

## DEIR EL-BAHARI

### HATSHEPSUT TEMPLE CONSERVATION AND PRESERVATION PROJECT 1996/97

**Franciszek Pawlicki**

The Polish-Egyptian Mission conducted conservation and restoration works at Deir el-Bahari between 1 December 1996 and 10 April 1997, in continuation of the four previous seasons,<sup>1</sup> and in accordance with a work program approved by the authorities of the Supreme Council of Antiquities.

This season's key objectives were as follows:

#### LOWER RAMP

The restoration of the lower end of the northern balustrade was completed over the season. Five assembled original limestone blocks replaced the elements of the balustrade which E. Baraize had introduced after Winlock's excavations.<sup>2</sup> The blocks bear representations of a lion carved in sunken relief on both sides of the balustrade (the southern balustrade of the same ramp has no decoration on the front). To render the original elements impervious to aggressive agents, water and humidity, they were consolidated and protected with a solution of ethyl silicate in benzene.

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<sup>1</sup> The Mission comprised Dr. Franciszek Pawlicki (Director), Messrs Rajmund Gazda, Janusz Smaza, Wojciech Myjak, Andrzej Sośnierz, Mrs. Barbara Wołosz, Ms Agata Wiaderny, conservators; Messrs Marcin Dajbrowski, Andrzej Kwaśnica, architects, Mr. Krzysztof Złotkowski, civil engineer, Dr. Maciej Witkowski, Prof. Jan Krzysztof Winnicki, Mrs. Hanna van Heijer, egyptologists, Mr. Waldemar Jerke, photographer. Mr. Fabian Welc, student of archaeology, took part in the first part of the season. The SCA was represented by Mr. Said Gubrail, inspector with the expedition, and Mr. Mohammed Shawky Bakri, representative of the Engineering Department of the SCA in the Gurna Inspectorate. We wish to express our gratitude to Prof. Ali Hassan, Secretary General of the SCA, Dr. Mohammed Soghir, Director General of Antiquities in Luxor, and Dr. Mohammed Nasr, Director of the Gurna inspectorate, all of whom have helped in various ways to bring the work to a successful end.

<sup>2</sup> H. Winlock, *The Egyptian Expedition 1924-1925*, pp. 15-16.

The missing parts of the balustrade were filled in with mortar composed of powdered limestone, sand and white cement. Finally, the formula of the finishing coat (an aesthetic superficial layer of plaster) was selected to be compatible in texture and color with the original fragments. The technical design for the eventual reconstruction of the stairs and pavement of the ramp was revised in preparation for its implementation in the coming season.

### **UPPER RAMP**

The conservation and restoration of the lower part of the northern balustrade, as well as most of the original course of its southern side were completed. The original elements of the balustrade, collected and partly restored by Baraize with some additional work by the Polish-Egyptian Mission in the early 1970s, had suffered considerably due to heavy insolation and water penetration after the recent local downpours in 1991 and 1994. The capillary rising of sulfate salts, as well as sulfatization of both original and modern mortar, especially that with a gypsum content, has been observed, causing damage as a result of swelling and disintegration. All the loose binding agent was removed; the joints and voids were cleaned of dust and sand, and liquid mortar composed of POVOH (polyvinyl) was injected into the fissures to fix detached fragments. To avoid salt crystallization and whitish efflorescence, the original surface was protected with a solution of ethyl silicate. Finally, the statues decorating the balustrades were recreated. The attribution of five original fragments, including part of a falcon's head with preserved eyes, enabled the southern balustrade to be completely restored. Originally, its front part was carved in the form of a falcon (Horus) with wings embracing the cryptogram of Hatshepsut's name. Most probably, the queen's name was composed of a cobra with a sun-disk and the ka sign. The tail of a snake was carved on the top of the balustrade along its entire length. The iconography strongly resembles

the cobra frieze in the temple porticoes. The falcon statue was one of those, which had embellished the temple facade and courtyards and which had been deliberately smashed and buried in pits some twenty years after Hatshepsut's death. Thousands of statue fragments were uncovered by the mission of the Metropolitan Museum of Art in two great pits in front of the Hatshepsut temple. Recently, many of these pieces were used in the restoration of the Osiriac statues in the facade of the Upper Portico on the Third Terrace.

### **UPPER PORTICO - OSIRIAC STATUES**

Work continued on the restoration of the Osiriac statues in the southern wing of the Upper Portico, one of which had been started almost thirty years ago and never completed. Without adequate protection, the original head of the statue had suffered considerably due to heavy solar exposure, numerous deep fissures and surface losses. Parts of the shoulders and arms were badly affected by salts migrating through the concrete used during the earlier restorations of the statue. Furthermore, inaccuracies of restoration of the lower part of the torso necessitated the dismantling of the statue and its re-erection with the introduction of several original elements. The statue of queen Hatshepsut, six meters high, once stood in front of a pillar of the outside portico row. The Queen, dressed in the traditional white shroud of Osiris, wore a double crown. A large part of the statue was restored from original fragments. The polychromy was also preserved on the queen's face, the ceremonial royal beard, the palms of her hands, as well as the god's insignia. Altogether, five large blocks and over twenty smaller fragments were used in the restoration, anchored to the pillar and fastened with an epoxy resin glue. Finally, aesthetic plaster was applied to places on the surface where the original material was missing. Many other statuary elements (including heads, crowns, part of the torso) were selected and protected in preparation for future restoration work on the

statues of the Upper Portico and those from the niches in the western wall of the Upper Court, too.

#### UPPER COURT - WEST WALL

The wall, better known as the wall with niches, was ruined in antiquity and partly reintegrated by the British Mission in 1897-1898, then reconstructed in full by the Polish-Egyptian Mission in the early 1970s. However, recent research has shown that more than seventy original blocks could be attributed to the facade or the walls inside the niches. There are two alternating types of niches: higher ones, accommodating standing statues of queen Hatshepsut, and smaller and deeper ones for portable statues of the kneeling queen. The wall itself was a kind of monumental facade of the main sanctuary of Amun, with the entrance located in the middle. The statues of Hatshepsut in the form of Osiris presented the queen as an eternal ruler to whom the gods of the Great Ennead, depicted on the side walls, offered favors. Limestone blocks recently attributed to the walls of the niches bear representations of Nephtys, Geb, Hathor, Amun and Ptah-Tatenen. The decoration of the smaller niches was very similar to the iconographic program depicted in the Royal Cult Complex. Queen Hatshepsut (or a member of her family) is shown sitting in front of the offering table, addressed by the god Thot or the priest Iwnmutef, who recites the *hetep-di nesu* formula. Several fragments with representations of offerings were recently returned to their place in the sides walls of the smaller niches.

The decoration of the scenes located over the smaller niches was completed as well. Several blocks with the images of Tuthmosis I, queen Ahmes and the god Amun were fitted into the wall facade. As a result, the representations of several rituals, such as offering incense and wine, and consecrating vessels and the four *meret* boxes, were observed. The representations of the queen's daughter Nefrure were observed to have been removed and re-

placed by images of Ahmes, while figures of Tuthmosis II had been introduced instead of the erased depictions of Hatshepsut.

It should be emphasized that the restoration of the west wall of the Upper Court was completed close to a century after the first attempt at a reintegration. However, the restoration of two Osiriatic statues from the niches remains a task for the nearest future.

#### UPPER COURT – NORTH WALL

One of the objectives of the work this year was the restoration of the north wall of the Upper Court. It had undergone some minor restoration at the hands of Baraize, then was reinforced by the Polish-Egyptian Mission in the early 1980s. Egyptological research has led to over forty blocks or their fragments being identified and attached to the already assembled parts. In many cases, the new elements helped to establish the details of the iconographic program of the wall's decoration, especially in its upper register. The scenes depict one of the major Theban feasts, the Beautiful Feast of the Valley. Blocks recently attributed to the upper register in its western section made it possible to restore the upper row, showing the priests carrying bowls, divine standards and jars. A large section of the decoration of the upper register could be restored thanks to the exact localization of several elements with a long inscription that was the speech of the Great Ennead. The register was composed of two rows of a divine procession and offerings to Queen Hatshepsut. After the attribution of two blocks (assembled from several small fragments) to the space between the beams of the portico (Fig. 1), it became evident that, following the changes in the court architecture introduced during the reign of Hatshepsut, there were ten columns alongside the northern wall, instead of the nine originally erected there.<sup>3</sup>

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<sup>3</sup> F. Pawlicki, A. Kwaśnica, Changes in the architecture of the Upper Court in the Temple of *Djeser-Djeseru* at Deir el-Bahari, *JEA* (in print).

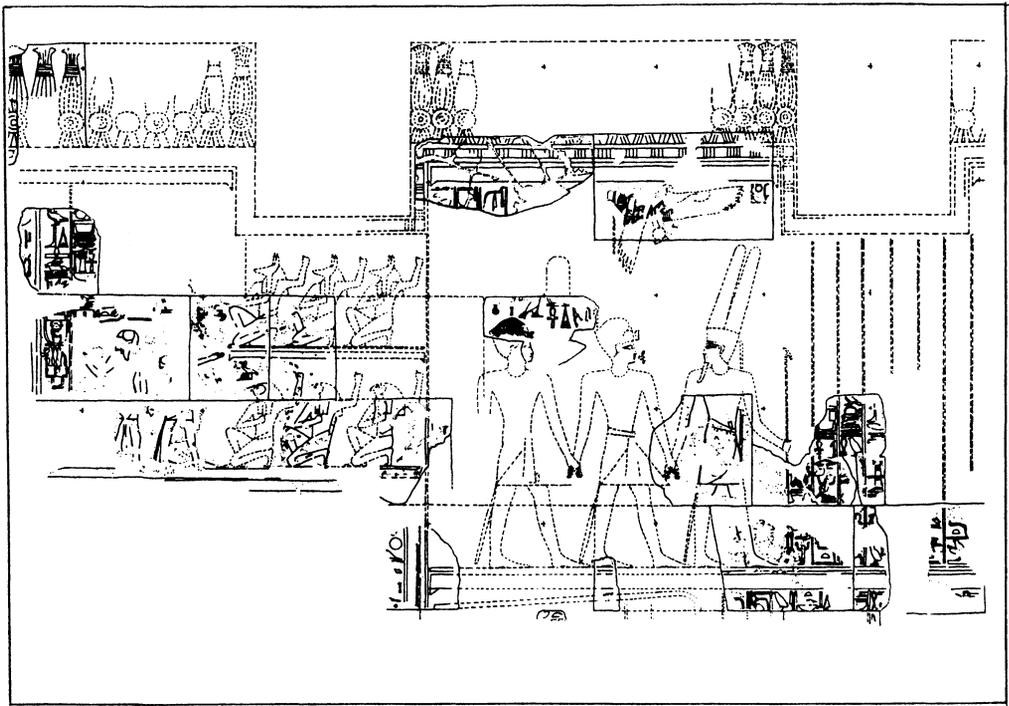


Fig. 1. Western section of the north wall. Restored sockets of the architraves.  
Drawing A. Kwaśnica.

Several fragments or even complete blocks were also attributed to the lower register of the wall, including one with the face of Tuthmosis III being led by the god Amun.

#### **THE RE-HORAKHTY VESTIBULE – EAST WALL**

The rebuilding of this wall was the last stage of the restoration conducted in the vestibule of the solar chapel. The north and south walls had been completed in the previous seasons,<sup>4</sup> and it seems now that there is not enough original material for the rebuilding of the west wall of the vestibule, including the entrance to the solar court. The three plain lowermost courses of the east wall were preserved in place. A few decorated blocks were fitted in the wall by the Polish expedition in the 1970s, mainly in the northern corner. Painstaking research resulted in the attribution to the east wall of over seventy original blocks or fragments.<sup>5</sup> All of them had been identified and attached to the already assembled parts of the wall. The decoration apparently consists of two antithetical representations of the king presenting food offerings to the solar bark. Unfortunately, both royal figures are missing. One block with the representation of the king's offerings was removed from the hypostyle hall of the Hathor Shrine (mistakenly put there by Baraize) and replaced in the wall of the Re-Horakhty vestibule. Both representations of the kings were accompanied by long texts of a cosmographic and cultic character. A major problem at the beginning was that both inscriptions were cryptically conceived to protect their secret and exclusive character. The text located in the southern section of the wall is related to the king's secret knowledge concerning the morning phase of the solar journey of the sun god, while the one in the northern part is related to the evening phase. Research has proved that at least one passage, if not more, in the Deir el-Bahari version is not attested elsewhere, although

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<sup>4</sup> *PAM VII*, 1995 (1996), pp. 69-76, *PAM VIII*, 1996 (1997), pp. 59-67.

<sup>5</sup> *PAM VII*, 1995 (1996), p. 66, Fig. 1.

generally it seems to correspond to the version from the Luxor temple. The identification of blocks belonging to a representation of the Western Mountain, where the sun god sets every evening, became crucial for the restoration of the northern section of the said wall.<sup>6</sup>

The reconstruction was preceded by full conservation. Almost all of the newly attributed blocks had been strongly affected by erosion due to sun exposure, and salt crystallization in many cases. Some of them were discolored on the surface; their structure lacked natural cohesion, and they were highly susceptible to all kinds of mechanical damage and cracking. All of them were consolidated with acrylic resin Primal AC 330, then hardened with a stone-hardener Funcosil 510 and 300. Blisters and small detached fragments were re-attached, the fissures were filled in with powdered limestone, sand and polyvinyl dispersion. Finally, the wall was rebuilt, and the missing original parts were faced with artificial slabs, and plastered with an aesthetic coat.

#### **MAIN SANCTUARY**

The entrance to the main sanctuary of Amun with the granite doorway was installed in the eleventh year of Queen Hatshepsut, when the Third Terrace of Djoser-Djeseru underwent several changes and modifications introduced by the ruler. The original limestone doorway of the sanctuary was removed and replaced by the granite one. During the present season, the granite doorway was restored. Its lintel, which had cracked twice in consequence of earth tremors, was fastened together with an epoxy resin. Several smaller broken fragments were re-attached to the bottom surface of the lintel, and the missing parts were filled in with powdered granite mixed with white cement and epoxy resin. The face of the lintel with a sunken-relief decoration depicting a kneeling Hatshepsut and Tuthmosis III in front of the seated

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<sup>6</sup> Publication prepared by Hanna van Heijer (in print).

Amun, were affected by very strong erosion resulting in many surface losses. All the detached fragments were made to readhere and the blisters were filled in with the filler.

The rebuilding of the limestone jambs leading to the first chamber of the sanctuary (Room of the Bark) became one of the major objectives of the season. The entrance, restored almost a hundred years ago by the British Mission, was narrower by about 12 cm compared to the original width. It was decided to dismantle both jambs and to rebuild the entrance again, introducing twelve, recently attributed original blocks. After the dismantling to the lowermost course, the foundations of the jambs were reinforced. The disintegrated rock debris was removed and brick reinforcements introduced instead. All the original blocks were consolidated and protected. Their structure was weakened by chlorides and as a result of high temperatures caused by a fire in Coptic times. Their surface was discolored, having become dark, gray or bluish.

The identical decoration of both jambs is divided into two registers. The representations depicted in the upper part of the decoration a kneeling Tuthmosis II (originally Hatshepsut) bringing offerings. This part of the entrance was recently completed. The decoration of the lower register consists of an inscription which constituted a speech of the god Thot addressed to Amun.

The Osiriac statues of Queen Hatshepsut stood in front of the inner faces of the entrance jambs (inside the Room of the Bark). Some remains of the crowns of these statues were identified on the blocks that were restored during the season.

In accordance with the long-term conservation program, work in the Room of the Bark was continued. Several original fragments were fitted in the upper register of the decoration of the southern wall, including the representation of king Tuthmosis II kneeling in front of the sacred bark of Amun. Thick

layers of soot were removed from the reliefs on the south wall. First, however, the detached and flaking plaster and paintings were secured with numerous injections of Primal and Funco-sil. The cleaning was done by repeated dampening of the sooty surface with a 3-4% solvent of ammonia water and a dispersion of Condrat-200 in alcohol. Finally, fiberglass pencils, sponges, and scalpels were used to remove mechanically the rest of the soot.

Architectural measurements and studies of the Royal Cult Complex in the southern part of the third Terrace were completed in preparation for a monograph publication of the temple architecture. The search for decorated blocks originating from this complex resulted in over 250 blocks being attributed to the chapels of Queen Hatshepsut, Tuthmosis I, as well as to the vestibule. The technical design for the reconstruction of the vaulted ceiling of Hatshepsut's chapel was prepared over the course of the season.