

Leather, mud and grain: the 2018 excavations in Uronarti Fortress

Laurel Bestock and Christian Knoblauch

Introduction

The Uronarti Regional Archeological Project has been investigating the landscapes and monuments of the Middle Kingdom border with Kush at the Semna Cataract since 2012 (Knoblauch and Bestock 2014 (2013); Bestock 2017; Levine *et al.* 2019). Work to date has focused on three main areas: (1) an extra-mural, 12th dynasty settlement on the eastern flank of Uronarti island (Site FC); (2) survey in the Western desert between Uronarti and Semna; and (3) excavations focused on the 12th dynasty fortress of Uronarti previously cleared in 1929/30 (BMFA/Harvard, (Dunham 1967; Reisner 1960; Wheeler 1931)). During the 2018-2019 season our work included: excavation of two locations within the fortress, which are the focus of this report; an excavation unit in the outer fortress that uncovered and documented a kiln; collection of samples for C¹⁴ dating from numerous places; and preliminary survey work in the Western Desert, which documented over 100 stone features.¹ The season was furthermore the first intensive use of software designed to allow us to use tablets for field recording without access to the internet; the results of this are relevant beyond our project. This report addresses only those elements of the 2018-2019 season within the fortress proper, where excavation in an administrative area and a 'barracks' area sheds unexpectedly rich new light on both the construction history of the fortress and its domestic spaces over time. We also reconsider some previous interpretations, including suggesting a location for the main stairs to the fortress defenses and arguing that the southwest corner of the fortress was a place of exchange, including the exchange of grain for gold with local populations.

Work in the Fortress

Following preliminary survey and sampling in 2012, excavations in the fortress were started in 2015-2016 in a 'barracks structure' (Unit CC/Block III) where we documented the shifting character of the fortress in the late Middle Kingdom (Knoblauch and Bestock 2017). During the 2018-2019 season, work in the fortress consisted of the documentation of a large well-built building immediately inside the southern gateway (Unit FA), and targeted excavations within a second 'barracks' unit in the central-western area of the fort (Unit FI). We designed the work in response to the following aims:

1. Understanding the 'foundation' phase of the fortress: it is easy to think about Egyptian presence starting when a garrison first occupied the fortress, but the construction of the fortress in this unsettled, inhospitable environment was a massive undertaking. Our research gathers data that allows us to better imagine the logistical processes of transforming the hill-top into a platform for constructing a fortress with remarkably uniform floor levels. This includes building techniques. It is also concerned with chronology: was this a long phase? When can it be set chronologically?
2. Understanding the plan. How did the layout of the fortress function? What was the purpose of individual blocks? Can we see differences between an ideal plan as conceived and a lived plan as experienced? Is it proper to talk of 'the plan' at all, given extensive remodelling?
3. Bottom-up understanding of the human context. Focus has been on forts as institutions, but who were the people who occupied these spaces? What did they do?

Unit FA

Unit FA designates a single, trapezoidal shaped room (7x8.5m) equivalent to Room 5 in the Reisner/Wheeler system (Dunham 1967, 9, Map III). Room 5 was part of a larger complex that occupied the southwestern corner of the fortress

¹ The URAP is co-directed by Laurel Bestock (Brown) and Christian Knoblauch (Swansea). The team this season consisted of: Elnzeer Tirab, inspector; Lutz Klein, software developer; Allison McCoskey, archaeologist; Miriam Rothenberg, archaeologist and geologist; Oren Siegel, archaeologist; Anna Soifer, archaeologist and registrar; Abigail Stoner, architect and artist; and Lyndelle Webster, archaeological scientist. No workmen were hired this season, all excavation being done by team members. Mohamed Tawfiq and Abderabu Mohammed provided essential support, without which neither life on site nor work would have been possible. We are grateful to Dr Abdelrahman Ali and the National Corporation for Antiquities and Museums for their continued support.

immediately opposite the southern gateway (Block VII, Figure 1). The 'Block' (Figure 2) consisted of a large square building with an ambulatory (Building A) and a roughly triangular space directly adjacent to the western wall of the latter divided into two separate rooms, 5 and 6. Entry to Room 5 was via Room 1, which itself had a sunken stone basin in the floor. To the West, Room 5 was bounded by West Wall Street South and then, the West Wall perimeter wall. Room 5 was the place where a resident of Uronarti had discovered in 1924 the famous inscribed wooden objects later described by Dunham/Wheeler as 'commemorative loaves and cakes' (Dunham 1967, 5, 9, 34-36, pls. XXVII, XXVIII, XXXV). Based partially on the 'commemorative' loaves, Dunham (1967, 5, 9-10) proposed that Block VII was a Temple complex, whereas others consider an economic/administrative role more likely (see below). The rich artefactual record from Room 5, the disagreement about its function and the unusual combination of narrow walls and columns made it an ideal candidate to investigate. Additionally, recent looting holes dug through the mud brick floor exposed stratified cultural layers. It was clear that we were either going to be able to clarify some of the construction processes of the fortress or that Wheeler had stopped at a later floor and we would have use-deposits from an earlier phase of the fortress. The former proved to be the case.

From Rock to Brick: the construction sequence of the southwest corner of the fortress

The earliest material in Unit FA predates the construction of the walls of the room and provides some sense of the enormous amount of effort and multiple phases needed to build this monument. Of our three sondages through the floor, the eastern two came down upon bedrock (Figures 3 and 4). In this small space, the slope is some 16% – steep enough to present challenges to building – and apparently the slope became steeper to the west. The lowest cultural layer in the easternmost sondage was a mud surface with no artefactual material, which we interpret as a working surface (FA-026). This was not present everywhere in the sondage and petered out from east to west, suggesting it is associated with construction to the east of the unit. Above this level was a loose, silty layer with abundant amounts of straw and wood (FA-027 in the eastern sondage; FA-056 in the central sondage). This was present everywhere bedrock was reached, and we also interpret this as related to construction: wooden beams and straw mats are components of the main defensive walls of the fortress, mats are also present in the interior walls, and wooden scaffolding may have been used during construction. Room 5 is close to the western corner of the fortress and immediately beside the main gateway; it seems likely that this area was used to prepare materials for construction of these massive features.

Afterwards, the area itself was leveled. This was done after the construction of the western wall of the fortress, which served as a terrace wall to support the fill. This filling is best represented in the deepest sondage, the central one, where atop the probable construction layers is a 200mm thick stratum of sand, FA-052, that lacks the characteristics of windblown sand. In this layer were fragments of Middle Kingdom bread moulds and a variety of unusual organic

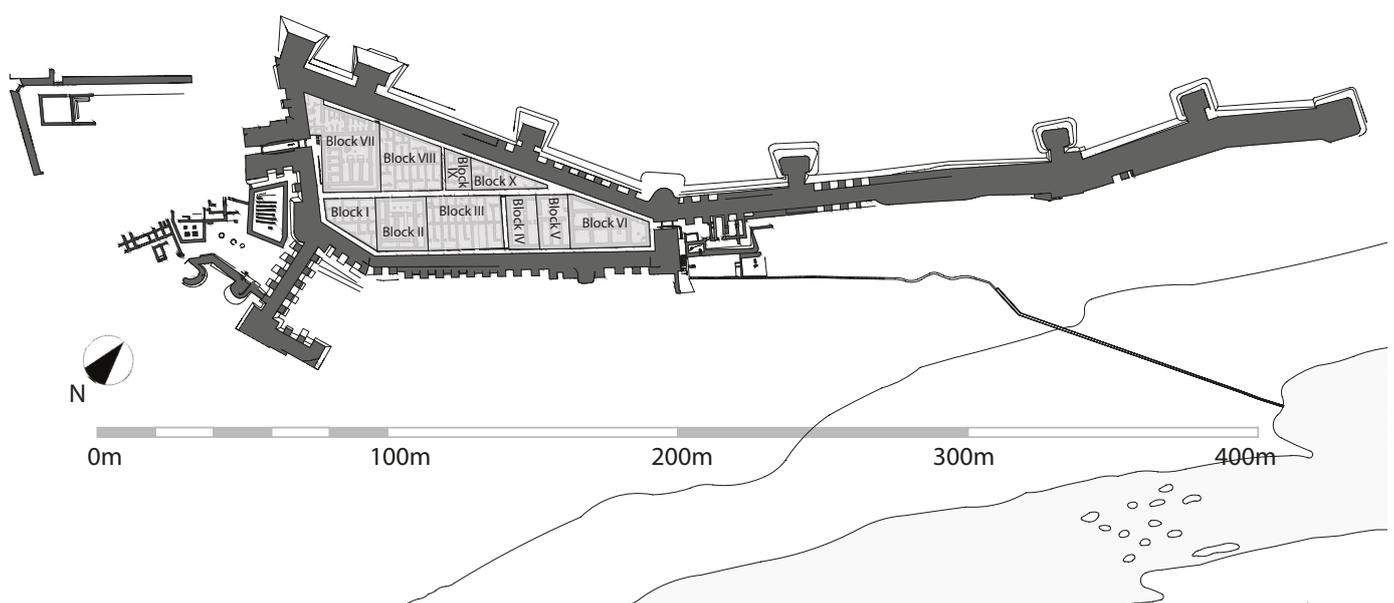


Figure 1. Uronarti fortress divided into blocks, after AEGARON, Ancient Egyptian Architecture Online with additions by URAP.



Figure 2. Block VII, © AEGARON, Ancient Egyptian Architecture Online (Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License).

5, he dug down 3m below the floor before hitting bedrock. He found sand at the bottom, topped with ‘packing’ of mudbrick and rubble, and explicitly stated that there was no lower floor (Wheeler 1929-30, 212). Here, in the angle made by two of the defensive walls, we can probably reconstruct the use of the main walls as the first retaining walls, the general infilling of the area to level the slope, and then the construction of the interior walls. Therefore, apart from their undoubted defensive function, the main perimeter walls on the western side of the fortress were also essential technical features of the construction phase that enabled the initial levelling of the very uneven topography of the hilltop.

The Construction and Development of Room 5

The top elevation of FA-052, the terracing sand layer in which we found such interesting objects, is the same as the lowest elevation of the foundation of FA-002, the west wall of Room 5, which sits atop sand that may be from the same leveling event. It thus seems likely that the first wall built here was FA-002 and that this again served as a sort of terracing wall. Atop FA-052 is another layer of non-windblown sand some 20cm thick, FA-050, which brought the centre of the room to the same height as the bedrock in the east. This layer was sterile. These sand layers were entirely sealed by a very hard mud layer, FA-039, likely representing multiple episodes and perhaps related to the construction of additional walls. The order of wall construction can be determined by bonds and abutments (Figure 3). The north wall of Room 5 was certainly built subsequent to the east and west walls. All of the room walls are built of silty bricks measuring on average 310x150x80mm. The walls measure 2.5 brick-lengths thick, but with mortar and plaster this comes to an average of 0.92m. Reed matting was placed every fourth course. Construction technique was not entirely regular, as can be seen in the plan, Figure 3.

finds: a short clipped lock of hair, possibly human (Figure 5); a thin object of thick leather with hair still attached, perhaps a strap or bracelet (Figure 6); a small scrap of loosely woven linen; and a leather strap or band 8.5cm wide, whip-stitched with a rawhide cord that was knotted at one end (Figure 7). This object, found in fragments and incomplete, had originally a cylindrical shape and might have been used as an armband. It had a minimum length of 143mm and in parts shows horizontal creasing, presumably from use. The area exposed in this central sondage was so small that it is not possible to speculate about the original function of these objects and their relation to this layer, but it is clear that they were sealed in a context that dates to the construction phases of the room.

The general picture painted by this sequence is one of multiple terracing events prior to the construction of the interior buildings of the fortress, all to bring the ground level of the fortress up to one uniform elevation. Some of Wheeler’s observations support this picture. Most tellingly, in the southwest corner of the fortress, in Room 1 (Figure 2), which communicates with Room

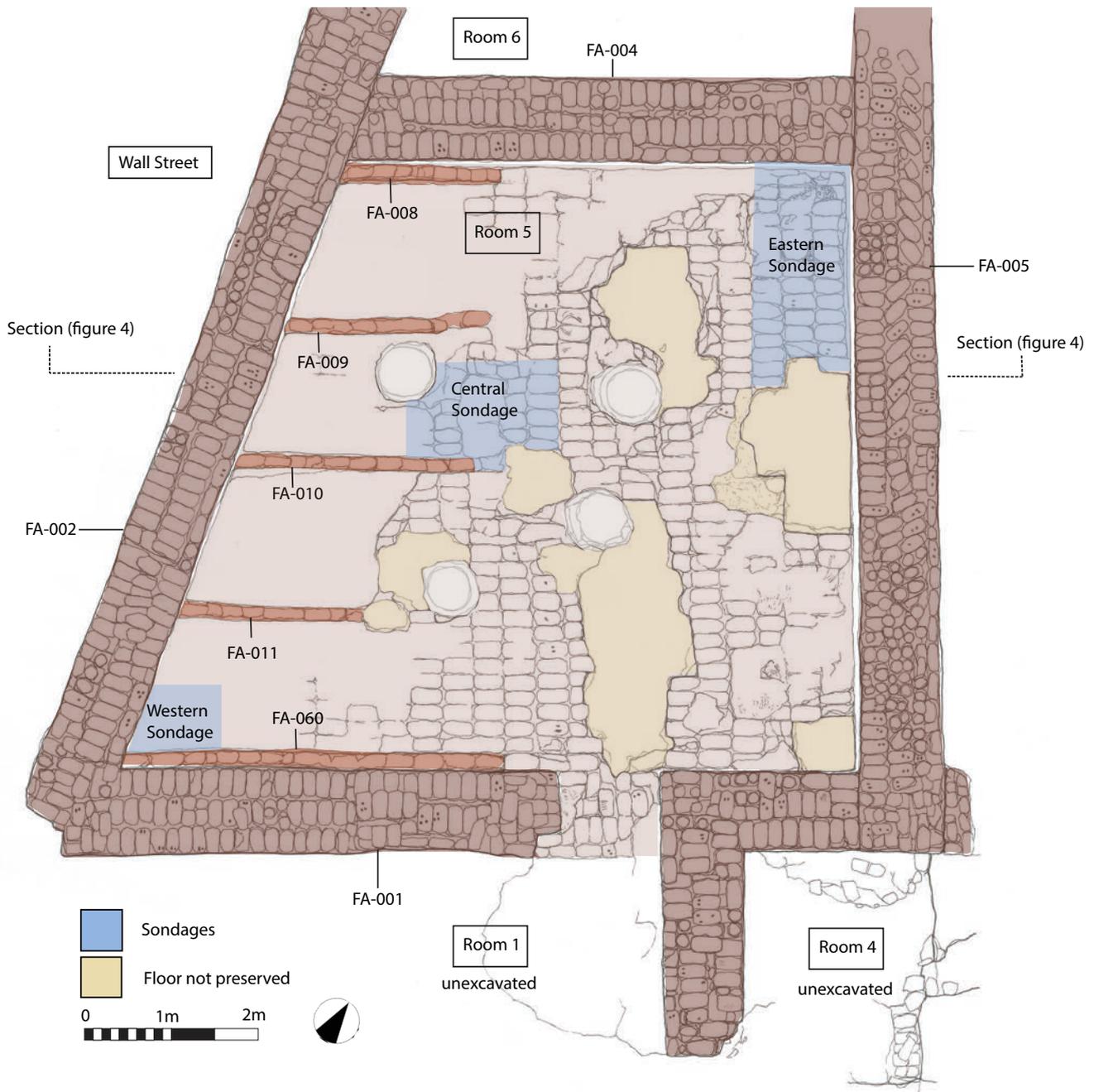


Figure 3. Unit FA, plan. Shaded areas show the three sondages cut through the floor (figure by Abigail Stoner and Evan Levine, with additions by the authors).

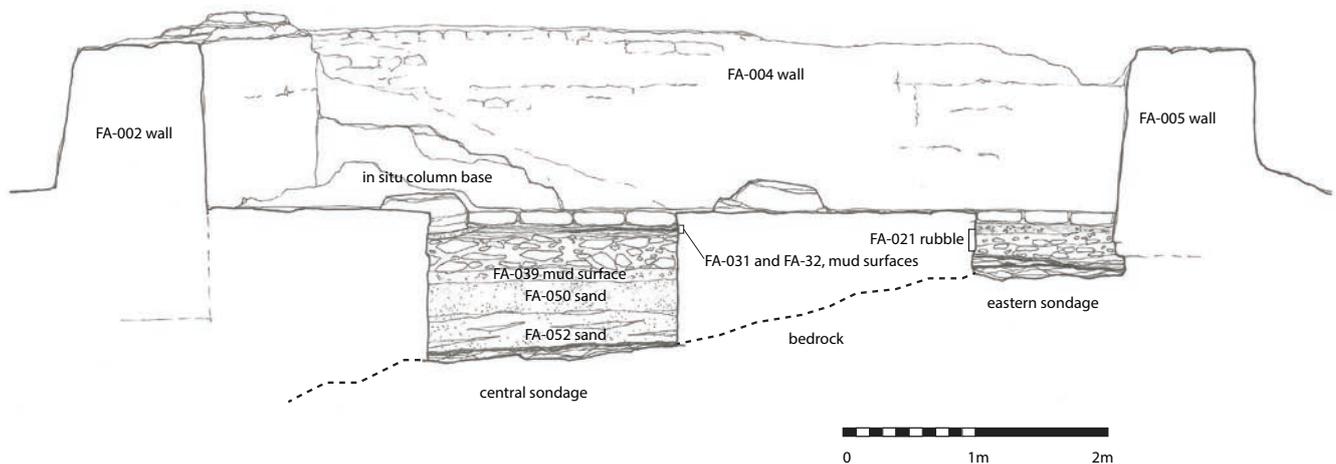


Figure 4. Unit FA, section looking north, showing the central and eastern sondages. Not all strata found are labelled here (figure Abigail Stoner and Evan Levine, with additions by the authors).



Figure 5. Hair from FA-052.



Figure 6. Leather Object from FA-052.

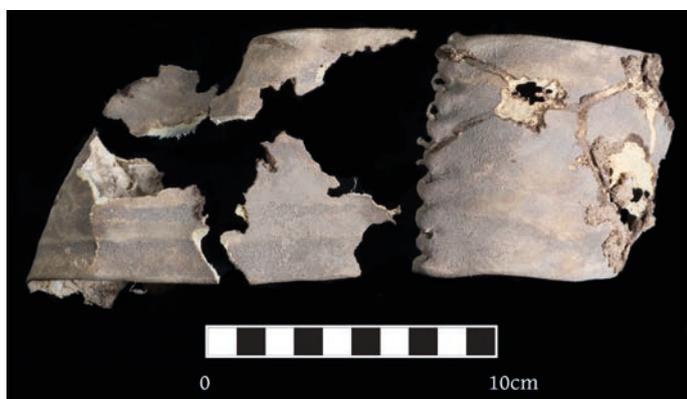


Figure 7. Leather Object from FA-052.

made of unfired silt and decorated with white painted lines (Figure 8). The only other published example is also from Uronarti (Dunham 1967, 49, fig. 1).² There is no indication these objects reflect the use of this space; rather they seem to be trash from elsewhere brought to level the room. After the deposit of the leveling fill of FA-021, the room appears to have been intensively used even though no formal floor was yet laid. Most clearly visible in the central sondage, this phase is represented by FA-031 and FA-032, mud surfaces with variable amounts of charcoal and organic material in them but no artefacts. How long this use lasted or what the purpose of the room was at that point is unclear, but cereal grains and charcoal suggest food preparation was one activity.

The final construction phases for the room resulted in its roof, floor, and internal dividing walls being built. A shallow bowl-shaped cut into FA-031 and FA-032 was made in order to lay the one column base that is still *in situ*, seen in the central sondage (Figure 4). Clean sand was deposited to support the sandstone column base; presumably similar foundations were prepared for the three other columns and a roof erected with support from the columns. After this, a thick layer of mud was evenly laid across the entire room, and the brick was set. Walls and floor were mud-plastered and the walls were white plastered. None of this white is still visible today, but the published photograph of half the room from the earlier excavations shows a clear vertical line that suggests that only some areas, including the centre of the rear (north) wall of the room, received this treatment (Dunham 1967, pl. IVB).

After the completion of the floor, thin walls of a half-brick thickness were built subdividing both the eastern and the western sides of the room into parallel spaces. Those on the east are visible in the photographs from the original excavations but are now gone. Those on the west were still *in situ* during our excavations. Five such walls were built with their ends abutting the western wall (FA-002); from north to south these are FA-008, FA-009, FA-010,

²It can be noted that the example found by Wheeler has an intentional groove on one side from the 'top' to just below the shoulder. This is identical to the grooves often found on mud jar stoppers (i.e. Wegner, 2007, fig. 106, 6-12) whose function may have been to allow carbon dioxide gas produced during the fermentation process of wine and beer to escape (i.e. Schiestl and Seiler 2012, 788).



Figure 8. Jar stopper made of unfired silt with white linear decoration.

FA-011, and FA-060. These walls were built atop the brick floor, and excavation of the southwest corner sondage demonstrates that at least in the case of FA-060 there was no sub-floor foundation. These walls divided the western half of the room into four spaces of somewhat uneven width, varying between 1.4m-1.75m. The northern (FA-008) and southern (FA-060) walls were built directly against the existing faces of the north (FA-004) and south (FA-001) room walls. Marks in the plastering of FA-002 indicate that all of the walls had originally been of the same height, approximately 1m. They extended into the room to roughly the line of the doorway or just short of this. The thin walls had multiple layers of plastering, suggesting continuous use and upkeep over a lengthy period of time.

The Date and Length of the Construction Period of Uronarti Fort

The material from FA-021 is the earliest sealed deposit with datable ceramic that dates prior to the completion of the fortress. So far, there is nothing that favors a date for the completion of Room 5 before the accepted date for the erection of the fortress: Senwosret III Year 16, based on a stela found at the site (Janssen 1953). Of course, a slightly earlier date cannot be ruled out due to the ambiguous nature of ceramic data, but a later date can be excluded. The beer bottle types were probably not produced before the reign of Senwosret III (Schiestl and Seiler 2012, 652-656) and broadly match those from the earliest

layers of his town at Abydos built rather late in his reign (Wegner 1996 fig. 6; 2001, figs. 8-10). They are also identical to vessels found at floor level in Unit FI. No complete hemispherical cups could be reconstructed, but the fragments appear to be from vessels shallower than the earliest cups from Wah-Sut (Wegner 1996, 260), probably meaning they are older, i.e. earlier in the reign of Senwosret III but certainly not younger. As such the entire construction phase likely dates to a relatively short period within the reign of Senwosret III.

The Function of Room 5 and Block VII

Neither Wheeler nor we found any indication that the spaces defined by the thin walls in Room 5 were blocked off from the front. Wheeler did find wooden beams in the tops of the walls of the northern most (and smallest) of these spaces and suggested that all these walls might have been the bases for shelves; this is also suggested because the northern and southern walls, running immediately against the room walls, did not serve to separate any spaces and so a function other than support is not obvious. However, such shelving would have been too low and deep to be practical. Moreover, it seems likely that the roof was still intact and the columns were still standing when these subdivided spaces were used; the columns were even incorporated into the spaces between the short walls. A low balcony with storage space below as in Meketre model MMA20.3.10³ is one possible solution. In any case, the architecture hints strongly at some sort of storage function rather than a domestic space.

In fact, our removal of the floor and the concreted material atop it in the southwest corner sondage uncovered dense concentrations of unprocessed grain embedded in multiple layers of mud plaster, along with textile threads. There was even a still-pungent deposit of rodent excrement. Observation of the floor in all of the other subdivisions on the west side of Room 5 also showed either intact grain or the impressions of grain in plaster. This suggests that these spaces were probably parallel magazines or bins used to store grain, albeit in a different manner and for a different purpose than in the main Uronarti granary (Block VI). There the tall, thick-walled, rectilinear compartments were filled with large volumes of loose grain from the roof, with the grain then extracted through small openings let into the walls above floor level (Kemp 1986). The open, unprotected and low nature of the magazines in FA, on

³ <https://www.metmuseum.org/art/collection/search/544257>.

the other hand, suggests relatively small volumes of grain stored here for short periods of time, probably in sacks (*Khar*). The different magazines might reflect the subdivision of grain into different types and qualities. We noted that the brick floor from the entrance to the back of the room between the two sets of magazines was heavily abraded indicating intense and repetitive foot traffic and potentially, the dragging of heavy sacks; it was not so worn in the compartments themselves.

There was only one point of access to Room 5, from Room 1, and it was presumably here that the administration related to the goods stored in Room 5 occurred (Figure 2). Room 1 itself could be entered either from West Wall Street South, or from the direction of the main fortress gateway, where Rooms 3 and 4 seem to be a sort of gatekeeper's area to Room 1. Direct evidence for administrative activity in this area comes from the seals and fragments of papyri found by the earlier excavations in Rooms 3 and 4. Room 1 itself was laid out as a room or court with a columned portico (possibly) against the southern perimeter wall. It contained a sunken stone basin for water at the base of the middle column. Over time, access to this room was made increasingly difficult as it was further secured by an extra doorway in West Wall Street opposite Room 6 and the addition of a screen wall, Room 2, that shielded Room 1 from the occupants in Rooms 3 and 4. Rather than a 'public' area where constant traffic was expected (Liszka 2008), we suspect that Room 1, and by extension Room 5, was instead a highly secure area with tightly controlled access points.

Previous interpretations have argued that Room 1 must have been a public space on the basis of a feature interpreted as the staircase to the defensive walls (Dunham 1967, 9). In Wheeler's day it was a long low bench, open on its north side, with three remaining steps at its east end. In order for it to reach the height of the walls it would have had to turn or be cut into the thickness of the main defensive wall; Wheeler recorded no evidence for either. In other Nubian forts, access to the fortress walls was always from stairs that have major differences from this feature: they are *not* immediately adjacent to the outer walls; they are rather within administrative buildings close to the main walls but separated by at least a street, which would have allowed for the defensive addition of removable bridges between stairs and parapet; and they are defined and closed on both sides by walls i.e. Shalfak (Dunham 1967, Map X). At Uronarti, it is much more probable that the so-called Ambulatory north of Rooms 12 and 34 in Building A of Block VII (Figure 2) was the location of the main staircase than in Room 1 as generally believed. Wheeler removed what he called a later staircase in this ambulatory, but holes from wooden treads still visible in the walls (Figure 9) probably reflect a major staircase here from the first main phase of construction.

What, then, is the feature with three steps in Room 1, and how does it relate to Room 5? We suggest this was a raised podium or platform. A platform of this type occurred in the colonnaded court of an administrative building in the fortress of Mirgissa (Kemp 1986, 128-129). It was on platforms such as this that officials oversaw tasks performed by scribes, as is sometimes shown in three dimensional models and tomb representations (Adams 2007, 13; Arnold 2005). We suggest that this was the platform from which oversight of activities that took place at the intersection of Rooms 1 and 5 took place. The nature of this activity is indicated by our discovery of notable amounts of grain and Wheeler's find of wooden 'commemorative loaves' – actually tokens recording the size of a weekly ration (Oppenheim *et al.* 2015, 168). It is likely that this corner of the fortress was occupied by an institution with responsibility for distribution of grain and other commodities originally drawn from the central granary and treasury. This included payments (wages/rations) to officials calculated in notional loaves of bread but 'exchangeable for something else' (Kemp 2018, 178), for example *hekats* of grain. The unique location of the institution combining direct access to the fortress gateway and insulation from the remainder of the fortress also meant that the institution was ideally placed to facilitate economic exchanges between the fortress administration and outsiders. A series of stone weights for gold, also found in Room 5 (Dunham 1967, pl. XXXV), may indicate that gold arriving in the fortress was received here and weighed and exchanged for grain or other commodities stored for this purpose in Room 5.

Unit FI

Unit FI was located in a 'barracks area' in Reisner/Wheeler Block VIII, Rooms 42-3 and 45, near the centre of the fortress to the west of Middle Street (Figure 1). It was initially opened as a small unit with the aim of taking samples for micromorphological analysis of a series of stratified floors that Wheeler had left intact in the doorway between Rooms 45 and 43 (Figure 10). The micromorphological analysis of the section is not yet complete and will be published

separately. As the section could not be excavated and sampled properly without first clearing the architecture and other remaining deposits in the structure to which the doorway belonged, the unit was expanded to include the three rooms of the 'house'. In this report we detail the excavation and our first interpretations of the architecture, and macro-scale investigation of strata and finds.

Planning, Constructing and Living in Unit FI

The initial layout of Unit FI (Figure 11) was as a tripartite 'barracks' type structure similar in plan to those seen throughout Uronarti fort; it consisted of one wide room (Room 45, 4.72m/circa 9 cubits wide x 2.67m/circa 5 cubits deep) entered from the street. This opened to the back into two long, parallel rooms (42 and 43), each (5.46 m/10.5 cubits) in length. As is the case with the other barracks units, there is no communication other than from the street between this unit and those to its sides; it is self-contained, though it was not built independently. The walls of the barrack houses are consistent in width at about 0.52m (=1 cubit), which is notably narrower than the walls of the administrative units of the fortress such as that excavated in Unit FA.

As was the case in Unit FA, FI shows that the development of this area of the site was more complicated here than we knew previously. Once more the slope of the ground necessitated leveling and terracing before the space could be used. This is shown most clearly in looking at the elevation change of the foundation course of walls. The foundation of the front wall of the house (FI-020) was precisely at street level, the elevation that was the highest natural point inside the fortress. The cross wall Room 45 and the back rooms (FI-013) could be seen, in one place, to have at least two courses below the floor level at street elevation. In a sondage cut in Room 42 against the south face of FI-006 three courses of sub-floor foundation could be seen (Figure 14). Looters' pits in Room 25, which is immediately west of Room 43 and not inside Unit FI, show that bedrock must have been well over a metre deeper here, only some 10m west of the street.

The construction sequence seems to be largely similar to that seen in Unit FA but somewhat simpler. The lowest cultural stratum reached is a substantial mud working surface that runs below the original foundation of the walls. It is probable but not yet demonstrated that here, as in FA, preliminary terracing preceded this. After construction of the walls (perhaps only to street level, see below), the uneven rooms were filled with rock rubble to provide a more uniform level. Upon this were many superimposed thin mud floors consisting of fine silt (Figures 10 and 11). As well as the discarding of waste, most of these surfaces seem to reflect the gradual accumulation of floor levels due to the erosion of the mudbrick and silt architecture compacted through traffic and use, and possibly consolidated on a regular basis with water to prevent dust. There is a moderate amount of grain and ceramic, but also notable concentrations of fish bones (Figure 13) embedded in the floors. The find of numerous weights, probably for fishnets, in loose contexts in this unit likely connects the occupants of this unit not only to fish eating but to fish catching and



Figure 9. Holes in the wall of the northern so-called ambulatory of Building A; their slope clearly indicates that they originally anchored stair treads. We argue that this was the staircase to the fortress walls. Figure 10. Stratigraphic Column in Unit FI, looking east, prior to cleaning.

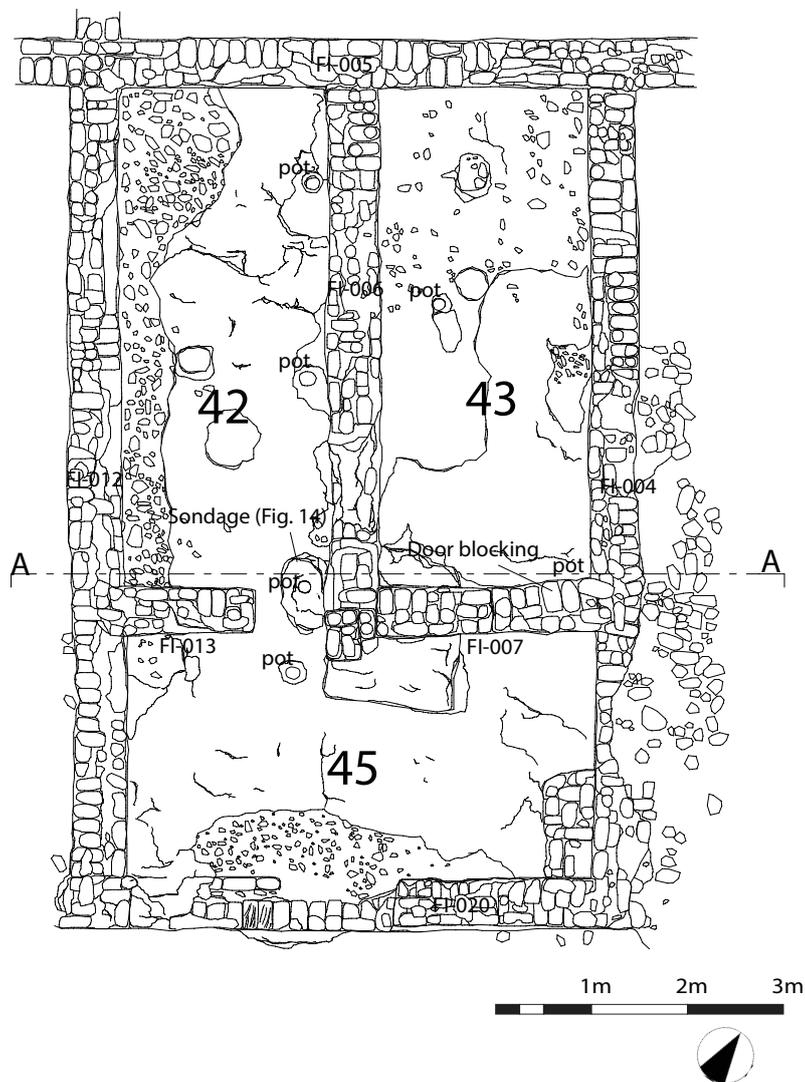


Figure 11. Plan of FI (figure by Abigail Stoner and Evan Levine, with additions by the authors).

made entirely of silty bricks and the upper courses containing some silty but also many sandy and gravelly bricks. Elsewhere in the fortress, the latter type of brick is never found in first-phase walls. The sandy, gravelly bricks are also characteristic of the above-floor parts of the other walls of this unit, while no bricks that were seen below floor level are other than silty.

The implications of a potential use-phase in between foundation and room construction are significant. It suggests that the walls of the barracks were built first only to street level. This served two purposes. First, and most essentially, they were a sort of latticework terrace to contain the rubble fill needed to correct the very sloped terrain to make it

preparation. Continuity of the use of the space over time is suggested by the presence of fish bones not only in the original floor level but at multiple higher levels in the standing column of stratigraphy. The gradual rise in floor level in FI can be contrasted with Unit FA where there is no indication from Wheeler’s notes or our observations that FA’s Room 5 saw any accumulation of debris. This might suggest a difference in attitude to the management and upkeep of official administrative space with a clear function as opposed to less ‘formal’ spaces such as FI.

The relationship of the floors to the walls in Unit FI is difficult to clarify. The floor at street level was laid after the lower courses of the walls were built, therefore after the layout of the building was clear on the ground. However, there are indications that the initial mud floor at this level dates prior to the walls being built above foundation level, so before the construction of the actual rooms. In the case of the floor in Room 42 just west of FI-006, the wall dividing Rooms 45 and 43, we observed that the floor seemed to run *into* the wall. We also noted that the nature of the wall above and below the initial mud floor level was quite different, with the lower courses

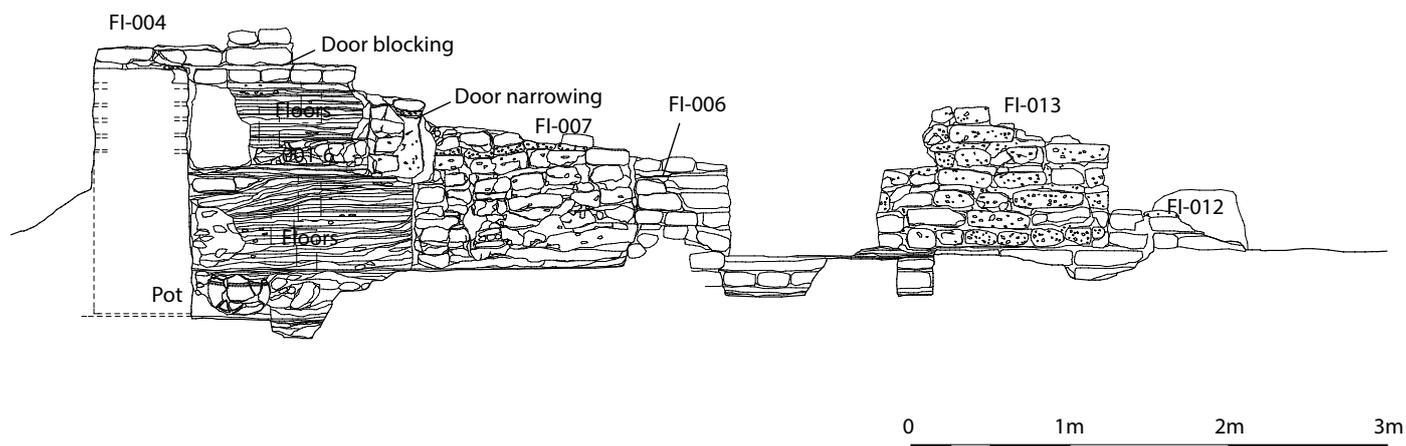


Figure 12. Section of Unit FI, looking east (Figure by Abigail Stoner and Evan Levine, with additions by the authors).

level. Second, they stamped the ideal plan of the fortress, with its neat and regular house-style, on the ground, a sort of blueprint in action. After the construction and infilling of these below-street-level retaining walls, the space was used, probably for a short period of time before the rooms were actually finished. This would be unsurprising as the fortress was clearly not built in a day, and as in FA, the space within it must have been used (and indeed required) for the construction process. Therefore, some areas would have been prioritised for final completion above others.

The nature of the floor at the initial floor level is noteworthy. At least five jars were intentionally buried in the rubble fill that underlies the street-level floor in Unit FI. The location of the pits is intriguing (Figure 12); while some were lined up along walls and one was near the middle of a room, two are in doorways where they would have impeded movement if the pots and doors were in use at the same time. This may be added reason to suggest the walls were not yet built above foundation level. In no case could a clean section be cut that would have allowed us to clarify if the pots were buried at the same time as the rubble was placed or if there were later cuts for the emplacements. All the jars had been repurposed by the removal of the neck and, sometimes, the base. The tops of the pots were roughly level with the floor and one example was covered with a reed mat, presumably to stop waste falling in. The general purpose of these jars was to create secure sub-floor storage space (see also Moeller 2010, 104), but it is unclear what specifically was stored in the vessels as it was impossible to distinguish between intentional fillings and accidental accumulation of waste. Contents included fish bones and bones of small animals, grain, charcoal, a fishing weight, and a wooden stake. Two of the jars also contained complete drinking cups that we suggest were used for scooping out the contents. Dense concentrations of buried pots are certainly well-known from spaces intended primarily for household storage with limited foot traffic, for example cellars (Raue *et al.* 2007, pl. 1). This consideration together with stones for grinding grain, beer jar stoppers, lithic blades, fishing weights found in the debris of the room as well as fish bones *in situ* in the floor, indicates a domestic context including food storage, food preparation and consumption.

The one place where the floors and walls of Unit FI are clearly related and can be read in relationship to one another is in the doorway in the northern part of the wall FI-07, between the front room (45) and the northern back room (43). Here the doorway itself has three distinct phases (Figure 12): the initial construction of the doorway, its narrowing, then final bricking in. Multiple levels of floors separate these phases. The pot emplaced in the street-level floor can be seen on the left, in the north of the section. Its base rests on a mud surface that is below the leveling rubble that surrounds the pot; its rim is at floor level. The next 600mm of accumulation seem to be compacted and largely level floors. However, shortly after the narrowing of the doorway came Layer FI-001-6, a 250mm thick layer of 'bricky' and unconsolidated rubble seeming to indicate a single episode of deliberate dumping. This stratum contained 19 fragments of seal impressions and many additional fragments of plain sealing clay (Figure 15). Because these appear to be part of a dumping episode, they do not say anything specific regarding the function of the room.

Chronology of Building and Occupation in FI

A full chronological evaluation of the deposits of Unit FI will take place when the radiocarbon and the pottery



Figure 13. Fishbones in Floor of Unit FI.



Figure 14. Sondage through floor in Room 42, Unit FI.



Figure 15. Sealing from FI.

that the entire column of stratigraphy and the final bricking over of the doorway fall within the late Middle Kingdom.

Unit FI will be returned to in future. Still to clarify are the lower levels of stratigraphy above floor level, which are present not only in the doorway but also in the front room; the terracing of the hill during original construction; and a brick feature (FI-017) of a later phase built in the northeast corner of the unit. This sits atop stratified layers and is clearly later than the original walls of the structure; it may be part of a stairway needed once the floor levels rose in this building.

References

- Adams, M. D. 2007. 'Household silos, granary models, and domestic economy in ancient Egypt' in Z. A. Hawass and J. E. Richards (eds), *The archaeology and art of ancient Egypt: essays in honor of David B. O'Connor*. Cairo, 1-23.
- Arnold, D. 2005. 'The architecture of Meketre's slaughterhouse and other early twelfth dynasty wooden models', in P. Jánosi (ed.) *Structure and significance: thoughts on ancient Egyptian architecture*. Vienna, 1-75.
- Bestock, L. 2017. 'Forgotten fortress: returning to Uronarti', *Near Eastern Archaeology* 80.3, 154-165. [Doi: 10.5615/neareastarch.80.3.0154]
- Dunham, D. 1967. *Second Cataract Forts Volume II: Uronarti, Shalfak, Mirgissa*. Boston.
- Janssen, J. M. A. 1953. 'The stela (Khartoum no. 3) from Uronarti', *Journal of Near Eastern Studies* 12.1, 51-55.
- Kemp, B. 1986. 'Large Middle Kingdom Granary Buildings (and the Archaeology of Administration)', *Zeitschrift für ägyptische Sprache und Altertumskunde* 113, 120-136.
- Kemp, B. 2018. *Ancient Egypt: anatomy of a civilization*. London-New York.
- Knoblauch, C. 2011. 'Not all that Glitters: A Case Study of Regional Aspects of Egyptian Middle Kingdom Pottery Production in Lower Nubia and the Second Cataract', *Cahiers de la céramique égyptienne* 9, 167-184.
- Knoblauch, C. and L. Bestock 2014 (2013). 'The Uronarti Regional Archaeological Project: Final Report of the 2012 Survey', *Mitteilungen des Deutschen Archäologischen Instituts* 69, 103-142.
- Knoblauch, C. and L. Bestock 2017. 'Evolving communities: the Egyptian fortress on Uronarti in the late Middle Kingdom', *Sudan & Nubia* 21, 50-58.
- Levine, E. I., M. a. W. Rothenberg, O. Siegel, C. Knoblauch, L. Bestock and L. Klein 2019. 'The Uronarti Regional Archaeological Project: Second Cataract fortresses and the Western Desert of Sudan', *Antiquity* 93, 372. [Doi: 10.15184/aqy.2019.183]
- Liszka, K. 2008. 'Water basins in Middle Kingdom planned settlements' in V. Gashe and J. Finch (eds), *Current Research in Egyptology 2008: proceedings of the ninth annual symposium which took place at the KNH Centre for Biomedical Egyptology, University of Manchester*,

analysis from the extant stratigraphic column have been completed. A rough date for the subfloor storage installations is provided by the hemispherical cups found in them. They are uniform with a rim diameter of 130mm and, where complete, have a height of c. 65mm. They are morphologically identical to those found below the floor of Unit FA proving that they are chronologically close to the foundation phase. The only beer bottles we have observed at floor level are those with triangular rim, the same type that also occurs in the foundations of Unit FA. This type of beer jar rim occurs in the preserved column of stratigraphy up to the period when the doorway between Rooms 45 and 43 was narrowed. The only 'marker' of the progression of time, is the first appearance of micaceous slip pottery above the narrowing of the door. This was a 'local' invention (Knoblauch 2011; Smith 2012, 389-390) that first occurred after the colonisation event, to judge by its absence in both the foundations of FA. The pottery from the highest levels is very poorly preserved but it appears

- January 2008. Bolton, 51-68.
- Moeller, N. 2010. 'Tell Edfu: preliminary report on season 2005-2009', *Journal of the American Research Center in Egypt* 46, 81-111.
- Oppenheim, A., D. Arnold, D. Arnold and K. Yamamoto (eds), 2015. *Ancient Egypt Transformed: The Middle Kingdom*. New Haven-London.
- Raue, D., C. Von Pilgrim, F. Arnold, J. Budka, R. Cortopassi, E.-M. Engel, P. Kopp, E. Lakowszka-Kuztal, E. Peinter, B. Von Pilgrim, S. Seidlmayer and M. Weber 2007. 'Report on the 36th Season of Excavation and Restoration on the Island of Elephantine', [https://www.dainst.org/documents/10180/384618/Elephantine+-+Report+on+the+36th+Season+\(ENGLISH\)/493eb286-4319-4694-a3e9-babd45d9d5a1;jsessionid=E09107174292E5AC6782CCC27584093F?version=1.0](https://www.dainst.org/documents/10180/384618/Elephantine+-+Report+on+the+36th+Season+(ENGLISH)/493eb286-4319-4694-a3e9-babd45d9d5a1;jsessionid=E09107174292E5AC6782CCC27584093F?version=1.0), 1-31.
- Reisner, G. 1960. 'The Egyptian Forts from Halfa to Semna', *Kush* 8, 11-24.
- Schiestl, R. and A. Seiler 2012. *A Handbook of Middle Kingdom Pottery. Volume I: The Corpus Volume*. Contributions to the Chronology of the Eastern Mediterranean 31. Vienna.
- Smith, S. T. 2012. 'Pottery from Askut and the Nubian Forts' in R. Schiestl and A. Seiler (eds), *Handbook of Pottery of the Egyptian Middle Kingdom. Volume II: The Regional Volume*. Contributions to the Chronology of the Eastern Mediterranean 31. Vienna, 377-405.
- Wegner, J. 1996. 'The Nature and the Chronology of the Senwosret III-Amenemhat III Regnal Succession: Some Considerations based on New Evidence from the Mortuary Temple of Senwosret III at Abydos', *Journal of Near Eastern Studies* 55.3, 249-279.
- Wegner, J. 2001. 'The Town of Wah-sut at South Abydos: 1999 Excavations', *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 57, 281-308.
- Wegner, J. 2007. *The Mortuary Temple of Senwosret III at Abydos*. Publications of the Pennsylvania-Yale-Institute of Fine Arts Expedition to Egypt 8. New Haven-Philadelphia.
- Wheeler, N. F. 1929-30. 'Diary of the Excavation of Uronarti Fortress', *Harvard-Boston Museum of Fine Arts*. Boston.
- Wheeler, N. F. 1931. 'Harvard-Boston Expedition in the Sudan, 1930-1931', *Bulletin of the Museum of Fine Arts* 29, 66-70.