Abstract: The Sanctuary of Amun of the Temple of Hatshepsut in Deir el-Bahari was, starting from the early 18th century, gradually discovered, and has been analyzed by many researchers and scientists. In the late 19th century E. Naville was the first to concentrate to a significant extent on the Sanctuary rooms, which resulted in the elaboration of a vast architectural description prepared by Somers Clarke, his cooperator. In the early 20th century, Herbert Winlock conducted studies and analyses of the Sanctuary rooms. In 1961, a concession for conducting works was assigned to the Polish Station of Mediterranean Archaeology of the University of Warsaw, directed by Prof. Kazimierz Michałowski. Since that time, Polish Missions have conducted numerous architectural and conservation as well as epigraphic works, gradually ordering and reconstructing the Sanctuary.

Keywords: Hatshepsut temple; main Sanctuary; Sanctuary of Amun-Re; Deir el-Bahari

Introduction

The Amun Sanctuary as the main complex of chapels of the Hatshepsut Temple in Deir el-Bahari (Pl. 1) is located on the east-west axis of the temple’s highest terrace (Pl. 2). The first granite portal of the third and highest terrace leads to the Festival Courtyard, the integral part of which is constituted by the Ptolemaic Portico, preceding the second granite portal, already
leading to the Sanctuary itself. The biggest room within this rock-hewn complex is the Barge Hall, with six niches (three in the northern and three in the southern wall), where the sacred barge transporting the figure of Amun-Re during the annual Beautiful Valley Festival was placed. The second room is the Statue Hall, where rituals in the god’s honor were performed. Three chapels lead from this space: The Chapels of the Great Ennead in the northern and southern wall, as well as Ptolemaic Sanctuary in the western wall, on the main axis, erected under the reign of Ptolemy VIII Eurgetes II Physcon in the 2nd century BC and devoted to the cult of Amenhotep, son of Hap, as well as Imhotep (Pawlicki 2017, 4, 10).

For about 280 years, the complex was analyzed by a number of persons specializing in different areas of science, and epigraphic research was conducted along with conservatory and architectural works, which has resulted in the renovation and reconstruction of the Amun Sanctuary, which is accessible to visitors.

Research in the Temple and Amun’s Sanctuary in the 18th and 19th centuries

The 18th century inaugurated a series of modern expeditions to the Temple of Hatshepsut. In 1737, Richard Pococke visited the ruins and was the first to describe the temple and the remnants of the Christian monastery. However, he could see only the entrance portal of the upper terrace and the Hatshepsut Chapel, as at that time the temple was buried in rubble. Subsequent researchers who arrived at the temple and left their description were with an expedition of Napoleon Bonaparte – they were Jean-Baptiste Prosper Jollois and Édouard de Villiers du Terrage. During the expedition of 1798-1802, they prepared a description and plan of the complex, included in the work entitled Description de l’Égypte. At that time, the Sanctuary remained partially buried under the rubble; on the performed plans, the location of its entrance is presented as a depression. In 1817, Italian researcher Giovanni Battista Belzoni along with Henry William Beechey conducted the first archaeological excavations, and they were most probably those who discovered the entrance to the Sanctuary. They reached the last room from the Ptolemaic period (Karkowski 1979, 9).

The first to include information about the Sanctuary in his notes is John Gardner Wilkinson. He briefly describes room arrangement and the dimensions of the Barge Hall, concentrating more on wall decorations (Wilkinson 1843, 198). Two years later, in 1829, Jean-François Champollion arrived.
He was involved in copying the texts from granite portals and Sanctuary walls, and also provides its detailed description. He also recognized Amun as the temple’s main god (Roehrig et al. 2005, 291). Robert Hay’s drawings, including a plan of remnants after the Coptic monastery, probably date back to 1832. The drawings also include Coptic reconstructions of the interior of Amun’s chapels complex (Kaczor 2010, 157). Karl Richard Lepsius, who conducted excavation works in 1845, created the first advanced plan of the temple, including a sketch of Amun’s Sanctuary, in notes concerning wall decorations as well as on the plan of the temple itself (1852, 111). However, he concentrated, similarly to his predecessors, mainly on reliefs.

The first excavations were conducted on a large scale by Auguste François Mariette, the creator of The Egyptian Service of Antiquity. He cooperated with John Greene and E.M. Brune, but their work involved mainly clearing the Portico of Punt, Amun’s Northern Chapel, and Hathor and Anubis Chapel of rubble, as well as creating theoretical reconstruction designs, among others of the Upper Portico. Naville recalls that Mariette began the removal of rubble from the Sanctuary, but he suspended the works, leaving the blocks which had fallen from the vaulting (Naville 1906, 2).

**Architectural and conservation works at the turn of the 19th and 20th centuries**

In February 1893, works in the temple were inaugurated by Édouard Naville, Swiss Egyptology professor and student of Karl Richard Lepsius. Research by the British Mission, organized by the Egypt Exploration Fund (EEF) that he led, was included in six volumes of the work *The Temple of Deir el-Bahari*. The fifth part was devoted to the Upper Courtyard and the Sanctuary. In 1893 Naville began the uncovering of the southern part of the Upper Courtyard and of the Sanctuary, and in the autumn the northern part of the courtyard was cleaned to reach its surface. For the first time in the history of the research, a detailed architectural description of the main chapel complex was published. In addition to the description of rooms included in the preface and in the section devoted to the chapel complex itself, Naville presents damage which affected these parts within the period when no works were conducted in the temple, which is noticeable when comparing his account to that of Lepsius. The first two rooms were mistreated by the Copts, as the smoke from their candles damaged colorful decorations, in particular on the vaults. They also repaired the walls, inserting stone blocks, ignoring decorations on these blocks
and wall ornaments. Neville also mentions that the Sanctuary was open for years, and was damaged by tourists who would, for example, cut out relief fragments and sell them, which affected the representation of Thutmose II (Naville 1906, 9). They made a drawing of the plan of the Upper Courtyard with the Sanctuary, a view of the west wall with the entrance to it and a cross-section through the speos and the Ptolemaic Portico. The drawings also present the original load-relief triangle, placed over the vaulting of the Barge Hall (Naville 1906, Pl. CXIX) (Pl. 3).

The sixth volume of *The Temple of Deir el-Bahari* contains an architectural study by Somers Clarke, an architect cooperating with Naville. Clarke describes the dislocations which took place in the Sanctuary walls, mentioning that the northern wall of the Barge Hall was seriously damaged. He analyzes the structure of the Sanctuary and describes the condition of the walls and the structure of vaulting in the first room. He also specifies antique reconstructions and repairs which were performed here. He mentions the repair which took place in the portal of the western wall of the Barge Hall, done by the Egypt Exploration Fund. The lintel fell and descended almost to the floor; in 1896, it was installed again in the proper place, along with reconstruction of the southern frame of the portal. Repairs and reinforcement of the eastern wall were also done in the Barge Hall (Pl. 4). Clarke describes the Sanctuary vaults as apparent, and describes the load-relief system, which emerges over the stone leaning (Naville 1908, 25-29). The activity of the mission led by Eduard Naville finished in 1899. It was the first restoration undertaken on such a large scale at Hatshepsut Temple, but the Sanctuary itself did not receive more significant repairs.

In 1911-1931, an American mission from the Metropolitan Museum of Art in New York worked in the temple, led by Herbert E. Winlock. In the 20 years of its activity, an important number of graves, sarcophagi, sculptures and mummies were discovered. The cavities of foundation deposits were also uncovered, making it possible to specify subsequent stages of construction of the temple together with the remnants of the Temple of Amenhotep I (Kaczor 2010, 160). In the 1930-31 season, Winlock described the work on the Sanctuary as an ‘urgent task’. His collaborator Charles K. Wilkinson copied the unpublished scenes of wall decorations. He also writes that ‘[…] there were some fallen stones to be replaced and a cupboard, masked behind a Ptolemaic restoration, to be cleared and repaired’, and mentions that M. Baraize used a mason for the last two works (Winlock 1942, 215). Winlock’s important achievement was the discovery and matching, out of
the remains of the fourteen Osiris figures remaining in the warehouse at that
time, four which had previously been intended for the Barge Hall. They were
located in the corners and differed in color from the figures intended for
the niches (in internal Osiris figures the skin color was pink, while the external
figures were red or green). He pointed to the fact that some elements were cut
out in the corners of the room and the stone surface was uneven. The heads
of Osiris figures were checked, and they perfectly matched the locations.
Wilkinson collected data concerning the figures, and then performed
a reconstruction drawing of the western wall of Barge Hall together with
the representation of two Osiris figures (Winlock 1942, 215, 217).

It is necessary to mention that from 1925 to 1952, reconstruction
works in the temple were performed by the French architect Emile Baraize,
technical director of the Service of Antiquity in the Upper Egypt. He rebuilt
most of the reconstructions made by Naville. However, his work was not
documented, making it impossible to analyze the architect’s activity within
the temple.

**Architectural and conservation works of Polish missions**

The works were interrupted after the Second World War, until 1961
when the Polish Station of Mediterranean Archaeology of the University
of Warsaw, directed by Prof. Kazimierz Michalowski, received permission
to work within the Temple of Hatshepsut. In agreement with the Egyptian
conservation service, the mission began research and conservation
activities, led by main station architect Leszek Dąbrowski, authorized
by the Egyptian Service des Antiquités (Dąbrowski 1964, 39). The works
began with the reconstruction of the front portico of the third temple
terrace. In the 1961–62 and 1962–63 seasons, works were also conducted in
the courtyard of the Upper Terrace. This terrace was entirely covered with
a thick layer of sand, and after its removal it turned out the entire floor was
paved with stone blocks from different parts of the temple. It took two years to
remove and examine this layer, excavating several thousand blocks and stone
fragments, including perfectly preserved decoration. The proper flooring of
the upper terrace was revealed, which made it possible to introduce subsequent
studies of object architecture. In 1962, the previously buried Temple of
Thutmose III was uncovered (Dąbrowski 1964, 42-44). These important
discoveries pushed the works in the Sanctuary into the background. In early
1968, the Center of Mediterranean Archaeology of the University of Warsaw
was replaced by the PP mission Monument Conservation Ateliers, led by architect Zygmunt Wysocki. He was aware of the scope of this undertaking, aimed at the reintegration of the temple. However, he postponed the works on the Sanctuary as he felt that this work did not contribute to the restoration of the external contour of the object or to its protection (Wysocki 1979, 21).

The focus returned to Amun’s Sanctuary during works performed on the ledge over the upper terrace as well as the covering wall, the center of which constitutes the entrance to a number of chapels. Wysocki continued the inventory of two newly discovered platform wings, a fragment of a covering wall as well as load-relief structure of the Sanctuary vaulting (Pl. 5: 1-2). Excavations and examinations were conducted at the southern and northern contact of the walls of the first room with the wall with niches, aimed at discovering traces of the curtain wall. At the time an attempt was made to discover the shape of the internal wall fragment as well, which was necessary due to filling in of the central section of the stone platform, which required support here (Wysocki 1973, 10). In this way, with the intention of reconstructing the covering wall and the platform, it was necessary to perform protective works on the Sanctuary vaulting and the antique load-relief triangle. Wysocki began his own research, concentrating on this structure, at the same time solving the problem of the original height of the protective wall, checking the mutual course and the connections of the wall elements and the load-relief triangle. He developed the design for reconstruction of the ledge and the protective wall together with a reinforced concrete barrel vault over the vaulting structure accessible through a shaft with a steel ladder (Wysocki 1973, 12-13). Performing the protections was necessary for two reasons. The first was the constant threat caused by rock erosion, where loosened fragments of different sizes would fall into the area of the temple, constituting a threat to tourists and workers standing there. The second reason was tectonic shocks of varying intensity. Choosing the form of protection also depended on the political situation of Egypt at that time (it was a period of martial law in the country, which resulted in limited financial resources allocated for the activity of the mission) (Wysocki 1973, 16).

Works on the southern wing of the protective wall were inaugurated in the 1969/70 season. At the same time, cavities in stone platform were reconstructed, with the use of crushed limestone arranged in layers and with cement mortar poured on it. Stone cavities of the ledge were concreted. For the next three seasons, the protective wall was gradually developed. In parallel to the works on the platform and the wall, cleaning of the stone
niche surrounding the stone triangle was carried out, including the removal of weathered rock and preparing the area for further works (Wysocki 1973, 19-21).

In November 1974, works on the reconstruction of the central part of stone platform were initiated, including the reinforced concrete dome protecting the original vaulting of the Sanctuary. When both wall wings were already nearly finished, before the completion of the works it was necessary to work on the triangular load-relief system. Special mobile scaffolding were prepared, which made it possible to concrete the dome fragment by fragment, respecting the width of 120cm. The dome itself is 30cm thick, reinforced with a double mesh of steel bars with a thickness of 12mm. Performing this scope of works made it possible to continue the works involving the connection of a rock platform, which was planned for the subsequent season (Wysocki 1975, 1, 5) (Pl. 6).

In the 1980-81 season, the architect Adam Stefanowicz conducted a series of studies and outcrops of the northern and southern walls of the Barge Hall. In 1981, Zygmunt Wysocki studied the layers of blocks and joints, and then he discovered on the face of both rebuilt walls traces suggesting there may have been internal niches on each of them, which were most probably covered in the Ptolemaic period. Due to a number of vertical cracks, it was decided to conduct deconstruction works in a limited scope in order to confirm the thesis. Before beginning the works, measurement, drawing and photographic inventory were performed, and then the removal of stone blocks began in the southern and northern walls, giving each of the discovered elements a number (Pl. 7: 1-3). The team of archaeologists led by Janusz Karkowski studied the composition of the obtained material filling both niches. The good condition of the northern niche made it possible to uncover it completely (Pl. 8). After the uncovering of both niches, according to their condition, documentation was done in the same way as before beginning the works (Stefanowicz 1981, 1-4). All of the works were conducted in January 1980, right after Wysocki’s discovery. From December 1981 until February 1982, the reconstruction of both niches was in progress. Frame fragments were emptied and restored (Wysocki 1985, 366-368). In the 1982/83 season, Stefanowicz made the inventory of wall surface and joints of the walls next to the granite portal leading to the Barge Hall. Studies included the connection of relief frames of the limestone portal with the longitudinal Sanctuary walls, the course of horizontal joints adjoining in wall corners as well as semicircular gable wall with the Sanctuary’s entrance portal. Drawings of this wall were performed, together with
the drawings of portal frames, granite portal from the outside, along with photographic documentation (Stefanowicz 1988, 1).

The 1988/89 season was the last year of works conducted by the Monuments Conservation Atelier (PKZ) mission. In 1993, the mission of the Center of Mediterranean Archaeology of the University of Warsaw returned to work, led by Franciszek Pawlicki. Starting from 1989, extensive epigraphic research was conducted, and from 1992 it was particularly concentrated on Amun’s Sanctuary. This made it possible to begin architectural and conservation works. In the 1995/96 season, the reconstruction and conservation of the Barge Hall walls was inaugurated. On the southern wall, within the westernmost scene presenting King Thutmose I and Queen Jahmes, standing by Amun’s sacred barge, filling was introduced after prior conservation, in the form of nine polychrome fragments. All of the cement fillings were removed and replaced with powdered limestone with polyvinyl. Twelve subsequent original polychrome fragments were introduced into the northern wall, where the majority of them complemented the representation of kings kneeling in front of the sacred Amun’s Barge. This place in the wall was already reinforced with the use of stone blocks, removed and replaced by original elements. The block over the niche was again assembled with the use of a corrosion-resistant anchor with epoxy resin.

As the stone blocks of the Barge Hall were covered in their entirety with soot from the Coptic era, cleaning was undertaken. Two years earlier, a number of laboratory tests had been done, making it possible to select an appropriate cleaning method. Before cleaning the blocks, all of the delicate and fragile decorations were secured, and then the works began (Pawlicki 1997, 63-65).

In the 1996/97 season, the granite entrance portal to the Barge Hall was restored. The lintel, which had already cracked twice as a result of ground tremors, was assembled with the use of epoxy resin. In its lower part, it was complemented with loosened original fragments and the gaps were filled in with powdered granite mixed with white cement and epoxy resin. Conservation treatments were also performed. The works also concentrated on the reconstruction of limestone frames, leading to the Barge Hall, which were reconstructed during the period of activity of the British Mission. Both frames were disassembled and reconstructed, complementing them with twelve original blocks. The original blocks were appropriately integrated and preserved. Frame foundations were also reinforced.

During this season, the reliefs in the southern wall were cleaned of soot and necessary conservation works were conducted. Wall decoration was
completed with original fragments (including the representation of King Thutmose II kneeling in front of the sacred Amun’s Barge) in the southern wall (Pawlicki 1998, 58-60).

In the 1997/98 season, approximately 40 blocks and stone fragments were matched, belonging to the northern and western walls and niches situated in the Barge Hall. In that period, lower wall sections were also complemented with original blocks, taken from other parts of the temple. Deformed niche walls were disassembled, blocks were subject to conservation, processing and cleaning, and then the niches were reconstructed again. In the north-western corner of the room, a fragment of original stone flooring was preserved, which made it possible to reconstruct floor on the entire surface of the Barge Hall.

A fragment of the northern wall between the western and central niches posed an important technical problem. Originally, a symbolic representation of the unification of Upper and Lower Egypt called Sema-tawy had been situated there, at that time filled in with different stone blocks. The scene was reconstructed and complemented with elements of the original. Then wall complements were built with the use of original blocks. The construction of the western wall also came to an end and it was to a large degree restored within the previous two seasons. Another five original elements were installed in the tympanum over the lintel and steps leading to the second room of the Sanctuary were built.

In parallel to the works in the Barge Hall, those in the Statue Hall were in progress. Complete wall conservation was performed here. The entire eastern fragment of the northern wall was deconstructed, as it had bulged and its fragments were dislocated, then the rubble causing impact on the wall was cleared. Frames of the portal leading to the Ptolemaic Sanctuary were reconstructed. Wall conservation and cleaning lasted for the entire season of the Mission’s activity, which was impeded in particular by heavy buildup of soot on wall fragments. Greasy precipitate resulted in permanent stone discoloration in lower parts of the room. The vaulting in the Statue Hall was not subject to cleaning. Chemical reactions which took place in this part of the Sanctuary made it impossible to work on the vaulting without significant damage to its decoration. Conservation was limited to filling the empty spaces with original fragments or new material. A new floor was made and final aesthetic activities were carried out (Pawlicki 1999, 121-127).

In the 1998/99 season, the walls of the Barge Hall and the niches were completed with another 30 stone blocks including decorations, found in the tombs of Amun’s priests. Discovered fragments complemented
the representation of the list of donations, sacrifices, and the bow of the sacred barge on the southern wall. The decision was made to remove stone blocks by the north-eastern corner of the room, which had been placed there in the Ptolemaic era. Further decorated blocks were discovered, after which the northern wall (in the representation of Thutmose III) was completed with twelve elements. Reconstruction of two out of four Osiris figures standing by the western wall of the Barge Hall was done, complementing them with original elements (the figures were reconstructed without their heads). Conservation works were performed and the Great Ennead Chapels were cleaned of soot and dirt. Limestone blocks were discovered under the accumulated soil at the Ptolemaic Sanctuary, which probably came from the chamber constructed during the reign of Queen Hatshepsut. They were reused to lay the flooring in the room during the construction of the last room in the Ptolemaic era (Pawlicki 2000, 159, 163-164).

The 1998/99 season brought all of the recent major works at the main Temple Sanctuary to an end. Additional conservation treatments were conducted in the seasons that followed. During the 1999/2000 mission the works concentrated on friezes – *kheker* in upper wall sections and on the eastern wall, in the part under the vaulting Exfoliated colour surface was fastened to the stone, and air bubbles were removed from below the ornaments. Connections and missing parts of the wall and ceiling surface were filled with mineral joint compound. Conservation works were also performed on both of the granite portals, by the entrance to the upper terrace as well as to the Sanctuary. The western wall of the Statue Hall was cleaned, together with the reconstructed portal dating back to the Ptolemaic era, which resulted in a clearly visible and preserved gilt layer (Gazda 2001, 212). Within the mission, in 2001 the vaulting of the Barge Hall was examined, which revealed cracks in some of the stone fragments directly by the gable and along the axis of the room. Reinforcing works were undertaken with the use of the injection method. Structural analysis showed that there was no threat to the stability of the vaulting. Moreover, drawing and photographic documentation of the decoration of the Barge Hall and the niches was prepared (Barwik 2002, 196). In the years that followed, a number of theoretical studies were done in the Sanctuary, among others referring to light penetrating the chapel through the skylight (2008). In 2009, a small fragment of the *Sema-tawy* scene was completed in the Barge Hall, presenting a fragment of the face of the Eastern god of fertility (Gazda 2012, 253). In 2011-2015 steps were undertaken in order
to complete the set of documentation and the entire decoration of Amun’s Sanctuary.

Summary

All of the works and studies conducted in the early 18th century contributed to a greater or lesser extent to determining the original form of the Sanctuary. The majority of works, in particular within the period of the Polish missions starting in the 1960s, depended on the availability of financial and material resources. Furthermore, the works were conducted in parallel to the activities in other parts of the Temple, which significantly prolonged the reconstruction and preservation process. Finally, Amun’s Sanctuary was officially inaugurated on December 9th, 2017 and made accessible to visitors.
References


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Pl. 1 – Map with the location of the site
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Pl. 7. 3 – A view of the south wall of the first chamber of the Main Sanctuary. The state after completing the studies and the preservation and reintegration work of the newly discovered niche ‘I’ in the 1981/82 season. Courtesy of PCMA UW
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Courtesy of PCMA UW