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Excavations in the Temple Precinct of Dangeil, Sudan

INTRODUCTION

Sudan's rich cultural heritage, complex history, and archaeology remain little known to the modern world, yet it is Africa's largest country, covering around 2.5 million km². Sudan has played an important role connecting the peoples of central Africa and the Mediterranean world for thousands of years. Archaeological discoveries range in date from the Palaeolithic to the Islamic period, and include 300,000-year-old stone tools belonging to the first prehistoric settlers, large burial mounds of the powerful Kerma rulers of 1700BC, temples built by the Kushite pharaohs, medieval Christian churches and Islamic *qubbas*, the burial places of holy sheikhs.

DANGEIL AND THE KINGDOM OF KUSH

Located 350km north of Khartoum, Dangeil was a powerful royal city in the Kingdom of Kush between the 8th century BC and 4th century AD. This kingdom stretched along the Nile from south of Khartoum to the edge of the Roman Province of Egypt in the north.



In the middle of the 8th century BC, the Kushite kings invaded and ruled Egypt, becoming known in Egyptian history as pharaohs of the 25th Dynasty. After ruling Egypt for almost 100 years, they were expelled by the Assyrians, but their kingdom remained powerful and continued to flourish in Sudan for another 1000 years. The Kushite rulers adopted ancient Egyptian religion and practices, particularly worship of the god Amun, who they believed

TEMPLE OFFERINGS

When we began excavating a low mound (Mound K) located behind the temple (to the east), we began to get a clearer idea of the type of the offerings being made during the temple rituals and what the ancient Kushites were eating. The mound was covered with pot

Red brick and mud brick tumble filling the temple.



sherds, charcoal, ash, pebbles, grinding stones and numerous red brick fragments. It was a place where the temple priests dumped their rubbish.



Mound K, the low mound behind the temple, to the east.

Nearly 1,200,000 cone-shaped, ceramic sherds from offering moulds were excavated from a small excavation square. The first 80,000 were counted by hand, then the remainder estimated by bucket-load. This comes to approximately 77,000 temple offerings when the cone-bases alone are taken into account.



Ceramic mould sherds.



Dust cloud over the excavation site.



Many questions remain. What incidents led to the breakage of these statues and who was responsible? Much of the temple and surrounding enclosure remain to be explored. Hopefully future work will answer these questions.

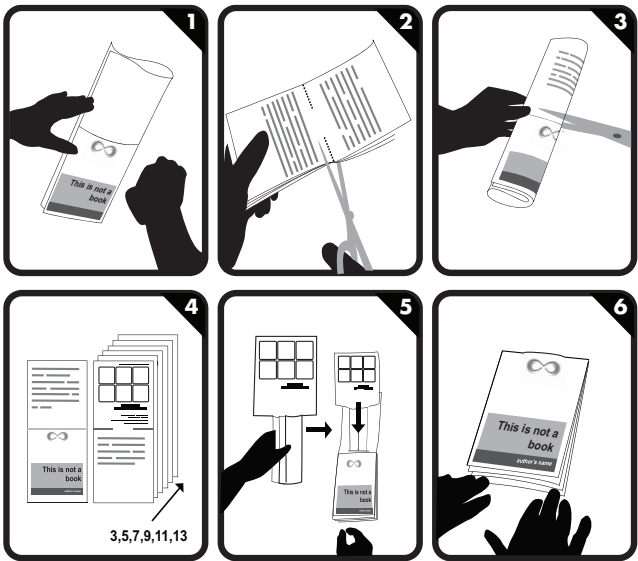
Dangeil's early Kushite statues may have come from a cache that was disturbed during the destruction of the later Amun temple, or they may have been housed in the temple and destroyed along with it. Because the Dangeil statues appear to be ritually broken, and are similar to those discovered buried in caches at Jebel Barkal and Dokki Gel, Kerma, the first explanation seems more likely.

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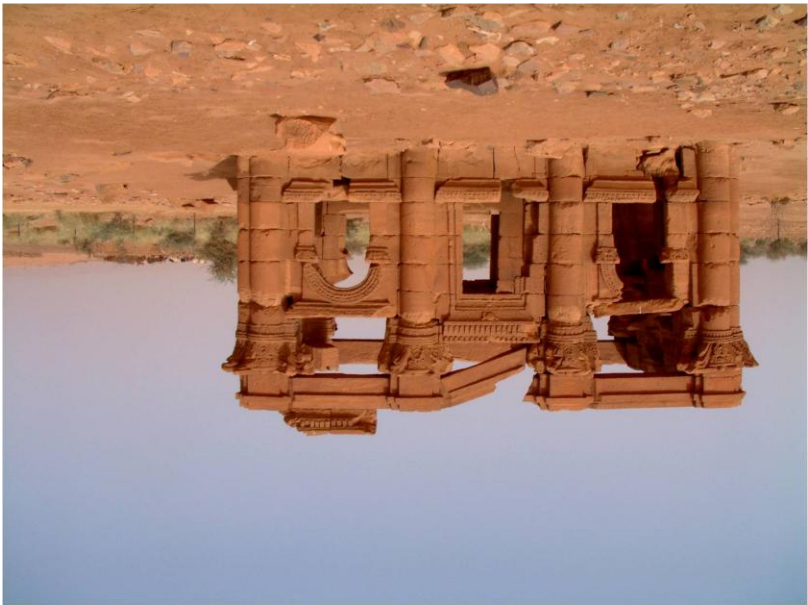
covered with fragments of red bricks, sandstone, pot sherds, and plaster. The name conducting archaeological excavations at Dangeil. The site consists of several mounds Since 2000, the National Corporation for Antiquities and Museums, Sudan, has been

THE ARCHAEOLOGICAL SITE OF DANGEL

Kushite pyramids at Meroe.



Kiosk at Naqa.



lived in the mountain of Jebel Barkal. They maintained close contacts with Egypt and their culture displays a rich mixture of Pharaonic, Roman, Hellenistic and indigenous African characteristics as seen, for example, in the Kushite lion from Basa, the temple kiosk at Naqa and in the royal burial field of Kushite pyramids at Meroe.



Kushite lion statue from Basa, now in the Sudan National Museum, Khartoum.

Distribution of statue fragments across the south room of the Amun temple.



Dangeil is the furthest upstream that such a statue group of early Kushite kings has been discovered so far. There have been two similar groups discovered in Sudan: one at Jebel Barkal found by George Reisner in 1916 and the other at Dokki Gel, Kerma, discovered by Charles Bonnet in 2003. The statues at these sites had been ritually buried in caches and the Kushite kings included were identical: Taharqo, Tanwetamani, Senkamaniskun, Anlamani and Aspelta. All ruled between the 7th and the 6th centuries BC and all of these statues had been deliberately broken at the neck, thigh and ankle. Aspelta was the latest ruler to be included, but there is no direct evidence to suggest when the statues were broken and the caches made.

Dangeil's early Kushite statues belong to this same family of rulers and were broken in the same places. It is likely that the caches mentioned above are connected and the contributory incident was the same in all three cases.

DISCUSSION

As found, the Dangeil discovery was not a statue cache. Statue fragments were randomly distributed over two rooms at various depths, and were mixed with the destruction layer of the later temple.



The early mud brick walls underlying the Amun temple

Dangeil's temple was built on top of several substantial mud brick walls and shares their orientation. It seems likely that this mud brick building was an earlier Amun temple. Associated ceramics and faïences suggest a date early in the Kushite period for these mud walls and it is probable that the royal statues originated in this building.



Faience plaques of the head of Amun and of a river plant.

Part of the enclosure wall after excavation.



The enclosure wall around the temple at Dangeil.



Much of the archaeological work has focused upon a large mound (60x37m) located in the centre of the site. Excavations here have revealed a large, previously unknown, temple of the 1st century AD dedicated to the Kushite god of kingship, Amun. Amun was often shown by the Kushites as a man with a ram's head. The temple was surrounded by an enclosure wall, with a large monumental gate on the west side.

'Dangeil' actually means 'broken red brick'. Some mounds stand more than 4m high and each one represents a well-preserved ancient building. Because Dangeil is well-preserved, it provides a unique opportunity to examine the characteristics of an ancient Kushite settlement and temple, and to gain greater insight into Kushite society and daily life. The site is quite large, measuring 300x400m, or is roughly equal to 17 football (soccer) fields in size.



Air photo of Dangeil, looking south-west.

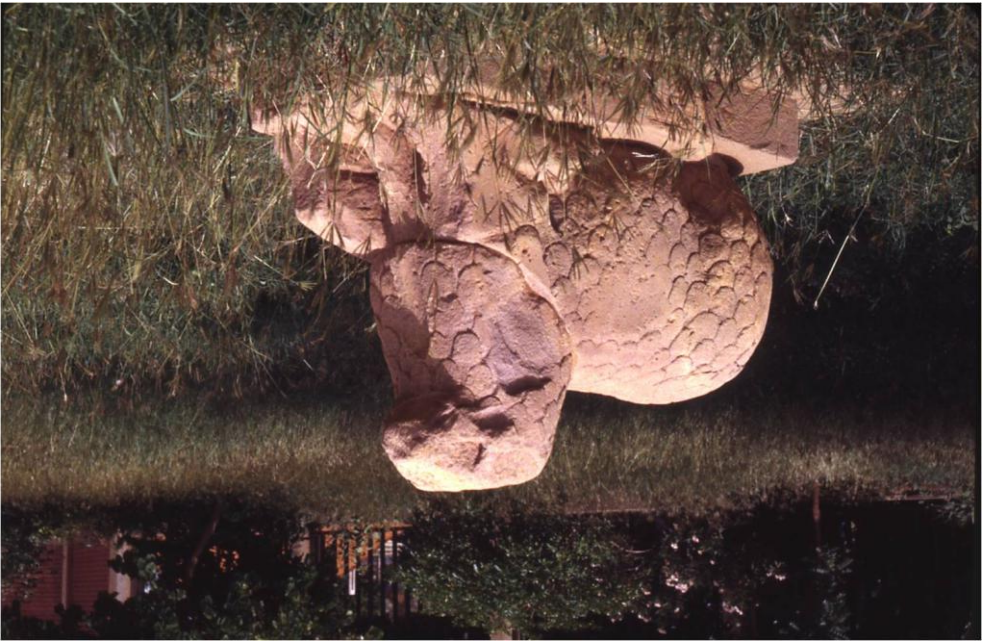


Dangeil, looking south-west.

A kiosk straddled the processional way roughly halfway between the enclosure entrance and the temple. It measured about 10 x 12m. The lower portions of the walls were constructed of three engaged columns connected on either side by a wall, and four rounded corners also consisting of engaged columns. The basic unit of measurement used was the

THE KIOSK

A ram statue from el-Hassa, Sudan, similar to those which were at Dangelil.



Fleece and eye from Dangelil ram statue.

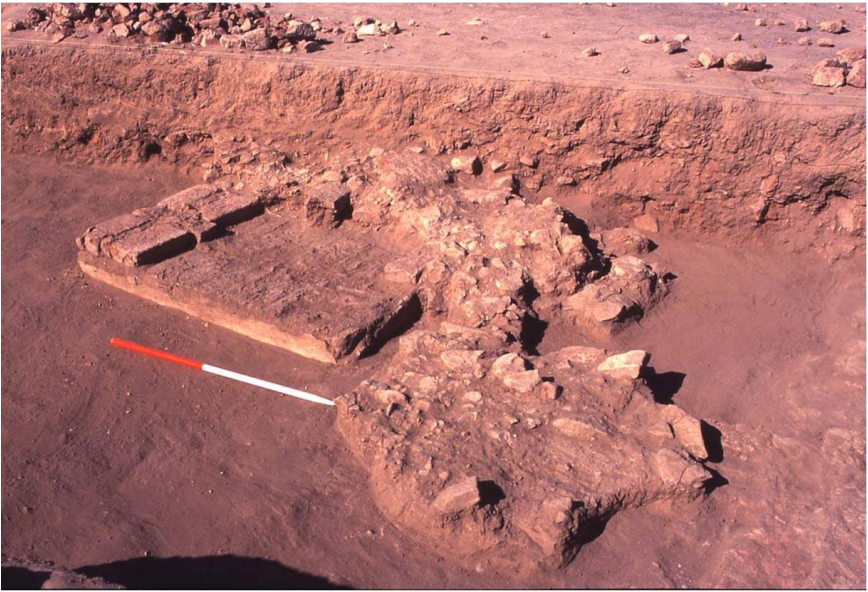


THE PROCESSIONAL WAY AND RAM STATUES

A processional way led from the entrance of the enclosure, through a kiosk, to the temple. It was paved with sandstone flagstones and red bricks. Part of it was excavated, along with the remnants of several smashed sandstone ram statues that had previously flanked it on either side.



Processional way leading from the main entrance into the enclosure, to the temple.



Smashed ram statue lying on top of a pedestal along the processional way.

The head is about 18.5cm high and was carved from coarse grey and pink granite. It is roughly half life-size. The king wears a Kushite cap with double cobras (*uraei*) on his brow. The tails of the snakes extend backwards across the centre of the head. The face is round, has almond-shaped eyes, and the king appears to be smiling. Much of the surface remains rough so that painted plaster could adhere. Traces of yellow and red paint and

The last fragment of a Kushite royal statue of early date discovered was the head of a king thought to be Aspelta (593-568BC). Although the top of an inscription is present on the back of the statue, the name is missing, so the statue was identified through comparisons made with other known figures. The torso and upper legs are missing.

Preparing to carefully move Taharqo out of the excavation.



The statue shows the king in a standing position with his left leg striding forward. He is bare-chested with broad, round shoulders, lightly-defined pectorals and chest, and well-defined arm and thigh muscles. His waist is narrow and he wears a closely-fitted kilt. His arms hang at his sides and he holds a document case in both hands. His belt is inscribed with an Egyptian hieroglyphic inscription that reads: 'The perfect god Taharqo, beloved of Amun-Re'.

Taharqo, ruled an empire that extended from the border of Palestine, possibly as far south as modern Khartoum. He united the Nile Valley from the junction of the Blue and White Niles northward to the Mediterranean Sea.

plaster remained. The head matches a pair of striding feet indicating that like Taharqo and Senkamanisken, this king was shown in a striding pose.



Head of King Aspelta (?).

The Taharqo statue, just after discovery.



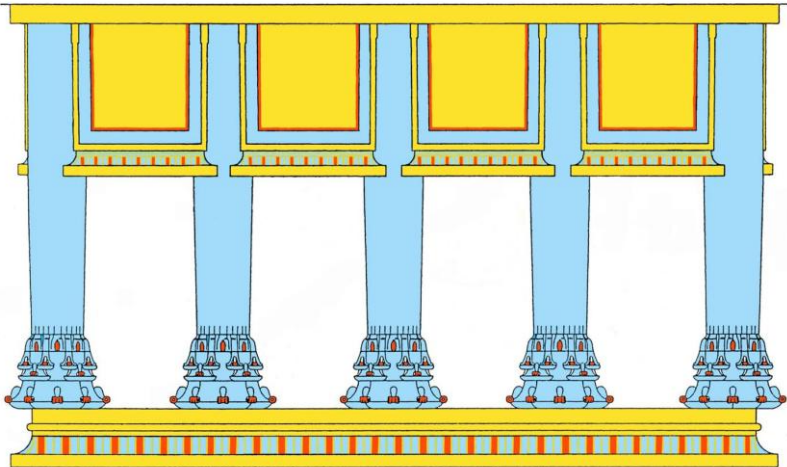
Senkamani's feet and statue base were found in the north-east corner of the room, beside the torso of a colossal granite statue which was lying on its left side. Its kilt and thighs were leaning against the upper part of the temple's east wall and the shoulders were angled downwards towards the floor. The names and titles, again written in Egyptian hieroglyphs in the cartouches on the back pillar, were those of the Kushite ruler and pharaoh of the Egyptian 25th Dynasty, Taharqo. The first base discovered belongs to this statue.

The Taharqo statue was carved from granite gneiss and is comprised of seven fragments, of which the torso and feet are the largest. The head is still missing. Wearing a simple cap crown, the statue would have originally stood around 2.6-2.7m high and is about 1.5 times life size.



Taharqo, king of Kush and pharaoh of Egypt.

Reconstruction of the painted exterior of the Dangeil kiosk.



Apart from the broad application of colour, there is nothing to suggest that scenes were painted on the outside of the kiosk. So from the archaeological data collected on site, it is possible to reconstruct much of the original appearance of the Dangeil kiosk. From all indications it would have been an extremely brightly decorated building, as was the temple. Imagine the visual impact of this building against the brown desert landscape.

Dangeil kiosk: part of the painted cornice roofing, now lying upside down.

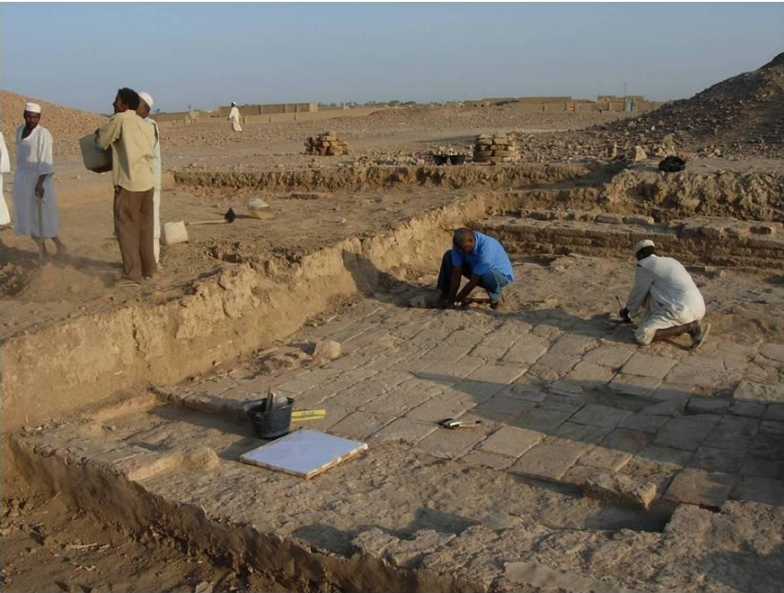


The exterior walls and mouldings were yellow, while the columns were blue. The entire building was topped by a cornice, painted with alternating stripes of red and blue. enclosed within yellow borders, and column capitals that were red and blue.

Egyptian cubit (c. 52.3cm). When the kiosk's dimensions are calculated in cubits, it is evident that the structure was laid out precisely.



Dangeil kiosk, with the entrance into the enclosure in the background, facing west.



Planning and drawing the floor in the kiosk.

From traces of painted plaster remaining on the kiosk's walls and architectural fragments, it is possible to determine the way in which this ancient building had been decorated on its



The torso of King Senkamaniskien.



Back of Senkamaniskien’s torso with the king’s names inscribed in cartouches.



The floor was reached in the north side of the first court and six columns were exposed. The floor consisted of hard, packed earth. The columns were made from several stacked layers of red brick quarter-circles and are a little over a metre in diameter.

THE TEMPLE’S FIRST COURT

The Dangeil temple: facing east, from the top of its main entrance. The first court is in the foreground and the sanctuary is in the background.

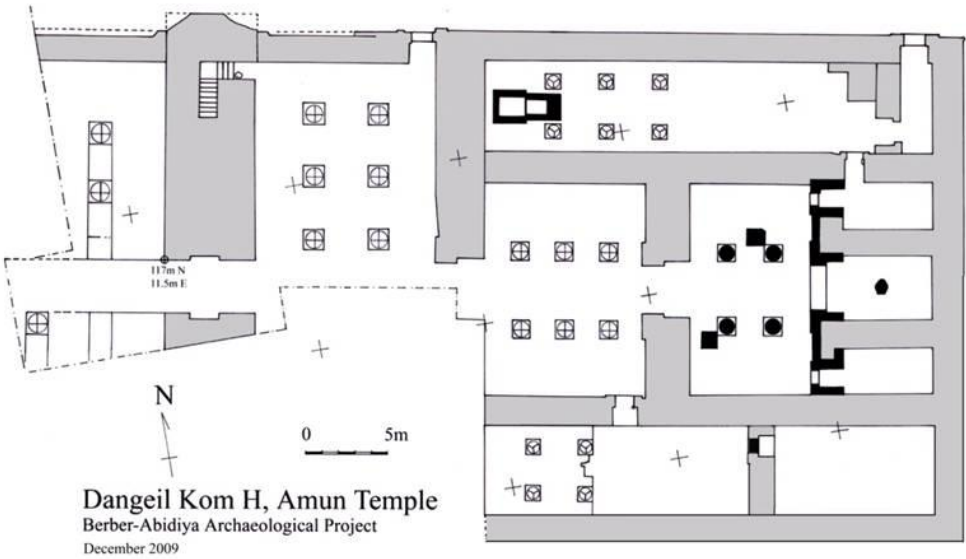


Kiosks are small sanctuaries that served as places of rest and protection for the god’s sacred boat when the god, housed within a shrine on the boat, left the safety and sacred space of the temple to travel, visit other gods, and participate in festivals. The god’s sacred boat was normally carried on the shoulders of several priests.

The kiosk was the focus of the sacred cult on the processional way and it was fully incorporated into the overall plan of the temple precinct. As a more public space than the temple itself, the kiosk acted as a point of engagement between the local people and their god Amun, as well as the power of the state and king, as represented by Amun.

THE AMUN TEMPLE

Dangeil’s Amun temple is orientated east-west with the entrance facing the Nile (48.5m x 33.5m). The temple’s monumental entrance gate is over 5.5m wide and stands almost 4m high. Much of the foundation and external wall faces are made of red brick or sandstone, while the interiors of the walls are constructed of mud brick. Excavations within the temple initially bisected it along its east-west axis.





Uncovering the granite statue base.

Hand of a granite statue holding a document case discovered in 2007.



As work expanded eastwards in the south hall, the torso of another granite statue was uncovered. It had been intentionally placed in an upright position and appears to have been reused for *baraka* or blessing rituals after the temple had stopped being a formal place of worship. Written in Egyptian hieroglyphs in well-preserved cartouches on the statue’s back pillar were the names and titles of the King Senkamanisken (643-623BC) who ruled Kush during the 7th century BC. The fist found in 2007 belongs to this statue.



Discovery of the torso of Senkamanisken.

There is a dramatic difference in colour between the hand discovered in 2007 and the statue torso, with the torso being considerably lighter. This suggests that the torso was likely exposed to the elements for quite a period of time.

The statue is approximately ¾ life-size and would have stood c. 1.5m high. Senkamanisken is depicted in a pharaonic striding pose with arms at his sides and hands holding document cases. His muscles are well-defined. The rough stone texture of his kilt, upper armlets, bracelets, sandals and Kushite ram necklace indicate that they would have been plastered and painted or gilded.

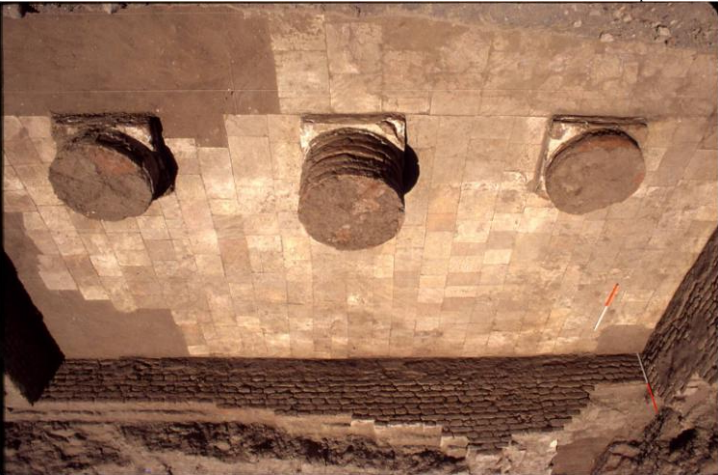


Fallen sandstone blocks in the sanctuary area.

Further east, excavations exposed the temple’s three-roomed sanctuary, where the cult statue of the god would have resided. The debris that filled this area contained many fallen sandstone blocks and fragments from the sanctuary chapel facings, some quite substantial.

THE SANCTUARY

Dangeil temple: 2nd court with sandstone floor.



The floor in the second court consists of sandstone flagstones of varying sizes. Columns held up the roof and were orientated in a line east-west, parallel to the temple axis. They are similar to those in the first court, but are slightly smaller. Long depressions are visible in this floor. These grooves appear to correspond to the placement of the temple’s roof beams and were likely caused by rainwater leaking through the roofing, and dripping from the beams onto the soft sandstone floor over a period of many years.

THE TEMPLE’S SECOND COURT

Fragments of ceramic drainpipes were recovered from the rubble debris in the first court and in front of the temple’s main entrance. They had been set in the upper part of the wall to divert rainwater away from the base of the building. The area around Dangeil only receives about 25mm of rain per year, but most falls between the months of July and September and it can be very destructive, undercutting the foundations of walls and buildings.



Temple drainpipes.



Surveying in the temple precinct.



Kushite beer jars from Dangeil's Kushite cemetery.



Freshly prepared aceda.

however, large jars, possibly used for the making of beer, have been excavated in the Kushite cemetery between Dangeil and el-Fereiikha.

At this point, it remains unknown as to whether a sorghum beer or porridge was consumed in Dangeil’s ancient moulds. It is hoped that further study will be enable us to determine which of these the Kushites chose to offer to their god Amun.

RECENT EXCAVATIONS AND THE DISCOVERY OF KUSHITE ROYAL STATUES

Most recently, work has focused on the long, southern room of the temple. The western part of this room contained four red brick columns and a well-fitted sandstone floor. A granite statue fragment, consisting of a ¾ life-size human fist holding a document case (*mekes*), was discovered in the centre of this hall at the end of the 2007 season. It was found in a pit filled with destruction debris from the temple and it clearly had belonged to the statue of a god or royal person.



The west end of the temple’s southern room, facing west.

Excavations in following years have focused on the eastern part of this south room, and here many fragments of early Kushite statues have been discovered. The first fragment found was the right foot of a large, granite statue bearing the Egyptian hieroglyphic inscription ‘forever’ on its back. The left foot was missing, but it was clear that this had been the base of a standing figure with the left leg striding forward. This discovery generated great excitement because the fragment was definitely dated to the 7th century BC, yet surprisingly like the granite fist uncovered earlier, it was found in the destruction level of the Amun temple, which is dated at least 700 years later.

Within the temple’s sanctuary, several pink sandstone fragments of a third finely carved altar were discovered. Some were inscribed with portions of well-executed royal names written inside cartouches including that of the Kushite Queen Amanitore. This suggests that she was a major benefactor of the temple and probably constructed a large part of it during

Quarry at Jebel Nakharu.



The sandstone used in the temple comes from the ancient quarries located in Jebel Nakharu directly across the river from Dangeil, and many of the temple’s sandstone blocks had fine chisel marks on them.

Each column is decorated with eight Nile fertility gods striding forward towards the main sanctuary. These gods were to ensure the seasonal inundation of the Nile and bountiful harvests. They are shown wearing river plants and flowers on their heads, have fat stomachs and wear short kilts. Each figure carries two water jars that are pouring offerings to Amun, the main god of the temple. Fertility figures also decorated one of the altars and the lower parts of the walls. The columns are also inscribed with Meroitic hieroglyphs. Following the 3rd c BC, the Kushites used these to write their language, Meroitic, but it is one of the few remaining languages in the world which has not yet been translated. As a consequence, the inscriptions in the temple remain undeciphered. The script itself is alphabetic and consists of 23 letters written either in a hieroglyphic form or in a cursive form. While the sounds of the letters are known, the words themselves are not. A bilingual inscription, which could serve as a dictionary, is required.

With the sanctuary exposed, four decorated sandstone columns, and two altars were visible. The entrances to the chapels were faced with sandstone blocks and the floor paved with well-fitted sandstone flagstones.



Dangeil temple: sanctuary area.

The sanctuary columns consist of a series of sandstone drums stacked one upon the other, with a thin paste of mud mortar sealing them together, and are one metre in diameter.



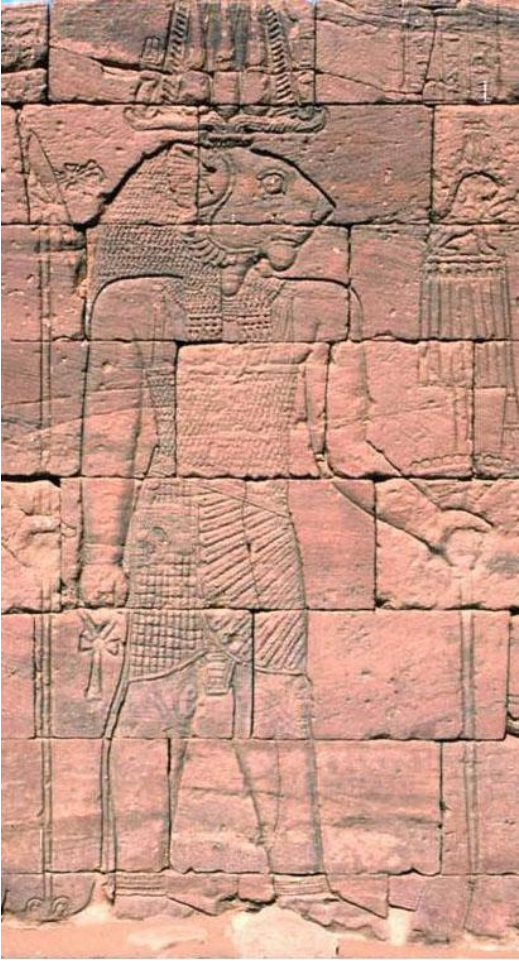
Sandstone sanctuary column with Nile fertility gods.

It was originally thought that the grain used to make the offerings in the Dangelil moulds was a type of wheat, as was used in Egypt. Emmer wheat was cultivated in Egypt from as early as the 6th millennium BC and was used to make beer and bread. Ancient food residues and starch left on the Dangelil mould sherds were analysed. Remains of sorghum were found on the moulds and grinding stones. Sorghum was used for offerings at Dangelil, not wheat or barley as in Egypt.

Within a temple, bread baked in temple ovens, was offered to the god who would consume the bread's spiritual essence. Presumably afterwards, the physical bread itself would be eaten by the priests and various appropriate persons.

Mould sherds are the most common find at Dangelil. Due to the conical shape, it was necessary to break the mould to remove the contents after cooking; essentially, they were for a single use only. In Sudan, ceramic cones have been discovered at numerous Amun temple sites and identified as moulds for temple bread offerings. Essentially, the moulds are a handmade, coarse ware that ranges in colour from black or grey to a pinkish-buff or red. It is evident that they were manufactured at speed and not with any great care. Their use seems restricted to temples dedicated to the god Amun. They are not associated with the temples of indigenous Sudanese gods, such as Apedemak, suggesting this type of offering was restricted to the rituals associated with the god Amun.

Mound of mould sherds after excavation and counting.



The Kushite god Apedemak shown on the Lion Temple at Naqa.

It appears that the Kushites, at least those in the middle Nile, adopted the practice of using moulds for offerings made to the god Amun, but modified their use to suit their own needs, local rituals, traditions, and perhaps available food grains.

What sort of bread can be made in a mould with sorghum? The only sorghum foodstuff currently produced in Sudan using a mould is a stiff porridge, called *aceda*. At its simplest, to make *aceda*, sorghum flour is mixed with water, usually left overnight, then the mixture is strained and heated over a fire in a pot. It becomes thicker during cooking, turning into a porridge. The *aceda* is then added to moulds, such as bowls. When the *aceda* is removed from the mould, it maintains its shape. The moulds themselves are not baked or cooked. Another possibility is that bread or porridge are not being consumed at all, but rather a beverage or beer similar to modern day *merissa* or *assaliya*. Classical writers mention that the Kushites consumed beer made from sorghum, but direct evidence is lacking. Of note,

Burnt palm wood roof beams from the temple's destruction.



The temple was destroyed by a great fire which seals most of the floor surfaces. This fiery destruction was accompanied by the smashing of altars, and digging of pits through floors. Following its destruction, the temple gradually decayed and collapsed leaving it buried beneath about two metres of solid red brick and mudbrick tumble. The temple and its precinct seems to have been largely abandoned after the temple was destroyed.

THE DESTRUCTION OF THE TEMPLE

Dais or possibly throne base in the north room.



her reign in the 1st century AD. Her altar had been purposefully smashed, broken in two, and all decoration had been chipped off, leaving two rather sad rounded boulders.



Fragment bearing the royal name of the Kushite Queen Amanitore (1st c AD).

THE NORTHERN DAIS ROOM

A long rectangular room (27.3 x 5.5m) ran along the north side of the temple and was orientated parallel to its axis. A colonnade consisting of six red brick columns led up to a raised dais at the western end of this room. It was constructed of well-laid sandstone blocks that enclosed a poorly-laid red brick, sandstone and rubble core. The dais was approached by five steps, of which three were preserved. The floor of the room is paved with finely-laid flagstones.

Similar daises have been discovered in the Amun temples at Kawa, Jebel Barkal, Meroe, and Naqa. The function of the daises within temples is unknown, but they may have had a throne placed upon them, that was used by the king during ceremonies dedicated to various sun gods, such as Re' or Amun-Re'.

As with the kiosk, the careful architectural planning of the temple is particularly notable when examining the construction of the dais and its surroundings. Architects' guidelines were incised into the soft sandstone floor, marking the exact position of the dais' corners in relation to the room's walls. Overall, few objects have been found in the temple and it is likely, that because it was a sacred space, a high level of cleanliness was maintained.