

New York University
Excavations at Amheida 2012
Preliminary Report

The 2012 season started on the 24th of January and concluded with the registration of the finds on the 23rd of February.

The team consisted of Roger S. Bagnall (director, papyrologist); Paola Davoli (archaeological field director); Olaf Kaper (associate director for Egyptology); Nicola Aravecchia (deputy field director), Mirjam Bruineberg, Roberta Casagrande-Kim, Dorota Dzierzbicka, and Silvia Prell (senior archaeologists); Loriane Bussien, Nancy Highcock, Valentina Liuzzi, and Borna Scognamiglio (archaeologists); Clementina Caputo, Julie Marchand, and Irene Soto (ceramicists); Marina Nuovo and Océane Henri (registrars); Fabrizio Pavia (topographer); Bruno Bazzani (database management and computer operations); Katherine Adelsberger (geologist); Sandra Ottens (Egyptologist); Dorothea Schulz (paintings conservator and artist); Raffaella Cribiore (papyrologist); Mohamed Ahmed Sayed Mustafa and Bahaa Gomaa (conservators); Ashraf Barakat (assistant to the director); Gaber Murad (house manager); Christina Chopra, Marek Dospel, Serena Esposito, Matthew Firpo, Sarah Jolly, Emilio Santiago, Mary Van Dempsey, and Juan Vidal (student assistants). The SCA inspector was Nasr Abd-el Razek Mohamed Senussi.

The excavation continued in two areas where the exploration already started in previous years (the temple Area 4.1 and the residential/public Area 2.2). A new area has been opened (Area 2.3) east of Area 2.2, where a public building with columns was mapped earlier during the topographic survey.

Other projects and activities continued during the season as in the past, like the topographical and the geological surveys, the painting of the replica of Serenos' house, and the reconstruction of the temple scenes in the block house, as well as the study of finds from previous years in preparation for publication.

Area 2.2 (Building 6) (Paola Davoli, Mirjam Bruineberg, Silvia Prell)

While the excavation of B6 focused in 2010 and 2011 on the central columned hall and directly adjoining rooms, in 2012 the main interest focused on the exploration of the rooms in the southern and western wings of the building (fig. 2).

One of the so far unsolved questions concerning B6 was related to whether the Roman baths (*thermae*), found underneath B1 and B5 and belonging to an earlier phase of occupation, once extended further north and if corresponding remains are also underlying B6.

What is clear so far is that B6 was built later than the house of Serenos (B1) and the school (B5); the ruins of the *thermae* were still partly there, and they were reused in different ways to build B6. The row of rooms south of the central room 24 has extensive parts (walls and floors) reused from the bath. So far two renovation phases of B6 have been recognized. One more building phase predating the bath was found below *thermae* floors.

The western wing is formed by three rooms (R28-30) and a passageway (R35) connecting the central columned hall (R24) with rooms 29 and 30. All of them are preserved up to a height of ca. 3 m and were probably covered by flat roofs. Rooms 28 and 29 are of comparable size (2.85 x 2.47 m; 2.93 x 2.42 m), while room 30 is considerably bigger (4.10 x 5 m) and also provides access to the street north of B6, while the other two rooms were accessible only from within the building. Both rooms once provided access to the neighboring rooms via two doors. At a certain point, for unknown reasons, the doors in the eastern wall, once connecting room 28 and 29 with the columned hall, were blocked off with blocking walls build within the former doorframes. The blocking was undertaken in a first phase of renovation of the building, working from within the columned hall, and the blocking walls were nicely plastered over with brown mud. In room 29 the available space between the former doorframe and the blocking wall was equipped with a niche, which was white-plastered on the outside. In room 28 the blocking of the door wasn't furnished with any comparable alterations, as the room was equipped with a stairwell. Two flights of steps are preserved (fig. 3). The eastern one is built on top of a mud-substructure, paved with one course of mud bricks; the edges of the steps are protected by a row of baked bricks. The same can be said for the landing of the western flight, while the western flight itself consists of four steps, protected by wooden beams on a substructure of loamy sand once covered with mud. The stairwell provided access to the second floor of B6 or at least to the roof of the building. In a second phase of renovation it was decided to block off rooms 28 and 29 completely from the rest of the building, and the doors still connecting the rooms to the south and the north were blocked off as well. Those blockings were plastered with reddish brown plaster from the outside, showing that the building itself was still in use. The similar brickwork of these blockings with alternating rows of bedded bricks and bricks on edge suggests that both rooms were given up at the same time. Both rooms were found filled with dumped material, which consisted mainly of building debris. In room 29 altogether 16 *ostraka* (see Documentary Material) were found within the dump (DSU 31). The dump in room 28 (DSU 29)

only provided two *ostraka*, but also yielded pottery which can be dated to the late 4th century AD, when the city was about to be abandoned.

In room 30 the original mud floor was completely lost and preserved only in a small patch still attached to the southern wall. Underneath the former floor, however, a layer came to light (DSU 49), which contained thousands of so called *tesserae*, cubic cut stones used to form a mosaic floor (see *Mosaic Tesserae*). During excavation it became evident that the room itself never was equipped with a mosaic floor. The presence of raw material and bigger pieces of local stone, chipped already in a convenient shape for later processing, point either to a small workshop in the room itself or a workshop dump. Nevertheless, those *tesserae* prove the existence of mosaic floors in Trimithis, and can be considered at the same time as the first proof for mosaic floors in the oases of the western desert.

Underneath DSU 49 a mudbrick debris layer was unearthed (DSU 60), which provided again several *ostraka*, 27 in total (see Documentary Material). This layer covered earlier mud brick walls also present underneath the one and only floor that room 29 was equipped with. The fact that those walls are built from mud brick raises the question whether they belong to the earlier complex of the *thermae* or if they might belong to another building. As those walls could not be fully explored this season, further investigation in the forthcoming season is required to answer this question.

Rooms 25, 27 and 31 form the southern limit of Building 6. They form an east-west oriented row, located south of the pillared room 24. From west to east they are numbered R25, R27 and R31. They are preserved up to a height of 3 meters.

Room 25 (2.45 x 5.60 m) was accessible from the west street through a doorway located in the northwest corner (fig. 4). Two steps lead down to the level of the floor. When building B6 was built, the walls and floor already present were reused and integrated into B6. These walls and floor were part of a previous building, belonging to the *thermae*. The original floor is made of baked bricks coated with a thick layer of white hydraulic plaster. The same white plaster also covers the walls. The room was covered by a barrel vault.

When the room was incorporated into B6, the walls were probably re-plastered with mud plaster and the floor was covered with a mud floor. The above mentioned steps in front of the western wall and doorway were built. After some years, the room underwent a first renovation phase with a new coat of brown mud plaster on the walls and two new floors (first a thin white plaster and later a gray mud floor). In this phase the room was still connected to room 28 by a doorway (93 cm width). This doorway was blocked during a second phase of renovation. The blocked door was covered by new mud plaster, reddish brown in color. At the same time a new rough floor, made of compacted debris, was laid down. It covered the lower step, but the upper step remained in use.

The original white plaster of the *thermae* phase is not preserved everywhere on the walls. It was decorated with a raised plane dado (1.5 m from the baked brick floor). Some *dipinti* and *graffiti* were made both on the dado (west wall) and on the plaster above (see Documentary Material). Some of them are very high on the wall (up to 2.20 m above the floor). We therefore assume that the *graffiti* and *dipinti* were made after the *thermae* were abandoned.

The room was connected to R27 through a door located in the southeast corner. When R27 (2.60 x 6 m) was built, previous walls were leveled and the new walls cut through previous mud brick and baked brick floors (belonging to the *thermae*). In room 27 the previous walls were not incorporated, as was done in room 25. All the walls in its western side were built on purpose for B6. A mud floor was laid down covering the previous floors and razed walls. To the north one could enter the pillared room 24 through an opening of 2.70 m wide, flanked by a semi column on each side. To the east there was a doorway leading into R31.

During the first renovation phase also this room was replastered with a new brown mud plaster on the walls and two new floors (first a white plaster and later a gray mud floor). On top, in front of the doorway to R25 in the southwest corner, a small step was built in mud brick. During the second phase of renovation a new rough floor, made of compacted debris as in R25, was laid down, covering the step completely. In this phase the doorway to R31 was blocked and parts of the walls were re-plastered with a reddish brown plaster.

The room used to have a flat roof, made of beams, baked bricks and thick plaster, which collapsed on top of the last floor.

A test trench was excavated in the middle of the room. Below the baked brick and mud brick floors of the *thermae*, the remains of two bread ovens were found. The oven not only predates B6, but also the *thermae*. Room 27 used to be connected with room 31, but this door was blocked off during the second phase of renovation of the building. Room 31 (2.50 x 2.50 m) was accessible from the south through a doorway located in the southeast corner. When R31 was built, the east wall and part of the northern wall were reused and integrated into B6. These walls were part of a previous building, likely belonging to the *thermae*. Originally the walls were white plastered and the room had a barrel vault. The original opposite wall had collapsed or was cut, since the new wall does not have the springing of the vault. The new northern perimeter was half the previous white plastered wall, and half a new wall made of reused baked bricks. The original floor was not preserved.

The state of preservation of R31 is not very good. The mud plaster on the walls is not as thick as in R25 and R27. Also the floor is not a compacted mud floor, but rather the top interface of a rubble layer. We cannot say much about the first phase of renovation, but during the second phase of

renovation the doorway to R27 was blocked. The bonding is irregular and similar to the blocking of the door between R25 and R28.

Later the room was filled with dumped material (mud brick, baked brick, stone slabs and mortar from a ceiling). The original white plaster of the *thermae* phase shows two layers of plaster. Some *dipinti* and *graffiti* were made on the plaster (see Documentary Material) and we can assume that they were made after the *thermae* were abandoned (as in R25).

The two reused walls both have a niche. The niche in the east wall (cm 53 x h 56 x 37 deep) used to have a wooden shelf. The niche in the north wall (cm 51 x h 62 x 34 deep) had a wooden shelf as well. The niches were fully white plastered. Inside the niches the plaster is blackened, presumably due to lighting candles or lamps.

Mosaic *Tesserae* (Marina Nuovo)

A large amount of mosaic *tesserae* of four different colors has been found in Room 30, DSU 49 (fig. 5):

- approximately 11,825 white *tesserae* (Kg 47.58), cubic, made of limestone of slightly different tints (from bright white to yellowish and pinkish). Two different sizes have been identified: small (from 1.1 to 1.4 cm) and large (from 1.4 to 1.6 cm). Some *tesserae* have a rectangular section (dim. 1.1 x 1.5 x 1.7 or 0.9 x 1.2 x 1.9 cm);
- ca. 1047 red *tesserae* (Kg 3.8), cubic, made of sandstone. Three sizes are recognizable: small (1 cm), medium (from 1.2 to 1.5 cm), large (1.8x1.8x1.2 cm);
- ca. 3286 black *tesserae* (Kg 11.5), cubic, made of sandstone. Size: small (from 0.8 to 1.1 cm); medium (from 1.2 to 1.4 cm); large (from 1.4 to 1.6 cm);
- ca. 4203 dark yellow *tesserae* (Kg 17.4), made of sandstone. Size: small (from 0.9 to 1.1 cm); medium (from 1.2 to 1.6 cm); large (1.8 cm).

Some *tesserae* are irregularly shaped; these may be flakes from chipping.

Raw material, both limestone and red, yellow and black sandstone, has been found together with the *tesserae*, and some of the stones are chipped.

The estimated area that could have been covered with these *tesserae* is 4.30 sqm (20,430 pieces).

Area 2.3 (Building 7) (Nicola Aravecchia, Dorota Dzierzbicka)

The primary object of excavation in Area 2.3 in the 2012 season was room 1 of Building 7 (figs. 6-7). Surface clearance was also done in rooms 2, 3, and 4 located to the east of room 1, in order to clarify their plan and determine their relationship to room 1, but no further excavation was conducted.

Room 1, built entirely of mud brick, suffered from severe erosion and is poorly preserved especially on the west side, with features above floor level extant only in the eastern half to a height no greater than roughly 0.75 m. The room is ca. 12 m by 13.65 m and it is oriented east-west. The main entrance was most probably located in the western wall. In this part of the room there are two square bases, perhaps for engaged columns, which abutted the western foundation wall on its eastern face. The space they flanked, 165 cm in width, may have been the location of the doorway. Two more doorways to room 1 were also found in the southeastern corner of the room. One leads to a small room on the eastern side and one to a yet-to-be-defined space to the south.

Extant column bases with remains of the eroded first course of column bricks indicate that two rows of columns, four on each side, divided the room into three zones – a nave and two side aisles (north and south). The easternmost base in each row originally supported a square pillar with two engaged columns abutting it on two sides: one facing the nave and the other the western entrance. The column bases were built on two parallel foundation walls. These walls were bonded with north-south oriented foundations, forming a rectangle in the centre of room 1, originally concealed by a mud floor (F22).

The room had a flat ceiling, as indicated by collapses in the central and eastern area (DSUs 5, 10, 19), as well as in the southwest corner (DSU 6). These units contained palm ribs, of which impressions are visible in fragments of ceiling plaster. The layers of ceiling collapse between the rows of columns were very rich in fragments of painted plaster (fig. 8), which originally covered the flat ceiling in this part of the room. The small fragments were collected on trays, whereas larger fragments were consolidated in situ using a solution of Paraloid, attached to gauze and subsequently removed. The fragments were the object of preliminary selection and were stored for future study. A reconstruction of the geometrical pattern that once adorned the ceiling of room 1 was offered by Dorothea Schulz (see Painted Plaster in B7 Conservation Report). The largest patch, or rather several large patches one on top of the other, were found in the southeastern part of the central zone. They were consolidated and left covered for future removal.

The walls of room 1 were covered in white plaster. It is partly extant on most of the standing features preserved above floor level and large amounts of it were found in destruction layers along the walls. Large patches of white wall plaster were also found along the eastern wall of the room.

One such patch carried Greek inscriptions, one of which was written in small letters in black ink and read *ho theos* ([the] God).

The floors of room 1 are preserved only in its eastern half. There were at least two floor levels: in the north aisle the earlier floor is represented by a layer of lime mortar (F21), which was subsequently concealed by a mud mortar floor F20. In the south aisle there is no evidence of a lime floor, but an earlier mud mortar floor F27 is clearly visible between the patches of the higher floor level (F23).

A rectangular raised platform F19 abuts the eastern wall in its central part. It is located on the east-west axis of the room and it is accessible from the north and from the south by two flights of steps, consisting of two steps each. As is true of all the features above floor level in room 1, the platform was originally covered in white plaster. At a later date, perhaps associated with the laying of the mud flooring throughout the room, it received a coat of brown mud plaster. The upper surface of the platform was flanked by two engaged columns 60 cm in diameter, leaving a space of 190 cm in between. F19 appears to have been a step in the entrance to room 3 to the east. A fragment of a corner of a wall found in the vicinity had a painted border (it was the only evidence of polychromy on wall plaster), suggesting that the entrance from room 1 to room 3 was decorated. Few other features related to the occupation phase were preserved within room 1. A bench abutted the entire extent of the southern wall of room 1, and a foundation for what was probably a platform abutted the south and west sides of pillar base F11.

The lower floor F27 between pillar base F3 and eastern wall F1 was cut by a burial pit (Tomb 2, fig. 9). The pit was overlaid with a mud-brick covering and sealed with the upper floor F23. The human remains were preserved intact. Another human burial (Tomb 1) was excavated in the northwest part of the room, in a sand layer that was part of the foundation fill of the external walls of room 1. Both burials were laid on their backs and oriented with the heads facing east. No evidence of coffins, biers or grave goods was found, and only Tomb 1 contained remains of textile, suggesting that the body was wrapped in a shroud. The bones were collected and will be studied by a physical anthropologist in the future.

Building 7 had very deep foundations, which were investigated in test trenches 1 and 2. Trench 1 was opened along the western wall, between features F16 and F17. The bottom of the foundation courses of these features was reached at 138.78 m asl. Trench 2 was opened in the north aisle from the east end of colonnade foundation F9 to the western wall. The foundations of both of these walls were reached at 138.13 m asl and 137.44 m asl respectively. Thanks to the excavation of Trench 2 it is possible to attempt a tentative reconstruction of the foundation building technique in B7.

Considering the data collected in parts of Building 7 investigated in the 2012 season, it appears that this structure was a monumental public building datable to the 4th century AD largely on the

basis of ceramic evidence. The orientation of the building, the human remains buried in it during its use, as well as the Greek inscription found on its wall plaster, suggest its identification as a church.

Painted Plaster in B7 Conservation Report (Dorothea Schulz)

In course of excavating building seven the roof collapse was found. It contained a lot of painted plaster, mostly completely fragmented.

Luckily there were a couple of bigger pieces preserved as well and they could be carefully removed, treated with Paraloid B 72 in Acetone (5 and 10 percent) and subsequently being studied.

There were not enough big fragments to reconstruct the complete decoration of the ceiling. At least four different kinds of patterns could be described. In a future season the study of the painted plaster will commence in more depth and we will be able to get together more detailed information about the decoration. The patterns discerned were:

1. A pattern consisting of squares and triangles in red and yellow (fig. 10).
2. A pattern consisting of lozenges, octagons and squares in red and yellow (fig. 11).
3. A pattern consisting of hexagons, squares and lozenges in red and yellow, at least three different compositions.
4. Broad light and dark yellow bands, framing a purple band with a yellow garland.

Area 4.1 (Temple area) (Paola Davoli, Roberta Casagrande-Kim)

The 2012 excavations of Area 4.1 focused on squares AP48 (10 x 10 m), AO50 (10 x 10 m), and half of square AO49 (10 x 5 m), revealing, respectively, eleven pits in AP48 (F81, F84, F86, F88 to F95) and five pits in the other two (F80, F85, F87, F96, F98), all dug in the course of the past centuries to collect *sebbakh*. All three squares are characterized by a surface layer of wind blown sand mixed with pottery sherds, small fragments of temple blocks, and grinding stones consistent with the surface layers investigated in previous seasons. Below the sand, the whole extent of the squares is covered in a thick layer of mudbrick debris, mudbrick clusters, and remains of mudbrick walls suggesting the presence of substantial structures. These collapses lie on the pits' upper edges and reach down to the upper elevations of their fills. In the deepest pits (F81, F84, F87, F85) the lower elevations are filled in Aeolian sand, proving that the mudbrick structures collapsed not as a consequence of the destructive digging in the area but, more probably, for structural decay.

Temple blocks have been found mostly on the surface (DSU 159, 160, 181, and 185), above both the mudbrick collapses and the pits' edges. One particularly interesting cluster, DSU 185, revealed 7 decorated blocks (fig. 12) dated to the reign of Domitian, all pertinent in shape, size, and iconography to a gateway. The positioning of the blocks in the cluster and the discovery of another block for a door jamb in the vicinity, hint at the presence of an entrance to the late first century CE temple at this location, probably opened in the center of a forewall crossing squares AP50 and AP49.

Noteworthy is the uncovering of a coin hoard (figs. 13-14) of ca. 850 tetradrachms divided in three textile bags (traces of fabrics are visible) lying on top of a mudbrick debris layer filling pit F90. Apart from pits F80 and F96, cut in the spoil heap layers created by the partial dismantling of wall F101, all the other investigated pits were dug into earlier anthropic stratigraphies, identifiable by a series of horizontal layers alternating thick strata of dark ash, lime spots, and red compacted clay very similar in nature and composition to those found in previous seasons. These layers are in direct stratigraphic relation with a series of walls chopped off and badly damaged in the cut of the pits. The numerous bread molds and complete vessels found in situ by these walls and the abutting anthropic strata suggest that the pits cut through occupational layers dated to the Second Intermediate Period or even, as is the case for wall F101, to earlier phases.

So far at least four levels of walls have been recognized at different heights in the stratigraphy. Those belonging to the Roman or Late Roman period are all collapsed into the pits and are not anymore standing. The other visible walls can be provisionally assigned to three periods centered around the Second Intermediate Period.

Report on Egyptian Epigraphic Material (Olaf E. Kaper)

A total of 55 blocks and fragments of temple decoration were found during the season, and part of a stela.

The principal conclusions drawn from this material are the following.

Some 15 fragments may be ascribed to the temple built under Darius I.

The most important block among these carries part of four columns of a hieroglyphic inscription naming a high official with priestly titles, who was probably depicted in the temple of Darius I. His name or image is not preserved.

The finds include the left wing of a winged sun disk that may also be ascribed to the same phase of the temple. The solar disk belonging to it had already been found in 2005.

The top of the head of a baboon that stems from the rear wall of the Darius temple does not bring new information, but it is an important addition to the display of the reliefs.

A block with part of an inscription column was found that reused part of an earlier temple. The particular type of sandstone employed identifies this earlier temple as that of Psamtek II. The reuse of this earlier structure under Darius had previously been attested on two other blocks, and the present find confirms it again. The new relief is part of a large-scale offering scene with an altar facing left, and this shows that the building works under Psamtek II were more important than was suggested by the earlier finds.

No new information has emerged about the temples erected under Amasis, Nekaio II, or Petubastis, nor of the Roman temple under Titus.

Seven fragments may be ascribed to the temple built under Domitian. Among these is a fragment of a winged sun disk in a large raised relief.

A more important discovery is a series of five blocks that belong to a series of blocks found previously in an adjacent square. These pieces, which partly join to the previous lot, provide important new information about the Roman period temple. The size of an average offering scene with two deities and a pharaoh can be estimated on the basis of these blocks to have measured ca. 165 x 120 cm. These measurements mean that the decoration stems from a wall rather than a gateway as was previously thought. There are now remains of five different offering scenes from this part of the Roman building, and one additional scene probably depicts the Seven Hathors. The latter conclusion is based on a single block showing remains of two goddesses, at least one of whom is beating a tambourine. Two other blocks may be associated with this scene.

A few small fragments may be associated with the second century extension of the Roman temple, but no name has been found.

In addition to temple decoration, the excavations yielded a fragment of a composite capital as would be found in the hypostyle hall or pronaos. Evidence for material remains from a forecourt was found in the form of a small water basin and fragments of a horned altar.

The excavations also unexpectedly yielded a fragment of a private funerary stela of the late Old Kingdom or First Intermediate Period. The fragment forms the right half of a stela, depicting three standing male figures with part of a hieroglyphic inscription and a hieratic legend with one of them. The presence of two vessels in the image confirms its mortuary purpose. The presence of this piece relates to the digging of holes in the site in relatively modern times, which disturbed the Old Kingdom and FIP layers in the lower strata. The presence of funerary material in this location gives a precious indication of the nature of the remains from this early period at Amheida.

Apart from recording the new finds, the season was dedicated to preparing the visitors display of the temple decoration. Diagrams were prepared of the larger reconstructions that will form the principal attraction inside the block room once it is open for visit.

Documentary Material (Roger S. Bagnall)

The 2012 season produced about 111 *ostraka* from the Graeco-Roman period found this season, plus 4 hieratic *ostraka* from earlier periods. Of the Graeco-Roman *ostraka*, 5 were in Demotic; 1 was a pen trial; and 1 was probably just decoration or else a pen trial; the remaining 104 are Greek. They contain largely material of a familiar kind, particularly tags and labels of various sorts, particularly those mentioning wells from which agricultural produce came in to Amheida. There are also quite a few accounts or memoranda concerning wheat, barley, hay, wine, and other commodities. More unusual is an *ostrakon* providing a list of substances including aloe, sandarac, arsenic, opium poppy, and purple, with prices in talents.

Perhaps the most significant *ostrakon*, however, is important not so much for itself but as a marker of stratigraphic information. This text, just 2.2 x 2.1 cm, contains just five words: The well of Psoi, the man from Didyma. This man occurs also in O.Trim. 123, found in a dumped layer under the floor of room 4 in the House of Serenos, and also in inv. 14089, found in DSU 368 under the surface of Street 2. He occurs for the third time in DSU 77 under the floor of room 31 in B6. He gives us a consistency in tying together these dumped layers of pre-construction material in all three contexts that is enormously helpful in making sense out of the complex building history of Area 2.1.

A number of graffiti were found in B6 and B7 during the season; these are poorly preserved and still under study, but one of those in B6 is similar to an acclamation for the *basilikos grammateus* published by Guy Wagner in BIFAO 1976; in conjunction with the graffito of an officer of the garrison of the *kastra Trimitheos* discovered last year and studied further this year, it helps to suggest that B6 was public space.

The other major discovery of the year was a hoard of about 850 coins found in Area 4, in adjoining pits. Only a fraction of these have been cleaned so far, but all of those read to date are tetrachms minted in Alexandria by Roman emperors from Nero to Antoninus Pius. Most suffer from severe copper corrosion and will take quite a bit of time and effort to clean sufficiently to allow them to be read. As there is no intact stratigraphy in this pitted area, devastated by *sebbakhin*, we cannot recover the original context with any confidence. If the hoard was deposited during the

second half of the second century in this location, it seems likely to have belonged to someone connected to the temple, which was immediately adjacent.

Topographic Survey (Fabrizio Pavia)

The topographic work carried out during the 2012 season continued on the basis of what was already elaborated in 2011. The survey was conducted using a new polygonal triangulation centered onto 5 fixed points, S1, S2, S200, S400, and S600. S400 and S600 are two newly placed points, the first one located to the West of Building B6, and the second by the northern limits of the ancient city.

Topographic Assistance in the Fieldwork

Following the evolution of the work in the field, daily updates were prepared in Area 2.2, 2.3, and 4.1 to provide total stationing references, both in terms of fixed points and in horizontal and vertical photogrammetries to assist and facilitate the work of the archaeologists in building B6, building B7, and at the temple area. The result of the work generated a comprehensive plan of the three areas reflecting the architectural situation on the ground.

Site Survey (fig. 1)

The team continued the surface mapping of the site in two areas, the first one at the northern end of Area 2, the northeast limits of the city, measuring 140 x 110 m. Area 8 was the second investigated portion of the city, located to the northwest of the temple hill. This area is now covered by a thick layer of wind blown sand that prevents us from identifying the structures lying below it. Only a narrow north-south strip roughly at the center of Area 8 still has walls visible on the surface.

The surveyed portion of Area 2 presents architectural features clearly identifiable as dwellings, mostly rich houses, characterized by numerous rooms, often decorated with painted plaster, creating large overall plans. In several instances, the house plan recognized during the 2010 season, with two pillars situated at the center of the main room and vaulted rooms, is clearly visible also in this district of the city.

Area 8 is instead defined mostly by smaller rooms lining up along streets and corridors that are predominantly east-west oriented. From their sizes and orientations they do not seem to be part of dwellings but rather of street shops or other utilitarian buildings, possibly storage facilities. To the west of the temple hill, a large north-south street, at least 4 meters wide, is clearly visible from the

surface. Its orientation and size are similar to those of another street, identified in the 2010 survey, that crosses the ancient city on the other side of the temple hill, to the east (fig. 15).

The topographic survey of the city can now be considered concluded. The areas which are devoid of walls in the general plan are those completely covered by sand, which possibly obliterates the extant buildings. The next step would be the survey of the cemetery located south of the city.

Geologic Survey (Katherine A. Adelsberger)

Geologic survey during 2012 built upon the geologic survey of 2010 and a more limited survey in 2011, and focused on obtaining elevations for charcoal samples taken in 2011 as well as describing stratigraphy relevant to these samples where necessary. Previously-described sections were also re-visited in light of new hypotheses, in order to verify descriptions. Areas where Mut bedrock is found at the surface have been included in the GIS map. This year's investigations provide additional support for probable well-digging in the past, and reveal a paleosurface several meters above the modern surface that was anthropogenically altered.

The evidence identified during the 2012 season at Amheida supports the results of the 2011 survey. The current hypothesis provides for a series of events associated with local water, culminating in the abandonment of irrigation and a need to dig wells. At some point prior to occupation, during the Pleistocene but also potentially continuing into the Holocene, spring activity was frequent and led to the deposition of iron-rich precipitates and sands. This landscape was significantly deflated, and a playa environment provided for the preservation of sandy units overprinted with large root casts and oxidation. This playa deposit was followed by the deposition of dune and sheet sands. The presence of water issuing from groundwater vents, either through spring activity or through irrigation, is evidenced by massive sand units containing weak soil development, snails, pottery, charcoal, and organic matter. On top of these sediments we find excavated bedrock, indicating a later period of well excavation. The predominantly Roman-era pottery found directly beneath this excavated bedrock layer suggests Roman-era removal of bedrock and use of water, on a surface up to 1.5 m above the modern surface.

The Paintings in the Replica of Serenos' House (Dorothea Schulz)

Due to the fact that Dorothea Schulz was without assistants this year and that she unexpectedly needed to devote much of her time to work with painted plaster from B7, she did less in the replica than intended.

In the replica reconstruction the “wallpapers” (the geometrical patterns) in the domed room have been completed. The second “squiggly diamond” pattern is based on two fragments from the original house, coming from the southeast corner (fig. 16).

Furthermore, she went on studying the fragments from the original house, especially from the decorated dome. There are still many links missing and the patterns are not clear yet.

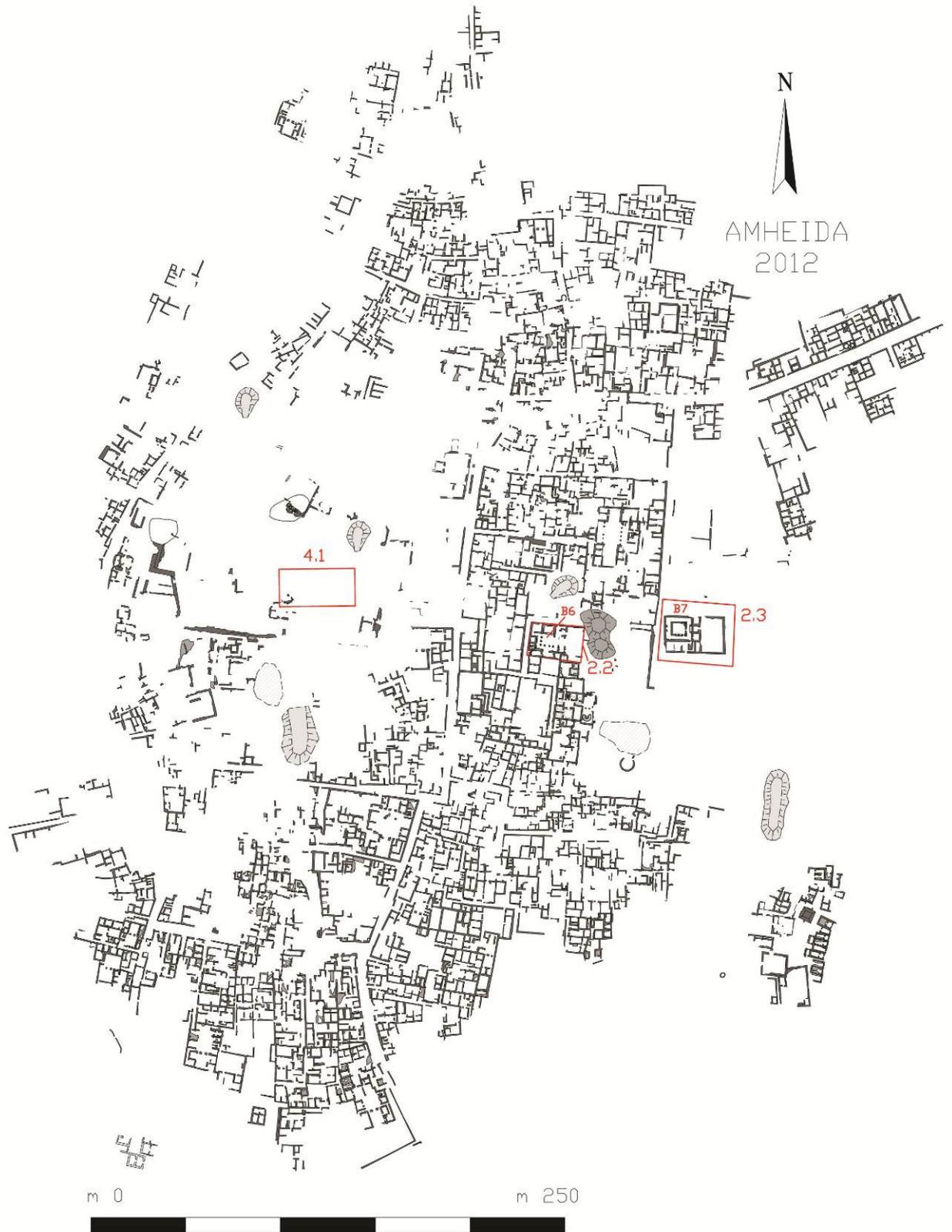


Fig. 1: general plan with excavated areas

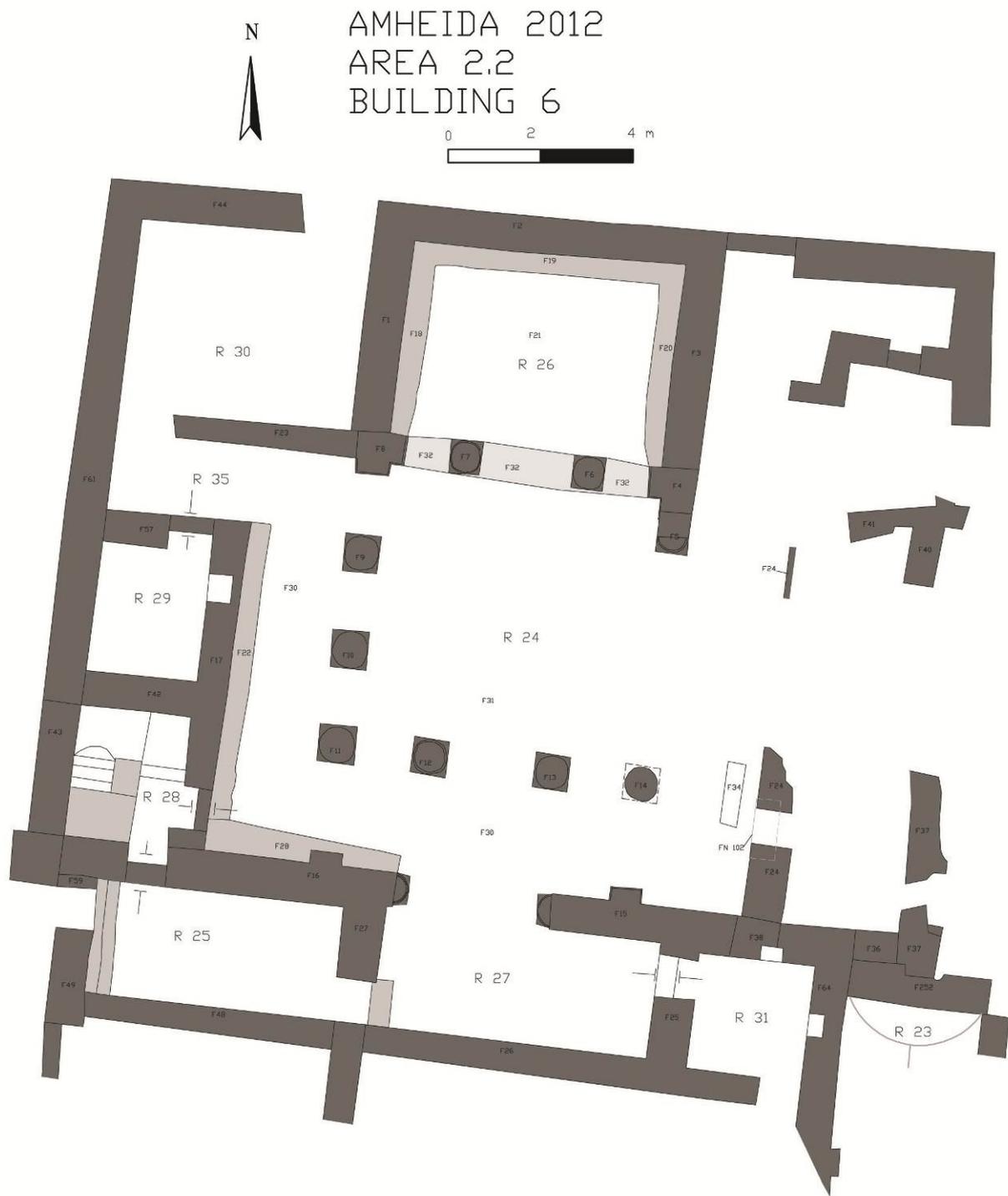


Fig. 2: plan of building B6



Fig. 3: B6, staircase in room 28 looking north



Fig. 4: B6, room 25 looking east



Fig. 5: mosaic *tesserae* from B6, room 30

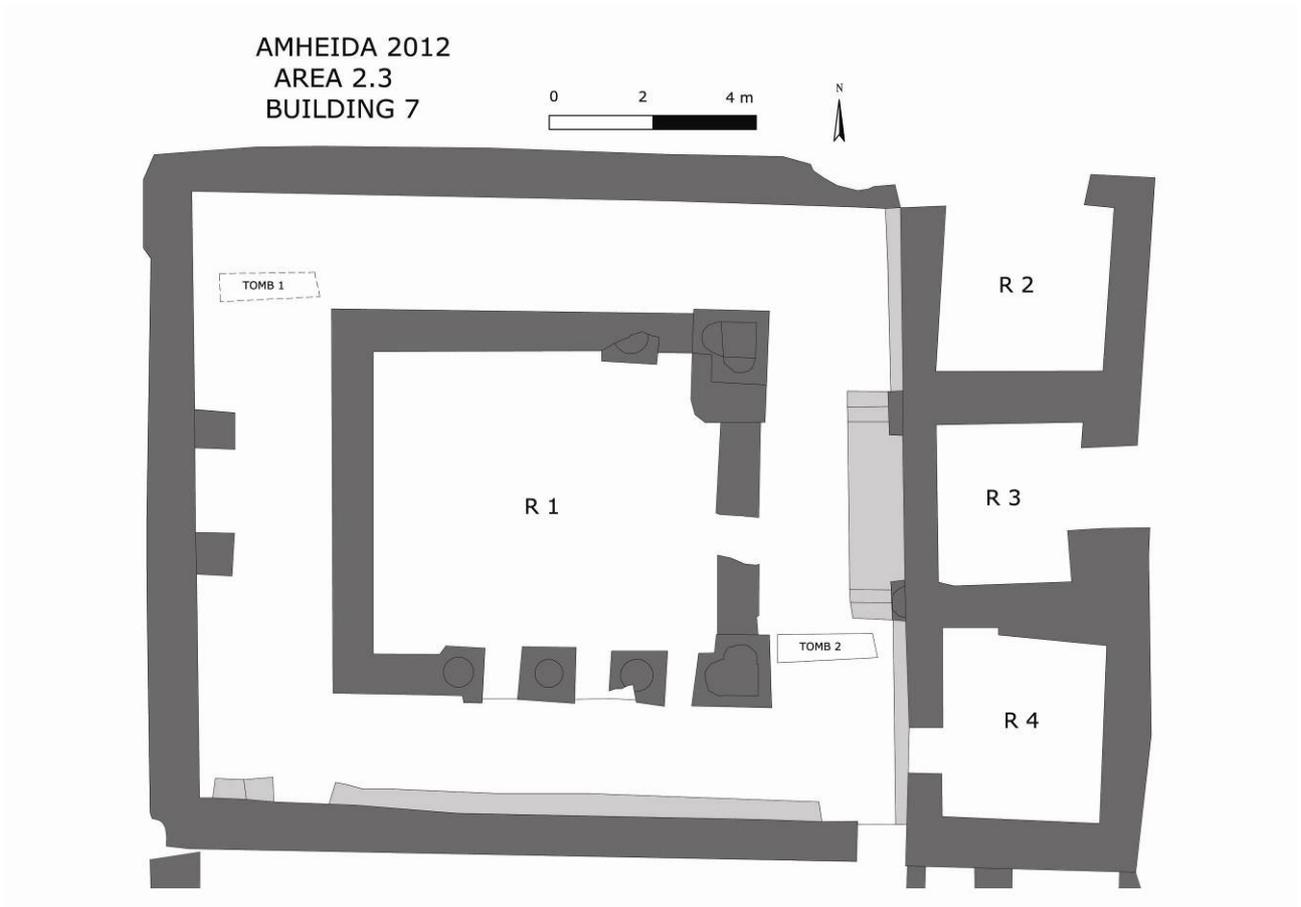


Fig. 6: plan of building B7



Fig. 7: B7, room 1 looking south-east.



Fig. 8: B7, fragment of painted plaster from the ceiling of room 1



Fig. 9: B7, tomb 2 in room 1

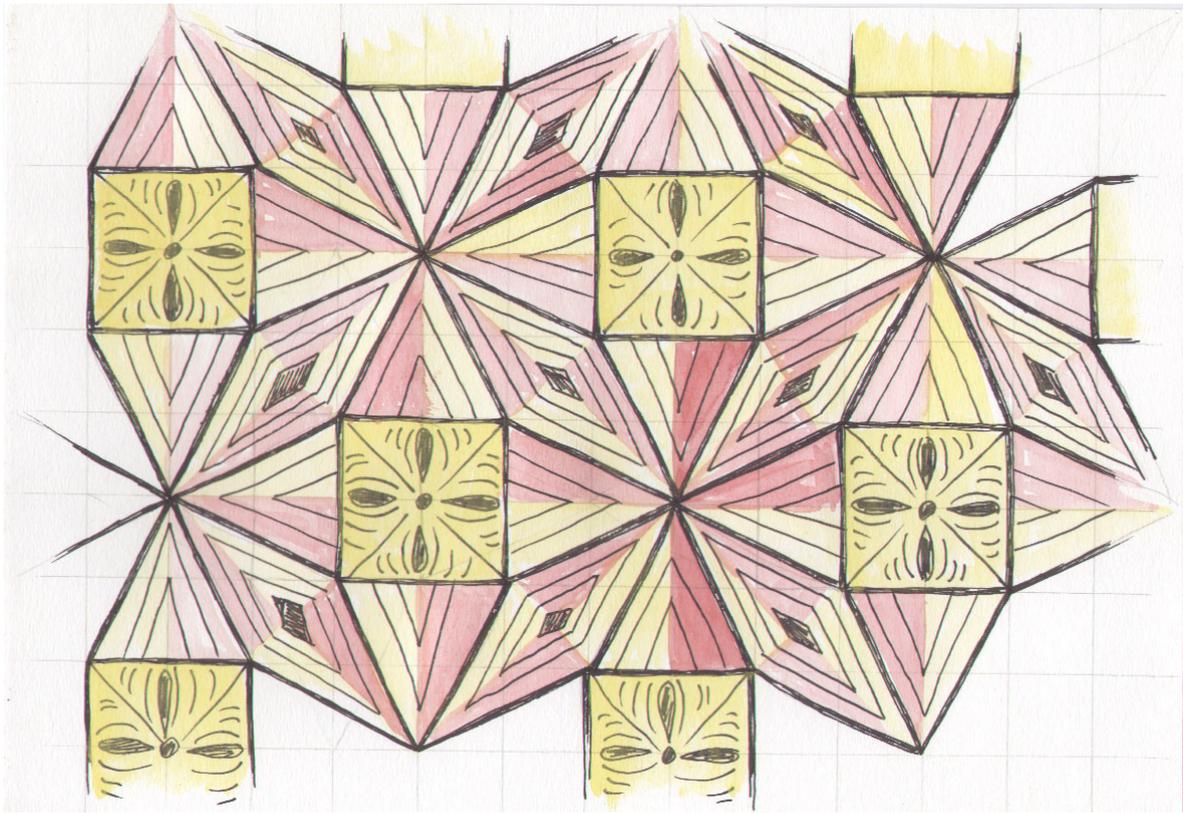


Fig. 10: B7, reconstruction of one pattern from the decorated ceiling of room 1



Fig. 11: B7, fragment of painted plaster from the ceiling of room 1



Fig. 12: Area 4.1, cluster of temple blocks (DSU185).



Fig. 13: Area 4.1, coin hoard in pit F90.



Fig. 14: Area 4.1, coin hoard and two restored coins



Fig. 15: Topographic survey, wide north-south street in Area 8



Fig. 16: Replica of Serenos' house, geometric patterns in the domed room