Amheida 2004-2006. New results from the excavations.

Paola Davoli, Università di Lecce

The site of Amheida, ancient Trimithis,[1] is located in the western part of the Dakhleh oasis. Its ruins lie about 3 km South of El-Qasr, west of the paved road that links Mut to El-Qasr. The extent of the ruins is still to be determined, but the area under the control of SCA is about 2.5 km North-South by 1 km East-West. The topographical survey, carried out in the seasons 2001-2003 by the Archaeological Mission of Columbia University directed by Roger S. Bagnall,[2] concentrated on the central area, where the main buildings are. The topographical survey is still in progress in the living quarters, in the necropolis, and in the surroundings, where numerous wells and old bed channels are still visible. Spring mounds and clay hillocks are scattered on the East side of the *kom*; they were used in different periods and, apparently, for different purposes.[3] During the 2006 season an archaic field of burials[4] has been identified in the plain South-East of the pyramid, near an ancient channel coming from a spring mound and around clay hillocks. The geophysical survey located a pre-Roman pottery kiln near one of these mounds.

The archaeological evidence collected to date at Amheida testifies to the presence of a settlement in this area at least from the Old Kingdom to the Late Roman Period. The major evidence comes from the main hill of the site (labelled area 4), where objects and potsherds dating back to many different periods came out from a very complex stratigraphy partly disturbed in the Ottoman period.

The topographical survey revealed that Trimithis was built in an uneven sandy area and with a quite regular pattern that followed the irregularities of the ground (fig. 1). Generally speaking, the

[1] For the identification of Amheida with Trimithis cf. R. S. Bagnall – G. R. Ruffini, *Civic Life,* 143-144.
[2] The mission is part of the DOP, directed by A. J. Mills. Amheida is DOP site no. 33/390-L9-1.
[3] Hundreds of spring mounds are in Dakhleh, with the largest and most complex structures present North of Gedida: M. R. Kleindienst – C. S. Churcher – M. M. A. McDonald – H. P. Schwarcz, *Geography, Geology, Geochronology and Geoarchaeology*, 34.
[4] Some skeletal remains are visibile on the surface in their original depositional places. This means that the skeletons became exposed because of the erosion, which can be quantified as at least 1 meter. A similar situation occurred at Sheikh Muftah, Localities 365 and 375: J. L. Thompson, *Neolithic Burials at Sheik Muftah,* 43-45.

plan of the structures visible on the surface, and thus apparently belonging to the last occupational phase of the city, shows a high density of buildings grouped in wide areas rather than in *insulae*, as happens in some other Graeco-Roman settlements in Egypt.[5] The longer streets seem to be oriented North-South and are roughly parallel to each other, although the major one has a completely different orientation towards the North-East. As far as we can see on the surface, the biggest and most articulated buildings (with columns and painted and moulded plaster) are concentrated South and East of the temple hill, the highest area of the site and that most plundered in modern times (fig. 2). Until now we have not been able to identify any street or *dromos* leading to the temple.

On a hill to the East of the temple area is a building characterised by a sort of peristyle oriented East-West. It is a mud-brick building with inner surfaces coated with a thin layer of gypsum. It is only partially visible from the surface, but its plan is very similar to that of the Large East Church at Kellis.[6] Fragments of paintings from the walls are scattered among the surface debris.

In the first three seasons of excavations our efforts concentrated on three sectors located in different areas of the city: the temple hill (area 4), a rich house located at the foot of the temple hill (area 2.1) and a Roman period house in the so-called industrial quarter (area 1.3) (fig. 2).[7] The method of excavation is stratigraphic and a dedicated program for the recording of the data and of the graphic documentation (drawings and photos) has been prepared.[8]

Area 4: the temple hill

The hill seems to have been completely built up, as we can appreciate on the North, East and West slopes, where numerous buildings are still partially visible. By contrast, the South slope is characterized by the presence of sand dunes and potsherds. The top of the hill is quite plain with few recognisable structures, and the surface has been damaged by hundreds of round pits of very

[5] For example Philadelphia, Soknopaiou Nesos, Karanis: cf. P. Davoli, *L'archeologia urbana.*
[6] G.E. Bowen, *The Fourth-Century Churches,* 66 Fig. 2.
[7] See A. Boozer in this volume.
[8] B. Bazzani is responsable for the data processing.

different dimensions. Wide areas of spoliation, now full of clean aeolian sand, are clearly visible along the North slope.

During the past two field seasons we excavated a sector of about 20 x 20 meters in the central area (area 4.1), a second one of 10 x 10 meters on a small hillock on the North (fig. 3) (area 4.2), and cleared part of the surface in order to define the boundaries of the temple area and the *temenos* wall. The latter survives partially on the South side of the area, where a 20 m long wall is still standing (fig. 4). Scanty evidence of walls 3 meters thick found on the East and West sides testify to an irregular perimeter. The *temenos* enclosed an area of about 120 x 70 m, apparently oriented East-West. During the 2006 season sector 4.2 was opened to test the nature of a hillock characterised by numerous scattered chips of sandstone, which suggested the presence of a sandstone building. Another similar hillock is on the West side of the area. Both mounds appeared to me as possible locations of gates in the *temenos*. A possible fragment of a lintel with a Greek inscription, carved and painted in red, mentioning a Kaisar, probably Trajan, and a piece of a baboon statue were found on the surface near the western hillock and point to this identification.[9]

The foundations of a building in mud-brick and in sandstone blocks were found during the excavation of area 4.2 (fig. 5). Their poor state of preservation and the orientation, which is not perfectly aligned with the South *temenos* wall, prevent me from giving a clear interpretation of these ruins until the area has been completely investigated. Indeed, the *temenos* wall, as well as other buildings, disappeared because of the massive robbing that took place in this area. The surviving walls have a different orientation from the other visible structures. The foundations of the building consist of a sort of a foundation room built in mud-brick, within which are three sandstone blocks walls along the perimeter and a grid of mud-brick walls in the centre. The stone building is about 4.80 x 3.20 m and it is preserved to a maximum height of five courses (1.25 m ca.) of large blocks cut rather summarily and poorly aligned. On three of them, on their upper surfaces, are Greek black ink inscriptions written by the same hand and record the names of Petosiris son of

[9] Inv. nos. A05/0.0/1/2001; A05/0.0/1/2006.

Tithoes and Petenephotes son of Petosiris (fig. 6).[10] The structure belongs to the Roman period, and it reused a previous period mud-brick wall in the foundations. The stone building was quarried and its eastern, western, and southern sides were deeply damaged by cutting huge pits. In this condition it is very difficult to understand the original shape and function of the building, but I cannot rule out the original idea of the gate in the *temenos* wall. The thick mud-brick wall on the eastern side is built on a deep deposit of hard rubble intentionally packed. The same rubble is present on the western side and the potsherds found in it have been dated mainly from the Late Period to the Ptolemaic period. Potsherds of the Old Kingdom, Middle Kingdom, and Second Intermediate period are also present.[11] Similar layers of packed rubble were found under the foundations of temples at Mut el-Kharab and El-Kab.[12]

The most important discoveries came from sector 4.1 in the centre of the area. Hundreds of sandstone blocks and column drums from a temple were discovered in the filling of the pits, thrown in at random after digging through the archaeological remains (fig. 7).[13] Of these blocks, about 400 are decorated; they belong to temples dedicated to Thoth in different periods. O. Kaper, who is studying them, recognised at least three temples on the basis of the names of the kings preserved and of the style of the reliefs. The most recent temple was built in the Roman period using the blocks of the previous phases.[14] The names of the emperors Titus and Domitian recur on some blocks which seem to belong to the inner part of the sanctuary, the forepart of which was built, or

[10] These names seem to have been painted after the blocks were positioned in the wall. For this reason they are not to be regarded as builders's marks, as they have been in other cases: R. Martin, *Manuel d'architecture grecque, I*, 224-225.
[11] The pottery of 2005 and 2006 seasons was processed and studied by G. Pyke.
[12] C.A. Hope, *Mut el-Kharab: Seth's City*, 4; J.-Cl. Goyon-J. Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique*, 240.
[13] Several temple blocks have been reused in tombs and houses built in the seventeenth and eighteenth centuries in El-Qasr. It is now sure that they originally belonged to the Amheida temple of Thoth: P. Davoli-O. Kaper, *A New Temple for Thoth*, 13.
[14] On Roman temples in the Dakhleh oasis see: O. E. Kaper, *A Painting of the Gods of Dakhla,* 204-215; Id., *Doorway Decoration Patterns in the Dakhleh*, 99-114.

decorated, during the later half of the second century AD.[15] Among the reused blocks two main phases can be distinguished: one dates back to the 26th dynasty,[16] and the second one to the 23rd dynasty.[17] A hieratic stela (fig. 8),[18] also reused in the masonry, belongs to this period. It testifies to the donation to the temple of Thoth of emmer and loaves of bread by Esdhuti, the Libyan chief of the Shamain, in the year 13 of the reign of Takeloth III. This monument brings new light on this poorly-known historical period and is clear evidence, together with the blocks of the contemporary temple, that Takeloth III and, before him, Petubast I were recognized as kings in the Southern Oasis.

No structural part of these temples has survived in the excavated squares, including the foundations, which must have been very shallow. The plan of the temple is not recognizable, and the only possibility we have to define a schematic disposition of rooms is to examine carefully each block in its actual position in relation to its shape and decoration. The hypothesis on which we are currently working is based on very scanty evidence, such as the position of the South *temenos* wall, a possible South-East corner of the *temenos,* and a collapsed wall of sandstone blocks found in 2005.

A substantial contribution to the current hypothetical plan of the temple came from the above mentioned collapsed wall (SU A05/4.1/25) (fig. 9), which turned out to be part of a corner with an unfinished torus cornice (fig. 10). The position of this collapse suggests the presence in this area of one of the external corners of the temple. If this was the case, it is possible to trace approximately the position of two walls, whose orientations match with that of the South *temenos* wall. The position of the blocks scattered throughout the area suggests an East-West orientation of the temple,

[15] On the temple building program of the emperors in the Southern Oasis see: O. E. Kaper, *Temple Building in the Egyptian Deserts*, 139-158.
[16] The names of Necho II, Psamtek II and Amasis occur on some blocks. The name of Darius I may be recognized in a fragmentary cartouche: O. E. Kaper-R. J. Demarée, *A Donation Stela in the Name of Takelot III*, 19-20.
[17] The name of Petubast, probably Petubast I, is preserved on a block: O. E. Kaper-R. J. Demarée, *A Donation Stela in the Name of Takelot III*, Fig. 1
[18] O. E. Kaper-R. J. Demarée, *A Donation Stela in the Name of Takelot III*.

too: part of a monumental cavetto cornice[19] of a gate was found in the easternmost square (AP50), not far from a block originally part of a jamb.[20] Several column drums,[21] complete or fragmentary, are concentrated in the centre of the excavated sector and might have been part of a hypostyle hall and/or of a courtyard with columns (fig. 11). Several blocks and a drum attest to the presence of screen walls.[22] In the westernmost area of the sector a high concentration of reused blocks has been noticed, together with blocks belonging to the *subassement* decorated with fecundity figures. According to O. Kaper, these were part of a hall or of a chapel built by Titus.[23]

It should be noted that the majority of the blocks found were set in the lower part of the building, as is demonstrated by the decoration and by the presence of a black thick deposit that covers the surface of some drums and of several slabs that were surely part of the floor. The same kind of deposit was found in the Deir el-Haggar temple, spread on the architectural elements located on the central or processional axis, and on many features and parts of furniture in the temple of Tutu at Kellis.[24] In this last temple it has been shown to be a deposit of olive oil used during cult practices.

From the blocks found thus far it is possible to draw the kind of masonry used in the Roman temple. It was built with blocks of medium to small sizes with a great variety of measures. The blocks are generally roughly cut and the walls were built using a huge amount of white gypsum mortar and chips of sandstone to fill the gaps among the blocks, particularly in the core of the walls.[25] The outer faces of the walls were quite regularly built, with courses of about the same height (20-26 cm) and with blocks whose outer faces were cut with bosses surrounded by four

[19] Inv. no. A06/4.1/80/11165: it measures 110 x 91 x 36.50 cm.
[20] Inv. no. A06/4.1/92/11167. The Roman temples in ‘Ain Birbiyeh, Deir el-Haggar and Kellis (main temple and West temple) have an East-West orientation, too: A. J. Mills, *‘Ein Birbiyeh*, 23-24; Id., *Deir el-Haggar*, 25-26; C. A. Hope, *Observations on the Dating*, 44-45 Figs. 4.1, 4.2.
[21] 13 column drums or fragments of drums have been found. Their diameters measure 82.60 cm, 84 cm and 85 cm.
[22] Inv. no. A05/4.1/18/3442.
[23] Personal communication. On fecundity figures in Dakhleh temples see: O. E. Kaper, *Local Perceptions of the Fertility*, 70-79.
[24] A. J. Mills, *Deir el-Haggar*, 25; A. Ross, *Identifying the Oil*, 263-267.
[25] The same technique has been observed in the main temple at Kellis, in walls built during “Phase 3”: J. Dobrowolski, *Remarks on the Construction*, 123.

chiselled cornices, following the current technique in Graeco-Roman period masonry.[26] The vertical joints of the blocks are usually not very well levelled and the presence of a sort of anathyrosis is rare; vertical channels for liquid mortar are also rare. On few blocks are slots for dovetail cramps; one of these comes from a wall decorated in the reign of Titus.[27]

Blocks with bosses and masonry marks are common in the investigated area and may have been part of the foundations of the temple, where guidelines were necessary for the masons and there was no need to smooth the blocks cutting away the bosses. The marks are essentially of two kinds: chiselled and painted. Among the painted marks some are short hieratic inscriptions in red ink,[28] others are simple drawings quickly traced with black charcoal in the shape of X, I, and an elongated α (fig. 13).[29] Red-painted or chiselled thin lines were used for alignment. Their presence on many of the blocks suggests to me that they might have been part of a foundation platform, on which the perimeter of the walls had been marked, or of the base of walls.[30] During the Roman period the plan of the buildings was marked on their foundations with chiselled or painted lines that helped the workers during the construction phases. These lines were marked on the inner surface of the retaining mud-brick walls, when the stone walls were singly founded,[31] or on the upper surface of the foundation platform, as is the case in the Roman Mammisi at Dandara and in the courtyard of Kom Ombo temple.[32] These guidelines formed the limits and the precise perimeter of the walls. Each external block of a wall was aligned with the line by the masons.

At Amheida these lines were also cut on many of the reused blocks, mainly on the worked face and along one side (fig. 14). This means that these blocks were not reused in the Roman period

[26] J.-Cl. Golvin-J. Larronde, *Etude des procédés I*; J.-Cl. Golvin-R. Vergnieux, *Etude des procédés IV*.
[27] Two cavetto corniches inv. no. A05/4.1/15/3053; A06/4.1/7/11025. Relief inv. no. A06/4.1/62/11064.
[28] Inv. nos. A05/4.1/10/3040; A06/4.1/7/11020.
[29] Inv. nos. A05/4.1/31/3397; 3188; 3231; 3341; 3400; 3401; 3402; 3434.
[30] Cf. J.-Cl. Goyon-J. Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique*, 247-248, 250.
[31] P. Davoli, *Lo scavo 2000*, 7-56; Ead., *Lo scavo 2001*, 7-69.
[32] J.-Cl. Golvin-J. Larronde, *Etude des procédés I*, 167; J.-Cl. Goyon-J. Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique*, 94-95, 249.

masonry following their proper orientation, but lay with the worked surface as the upper joint bed. It has been noted in many occasions that reused blocks from previous temples have been employed as dry filling in the foundations of new temples. At Amheida, white mortar is still stuck on most of the reused blocks; they were thus not used as dry filling in the foundations but in the masonry.[33] Some scholars have raised the question whether in these circumstances the holiness of the blocks had been respected and preserved or if this use was simply due to practical reasons.[34]

As I have said above, the blocks were found in the filling and at the bottom of several pits that were cut on the hill. In the excavated sector the pits cover the whole area and they cut each other. They were excavated in the ground under the temple, after this had been removed, and a sequence of horizontal layers of dark soil rich in ash, charcoal and pottery was identified. This stratigraphic deposit is very thick, as we were able to observe following a pit more than 3 meters deep, and the potsherds found in the area date from the Old Kingdom to the fourth century. The considerable number of bread moulds and grinding stones suggests the presence of a bakery nearby, possibly active from the Late Old Kingdom to the New Kingdom.[35] Some mud-brick walls have been identified in it, but it will take further investigation to understand this complex and disturbed context. These walls do not seem part of foundations or retaining walls of the temples. The magnetic survey conducted on this area in 2005 by Tatiana and Sergej Smekalov, produced a map that revealed the presence of sub-surface structures. A rectangular enclosure of about 108 x 56 meters is located on this map in the central part of the hill. Its dimensions and orientation are very similar to the Old Kingdom enclosure found at ‘Ain el-Gazzareen.

It is evident that in area 4, the floor level of the Roman period completely disappeared because of the erosion and of the robbing activities. On the basis of some elevations taken in area 4.2 on *in*

[33] Reused blocks are often found as dry filling in the foundations: J.-Cl. Goyon-J. Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique*, 240, 251-252.
[34] Di. Arnold, *The Encyclopaedia*, 200 (s.v. Re-use of blocks); J.-Cl. Goyon-J. Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique*, 253.
[35] Seeds of barley have been identified by J. Walter in SU A06/4.1/96. Considerable quantities of emmer have come so far only from samples collected in area 4.1. A bakery of the Old Kingdom has been excavated by A. J. Mills in ‘Ain el-Gazzareen: A.J. Mills, *Deir el-Hagar, ‘Ain Birbiyeh, ‘Ain el-Gazzareen and El-Muzawwaqa*, 28.

situ foundation blocks and on the still standing portion of the South *temenos* wall, I can suggest that this floor level was 1.5 m higher than ground level today (equivalent to 6 or 7 courses of blocks).

Area 2.1: The Late Roman house

The excavation in sector 2.1 begun in 2004, from the painted room discovered during a DOP survey in 1979.[36] The excavation of the house is not yet finished, and the objects found inside it are still under study. Therefore, the following considerations are preliminary and are subject to change as the work proceeds.

The house is located in a densely inhabited habitation area and is part of a block bounded on the East and West sides by narrow streets (fig. 15). Its plan was originally square with sides of 15.30 m; an extension to the North was built connecting the house with a room that was originally part of another building.[37] It is not yet clear if the house was connected to the South with another building of similar plan and to the North with a courtyard excavated in 2006 and labelled Rooms 9 and 10.

The house is composed of 13 rooms (fig. 16), of which one is a staircase, one is a corridor leading to the added Room 15, and one probably a central courtyard (R2). Four of these rooms are still to be excavated (R11-14). They are aligned along the West side, were clearly covered by barrel vaults, and are painted. These will be excavated in the next season.

The ground floor of the house is preserved to a maximum height of 2.80 m. The entrance to the house is on the East side, through a *vestibulum* (R7) that leads to a central room or courtyard (R2) on which other five doors open, and to Room 8. Room 7 had a barrel vault cover that was restored or rebuilt once. A round-topped small niche (40 x 45 cm, 40 cm deep) with an arched groove (7 cm wide) for an applied decorative cornice, which has now disappeared, is set in the South wall.

Room 2 (5 x 3.75 m) was probably an open space, paved with packed mud. The walls were mud plastered twice: the older layer was painted in dark red. On the West and South-West walls there are two well preserved rectangular niches with hollows for wooden shelves and lintels. The niche

[36] Cf. R. S. Bagnall – G. Ruffini, *Civic Life*, 144 and previous publications.
[37] This room (R15) and the nearby courtyard (R9, 10) need more investigations in future seasons.

on the West wall is a real cupboard set 80 cm above the floor, 120 cm high, 80 cm wide, and 45 cm deep (fig. 17). The one on the South-West wall, aside the door into Room 1, is 70 x 70 cm and 50 cm deep. A small pot is mortared into its western corner.

The most significant room is Room 1, situated at the back of the house, completely painted and originally covered by a dome (4.46 x 5.36 m). The entrance door, 1.30 m wide, was set in the centre of the North wall and was closed probably by two wooden leaves hinged outside the room (fig. 18). The leaves opened into Room 2. Figural paintings cover a register running on the preserved upper part of the four walls. Probably there were at least two registers with figurative scenes, and the dome was decorated also. On each wall are different themes drawn from Greek epic and mythology. The scenes are bounded by black belts that form frames of a sort. The name of every character on the North part of the East wall is painted in white on the upper black belt of the register. We can see Perseus rescuing Andromeda, Odysseus, some Olympian gods, Ares and Aphrodite, Harpocrates, and perhaps Isis (fig. 19). Only one scene on the West wall apparently depicts the family owner of the house, sitting at a banquet. Panels with geometric pattern decoration are painted on the lower part of the walls. The room was painted twice, and in many spots the previous paintings partially emerge under the thin layer of the plaster. The first decoration was different and apparently of a better quality.

The paintings have been consolidated by C. Silver and are under study by H. Whitehouse. They have been photographed with photogrammetric technique and drawn by M. Hense. The humid environment forced us to backfill the room with sifted sand to preserve the paintings after their consolidation. The room is paved with packed mud; three small niches are preserved in the East, North-East and South walls. The first one is set 1.30 m above the floor and measures 48 x 60 cm; the one located on the North-East wall is 1.17 m above the floor and measures 42 x 42 cm (fig. 20). The third one is 1.20 m above the floor and measures 40 x 60 cm. The South wall is partially collapsed on its eastern side.

Another room (Room 6) is quite singular for its measurements (fig. 21). It is 7.20 m long and 3.56 m wide. It was covered with a flat roof, the timbers of which left their impressions on the sandy filling of the room. The function of this room is not clear yet, as nothing was found in it that could lead to any interpretation. The most remarkable element is a bench 13 cm high built with mud bricks along the southern wall. Nevertheless it is evident that the room was modified: a door leading to the street and placed in the south-eastern corner was closed and a new mud floor was made. A step 18 cm high and built with red bricks was in front of the door. The room is completely plastered with thick layers of mud. The doorway is in the north-western corner and is 95 cm wide. The lintel and the sill were originally formed by wooden poles plastered with mud. The wooden door was hinged in the North-West corner of the room and opened inside the room. Two holes for a lock and a bolt[38] are on the South side of the doorway. A long mark of rubbing has been left by the lock on the wall. In this way, the door could be closed both from inside the house (R2) using the lock and from inside Room 6 using the bolt.

A niche is set in the West wall of Room 6, 1.23 m above the floor. It is 75 cm high, 62 cm wide and 40 cm deep. Originally there were two wooden shelves inside. Around the niche and the doorway there are bands 35-40 cm wide of a thin layer of white gypsum plaster (fig. 22).[39] The inside of the niche was probably completely white plastered as well. The same kind of plaster is present on the eastern wall, in front of the doorway, as an isolated vertical band 42 cm wide and slightly curved towards the South (fig. 23). Its purpose is not yet clear.[40]

Rooms 4 and 8, originally connected with a door placed in the South-West corner of R8, were used as cooking and living rooms. A small hearth was found in Room 4 and some fragments of

[38] They are one over the other. The first one is squared (7 x 8 cm, 7 cm deep) and probably corresponds to the lock; the second one is round (ø 6 cm, 10 cm deep) and deeper and might have been used for a bolt.

[39] Similar niches with white plaster cornices have been found in Area A House 3 at Kellis: C.A. Hope, *The 1991 Excavations*, 42.

[40] It does not seem to be a decorative pattern. Because of its position and color it is possibile that it might have reflected and shed the light coming from the courtyard through the door into the room. We do not have any idea of the position of the windows in the house, because they must have been higher than the actual preserved walls, as usual in Greco-Roman domestic architecture in Egypt: E.M. Husselman, *Karanis*, 44.

grinding stones are set in the floor of Room 8. Most of the coins found in the house were concentrated in the filling of Room 4. They are all from the fourth century, with the most recent one minted between 378 and 383 AD (inv. no. A04/2.1/15/91). Room 4 (3.24 x 3.10 m) is connected with the courtyard R2 and had a vaulted ceiling, partially preserved over the South wall. The walls are mud plastered and two white plaster bands run at the same height on the North and East walls, as in Room 8. On the western wall there are two small niches probably used for lamps. Around one of them there is a wide cornice of white plaster. A third small niche with round top is located in the South wall.

Room 8 (2.76 x 3.10 m) was covered with a barrel vault ceiling, now completely collapsed. The room is connected with Room 7, but originally a door opened in the West wall in Room 4. This door, about 90 cm wide, was blocked off with a wall[41] and the room was replastered with mud, still quite well preserved. On the mud plaster there are three white plaster bands 48 cm high on the North, East and West walls (fig. 24). These are about 1.20 m above the floor level and only the one on the North wall extends over the whole length of the wall. The other two are very short. All of them end with short projecting parts.[42] The floor of the room is quite rough, made of packed mud with several stones set into its surface.

Some test trenches have been excavated in the floors in Rooms 1, 2, 4 and 8. They have revealed that the house has shallow foundations (about 50 cm) and thus no underground cellars.[43] Under the floors, all made of mud, are series of horizontal fillings consisting in hard packed rubble rich in potsherds. The test in Room 1 (2 x 2 m) revealed the presence of only one floor set on five horizontal layers of ash hardened probably with water and laid over the sand. A coin from one of

[41] The wooden lintel is still *in situ*.
[42] Similar white bands are in Rooms 4 and 6. Two similar bands were found in the 2006 season on the North and East walls of Room B3 in 'Ain el-Gedida (4th century): see N. Aravecchia in this volume. White plaster bands were also found in Area A, House 1 at Kellis: C. A. Hope, *Excavations at Ismant el-Kharab*, 49.
[43] Underground cellars are very common in the Roman period houses of the Fayyum, but not in those of Dakhleh oasis: cf. Davoli, *L'archeologia urbana*, *passim*; C. A. Hope, *Excavations at Ismant el-Kharab*; C. A. Hope, The 1991 *Excavations*; C. A. Hope, *The Find Context*, 5-7.

these layers is datable between 355 and 361 AD[44] and seems to suggest that the floor and the preparatory layers under it were made at the same time early in the second half of the fourth century.

Instead, in Room 2 a sequence of three floors and fillings among them has been recognized. They were particularly rich in Greek *ostraka*, currently under study. Only one floor level was identified in Rooms 4 and 8. No traces of previous buildings have been found in these trenches.

Room 15 is 5.61 m long and 2.60 m wide (fig. 25). Its original access was from a central door in the North wall, while a new one was opened in the South-West corner. In a second phase of the room, a floor was built using beams and reeds or wooden planks supported by rough pillars made with reused large red bricks. The new floor was 85 cm above the original one and was reached by a flight of eight steps built against the South wall.[45] The access to this staircase was from a corridor (R16) built under the staircase R5 and oriented North-South. We do not know the reasons of such an unusually high floor in R15. A great quantity of pottery, some decorated, was found on the floor, but nothing survived of the organic materials. It is possible that on the East wall there was a long shelf supported by a step in the wall. Among the pottery, still under study, are table ware pots, like bowls and flasks, and storage vessels like amphorae and jars.

White gypsum plaster is present only on parts of the walls, in the northern half of the room. It belongs to a previous phase of the room when the northern door was open and the room was probably part of another building. The plaster was originally painted in yellow topped by a red belt at about 1.50 m above the original floor. It was then painted with a whitewash on which a series of inscriptions were written in red ink.[46] The best preserved text is on the East wall and is a scholastic rhetorical composition in verse.[47] The unusual presence of a scholastic text written on the wall suggests that the room was originally used as a school, but to understand better the original situation

[44] Inv. no. A06/2.1/164/11324.
[45] This staircase is built with mud bricks, with the surface of the steps and the landing of baked bricks.
[46] See R. S. Bagnall in this volume.
[47] It will be published by R. Cribiore and D. Ratzan.

of this room we have to continue the excavation in Room 15 and North of it, through the closed door.

To the East of this room is a wide courtyard of 9.59 x 6.86 m divided into two spaces by walls (fig. 26). Apparently, the only access was a door in the North-East corner, subsequently blocked with a wall. We will ascertain in the future if the house communicated at some point with the courtyard through the corridor R16 running under the staircase R5. The courtyard was roughly paved with mud, and mud-brick *mastabas* were built against two walls in the two areas. Their dimensions are similar (60 to 80 cm height) but their function is unknown. The courtyard was turned into a dump after the closing of the door.

Under the floor, a complex stratigraphy of previous building phases emerged. The most interesting and well preserved building is a circular room built in mud-brick with a diameter of 4.50 m and a preserved height of 80 cm. The inner surface and the floor were plastered with white gypsum plaster. The floor was restored with mud and covered with wooden planks fixed with big iron nails. The wood disappeared but the impressions left on the mud are still visible. We will continue the excavation under the floor in the future, but for the moment we can say that there is a cavity under it with squared pillars in red bricks, probably a *hypocaust*. Ceramic pipes (*fistulae*) set into the round wall might have been used as funnels for smoke. Two of them are preserved, with soot covering their insides. This building might be contemporary to the first phase of the house or even earlier. Its function is still to be clarified. Some traces of yellow powder, probably ochre, found on the white plaster inside the circular room might suggest some sort of industrial production.[48] The presence of a *hypocaust* under the floor would suggest a thermal usage, were it not for the mud-brick masonry.[49]

[48] According to Pliny, N.H. XXXV 35, red ochre was also produced by burning ochre in new pots lined with clay. On the identification of the yellow pigments present in Kellis paintings and in the sorrounding desert cf. M. Berry, *The Study of Pigments from Shrine I*, 53-60.

[49] Baths, public or private, are well known in Egypt during the Hellenistic and Roman periods. Some of these are composed of one or two round rooms (*tholos*) with short basins all around the wall. These rooms were built in backed bricks or in concrete: see P. Davoli, *L'archeologia urbana*, 279, 295, 305. Some rooms in the baths were built in mud-brick, but no water was used in them. In

At this stage of our work it is possible to say that the house was active during the fourth century and that it was restored and modified in some parts, probably at different moments: the vault of the *vestibulum* (R7) was replaced, probably after a collapse; the door connecting the street with Room 6 was closed, as was the door connecting Room 4 with 8. The painted decoration of Room 1 was renewed at an undetermined date. The floor of Room 1 seems to have been completely dismantled and replaced after the year 355, as testified by a coin found in the preparatory layer under it. The floor in the courtyard R2 was renewed three times, probably because of damages due to frequent passage and to exposure. To connect Room 15 it was necessary to modify a small room under the stairway, transforming it into a corridor (R16) leading outside the house, where two walls were built to avoid the passage from and to the courtyard 9.

The coins found in the fillings inside the house are mainly from the period 345-365 and thus they suggest that the abandonment of the house occurred in the second half of that century. The *ostraka* found in the fillings of the rooms are sometimes dated by regnal years that appear to belong to a broader span, ranging from the late third century to around 360.

According to R.S. Bagnall, the last owner of the house was a member of the city council named Serenos, whose name and activities are mentioned in some private letters written on *ostraka* and found in the house (Room 2).[50] Thus, we can suppose that the restorations of some parts of the house, the enlargement to the North into Room 15, the re-flooring of the Room 1 and the second painting layer also in Room 1, belong to the time of Serenos. However we have to wait for the end of the excavation to reach a better and more solid interpretation of the chronology of the house.

The house was built with careful construction techniques, with quite uniform bricks of 30-32 x 15-17 x 8 cm.[51] The bonding is the so-called English bond, except in the late addition walls in

---

the Karanis bath the only mud-brick room was the entrance room; the *laconicum* had a rectangular shape, with *fistulae* in the backed-brick walls: S. A. A. El-Nassery – G. Wagner – G. Castel, *Un grand bain gréco-romain à Karanis*.

[50] On Serenos and his possibile identification with a *praepositus pagi* cf. R. S. Bagnall – G. R. Ruffini, *Civic Life*,145-152.

[51] The average size of 30 x 15 x 10 cm is very common in buildings dated from the Late Ptolemaic period to the Roman period: cf. A. J. Spencer, *Brick Architecture*, 82, 147, Pl. 42.

Rooms 9 and 10. The steps of the two staircases (Room 5 and F97 in Room 15) are built with red bricks, possibly reused. Reused red bricks are also present in Rooms 15, 10 and 9, and at the bottom of some perimeter walls. Squared red bricks of 30 x 30 x 7 cm (*pedales*) were used to build rough pillars used as support for a wooden floor in Room 15 and in its staircase. Baked bricks are present under the floor of the round building found in courtyard 9 and many are scattered in the ruins of buildings located North of the house. A large circular baked-brick building has been recognized during the magnetic survey in 2005 East-South-East of the house. It is thus possible that the baked bricks employed in some parts of the house were collected from dismantled industrial or bathing buildings. As far as we know at the moment, they are present only in the North side of the house.

Most of the rooms were covered with barrel vaults built with mud bricks of bigger size (35-36 x 20-23 x 7-9 cm) than those used in the walls. They bear finger impressions on each side, in the shape of three concentric circles, in order to receive a quantity of mortar and better adhere to the other bricks. The vaults spring directly from the walls; thin supporting walls are never used in the house.[52]

The stratigraphy found in the three excavated sectors testifies, quite surprisingly, to the absence of thick sand layers among the subsequent building phases explored so far. Houses 2.1 and 1.3 were built on a layer of sand, and they were covered by sand after their abandonment. Wind erosion on the surface of the site is quite high and can be estimated in 1.5-2 meters. In fact, there are few still standing buildings, and the skeletons in the archaic tombs South-East of the pyramid are completely exposed. For the same reason, the floor level of the Roman period temple area has completely disappeared. In spite of the fact that we do not know anything of the landscape of the countryside around Amheida in the different periods, we can suggest, on the basis of these data, that the city was surrounded by cultivated fields, and not by the desert, probably until it was abandoned at the

[52] Vaults supported by thin walls are usually those of the cellars. This system was used in house 1.3 and in cellars of the Fayyum Graeco-Roman houses.

end of the fourth century AD. The Survey of Egypt map attests to the presence[53] of a number of wells and springs defined as «romani» South and West of Amheida as well as at least 8 other archaeological sites. The high percentage of humidity in the ground and in the buildings of area 4 and 2 is probably due to the presence of a still shallow water table in the area.

During the season 2006, the restoration of the East pyramid begun under the supervision of N. Warner (fig. 27). It is an imposing mud-brick building (6.4 x 6.4 m, ca. 6 m high) in the necropolis, placed at the top of a hillock. The monument is a truncated pyramid on a rectangular podium and is surrounded by plundered burials and chapels. It was built in the Roman period and is similar to a few burials found in Mut necropolis (Bir es-Shagala), composed of one or two vaulted burial chambers with a pyramidal superstructure. There is another pyramid in the South necropolis of Amheida.

Bibliography:

Di. Arnold, *The Encyclopaedia of Ancient Egyptian Architecture*, English translation, London 2003.

R.S. Bagnall – G.R. Ruffini, *Civic Life in Fourth-Century Trimithis. Two Ostraka from the 2004 Excavations*, ZPE 149 (2004), 143-152.

M. Berry, *The Study of Pigments from Shrine I at Ismant el-Kharab*, in C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 53-60.

G.E. Bowen, *The Fourth-Century Churches at Ismant el-Kharab*, in C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 65-85.

P. Davoli, *L'archeologia urbana nel Fayyum di età ellenistica e romana*, Napoli 1998.

[53] Survey of Egypt, Sheet 328/396, 1:10,000, 1928-29. This area should have been part of the Sawahet/Set-wah territory: O. E. Kaper, *Egyptian Toponyms*, 124-129; P. Tallet, *A Particularity of the Toponymy*, 169-174.

P. Davoli, *Lo scavo 2000. Relazione preliminare*, in S. Pernigotti-M. Capasso-P. Davoli (eds.), *Bakchias VIII. Rapporto Preliminare della Campagna di Scavo del 2000*, Imola 2001, 7-56.

P. Davoli, *Lo scavo 2001. Relazione preliminare*, in S. Pernigotti-M. Capasso-P. Davoli (eds.), *Bakchias IX. Rapporto Preliminare della Campagna di Scavo del 2001*, Imola 2002, 7-69.

P. Davoli-O. Kaper, *A New Temple for Thoth in the Dakhleh Oasis*, EA 28 (2006), 12-14.

J. Dobrowolski, *Remarks on the Construction Stages of the Main Temple and Shrine I-II*, in C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 121-128.

S.A.A. El-Nassery – G. Wagner – G. Castel, *Un grand bain gréco-romain à Karanis. Fouilles de l'Université du Caire (1972-75)*, BIFAO 76 (1976), 231-275.

R. Ginouvès – R. Martin, *Dictionnaire méthodique de l'architecture grecque et romaine*, Roma 1985.

J.-Cl. Golvin-J. Larronde, *Etude des procédés de construction dans l'Egypte ancienne. I. L'édification des murs de grès en grand appareil à l'époque romaine*, ASAE 68 (1982), 165-190, Pls. I-VIII.

J.-Cl. Golvin-R. Vergnieux, *Etude des procédés de construction dans l'Egypte ancienne. IV. Le ravalement des parois, la taille des volumes et des moulures*, in *Hommages à François Daumas*, Montpellier 1986, I, 299-321, Pls. I-V.

J.-Cl. Goyon-J.Cl. Golvin-C. Simon-Boidot- G. Martinet, *La construction pharaonique du Moyen Empire à l'époque gréco-romaine*, Paris 2004.

C.A. Hope, *Observations on the Dating of the Occupation at Ismant el-Kharab*, in C.A. Marlow – A.J. Mills (eds.), *The Oasis Papers. Proceedings of the First International Symposium of the Dakhleh Oasis Project*, Oxford 2001, 45-59.

C.A. Hope, *Excavations at Ismant el-Kharab in the Dakhleh Oasis*, BACE 1 (1990), 43-54.

C.A. Hope, *The 1991 Excavations at Ismant el-Kharab in the Dakhleh Oasis*, BACE 2 (1991), 41-50.

C.A. Hope, *The Find Context of the Kellis Agricultural Account Book*, in R.S. Bagnall, *The Kellis Agricultural Account Book (P.Kell. IV Gr. 96)*, Oxford 1997, 5-14.

C.A. Hope, *Mut el-Kharab: Seth's City in Dakhleh Oasis*, EA 27 (2005), 3-6.

E.M. Husselman, *Karanis Excavations of the University of Michigan in Egypt 1928-1935. Topography and Architecture*, Ann Arbor 1979.

O.E. Kaper, *Doorway Decoration Patterns in the Dakhleh Oasis*, in D. Kurth (ed.), *3. Ägyptologische Tempeltagung. Systeme und Programme der ägyptischen Tempeldekoration*, Wiesbaden 1995, 99-114.

O.E. Kaper, *A Painting of the Gods of Dakhla in the Temple of Ismant el-Kharab*, in S. Quirke (ed.), *The Temple in Ancient Egypt*, London 1997, 204-215.

O.E. Kaper, *Temple Building in the Egyptian Deserts during the Roman Period,* in O.E. Kaper (ed.), *Life on the Fringe*, Leiden 1998, 139-158.

O.E. Kaper*, Egyptian Toponyms of Dakhla Oasis*, BIFAO 92 (1992), 119-132.

O.E. Kaper, *Local Perceptions of the Fertility of the Dakhleh Oasis in the Roman Period*, in C.A. Marlow – A.J. Mills (eds.), *The Oasis Papers. Proceedings of the First International Symposium of the Dakhleh Oasis Project*, Oxford 2001, 70-79.

O.E. Kaper-R.J. Demarée, *A Donation Stela in the Name of Takelot III from Amheida, Dakhleh Oasis*, Jaarbericht "Ex Oriente Lux" 39 (2005), 19-37.

M.R. Kleindienst – C.S. Churcher – M.M.A. McDonald – H.P. Schwarcz, *Geography, Geology, Geochronology and Geoarchaeology of the Dakhleh Oasis Region: an Interim Report*, in C.S. Churcher – A.J. Mills (eds.), *Reports from the Survey of the Dakhleh Oasis 1977-1987*, Oxford 1999, 1-54.

R. Martin, *Manuel d'architecture grecque, I. Matériaux et techniques*, Paris 1965.

A.J. Mills, *'Ein Birbiyeh*, in C.A. Hope – A.J. Mills (eds.), *Dakhleh Oasis Project, Preliminary Reports on the 1992-1993 and 1993-1994 Field Seasons*, Oxford 1999, 23-24.

A.J. Mills, *Deir el-Haggar*, in C.A. Hope – A.J. Mills (eds.), *Dakhleh Oasis Project, Preliminary Reports on the 1992-1993 and 1993-1994 Field Seasons*, Oxford 1999, 25-26.

A.J. Mills, *Deir el-Hagar, 'Ain Birbiyeh, 'Ain el-Gazzareen and El-Muzawwaqa*, C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 25-30.

A. Ross, *Identifying the Oil used in the Ritual in the Temple of Tutu*, in C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 263-267.

A.J. Spencer, *Brick Architecture in Ancient Egypt*, Warminster 1979.

P. Tallet, *A Particularity of the Toponymy of Dakhla Oasis: S3-wh3t and Jw-mrw*, GM 173 (1999), 169-174.

J.L. Thompson, *Neolithic Burials at Sheik Muftah: a Preliminary Report*, in C.A. Hope – G.E. Bowen (eds.), *Dakhleh Oasis Project: Preliminary Reports on the 1994-1995 to 1998-1999 Field Seasons*, Oxford 2002, 43-45.

Plates:

Fig. 1: general plan of the buildings at Amheida, area North.

Fig. 2: Amheida, plan of the central area.

Fig. 3: plan of the building found in 2006 season in area 4.2.

Fig. 4: area 4.1, the temple hill, looking South-West. In the foreground the still standing sector of the mud-brick *temenos*.

Fig. 5: view of the foundation of a possible gate in area 4.2.

Fig. 6: black ink inscription on a block in 4.2 building: «Petosiris son of Tithoes».

Fig. 7: some pits with temple blocks in area 4.1.

Fig. 8: the stela of Takeloth III.

Fig. 9: collapsed sandstone blocks wall in area 4.1.

Fig. 10: block from the collapsed wall. It was part of an unfinished corner torus cornice.

Fig. 11: cavetto cornice block in area 4.1.

Fig. 12: column drums in area 4.1.

Fig. 13: block with masonry mark traced with black charcoal.

Fig. 14: reused block with chiselled line for alignment.

Fig. 15: the house in area 2.1. View looking South-West.

Fig. 16: plan and a possible reconstruction of the house in area 2.1 (N. Warner).

Fig. 17: Room 2 and the cupboard on the West wall.

Fig. 18: Room 2. The entrance to Room 1.

Fig. 19: East wall in Room 1.

Fig. 20: North-East corner in Room 1.

Fig. 21: Room 6 looking North.

Fig. 22: the niche and the door in Room 6.

Fig. 23: the white plaster band on East wall in Room 6.

Fig. 24: the white plaster band on North wall in Room 8.

Fig. 25: Room 15 looking South.

Fig. 26: view of the courtyard R 9 and 10 looking South-West.

Fig. 27: the East pyramid under restoration, looking North.