Return to Taharqo's Temple at Sanam: the inaugural field season of the Sanam Temple Project

Kathryn Howley

The site of the Amun Temple at Sanam, founded by King Taharqo in the 7th century BC, was first excavated by Francis Llewellyn Griffith as part of the Oxford Expedition to Nubia in 1912. The excavations were conducted in one season and, although Griffith had hoped to return to the site, 'circumstances prevented [him]' (Griffith 1922, 67). The entire area of Sanam (temple, treasury, town site and cemetery) was published in a preliminary report in 1922 in the *Liverpool Annals of Archaeology and Anthropology* (Griffith 1922). The work was completed to the standards of the day, and thus involved in the temple, large-scale clearance of architecture with the main goals of searching for Egyptian texts and museum-quality pieces (of which Griffith found several, most of which are now in the Ashmolean Museum in Oxford). Although Griffith took a large number of photographs during the work, the early date of the excavation means that their quality (and particularly the printing of those published in Griffith 1922) often leaves something to be desired. However, more than just from early archaeological techniques, the work suffered from the fact that Griffith (through no fault of his own) was unable to interpret what he was looking at. None of the other Napatan period temples or royal tombs, notably those at el-Kurru and Nuri, that were later uncovered over the course of the 20th century, had yet been investigated, and Griffith was, therefore, unable to understand the temple's significance or interpret the material within it. The mostly ruined temple, therefore, received cursory publication, and has attracted little scholarly attention since. This is despite the fact that the temple lies within the Kushite kings' heartland of Napata and in close proximity to numerous other important archaeological remains of the first millennium BC, both royal and non-royal, and represents the most archaeologically accessible example of a Napatan-period Amun temple outside of Jebel Barkal. Now, with a far greater variety of archaeological comparanda at our disposal, it is clear that Sanam temple, surrounded by a non-royal cemetery and town site, has the potential to offer new insights into Kushite society of the first millennium BC.

Indeed, this potential has been amply demonstrated by both new archaeological excavation and archival research re-examining Griffith's work in the wider area of Sanam (notably Vincentelli's work at the 'Treasury', Vincentelli 2001; 2011, and Lohwasser's re-analysis of Griffith's cemetery data, Lohwasser 2010; 2012). The temple has continued to receive little attention, with Jeremy Pope's work on the Sanam Historical Inscription an important exception (Pope 2014, 58-144). The restudy of the royal monuments of the Treasury and the Sanam Historical Inscription have underlined the non-Egyptian character of the Kushite state, and further suggested the potential that new excavations at Sanam temple could offer.

One particular instance of this potential already visible from Griffith's work at the temple was his discovery of traces of faience production debris (Griffith 1922, 87-9; pl. XVII), consisting of terracotta moulds for shabtis and amulets as well as two faience shabtis. Griffith was uninterested in the crude clay faience moulds beyond that they 'reveal one of the industries pursued in the temple', and believed that the distinctive shabtis they would have been used to manufacture did not match those found by Reisner at the royal tombs of Nuri (Griffith 1922, 87-8). Reisner's work was not, however, published until three decades after Griffith's Sanam report appeared, and the doctoral dissertation of the author on the tombs at Nuri has demonstrated that, in fact, the Sanam moulds can be linked definitively to particular shabtis discovered within the Middle Napatan queens' tombs (Howley 2015, 86-7). There is, therefore, a clear link between Sanam temple and the production of Egyptian-style goods for the royal family. Production of faience objects, moreover, seems to have been a feature of Napatan temples that was again observed later by Griffith during his work at Kawa temple (Macadam 1949, 166), now inaccessible under large amounts of windblown sand. If faience moulds were found, one would expect the presence of other evidence of faience production activity, particularly kilns or other pyrotechnology. Griffith, however, did not systematically explore outside the walls of the temple to find it, and we were, therefore, hopeful that this important evidence for how Egyptian-style temples functioned in the Napatan economy might still remain at Sanam.

The Sanam Temple Project was initiated in 2017 to restudy the archives and objects from Griffith's original excavations in light of improvements in archaeological understanding over the last century, and to conduct a new study and excavations at the temple itself, particularly outside the temple walls. Research was undertaken at the Ashmolean Museum and Griffith Institute in Oxford in the summer of 2017 to better record the material culture from the temple (most of which is now stored at the Ashmolean) and assess the scope of Griffith's archives. The first field season took place over three weeks in January 2018, and involved both recording and excavation. This article will provide a brief overview of the aims of the Sanam Temple Project and the activities of the first, short field season, and provide a summary of the results so far and potential for future work at the site.

The aims of the first season of work were firstly to remap the temple with modern geodetic equipment, as Griffith published only a schematic sketch plan which did not link the temple to its wider landscape. Comparison of the plan with recent satellite imagery further suggested that the original plan's degree of accuracy was not high. Secondly, we intended to excavate a series of test trenches around the outside of the

temple in order to assess the degree of archaeological deposits still remaining and thus the potential for further excavation at the site. The third aim was to epigraphically record the decoration in the colonnaded court of the temple; a closer reading of the original publication revealed that Griffith made epigraphic drawings only of the temple blocks he removed to Oxford, while all published drawings of decoration that remains *in situ* were based only on field sketches.

Mapping of the temple

Sanam temple is today enclosed by two modern barbed wire fences, both visible on satellite imagery (Plate 1). The entire area within the outer enclosure fence was topographically mapped, and the outlines of the temple walls still visible above the sand were also recorded (Figure 1). The site grid was aligned to the UTM coordinate system, and ten fixed points were established and their coordinates recorded to enable all future work at the site to be aligned to this grid. As areas within the temple were excavated, we produced georeferenced photogrammetric plans that were added to the main temple plan, which will eventually allow us efficiently to draw a block-by-block plan of the temple. All measurements were taken with either a Total Station or differential GPS unit that provide sub-centimetre and centimetre accuracy, respectively. The topographical map shows particularly clearly the extent and location of Griffith's spoil heaps (see below for further discussion).

Excavation and Epigraphy in the First Court of the Temple

Work this season focused on the first, colonnaded court of the temple. Since we were aware that Griffith had worked in this area, our initial plan was to clear what we thought would be sterile, windblown sand from around the walls to enable epigraphic recording to take place. Work began at the south wall of the court on which the Sanam Historical Inscription is written, since the parts of inscription that were exposed above the sand were suffering the full force of the prevailing wind and thus in seriously deteriorating condition.

Excavation

When excavating the sand in front of the pylon, however, it quickly became clear that Griffith had not in fact cleared the First Court to the original floor level. Firstly, stratified surface layers still survived above the original temple floor. Several layers of compacted mud surfaces could be identified, some of which could be identified as floors with some confidence because of the presence of large ceramic sherds embedded in their surfaces (Plate 2). Secondly, to our surprise, the secondary mud-brick walls marked on Griffith's plan as

Plate 1. Satellite image of Sanam temple (prepared by Martin Uildriks).

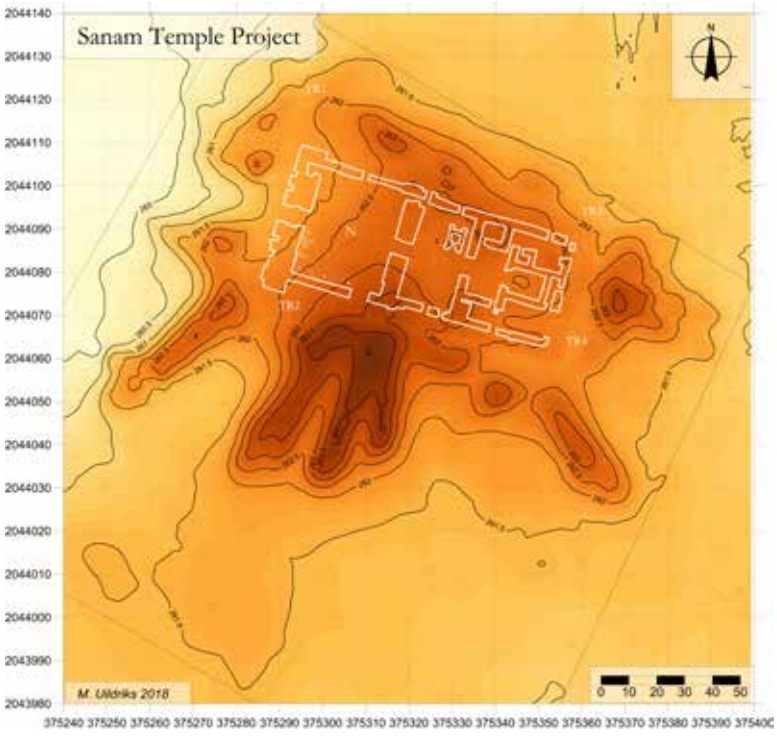

Figure 1. Topographical map of Sanam Temple (prepared by Martin Uildriks).

been the location of craftsmen's shops, selling the 'figurines and ornaments' he found in large numbers at the site (Griffith 1922, 75, 85). This can be discounted mainly because it is now clear that *shabtis* in the Napatan period were only for royal consumption and were never a feature of non-royal Kushite graves (Howley 2018, 25). In addition, the shabtis found at Sanam can be dated to the Middle Napatan period (Dunham 1955), at which point the temple was still being maintained and expanded, at least as late as the reign of Aspelta (Griffith 1922, 85). The secondary occupation can thus be dated to later than the *shabtis*, which were made in the Middle Napatan period when the temple was still in use as a cult place. This reasoning is bolstered by the fact that the secondary walls abut the stone outer walls of the temple showing no concern for their decoration, again suggesting that the mud-brick walls were constructed after the Middle Napatan Period when the temple was still maintained. We also found that some stone elements of the temple were reused in the construction of the walls (see Plate 4); this reuse was accomplished with no regard to the decoration of the stone element (Taharqo's cartouche is upside down) and also suggests that the

Plate 2. Handled jar sherd embedded in the secondary mud floor in temple's First Court, with the floor abutting a secondary mud-brick wall.

Plate 3. Secondary mud floor running up to secondary mud-brick wall.

running between the temple's columns and walls were still present, and preserved to a much greater height than expected (in some cases over a metre). The mud surfaces on several levels ran up to these secondary mud-brick walls, demonstrating that the surfaces were associated with the walls and part of the secondary occupation of the temple (Plate 3). A large amount of ceramic was recovered from both the floor levels and the mud bricks themselves, which after analysis will provide a *terminus post quem* for the secondary occupation. In addition to ceramic sherds, large quantities of charcoal and some bone were found on, and embedded in, the secondary floors, indicative of sporadic occupation in the temple after its initial phase of use.

The mud-brick walls were theorized by Griffith to have

Plate 4. Reuse of temple block inscribed with a cartouche of Taharqo in a secondary wall.

stone parts of the temple had fallen into disrepair at the time of the construction of the mud-brick walls, again placing the secondary occupation after the Middle Napatan Period. Although Griffith's theory can be put aside, the function of these rooms, some of which are very small and have no door or other opening through which to enter, is not yet clear.

Under the compacted mud surfaces lay a beautifully crafted stone floor made up of large and carefully dressed flagstones, apparently never seen by Griffith. A particularly interesting feature of the original stone floor was the round holes bored into the flagstones at irregular intervals (Plate 5). These averaged approximately 200mm in diameter and

Plate 5. Orthophoto of a section of first court, showing original flagstone floor and post-holes (prepared by Martin Uildriks).

extended to a considerable depth, some more than 300mm, and in some cases right through the flagstone into the sand beneath. Compacted mud packing was observed around the side of some of the holes, which presumably would have served to keep a wooden stake in place. Large quantities of flaked dark stone (granite?) were also found in the majority of holes, which may also have been used as packing material. These holes may have been used to hold stakes or poles used in the construction or destruction of the temple (as has also been observed at Amarna in front of major walls: Nicholson and Shaw 2000, 88; Arnold 1991, 321-3).

Epigraphy

Epigraphic recording at the temple is necessary not only because Griffith's lack of time led to the publication of many temple scenes based on field sketches rather than epigraphic scale drawings. Once on site it also became clear that decoration survives on the east and west walls of the First Court that Griffith did not document due to its extremely fragmentary nature, and that he missed many details from some of the First Court scenes, presumably as a result of haste.

Our first recording task was the Sanam Historical Inscription because of its concerning condition. Approximately two hieroglyphs have been lost from the top of the wall since Griffith photographed it in 1912, and the surface is now in an extremely friable condition, with the hieroglyphs in many places threatening to flake off the wall. Traditional epigraphic recording of the inscription would have been extremely challenging due to the poor condition of the sandstone surface and the orientation and topography of the temple, which meant that the wall received no raking light at any time of day. We, therefore, used photogrammetric techniques to create highly accurate orthophotos with Agisoft Photoscan software, to enable the tracing of the inscription directly from the photograph. Using an image of the high resolution 3D 'mesh', showing only the dimensionality of the surface and not the colour or texture of the stone, gives a much clearer impression of the eroded signs than the orthophoto alone (Plate 6).

Excavation outside the temple

Given that the main goals for excavation outside the temple this season were to determine the degree of archaeological deposits remaining and the possible location of production areas, our excavation strategy was determined mostly by expediency. The substantial spoil heaps from Griffith's work would have significantly limited the number of test trenches we were able to excavate, and we, therefore, chose areas for excavation that were not under Griffith's spoil while still spaced around the temple as much as possible. Test trenches were laid out in 2.5 x 2.5m squares according to the site grid (Figure 1).

Trench One

The first test trench to the north west of the temple, just north of the First Pylon, revealed in its upper layer large sandstone blocks in various stages of decay that appear to have come from the temple (though whether this was due to Griffith's activity or ancient collapse/destruction is not yet clear). Beneath the stone layer was an extremely hard and compacted layer which we presumed marked the end of the archaeological deposits; however, we decided to remove it to ascertain the level of the bedrock. In fact, the compacted layer did not mark the end of the archaeology, and large quantities of ceramic were recovered from the layers beneath. The archaeological deposits continued at least to 1.8m below the surface; at this point we closed the trench in the interests of both safety and practicality, but we hope to return to the area in future seasons. One particular area of interest that such a depth of archaeological deposits could address is the date of foundation of Sanam temple. Taharqo's other Amun temples in Nubia, including that at Kawa, were founded on Egyptian New Kingdom temple sites. The same has, therefore,

Plate 6. Views of highly accurate scale 3-D models of blocks of the Sanam Historical Inscription, used for epigraphy (prepared by Martin Uildriks).

plausibly been considered to be the case for Sanam temple as well (Pope 2014, 85; Griffith 1922, 85), though Griffith's work produced no convincing evidence to support the idea (Griffith 1922, 85: he briefly describes a brick wall below the foundation of a brick structure outside the temple walls, but was unable to identify or date either the structure or the wall). Future excavation and ceramic analysis of these deep deposits will hopefully elucidate whether Taharqo was the first to build a temple on this site, or if a previously unknown Egyptian foundation existed prior to the Napatan temple.

Trench Two

To the south-east side of the temple a second test trench was opened. Just below the surface was uncovered a monumental mud-brick wall, with mud-brick slump on both sides. The surviving height of the wall was 1.24m, and at the bottom course were found two rifle cartridge casings and a corroded, thick piece of metal wire (Plate 7; the cartridge casings appear to be comparable to the Boxer-Henry case in Welsby 2011, pl. 170, cat. no. 160 and probably date to the latter half of the 19th century). We suspect that this wall is the remains of the British colonial-period building 'Kitchener's Fort', a structure that Griffith described as having been built on top of the First Court and Hypostyle Hall of the temple (Griffith 1922, 74-5; also described in Arthur 1920, 86). Griffith dismantled this building in order to facilitate the excavation of the temple, unfortunately without undertaking formal recording of it; there are, however, several photographs in his archives, taken from a distance, that show the building still standing (Plate 8). Although ancient ceramics were found in this area, they were all mixed into the upper layers.

Plate 7. Metal objects from Trench Four, possibly associated with 'Kitchener's Fort'.

Plate 8. View of 'Kitchener's Fort' from a distance before excavation in 1912 (© Griffith Institute, University of Oxford).

Trench Three

The third test trench was opened on the north east, to the rear of the temple. The initial square of 2.5m^2 was extended with a second 2.5m square. Beneath a very copious amount of charcoal was found a large number of faience beads; faience objects including one intricately moulded piece; and misshapen lumps of faience that seem to be 'wasters' from the faience production process (Plate 9). The amount and concentration of these remains in a small area argue strongly for the presence of faience production here. More unexpectedly,

Plate 9. Evidence of faience production in Trench Three.

a very large amount of small Nile mollusc shells were recovered along with several grinding stones (Plates 10 and 11).

Plate 10. Nile mollusc shells possibly used in faience production from Trench Three.

Plate 11. Grinding stones possibly used in faience production from Trench Three.

Time constraints prevented the full excavation of this area, and much remains to be done in future seasons. Nevertheless, some interesting preliminary observations can be made. The presence of such a large quantity of shells in association with other faience production debris is intriguing. The very small size of the shells argues against their use (solely) as a food source. The numerous grinding stones are suggestive in this regard, perhaps indicating that the shells were ground to be used as an additive to the faience paste. Faience making in Egypt did not, to our knowledge, use shells in this way: the constitution of the faience paste required calcium oxide, or lime, which was (scholars assume) acquired through either ground up limestone or the addition of sand derived from limestone (Nicholson and Shaw 2000, 186-7). The geology of Sudan does not provide such materials, being predominantly sandstone. The procurement of lime for the production of faience must have come from another source: Nile shells would have been in abundant supply.

Trench Four

A fourth test trench was opened at the rear of the temple behind the east wall. Numerous faience beads and ceramics were found, but no structural features; time constraints allowed us to excavate to the same compacted mud surface layer found in trench one but no lower.

The Archaeology of Griffith's Archaeology

An unexpected yet prominent part of the project was the constant reminders of Griffith's presence at the temple a century before us. These traces of our archaeological predecessor revealed interesting aspects of his working practices, and also suggested ways in which modern archaeologists might productively approach already-excavated sites, which are often feared to have no more archaeological information to offer.

Griffith's Working Process

The first aspect of Griffith's activity to affect our work was his sometimes near-monumental spoil heaps. These are visible in satellite imagery of the site, but their scale became even more evident in the topographic map of the site (Figure 1; Plate 1). Both archival photographs and the finger-like shape of the spoil heaps show that Griffith utilized a Decauville light railway system to remove fill at Sanam, just as he did at his later excavations at Kawa. As can be seen from the site plan, this was achieved mostly in places where there was a convenient gap in the temple wall through which to carry the spoil, which was dumped right up to the temple walls. This approach again underlines Griffith's lack of interest in the area outside the temple walls, and the time pressures he faced in excavating at Sanam. Griffith worked at immense speed, and in terms of small finds was interested mainly in large, museum-quality pieces. The fill is, therefore, highly likely still to contain small objects (as the many beads our workmen found on the surface show) and other traces of ancient human habitation. Moreover, because of the presence of spoil heaps at each gap in the wall, the spoil heaps can with a reasonable degree of certainty be linked to specific (if broad) areas within the temple. We, therefore, hope in future seasons to sample the spoil heaps in order to test whether any useful archaeological traces can be recovered from them, and if these traces can be linked to particular areas of the temple in any meaningful way.

As non-monumental, mud-brick structures, the secondary mud-brick walls in the temple were of little interest to Griffith, though he recorded them on his temple plan. We were, however, surprised to find that he had apparently not attempted to remove them to any extent, given that the height to which they were still standing severely impeded the removal of fill. However, we did discover one unusual intervention which Griffith had taken on the walls to make his work easier. At every place where a secondary wall abutted with the south-

west temple wall on which the Sanam Historical Inscription was inscribed, a small notch has been taken out of the mud brick, which is visible as a sort of channel when looking along the line of the wall (Plate 12). These 'scoops' appear to have

Plate 12. Notches cut into the secondary walls in the First Court, probably by Griffith.

been made by Griffith in order to facilitate the photography of the lowest parts of the Sanam Historical Inscription without having them obscured by the secondary walls; some of Griffith's archival photographs support this view, as the top of the mud-brick wall is just visible and out-of-focus in the bottom of the frame. Presumably the mud brick would have been far more obtrusive had the height of the secondary wall not been lowered where it met the inscription, but it also served a useful purpose: the photograph seems to have been taken by taking advantage of the secondary wall in order to serve as a camera support.

Further evidence of photographic practice in 1912 came in the form of some beautifully preserved fragments of the Sanam Historical Inscription that were found in the area in front of the outer temple wall, and directly beside one of the mud-brick secondary walls (Plate 13). In striking contrast to the condition of what now remains on the wall, these hieroglyphs were deeply and crisply cut, with red pigment in the relief of the hieroglyphic signs. Our initial assessment was that we had found new sections of the inscription, since it seemed impossible that Griffith could have seen such legible inscriptional material and not removed it from the site. However, once we had reassembled the fragments (Plate 14) and compared these with Griffith's photographic archive, we quickly realised that Griffith had indeed seen these fragments, and taken a picture of them that remained unpublished (Plate 15; first published and analysed by Pope 2014, 140, fig. 50). In fact, given the concentrated area from which the pieces

Plate 13. Fragments of the Sanam Historical Inscription in situ.

Plate 14. Reassembled fragments of the Sanam Historical Inscription.

Plate 15. Griffith's picture of the fragments of the Sanam Historical Inscription (© Griffith Institute, University of Oxford).

were recovered in front of the secondary wall, and the sandy background to Griffith's photograph, it seems likely that he had reassembled the pieces in the sand directly in front of the mud-brick wall. This allowed the photographer to take a top down view of the reassembled inscription, again taking advantage of the secondary walls to gain an appropriate vantage point. We can only assume that the pieces were then

left in place, to be covered by windblown sand and discovered again a century later.

Conclusions and future directions for research

The first season of the Sanam Temple Project confirmed the impression gained from preliminary study of Griffith's publication and archives, that the site of Sanam temple still has much to offer archaeologically despite its clearance by Griffith a century ago. In certain areas around the site at least 2m of archaeological deposits remain, and there is clear evidence for faience production at the temple that will repay further investigation in future seasons.

The confirmation of faience production at Sanam temple and the likely discovery of a faience workshop outside the temple are particularly exciting. On a general level, it is as yet unknown precisely what economic role temples played in Napatan period Nubia, and whether their Egyptian appearance would have mirrored the central economic function that temples played in Egyptian society (the very different structure of the Napatan to the Egyptian state, and in particular the far lower levels of agricultural productivity in the Nubian Nile Valley, make this unlikely). Production areas at Sanam temple could have a lot to add to our understanding of this problem. In thinking about faience more specifically, the presence of production areas directly outside the temple walls at Sanam is striking. Manufacture of faience at temples is unknown in Egypt, where faience production took place in domestic contexts (Nicholson and Shaw 2000, 187). Its location at Sanam, therefore, seems to be a particularly Kushite feature that separates it from Egyptian faience making practice, and marks a somewhat different function for Amun temples in Kush than in Egypt. It additionally seems likely from the excavations in Trench Three that the recipe for faience paste in Nubia was different from that in Egypt, with the possible inclusion of ground Nile mollusc shells. We hope in the future to conduct XRF testing to discover more about the faience paste composition and compare it to contemporaneous Egyptian samples (Kaczmarczyk and Hedges 1983), as well as to earlier Kerman faience manufacture. These production areas, therefore, have the potential to add much to our understanding of the use of Egyptian-style material culture by the Kushite rulers, and the ways in which Egyptian models were adapted by the Napatan kings to a Kushite cultural and physical context.

Acknowledgements

The Sanam Temple Project wishes to extend its heartfelt thanks to the National Corporation for Antiquities and Museums of Sudan for permission to conduct the work, and acknowledge in particular the assistance of Dr Abdelrahman Ali Mohamed and El-Hassan Ahmed Mohamed (our inspector for the 2018 season). The 2018 season was financially supported by a grant from the White Levy Foundation. Liam McNamara and Cat Warsi of the Ashmolean Museum and Griffith Institute granted access to their collections and were extremely generous with their time and assistance. The author would also like to thank all the members of the project's 2018 field team, and in particular Martin Uildriks for his indispensable expertise and hard work on the mapping and digital aspects of the project.

Bibliography

Arnold, D. 1991. *Building in Egypt: pharaonic stone masonry*. Oxford.

Arthur, S. G. 1920. *Life of Lord Kitchener*. London.

Dunham, D. 1955. *The Royal Cemeteries of Kush, Nuri*. Cambridge, Mass..

Griffith, F. L. 1922. 'Oxford Excavations in Nubia VIII-XVII, Napata, Sanam Temple, Treasury and Town', *Liverpool Annals of Archaeology and Anthropology* 9, 67-124.

Howley, K. 2015. *The Royal Pyramid Tombs of Nuri: cultural interaction between Nubia and Egypt in the Middle Napatan Period*. Unpublished PhD Thesis, Brown University.

Howley, K. 2018. 'Power relations and the adoption of foreign material culture: a different perspective from first-millennium BCE Nubia, *Journal of Ancient Egyptian Interconnections* 17, 18-36.

Kaczmarczyk, A. and R. E. M. Hedges 1983. *Ancient Egyptian Faience: an analytical survey of Egyptian faience from Predynastic to Roman times*. Warminster.

Lohwasser, A. 2010. *The Kushite cemetery of Sanam: a non-royal burial ground of the Nubian capital, c. 800-600 BC*. London.

Lohwasser, A. 2012. *Aspekte der napatanischen Gesellschaft: archäologisches Inventar und funeräre Praxis im Friedhof von Sanam - Perspektiven einer kulturhistorischen Interpretation*. Denkschriften der Gesamtakademie vol. 67. Wien.

Macadam, M. F. L. 1949. *The Temples of Kawa*. Oxford.

Nicholson, P. T. and I. Shaw 2000. *Ancient Egyptian Materials and Technology*. Cambridge.

Pope, J. 2014. *The Double Kingdom under Taharqo: studies in the history of Kush and Egypt, c. 690-664 BC*. Leiden.

Vincentelli, I. 2001. "Il Tesoro' di Sanam (Sudan)', *Isimu* 4, 75-92.

Vincentelli, I. 2011. 'The Treasury and other Buildings at Sanam', in V. Rondot, F. Alpi and F. Villeneuve (eds), *La pioche et la plume: autour du Sudan, du Liban et de la Jordanie. Hommages archéologiques à Patrice Lenoble*. Paris, 269-282.

Welsby, D. A. 2011. *Sudan's First Railway: the Gordon Relief Expedition and the Dongola Campaign*. Sudan Archaeological Research Society Publication 19. London.