Amheida 2007-2009: New Results from the Excavations

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The excavations at Amheida, ancient Trimithis,1 started in 2004 on behalf of Columbia University and now sponsored by New York University, are directed by Roger S. Bagnall. The methods and the strategy of investigation and documentation have followed consistent principles from the start: the excavation is run according to the stratigraphic method, mainly on extensive areas. Records of features, depositions, small finds, pottery, and quantitative data are all related to AutoCad plans and photographs. The enormous amount of data collected so far has been digitized into a database, of which we have now a new web version.2 The last three seasons have been instrumental in refining our knowledge of the history and development of the site and of the two sectors we have been working in. These are located on the top of the main hill of the site, in the area of the Thoth’s temple (area 4) and in the center of the city (area 2) where we have completed the investigation of the house of Serenos.3 The topographic survey is still in progress: most of the visible buildings of the city have been mapped by means of a Total Station (Plate 1) and a provisional 3D rendering has been realized by F. Pavia and S. Maggioni. The geological nature of Amheida area has many interesting features that need to be understood in order to reach a general view of the evolution of the landscape. A geological survey started in 2007 and it is still in progress. According with J. M. Kieniewicz, some buildings are set on stabilized dune material (cross-bedded eolian sand), like for example the pyramid. More investigation is needed to understand the nature of the temple hill.

Area 4: the temple hill
Excavations in area 4.1 were resumed in 2008 and 2009 with the investigation of three more squares.4 The stratigraphic situation is consistent with what had been encountered in the previous seasons, with several deep pits destroying part of the original strata. Temple blocks were found inside the pits, in a considerably smaller number than in the pits excavated in the previous years. An interesting alignment of blocks and pieces of walls was found crossing the area from east to west in AQ50 (Plates 2, 3). This peculiar concentration of massive pieces of walls on the same axis suggests that they could have originated from the collapse of a wall of the temple, which probably once stood near by. In fact, beyond this line to the south very few blocks were recovered, while the major concentration of architectonic elements was to the north of it. In this cluster more than 100 decorated blocks and fragments have been recovered, which belong for the most part to the Saite temple and were reused in the Roman period walls.

A few new and scattered blocks could be recovered during the short 2009 season5 to the north of the already excavated squares (AQ48). Of these, only four blocks are decorated; these are dated to the 26th Dynasty. This occurrence led us to believe that this area was outside the sanctuary, but we need to explore a couple of new squares to be able to confirm or disprove this hypothesis.

1 For the identification of Amheida with Trimithis cf. Bagnall and Ruffini 2004, 143–44.
2 See in this volume B. Bazzani, “A New Database for Recording Excavation Data.”
3 Two test trenches have also been cut in the northeast quarter (area 1), in the courtyard of house B 2 (already excavated in 2005–2006), and in the street S1, the widest street known so far at Amheida. The results of the excavation in area 1 are under study and will be published soon by Anna Boozer.
4 AQ50 and AR50 (20 x 10 m); AQ48 (10 x 10 m). The team was supervised by R. Casagrande-Kim.
5 The excavation lasted one week because of the late delivery of the security papers.
In spite of the complete destruction of the temple, the evidence collected so far allows us not only to reconstruct parts of the decoration of the temples of the different periods, but also to suggest a possible location and the approximate dimensions of the Roman period temple of Thoth. Key elements in the formulation of this hypothesis are: the aligned clusters of blocks, a collapsed corner of the temple found in 2005, the position of scattered columns drums and that of a cavetto cornice presumably of the main gate (Plate 3).

These are of course very faint evidence, but still they are the only clues we have in the field to the position and dimensions of the temple. This hypothesis is thus only tentative. A possible wall runs in square AQ 50, while the external northeast corner of the temple was located in square AP 49. The geometric distance between these two elements is about 16 m. Interestingly, the maximum concentration of blocks lies between these virtual lines, while the column drums and the cavetto cornice of the gate are located in the easternmost part of this area, suggesting that the forepart of the temple was to the east. We thus can argue that the entrance of the temple was oriented to the southeast. In the absence of clear archaeological evidence related to the length of the building, we can estimate it by comparison and applying the ratio between the short and the long side as it has been calculated for Dendara and Edfu temples. By applying this ratio on a short side of 16 meters we obtain a length of 26.5 m. However, it must be pointed out that these proportions were not systematically applied to the temples of this period. Future investigations in some other squares will hopefully clarify the general outline of the building.

One of the most interesting discoveries of the last seasons is an area of 3 x 5.5 m which was not disturbed by the pits diggers (DSU 120). Its excavation is not yet finished, but it can be interpreted as an animal necropolis, datable probably to the Late Period or the beginning of the Ptolemaic period. Five sealed pottery coffins have been recovered, and many other fragments of similar containers have been found scattered in the area (Plate 4). The coffins are hand made and of relatively poor quality, with an oval shape (70–46 x 40-35 x h 40–21 cm) and a cover sealed to the body with gypsum plaster. No inscriptions or other signs have been traced on them. Two of them were emptied of their contents, which consisted of hundreds of small bones and dark dust. The bones from one coffin were examined by Salima Ikram, who recognized raptors and ibisis. No trace of mumification is visible.

From the same context of the coffins came a cluster of 40 miniature pottery vessels and about 45 bronze fragments of Osiris statuettes and pendants. The restoration of the bronzes revealed the presence of statues of different sizes, with inlaid eyes and gilded surfaces (Plate 5). Among these figurines one is of particular interest, being made of unfired clay. Osiris figurines are very common finds in animal necropoleis and in the related temples. The difficulty of dating them precisely through a stylistic analysis is well known, and our objects are no exception in this regard.

Four walls, possibly forming a room, delimit this area, but the pits dug to contain some of the coffins cut them. Further investigation will reveal if they were part of the sacred necropolis or if they belong to previous period buildings. According to the estimated extension of the temple, the surviving area of the coffins was outside of the Roman period sanctuary, but it is impossible to know if it continued under the temple, because of the heavy destruction of the stratigraphy.

We hope that the continuation of the excavation in the coming seasons will clarify the dimensions of the temple, the animal necropolis’ extension towards south and west, its date, and the nature of the animals found in the coffins.

Area 2.1: the central habitation quarter

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6 See in O. E. Kaper, this volume.
7 According to C. Rossi this ratio is: short side = ½ + 1/10 of the long side; long side = 1+2/3 x short side; Rossi 2006, 171. The columns also have a ratio between the high and the diameter. According to Arnold the height is 7–8 times the diameter: Arnold 2003, 56. The surviving drums of the Amheida temple have a diameter of between 85 and 77 cm, which means a height of about 6-7 meters.
8 The temple at Deir el-Haggar measures 7.3 x 16.2 m; applying the ratio it would have been 7.3 x 12.16 m.
9 They came from the same context and from the disturbed layers around this area (mainly from AR50 and AR51, very few from AQ49). There are 9 small figurines or amulets (inv. 27–30, 32–34, 13442, 13634), one piece of an atef crown from a statue (inv. 13462), 12 heads, 17 legs or feet, and 4 busts. Many of the lower parts of the statuettes have a tenon to be inserted in a base; often a lop is present behind the neck.
10 The smaller pendants are thin, convex figures of a single standing Osiris or groups of two or three figures. Good parallels were found in Umm el-Qaab, which have been dated to the New Kingdom: Effl 2006, 140–41, Taf. 30a. See also Roeder 1956, 164, Abb. 222, 223; Davies and Smith 2005.
11 Coulon 2008, 22. 370 statuettes were found in the temple at ‘Ayn Manâwir and several hoards were recovered from the Sacred Animal Necropolis at Saqqara: Wuttmann, Coulon and Gombert 2007, 167–73; Davies 2007, 174–87.
The excavation of the interior of Serenos’ house (labelled B1) ended in 2007 with the investigation of the western half of the building and of the courtyard (Plates 6, 7). A second entrance from the western alley was found, leading to a vestibule (R 12) that gave access to the central Room 2 and to Room 13 (Plate 8). Two phases of use are evident in R 13: during the earlier phase the walls were painted in purple and decorated with squared panels ("panel style") with classical motifs, on top of which names of Greek gods like Dionysos and Hephaistos were written. During the second phase, the room underwent a restoration due to the shifting of the western wall towards the west, and it was transformed into a sort of storeroom: the walls were painted with whitewash, and two square bins were added abutting the North wall.

Similar damage due to the shifting of the western wall is clearly visible in Room 11, a side space that, like Room 14, was entered by the painted Room 1. These two rooms were decorated with similar patterns, while their barrel vaults were whitewashed. Room 11 is painted with a green background up to 1.7 m above the floor (Plate 9). A geometric design of intersecting yellow circles with a rose petal in the centre fills the central rectangular panel on each wall. This “wall-paper” pattern, following the effective definition of Helen Whitehouse, is topped by a band of vine leaves, grapes, flowers, and birds. Columns or pillars with Corinthian capitals flank the panels at the corners of the room. A similar decorative pattern, but simpler and on a red background, covers the walls in Room 14 (Plate 10). In both R 11 and 14 the excavation was not complete because of the precarious stability of two walls.

Test trenches have been cut in R 1, 2, 6, 4 and 15. The foundations of the walls of Serenos’ house are quite shallow, reaching a depth of only about 50 cm. The foundation trenches of the walls were cut into layers of debris or of compacted ashes, like in R 1 and 6. A considerable number of ostraka were found, together with a bronze hoard, in the debris below the floor in R 4. The bronze hoard (Plate 11), deliberately hidden and then forgotten, consists of two big lamps with lions heads and suspension chains, a cylindrical box, and a knife with figured bone handle. No substantial remains of buildings of previous phases were found in these trenches.

Serenos’ family used the wide open space labelled R 9 and 10 as courtyard and working area for a short period of time. It was accessible through a door located in its northeast corner, later blocked off by a wall. In the courtyard the excavation revealed the presence of about a layer of windblown sand 2 m deep, which should have filled the space quite quickly after its closure, as is testified by the preservation of rectangular and semicircular bins and by the absence of the characteristic grooves at the base of mud brick features due to erosion of wind and sand. All the features and depositions in this area were worn by the weather but still in good condition. Dumped layers on top of a roughly made mud floor testify to the secondary use of the area. Under the floor the stratigraphic situation was quite complex and revealed the presence of considerable remains of buildings pre-dating Serenos’ house, which were covered by destruction debris (Plate 12). The features belong to a public bath complex built in baked and unbaked bricks. This building was demolished at a uniform level, and its baked brick walls were used as a foundation for mud-brick walls belonging to a school building (labelled B 5), built at the time of Serenos’ house, and north of it. Room 15 was originally part of this school and was built on top of a baked brick cistern or a room of the bath complex in which water was used (Plate 14). The original presence of the water in this space is attested by a hole visible at the base of the northeast corner. The water flowed in a side squared room or latrina, where a drain running along its perimeter conveyed the water into a sewer channel running towards the north.

The most impressive feature of the thermae preserved in this area is a round mud-brick room with a hypocaust in baked bricks (Plate 13). It can be identified as a laconicum or a hot dry-steamed room, which was heated by hot air under the floor. It should have been connected with the latrina, but their entrances disappeared during the destruction of the building. This circular room has a diameter of about 4.3 m and was built in mud-brick, with a baked tile floor resting on the hypocaust. The wall and the floor were lime plastered. The floor or suspensura is quite thin, being made by tiles and white plaster for a thickness of no more than 8 cm. Probably for this reason, the floor was repaved with wooden planks fixed with iron nails to some crossing beams set on...
series of mud and baked bricks within a mud layer 10 cm thick. Unfortunately only the nails and the impressions of the planks survived (Plate 15).

The hypocaust was realized directly into the gebel and has a diameter of 2.9 m and a depth of 0.85 m, with 16 freestanding baked brick pillars (pilae) set on a mud brick floor. They are arranged on 4 rows of 4 pillars each. The channel that conveyed hot air enters the hypocaust from the south and was dug into the gebel. A similar round room was found in the 2009 season but has not yet been excavated, located outside the courtyard to the east, below the level of the street flanking this block of houses.

During the 2008 season the excavation was extended northward to investigate a building (B 5), which was linked to R 15 through a door originally opened in its north wall (Plate 16). Room 15 was already excavated in 2006 and turned out to be originally a school room annexed to Serenos’ house in a second phase and then transformed into a storeroom. During the school phase, a Greek literary text was painted in red by a teacher on the white plaster of the east wall. The door that originally connected R 15 with R 19 was blocked off with a wall when the room was annexed to the house. It was evident that the room to the north, Room 19, was originally part of the same school building with R 15. In fact, other two literary texts were painted in red on the white plaster of the west wall in R 19 (Plate 17). However, it is also clear that the building soon changed its function and underwent two major remodelling phases.

The building of the later phase is approximately L-shaped and is entered through a narrow corridor from the east street (S2). This corridor leads into the largest room of the building (R 19), which gave access to two smaller spaces, R 23 and R 21. Another room (R 20) is located in the northeastern corner of the building. All the rooms had mud floors on which rectangular and semicircular bins in mud brick were set. They were certainly used for processing dry materials, but none of the finds could suggest what it was and the kind of work carried out. The only feature the use of which was clear was as a pen for chicks in the southwest corner of R 21. It is a curious and well-preserved mud feature with a rectangular ground plan and rounded corners, 50 cm high (72 cm long, 35 cm wide), and with a hole in the front that could be closed from the top with a sliding door. The number and recurrence of bins in every room attest to the fact that the building, at least in its later phase, was not used as living quarters but rather had an utilitarian function. Ostraka found in the corridor suggest a use by Serenos’ family.

Several walls belonging to earlier phases were found under the mud floors. Some of them subdivided R 19 into three smaller rooms with an unknown function. These walls were built on top of a debris layer that covered the remains of the thermal, which extended far beyond the courtyard area (R 9 and 10): Room 19 was built on top of what appears to be a wide rectangular space in which water was used. The floor was roughly made with backed-brick tiles and bricks and was covered by a thick layer of waterproof lime plaster. The base (1.20 x 1.20 m) of a squared pillar on which probably a labrum once stood was identified in the middle of R 19. The broken limestone labrum has been found next to it on the floor. The excess water present into the room drained into the latrina through a hole placed at floor level in the south wall. A baked-brick shallow platform was at the northeastern corner of this wide room. Only part of it was demolished, and it is still possible to reconstruct its shape and function. It measured 4.3 m east-west and was approximately 1 meter in height. At its centre a sunken basin (2.35 x 2.15 m) or tub one meter deep was made with waterproof plaster (Plate 18). Three round steps in a corner, now covered by a mud-brick bin, allowed for a gradual immersion into the water.

Worth mentioning is the discovery of an earlier stage of the thermal demolished and covered with a new floor. Of this earlier phase only part of the base of a painted column and part of a stepped basin are visible so far.

During the short 2009 season, a trench of 10 by 7 meters was cut in the north-south oriented street running in front of the eastern entrance of Serenos’ house (building B1). Three superimposed floor levels of this street, which is 6 m wide, have been identified. On the latest one the impression of three east-west oriented beams was clearly visible. These impressions together with others of reeds on several flat pieces of mud support the hypothesis that a flat roof covered at least this portion of the street. The access to the street from the north was blocked by a doorway or gate built at the northeast corner of the house, of which only the two mud brick jambs and the threshold remain (Plate 19).

Some features belonging to buildings pre-dating the house were found under the street’s floor level. One of these features is a white plastered round room similar to the laconicum discovered under the courtyard (R 9). Its future investigation will clarify if the two round rooms were used at the same time or if one replaced the other. In the first case we would have a double, symmetrical public bath with separate rooms for men and women.

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18 This labrum, which still needs to be restored, can ascribed to the “Tipo II a bacile”: Ambrogi, 2005, 75 and 79.
In conclusion, after six seasons in area 2.1, we can try to summarize the complex amount of data collected.

Two main building phases or two layers (Thermae layer and House of Serenos layer), separated by a destruction phase, have been recognized. Each of the excavated buildings underwent remodelling actions, with restoration, destruction, and building of new features. So far two phases (building and remodelling) have been recognized for the thermae; three phases were identified for Serenos’ house and the school.\(^{19}\)

Serenos’ house, for example, underwent three stages: this sequence has been recognized through the stratigraphy of the floors, of the walls plaster, and of the restorations of parts of the building. The date of each phase of the house has been established through the ostraka and coins found in the stratigraphy.\(^{20}\) Thus we argue that the house was occupied by Serenos’ family for about 25 years, which is a rather short period of time: it was built around 340 CE and abandoned around 365 CE.

We can quickly follow the evolution of the house and of the other explored buildings. The area was occupied by what we can provisionally identify as a large public bath complex (Thermae layer). The extension of the complex and the dates of its foundation and renovation are still uncertain, but its architecture points at the Roman imperial period. Its destruction can possibly be dated in the first twenty years or so of the fourth century. Its baked bricks and some walls were reused in the newly-built buildings (B1 and B5). The ruins were then covered by debris (destruction layer), on top of which some mud brick buildings were built (Serenos’ house and school layer).

Serenos’ house and the east street were built on top of debris artificially dumped on horizontal layers. Several walls of the school were built directly on the baked-brick features of the thermae. Unfortunately, the partial destruction and subsequent remodelling of the school prevent a full reconstruction of its original plan, but it is almost certain that it was built at the same time as Serenos’ house, with a perimeter wall in common. The school consisted of at least three large rooms: R15, 19, and 23. The rooms belonging to the school were characterized by the use of white plaster on the walls, on which texts for education could be written, whether by a teacher or by students. The original entrance was located on the west side, but it was later closed by a wall, as was also the case for the door leading to R15. Low benches along the perimeter walls of all the rooms of the school distinguish the building. These benches are made of mud brick and baked brick and have a mud facing. Some of them were cut into the baked brick walls of the thermae.

The building phase of the school and of Serenos’ house seems to have covered a wider area, especially to the south, where another house with the same dimensions and layout of B1 is clearly visible. The area dramatically changed its function and topographical organization at that time, when the public bath was replaced by rich residential buildings. It would be interesting to investigate the causes of this change and the source for the water used in the thermae.

Serenos’ house was originally a square building, with 11 rooms and probably three entrances,\(^{21}\) with Room 2 painted in red and yellow ochre and Room 1 showing its first decoration. At a second phase, which seems to have occurred five years later, the house underwent a series of substantial alterations: Room 1 was plastered and repainted with the figural scenes; Room 2 was replastered with simple mud; Rooms 11, 13 and 14 were painted and a new door was opened between R7 and R8. The door between R8 and R4 was closed as well as the door leading to R6 from the east street. Some of the floors were replastered. The extension of the house towards the north in Room 15 can probably date to this phase: the school room became a sort of magazine with a suspended wooden floor. The house gained two new working spaces by acquiring the school building, which in the meantime lost its original function. It was partially demolished to give space to two opened courtyards (R9 and R10), and it was partitioned into smaller rooms (R19 A, B, C). The courtyard and the new Building 5 were accessible through two doors close to each other and opening on the east street. The street underwent some changes too. A door was built to close its passageway and probably to separate the residential side of the house from the working areas. The space in front of Serenos’ house was covered with a flat roof, most probably to protect the area from the weather and the sand, as commonly happened in the medieval settlements of the western desert oases.

During the third phase the house underwent a sort of restoration, mainly visible in its western rooms, due to the shifting of the western perimeter wall. Some floors were replastered, other were repalced,\(^{22}\) and whitewash bands were painted in some rooms around niches (Plates 8, 10), doors, and on several walls. Bins were built

\(^{19}\) In the remodelling phases the destruction of some features is implicit.

\(^{20}\) They are several hundred. The ostraka are going to be published by R. S. Bagnall and G. Ruffini.

\(^{21}\) A third door opened in the southeast corner of R6, on the eastern street, but it was walled up.

\(^{22}\) The mud floor in R1 was probably re-placed with a new one after 355 CE, as suggested by the presence of a coin under this floor (inv. 11324). Coins from inside the upper floor (F150) found in R13 confirm this date. Another coin (inv. 136) coming from the surface of the second floor in Room 4 confirms the date of the renewal of the pavements, too.
inside R 13 and 14 and several others were set in Building 5, which was in the meantime transformed by the
destruction of some walls and the creation of one large central room (R19). The door leading to the courtyard
(R9, 10) was closed, and consequently all the activities were moved into Building 5. We can argue that it was
probably more convenient, for climatic reasons, to work in closed and covered spaces.

The abandonment of these buildings seems to have occurred around 365 CE, as it is suggested by the ostraka
and coins found so far.

The decision to continue the investigation outside the perimeter walls of Serenos’s house and extensively
under its floors is providing good results in terms of urban development and of a better knowledge of Serenos’
activities. In fact, ostraka with his name were recovered all over the investigated area and leave no doubt about
the acquisition of the working spaces by his family.

The presence of a rhetor teaching Greek in an advanced school in mid fourth century Trimithis is also an
exceptional acquisition, from both a cultural and an architectural point of view, because school buildings are
rarely found archaeologically. The life of the school was apparently very short (probably less than 20 years); it
is natural to wonder if this could be related to the presence or the active lifespan of the teacher. Moreover, the
discovery of what appears to be a monumental public bath complex of Roman tradition opens new perspectives
on the culture and urbanism of Trimithis and of the Oasis before the fourth century.

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Plate 1: general plan of Amheida (2009)


Plate 3: Area 4.1. Area with the maximum concentration of blocks and the hypothetical position of the Roman period temple of Thoth (square 10 x 10 m). The columns drums and the cavetto cornice are marked in black.

Plate 4: Area 4.1. Coffins of the birds.

Plate 5: Area 4.1. A sample of Osiris bronze statuettes.

Plate 6: View towards South-East of area 2.1 (2007).

Plate 7: Area 2.1. Plan of the last phase of B1 and B5 (around 365 CE).

Plate 8: Room 13 in Serenos’ house, with purple paintings.

Plate 9: Room 11 in Serenos’ house, with green paintings.

Plate 10: Room 14 in Serenos’ house, with red paintings.


Plate 12: Thermae layer in R 9 and 10: plan of the laconicum and latrina.

Plate 13: Thermae layer in R 9 and 10: the laconicum and latrina.

Plate 14: Room 15 view towards South. In the foreground is the backed-brick floor of a thermae room. To the left is the wall with the teacher’s dipinto.

Plate 15: Detail of the laconicum and the hypocaust.

Plate 16: Building 5; aerial view.

Plate 17: Room 19 in B5, view towards South-West.

Plate 18: Room 20 in B5. Water basin of the thermae layer below a mud-brick bin.

Plate 19: The street on the East side of Serenos’ house and the gate (view towards South-East).