

Report of the Project "Wadi Abu Dom Investigation"

Twelfth Season, 14.1.-7.3.2019

Excavation in El Tuweina

(funded by the the Qatar Sudan Archaeological Project)

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2. Introduction

During the excavation of El Tuweina in 2017 and 2018 we realized that the visible structures resemble only partly the deeper layers. A combination of geophysical and archaeological prospection methods enabled us to identify a significant number of formerly unknown architectural structures, completing the clarification of the ground plan of the enclosure to a great extent. All so far unknown parts of the building were documented by topographically referenced SFM 3D point cloud models.

Since finds were collected not only during the classic invasive trenches, but also during the prospection, the areas of light-invasive archaeological prospection ("surface clearing") were also labelled with trench ("spot") and position numbers in order to fit finds and records into the general methodical nomenclature of the project (Fig. 1).

3. Prospection

After the 2017 geophysical prospection already revealed some wall structures in the southern and western part of the enclosure relatively clearly, archaeological prospection in the 2019 campaign concentrated on the eastern, south-eastern and central part of the enclosure, where the geophysical prospection shows indifferent results.

The area was divided into four large scale rectangular spots, 1-23, 1-25, and 1-33 (all 10 by 10 m), as well as 1-34 (10 by 5 m). All these areas were cleaned of stone debris and Aeolic sand until the first rain water-induced surface. Afterwards, this surface was invasively excavated until a pre-defined artificial planum 10 till 15 cm below the surface.

The surface clearing revealed a large number of wall structures, mainly consisting of mud brick, which were not known so far. In the south-eastern part of the enclosure (covered by surface clearing spots 1-23 and 1-25) the isolated stone wall structures already known from the architectural and geophysical prospection turned out to be connected by additional walls, forming an apartment-

shaped structure of three elongated rooms connected to each other and accessible only by one door from the central court of the enclosure. In order to further clarify the internal chronology and function of these rooms, parts of them were afterward excavated until the geological soil (cf. paragraph 4.1.2 and 4.1.3). In the south-eastern corner, the already known very small room attached to the eastern enclosure wall turned out to belong to a row of altogether four, very similar small rooms. Since the architectural concept and the connection of this room structure remained unclear from the surface clearing, this area was also excavated until the geological soil (cf. paragraph 4.1.4 and 4.1.6). Within surface clearing spot 25, an additional elongated and apartment-shaped room structure became visible along the eastern wall of the enclosure. It was excavated until the geological soil (cf. paragraph 4.1.5).

Within the surface clearing spots within the center of the courtyard of the enclosure, no further walls were discovered. Despite some ash concentrations, these spots revealed no other archaeological records (Fig. 2).

Besides the four main surface clearing spots, at three additional spots within the architectural complex (1-21, 2-3, and 3-12) clearings of Aeolic sands and stone debris in order to clarify the exact edges of walls.

4. Excavations

4.1. Trenches

Altogether, 14 trenches were defined (partly according to the archaeological surface clearing prospection and invasively investigating some of the structures discovered during these clearings) and excavated until the geological soil (Fig. 1).

4.1.1. Trench 1-22

Since it remained unclear whether some anomalies recorded in the ground penetrating radar prospection are to be connected to the walled structures already excavated in 2018, another trench was set out towards south. It turned out that two rooms with mud brick walls were located there, directly adjacent to the outer enclosure wall. Initially these rooms were partly open to the North, and only in a later phase closed by an additional, younger mud brick wall. Early during the usage of this room, parts of the building structure was set out in lightweight vegetable architecture (“rakuba-style” indicated by a system of post holes).

One of the rooms was partly used as a storage facility, containing a number of large vessels (including one large transport vessel most probably imported from Egypt). The rooms excavated within trench 1-22 might have been used generally for economic purposes, completing the picture of the room structures around the south-western corner of the enclosure as the “economical complex” within the building ensemble (Fig. 3).

4.1.2. Trench 1-24

Trench 1-24 was intended to clarify the internal chronology and function of parts of the room structure clarified by the surface clearing spot 1-23. It turned out that the room belonged to an ensemble of three rooms, connected by doors, with only one entrance (therefore resembling a kind of apartment within the building complex). Here, a significant number of small-scale grinders were found, much too small for food preparation, but also with no traces of pigment or other material. It could be the case that they were used for cosmetical purposes.

Stratigraphically, it turned out that the external wall delimiting the whole enclosure and the internal room walls are contemporary to each other, indicating that the three rooms of that apartment structure belong to the initial phase of the building.

4.1.3. Trench 1-26

Immediately adjacent to trench 1-24, another room of the before mentioned “apartment” was excavated until the geological soil. It’s stratigraphic and find material structure resembles trench 1-24 very closely. Since the only door opening to the central courtyard of the whole room structure was situated here, this room was most probably the main entrance for the whole apartment (Fig. 4). As at trench 1-24, it turned out that the internal room walls and the external enclosure wall were contemporary to each other and result from one singular planning and building process. The room structure at trenches 1-24 and 1-26 shows only one building phase – later occupation phases (as indicated by lenticular ash concentrations) are to be seen as squatter occupation.

The idea that within trench 1-26 a chronological gap within the construction of the external enclosure wall would be visible was later falsified by the archaeological record (cf. 4.1.8 trench 1-31): it turned out that a step within the level of the foundation layer of the enclosure wall occurred due to topographical reasons and had no constructive and/or chronological implications.

4.1.4. Trench 1-27

This trench was set out, also within the surface clearing area 1-23, to clarify the internal chronology and function of a row of small scale square shaped rooms, which, at the first glance, seemed not to fit to the general architectural concept of this part of the building complex. Indeed, it turned out that these small rooms belong to a later building phase, re-occupying this part of the building after heavy destructions of the initial wall structures around the south-eastern corner. Within the corner, the traces of significant amounts of floating surface water are still visible within the architectural record – the whole corner was pushed eastwards by the water. It turned out that during the initial construction phase, the layout of this part of the building was rather similar to the room structures north and west of the corner, and a single elongated, but comparably small room was located here. During the reconstruction after the surface water destructions, the layout was changes radically, constructing the row of small, square-shaped rooms. The function of these rooms remains unclear, because their size and the fact that they are not accessible by doors exclude a function as living rooms (Fig. 5). At the other hand, no traces were found within that they were used as storage facilities or small stables.

After the construction of the small rooms, a narrow passage from the courtyard towards the outer delimitation wall of the enclosure remained. Huge amounts of find material within this passage indicates that during the occupation phase after the construction of the small rooms this part of the building was used as a rubbish deposit, and later delimited from the courtyard by a small, roughly constructed wall.

4.1.5. Trench 1-28

This trench was set out to clarify the room structures adjacent to the eastern enclosure wall which were revealed by the prospection within surface clearing spot 1-25. The room ensemble consists of two rooms constructed from mud brick, and a third room with a stone wall (Fig. 6). During the excavations it turned out that the two rooms constructed of mud brick were contemporary to the external enclosure wall, and therefore also contemporary to the room structure excavated within the

trenches 1-24 and 1-26. The third room, constructed from stone, belongs to a later phase of the building, maybe contemporary to the construction of the row of small rooms excavated at trench 1-27 and 1-29. Post holes indicate that during the initial building and occupation phase the room structure was open and accessible to the south. Later, after this access was closed by the construction of the small-scale rooms, and the additional stone room to the north, the general access to this room structure was obviously shifted to the north via the attached stone room.

Within this apartment, two barbeque installations similar to the ones already documented in 2018 were found, both belonging to the later occupation phase after the construction of the stone room.

4.1.6. Trench 1-29

Trench 1-29 was set out to fill the gap between trenches 1-27 and 1-28, in order to clarify the relation between the older constructions beneath the small-scale square rooms and the mud brick architecture along the eastern enclosure wall. It turned out that here, before the small-scale room row was constructed, a large construction of lightweight vegetable architecture (“rakuba”) was incorporated into the layout of the rooms, obviously connected to the mud brick rooms from trench 1-28 (Fig. 7). After the construction of the small rooms, this side of the rooms was closed.

4.1.7. Trench 1-30

This trench was set out to get an additional view on the internal chronology and function of the rooms already excavated in trench 1-24 and 1-26 from the other side. It turned out that the stratigraphy resembled closely the archaeological record already documented in these earlier trenches (Fig. 8). Large amounts of pottery indicate an intensive usage of this part of the apartment, especially during its second occupation phase.

4.1.8. Trench 1-31

This small trench was set out in order to clarify from outside the step within the level of the outer enclosure wall already recorded within trench 1-26 (cf. paragraph 4.1.3). It turned out that the step followed the local topography, and was most probably intensified during the destructions caused by floating water which also affected this part of the enclosure wall.

4.1.9. Trench 1-32

Another small trench was set out within surface clearing spot 1-25 west of trench 1-28. Here, the surface clearing had revealed a significant amount of mud brick debris. The trench was intended to clarify whether this debris concentration was connected to any architectural structure beneath. It turned out that there were no additional wall structures beneath, and that the mud brick debris was deposited on sand soil. Most probably, its offspring was the destruction of the upper layers of one the mud brick walls from trench 1-28 by surface water.

4.1.10. Trench 2-2

After trench 2-1 excavated in 2017 did not provide much archaeological material due to the disturbance of the room by looters, trench 2-2 was set out in order to get more information about the function of building 2. The trench revealed an entrance to the room from the north (and, therefore, outside the enclosure wall), and another door leading to the internal rooms of the building. The room contained three different kitchen installations within a very small area: One of the secondary used barbecue pots already documented in 2018 and within trench 1-28, a so called “Steinplatz”

(open grill installation on a base of quartzite pebbles), and a small pit lined with flat stone slabs, obviously also used for cooking purposes (Fig. 9). This shows that during a later occupation phase (to which the whole building 2 belongs) cooking installations of different cuisine styles played an important role within the building. Additionally, the trench revealed that both room structures of building 2 were accessible from the outside, while there was no direct connection between building 2 and the central courtyard of the enclosure building 1 (or any other of its building elements).

4.1.11. Trench 3-8

After the architectural ground plan of a building complex at the northern part of building 3 was already revealed by a surface clearing in 2018, this campaign some invasive investigations in order to clarify the internal chronology and function of these room complex were planned. Trench 3-8 is the first one of these trenches, clarifying the southern half of the eastern room of the complex. It is accessible via a door from the east. A cooking installation within the room belonged to a later (maybe squatter) occupation phase and is not related to the initial function of the room (Fig. 10).

4.1.12. Trench 3-9

This trench was set out within the room directly adjacent to trench 3-8. Interestingly, no door could be identified – the room must have been accessible from above. As in the (also doorless) small rooms in the south-eastern corner of the enclosure, this might lead to the assumption of storage facilities; nevertheless, this is not supported by the archaeological record, which showed no traces of any material which could have been stored here. Until now, the function of the doorless rooms remains unsolved (Fig. 11).

4.1.13. Trench 3-10

Since the excavations within the trenches 3-8 and 3-9 revealed a similar level and stratigraphic embedment of the foundations layers of the walls as in the old trenches 3-1 and 3-2 within the large elongated rooms of building 3, trench 3-10 was set out to further clarify the assumption that all these building elements of object 3 are contemporary to each other. Nevertheless, the excavations had to be stopped before reaching the geological soil because the northern wall was found partly damaged, so that the further removal of debris and sediment would have caused some problems for the structural integrity of the walls.

4.1.14. Trench 3-11

Another trench within building 3 was set out in the northern external corner of the complex. At the surface, one got the impression that an older wall was partly dismantled for the construction of the “northern rooms”. Nevertheless, the trench revealed that both wall structures were contemporary to each other, and the impression at the surface was caused by later repairs of damaged upper parts of both walls.

4.2. *General conclusions from this season's excavations*

The two main building and construction phases already postulated after the 2018 campaign were, at least in general, verified during the spring 2019 campaign. It turned out that the room complexes at the southern and eastern wall (connected to two “apartments”) were constructed and used in a first phase contemporary to the construction of the external enclosure wall, and also contemporary to the first phase of construction and usage of the “economic compartment” to the west. In this phase,

within the (mud brick) “eastern apartment” as well as within the western “economic compartment” a significant amount of lightweight vegetable architecture was used. In later construction and usage phases, parts of this lightweight architecture was replaced by walls from more solid material, like mud brick or stone masonry; nevertheless, this was not always a simple replacement, since in some parts of the building (for example within the “eastern apartment”) the replacement of lightweight architectural elements was combined with major changes in the general layout of the room structure, for example the change of the general access and therefore the main room axis. In other parts of the building (especially immediately around the south-eastern corner) major reconstructions after heavy damages by floods also resulted in major changes within the layout and function of parts of the building.

Despite the fact that at least two main phases of construction and occupation occur at most sites, it would be a mistake to press all these later additions and changes into a too narrow system of “two building phases” for the whole complex. Indeed, there are indications that some changes of the layout were carried out occasionally, as it can be observed also in the modern architecture of the area, where often single rooms are attached due to the actual necessity, or at least are subject to changes of their function.

Again, a large amount of different food preparation facilities was excavated. In 2018, it was stated that all the then known food preparation installations were placed close to walls, but within the open courtyards. After the excavations in 2019, it became clear that similar installations were also found within rooms, even “Steinplatz” installations (which needed a larger open fire) within relatively small rooms like at building 2. Interestingly, a majority of the cooking and barbecue installations excavated during this campaign seem to belong to later (but not squatter) occupation phases.

Concerning the general function of the building, an elite context (as already stated in 2017 and 2018) could be indicated by some decoration elements like multi-colored painted plaster, by the differentiated styles of food preparation, and by the quality of some of the small finds and ceramics. Still no traces of direct Meroitic administration (like inscribed material or religious installations) were documented, indicating that the building structure was the residence of a local elite rather than an outpost of a representative of the Meroitic central state. Still, it has to be stated that the overall layout generally hints to a residential character of the building rather than to a primarily administrative or economic function (like an outpost, a collecting point for trade goods, or a caravansary).

5. Ceramics study

It was the first time for our pottery specialist working in this project. Saskia Nehls had to deal with pottery finds of three seasons (since 2017) from El-Tuweina. Being for four weeks with us, she documented nearly 1000 sherds of Post-Meroitic time (including fabric description and production process). Nearly all sherds from earlier and recent campaigns were washed and a huge amount also photographed. In this season no sherds were drawn, but 463 sherds were prepared for export to be drawn in Germany. These are mostly diagnostic sherds with incised decoration. After documentation the finds will be registered in a database. Many of the sherds are made of rough clay with lots of inclusions, but there were also sherds of vessel types which were of higher quality, made of a very homogenous clay mix with nearly no inclusions. Handmade vessels and bowls made from rough mixed clays occur as well as fine and tiny, thin-walled vessels, which were carefully

decorated (Fig. 12). Notable are thick-walled sherds of a nearly complete Amphora, which is dated into Greek-Roman times, from trench 1-22 (cf. paragraph 4.1.1).

6. Small finds study

All the small finds of the excavation which were found until mid-february 2019 were documented in a database and photographed. Samples of beads as well as the few extraordinary finds were drawn. Most of the small finds are beads, most of them discs made of ostrich eggshell and dark stone. Fayence cylinder beads and few ring beads are also present. There are very few pendants of stone (quartz) in drop and ellipsoid shape (Fig. 13).

Few small finds are exceptional, like a worked bone or a fragment of a decorated (bone?) pendant and three fragments of a nicely decorated cup of pottery (Fig. 14). Metal objects include few rings of bent wire and two of bent bronze stripes as well as iron needles. A torso and head of a quadropode (bovide?) and several fragments like legs and horns of unfired clay give an impression of the art in this rural environment (Fig. 15).

7. Archaeozoological study

Again, animal bones were transported to Muenster to be studied by PD Dr. Valeska Becker. Although she did not finish her investigation yet, she wrote a preliminary internal report on the first results. It was very interesting to learn that there were astonishing amounts of cattle bones among the material. Goats and sheep are also common, but cattle as a category of animals which need significant amounts of water and green fodder in walking distance from surface water was a surprise. It could indicate that the role of cattle keeping played some role concerning social prestige, as it is ethnologically documented for some recent ethnic groups in Kordofan and South Sudan.

Remains of game (like gazelle) are also present, but only to a small extent. The find material of hunting arrowheads might therefore indicate some role of hunting for the social prestige of the inhabitants, but did not contribute to the local diet to a larger extent.

We plan to export the animal bones of the campaign of this year again to enlarge the data corpus for the study.

8. Proposal for future activities

After completing the excavations in El Tuweina, the analysis and interpretation of the archaeological record and material shall lead to a publication of the results.

For the general future of the W.A.D.I. project the excavation of Umm Ruweim is planned. An application for funding is under review at the German Research Foundation. If the funding is granted, we hope to be able to start in spring 2020 with that project.

9. Potential dangers

Since in the past years larger (gold diggers) and lesser dangers (parts of the ruin were used as toilet by the visitors of the nearby *istiraha*) appeared, in 2019 fortunately no new disturbances of the archaeological material were observed. The Parking sign as well as the tourist information panel were damaged during a sandstorm and need restoration. It is planned to re-erect the tourist information panel closer to the site.

Nevertheless one should be aware of possible dangers, especially because the archaeological site is so close to the asphalt road and easily accessible by heavy machinery.

10. Public relations

On Sunday, February 17th, a visit at the school of Merwa was organized. Even when this year no public lecture was conducted due to the school examinations in that week, the teachers reported that the archaeological site of El Tuweina meanwhile became a subject of school lessons on local history, and is visited during school trips by groups of pupils with their teachers. This further strengthens the interaction of the archaeological project with the local community and especially their educational component.

Additionally, the site was visited by some foreign groups, among them the team of the Slovak mission to Duweym, which also assisted us with some DGPS surveying measurements (Fig. 16).

11. Final remarks

We would like to thank Mr. Mohammed el Toum and Mr. Loai Shamsalola very much for all their indispensable help and smooth organization! They have acted as good mediators to the people in the Wadi Abu Dom as well as experts for organization and especially as good friends to us!

Karima, 10.3.2019

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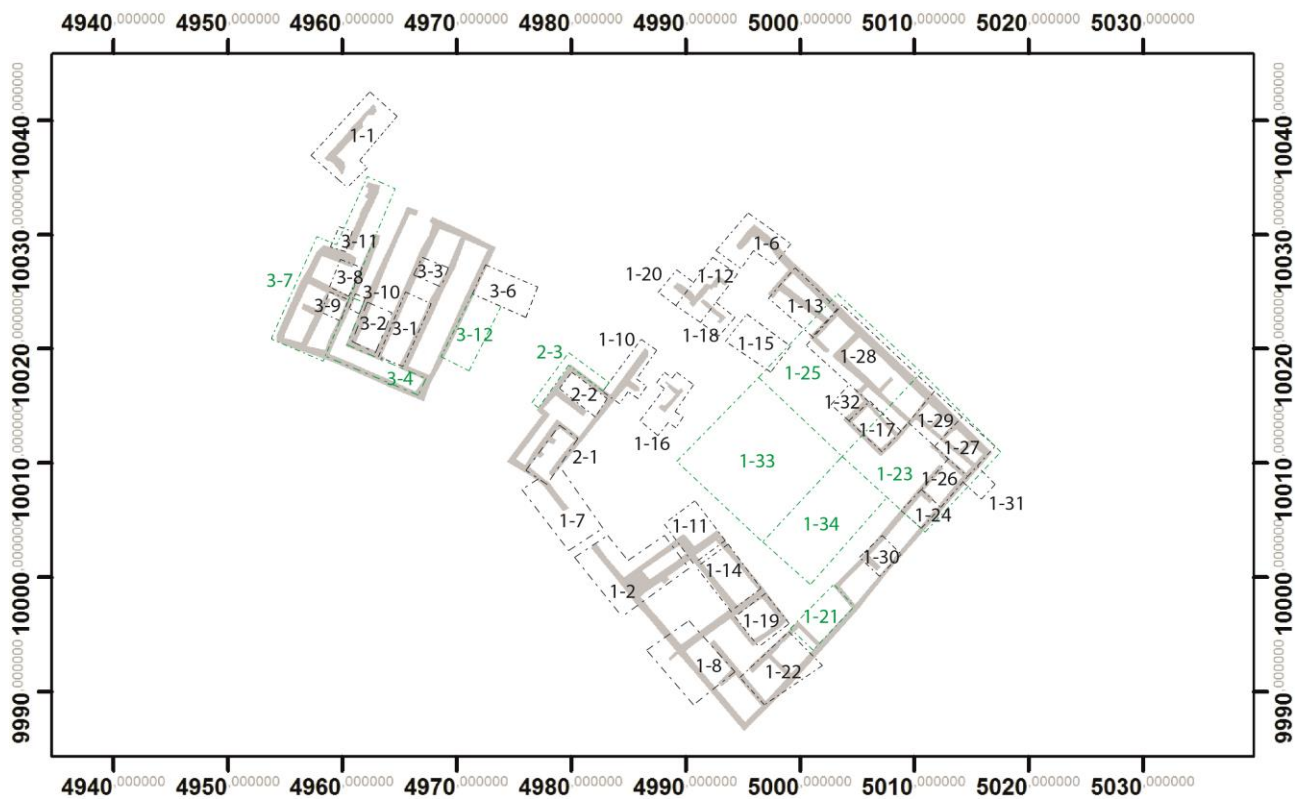


Figure 1: Position of all spots (surface clearings and trenches) conducted so far (green: surface clearings; grey: trenches)

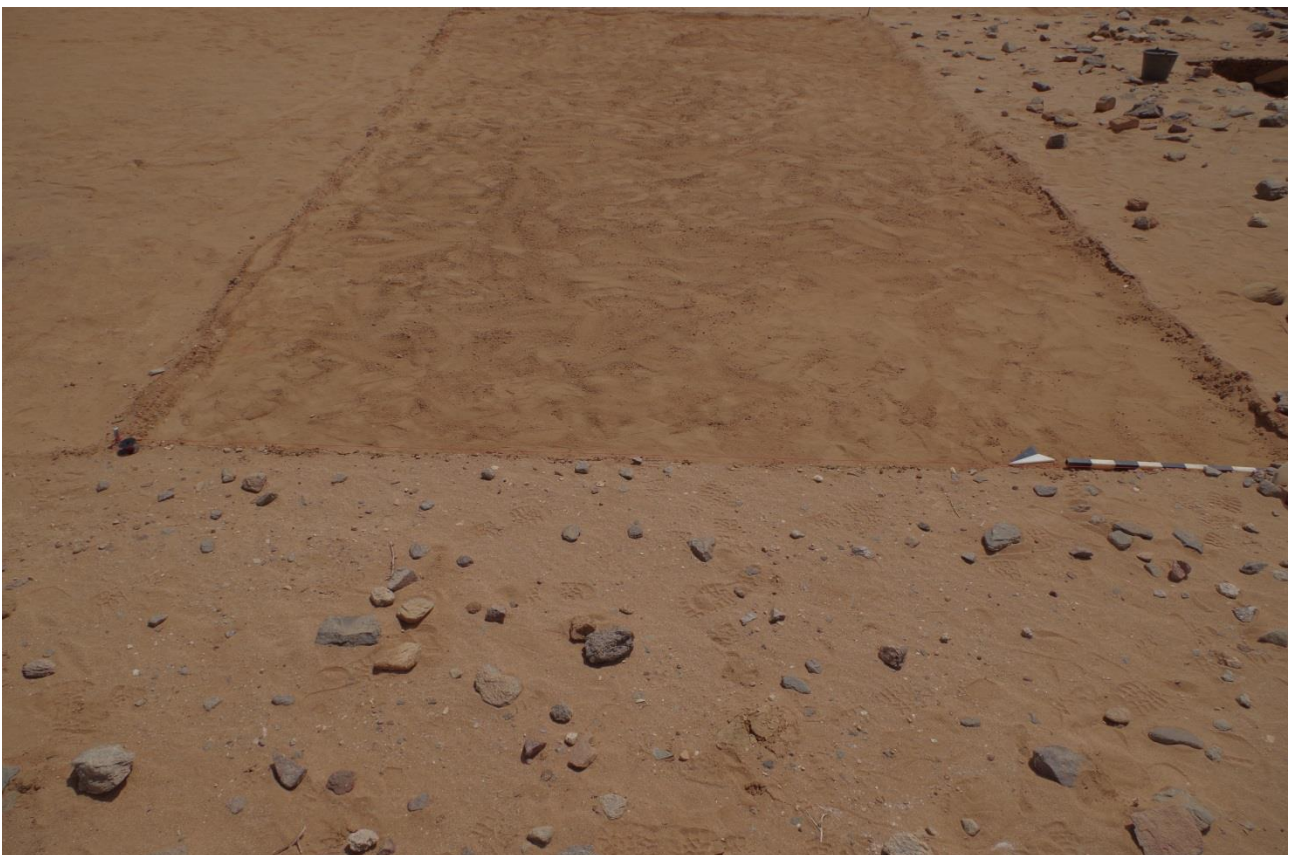


Figure 2: Spot 34 after surface clearing



Figure 3: Storage vessels at trench 1-22



Figure 4: Trench 1-26 with its original floor planum



Figure 5: Small, square-shaped doorless room within trench 1-27



Figure 6: Two older mud brick and one younger stone wall room within trench 1-28



Figure 7: Post hole ensemble within trench 1-29



Figure 8: Trench 1-30 with its original floor planum



Figure 9: Barbecue pot, "Steinplatz" barbecue installation, and stone-lined basin within trench 2-2

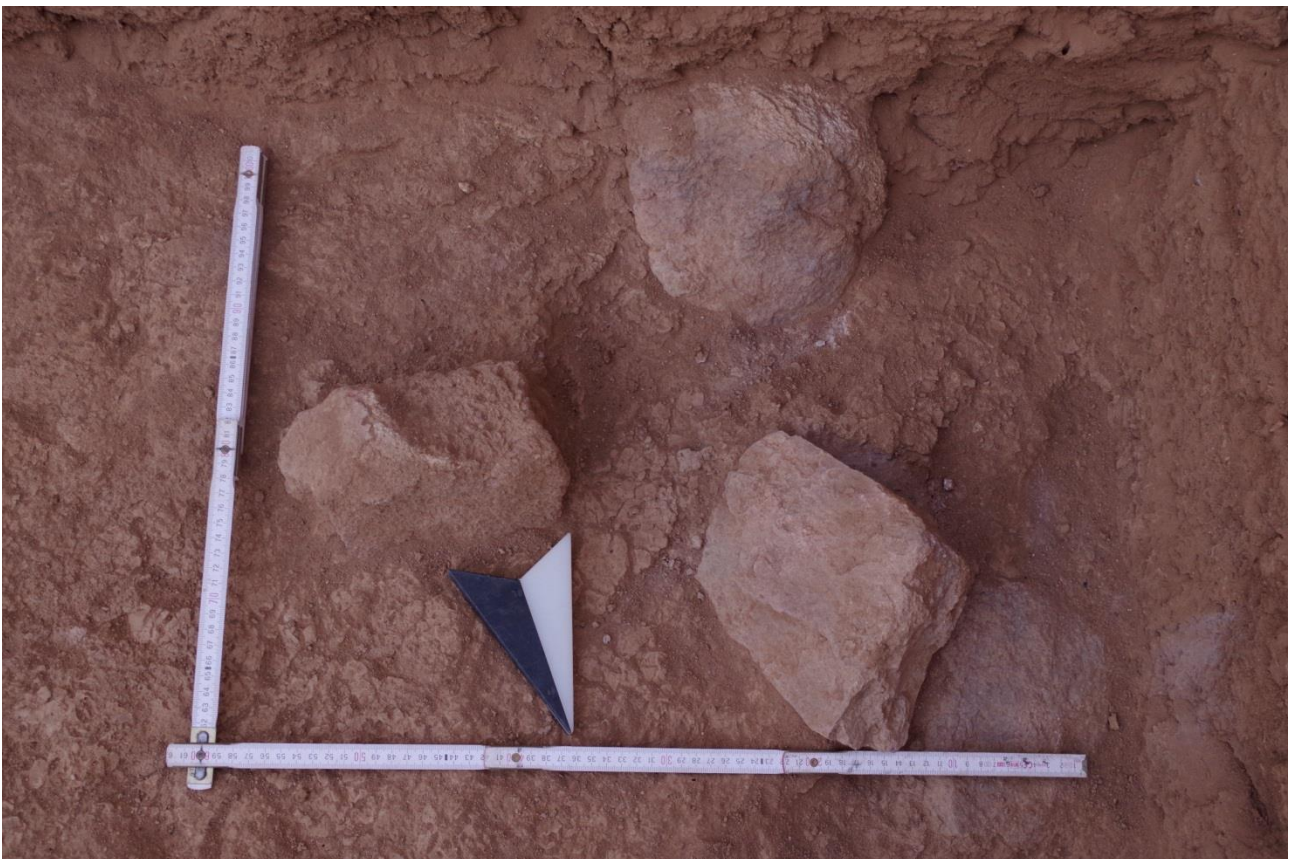


Figure 10: Secondary fireplace within trench 3-8



Figure 11: Doorless rooms in the northern part of feature 3 (with trench 3-9). 3D mesh model



Figure 12: Decorated pottery



Figure 13: Beads made from stone, faience, and ostrich eggshell



Figure 14: Vessel of unburnt clay, decorated with Egyptian motifs

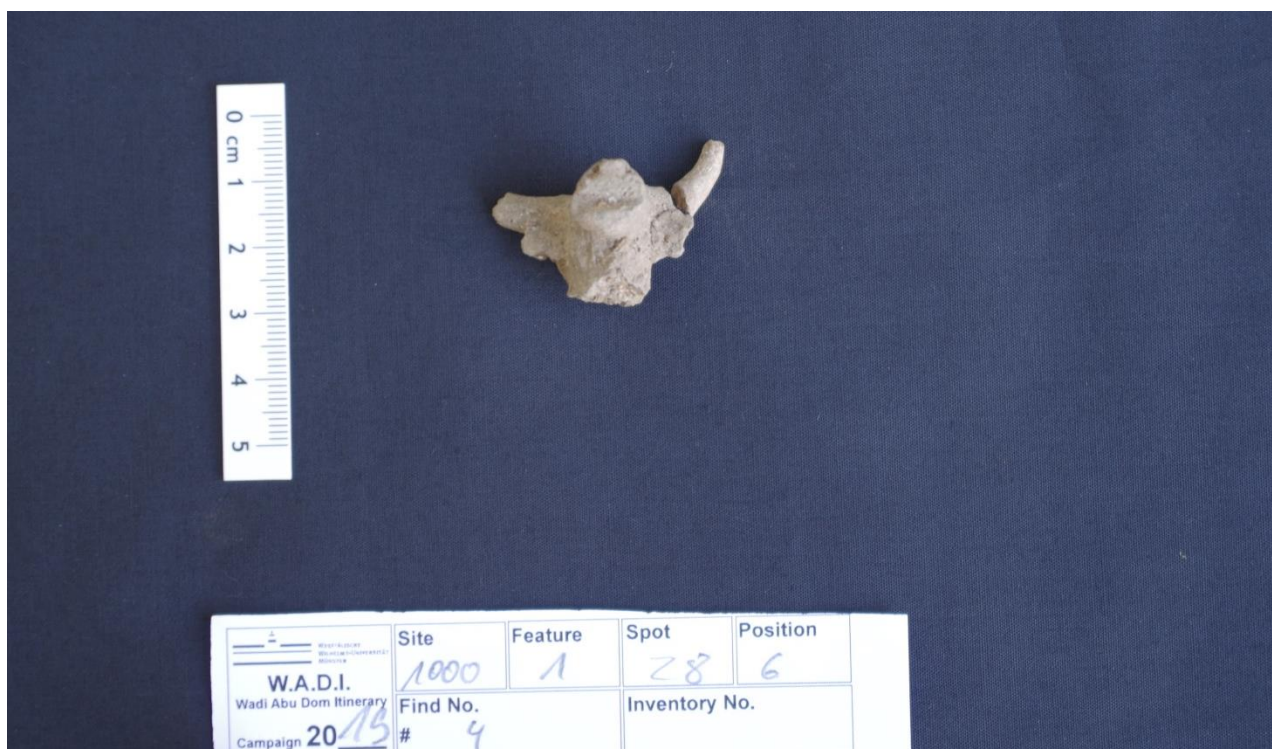


Figure 15: Cattle head of unburnt clay from trench 1-28



Figure 16: Visit of the Slovak Archaeological Mission