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# Shalfak: a Middle Kingdom fortress in Lake Nubia

Research on the Middle Kingdom fortresses in Lower Nubia is closely connected to the Egypt Exploration Society: the fortress of Buhen was explored by an EES team under the direction of Walter Bryan Emery between 1957 and 1964, before the site was lost to the rising waters of Lake Nasser. Sixty years later, **Claudia Näser** resumed work at the fortress of Shalfak, 50 km south of Buhen.

Lower Nubia is widely known as the venue for the world's largest archaeological salvage project, UNESCO's International Campaign to Save the Monuments of Nubia. When the reservoir behind the Aswan High Dam, Lake Nasser or Lake Nubia as it is called on the Sudanese side, reached its full capacity in 1976, it flooded more than 450 km of the Lower Nubian Nile valley and thousands of archaeological sites. Among them were 13 Middle Kingdom fortresses – massive mud-brick constructions which belong to the most impressive testimonies of Egypt's rich architectural heritage.

The Lower Nubian fortresses were built in the Twelfth Dynasty, in the reigns of Senusret I (1971–1928 BC) and Senusret III (1878–1843 BC). They formed a monumental defense system, spreading over 300 km of the Nile valley between the First and the Second Cataracts. Their main aim was to create a buffer zone protecting Egypt's southern border against the (perceived) threat of the Kerma kingdom near the Third Cataract, some 300 km further south. But the fortresses also secured the river-borne trade with Kerma and more generally controlled the movement of people and goods

at Egypt's southern border. Moreover, they facilitated the extraction of local resources and access to the gold-bearing regions in the hinterland, the exploitation of which is attested in written records from the period.

Dubbed the 'mud-brick curtain' by Bruce Williams, the Lower Nubian fortresses signal what is considered to be Egypt's first imperialist expansion. Both their military and administrative dimensions attracted considerable attention in Egyptological research. All 13 fortresses saw some archaeological exploration in three subsequent salvage campaigns: the first prior to World War I in connection with the first heightening of the old Aswan Dam, the second in the 1920s up to 1932, and the third in the wake of the UNESCO salvage project. Due to the size of the structures and the increasing time pressure, most of these investigations were hurried and summary. Shalfak, for example, was explored by Noel F. Wheeler for the Harvard University and Museum of Fine Arts Boston Expedition in just four weeks, in February and March 1931. The final publication, *Second Cataracts Forts II*, which appeared under the authorship of Dows Dunham in 1967, dedicated a meagre 22 pages to Shalfak.

Shalfak, view along East Wall Street towards southwest.

Photo: Shalfak Archaeological Mission.



It is normal for archaeologists to face the progressing deterioration or loss of their database. In view of this, it came as a complete surprise when it transpired that two of the Lower Nubian fortresses had actually survived above the waters of Lake Nubia in 2002. It is a rare stroke of luck to be able to return to a site long believed to have been lost and to have the chance to transcend the limits of previous research. The southern of the two fortresses, Uronarti, became the focus of the Uronarti Regional Archaeological Project in 2012. Shalfak, 5 km downstream of Uronarti, was visited by the author in January 2016. In April 2017, the Shalfak Archaeological Project (SAM) was launched.

With an enclosed area of 1838 m<sup>2</sup>, Shalfak is the smallest of the Nubian fortresses. There is a wide agreement that it was built under Senusret III in the second phase of the Middle Kingdom's military expansion into Lower Nubia. It is situated at the highest point of a rocky outcrop that had formed part of the west bank of the Nile before the flooding. Today, the fortress sits on a small island, which connects to the western bank when the water level in the reservoir is low.

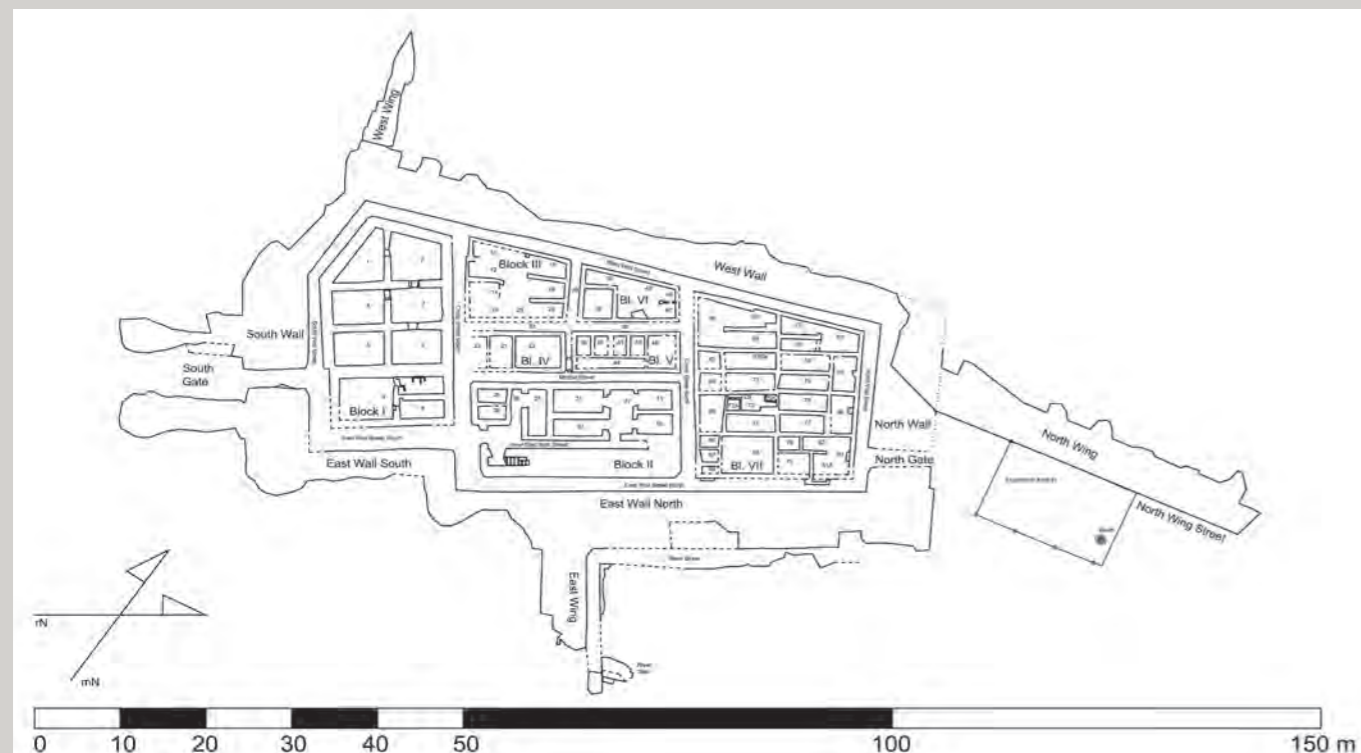
The isolated position and the hyperarid climate have contributed to the excellent condition of Shalfak's architectural substance. Its main walls still stand up to 8.3 m high, and the internal structures are well preserved. Nearly half of the interior space is occupied

by the command building and the granary. The remainder is taken up by barracks, workshops and storerooms.

The 2017 season of the Shalfak Archaeological Mission started with a detailed mapping survey, which resulted in a new plan (image below) and a three-dimensional representation of the fortress' main architectural features. The comparison with the 1931 plan showed that Wheeler's documentation was schematic and idealised, incorporating details which are not present on the ground. The new plan forms a seminal starting point for the architectural analysis and the subsequent condition mapping and monitoring.

A special feature of the Nubian fortresses is the extensive use of organic building materials. In Shalfak, wooden logs were embedded transversely into all outer walls and the main gate of the fortress. Additionally, mats were inserted in the walls in regular intervals (images opposite page, top). Both elements were reported from other Nubian fortresses, but have never so far been explored in detail. In a first reconnaissance, samples have now been identified as acacia (*Acacia sp.*) and Halfa grass (*Desmostachya bipinnata*). Both materials were locally available in antiquity. Their labour- and material-intensive use suggests that they were of direct relevance for the functionality of the construction. Indeed, the dimensions of the mud-brick walls created structural challenges. During drying,

Plan of Shalfak.



Plan: Shalfak Archaeological Mission.



Photo: Shalfak Archaeological Mission.



Photo: Shalfak Archaeological Mission.

large bodies of moist material, such as mud or concrete, shrink. Without an appropriate reinforcement, cracks will occur and can eventually lead to a breaking-up of the brickwork and the collapse of the wall. Much in the same way as steel reinforcements in present-day concrete constructions, the logs and mats at Shalfak act as tension anchors absorbing tensile stresses resulting from shrinkage. A first survey at Shalfak indicates that timber was only used in walls thicker than 3.6 m, whereas mats occur in walls with a minimum width of 1.5 m. It should be noted that the combination of cross beams and matting was not developed in the context of the Nubian fortresses, but has already been noted in the Third Dynasty mud-brick town wall of Elephantine. Thus, the architects of the Nubian fortresses took draw on long-established experience in mud-brick constructions.

Unexpected data were obtained with regard to the original colouring of the fortress. A portion of the outer fortification wall preserved a white wash upon which yellow paint had been applied in curved strokes. Parts of a workplace where the paint had been prepared were found in front of the wall. They comprised a mud floor, concentrations of pigments and a tool sherd with copious amounts of yellow and white paint (images right).

The first excavation focused on an area north (plan opposite page) of the fortress where previous research had suggested the location of a temple. The re-investigation revealed a sequence of three narrow rooms (plan next page), which were identified as storage spaces based on their layout and dimensions. Remains of a mud-brick floor covered a large open space



north of them. Of particular interest was a 'stone slab bath' that Wheeler had documented in this area. Similar installations existed in other Lower Nubian fortresses and were suggested to have been associated with ritual functions. Based on the new data, the assemblage can now be identified as a storage and/or workshop complex with a spacious activity area. It dates from the primary use phase of the fortress and saw a quick succession of alterations, all of which seem to date from the Middle Kingdom. The complex resembles structures at Uronarti and the nearby fortress of Askut that are also located in comparable positions outside the fortress gates.

A second excavation targeted the other area discussed as a potential locale of a temple at Shalfak: a three-room structure next to the southern main gate (plan opposite page). Deviating from this hypothesis, Barry Kemp had identified the complex as the administrative part of the granary which is situated next to it. Findings of the current excavation confirmed the interpretation as a profane activity area. Thus, there is growing evidence that Shalfak did



Photos: Shalfak Archaeological Mission.

Top left: mat with binding and mortar on top, East Wall North. Top right: wooden beam and layer of matting at the inner face of East Wall South.

Above centre: southernmost niche of the North Wing Wall with remains of plaster and paint.

Above: sherd with yellow and white paint from the work place in front of the North Wing Wall.

not possess a temple in the Middle Kingdom, but that all available space was used for administrative and industrial activities and storage.











The data collected in the first field season at Shalfak indicate an intense occupation, including building alterations, for a limited period of time following the construction of the fortress in the heyday of the Twelfth Dynasty. Previous research assumed that Shalfak had been completely abandoned after the end of the Middle Kingdom. However, rock inscriptions testify to a presence

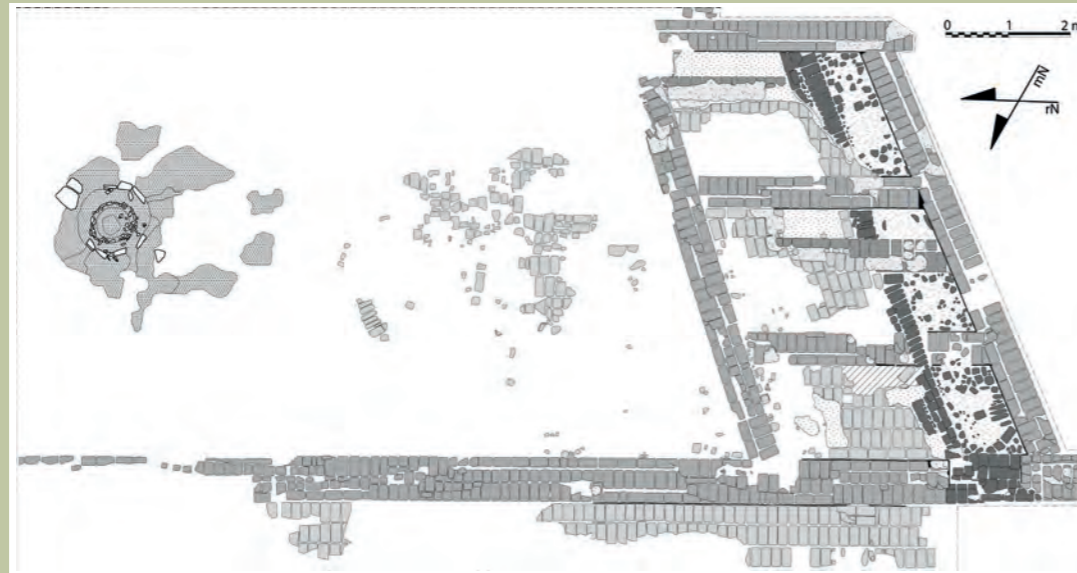
of Egyptian functionaries in Year 18 of Hatshepsut (c. 1460 BC), and an endowment text from Semna fortress nearby mentions a cult maintained at Shalfak in the reign of Thutmose III. This shows that the fortress was the venue for at least a limited range of activities after the re-occupation of Nubia in the early New Kingdom.

In the upcoming 2018 season, we plan to follow up on some of the issues raised in last year. The architectural analysis will focus on

the building history, the use of specific building materials and their functional implications. Excavations shall continue to explore the *extra muros* storage area and tackle the granary proper. Since the results of the first season have defined industrial activities and storage as key elements in the organisation of space at Shalfak, we are keen to learn more about how these aspects were integrated in the running of the fortress and the everyday life of its occupants.

Plan of Excavation Area I and legend.

-  mud-brick wall, phase 1
-  mud-brick wall, phase 2
-  mud-brick wall, phase 3
-  mud-brick floor
-  rubble fill
-  mud mortar (wall)
-  plaster (floor)
-  plaster (wall)
-  mud mortar (basin)
-  disturbance
- mN** magnetic North
- rN** river North



Plan: Shalfak Archaeological Mission.



'Stone bath' after excavation.

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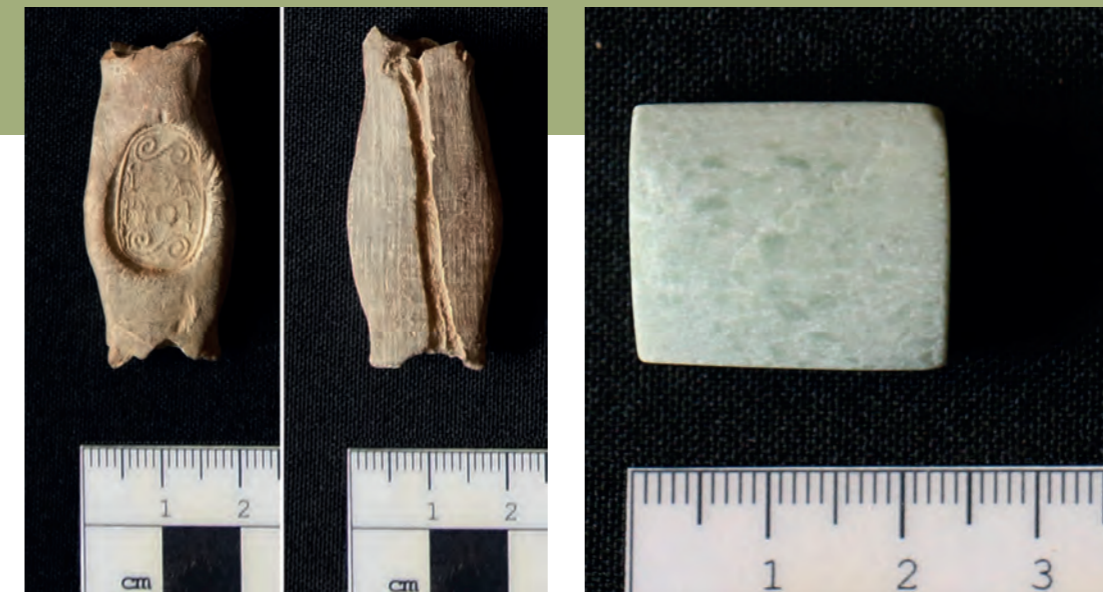
Small finds

Finds of the 2017 season include an isolated mud sealing. The traces on its underside indicate that it was attached to a letter. As only few sealings were found at Shalfak so far, the new specimen is of particular interest. It is identical to four sealings from Uronarti and seems to have been stamped by the same scarab. Its inscription refers to the office of the vizier in Thebes. The title string it gives is only rarely attested in the late Middle Kingdom and was suggested to have been reserved for stamping letters to private people, while communications to officials and institutions were sealed with different seals. Another interesting find is a small weight of light green stone. At just 11.8 g, it is at the lower end of the range of common gold unit – indicating that gold was processed or traded at Shalfak.



Rooms 8 and 9 during excavation.

Photo: Shalfak Archaeological Mission.



Far left: mud sealing.

Left and above: gold weight (photo and line drawing).

Photos and line drawing: Shalfak Archaeological Mission.