

# **University of Basel Kings' Valley Project**

## **Report on work carried out during the field season 2016–2017**

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### Abstract:

Research on the undecorated tombs in the side valley leading to the tomb of Thutmose III has led to major new scientific insights thanks to the discovery of KV 64 and the very rich, though highly fragmented funerary remains in KV 40. The conservation and analysis of these remains has occupied most of the time and effort during the last seasons. The major archaeological activity was dedicated during the season 2017 to the opening of KV 37. In the tomb of Seti I<sup>st</sup>, KV 17, clearing and analysis of decorated wall fragments was continued.

Key-words: Valley of the Kings, tomb architecture, tomb decoration, conservation, anthropology, pottery, textile, cartonnage, royal family, Amenhotep III, Seti I<sup>st</sup>.

Work in the concession area of the side valley leading to the tomb of Thutmose III started on November 12, 2016 and continued until April 20, 2017.

The main effort this season concentrated on conservation work and on the analysis of the abundant fragmentary remains from KV 40. Fragments of wooden objects, cartonnage, textiles, pottery, and jar inscriptions were cleaned, restored, documented and assessed. The anthropological investigation of the fragmented human remains from KV 40 was continued.

The opening and clearing of KV 37 was carried out and revealed an important deposit of pottery.

The clearing of room Jc in the tomb of Seti I<sup>st</sup>, KV 17, was continued and the study of fragments of wall decoration from the tomb of Seti I<sup>st</sup> was resumed.

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Participants during this season were: Susanne Bickel: Project Director, Egyptologist; Elina Paulin-Grothe: Field-Director, Egyptologist; Faried Adrom, Egyptologist; Tanja Alsheimer, archaeologist; David Aston, Egyptologist; Ludovic Bellot-Gurlet, archaeometrist; Abigel Bouwman, anthropologist; Emanuele Casini, Egyptologist; Marina Estermann, Egyptologist; Yehia Gad, Prof. of molecular genetics; Charlotte Hunkeler, Egyptologist; Salima Ikram, Egyptologist; Somaia Ismail, Professor of molecular genetics; Christiane Jacquat, archaeo-botanist; Matjaz Kacicnik, photographer; Khairat, Rabab, molecular genetics; Iwona Kozieradzka-Ogunmakin, anthropologist; Mathieu Lebon, archaeometrist; Mahmoud Ibrahim, project agent; Florence Mauric-Barberio, Egyptologist; Irina Morossova, anthropologist; Hubertus Münch, Egyptologist; Erico Peintner, conservator; Anita Quiles, archeometrist; Daniel Reber, archaeologist; Frank Rühli, Medical Doctor and palaeopathologist; Agnieszka Wos-Jucker, textile conservator.

## **1. Documentation of finds from KV 40**

### **a. Funerary objects**

The documentation of the many thousand fragments of funerary objects from both the original burials of the 18<sup>th</sup> dynasty and the tomb's reuse during the 22<sup>nd</sup> Dynasty was continued and refined. Work concentrated on

- the reassessment of diagnostic fragments of coffins and wooden objects,
- the study of inscribed wooden tags,
- the reassembling and analysis of cartonnage fragments,
- the analysis of leather and faience fragments,
- the study and classification of plant remains,
- the quantitative assessment and analysis of textile fragments,
- the study of pottery and jar inscriptions.

Most fragments needed preliminary conservation and cleaning to remove the soot from the surface. Conservation measures were particularly effective for the cartonnage fragments: the polychrome decorated surfaces of the 18<sup>th</sup> dynasty funerary masks and of the 22<sup>nd</sup> dynasty mummy containers could in many cases be retrieved. In some cases,

the reassembling of fragments to larger parts of a mummy container could be realised. Cartonnage fragments from the two periods were analysed separately and classified according to decoration patterns, layering and coating of the inner surface. This procedure allows the reconstruction of typologies regarding iconography and production techniques and brings up an estimate minimal number of individual masks and body containers. The fabrication techniques were investigated under the microscope and samples of materials that entered the composition of the cartonnages were selected for analysis in Cairo. Where possible, adjoining fragments of cartonnage were glued together (fig. 1).

The analysis of the large quantity of textiles concentrated on specimens with special features such as seams or hems indicating a previous use as well as textiles with special decoration in the form of fringes (fig. 2) or coloured stripes. About 50 special pieces were identified, some of them were vacuum cleaned for better conservation and photographed for the publication.

The documentation of the large pottery convolute was completed. All the objects are now drawn and photographed and the analysis of the inscriptions and their palaeography is being continued.



Fig. 1. KV 40. Restored and reassembled cartonnage fragments.



Fig. 2. KV 40. Textile fragment with fringe.

#### **b. Human remains**

After completion of the general assessment of the highly fragmented human remains in order to determine the minimal number of individuals buried in KV 40, several specific investigations were carried out this year. A systematic observation of the mummification techniques was started with the aim to determine possible chronological differences in mummy preparation. Micro-sampling was carried out (fig. 3) with the aim to determine the presence of collagen in the bones, with specific attention to their condition and affection by fire. This investigation was partially carried out on site and revealed the presence of collagen in all tested samples. This ascertains good conditions of the bone material for potential  $C^{14}$  and aDNA analyses, despite the exposure to the fire in the tomb. Further analyses are currently being processed in Cairo. A second set of samples targeted the future analysis of aDNA to be carried out in Cairo. These analyses are of outmost interest for the comprehension of the internal family relationships within the two groups of people buried in KV 40, one in the 18<sup>th</sup> dynasty and one in the Third Intermediate Period.

Great attention was given to the classification and proper storage of the human remains within room D of KV 40 (fig. 4).



Fig. 3. KV 40. Micro-sampling of selected human remains.



Fig. 4. KV 40. Storage of fragmented human remains.

## 2. The area between KV 26 and KV 59 on the eastern slope of the wadi leading to KV 34

Investigations in the area on the eastern hill slope, between KV 26 and KV 59 and the path leading to KV 34, continued this season (fig. 5). The extensions of the area measured 5,5m East-West and 11m South-North.

The eastern profiles in Trench IV showed no clear structures or layers of modern or pharaonic levelling of the area. Only two modern surface layers can be seen on the upper parts as well as remains of a modern flood. During the removal of limestone chips and sand, only a few pottery sherds were found. All the debris probably comes from modern shifting and the construction of the path leading to KV 34. Certain parts of this area have also been excavated already by former archaeologists like Belzoni, Loret, Carter etc.

This year's excavation was not enlarged over the entire width of the path toward the West, and the complete topographical situation in this area could therefore not yet be



assessed. We intend to study the entire topography of this side valley in the future, in order to model its original shape and to better understand the layout and exterior aspects of this group of 18<sup>th</sup> Dynasty tombs. This intervention will also have a positive effect for the protection of the tombs in the lower slopes of the area.



Fig. 5. Area between KV26 and KV 59.

### 3. Work in KV 37

The main excavation work carried out during this season concerned the clearing of tomb KV 37. This tomb was discovered and excavated by Victor Loret in 1899. From his report, only ostraca and objects mentioning the names of Thutmosis IV and of Sethi I<sup>st</sup> are known. Elisabeth Thomas mentions pottery jars in KV 37. The Theban Mapping Project made a plan of the tomb in 1980.

Tomb KV 37 lies well below the surface level of the modern path on its eastern side and close to the beginning of the stairs towards KV 34. It is cut into the flat limestone surface at the foot of the cliff (fig. 6).

In order to get access to the tomb, part of the area on its north side along the cliff had to be excavated, where the debris reached a height of several meters. The debris in this area consists of big stone boulders and limestone chips. It did not contain any objects belonging to KV 37. Only on the stairs, sherds of large jars typical for 18<sup>th</sup> dynasty burials were found.

The stairs were covered with debris and rubbish from recent times. Inside the tomb, the corridor and funerary chamber were covered with a layer of flood debris of several centimeters.



Fig. 6. Entrance of KV 37 before excavation.

On the walls of the first corridor, several red construction marks are visible. The floor of the chamber at the end of the corridor was covered with a layer of fine sand remaining after a flood. In the middle of the room was a collection of fragments of jars, similar to those on the stairs (fig. 7-8). The collection was probably left in the tomb after the work of Victor Loret and already observed by E. Thomas. All the sherds were covered by fine sand. Some limestone chips have detached from the ceiling and were lying upon the flood layer. All the pottery was retrieved, cleaned and reconstructed (fig. 9). 20 jars, all of the same type, could be rebuilt. These jars will be documented for publication in the next season.

A new plan of the architecture and detailed photo documentation were made. At the end of the investigation of tomb KV 37, an iron door was installed at its entrance in order to prevent debris to enter the corridor (fig. 10).



Fig. 7. Passage towards the burial chamber in KV 37.



Fig. 8. The pottery ensemble in KV 37.





Fig. 9. Reconstructed Pottery from KV 37.



Fig. 10. KV 37 with iron door.

#### **4. Mapping and site management plan**

Mapping of the side valley was continued in order to create a site management plan that can help develop strategies for the future protection of the tombs, in particular by lowering the surface of the path. Several tomb plans and sections were completed and new architectural surveys of tombs KV 32 and KV 37 were carried out.

#### **5. Study of pottery from KV 38**

For comparison with the pottery from other 18<sup>th</sup> Dynasty tombs in the Kings' Valley, all pottery remaining in tomb KV 38 was removed, washed and mended. The analysis revealed some 93 diagnostic pieces with a general mix of both open and closed shapes. The ceramic corpus differs from that previously found in the area, principally through the presence of 13 large wheel-made storage jars made of fabric Marl A4 which do not occur in KV 26, 30, 31, 33, 40, or 64. The open shapes, all made of Nile clays comprise small plates, one with a black rim, shallow bowls with red splash decoration, uncoated flower pots, deep, carinated bowls, usually red painted on the interior and out at the rim, and model vessels.

#### **6. Work in KV 17**

##### **a. Study of the decorated wall fragments from the tomb of Seti I<sup>st</sup>**

Research on wall-fragments from the tomb of Seti I<sup>st</sup> continued and focused on identifying the original location of fragments in the wall decoration of KV 17 and on joining pieces with those inventoried in the last years. During this season, 582 decorated fragments retrieved from the side-room Jc could be documented. Some 20% of the fragments have a yellow background and come from the sarcophagus chamber, mainly from its pillars. The majority of pieces have a white background colour and come from the lower sections of the side-room Jb, its pillars, its bench with a cornice and the representations of funerary items. Numerous fragments can be joined.

Most of the decorated fragments retrieved from room Jc during this season will be documented and studied during the next season.

##### **b. Clearing of room Jc**

During this season, work continued in the undecorated room Jc of tomb KV 17 which is situated behind the burial chamber and has four pillars. The aim was to clear the entire room from the debris that were deposited here since the discovery of the tomb by Belzoni in 1817. The walls of this room Jc show numerous graffiti. Big fractures run on its walls and ceiling and the pillar opposite the entrance has collapsed (fig. 11). Large limestone fragments from the ceiling are lying over and inside the debris (fig. 12), which reaches in average about 1 meter over the floor. The reason for the bad condition in this

room is the *taffla* layer of Esna shale, which begins 1 meter above the floor level of the room.



Fig. 11. Ceiling and collapsed pillar in KV 17 Jc.



Fig. 12. Decorated fragments and limestone chips in KV 17 Jc.

The pillars and the ceiling are partly supported by wooden beams, probably since the 1960ies. In this time Sheikh Ali Abdelrasoul was excavating in the tunnel underneath room Jc. The stability markers and gipsum on the walls are also from the 1960ies and indicate no structural movements since that time.

The oldest deposited debris, mainly fine *taffla* dust, was in the western end of the room and the debris in the eastern end consisted of many large wall fragments with decoration, mainly from the pillars in room Jb. In the middle of room Jc, the debris seems to be very recent, deposited just in the front of the entrance, which was built and consolidated by Howard Carter.

In general, the debris in the room consists of *taffla* and limestone chips mixed with modern rubbish, remains of animal bones, pottery sherds, fragments of wooden pharaonic objects, mainly shabtis – surprisingly only parts of the feet (fig. 13). Belzoni reports that the floor of this room was covered with thousands of wooden shabtis. Many of them were removed by the tomb visitors in the early times. It is unclear why the foot-parts were left behind on the floor.

Hundreds of decorated painted limestone fragments of the tomb decoration (fig. 14-15), many of them from the walls and pillars in room Jb, were found in the debris all over room Jc. Many identified fragments of the ceilings belong to the burial chamber with astronomical scenes. The fragments painted in black belong either to the ceilings of different rooms or to the *dado* parts of pillars.

The clearing of room Jc will be completed during the next season; the documentation of the wall fragments and the identification of their original location in the tomb will be continued.



Fig. 13. Shabti fragments from KV 17.





Fig. 14. Wall fragments in the debris in room Jc of KV 17.



Fig. 15. Wall fragment in the debris in room Jc of KV 17.