

# Mirosław Barwik

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## Deir El-Bahari: The Temple of Queen Hatshepsut : Season 2001

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# DEIR EL-BAHARI

## THE TEMPLE OF QUEEN HATSHEPSUT

### SEASON 2001/2002

Mirosław Barwik

*The work of the Polish-Egyptian Archaeological and Conservation Mission of the Hatshepsut Temple at Deir el-Bahari was conducted in the period from November 14, 2001 to March 28, 2002.<sup>1)</sup> The main objective of the season was the restoration of the Solar-Cult Complex and continued documentation work in the Complex of Royal Mortuary Cult.<sup>2)</sup> Dr. A. Łajtar collated previously located Greek graffiti left by ancient visitors to the temple and documented further examples, some of which came to light only now, revealed in the course of conservation work undertaken in various parts of the temple.*

*The President of Egypt, Mohammed Hosni Mubarak, visited Deir el-Bahari on March 21, 2002, opening for the general public the central part of the Upper Terrace of the Temple of Queen Hatshepsut (Fig.1). The opening ceremony was attended by the Minister of Culture, Mr. Farouk Hosni, Dr. Zahi Hawass, Secretary General of the Supreme Council of Antiquities, and Dr. Gaballa Ali Gaballa, the former Secretary General of the Supreme Council of Antiquities. The Polish Centre was represented by Prof. Dr. Michał Gawlikowski.*

1) The staff of the mission included: Dr. Mirosław Barwik, Vice-Director of the Mission; Mr. Mikołaj Budzanowski, archaeologist; Mr. Cristobal Calaforra-Rzepka, conservator; Ms Monika Czerniec, conservator; Mrs. Hanna den Heijer, Egyptologist; Ms Jadwiga Iwaszczuk, archaeologist; Mr. Maciej Jawornicki, photographer; Ms Teresa Kaczor, architect; Mr. Andrzej Kwaśnica, architect; Ms Monika Kolasa, conservator, student; Mr. Wiesław Kuczewski, constructor; Mrs. Maria Lulkiewicz-Podkowińska, conservator; Dr. Adam Łajtar, epigrapher; Mr. Mieczysław Michiewicz, architect; Mr. Wojciech Myjak, conservator; Ms Edyta Nowak, Egyptologist; Ms Renata Pieniek, conservator; Mr. Marek Puszkariski, documentalist; Ms Katarzyna Szantoch, documentalist; Mr. Andrzej Sośnierz, conservator; Ms Aleksandra Trochimowicz, conservator; Mr. Yasser Youssif Ahmed, Egyptologist, SCA inspector.

2) The author would like to express his sincere gratitude to Prof. Dr. Gaballa Ali Gaballa, then Secretary General of the Supreme Council of Antiquities; Mr. Sabry Abd El Aziz Khater, General Director of the Department of Upper Egypt; Dr. Yahya El Masri, former Director of Antiquities in Luxor; Mr. Mohammed El Bialy, Director of Antiquities at Qurna; and Prof. Dr. Michał Gawlikowski, Director of the Polish Center of Archaeology of Warsaw University, for their invaluable help and continuous support.

## THE SOLAR-CULT COMPLEX

Work undertaken this season comprised a partial reconstruction and thorough restoration of the walls of the solar court, including niches located in its south and west walls. The most important task was the complete restoration of the Upper Chapel of Anubis with its masterful colored relief decoration. The work in the vestibule of the complex was also continued and the doorjambs of the portal leading from the vestibule to the solar court were partially reconstructed as well.

NORTH WALL  
OF THE SOLAR COURT

The wall was in a ruinous state before the work of reconstruction started. Only the

lower part of the wall had been preserved, and it demanded a thorough consolidation of its dilapidated structure. The wall was cleaned and its blocks were consolidated with injections of PRIMAL AC-33 (Rohm & Haas) (10% solution in water). Old decayed putties were removed and replaced with new ones, made of white cement, sand and yellowish mineral pigment.

The rest of the wall, up to its original height, was reconstructed of regular limestone blocks (cf. *Fig. 7*). Its back was made of rough limestone blocks. The joints of the blocks were filled with mortar, and a patina of yellowish ochre was applied to the new blocks to avoid a sharp contrast between the original blocks and new ones.



*Fig. 1. President Muhammad Hosni Mubarak visiting the temple of Queen Hatshepsut with, standing from left, Minister of Culture Farouk Hosni, the author and Prof. Dr. Gaballa Ali Gaballa (first from right) (Photo M. Jawornicki)*

This is essential especially in the courtyard which is heavily flooded with sunlight.

The work on the northern wall of the court was connected with the construction of a concrete vaulted ceiling above the Upper Chapel of Anubis to protect its structure against possible danger from above (*Fig. 2*).<sup>3)</sup> An iron framework was constructed, supported on the east by a newly built bench made of rough limestone blocks, and on the west on a similar bench constructed earlier to protect the foundations of the chapel.

The empty space behind the north wall of the solar court was filled with debris up to the top of the newly constructed

protective ceiling. Drainage will be installed in the next season.

#### UPPER CHAPEL OF ANUBIS

The lintel above the entrance to the chapel, the doorjambs of which had been reconstructed in previous seasons, was completed this year.<sup>4)</sup> Two original blocks decorated with the winged sun-disc and a fragment of inscription accompanying it were used in this reconstruction. A gypsum molding of the third block was inserted in the left part of the lintel. In this case the original block could not be used, because a lateral surface was also decorated, the decoration originating from a niche that



*Fig. 2. Work on the construction of the north wall of the Solar Court and concrete ceiling above the Upper Chapel of Anubis (Photo M. Jawornicki)*

3) Designed by M. Michiewicz.

4) According to M. Witkowski's reconstruction project.

had been built into the north wall of the court originally and then replaced by the present chapel of Anubis. Since more blocks from the original niche have been found (*Fig. 3*), it will be possible to display it in the future, perhaps on the bench at the rear of the chapel of Anubis, thus conveniently illustrating the different stages in the architectural development of the temple.<sup>5)</sup>

Earlier conservation work in the chapel of Anubis had been restricted to the most endangered places. The present effort concentrated on a thorough conservation of the decoration (*Figs. 4-5*). The polychromy<sup>6)</sup> preserved in the chapel was cleaned

after first consolidating the damaged parts with PRIMAL AC-33 (Rohm & Haas). The blue and green pigments, which are highly susceptible to dirt and dust absorption, were cleaned with CONTRAD 2000 (10% solution in water). Modern putties from the earlier conservation treatment were replaced with new ones. Surviving ancient putties were carefully consolidated (with injections of PRIMAL AC-33). As a last step, the pigments and ancient varnish applied in some parts of the decoration were reinforced with PARALOID B-72. All traces left by ancient restorers from the post-Amarna times were also carefully preserved.



*Fig. 3. Fragment of the niche replaced by the Upper Chapel of Anubis*  
(Photo M. Jawornicki)

5) I am grateful to Dr. M. Witkowski for this idea.

6) Except for parts destroyed in the Amarna period, the decoration of the chapel survives virtually untouched. The most obvious damages occurred on the south tympanum and were due chiefly to atmospheric factors. Salinity had also caused some problems. The ancient use of varnish was most certainly an essential factor behind the excellent state of preservation of the paintings in the chapel.

A lighting system was designed for the Chapel of Anubis interior, using the joints of the court's north wall to conceal all of the electric wiring. At the request of Mr. Mohammed El-Bialy, a special metal-and-glass viewing door was designed for the chapel entrance, the objective being to display while protecting. Visitors will be able to admire the excellent painting inside the chapel without entering the restricted space.

#### WEST WALL OF THE SOLAR COURT

The work on the wall started with a cleaning of its surface. Extreme caution was expended in view of the ancient *dipinti* decorating the walls of the solar court and its niches. The effort was rewarded with

the discovery of three previously unknown red-painted hieratic graffiti on the west wall. A palaeographic dating put the graffiti in the period of building operations during the reign of Hatshepsut.

The ancient blocks of the cornice surmounting the top of the walls of the solar court were placed on top of the west wall (Fig. 6). As some of the blocks were in extremely poor condition, it was necessary to consolidate them with STEINFESTIGER FUNCOSIL 300. Where necessary, iron tenons and epoxy glue were used. To strengthen the small fissures in the stone structure injections of PRIMAL AC-33 (Rohm & Haas) were applied.

Two of the three original lanterns that once lighted up the Northern Chapel of

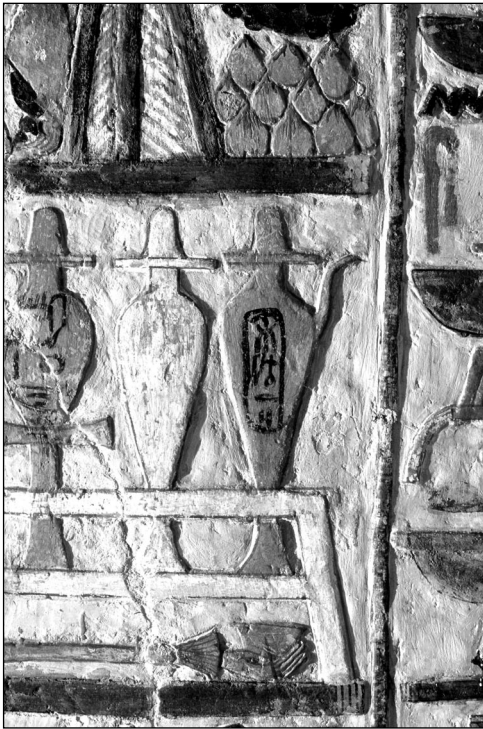


Fig. 4. A detail from the decoration of the Upper Chapel of Anubis, after conservation (Photo M. Jawornicki)

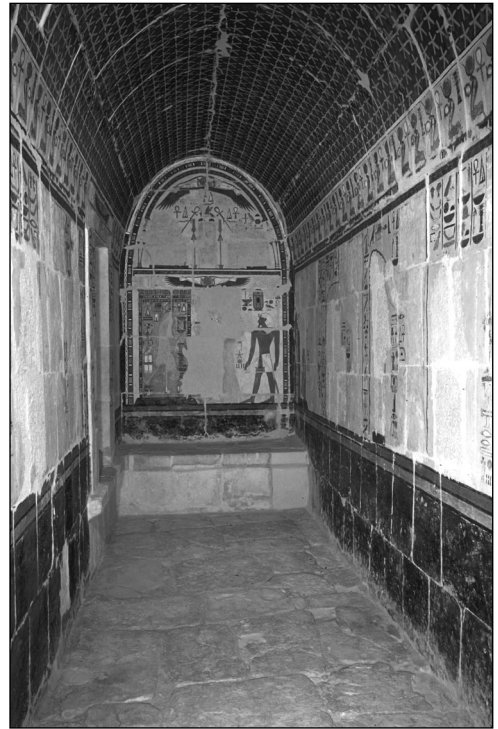


Fig. 5. The Upper Chapel of Anubis after completion of the work (Photo M. Jawornicki)

Amun will be reconstructed in the course of the next season. Appropriate spaces for the lanterns were left between the blocks of the cornice.

Conservation of the niche in the middle of the west wall started with a repositioning of two blocks obviously displaced in the uppermost layers of the south wall. The stone material was then consolidated with WACKER 280, any disintegrated fragments on the surface being first treated with injections of PRIMAL AC-33 (4-8%). PARALOID B-72 (3% in acetone) was applied to preserve the red lines of a grid of small squares left by the ancient sculptors who decorated the niche – the relief carving was never finished and was left unpainted. Ancient putties filling gaps in the stone surface (sometimes in the decorated parts) were consolidated with injections of PRIMAL AC-33 and new putties were inserted into the joints between the blocks.

An original wooden socket preserved *in situ* in the lintel of the door of the niche was soaked with PARALOID B-72 (3% solution in acetone) to strengthen its structure.

#### SOUTH WALL OF THE SOLAR COURT

Original stonework was preserved only in the lower part of the wall. The procedures and conservation techniques applied to its preservation did not differ from those described above for the north and west walls. In previous seasons, the upper part of the wall had been reconstructed in brickwork and partly covered with concrete slabs, leaving the top parts uncovered. The top of the wall will be faced with limestone slabs in a coming season. For the present the brick wall was completed up to its original height. In the upper part it was plastered using mortar in preparation for the next season of work.



Fig. 6. The northwestern corner of the Solar Court after restoration  
(Photo M. Barwik)



*Fig. 7. General view of the Solar Cult Complex in March 2002 (view to the northwest)  
(Photo M. Barwik)*



The niche located in the middle of this wall was consolidated following the same procedures as in the case of the niche in the west wall. One of the blocks in the lowermost layer of the east wall of the niche had to be repositioned. The red-painted ancient graffiti on the walls of the niche were preserved with PARALOID B-72 (3% solution in acetone). In addition, a gap in the pavement of the niche near its rear wall was filled with a new limestone block. Ancient putties surviving in the floor joints were protected with PRIMAL AC-33, which was also used to consolidate the cracks and splitting surface of the original stone. The last step was to impregnate the paving blocks with WACKER 280 (10% solution in benzene).

### VESTIBULE

#### OF THE SOLAR CULT COMPLEX

Work in the vestibule comprised the cleaning and partial conservation of the north, south and east walls, and the niche located in its north wall. Some preparatory conservation work on the columns in the vestibule and its pavement was accomplished as well. The most important task, however, was the reconstruction of the portal in the west wall of the vestibule leading to the open solar court.

Eleven decorated fragments of the doorjambes of this portal were consolidated with STEINFESTIGER OH/510 (Remmers) and then put back in place. The structure of the portal itself was reconstructed of limestone blocks (cf. *Fig. 7*), being restricted to just the eastern face in view of a complete absence of any surviving pieces belonging to the western one. The western facade and the passage were fashioned on the manner of a well-ordered ruin, hence the undressed limestone slabs covering the two doorjambes on this side.

Of the wall dividing the vestibule and the solar court only the lowermost layer of limestone blocks has been preserved *in situ*. The restoration of the portal required a limited reconstruction of adjoining walls, as well as the corner of the vestibule. In keeping with the restoration guidelines set down earlier for the vestibule, the rebuilt fragment of wall was plastered and the color unified with other walls of the vestibule. Its western face, however, was covered with limestone slabs following the same principles applied to the reconstruction of the walls of the solar court. The width of the wall separating the vestibule from the solar court can still be discerned on the north and south walls of the solar complex, where some blocks of the original filling and its eastern face (especially in the northwestern corner of the vestibule, where one decorated block was added now) were preserved *in situ*. At the north end, the section of wall between the vestibule and solar court was emphasized with a covering of undressed stones; at the south end, only the wall section outline was modeled in plaster, original fragments from this part of the wall being practically nonexistent.

The three other walls of the vestibule had undergone reconstruction in previous seasons. The painted reliefs preserved on a number of original fragments that had been put into the walls previously were now cleaned and protected.<sup>7)</sup> The ancient pigments were consolidated as was the whitewash of the background and the ancient putties and mortars. New putties were applied where necessary, and the color of the background of the south and north walls (the reconstructed parts covered with plaster) was unified by painting with FUNCOSIL PULVERFARBE (Remmers).

7) The work on the eastern wall needs to be continued in the next season.

The niche in the northern wall of the vestibule required the intervention of conservators. Contrary to the niches of the solar court, its relief decoration had been painted in antiquity. Before final cleaning the pigments were reinforced with PRIMAL AC-33. Then the paintings were consolidated with PARALOID B-72. A newly identified fragment of the left doorjamb of the niche was inserted in its proper place. Putties were applied where necessary and some of the older modern putties were replaced with new ones. Blocks of the floor had the modern mortar filling removed

from the joints and replaced with new putties following consolidation with WACKER 280.

One of the columns in the vestibule (the first from the north) was also restored this year. Consolidation treatment was carried out on the whitewash of the background, the yellow pigment of the inscription and the ancient putties. The restoration of the second column was begun and the third, southernmost one should be completed in the coming season. In addition, some gaps in the pavement of the vestibule were filled with ancient stone material.

## ROYAL MORTUARY CULT COMPLEX

This season work concentrated on the documentation of the relief decoration in different parts of the complex, not only the decoration existing *in situ*, but also hundreds of loose fragments attributed to this part of the temple. Several dozens of new fragments were attributed to particular places in the complex. Of particular interest are the fragments filling gaps in the inscriptions decorating the walls and ceiling of the Chapel of Hatshepsut and the Chapel of Tutmosis I. The photographic documentation and drawings, which are essential for the restoration project, will also be used in the planned publication of the entire complex.

The conservation work in the Royal Mortuary Cult Complex is restricted for the present to parts in need of urgent treatment and is synchronized with the progress of documentation work. This approach provides for high quality photographs and drawings of the decoration, even if it is badly damaged, and ensures thorough conservation of even small fragments prior to their final drawing and photographing. The focus this season was on the eastern tympanum



Fig. 8. Fragment of the decoration of the eastern tympanum of the Chapel of Tutmosis I (Photo M. Jawornicki)

and vaulted ceiling of the Chapel of Hatshepsut in view of its relatively poor state of preservation.

Samples of pigments and ancient putties taken from the walls and ceiling of the Chapel of Hatshepsut should, upon analysis,<sup>8)</sup> help to elucidate certain issues connected with the historical development of the complex and successive stages of ancient restorations carried out in this part of the temple.

The ceiling in the chapel of Tuthmosis I had long posed one of the unsolved questions regarding the architecture of the Royal Complex. The unparalleled architectural layout of the chapel with one vertical and one sloping wall only added to the mystery. The discovery of some inscribed fragments (*Fig. 8*), which have been attributed to the eastern tympanum of the chapel, will, I think, prove decisive for resolving this issue.

8) Carried out by Prof. Maciej Pawlikowski in association with Ms. Janina Trąbska (to be published soon).