner of the sacred enclosure, a rectilinear building with perhaps five rooms and paved floors was visible and there appears to be a mud-brick wall running east to west.

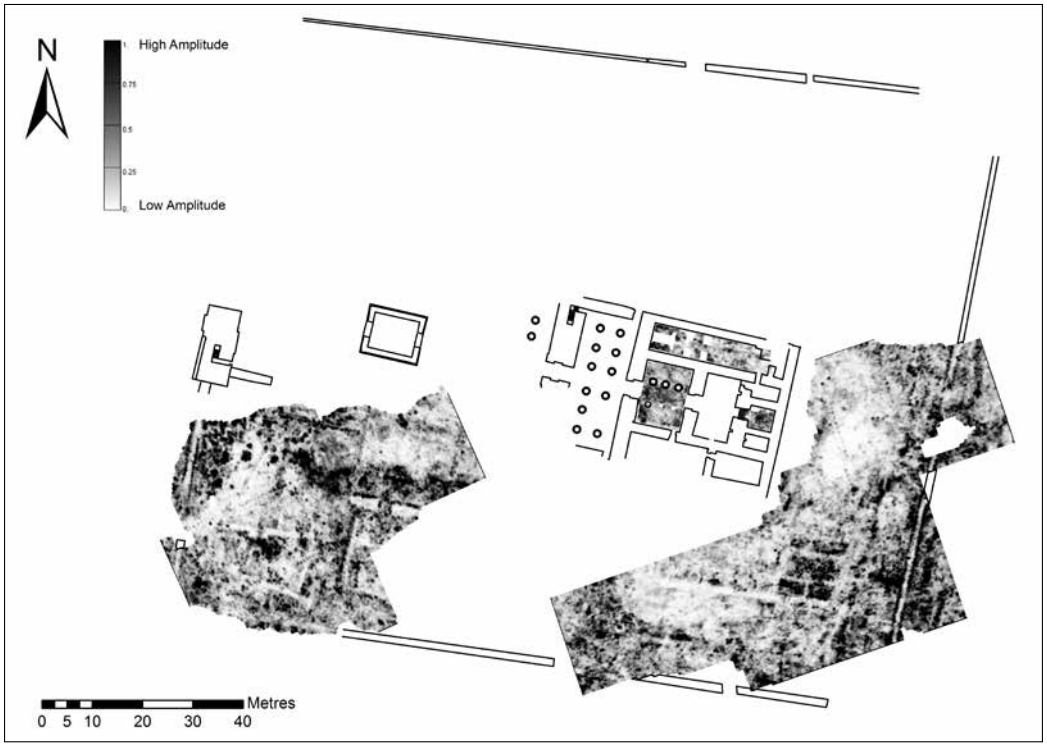

Plate 13. Ground penetrating radar results within the Amun temple precinct (scale 1:1500).

Cemetery WTC

Excavations in the late Kushite cemetery WTC, north west of the temple complex, continued and to date 66 Meroitic tombs

[12] A 400MHz antenna was used and high resolution surveys with 250mm traverse separation were conducted in all of the survey areas. For the areas within the temple, the antenna was removed from the wheeled cart and manually pulled using a handle.

have been excavated since 2002, with 14 being excavated this past season (Plate 14).[13] All tombs excavated thus far have an east-west sloping descendary leading to a north-south, oval-shaped burial chamber at the western end normally with one to three individuals in the chamber, most having been placed

Plate 14. General view of 2013 excavations in cemetery WTC, with descendaries of Meroitic tombs in the foreground (photo S. Maillot).

in a crouched position. The tomb chambers were sealed by a blocking wall of mud brick or red brick. The tombs vary in size from small burials with a short descendary to those with a long sloping descendary up to 4m in length. Preservation is variable.

A faience box lid with a partly preserved reclining leopard (115a/13) was found in the fill of the descendary of one of the tombs (WTC IX/60/43) (Plate 15). It has parallels with another lid from Kumbar, near Aksha in northern Sudan, dated to the 1st century AD, now in the Sudan National Museum (SNM 23159) (Abdel Rahman Ali Mohamed and Anderson 2013, 88, no. 78) and with a small lid fragment

Plate 15. Faience box lid with reclining leopard (115a/13).

found in the settlement on Umm Muri (site NE-36-F/3-J-5) in the Fourth Cataract (pers. comm. D. A. Welsby). The faience box (115b/13) to which the lid belonged was also in the descendary's fill.[14] The ends of the box are decorated with rosettes flanked by uraei wearing white and red crowns and two *udjat* eyes adorn each side. The box legs are in the form of duck heads and holes were pierced through the ends and sides to facilitate the attachment of the lid (Plates 16 and 17).

Plate 16. Faience box end with decorative rosettes (115b/13).

Plate 17. Faience box sides with udjat eyes (115b/13).

No superstructures are visible on the surface of the cemetery and its size remains to be determined; however, it is believed that tombs are scattered over a vast area along the road northward to el-Fereikha and over the area to the south of the modern Islamic cemetery. To gain a better idea of the cemetery boundaries and number of graves, a magnetometry survey was conducted across 30 grids (each 20 x 20m, for a total of 12,000 m^2) along the south and west sides of the modern Islamic cemetery (Plate 18).[15] Preliminary analysis of the survey's raw data has revealed numerous features, likely tomb chambers, concentrated in the northernmost, eastern-

[13] Mahmoud Suliman Bashir conducted these excavations along with Fakhri Hassan Abdula Hassan, Hind elBadwy, Mohamed Saad Abdalab, Anna Pieri and Rowide Rashid.

[14] The length of the box is 163mm, the width is 75mm and it stands 60mm high. The lid is 97mm long, 57mm wide and 24mm thick.

[15] The magnetometer used was a Geoscan Fluxgate Gradiometer (FM256) and the survey was conducted under the direction of Mohamed Abdelwahab Mohamed-Ali from the Faculty of Earth Science and Mining, University of Dongola, Sudan.

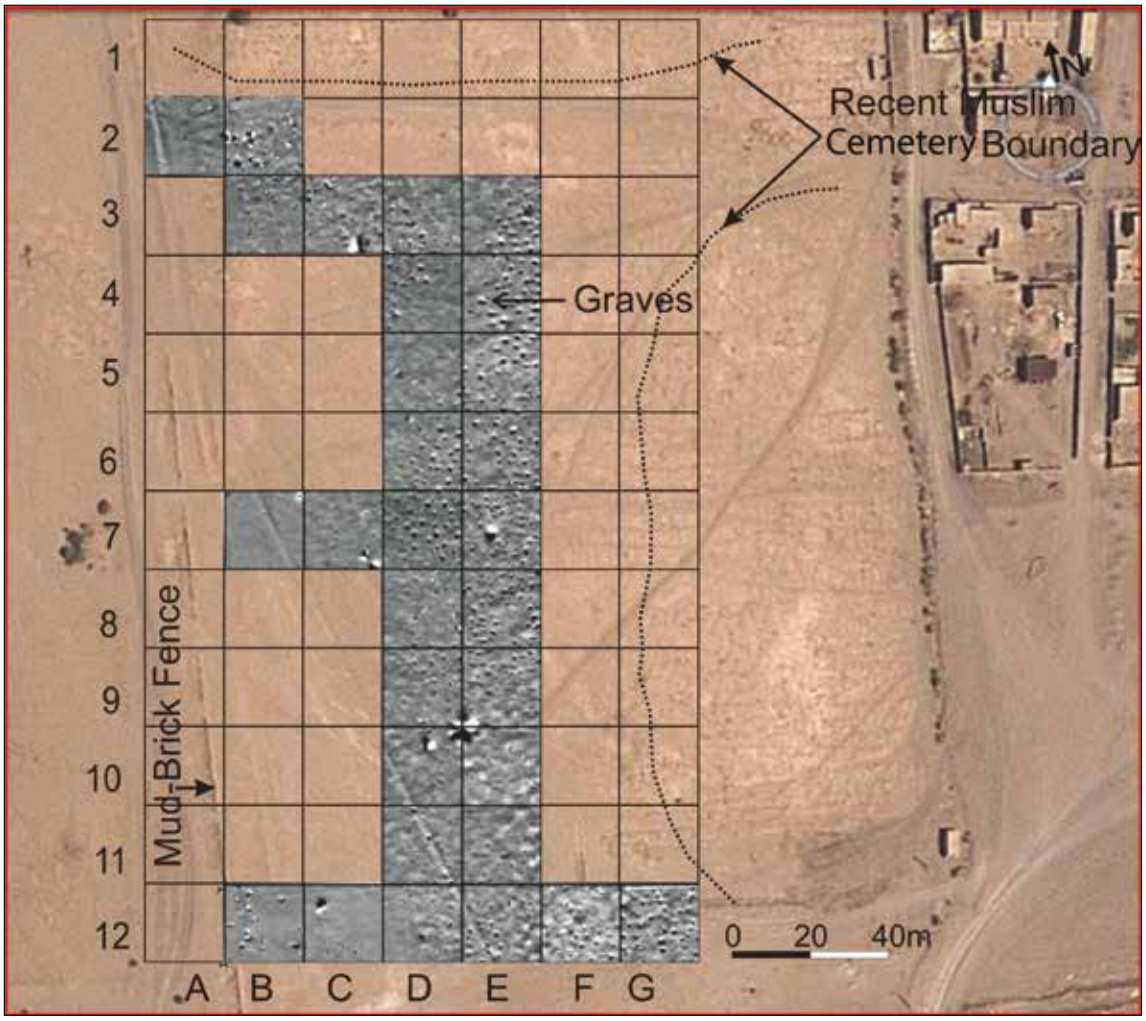

Plate 18. Geoscan fluxgate gradiometer (FM256) results in cemetery WTC (scale 1:2000).

most and southernmost grid squares (negative anomalies are presented as white images, while positive ones are in black); however, this will be further clarified once the data has been processed and filtered.

Conservation and site protection

Conservation this season focused on the northernmost long room of the temple, containing the dais, six columns and a flagstone floor. The dais is constructed of a mixture of materials. Finely cut sandstone blocks enclosed a core of red brick, mud mortar and irregular sandstone and red-brick fragments. The associated columns were comprised of column drums made from red-brick thirds bonded with mud mortar.

The dais was cleaned, consolidated with lime mortar, red-brick in-fill and stabilized, as were the red-brick columns on either side of it. The columns were also capped with lime mortar to ensure that moisture could not penetrate, thus preventing them from collapse. Holes within the sandstone flagstone floor were in-filled with red brick and flagstones were raised or reset where required. All treatments made are reversible and used locally available materials (Plate 19).

The site boundaries were reconfirmed and officially demarked by Yassin Mohammed Saeed and local officials and the local authority re-informed. The temple site was enclosed on the north and west sides by cement bollards and on the east and south side by walls to control traffic crossing the site. Excavated features on both sites were backfilled or covered by temporary structures pending future conservation.

Plate 19. Dais, columns and sandstone floor surface after conservation (photo T. Sweek).

Acknowledgements

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Bibliography

Abdel Rahman Ali Mohamed and J. Anderson 2013. *Highlights from the Sudan National Museum*. 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 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 2008. 'The Kushite Kiosk of Dangeil and Other Recent Discoveries.' *Sudan & Nubia* 12, 40-46.

Anderson, J. and Salah Mohamed Ahmed 2009. 'What are These Doing Here Above the Fifth Cataract?!! : Napatan Royal Statues at Dangeil', *Sudan & Nubia* 13, 78-86.

Anderson, J. and Salah eldin Mohamed Ahmed 2010. 'Ethnoarchaeology and Post-holes: Building a Bisharin house', *Sudan & Nubia* 14, 96-106.

Anderson, J. and Salah eldin Mohamed Ahmed 2013. 'Dangeil 2012: Sacred Ram – Avatar of the God Amun', *Sudan & Nubia* 17, 70-77.

Anderson, J., Salah Mohamed Ahmed and T. Sweek 2012. 'Meroitic Building Techniques: A Few Observations from Dangeil', *Sudan & Nubia* 16, 72-79.

Arnold, D. 1999. *Temples of the Last Pharaohs*. New York and Oxford.

Bailey, D. 1986. 'The Procession-House of the Great Hermainon at Hermopolis Magna,' in M. Henig and A. King (eds), *Pagan Gods and Shrines of the Roman Empire*. Oxford, 231-237.

Bailey, D. 2012. 'Classical Architecture', in C. Riggs (ed.), *The Oxford Handbook of Roman Egypt*. Oxford, 189-204.

Caneva, I. and A. Rocatti (eds) 2006. *Acta Nubica. Proceedings of the X^th International Conference of Nubian Studies, Rome 9-14 September 2002*. Rome.

Griffith, F. Ll. 1922. 'Oxford Excavations in Nubia', *Liverpool Annals of Archaeology and Anthropology* 9, 67-124.

Helck, W. 1979. 'Kiosk', *Lexicon der Ägyptologie*. III. Wiesbaden, 441-442.

Hinkel, F. 1984. 'Gedanken und Bemerkungen zum Thema 'Meroitische Architektur'', *Meroitica* 7, 290-309.

Hinkel, F. 1989. 'Säule und Interkolumnium in der meroitischen Architektur. Metrologische Vorstudien zu einer Klassifikation der Bauwerke', *Meroitica* 10, 231-267.

Jacquet-Gordon, H. 1981. 'A Tentative Typology of Egyptian Bread-Moulds,' in D. Arnold (ed.), *Studien zur altägyptischen Keramik*. Mainz am Rhein, 11-24.

Leclant, J. 1953. 'La colonnade éthiopienne à l'est de la grande enceinte d'Amon', *Bulletin de l'Institut français d'archéologie orientale* 53, 113-172.

McKenzie, J. 2007. *The Architecture of Alexandria and Egypt, c. 300 B.C. to A.D. 700*. New Haven.

Török, L. 2002. *The Image of the Ordered World in Ancient Nubian Art. The Construction of the Kushite Mind, 800 BC – 300 AD*. Leiden-Boston-Köln.

Török, L. 2006. 'Space, Temple and Society. On the Built Worldview of the Twenty-Fifth Dynasty in Nubia', in Caneva and Rocatti (eds), 231-238.

Welsby, D. A. 1996. *The Kingdom of Kush. The Napatan and Meroitic Empires*. London.

Wolf, P. 2006. 'Temples in the Meroitic South – Aspects of Typology, Cult and Function', in Caneva and Rocatti (eds), 239-262.

Wolf, P., U. Nowotnick and F. Wöß 2014. 'Meroitic Hamadab – A Century After Its Discovery', *Sudan & Nubia* 18, 104-120.

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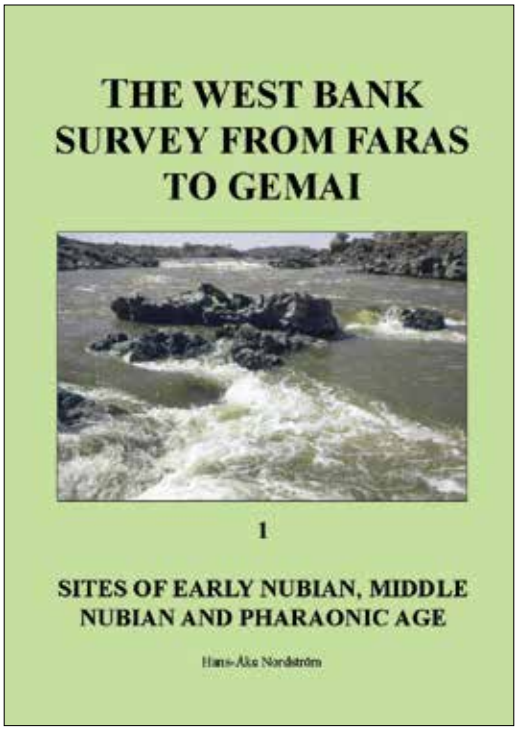

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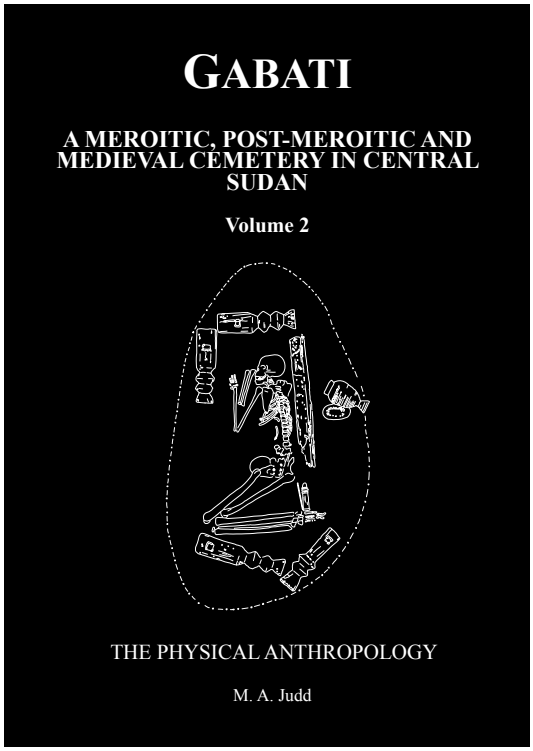

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View upstream along the Wadi Murrat from the late 19th century Anglo-Egyptian fort. The pharaonic inscriptions are amongst the trees at the wadi *edge in the far centre (photo D. A. Welsby).*

Horus, Lord of the Desert. A natural rock outcrop along the route from Buhen towards Wadi Murrat (photo D. A. Welsby).