

# Kom el-Khawaled Field Report 2006-11-28

## Aims

The aims of this brief fieldwork were

1. to establish the extent and height of Kom el-Khawaled
2. to ascertain the nature and variability of archaeological finds on the surface of the tell
3. to provide a preliminary chronology of the site
4. to situate Kom el-Khawaled in relation to other sites in the near vicinity
5. to identify topics and areas suitable for future work

## Benefits

A preliminary map of the site adds to existing information on the extent and height. The systematic survey and documentation of the range and quantity of archaeological finds on the surface of the tell allows a better appreciation of potential activity areas in different parts of the tell. Some diagnostic artefacts can be related to known assemblages and dated accordingly. The range of finds recovered can be related to resource availability in the surrounding area and trade networks in the surrounding region. Some idea on settlement hierarchy in the vicinity of Kom el-Khawaled can be obtained. As the field personnel become familiarised with conditions in the delta they can provide core competence for continuing work by the Swedish Mission in the Delta area and training of Swedish Egyptian and even EU students. Assessments of topics for future work will be based on results of the present field survey deepening present close working relations with Egyptian (SCA and University of Mansoura) and British colleagues (University of Oxford and Durham University).

## Scope

At this stage of the Swedish mission project the field programme was limited to the surface features in the immediate area of Kom el-Khawaled. Sub surface investigations are left to the following phase of the project. A brief excursion was made to the vicinity of Sidi Salem. Analysis of satellite images of the delta area and assessments of tell site locations will also be initiated in this phase.

## Personnel

Head of Mission Prof. Paul Sinclair (Archaeologist Uppsala University)  
Dr Åke Engsheden (Egyptologist Uppsala University)  
Dr Nils Billing (Egyptologist Linköping University, Sweden)  
Dr Joanne Rowland (Egyptologist/Archaeologist, University of Oxford)  
Dr John Ljungkvist (Archaeologist Uppsala University)  
Dr Anneli Sundkvist (Archaeologist Uppsala University)  
SCA Inspector: Mr Montaser Newaygi Khelifa

## **Previous Work**

Kom el Khawaled has been visited in 1900 by D. G. Hogarth and in the 1980s by Dr Patricia and Dr Jeffrey Spencer. Most recently a sketch plan of the site giving its outline and height has been provided by Dr Penny Wilson and Dr Joanne Rowland who have generously made available their data to assist in the present survey. The site was also visited recently by Prof. Frands Herschend who has also provided useful comments on the site. For all of these contributions we are very grateful indeed. .

## **Methods**

Initial familiarisation was obtained by walking transects haphazardly over the site. The extent of the tell was plotted using handheld GPS equipment providing accuracy of c. 4m. A UTM UPS grid using WGS 84 datum was established with a 100m grid mesh. The grid was oriented N/S c. 5 Degrees West of magnetic North. Sample points were positioned every 50 m N/S along the grid lines. Each sample point was marked with a stave and labelled. The 10 sq m area within each sample circle was photographed. For purposes of sampling a circular line of radius 1.78m was drawn around each grid node using the dog leash method. This provides a 10 sq. m. sample area around each point. 75 systematic samples were recovered and finds documented. Finds which were part of the systematic survey were collected from within the Systematic Sample circle and grouped according to Brick, Pottery, Stone, Glass, Slag, Metal, Shell (Marine and Fresh water) and Bone. All pottery sherds >1cm were recorded. The ceramics were grouped according to shape and ware categories. Rim sherds were drawn. Interpretation of the functional aspects of the sample areas was attempted and the surrounding context of the sample areas was briefly noted.

In addition to the systematic sample, considerable field walking was undertaken on the site. Features and finds were noted and recorded with digital cameras and plotted using GPS equipment. The combination of systematic and haphazard sampling was intended to provide a useful compromise between detailed and broad coverage of the site.

During our work at the site evidence of looting activities, apparently occurring over a long period of time up until the very recent past, was observed. In each case this was reported to Inspector Montaser Newaygi Khlifia.

## **Results**

The tell has an approximate area of 800m x 1000m and reaches a height of 15 m. No detailed map of the complex topography of the tell including disturbed areas was attempted, given the short time available. Exposed stratigraphy was noted in different areas of the site and the adjacent irrigation channels provided some indication of the cultural succession. Walls exposed in standing sections were located in the south-western part of the site. Points were recorded with the GPS and a 100m grid established. 75 Systematic Sample points were recorded providing a good coverage of the surface of the tell. First impressions of the sampling procedure indicate that it has provided sufficient information for assessing variability of the distribution of archaeological finds on the surface of the tell. The localisation of specific features e.g. suspected brick and pottery and glass kilns and categories of finds such as slag and

fragments of glass indicate activity areas which might well include glass manufacture and metal smelting or forging. Areas in which limestone and granite fragments occurred together with amphorae fragments and more rare glazed wares seem suggestive of other activity areas.

**Brick Structures:** The number of bricks scattered over the site is considerable and indicative of a range of different structures. These include walls discovered in the north-east of the site and a brick and mortar rectangular structure with adjoining walling in the west central area. In addition it is likely that brick kilns were used for metal working, glass production and ceramic and brick firing.

Pottery wares comprised both earthen wares and glazed examples. The majority of earthen wares were coarse in texture but medium and even some fine wares occurred. Examples of African Red slipped wares were present. From an initial consideration of the ceramics these seem to represent Late Roman, Byzantine and Islamic wares. No obvious earlier Pharaonic examples were noted. Glazed sherds included polychrome Islamic wares and some east Mediterranean wares. A more detailed analysis of the glazed sherds and earthen wares will provide further indications of dating the site.

Glass finds were very abundant on the site and included a range of small thin walled flasks and open containers represented by a variety of rims, handles bases and body fragments in different shades of green as well as some colourless examples and dark blue ones as well. In addition some fragments were decorated with blue blob patterns. Only two glass beads were recovered (0.5cm blue drawn cylinder and 0.7cm pale green spherical) and quite possibly fine mesh sieving would significantly increase the recovery rate. The possibility of glass manufacture at the site is an important consideration and well reflects the range and quantity of glass sherds found across the surface of the tell.

Metal finds included some copper coins of different sizes. Inscriptions were not possible to decipher owing to corrosion. In addition, metal finds including rim and handle fragments of small vessels were located in close proximity to the brick structures in the west central area of the site. Indications of metal working included some examples of possible ore samples as well as considerable quantities of slag and a few fragments of crucibles. These included magnetic and non magnetic examples of slag of varying size. Slag was abundant on the site. It seems that the slag finds reflect a range of activities with considerable temperatures being reached in brick ovens as evidenced by the occurrence of warped bricks potsherds and caked glass. Lumps of flow slag were quite common.

Finds of stone include a large limestone worked block c. 1.50cm x 50cm in size as well as a variety of smaller worked pieces as well as a spherical ball and a fragment of a worked basalt stone cauldron. Upper and lower grinding stones also occurred as did crudely worked limestone flaked pieces sometimes, some of which may have been used as scrapers. A number of carved stone bowl fragments (basalt) also occurred. These together with the grinding stones may well indicate food processing areas of the site.

Organic remains were few and no examples of carbonized seeds were recovered and very few bones were observed. Marine and fresh water shells were, however,

frequently found and recorded. The marine examples may include those from limestone agglomeration which were recovered on the site.

### **Looking Ahead**

The initial results of the field program are promising. Some control over the variability of finds on the tell has been achieved. This needs to be developed with sub surface stratigraphic investigations, best achieved by a program of augering already used at Sais by Dr Penny Wilson. In addition the use of geophysical prospecting using magnetometry and resistivity seems appropriate. The proximity of the water table weighs against the utility of ground penetrating radar applications. Geochemical surveys, especially for phosphates, sometimes associated with sub surface drilling have been successful elsewhere and might well be tried at Kom el-Khawaled. Soil samples taken at each systematic sample point over the site and these can be tested for phosphate values.

Initial attempts at setting Kom el-Khawaled within its local landscape context were made by visiting surrounding, in particular Kom Sidi Salem, which is currently under threat from building activities. Initial results of spatial comparison confirm the existence of at least a three tier settlement hierarchy. This work will be continued with the support of satellite imagery analysis. This will include analysis of hydrological changes as well as location of resource availability and consideration of present day conditions for cattle and small stock keeping. Some analysis of soil variability and productivity in the area surrounding Kom el Khawaled is also needed.

It is definitely worthwhile to continue work at Kom el-Khawaled and in the surrounding areas. Good opportunities for both training students and conducting research are apparent. The Delta region of Egypt is an area of priority for the Supreme Council of Antiquities of Egypt. Excellent relations have been established with central provincial and local Antiquities authorities and with the residents of Kom el-Khawaled, who are thanked sincerely for their understanding and hospitality .

Especial thanks are due to Dr Zahi Hawass, Director General of the Supreme Council of Antiquities and Dr Magdy el Ghandour, General Director of Foreign missions affairs and the Permanent Committee. Dr Abd el Fattah Eid and Dr Mohamed Refai of the Kafr el Sheikh inspectorate should be thanked for their help and support and Mr Montaser Newaygi Khelifa for his active participation in all aspects of the fieldwork.

Funding was provided by the Societas Archaeologica Uppsaliensis and Magnus Bergvalls Stiftelse, as well as African and Comparative Archaeology, Uppsala University and the previous Rektor of Uppsala University, Bo Sundquist's, strategic fund.

Paul Sinclair