

# **Qatar-Sudan Archaeological Project (QSAP)**

## **Report form Season**

**2013-2014**

**Number of Mission:** QSAP: A-14.

**Mission:** University of Dongola .

**Project:** El Kurru Archaeological Project.

**Site:** Al El Kurru .

**Director:** Prof Abbas S.A. Mohammed- Ali .

### **Duration of field activity:**

**From** :Jan 16<sup>th</sup> **To:** April 10<sup>th</sup>

**Post-excavation activity: From** April 11<sup>th</sup> **To:** May10<sup>th</sup>

### **Summary of season's activity:**

#### **Survey:**

Investigations made by Dr.Geoffery Emberling, the co-director, in George Reisner's 1919 kurru field notebook revealed five possible elements of a settlement: two fortification walls, two structures that he thought were temples, and a large well cut into rock that he thought might have been part of a palace.(fig 1,2).

four of these settlement elements have been identified, two of which are being investigated, a temple and a section of a large fortification wall(fig1,2).

A geophysical survey using an FM256 machine (hired from Dr Mohammed Abdel Wahab of the university of Dongola) of an area north of Reisner's

hut, and north-west of the main burials, was conducted, together with a topographic survey in the cemetery area. Detailed photographic survey of painted tombs for conservation purposes, and 3-D modelling of the spaces has begun (see page 5-6, fig28).

### **Excavation and Re-Excavation**

Due to natural and human factors, the work done by Reisener in 1919 was a subject to a lot of disturbance during the last 100 years, long after the burials were rubbed and filled with drifted sand in their chambers, stairways and pits. Stone blocks were removed from the walls, and all kinds of dirt and trash including dead animals, plastic bags plants remains and more! were driven in.

Two teams were working in the site a group of the university of Dongola lead by Dr. Jamal El-Hassan work in the Tumuli, the Mastabas and the Pyramids, and a group leads by Dr. Geoffery Emberling of the university of Michigan, working in Kurru Pyramid -1, the temple, and the city wall.

#### **The Tumuli:**

This group is made of 6 burials ( Tum 1,2,4,5, and horse – shoe Tum 6,19). The horizontal area re-excavated is c.200 sq.m. These burials are the earliest burials in the cemeteries. The superstructure is made of rubble and stone, in some, a stone enclosure was added. The substructure is a circular or oval pit. The whole area in and around the burials was cleared tons of soils and stones were removed. The stone blocks were returned to their original place following Reisner's plan of the cemetery (fig3).

### **The Mastabas:**

The 'Mastabas' form a line of burials east of the mound rubble and horse-shoe graves, and west of the pyramids. These are 11 in number (ku711,13-14,20-23) covering a horizontal area of c .1200 sq. M. The superstructure was made of well-cut stone blocks originally forming a mastaba and an outer rectangular enclosure wall with a mortuary chapel .

Here also the same elements of disturbance had their role . the features were re- excavated and the area in, and around the burials was cleared and the re-excavation revealed many Napatan Pot shreds(fig7-18).

### **The Pyramids :**

The Pyramids occupy the lowest and the eastern part of the field (ku2,3,4,15,16,17,18). A horizontal area covering 1800 sq.m. was reexcavated Here the kings of 25<sup>th</sup> Dynasty (apart of Taharqa) and some of their queens were buried here. With the exception of ku 5 and 16, the rest of the pyramids were open to factors of misuse since 1919. They were almost filled with wind blown sand and trash, rain, drifted soil, not to mention the human damage.

Tons of soils and trash were removed . the clearance went down to the original floor of each chamber, in some the depth of sand went as far as 3 meters deep, it yielded many pot shards and other objects . in some, the platform on which the wooden bed of the dead was laid was recovered (fig20-25).

The state of the weak ceiling of ku2 needs further investigation before it can be re-excavated.

## **Pyramid One (Ku.1)**

The largest pyramid at the site ku-1 is of a later date, (along with a likely contemporary queen's pyramid across the wadi to the south, the foundation of which have been removed). It is also the only pyramid at the site that was not completely excavated by George Reisner's excavation in 1919. In an inner chamber of the burial he noted that a large portion of the ceiling had collapsed. He was concerned about the danger of further collapse, so he stopped excavation.

Excavation was renewed this season with a plan to construct iron support structures in the inner chamber to allow for exploration of this chamber(fig19). We hope that continuing excavation will reveal some information.

## **The Temple**

Located near the Royal Cemetery, the temple was almost certainly a stone quarry before being converted to other purposes. Because it is located near the cemetery, it is likely to have been a "mortuary temple" dedicated to the cult of dead kings. It has a highly unusual plan with only one parallel, found at the site of Nuri (currently covered by sand). A staircase from the east (Nile) side leads into an outer room that is distinguished by the collapse of its outer wall, almost certainly because of a powerful flood from the nearby wadi. The inner room contains 26 columns as well as two doorways into inner chambers cut into the rocks. These inner chambers, two of which were also decorated with columns as well as roofing beams, were found almost entirely empty of material related to its function (fig26)

In the outer rooms there is a set of ancient graffiti that were probably carved into the walls and columns after the original use of the building was abandoned (perhaps because of a flood). These carvings were likely associated with a domestic re-occupation of the temple (100 BC – AD 100)

with cooking installations, grinding stones, and a layer of ash across the sand.

### **The City Wall**

Close to the line of palm trees along the Nile, another excavation has begun to expose and document a city wall more than 2 meters thick and over 1 meter high. Built of shaped stone blocks along each edge and filled with stone and rubble, much like other known walls of the Napatan and Meroitic periods (700-100 BC).

One gateway in the wall has been uncovered, and it preserves door socket stones, an original street on the sandstone bedrock, and a threshold stone made of a log of petrified wood (fig27)

We plan to clear the wall along its entire length, which Reisner noted was close to 200 meters.

### **Restoration/Conservation:**

Preliminary steps towards restoration and conservation of mound burials and the mastabas was undertaken by tentatively placing some of the stone blocks in their original place waiting for further work, in the painted tombs (Ku-5 and Ku-16). a datalogger has been placed in each of the painted tombs in order to monitor heat and humidity over 1 year. Tiny paint samples have been taken from each tomb by Dr. Rachael J Dann of the university of Copenhagen for analysis in Copenhagen in order to determine pigment, binders and fillers used in the tombs, so that appropriate conservation can commence in future(fig28).

Conservation of the two painted tombs at Kurru will be undertaken in collaboration with the Royal Danish Conservation School. A first step in the conservation process has been initiated, and involves measuring the temperature and humidity in the tombs over a year analyzing the pigments

and other ingredients that were used to make the different colored paints in the tombs, together with small samples of the rock being analyzed to determine their porosity and salt content. Then conservation work can begin, in order to preserve the paintings for future generations.

### **Protection work:**

1. We have built a walls with stone and mud in a half circular shape round each stairway of all pyramid to protect it from rain(fig29).
2. Have temporally closed the entrance of the outer burial chamber of every pyramid by mud and stone in face of people (fig...)
3. Have built and installed iron protective structure inside Ku-1 (pyramid).
4. built and installed iron doors in pyramid and in temple. Piled stones around Ku-1 stair was entrance to reduce wash of rain.
5. Installed barbed wire fence around temple.
6. Left large spoil heaps along wadi and built low red brick walls around temple to protect it against rain.
7. Covered city wall with shawall with layer of sand/dirt on top to protect stone.
8. The department of Antiquities and the department of tourism have their guards on the site.

### **Site presentation & Management:**

See protection work above.

### **Number of graves excavated:**

1. Ku-1 pyramid: work in burial chamber C unfinished.
2. One modern grave discovered, but immediately backfilled.

### **The main structures revealed:**

1. Re-excavation of the 23 burials recovered by Reisner in 1919.
2. Work in progress in Ku-1 pyramid, recovery of outer chamber A inner chamber B, burial chamber C.
3. Ku. 1500 stairway, temple outer room 1 (with rockfall), outer room 2 (with 26 columns), inner rooms 3-4 (with columns), inner rooms.
4. The city wall.

**Protection measurements undertaken for the site:**

See protection measurements above

**Restoration / conservation activity :**

See restoration and conservation above

**The main achievements of the season: (a brief summary of the whole project objectives and approximate percentage of work achieved):**

Following the objective of the project started in the original proposal:

1. A magnetometer survey was conducted revealed features previously suspected (the city wall the temple,..etc .
2. All the features of the site excavated by Reisner in 1919 (tumuli ,mastabas , pyramids )were re-excavated and tons of sand and rubble was cleared down to the floor of each burial, and the enclosures were tentatively resorted(fig...)
3. Pyramids Ku-1 excavated party in 1919, currently under excavation.
4. Mortuary temple dedicated to the cult of dead kings, was excavated and temporally protected .

5. The painted tombs have been the subject of a detailed photographic study. The images will be ortho-rectified in order to produce epigraphic drawings of the tombs. Paint samples from each of the tombs will be analysed (using X-Ray fluorescence and/or related techniques) in order to identify the pigments in the plaster and paints in the tombs. Photogrammetry of the entire tomb structures has commenced. All of these techniques will inform future conservation approaches, and full publication of the tombs.
6. The city wall was partly excavated and temporarily covered .
7. Great number of pot shards were recovered from the burials remain classification.

**List of important objects discovered**

No	Object	Location	State of Preservation	Description
1.	Broken Pots	Fig (26)	Poor	Napatan
2.	Pot shreds	Fig( 4-7,10 11,14-17, 21- 22,24-25)	Good	Napatan
3.	Pieces of offering table	Fig (11)	Good	?

4.	Fragment .of Shawabti	Fig(23)	Good	Napatan
5.	Broken leg of Shawabti	Fig(24)	Good	Napatan
6.	Fragment of marble object	Fig (23)	Good	Napatan
7.	Four marble basins	Fig (20-21)	Good	Napatan

**List of objects needing conservation:**

1. 10 semi complete pots, temple good.
2. About 500 pot shreds of Napatan nature.
3. One piece of what seems to be an offering table.
4. A sandstone fragment of Shawabti.
5. A broken right leg of a Shawabti.
6. Fragment of marble object.
7. Four marble basins.

**Security and legal measurements undertaken to protect the site(s):**

See above for protection of structures. Larger site protection measures to be taken in the next season .

**Observations:**

An important part of our plan to start presenting El Kurru for visitors was removing the large spoil heaps left on the site by the excavation of George Reisner in 1919 and those resulted from our current work . During our 2014 season the local representative of NCAM blocked our plan to remove the spoil heaps with a front-end loader, saying that heavy equipment are prohibited on archaeological sites, though our plan is to remove the soil not to use the heavy duty loader for excavation. Accordingly we could not start on building the wall fence before we remove the soil heaps out of the site. We will neogciate the matter with NCAM director to use small loader . Otherwise we have to modify our request to QSAP for the 2015 season to financially support moving the spoil heaps to the nearest wadis with workmen and wheelbarrows, and removal of the soil from the wadis using a backhoe and trucks away from the wadis . Those heaps are currently:

1. Standing in the way of current and future visitors to the site and to the passways .
2. Standing in the way of rain floods heading to the wadis, and so endangering the burials.
3. Covering areas of the site that we need to survey by magnetometer.

Due to this and to the size of the soils heaps ,we estimate it will take 100 men working for 3 months to move the spoil heaps and that will require 40 wheelbarrows since the distance from the spoil heaps to the wadis is long in some cases. from There we estimate that it will take a week more of work by the backhoe and trucks to remove the soil out of the site buffer zone .