

**Krzysztof Babraj, Hanna  
Szymańska**

---

**Marea: Report on the Excavations of  
the Polish Archaeological Mission in  
2006**

---

Polish Archaeology in the Mediterranean 18, 51-61

---

2008

Artykuł został opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej [bazhum.muzhp.pl](http://bazhum.muzhp.pl), gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach  
dozwolonego użytku.

# MAREA

## REPORT ON THE EXCAVATIONS OF THE POLISH ARCHAEOLOGICAL MISSION IN 2006

Hanna Szymańska, Krzysztof Babraj

*The seventh season of Polish excavations at Marea lasted from August 10 to September 28, 2006.<sup>1</sup> The season's main objective was to perform some archaeological and conservation works in the baths uncovered in previous campaigns (2000–2002), in the funerary chapel (2003) and the basilica church (2003–2005). These three structures were partly destroyed and are still threatened by rain, wind and other factors. The basilica was measured this year with a Nikon Pulse Laser Station NPL-332, and other features, namely the baths and funerary chapel, measured in the traditional methodology in 2002, were verified.*

*Conservation works this year encompassed two furnaces and two hypocaust cellars in the baths, as well as the basilica kiln and funerary chapel (see below, report by B. Wrońska-Kucy).*

1 The team was directed by Hanna Szymańska and comprised: Krzysztof Babraj (Deputy Director), Dorota Dzierzbicka, Wojciech Dzierzbicki, Renata Kucharczyk and Grzegorz Majcherek, archaeologists; Daria Tarara and Artur Błaszczuk, architects; Joanna Babraj, documentalist and conservator, student of conservation in the Academy of Fine Arts, Kraków; Piotr Suszek, photographer; Barbara Wrońska-Kucy, architect and restorer; and Jacek Kucy, photographer. The Supreme Council of Antiquities was represented by Inspectors: Amal Hassan Hamed, archaeologist, and Rabeia Ibrahim Mohamed, restorer.

We would like to express our deepest gratitude to Dr. Zahi Hawass, Secretary General of Egypt's Supreme Council of Antiquities, and Mr. Magdy El-Ghandour, General Director of Foreign and Egyptian Mission Affairs and Permanent Committee. Our work would have been impossible to complete without the cooperation of Mr. Adly Roushdy Amir, General Director of the Alexandrian Antiquities Department and the friendly cooperation of Ms Emily Nessim, General Director of Excavations in Alexandria.

## BYZANTINE BATHS

The first task was to finish the excavation of the baths. The western courtyard (F6), which was excavated partly in 2001, had to be cleared completely. It turned out to measure 14.72 by 13.83 m and was paved with marble slabs, of which only imprints in the limestone bedding have survived [Figs 1, 2]. Apart from sections that were repaired, the slabs followed no size standards, ranging from 1.80 x 0.89 m to 0.80 x 0.80 m. Two marble slabs found in the rubble, a surprising 0.04 m thick, most likely originated from the courtyard. A small fragment of the marble revetment was preserved in the northwestern corner.

The upper floor of limestone tiles, which replaced the previous pavement

when it was destroyed, was recorded in the southern part of the courtyard. The courtyard had porticoes on the south and north. The two stylobates were uncovered, both constructed of stone blocks oriented E-W. Marks left by the columns, five on each side, can be observed easily on the stones of the stylobate, the span being 2.44 m [cf. Fig. 2]. The westernmost mark on the south was left by a much smaller column, indicating that the columns were of different size, which means that the architectural members originated from other buildings in similarity to most of the marble architectural elements in Marea. The space of the courtyard between the porticoes was open.

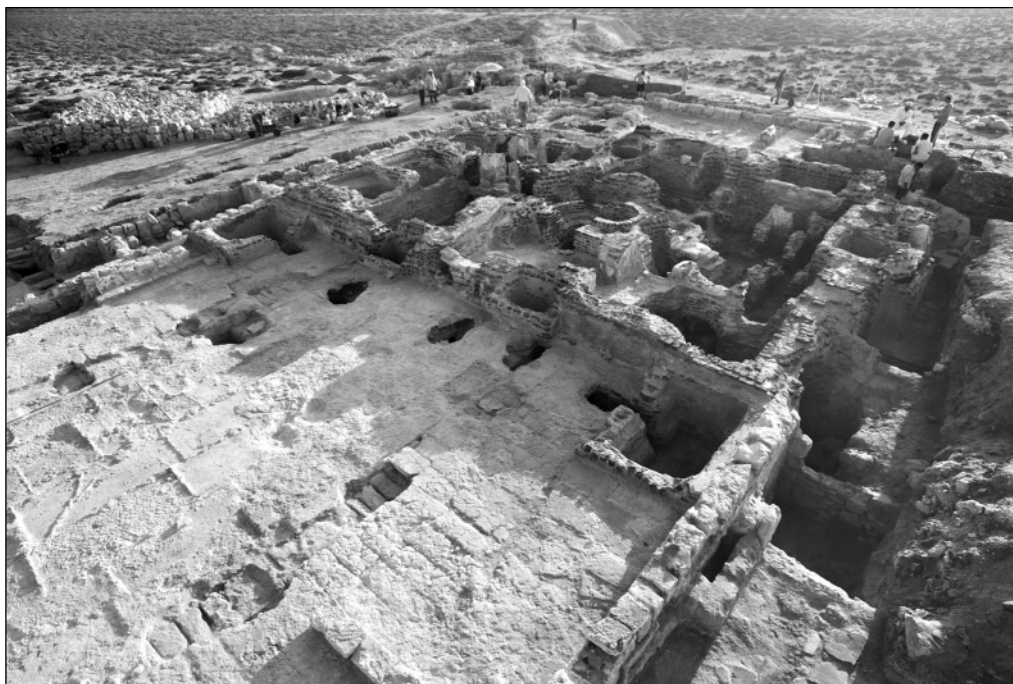


Fig. 1. Byzantine baths. Courtyard F6 with imprints of the marble pavement slabs preserved in the limestone bedding. View from the southwest (Photo P. Suszek)

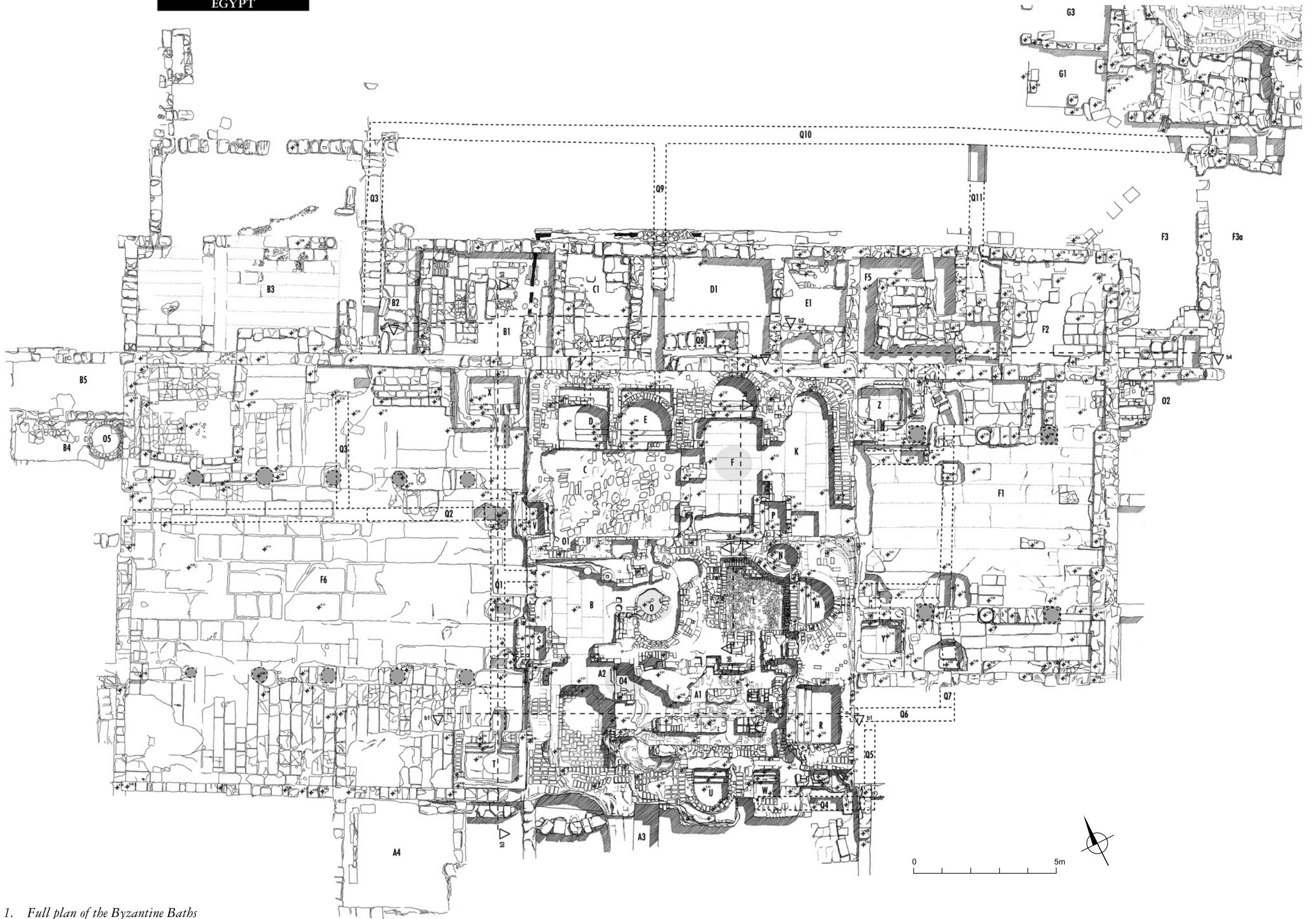


Fig. 1. Full plan of the Byzantine Baths  
(Drawing D. Tarara)

The courtyard was surrounded by a wall characterized by very varied structure. On the south and west it was built of stone blocks; an average three courses (1.50 m) bonded in mortar have been preserved. The north wall, which extended the wall behind the shops, was built in the same technology, that is, mortared rubble work<sup>2</sup> [Fig. 3]. The main entrance to the men's part, measuring 2.51 m in width, was in this wall [cf. Fig. 2]. The difference in the bondwork is not proof of a different time of construction, because Byzantine building allowed different bonds in the same building. The original doorways leading to the courtyard, observed in the west and

south walls, were blocked, presumably when the main western gate was installed. A short wall 0.60 m long was attached to the west wall; there was a slot in it presumably for mounting a bench.

Two pools, X and T, were built immediately adjoining the west wall; they are contemporary with the courtyard [cf. Fig. 2]. Other features are not, however, like a perpendicular N-S wall attached to the south wall and an enclosure formed by two walls set up on the pavement in the southwestern corner. These are later additions that find no justification during the operation of the baths. In both cases, a single course of blocks was preserved.



Fig. 3. *Byzantine baths. Technology of mortared rubble work employed in the north wall. View from the north (Photo P. Suszek)*

- 2 The north wall of the baths is constructed in typically Byzantine technology: pillars built of one or two courses of stone blocks in lime mortar and the space between them of mortared rubble. The surface of the wall was subsequently coated with a thick layer of mortar.

The first step of the stairs matched the western entrance in width [Fig. 4]. In front of it, a small open space was uncovered (B3), measuring 7.48 m by 6.71 m. The marble-slab pavement concealed two stylobates oriented E-W: one which is an extension of the wall lining the shops and the other 4.00 m to the north of it. An Attic marble column base was found *in situ* on the first of the two stylobates. An identical base lay in the rubble. This suggests the existence of a portico.

Perpendicular stone walls ran on either side of the entrance; only fragments immediately next to the wall were preserved.

Between the shops there is a small room (B2 – store?), 1.50 by 4.29 m, once connected with the neighboring B1 (the

door was later blocked). Channel Q3 runs under this room [cf. Fig. 2].

Behind the west wall two perpendicular walls were built out of whatever was available, including a partly eroded limestone column drum; these walls formed two units, B4 and B5.

The former protected a round bread oven (O5), 1.20 m in diameter, built of red brick (7 courses preserved, maximum height 0.50 m), surrounded by a row of stones, the filling hole in the southwestern side [Fig. 5]. The bottom was paved with limestone slabs.

A fragment of marble column shaft with preserved molded base was found in the northwestern corner of the courtyard.

Most of this season's registered finds came from beyond the west wall of



Fig. 4. Byzantine baths. The western entrance with a small space with two stylobates for columns in front of it. View from the north (Photo P. Suszek)

courtyard F6. Like the east wall of the baths, this spot functioned as a *favissa* for discarding objects which had been damaged and made useless in some way. A Corinthian capital of marble in excellent state was found here, as well as numerous potsherds, including pieces of a painted vessel with scenes of Dionysiac nature and an inscription in Greek translated as "I am healthy. Drink Kyria" [Fig. 7]. The *favissa* also yielded a few oil lamps repeating a type already known from previous seasons. An exceptional find is a bronze medallion with an image of St Menas and appropriate inscription [Fig. 6].

Four separate walls were built perpendicular to the north bath wall of stone blocks [cf. Fig. 2], forming four units of different size: starting from the east, E1 (2.26 x 3.48 m), D1 (3.48 x 4.48 m), C1 (3.61 x 2.18 m) and B1 (3.74 x 4.29 m). By parallel with other bath facilities, these units can be interpreted as shops providing bathers with the necessary bathing supplies, like fragrances etc. The present work (for previous exploration in 2001, see Szymańska, Babraj 2002: 56-57) extended the trench to the north, tracing the north wall of these rooms, which was located from 3.48 to 3.70 m away from the outer wall of the baths. All four shops were entered from the north and they were interconnected. Once the shops went out of use, these inner passages and the entries were all blocked [Fig. 8].

A drain of square section (0.30 m to the side) was found built into the thickness of the south wall in Room E1. Rainfall was collected via the drain and flowed down an angled limestone channel directly into a latrine. In the northern part of the room explorations revealed two floors: the bottom one in the form of a limestone mortar pavement and the upper one on a bedding of small stones, 0.10-0.15 cm

thick. A brick bench 1.10 x 0.50 m stood in the northeastern corner.

This season the system for removing waste water from pools F, E and D was traced. The wall of room D1 has three vaulted brick channel outlets that served to remove water from the pools. Two were located in the eastern part of the wall; only one of these was operational and served pool F, while the other one was blind and was found in the wall dividing rooms K and E. The third outlet was in the western part of the wall, behind pool E. All three pools, including the one marked as D, were emptied into channel Q8, which was

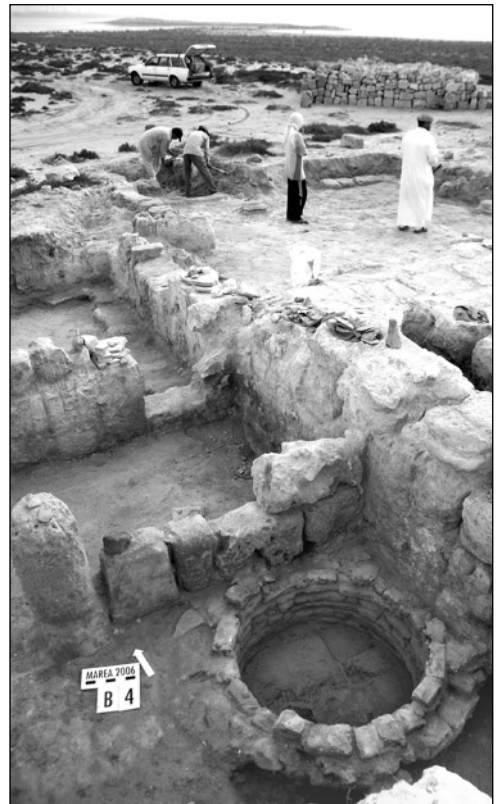


Fig. 5. Byzantine baths. Round bread oven of red brick beyond the west wall, view from the south (Photo P. Suszek)



Fig. 6. Bronze medallion with an image of St. Menas found beyond the west wall of the Byzantine baths (Photo P. Suszek)

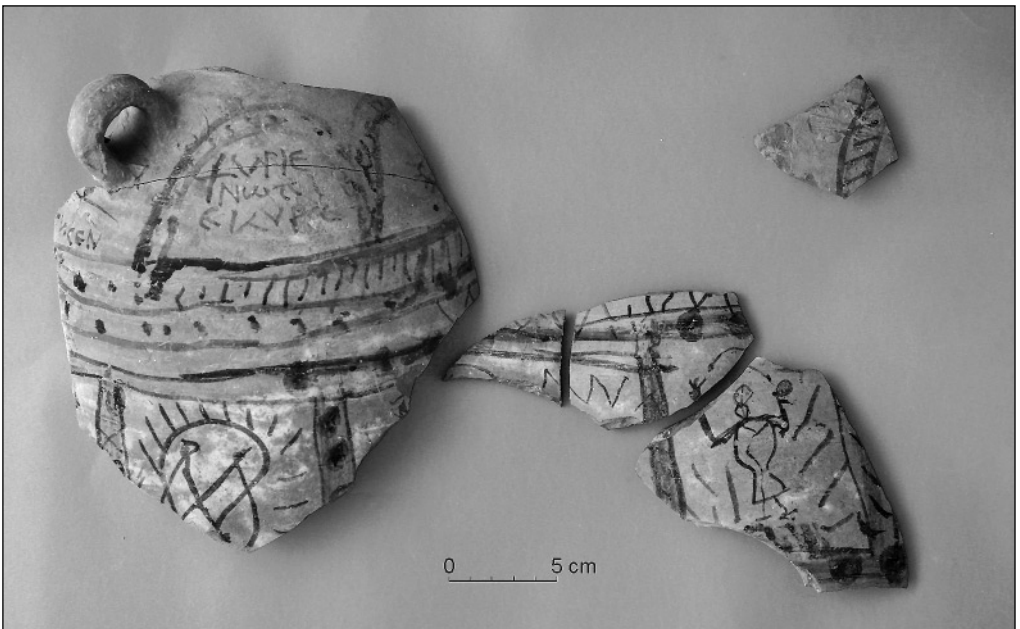


Fig. 7. Amphora sherd with inscription in Greek found beyond the west wall of the Byzantine baths (Photo P. Suszek)





*Fig. 8. Blocked inner passage between shops B1 and C1. View from the west  
(Photo P. Suszek)*



*Fig. 9. Shop B1 with stone structure in the centre. View from the northwest  
(Photo P. Suszek)*

covered on top with slabs of stone (nine such slabs were preserved in place). From there, the waste water ran through channel Q9 to the north to reach the city sewage. Channel Q10, oriented E-W, already belonged to the public sewage system. It was also reached by channel Q3 which ran under courtyard F6 and after turning at an angle of 30° under room B3. Channel Q2 continued in a westerly direction under courtyard F6, until the west wall where it ended. Channel Q10 collected water also from a branch of the channel designated as Q11, exiting from the latrine [cf. *Fig. 2*].

Almost all of the limestone flagstones of the pavement in shop B1 have been preserved in place. Running under them is a pipe supplying water from the saqiyah (see below). A stone structure measuring

1.80 x 0.50 m was found in the center of the shop. It was open from the south and its function remains in the sphere of conjecture [*Fig. 9*]. It most certainly belongs to a later phase in the operation of the shop, as it stands directly on the pavement.

The secondary floor in room C, consisting of two rows of irregular stone blocks occasionally bonded with mortar, was removed this season. It proved to conceal a hypocaust cellar underneath, the fourth such facility known from this baths and one of the two that heated the women's section. The secondary floor dates to after the Arab conquest as indicated by an Arab coin found underneath it in context with pottery of the 8th century. Some of the stones closed a flue from



*Fig. 10. Hypocaust C with installations comprising six brick pilae. View from the north (Photo P. Suszek)*

furnace O1, running in the thickness of the south wall of the room and heating the two caldaria: C and F. The hypocaust measured 3.10 by 4.44 m [Fig. 10]. The stone floor all but destroyed the ancient *suspensura*, of which only a small section has survived in the southeastern corner; fragments of marble paving were recorded 1.80 m above the bottom of the hypocaust cellar. The inside installations are in fair condition, comprising six regularly spaced, square *pilae* of brick, c. 0.48-0.50 m high. The level of the original pavement indicates that the *pilae* were higher originally, even taking into account the presumed thickness of the *suspensura*. A wall screening the north wall from the heat was also found. Located behind this wall were pools E and D. A similar protective wall adjoined the south wall. Between the vent from furnace O1 and the west wall, traces of *tubulatio* were discovered. The next two installations of the type were placed symmetrically in the west wall. They each contained presumably three *tubuli*. Numerous fragments of obviously rectangular section were discovered both in the wall and in the nearby rubble. The *tubulatio*-heated walls also served to warm up the water in pool V located behind the west wall.

The east wall played the most important role in the circulation of hot gasses. Beneath it there were three arcades: in the middle, under the threshold to caldarium F, the flue bringing hot air into the latter room, flanked by smoke vents, one on either side. The walls between the smoke vents were constructed of bricks in alternating courses of headers and stretchers. The floor was made of irregularly laid bricks.

The biggest discovery of the season was the tracing of the water supply route from the *sāqiyah* to the baths. A manual system

of drawing water and transporting it to the baths had been presumed until now for lack of good archaeological data. The system was actually a simple hydraulic installation making use of the principle of connected vessels. Water was collected in the pool of the *sāqiyah*, from where it was pumped into clay pipes to run to the bath. Only one such supply pipe has been preserved, running to pool X by the west wall of the baths. The pipe, which can be observed under the last block of the *sāqiyah* pool, where also two parts of a limestone casing for the pipe are still standing in place [Fig. 11], ran under the floor of F3 for 5.20 m at an angle to the north wall of the baths, reaching the north wall (behind the shops) supported on stone slabs. It then ran behind the north wall for a distance of 18 m. Two segments of this part of the channels were recorded, set in stone casings of 0.30 m width. The pipe then turned at right angles (the turn has actually been preserved) into room B1, where it continued for a distance of 4.20 m until it reached the south wall; it then rose to a height of 1.50 m, being attached to

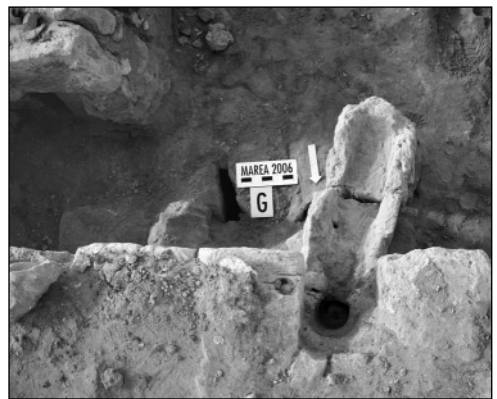


Fig. 11. Clay pipe under last block of *sāqiyah* pool and two sections of limestone casing (Photo P. Suszek)

the wall by lime mortar (traces still evident on the wall face) and ended in pool X. In shop B1, two long sections of this pipe were preserved, concealed under the limestone flagging on the floor. One section was 1.00 m long and had a stone bedding; the other measured 0.40 m [Fig. 12]. The pipes at the joining take on a spindle-shaped form, hence the different sections (5.5-7 cm of diameter) and lengths of particular pieces. A connection of two segments can be observed clearly behind room C1 [Fig. 13]. Apart from pipes *in situ*, there were many loose fragments in the fill nearby; one was 0.36 m long, found in a completely unexpected place under the paving in the center of courtyard F6.

This year's finds have confirmed the dating for the most intensive use of the baths in the 7th and early 8th century. The shops, and especially E1, yielded numerous coins of Chosroes II (618-621) [Fig. 14], while more than 10 of the legible Arab coins originated from the period around 689-750.<sup>3</sup> The blind end of channel Q2, at the western edge of courtyard F6, contained numerous coins, including 25 *folles*, which



Fig. 13. Joining of two segments of pipe behind room D1. View from the north (Photo P. Suszek)

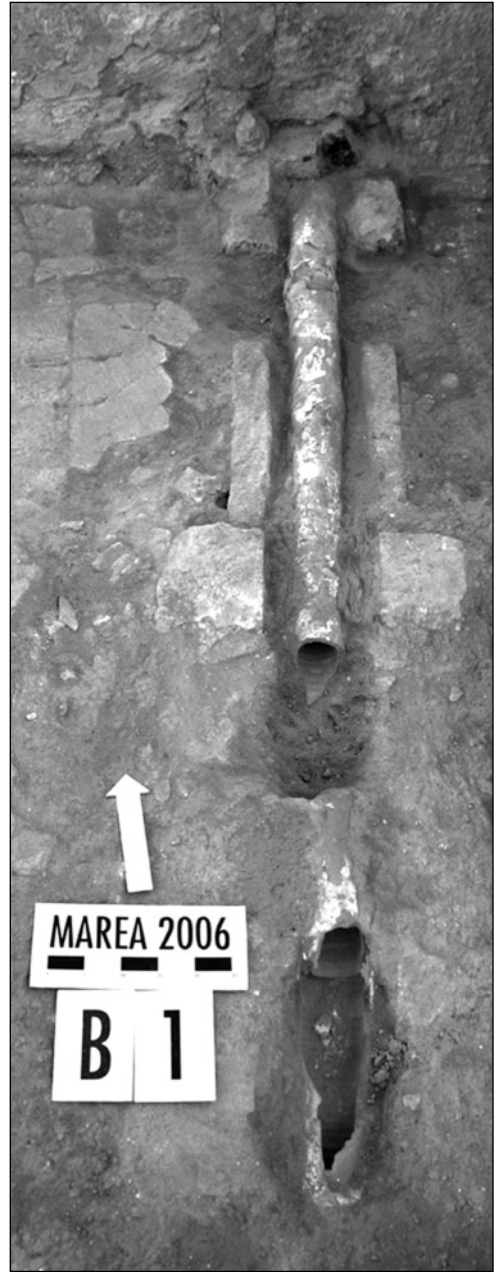


Fig. 12. Two long sections of pipe, preserved in shop B1. View from the south (Photo P. Suszek)

3 The Byzantine coins were kindly identified by Barbara Lichočka, the Arab ones by Dorota Malarczyk.



Fig. 14. Coin of Chosroes II (618-628)  
(Photo P. Suszek)

were, however, impossible to identify. The total number of coin finds in this season amounted to 383 bronze coins, of which 85 have been cleaned and 298 are unidentifiable.

Other important small finds from this season's excavations include a St Menas ampulla discovered in shop E1 and a seal with an image of a fantasy animal found in channel Q10.

#### REFERENCES

Szymańska, H., Babraj, K.

2002 Marea. Second interim report, 2001, *PAM XIII* [=Reports 2001], 45-59