



The Qatari Mission for the Pyramids of Sudan. Re-opening the Burial Chambers of Beg. N.9: Preliminary Report

*Murtada Bushara Mohamed
and Mahmoud Suliman Bashir*

Introduction

Since the excavations of Reisner in 1923 in the Meroe royal necropolises little archaeological research has been undertaken there. The exception is the joint Sudanese-German mission led by F. Hinkel who worked under the umbrella of the Sudan Antiquities Service now the National Corporation for Antiquities and Museums (NCAM). He left a massive archive relating in particular to the upstanding funerary monuments on the site. The current Qatari Mission for the Pyramid of Sudan (QMPS) conducting archaeological work at the site is again a Sudanese-German co-operation of NCAM and the Deutsches Archäologisches Institut (German Archaeological Institute – DAI) Berlin along with Qatar Museums (Riedel *et al.* 2016, 62).

The work of the Qatari Mission for the Pyramids of Sudan is focussed on the Royal Cemeteries at Meroe: on archaeological research, conservation and restoration, site management and the development of tourism. In the field of archaeology one of the main objectives of QMPS is the re-opening of some of the funerary chambers in the royal cemeteries. The pyramids were excavated rather quickly early last century by the American archaeologist George Andrew Reisner, head of the expedition from Harvard University and the Museum of Fine Arts, Boston.

In preparation for the current project Pawel Wolf, from the German Archaeological Institute, conducted research on the published and unpublished documents concerning the Royal Cemeteries at Meroe. He consulted the diaries of Reisner to select those tombs with decorated chambers for the re-opening project. The aim of QMPS is to re-open these chambers for study, conservation and eventual viewing by tourists. He recommended a choice of three tombs for re-opening, all with well preserved coloured wall paintings and inscriptions, pyramids Beg. S.10, Beg. S.503, and Beg. N.9.

Re-opening of Beg. N 9, work progress and challenges

QMPS concentrated last season on the re-opening of the chambers of Beg. N.9. This pyramid marked the burial place

of King Tabriq (Adikhalamani) who ruled from Meroe during the period 207-186 BC (Dunham 1957, 66). In his notes, Reisner mentioned that he stored in the chambers the materials from the cemetery that were not shipped to Boston or transferred to the museum in Khartoum.

Beg. N.9 is a sandstone pyramid 12.7m square at the base, with stepped faces and no plinth (Dunham 1957, 66). It is one of the best preserved pyramids in the cemetery, although the general plan is distorted and some of its blocks are in imminent danger of collapse. It has a well-preserved sandstone chapel with reliefs within, entered through a pylon from the east, the doorway crowned by a double lintel decorated with a cornice and sundisk.

Work began on this pyramid from the first season of QMPS in 2015-2016 by the QMPS-DAI Section with contributions from the QMPS-NCAM Khartoum Section. The work started at the descandary, but at a depth of 3.8m the work stopped due to the discovery of ancient water penetration. This is mostly from the area near the south-west corner of Beg. N.18, that was built close to the descandary, and has exerted pressure on the northern side wall (Plate 1). This problem can be seen in the profile of the northern side of the descandary. Most probably this problem began in antiquity as the descandary of Beg. N.9 was dug into the sloping face of the ridge from east to west. In addition, the later construction



Plate 1. Location of Beg. N.18 beside the descandary of Beg. N.9.

of Beg. N.18, east of Beg. N.9, resulted in the collection of rainwater that penetrated into the descandary.

In the following season, 2016-2017, in order to protect Beg. N.18 and to facilitate the work in the descandary of Beg. N.9, the QMPS-DAI team constructed a concrete ring beam around the upper part all along the descandary. The maximum depth of this revetment is 3.8m in the western part of the descandary.

In October 2017 the work was continued by the QMPS-NCAM team. This team concentrated on the removal from

the descandary of the wooden shuttering and sand and constructed red-brick walls to provide temporary protection. The clearing of the descandary at this time revealed traces of the previous year's heavy rains. Evidence for water penetration was clear on the wood which was partially eaten by termites.

In order to move the work forward, more local workmen were employed and the level of the excavation of last season was reached. At a depth of 200mm below the concrete beam, however, in the area under the south-west corner of Beg. N.18, we faced the same problem as that of the previous season. Part of the descandary sides had collapsed and the walls showed cracks, there were loose flakes of rock, and holes had appeared in the kaolin and white sandstone layers which stretched around the whole descandary (Plate 2).



Plate 2. Cracks and holes on the northern wall of the descandary.

To overcome these challenges, several meetings were held between the NCAM and the DAI teams, in order to secure the site and protect the workers. Metal supporting props (agroprops) were placed to support the concrete wall, and a stone wall was built under it, towards the western end of the descandary. A decision was made to allow only NCAM workmen to work in the descandary and tomb.¹

Excavation was halted several times in order to overcome the risks and challenges facing the continuation of the work. In fact, the situation required further consultation with a range of national and international experts in geology and structural engineering.

Dr Abdelrhman Ali Mohamed, Director General of NCAM, who initially trained as a geologist, tested the geological context of the area under the wall of pyramid Beg. N.9 and suggested that there was a 50% chance of serious collapse caused by the heavy load exerted on the underlying strata by the concrete revetment wall. He also suggested that a support of columns be inserted into the kaolin layer, but that in the meantime work could continue on the western end of the descandary as it was more stable.

The cracks in the western side of the northern and south-

ern descandary walls have been filled by sandstone fragments and clay and 20 agroprops have been placed to support the concrete wall. This is a temporary solution to facilitate the opening of the tomb and the removal of all the objects put inside by Reisner, as mentioned in his notes.

A Sudanese architect² was consulted to evaluate the situation and provided solutions. He suggested constructing supporting pillars for the concrete wall, which was causing extra pressure on the underlying strata. Furthermore, he pointed to the importance of analyzing the soil context, and he correspondingly took some samples to be tested. A second Sudanese architect³ in his evaluation mentioned that it was necessary to build pillars or supporting walls to stabilize the concrete wall.

To provide a definitive solution the Spanish architect, Ignacio Forcadell,⁴ was contracted to evaluate the situation. All the architects consulted agreed that the concrete wall was causing a heavy load and needed supporting pillars.

It was requested that Ignacio Forcadell devise a plan to secure the descandary in order that work could continue towards the burial chamber, the main aim being to look inside the chamber and to see if its condition justified the measures necessary to allow safe access. Therefore, to secure the descandary he suggested putting 80 agroprops under the concrete wall starting 300mm from the western side and concentrated in the middle of the descandary. However, to reach the burial chamber's entrance the solution employed was to dig a vertical shaft at the western end of the descandary with wooden shoring to hold back the earth (Plate 3).

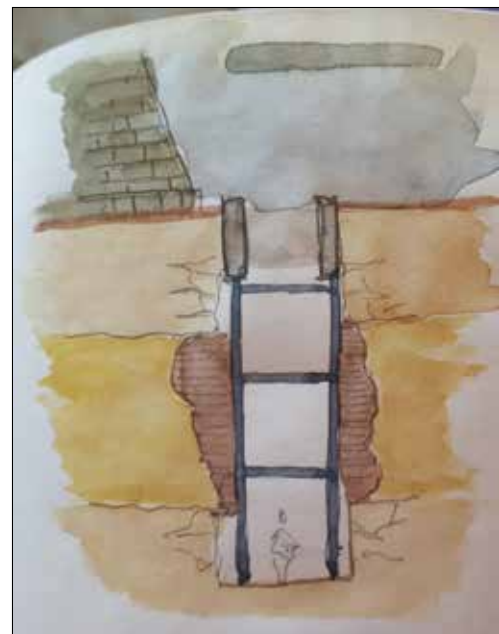


Plate 3. Drawing of the proposed shaft by Ignacio Forcadell.

¹ QMPS-NCAM team: Sufian Mutwakil, Abdelazin Abdelrahim, Ahmad Al Mustafa, Mobarak Adam, Osman Al Fadl, Mohammed Tohami (photographer), Mohamed Mobarak (trainee), Emad Tag Elsir (trainee), Hozifa Abdelmaged (Trainee).

² Ashraf Sabil from the Italian Tourism Company camp at Meroe.

³ Abdelwahab Abdallah Mahjoub, previously consulted in 2015, was again consulted.

⁴ He is specialized in security measures in the archeological field; he is working with the American Mission in el-Kurru and has also done some work at Amara West.



The Descendary

The skewed sub-rectangular descendary measured 17.6m long, 1.4-2m wide, with a maximum depth of 10m at its western end. It is orientated east-west and dug into the sloping surface of the ridge which consists of different geological strata. The upper one is ferricrete sandstone, followed by red gravel soil, and after that there is a layer of white sandstone followed by a thick layer of kaolin, and then again by ferricrete and yellow sandstone. The descendary contains poorly preserved steps leading to three burial chambers located at its western end. It is clear that the steps through the kaolin layer have disappeared.

The fill in the descendary consisted mostly of sandstone blocks (probably collected from the collapsed pyramids and chapels). Some of the blocks bore graffiti, depictions of figures and inscriptions, or were architectural elements from the corners of pyramids or the cornices of chapels. The fill also contained rubble and sand, pottery sherds, fragments of faience and stone tools.

In the descendary there is a pit, 800mm in diameter, cut through step no. 8 extending 500mm to the east starting from the white sandstone layer and extending down to the kaolin. Its fill is different from the descendary filling, consisting of soft clay under sandstone blocks.

The descendary was cleaned for a length of 8.4m from its eastern end. At a depth of 5.6m is the area of the missing steps in the kaolin layer. The fill in this part consisted of rubble and small sandstone blocks within a matrix of mud. The steps are again preserved below the kaolin layer in the ferricrete and yellow sandstone. In order to secure the descendary work was concentrated only in the western part of the descendary. The agroprops were installed after levelling the descendary fill at a depth of 5.6m (Plate 4).



Plate 4. Installation of agroprops for security in the descendary.

Entrance

The upper part of the entrance of the burial chambers was revealed at a depth of 9.35m. At a depth of 7.65m the carved door frame appeared (Dunham's type III; 1957, 66). It is a moulded entrance with a cornice and panel in the middle (Plate 5); the lintel with panel measured 2.2 x 0.8m and the northern of the two jambs 1.35 x 0.4m; its lower part was



Plate 5. The vertical shaft and part of the entrance to the burial chambers.

eroded by water penetration. The doorway was sealed by three rows of sandstone blocks between the jambs. Only the upper part was removed to give access to the first chamber.

The entrance to the first chamber was cut into the middle of the western wall of the descendary in the yellow sandstone layer immediately below the ferricrete layer. Some of the upper parts have collapsed and there were no traces of painting. The entrance was 1.13m wide, the north 'jamb' 1.13m thick, the south 'jamb' 940mm thick.

The first chamber (A)

Looking inside the first room after removing part of the blocking wall, we found that the roof, which is cut in the kaolin layer, had partially collapsed, forming a pile in the middle of the room. Pottery objects were visible in the room beside the walls (Plate 6), as was the entrance to the second burial chamber which was sealed by sandstone blocks. The presence of these pottery objects confirmed the entry in Reisner's memoir concerning the storing of archeological objects in the burial chambers beneath this pyramid. This discovery will hopefully reveal enormous archaeological information and knowledge.

The first chamber is the largest of the three, at 4.8m east-west x 8.35m north-south, with two rock-cut pillars

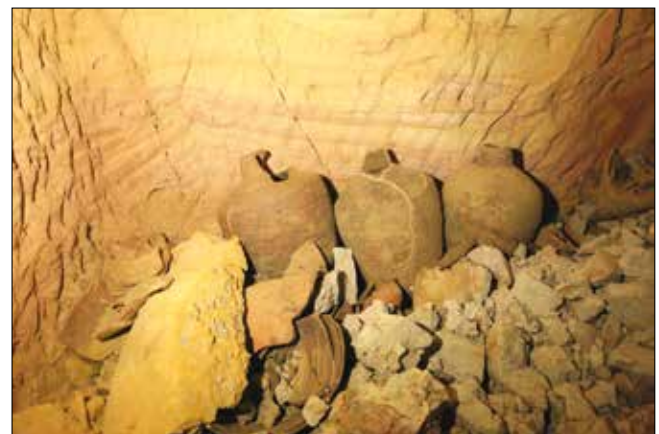


Plate 6. Collapsed roof and pottery jars inside the first burial chamber.

and a flattened roof according to Dunham. Unfortunately the pillars and the roof had collapsed most probably because of water penetration. Most of the archaeological objects left by Reisner were buried under the collapsed kaolin from the roof. Only a few complete objects were collected among them small pottery bowls found in small niches in the northern wall, and jars from the north-west corner and by the north wall. Fragmentary and broken jars came from the south-west corner along with a grinding stone and organic material. In front of the entrance leading to the second chamber was a whisky bottle left by Reisner with a paper inside but unfortunately it was not sealed when found and the paper was much decayed. The work was carried out in a hurry as we had been advised to collect as much as we could. This was done by dividing the chamber into grid squares, and removing the material for subsequent analysis. There was no trace of decoration in this chamber; it had not even been plastered.

The entrance to the second chamber was cut into the yellow sandstone layer in the middle of the western wall of chamber A. It is lower than that leading into chamber A, about 1.8m high, 1.37m wide with jambs 1.2m thick. Part of the inner, southern wall in chamber B had collapsed. The entrance was entirely sealed by sandstone blocks.

The second chamber (B)

The discovery of the objects in the first chamber encouraged us to investigate the condition of the second chamber. We removed some stone from its blocked entrance to view it with the aid of a camera installed on a metal pole. It became clear that the room is in very good condition. Moreover, this burial chamber differed from chamber A having been cut into a sandstone layer. This chamber has two bedrock columns 1.4m apart strengthened by sandstone revetments. Pillared chambers are a feature introduced during the Meroitic period. Tombs with chambers containing pillars are also seen in non-royal cemeteries as at Tomb IV T1 in Sedeinga, where four pillars were found in the first room and two in the second (Rilly and Francigny 2013, 62).

On the chamber's floor were numerous complete and fragmentary ceramic vessels as well as human bone (Plate 7). At the far end an entrance, well sealed with stone, gave access into the third burial chamber.

Chamber B is smaller than A, measuring 4.25 x 7.55m. The northern rock-cut pillar was located 900mm to the west of the east wall. This pillar is encased by seven courses of



Plate 7. View inside the second burial chamber showing the archaeological material and the pillars.

sandstone blocks of different sizes, while the pillar to the south was encased only at the base by three courses. The stones were bonded with a clay mortar. The presence of these pillars only in the second chamber raises the question as to whether it was built at the same time as the first chamber and descendent. Why was only the north pillar revetted to its full height and why were there only pillars in this second room? Had cracks appeared during the tomb's construction or before the burial took place? The pillars are rounded into the roof which is lower than that in the first chamber. There are some cracks in the pillars and in the entrance between chambers A and B, and part of the entrance has collapsed.

The objects, placed in piles, cover the entire floor of this chamber. It is clear that water had entered the chamber and silt covered most of the objects. The bulk of the archaeological objects were removed from this chamber for study.

The entrance to chamber C was cut in the middle of the western wall of chamber B through the yellow sandstone layer and had been sealed entirely with sandstone blocks by Reisner's workmen. The doorway is about 1.83m high, 1.43m wide and with jambs 990mm thick. No trace of plaster or paint remained in the doorway.

The third chamber (C)

Chamber C is the smallest at 3 x 3.1m with a vault-shaped roof only in the western side of the chamber, mainly in the area over the coffin bench. The north, west and south walls were plastered and painted (Plate 8). The coffin bench, attached to the west wall, was cut from the bedrock and measured 1.77 x 1.12-1.77m and was 660mm high above the debris sealing the floor; at its west end on the top there is a nail probably used by Reisner for drawing. The east face of the coffin bench bore inscriptions in high relief while the north and south sides were decorated with paintings of the king and deities (Plate 9).



Plate 8. View inside the third chamber shows painted walls and coffin bench.



Plate 9. The relief on the eastern face of the coffin bench.

In addition to the coffin bench and small niche cut in the western wall above the coffin, most of the lower part of the painting had been destroyed due to water penetration which reached at least 300mm above the floor of the chamber.

The archaeological material recovered from Beg. N.9

The first sight into the burial chambers revealed the existence of large numbers of finds. All were stored in the first and the second chambers; no objects were found in the third chamber. The majority of the finds are in the second chamber; some were found around the walls of the first chamber and most probably there are more under its collapsed roof. There are piles of human and animal bones, complete and broken pottery jars, bowls and amphorae, iron objects, fragments of anthropomorphic statues and plaques of faience.

The ceramic material consisted of a number of red-slipped, wheel-made, plain jars each with a short straight neck and cylindrical body (Plate 10). There are also red-slipped, wheel-made jars with a short neck and ovoid body, and among the finds a number of the ledge-rimmed, wheel-made bowls. A basin with an *ankh*-shaped partition within was also found, complete but broken into fragments (Plate 11).

Stone tools, among them upper and lower grinding stones of different sizes and materials were also found (Plate 12). A small number of metal fragments from objects of iron and



Plate 10. Wheel-made jars.



Plate 11. Ceramic basin with an *ankh*-shaped partition.



Plate 12. Lower and upper grinding stones.

copper alloy were noted, among them large pieces of iron (Plate 13) and parts of copper-alloy bowls.

Reisner's inventory numbers remained on some of the objects (Plate 14). There was an object field number for each object, even on those broken or incomplete. This will facilitate further detailed study of the finds when compared with objects found in the other tombs at Meroe.

Among the finds are some contemporary objects most



Plate 13. Unidentified pieces of iron.



Plate 14. Ledge rim bowl with Reisner's numbering system.

probably from the period of Reisner's excavations: a metal box (Plate 15) and a glass bottle (Plate 16).

The recovered human remains were not found in one place and had been placed in piles inside the second burial chamber. The method used to examine⁵ the recovered human remains was dependant on visual observation with the naked eye and with a magnifying glass. We separated out the long bones to see if there were any complete examples to allow for an estimate of how many individuals there were among the recovered bones.

Generally the preservation of the bone was not bad although it is fragmented and was affected by humidity and rain water. So far about ten individuals have been found and still unexposed layers remain. Two sub-adults and eight adults have been recognised; one male and one female were analyzed.

Among the animal bones are remains of cattle and sheep, represented by different elements of the mandibles, feet and long bones.

⁵ This material was studied by Mohammed Saad Abdallah, NCAM's physical anthropologist.



Plate 15. Early 20th century metal box.



Plate 16. Early 20th century glass bottle.

General Remarks

After the significant discoveries in this tomb, the work will be continuing so as to achieve the aims of the Qatari Mission for the Pyramids of Sudan, with the reopening of further burial chambers for documentation, study and to allow visitor access. Thus, the next stage will be to focus on security measures for the descendary and stabilization of the ceiling in the first chamber so that it can be documented and studied. Then, the work will move forward to the second and third chambers to document their archaeological remains and allow them to be compared with other archaeological remains found in the tombs associated with Meroe's pyramids. Work will also focus on preparing the burial chambers in this pyramid for public access, the first such tomb that can be visited at Begrawiya.

Acknowledgement

The Khartoum section of the Qatari Mission for the Pyramids of Sudan would very much like to thank Dr Abdelrahman Ali Mohammed, the director general of the National Corporation for Antiquities and Museums (NCAM), and Dr Salah Eldin Mohammed Ahmed, General Coordinator of the Qatar-Sudan Archaeological Project (QSAP), for their support and trust. Also we would like to express our



gratitude to the Sudanese architects for their offers of help with evaluating our work situation and challenges. Special thanks go to Ignacio Forcadell for his quick response to our request for assistance and for accepting responsibility for this commission. Also we would like to thank those who took the risk of working in Beg. N.9, digging and lifting objects from a 10m-deep hole and operating more than 10m underground.

Bibliography

- Dunham, D. 1957. *The Royal Cemeteries of Kush vol. IV, Royal Tombs at Meroe and Barkal*. Boston.
- Riedel, A., Mahmoud Suliman Bashir, P. Wolf, Murtada Bushara Mohamed and C. Kleinitz 2016. 'The Qatari Mission for the Pyramids of Sudan – Archaeological Investigation, Conservation and Site Management at Meroe 2015/2016', *Sudan & Nubia* 21, 62-74.
- Rilly, C. and V. Francigny 2013. 'Sedeinga 2012: A Season of Unexpected Discoveries', *Sudan & Nubia* 17, 61-65.