

Report on the Excavations at Elephantine
by the German Archaeological Institute and the Swiss Institute
from autumn 2010 to spring 2011

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1. Overview

From October 2010 until April 2011 the German Archaeological Institute and the Swiss Institute of Architectural and Archaeological Research on Ancient Egypt in Cairo continued their archaeological work on Elephantine.¹

Excavation work concentrated in the areas in front of the museum on the island. This museum will be refurbished and enlarged by the Supreme Council of Antiquities; therefore it was necessary to clear those areas which will be touched by construction work archaeologically. Even though the area of the excavation was limited, it revealed interesting insights into the development of the layout of the ancient town. Parts of different phases of the town walls were found which help to re-construct the site of the ancient main gate of the town which hitherto could not be located. Parts of earliest settlement activities outside the Old Kingdom town walls could also be uncovered, dating to the First Intermediate Period and to the Middle Kingdom (see sect. 2).

Further, excavation focussed on the later history of the town walls. Here, field work was continued at the remains of the town walls in the southern part of the site. This work was successful in clarifying the complicated chronology of the different architectural phases of the town walls, thus providing the necessary archaeological basis to follow the changing status of Elephantine as a fortified town (see sect. 3).

In addition to these excavation projects, detailed research was carried out to clarify some interesting aspects of the 18th Dynasty temple of Satet. Due to the excellent preservation of a significant number of the blocks of this temple, an analysis of the technical composition as well as of the development of its painted decoration was possible. As a most surprising result, this study revealed that, before the temple was finally dismantled probably in the Ptolemaic era, its original polychrome decoration was covered with whitewash, thus totally changing the appearance of the temple (see sect 4).

Further the original foundation layer of this temple was reconstructed from preserved blocks and the architectural construction process of the temple was studied by Felix Arnold revealing important new information on its ritual layout. Actually it could be shown that the open water pipe coming down from the temple of Khnum entered the temple of Satet and probably crossed its

¹ We are grateful to the members of the Supreme Council of Antiquities for their continued support, in particular the Director of Aswan Inspectorate, Dr. Mohamed el-Bialy and the Inspectors Hala Adel Mohammed and Amal Serif Tadris who represented the SCA on the site. For the excavations on Elephantine see also the preliminary reports appearing regularly in MDAIK.

sanctuary. This detail throws new light on the rituals associated with the celebration of the flood of the Nile in the temples of Elephantine.

Important research was devoted to the study of the finds from an early Byzantine workshop complex excavated in former seasons by Felix Arnold in the area of the temple of Khnum. Here the debris from a bronze casting workshop, in particular fragments of casting moulds, could be studied. In a second workshop in the same area, stone bowls of granodiorite were made, obviously from stone blocks taken from the ruins of the temple. In addition, grinding stones from red granite were produced at the same site (sect. 5).

Otherwise the study of the finds from former seasons in the storerooms was continued. This work concentrated on the finds from the New Kingdom (sect. 6) and on the pottery. Dietrich Raue continued his research on the Nubian pottery, while Julia Budka continued the study of the pottery from the New Kingdom. This work concentrated on recording of assemblages of pottery sherds deriving from New Kingdom layers that have accumulated above the exterior fortifications in front of the Middle Kingdom town wall.

St.S.



Fig. 1: Town enclosure wall of the 2nd Dyn.

2. Excavations in the garden area of the Elephantine island museum

Due to the extensions planned for the museum on the island of Elephantine the German Institute of Archaeology started excavations in October 2009 in the areas that will be covered by the museum in the future to clear the site archaeologically. Work concentrated on the area between the existing museum and the annex building to its north as well as on the areas in front of these two constructions.

The oldest archaeological remains found are the town enclosure wall of the 2nd Dynasty

(Fig. 1). It was well preserved between the annex and the museum, but smaller remains were also found on its continuing course to the north. This wall is already well known from the area of the Satet temple and the northern part of the town. It is constructed of three connected walls and leads from the top of big granite boulders near the Satet temple to the northeast. It runs between the old museum and the annex building and continues to the area in the vicinity of the old magazine building. In this area, it most likely turned to the east along the bank of the Nile to join the north-eastern corner of the early dynastic fortress revealed in earlier excavations by Martin Ziermann.



Fig. 2: Settlement of the Early Dynastic Period east of the museum

The settlement of the early-late 2nd dynasty was preserved in the area in front of the verandah of the old museum (Fig. 2).² Unfortunately it was largely destroyed by *sebbakhin* diggings. Only in one spot it was preserved to a height of some 2 m. In this area it was possible to study the connections between the two phases of the town enclosure wall and the settlement layers. The study of the stratigraphy led to a modification of the results of the former excavators in this area. In the early 2nd dynasty the area on the sloping natural granite terrain was terraced with older settlement debris. It was unclear which type of houses were build here because there were almost no finds except for pottery. Martin Ziermann suggested that there might have been a production settlement in this site, but due to a lack of finds this hypothesis could not be confirmed.

The second building phase of the settlement was already constructed against the reinforcement of the town wall. From this observation it may be concluded that the inner strengthening wall was build relatively soon after the primary town wall. In the following decades the settlement walls were renewed several times but hardly changed their position. The remains of

² For the adjoining area see M. ZIERMANN, *Elephantine XXVIII: Die Baustrukturen der älteren Stadt (Frühzeit und Altes Reich)*, AV 108, Mainz 2003, S. 20 ff.

the older walls were used as foundations for the new buildings.

Between the annex building and the old museum a structure made up of numerous granite slabs was found (Fig. 3). It runs parallel to the Early Dynastic town wall and most probably represents the substructure of a street leading up to a gate in the town wall. During the Old Kingdom there may well have existed a landing place for boats in the original bay of Elephantine island which is still to be seen south of the rocks of the former island Hassawanarti. From this harbour, a road probably went up to the town, passing the site of the Old Kingdom royal rock inscriptions which are located on a boulder immediately north of the antiquities area.³ Close to the site of the present day annex building, this road probably turned at a right angle to enter the town via a town gate located at the site of the present island museum. This is where the road runs over the foundation of granite slabs. Unfortunately this supposed town gate lies too close to the foundations of the verandah of the old museum so that it was not possible to search for its remains.



Fig. 3: Structure of granite slabs between annex and museum

Because the rock formations beneath the town wall were very high, it was necessary to build a substructure for the road to go up and pass through the gate in the town wall. The highest Nile floods may well have reached 94,5 m above sea level in this period. Therefore this substructure was built of granite slabs to protect it against the waters of the Nile during the inundation. After the Old Kingdom this road was no longer in use and the upper courses of its

³ See S. Seidlmayer, Bemerkungen zu den Felsinschriften des Alten Reiches auf Elephantine, in: S. Seidlmayer (ed.), *Texte und Denkmäler des ägyptischen Alten Reiches*, TLA 3, Berlin 2005, 287-308.

stones were taken away and used as building material. Thus the present height no longer corresponds to its original height during the Old Kingdom.

From the First Intermediate Period onwards the original depression between the two islands was no longer flooded during the annual inundation. So it was now possible for the inhabitants to use this area all year round and to build permanent dwellings and installations. In the area between the old museum and the annex building, the oldest dateable activities outside the town walls could be identified.⁴ The rear wall of a house of this period was build in front of the Old Kingdom road. Other walls, running at right angles and aligned to the north, divided the area into an open court to the east and a house to the west. A triangular storage device was integrated into the corner of the house. The lack of a normal door made the room safe against mice and other unwanted animals.



Fig. 4: Child burials, First Intermediate Period

In the court to the east two simple tombs of very young children were found⁵ (Fig. 4). The older child was about 2 years old lying on its back with the head to the southwest. Two small faience amulets were found near its neck. The other child was not older than 1 year and lying on its right side with the head pointing to the southeast. Only a fragment of a faience cylinder bead was given as grave goods. After these burials, the area was filled up with 10 cm of debris and a simple fireplace was build.

In this season, excavation was started also in the area in front of the annex building. This area was covered with a 3 m high layer of building rubble from the construction of the annex.

⁴ See also M. BOMMAS, *Nordoststadt: Siedlungsbereich der 1. Zwischenzeit und des Mittleren Reiches nordwestlich des Inselmuseums*, in: W. KAISER et al., *Stadt und Tempel von Elephantine*, 21/22. Grabungsbericht, MDAIK 51, 1995, S. 141 ff.

⁵ For the burial of young children in the settlement areas see C. Merheb, *Die Kinderbestattungen von Elephantine*, forthcoming.

Beneath this, there was another metre of *sebbakhin* debris. Only then archaeological layers were uncovered. The general development of this area is similar to that between the annex and the old museum as it shares its topographical properties, lying in the original depression between the two islands. It was also flooded for many weeks each year during the Old Kingdom by the annual inundation. So only a temporary use was possible until the First Intermediate Period. Above the expected building horizon of this period, like in the southeast, pottery kilns dating to the Middle Kingdom were found (Fig. 5).



Fig. 5: Kiln of the 12th Dyn.

On top of this industrial area domestic houses of the 12th dynasty were found (Figs. 6 and 7). These houses were only partially affected by *sebbakhin* digging. The domestic use of the houses is indicated by the lack of tools or administration remains, such as seals. In addition a mill stone was found *in situ* and, on another level, a semi-circular structure that may have been a stable for sheep or goats.

South of the 12th dynasty houses was a layer of granite stones (Fig. 8, background, left). They had a size up to 80 cm. Because they were partially covered by a wall of the 12th dynasty and also lying on a floor of the same period, it is clear that they were brought to this place at that time. Most likely they formed part of a bigger structure that was destroyed some time during the 12th dynasty. In the excavated area there were no remains of this larger building to which the stones possibly might have belonged originally, except possibly the edge of a stone structure the rest of which is still covered by the terrace retaining wall of the museum annex.



Fig. 6: Settlement of the 12th Dyn.

The youngest feature encountered in this excavation area was the remains of a town enclosure wall that cuts the features of the 12th dynasty and must therefore be younger (Fig. 8, foreground).



Fig. 7: Work in the settlement of the Middle Kingdom in front of the annex

In contrast to the Old Kingdom wall, it runs parallel to the Nile and surrounds also the north-western part of the settlement of Elephantine. Although *Sebbakhin* digging reduced the thickness of the wall from both of its faces, it can still be seen that it was at least 2,5 m wide. Most probably it dates to the Graeco-Roman period.



Fig. 8: Late town enclosure wall in the foreground; in the background the settlement of the 12th Dyn. with a concentration of granite boulders on the left side

P.K.

3. Research on the chronology of the town wall

The Swiss Institute continued the investigation of the fortifications of Elephantine. Excavations were restricted to a limited extent and completed the work of the previous season in *Bereich XIV* at the southern edge of the town (Fig. 9). However, further analysis of the visible structures contributed to a better understanding of the chronology of the later phases C, D and E of the town wall, which had been erroneously interpreted as a "post-Pharaonic" fortification. The results can be summarized as follows:

After the New Kingdom, when the town was apparently not fortified with a town wall, a new fortification wall was built in Dynasty XXI (Wall B). This wall was later replaced by a new enclosure wall (C) that was built on the levelled remains of the preceding one on a much higher level. Since no deposits attached to this wall have survived, its date of construction was difficult to determine. However, according to pottery sherds collected in the accumulations which were continuously deposited outside the preceding wall (B), Dynasty XXIV may be taken as a *terminus post quem* for the construction of Wall C.⁶

Subsequently, massive buttresses were added on the outside of the enclosure wall C. As they were cut into the outer face of Wall C, these buttresses were obviously built in order to support a new enclosure wall on top of Wall C of which no traces left. Built on the sandy slope of the riverbank, however, the eastern buttress (D3) became unstable and further abutments were

⁶ A. Seiler, in: *MDAIK* 53 (1997), 172-173.

added (Wall E). Since a continuous sequence of wind-blown sand has accumulated outside the fortification it was expected to achieve further chronological evidence through the analysis of pottery sherds from these layers. A vast early Ptolemaic cemetery with simple pit burials along the wall, however, largely destroyed any stratigraphic relation. Clean stratigraphic evidence was only obtained in a limited area in front of abutment E4. Pottery sherds collected from the wind-blown sand attached to the wall can be attributed to Pottery Phase III as established by David Aston spanning the period from the beginning of Dynasty XXV until the middle of Dynasty XXVI.⁷ Thus, at the present state of work the construction of enclosure wall C may be tentatively dated to Dynasty XXV, the buttresses D and later abutments E to Dynasty XXVI when Elephantine regained its role as a border fortress.



Fig. 9: Overview on the latter phases of the town wall at the south-western edge of the ancient town

In the second half of the season work was shifted to the area of the so-called *Südhügel* (*Bereich XXXII*) where some further but poorly preserved remains of the fortification walls are visible beneath modern excavation dumps. The area was cleaned from debris and the uncovered walls and features were mapped and recorded in order to prepare detailed investigations in the forthcoming season.

C.v.P.

4. Examination of the technical aspects of the decoration of the 18th Dyn. temple of Satet

⁷ D. A. Aston, *Elephantine XIX, Pottery from the Late New Kingdom to the Early Ptolemaic Period*, Archäologische Veröffentlichungen 95, Mainz 1999, p. 162

In this year an analysis of the the technological aspects of the decoration of the 18th Dyn. temple of Satet was carried out. This work provided new information about the former layout of the temple and its decoration, including its colouring. First of all it was the aim to assign the surviving scenes to a certain phase of the construction history of the temple and the development of its decoration with the help of categorical technical details. Actually certain technical features of the execution of the relief and its colouring can be assigned to specific phases of the history of construction and decoration of the temple.



Fig. 10: Example of original relief decoration from the time of Hatshepsut

The decoration of the inner as well as on the outer walls differ considerably in quality and shows both raised and sunk relief. As the building of the temple can be attributed to two kings, Hatshepsut and Thutmosis III., it is important to try to determine which one of them was responsible for which phase of construction and decoration. It is known, that queen Hathepsut commissioned the building of the temple and the decoration of the outer walls as well as that of the three ante-chambers of the temple in raised relief.



Fig. 11: Example of restoration executed under Sethi I

Most probably the raised relief decoration on the inner faces of the pillars of the surrounding

peristyle-hall can be attributed to the same period of construction (Fig. 10). The decoration of the other three faces of each pillar in sunk relief was most probably added only by Thutmose III. The decoration of the walls of the inner sanctuary rooms, also executed in sunk relief, can also very likely be attributed to this king.

During the Amarna period, the decoration of the temple suffered extensive defacement. This damage was repaired under Seti I, often in very superficial work (Fig. 11).



Fig. 12: Example of original polychrome painted decoration

In addition to the different layouts of the relief, raised and sunk, one can analyze the traces the workmen left while manufacturing the decoration. This evidence also provides clues to the sequence of events. Actually the decoration does not only show different techniques, but also the mark of different sculptors working together on the decoration in a team. By comparing the tool marks, the way of incision and the modelling of the figures, one can conclude that the group of workmen who executed the temple under Hathepsut and Thutmose III. was not very numerous.



Fig. 13: Example showing traces of whitewash covering the polychrome decoration

The raised relief was executed by not more than three certainly experienced, but unequally skilled sculptors. The preparation of the sandstone blocks for decoration and the incisions of the baselines and colour-borders can be attributed to an apprentice, because this work demands less manual skills and technical competence. Also the sunk relief was executed by a group of three to four workmen at most.

The colouring of the decoration, which is preserved very unequally on the different blocks of the temple, provides information about the different decoration phases of the temple. Originally, after its erection in the 18th Dynasty, the decoration was painted polychrome (Fig. 12). This polychrome painting was renewed several times later on. Very surprisingly all of the original polychrome decoration was repainted monochrome in a creamy white before the temple was finally dismantled probably in Ptolemaic times, thus completely changing the outward appearance of the building (Fig. 13).

E.P.

4. The early byzantine workshops in the area of the temple of Khnum

In the context of the long-standing investigations of the Swiss Institute in the area of the Temple of Khnum a new sub-project on “The Early Byzantine workshops of Elephantine (Aswan/Egypt)” was started in cooperation with a team of specialists from the Early Medieval Department of the *Römisch-Germanisches Zentralmuseum Mainz* (RGZM). The scientific research was focussed on two different kinds of workshops:

J. Drauschke and Ch. Eckmann studied the residuals of a casting house, where during the 6th century AD copper alloy vessels were produced. The work comprised the documentation of the nearly 5.000 fragments of moulds, which are crucial for the understanding of the production techniques used. The moulds’ composition as well as the casting procedure could be reconstructed. The whole complex is completed by fragments of melting pots and slags. Their documentation helped to arrive at a precise reconstruction of the processes in the casting house of the Coptic period. This is unique within the Early Byzantine archaeology in Egypt.

Nor the stone processing industries of the Coptic period have been in the focus of scientific research so far. F. Mangartz and S. Wefers worked on a different workshop that produced stone basins of granodiorite. These were found during the excavations mainly as semi-finished objects or production waste, because they were damaged during the manufacturing process. The stone vessel workshop was active at the same time as the casting house. Obviously the stone material was taken from the nearby ruins of the Khnum-temple. The different production stadiums of the vessels made it possible to reconstruct the whole production process.

Closely connected with the vessel production was the research on the grinding stones from

Elephantine which were manufactured mainly from the local red granite. 28 milling stones, discovered in previous seasons in the surface debris, were recorded. Together with baking ovens of the Coptic period crucial features of the food production could be documented.

Supplementing the studies of the workshops, the research on the pottery of the Late Roman Period was continued in the first half of the season. This work focussed on the assemblage of pottery sherds deriving from House K 20.

C.v.P.

6. Work on New Kingdom finds in the magazines

The small finds from the excavations of the past seasons were studied during November and December 2010. These were mainly finds from the settlement of the New Kingdom. The largest component was formed by more than 300 beads of faience and glass. Glass making was invented in the New Kingdom, and the beads present in the studied material have up to three colours. But there is still no mass produced glass in comparison to faience beads.

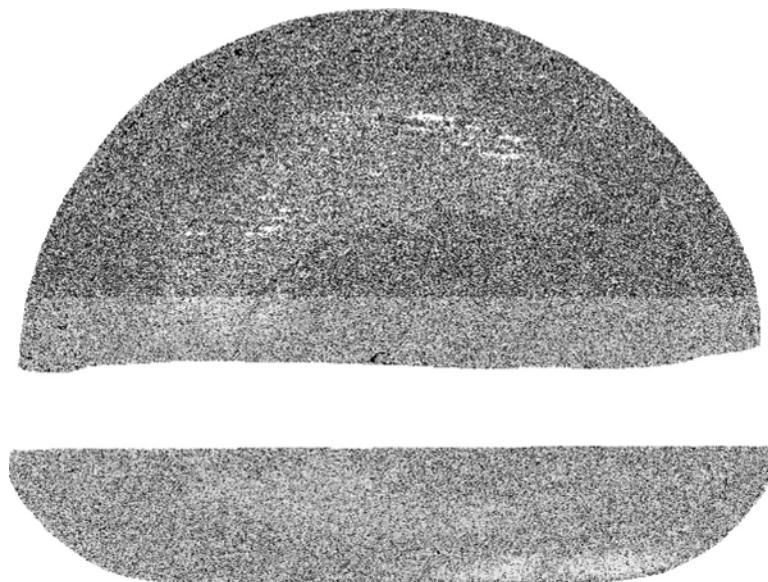


Fig. 14: Wooden bowl, New Kingdom

There was also found a rim fragment of a small blue faience bowl. On its outside it shows a black painted pattern of lotus petals. Therefore the bowl can be assigned to the type of so called "Nun-bowls", which are decorated with marsh scenes. Depicted are the plants and animals of the marshes, including occasionally a lake. These bowls are known from settlements but also from temples and tombs of the New Kingdom. The symbolism of the lotus is in this case not rebirth but the donation of life. Due to its connection with the water it stands to reason to decorate drinking bowls with the lotus symbol, as water is also a basis for life. Most interestingly, the same symbolism is also found on a wooden vessel (Fig. 14). A small rosette of lotus petals is incised in

the centre of this flat bowl. There are only a few wooden bowls like this known from Egypt. At Elephantine, thanks to the dry climate of the region, wooden finds are often excellently preserved.

The majority of the finds represent clearly the normal activities found in domestic areas. Wooden spinning whorls were used in the process of spinning linen fibres into thread. These were found in different domestic contexts. Therefore, spinning on Elephantine island was mainly a regular domestic pursuit as opposed to a workshop activity. Other tools are wooden plugs and weights of unknown purpose. One of the weights was not for use in hanging from a rope but was a scale weight. The un-inscribed, rectangular piece has a weight of 20.6 g.



Fig. 15: Female figurine, New Kingdom

Another type of object studied was female figurines. These can be divided into two groups. The first group depicts outstretched women wearing large wigs (Fig. 15). These figurines are made of blue faience and were manufactured in an open mould. The back side of the figurines is shaped manually into a slightly rounded form. The figurines of the second group are invariably made of pottery. Here a woman is lying on her back on a bed and to her right is a small child. She also wears a large wig as well as ear-rings. The figurines of the second type were also manufactured in an open mould. Therefore most of the faces are very similar. Only afterwards the shape of the bed was modelled by hand. As some of the pottery figurines are of unfired clay it is possible to say that they were produced on the island of Elephantine. A number of similar figurines from undetermined contexts show that at least some of them were painted in bright colours. Both types were found primarily in temples and settlements. As former studies show, they are clearly connected with female fertility.⁸ They were used in the settlement and given as votives to the temples with the hope to improve the chance for getting a child and also to implore protection for the mother and the child during pregnancy and childbirth.

⁸ G. PINCH, *Votive Offerings to Hathor*, Oxford 1993; P. KOPP, *Zu den Kleinfunden: Weibliche Figurinen*, in: G. DREYER et al., *Stadt und Tempel von Elephantine, 31./32. Grabungsbericht, MDAIK 61*, 2005, p. 85 ff.



Fig. 16: Model boat, New Kingdom

Another group of models studied were those of small boats made of clay or pottery. Fourteen of these boats were in the studied material. The most common ones are of a simple shape, but a few show more elaborated styling on the stern (Fig. 16). Model ships have been found on Elephantine from the Early Dynastic Period onwards. Their exact meaning is still unknown, but their presence in this region of the first cataract is not surprising. Boats had to pass the difficult waters here, and so some of the boats might have been given as votives to the temples to ask for protection for the crew.

P.K.