

# GREEK BATHS AND BATHING CULTURE

NEW DISCOVERIES AND APPROACHES

Edited by  
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# The Bath Complex in Hephaistia (Lemnos)

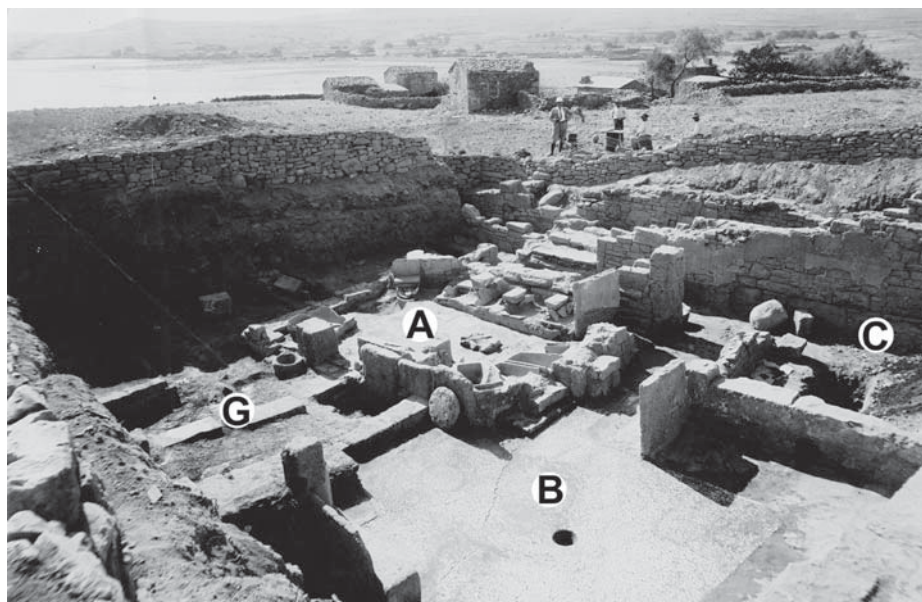
*Emanuele Greco and Paolo Vitti*

## *Abstract*

*The baths at Hephaistia on the island of Lemnos were discovered in 1927. Since then they have never been investigated in a systematic way, except for some excavations in 1937 and 2002-2003. Most of the structures are still covered by a thick alluvial stratum, which probably results from a catastrophe between the 2<sup>nd</sup> and 1<sup>st</sup> centuries BCE. In the Roman Imperial period structures relating to artisans' workshops were built on top of the buried bath complex and other structures near the port, and were continuously used until the end of the 7<sup>th</sup> century CE. The Hellenistic bath complex is situated in a terraced area immediately below a retaining wall in opus quadratum, which preceded the baths and considerably restricted their construction and design. The baths were probably linked via a ramp to a road that ran uphill into the city; in addition, there may have been a second direct access from the port area. A ceramic fragment with the graffito 'IEPON', found in the filling of the retaining wall against the slope of the hill, suggests that a sanctuary could have existed above the bath complex. Two building phases can be identified within the bath complex. While in the first phase the complex may have included only one single bathing room with hip-bathtubs (B), in the second phase two rooms served for bathing proper, notably Room A with hip-bathtubs and Room D with some relaxing warm bathing form. From the beginning, the rooms were decorated with stucco and waterproof pavements, among them a fine opus segmentatum floor in Room B. While fragments of a terracotta pipe system were found (H, I1), which most likely brought water from an unknown reservoir into the baths, the water management of the baths, including water supply and drainage, currently cannot be fully reconstructed.*

The Hellenistic bath complex in Hephaistia was discovered in 1927 (fig. 1) and excavated somewhat hastily.<sup>1</sup> Its subsequent abandonment resulted in extensive damage to the archaeological remains. This paper offers a synthesis of the information

that is currently available and is based upon the archival documentation, both photographic and written, and new archaeological evidence which has come to light since 2001. Unfortunately, a large part of the complex still remains to be excavated



*Fig. 1. Hephaistia, Baths: overview, from north, 1927 (photo SAIA archive).*

and a comprehensive assessment and report can only be made when this has been completed.

#### GENERAL ASSESSMENT

In 2001 the Scuola Archeologica Italiana di Atene (SAIA) started excavating again in Hephaistia on the island of Lemnos, taking up the campaign where Antonio Della Seta had left off in 1927 (fig. 2).<sup>2</sup>

The first excavation program already showed that an accurate topographical analysis was essential in order to be able to correctly evaluate all the monuments brought to light to date. Thus, the new campaign aimed to include in a single system all the parts of the city excavated in areas somewhat distant one from the other. The 1920s excavation had been carried out following the practice at that date of seeking archaeological remains that could provide information on the culture of the local pre-Athenian population, which supposedly had ethnolinguistic links with the Etruscans. These

objectives were of such a general nature that they could easily be evaluated without taking the archaeological evidence into account. This attitude significantly shaped the excavations which were undertaken in different parts of the city without any regard for the relationship between the uncovered structures. Thus, now that the philosophy underlying excavations has changed fundamentally we are left with a series of isolated monuments, amongst which are the Hellenistic *loutra*, the subject of this paper.

The city of Hephaistia is situated on a promontory with on one side the open sea and on the other the Gulf of Hekatòn Kephalès (fig. 2). The promontory slopes up towards its tip. The side exposed to the open sea is characterized by cliffs which originally formed part of the defenses of the ancient city. To the northeast, where the terrain drops down to the sea less steeply, the need to protect the city from enemies is evidenced by few remains of the fortifications that run from the cliff front down to the inland gulf. More fragmentary

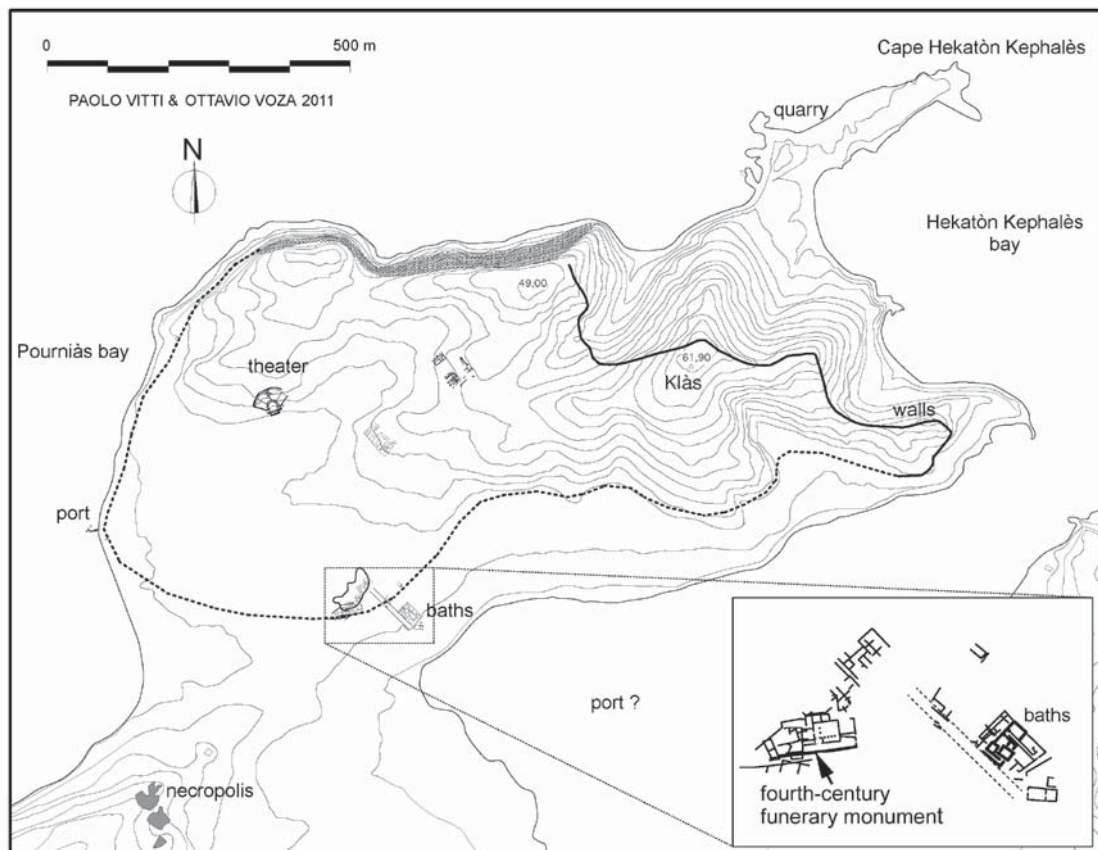


Fig. 2. Hephaistia: plan of the site; the dotted line shows the reconstructed extension of the city walls (drawing P. Vitti and O. Voza).

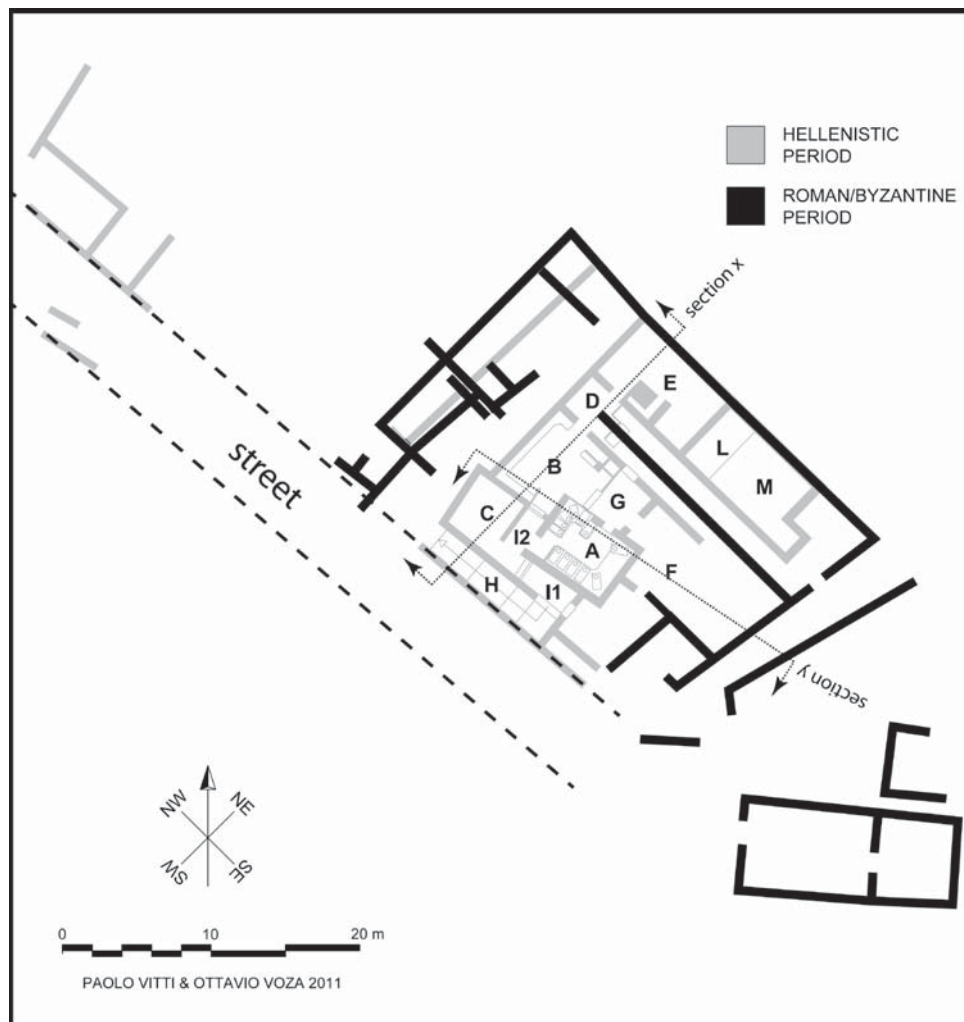


Fig. 3. Hephaestia, Baths: reconstructed phase plan (drawing P. Vitti and O. Voza).

remains of fortifications were found on the north-west side, running up to the cliff face itself, while the section across the isthmus cannot be defined with certainty. Here the limit of the city can be deduced only from the position of the necropoleis of archaic, classical and Roman date. A 4<sup>th</sup> century BCE funerary monument, which came to light not far from the baths, currently constitutes the structure that is located the closest to the southwest boundary of the city (fig. 2).

Without taking into consideration the finds in the upper part of the city (walls, probably from the Hellenistic period, a theater, an archaic sanctuary with a Hellenistic *ergasterion* superimposed, residential quarters),<sup>3</sup> we shall concentrate on the area near the baths. In this zone, in 1927, under the direction of Luciano Laurenzi, a residential area

of proto-Byzantine date was almost completely destroyed in order to uncover a part of the bath complex, notably Room A with the terracotta hip-bathtubs (figs 3, 4). A later excavation, directed by Giovanni Becatti in 1937,<sup>4</sup> revealed two further rooms, D and E, that adjoined Room A (fig. 5).

Research on the thermal complex was resumed again in 2001 and took into account Becatti's conclusions.<sup>5</sup> The objectives were twofold:

1. to clarify the topographical position of the baths that were constructed against a wall in *opus quadratum* crossed by a ramp of stairs marking the southwestern extension of the complex. This wall may have been a residual of the city wall, or possibly the terrace of a sanctuary to which the baths would have been related,

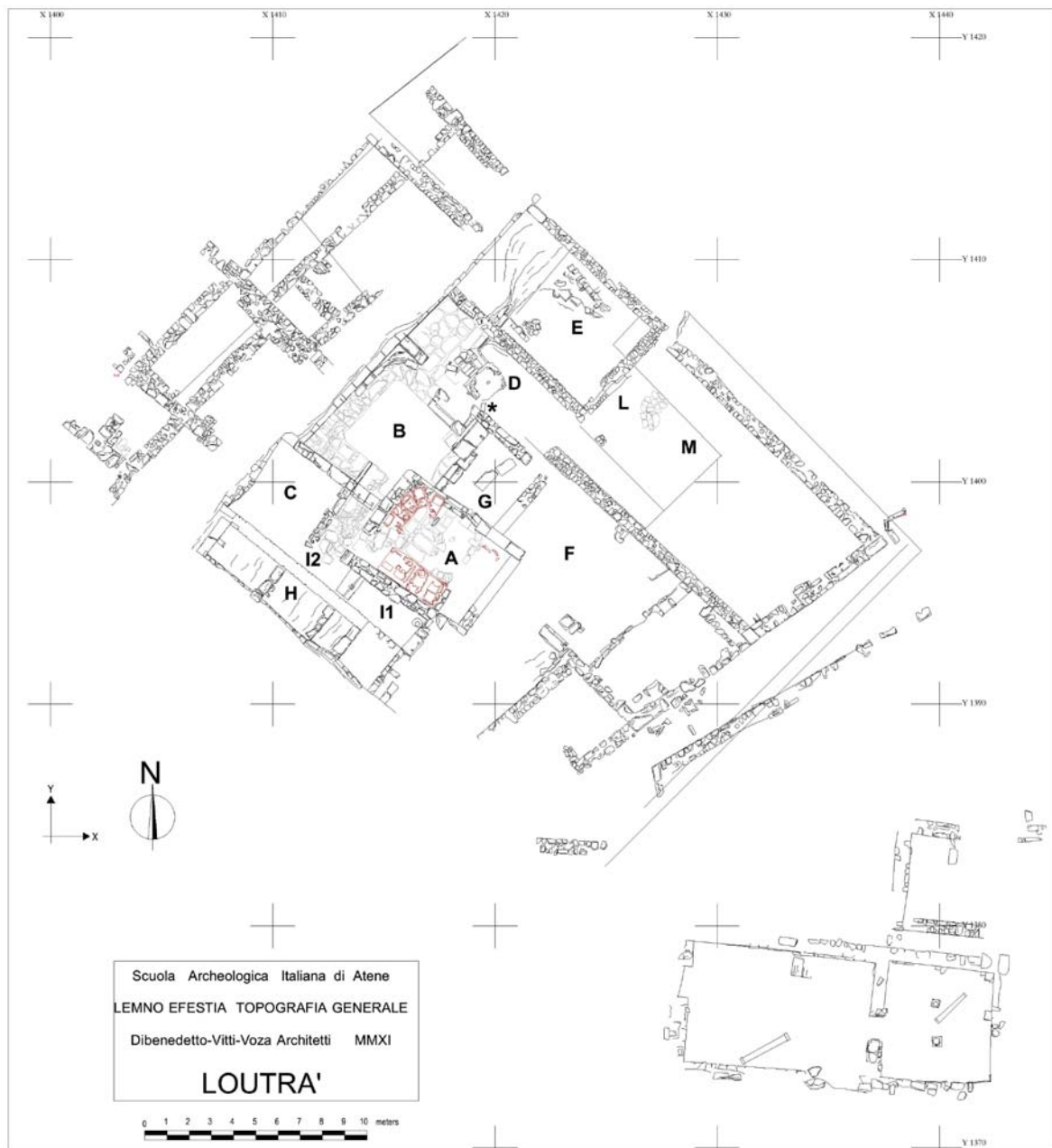


Fig. 4. Hephaestia, Baths: state plan (drawing P. Vitti and O. Voza).

located in an attractive position only a few meters from the sea shore.<sup>6</sup>

2. to verify, by undertaking deep exploratory trenches, the question of predecessor structures, the existence of which is suggested by Becatti's notebooks. The latter mentioned the discovery of *pithoi* fragments, which Becatti interpreted as evidence of cremation tombs similar to those

excavated by Domenico Mustilli in the isthmus necropolis, at a distance of some 400 m to the west of the baths.

The excavations<sup>7</sup> and the topographical and architectural reports<sup>8</sup> from 2001-2003 yielded the following results:

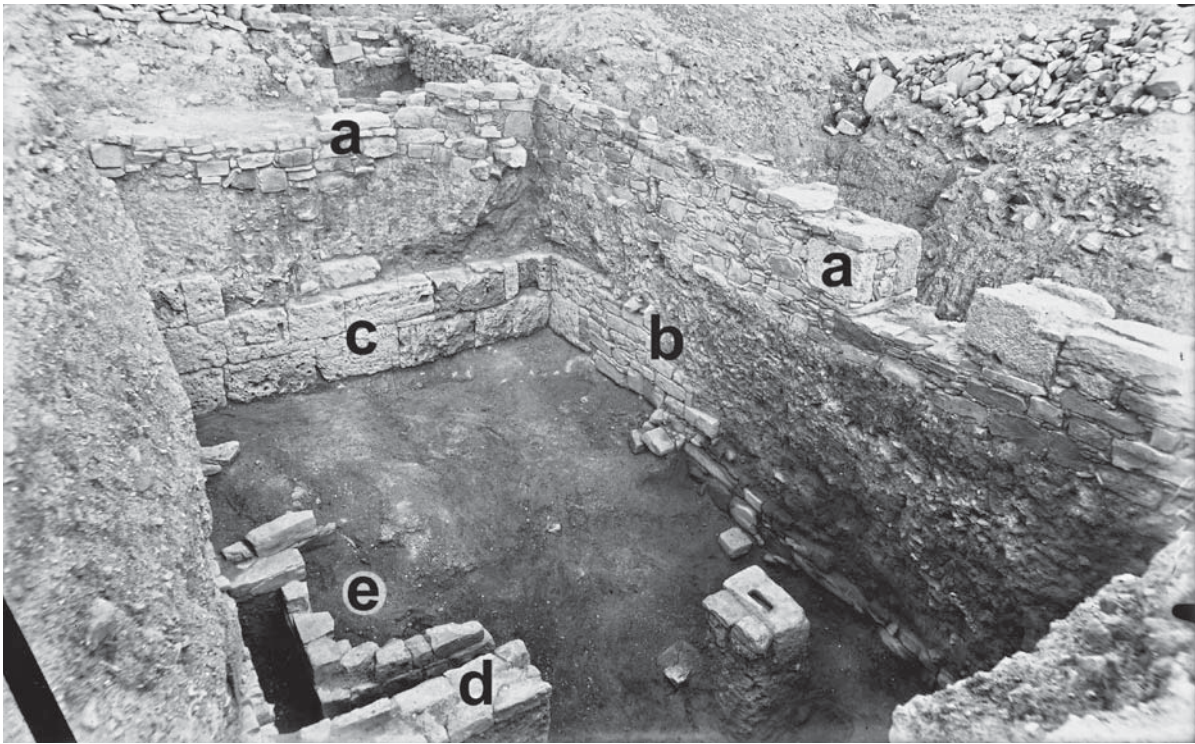


Fig. 5. Hephaistia, Baths: view of room E, from south, 1937: a) Byzantine walls; b) northeastern enclosing wall of baths; c) opus quadratum wall; d) foundation wall on earth, no longer extant; e) L-shaped wall (photo SAIA archive).

1. Becatti's hypothesis of the existence of a necropolis under the bath complex could be dismissed.
2. Elements which date the baths (late 4<sup>th</sup>-early 3<sup>rd</sup> century BCE, with subsequent modifications up until 2<sup>nd</sup>-1<sup>st</sup> centuries BCE, when they were buried and definitively abandoned, with domestic buildings from the Imperial period) were identified.
3. A part of an adjacent artisans' quarter, identifiable by remains of furnaces and ceramic rejects, was explored.

At the same time a team directed by Emanuele Papi (Siena University) embarked upon a geomagnetic survey in the area between the sea and the baths that has now covered almost the entire ancient city. This survey provided important clues about the nature of the quarter in which the baths were situated, but only for the Late Antique period, when it certainly served as an artisans' quarter and had a completely different urban structure from that of the Hellenistic period.

The baths are thus the latest structure to conform to the almost entirely regular urban plan of the classical city with its *insulae* and houses.

While evidence for a reconstruction of the baths' neighborhood in the Hellenistic period is missing, in the Late Antique period the area developed in a very different, irregular way, like a Medieval quarter.

EG

#### DESCRIPTION OF THE BATHS

In the Roman and Late Antique periods the bath complex was no longer visible, because it had been covered by an alluvial layer, datable to the 2<sup>nd</sup> and 1<sup>st</sup> centuries BCE, and by new constructions.<sup>9</sup> The rooms visible today were uncovered in 1927 by destroying the Late Antique structures above them and removing the earth covering them. Most of the southeastern rooms (figs 3-4: F, L, M) were not included in the area excavated in 1927 and 1937 and remain unexplored to date. The presence of Roman and Byzantine buildings makes any examination of the Hellenistic levels impossible, without demolishing the structures over them. The description which follows is based upon information resulting from the topographical survey mentioned above, the excavations carried out in 2001-2003, a thorough cleaning of Room D



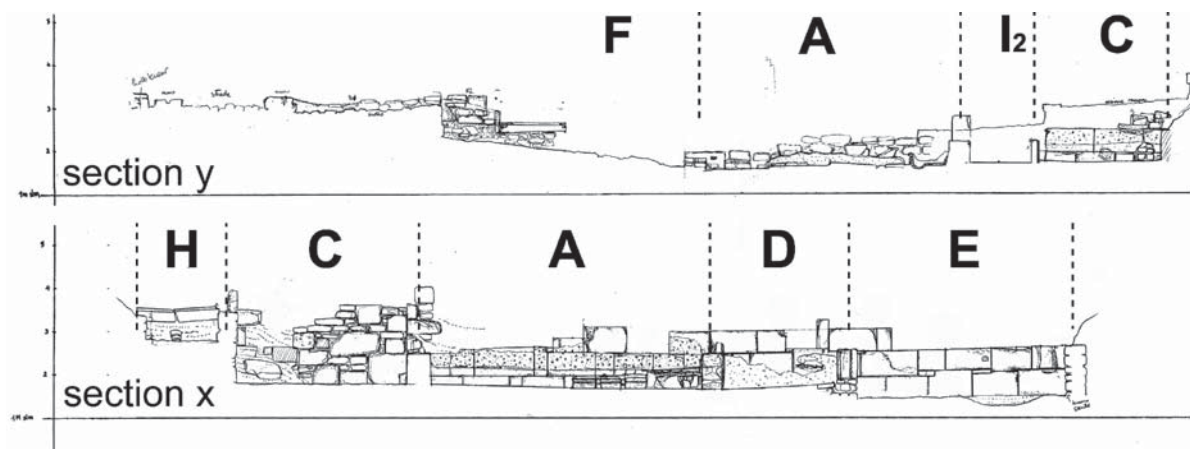


Fig. 6. Hephaestia, Baths: sections (cf. fig. 3; drawing P.Vitti and O. Voza).

carried out in 2010, and an examination of photographs in the SAIA archive.

The area investigated covers a rectangular area of about 21 x 14 m. The bath complex follows two different orientations. The northwestern rooms (figs 3- 4: B, D-G, L, M) are at 90° to an *opus quadratum* wall in poros or local calcareous sandstone, which encloses the structure on the uphill side (fig. 6: - see other fig. references here section x). The southwestern and southeastern rooms (figs 3-4: A, C, H, I1-I2) are oriented differently, and follow the inclination of the ramp (H) leading to the baths. The structure of the *opus quadratum* wall is not entirely homogeneous and shows various repairs in poor quality masonry. This suggests that during their latest phase the baths were reused for different purposes and that architectural changes of low quality were undertaken.

Given the complex stratigraphy of the extant structures and the necessity of using archival photographs to identify parts lost over the years, a detailed description of the spaces is necessary in order to establish the sequence of building phases.

#### Ramp H, Corridor I1-I2, and Room C

A stepped ramp (H) occupies the southwest side of the baths. The ramp is aligned with the road that runs down the slope to the northwest of the bath complex and was identified further up the hill in a test trench in 2002. The orientation of the ramp was obviously restricted by the urban plan in this area of the city. This orientation is also followed by Corridor I1-I2 and Rooms A and C.

The ramp is 1.70-1.80 m wide and ca. 8.25 m long, follows the slope of the terrain, and is contained by two walls that were originally plastered (fig. 1: above C). The walls are made of large

blocks of local sandstone, whose sides are only roughly squared off, and smaller sandstone blocks that are often rectangular and inserted in between in horizontal layers. This use of worked stones, with a size of up to 1.10 m in length and 0.75 m in height, gave structural solidity to the retaining wall. The steps of the ramp were made of large worked stone slabs. The excavations uncovered a pipe running below the steps into Corridor I1 and continuing a further 4.50 m to the southeast (fig. 7: H).<sup>10</sup> A stamp on the pipe, representing a cloaked knight, was dated to the 4<sup>th</sup> century BCE.<sup>11</sup>

The same wall construction as for the ramp is also used for the walls of Room C (figs 6, 8). The northwestern uphill wall is set against the natural rock, which was probably leveled in preparation for the construction of the retaining wall. A trial trench opened in 2003 at this spot revealed an artificial filling in which was found, amongst other things, a fragment of common pottery, with a trace of burning on the lip and with the letters 'IEPON' incised on its outer surface.<sup>12</sup> The north-east wall of Room C, shared with Room B, has two differently made sections: while the masonry of the northern part is similar to that of Room C's northwest wall (alternating large and small blocks), the southern part, from the northwestern wall of Room B onwards, is made out of poros blocks. These two distinct sections are built without a solution of continuity, however.

Corridor I1 opens at the bottom of Ramp H and has two thresholds, found in situ and provided with cuttings for wooden doors. While the northwestern threshold separates Corridors I1 and I2, the southeastern (fig. 7, above I1) leads to an unlabeled room that is located to the southwest (fig. 7: under I1 - see above) of Room F.

Room C is separated from Corridor I2 by a bad-

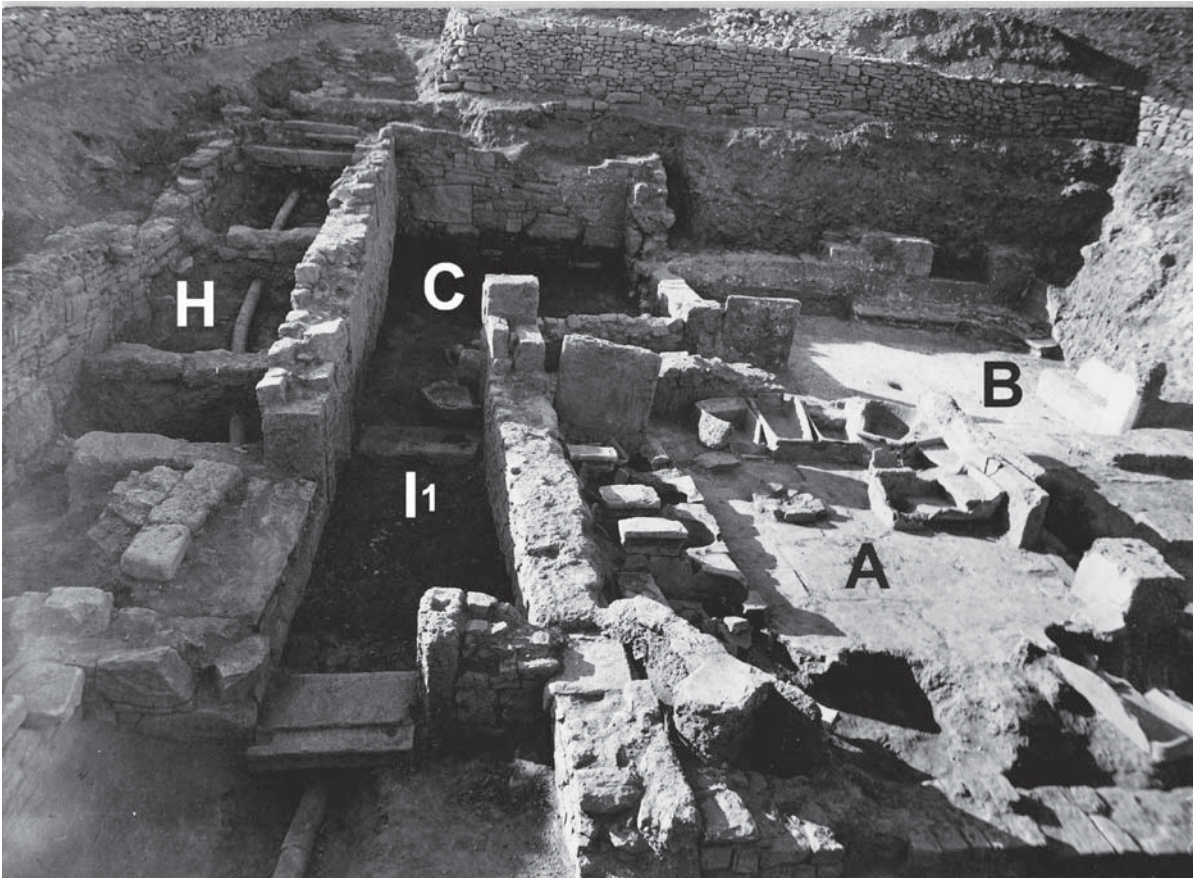


Fig. 7. *Hephaistia, Baths: overview of west part, from east, 1927 (photo SAIA archive).*

ly preserved wall that is 0.40 m thick and of poor construction technique. The corridor is paved with two large badly preserved calcareous slabs of ca 0.80 x 0.90 m and with other slabs of irregular shape and size; the gaps between the slabs are filled with earth. The opening between Corridor I2 and Room B (1.10 m wide) did not belong to the building's original phase but was added later. It is provided with a threshold that consists of two sandstone slabs and shows cuttings for a door (fig. 9: d). A photograph taken in 1927 testifies to the existence of a threshold and a door jamb made of poros blocks in the opening between Corridor I2 and Room A, which both are no longer visible today (fig. 1).

#### Room A

Room A is rectangular and has a surface area of 5.60 x 4.00 m. In 1927 12 of originally 14 individual terracotta hip-bathtubs were found here, of which only 9 survive today in a poor condition



Fig. 8. *Hephaistia, Baths: Room C, northwest back wall, from southeast, 1927 (photo SAIA archive).*

(figs 1, 8). The room has three entrances: one from Corridor I2, a second from Room G, and a third from Room B, which was found blocked.

The walls are built in different techniques and with different materials. Archival photographs

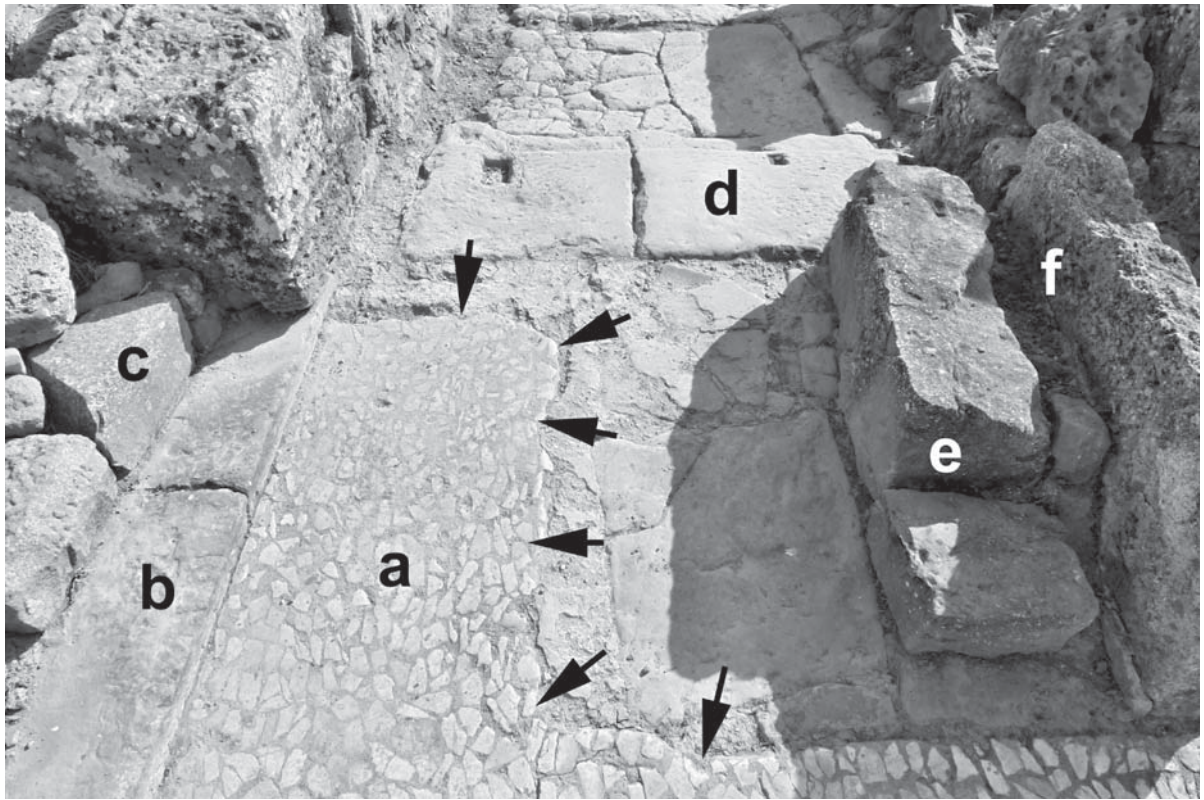


Fig. 9. Hephaistia, Baths: southwest corner of Room B, from northeast, 2010: a) opus segmentatum pavement, arrows indicating its remodeling; b) limestone threshold between Rooms A and B; c) blocking of door between Rooms A and B; d) threshold between Corridor I2 and Room B; e) modern masonry to reinforce slab f; f) slab screening the bench from the entrance area (photo P. Vitti).

show that the current state of preservation of these walls is very bad in comparison to that at the time of excavation. The door jambs and the corners of the room were made with large blocks of well-squared poros, some of which were bossed. The west corner consists of a pilaster that was made of two poros blocks with smooth bossed surfaces, which were still intact when discovered (fig. 10). Today only the lower block survives (0.44 x 0.57 m, 1.06 m high). The southwest wall, which separates A from I1 and is connected to this pilaster, is 0.60 m thick and now in a very poor state of conservation. The external wall face, clearly visible in a photograph from 1927 (fig. 10), was different from the internal face, which must have been redone later. In the south corner of the room a slab was found that may originally have been a large poros block and which supported the southeast wall of Room A (0.50 m thick).

The northwest side of Room A is difficult to assess because it shows signs of remodeling and gaps. The north corner must have been provided

with another poros pilaster, which left an imprint on the ground. Two passageways opened in the northwest wall, one next to the western pilaster and another next to the northern pilaster. The northern opening has a threshold with a size of 1.37 m x 0.50 m and was blocked at the time when the hip-bathtubs were set up in the room and against the northern opening. Between the two openings three blocks survive that belong to the fabric of the wall.

The northeast side is characterized by slabs (0.70-0.80 m high, 0.15-0.20 m thick) placed vertically in order to separate Rooms A and B. The slab next to the northern passageway is reinforced by a second slab (1.10 m long, 0.15 m thick), which broke into two and was repaired with two clamps in antiquity. The opening in the middle of the northeastern wall is 0.70 m wide and flanked on its southern side by a poros pilaster (0.59 x 0.51 m, 0.66 m high). While the eastern corner yielded another large poros block, the rest of the wall had already disappeared at the time of the excavation (fig. 1).



Fig. 10. Hephaestia, Baths: view of Room A and its still well preserved southwest wall, from southwest, 1927 (photo SAIA archive).

The pavement in Room A is made of slabs of local stone and of differently sized square and rectangular bricks (0.40-0.47 m per side). Archival photographs show in the northwestern part of the room a structure made of stones that are set radially on the pavement and most likely supported a brazier (figs 1, 7, 10).

From the available evidence at least two different building phases can be reconstructed for Room A. The first was carried out with large rectangular poros blocks, mostly placed at the corners of the space, and square poros masonry. By contrast, the slabs and the smaller blocks belong to a later phase, when the hip-bathtubs were placed in Room A.

The hip-bathtubs are arranged in an irregular manner, using as much space as possible along the walls. While the door between Rooms A and B was blocked in order to gain more space for bathtubs, the two entrances in the northwestern and northeastern walls were left open. Of the 14 identified hip-bathtubs many were repaired, some with lead clamps, whereas others were constructed out of two different bathtubs. Set immediately against the walls, the hip-bathtubs can be divided into three groups: four were lined up along the southwest side, four were set up in an arch-shaped configuration along the southeast wall, and six were grouped around the north corner, where they slightly overlapped one another. The hip-bathtubs along the southwest wall were

screened from the entrance between A and I2 by a tall, vertically placed and plastered slab that is only visible on photographs from 1927 (fig. 7).

The bathtubs were constructed in masonry and plastered. In a detailed analysis of the hip-bathtubs Gaetano Messineo and Angelo Pellegrino distinguished rectangular examples with or without upper border from round ones.<sup>13</sup> The hip-bathtubs are set on the floor, have an average length of 1.10 m, and include circular depressions for collecting the used water at the front, as well as seats in the rear that consist of a small plastered block of local sandstone with projecting upper rim. The hip-bathtubs' raised rear parts are supported by a fill of stones and bricks (0.10 m high) that is set on the pavement.<sup>14</sup> The variation in types of hip-bathtubs suggests that the hip-bathtubs originally had been used in different settings and were only reused in Room A.

#### *Rooms B and D*

Room B has a surface area of ca 5.90 x 5.60 m and is irregular, though roughly trapezoidal in shape (fig. 1). The benches that are visible along the northeast and northwest walls suggest that the space was used as a changing room (*apodyterium*; fig. 11). It is however possible to identify an earlier phase, in which the space was used for bathing activities.

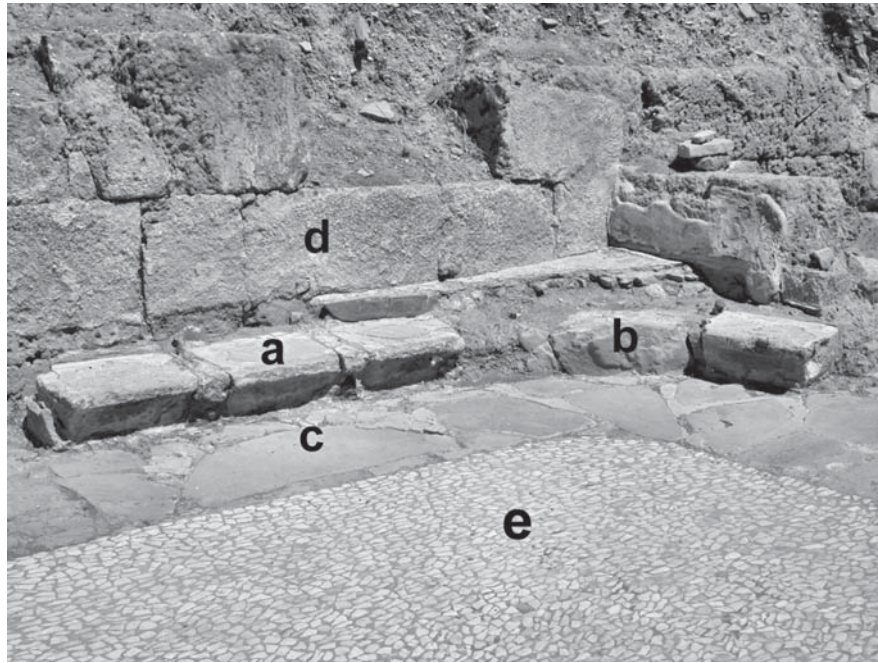


Fig. 11. Hephaestia, Baths: north corner of Room B, from south, 2010: a) hip-bathtubs with poros seats, re-cut to form a continuous bench; b) stones used to create the rounded parts of the bench; c) pavement of sandstone slabs (second phase); d) plastered opus quadratum wall; e) opus segmentatum pavement (first phase) (photo P. Vitti).

The walls that separate Room B from Rooms C and A are aligned with Ramp H. The other walls follow the orientation of the *opus quadratum* wall enclosing the baths on the northwestern side. The latter is ca 15 m long and 0.50 m thick (fig. 6: section x) and served as a retaining wall for a building to the northwest, which was located some 3 m higher than the baths. The wall's blocks with varying heights of 0.40-0.60 m are not always set strictly horizontally, and the gaps between adjacent blocks are filled with little poros blocks. To the west, the wall is not jointed to the wall between Rooms B and C, which was obviously built later. Thus, the *opus quadratum* wall preceded the construction of the baths, but was incorporated when the baths were built.

Room B is distinguished from all the other rooms by the presence of a fine *opus segmentatum* pavement (figs 1, 7, 9, 11).<sup>15</sup> This pavement occupies the central part of the space, following its geometric shape. By contrast, the floor along the walls is paved with grey-green sandstone slabs and square bricks (0.46 x 0.46-0.48 m). The mortar between the slabs is rich in crushed bricks. The pavement slabs continue, without interruptions, in Room D.

The pavement in *opus segmentatum* has a concave

surface inclined towards a hole of about 0.26 m in diameter that is situated at the geometrical center of the square area, excluding the two protruding sections towards Rooms C and G. Investigation of the hole did not reveal any drain, suggesting that the water was left to soak away into the ground. The west and north corners have 45° beveling over a length of 0.33-0.34 m. The *tesserae* of the *opus segmentatum* (0.04-0.06 m long) are set regularly and at 90° to the paved borders of the northeast and southwest sides. Two later alterations have been identified. The first corresponds to the threshold between Rooms B and C, where, at a distance of 0.76 m from Room A, the edge of the *opus segmentatum* pavement has been cut into and is irregular as a result of adjustments (fig. 9: a, arrows). In a similar fashion near Room G, the *opus segmentatum* pavement is irregular along the edge that runs from a pilaster on the northeastern wall to Room A (fig. 12: arrows). The pavement continues under the vertical slab that divided Rooms A and B (fig. 1), suggesting that the northeast side of Room A had originally included an opening symmetrical to the door between A and B on the northwest side of Room A (fig. 17).

Since the areas where the *opus segmentatum* pavement was cut are covered with sandstone

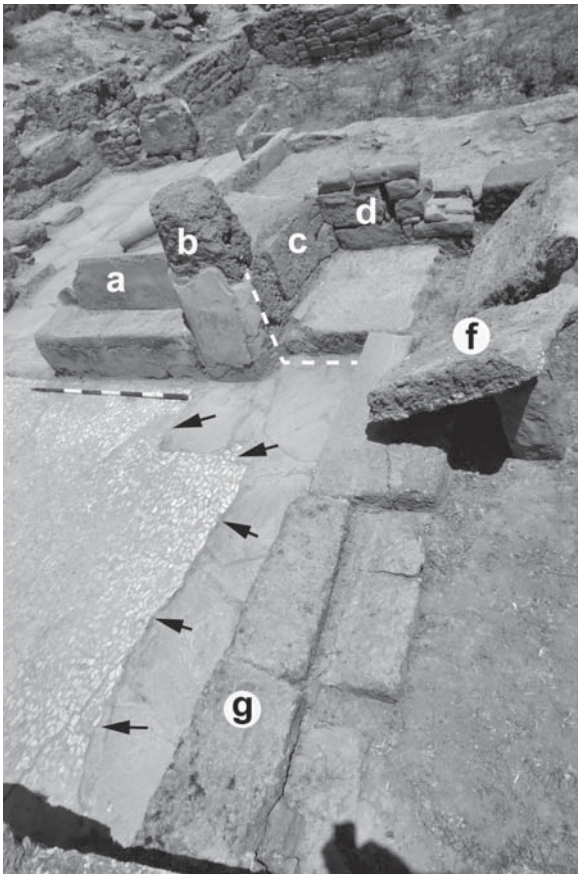


Fig. 12. Hephaistia, Baths: east corner of Room B, from southwest, 2010: arrows indicate remodeling of *opus segmentatum* pavement; a) plastered bench; b) plastered poros pillar; c) slab connecting pillar b and wall d; d) wall between Rooms B and D; f) slabs originally set vertically to separate Rooms B and G; g) threshold between Rooms B and G (photo P. Vitti).

slabs, the latter must postdate the *opus segmentatum* pavement. Contemporaneous with the sandstone pavement is a slab (0.14 m thick, at least 1.10 m high), set up vertically close to the passageway between B and I2, which served to create a screen between the entrance area and the room when the passageway between Rooms B and C was opened up. According to archival photographs, this slab was inserted into the ground and the pavement slabs abutted it (figs 1; 9: f).<sup>16</sup>

The area paved with sandstone slabs is 1.15 m wide on the southwest side, 1.03 m on the northwest side, and 1.10 on the northeast side. These measurements correspond to the average length of the hip-bathtubs in Room A, which is about 1.10 m. Thus it is likely that the area with the

sandstone pavement was originally occupied by bathtubs, which were subsequently replaced by benches. Four of these bathtubs, cut down to just the plastered poros seat, are still in situ in the north corner, forming, together with some stone blocks, a continuous plastered bench (fig. 11: a, b). The area corresponding to the bathtubs and, later on, to the bench, can be easily identified by the absence of plaster which by contrast starts at a height of 0.37 m above the floor (fig. 6: section x). This plaster has only a single layer, which is rich in crushed bricks.

In addition to the benches made from the reused bathtubs, there is another slightly higher bench that is made entirely of masonry (fig. 12: a). The bench is set parallel to the northeast wall of Room B, in alignment with the *opus segmentatum* pavement. The bench is 1.44 m long, 0.40 m high, and 0.32 m deep, and its back is made of a single slab (0.075 m thick, 1.20 m long, 0.39 m high). The presence of this backrest indicates that there was a space behind it, which is still visible in photographs from 1927. To the southeast, the bench adjoins a beveled plastered poros pilaster (fig. 12: b). The plaster covering the pilaster includes two layers (together 0.025 m thick) and is partially lacking on the southeastern side, where evidently another slab had been placed to divide the room from the space behind (fig. 12: dotted line). Another, thicker slab linked the pilaster to the wall between Rooms B and D (fig. 12: c). The function of this space and its partitions is difficult to establish at this stage of incomplete excavation.

Room D, which connects B to E, is enclosed on the northeast and southwest sides by two plastered walls (0.50 m thick), which extend for a length of 1.44 m from the *opus quadratum* wall into the room, at a distance of 2.60 m from each other. The room is provided with a pavement of sandstone slabs that forms a continuous surface with that of Room B. The southeastern part of the room has not been fully investigated and can only be assessed based on excavations performed in 2002 and a thorough cleaning carried out in 2010 (fig. 13). The wall between Rooms D and E is preserved only at the level of the foundations (fig. 15: b). Similarly, the wall between Rooms D and B is not preserved, but its location and thickness can be reconstructed from the pavement that abutted it (fig. 13: e). Room D was connected to B and E by two openings of 0.80 m in width. More information about the wall between B and D can be gained ca 3.40 m further south, where the ridge of a wall, made of small blocks, and an opening between D and G with two steps are visible (fig. 13: i). The two

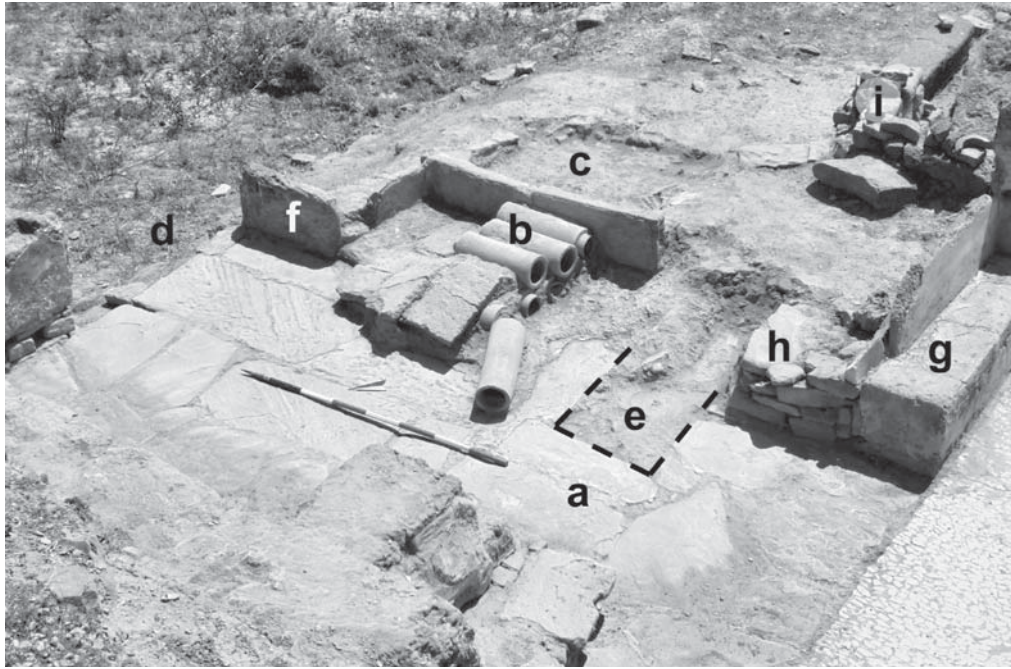


Fig. 13. Hephaistia, Baths: Room D, from northwest, 2010: a) pavement of sandstone slabs; b) terracotta pipes piled in a recess created by the slabs (f); c) basin built on a raised area of Room D; d) location of the probable passage between Room D and Room E; e) area filled with earth corresponding to the wall separating Room D from Room B; f) sandstone slabs separating the southeastern raised area of Room D; g) plastered masonry bench in Room B; h) modern masonry; i) remains of the wall separating Room D from Room B and G (photo P. Vitti).

steps lead up from Room G to a raised area in D, which lies above the floor level of the other rooms. This raised area extends to the northwest and is enclosed by sandstone slabs (0.40 m high), plastered and covered with a mortar capping (fig. 13: f). The slabs are inserted into the ground, and the pavement slabs abut them. The vertically placed slabs form a recess 0.70 m in depth, inside which pipes were found, stacked with sandstone slabs (fig. 13: b).<sup>17</sup> To the south of the vertically placed slabs and in the raised area, a basin was identified from the fragmentary remains of a poorly made rim and of fine hydraulic plaster. This basin was obviously dug into the ground. Since the size of this basin currently cannot be reconstructed, its precise function, notably as an individual immersion bathtub or even collective immersion pool, cannot be determined. During the excavation of 2002 a small channel was found whose upper part is made of terracotta slabs and that is preserved for a length of about 0.37 m, departing from the southwest wall of Room D; it may well have been connected to the basin, possibly draining water from its southwest corner to Room B or rather G (fig. 4: marked with \* under D).<sup>18</sup>

#### Rooms F and G

There is little evidence that would allow for a comprehensive assessment and interpretation of these two rooms. They were excavated in 1927 and then never investigated again until 2010, when a thorough cleaning provided evidence for a more precise evaluation of the wall between Rooms B and G (fig. 12).

The passageway between B and G includes a step of 0.16 m in height and a threshold that is 1.37 m long and 0.60 m wide (fig. 12: g). Two vertical slabs (fig. 12: f) were used to create a low partition wall between Rooms B and G. More, albeit fragmentary, information can be gleaned from the 1920s photographs (fig. 14). Room G was enclosed to the southeast by a wall which abutted one of the pilasters in the southeast wall of Room A; this wall separated Rooms G and F and was possibly provided with an interconnecting opening. Other large stone blocks lay scattered around in the area of Room G.

In Room F, where a considerable amount of earth was removed in 1927, a wall can be identified that is built against the southeast wall of



Fig. 14. Hephaistia, Baths: Room G, from southeast, 1927 (photo SAIA archive).

Room A. In the area to the southwest of Room F, which is linked by a door to Corridor I1, was found a section of the above-mentioned water pipe system that descended Ramp H.

#### Rooms E-L-M

Room E with a surface area of 7.70 x 4.78 m was discovered in 1937 by Becatti under a thick layer of fill that appeared beneath late antique struc-

tures (fig. 5). In contrast to the areas excavated in 1927, this space was almost entirely bare and the walls on the northwest side unplastered.<sup>19</sup> In addition to the above-mentioned wall in *opus quadratum* (fig. 5: c) and bonded with it, parts of the northeastern and southwestern walls of the space are preserved (fig. 5: b). The wall between Rooms E and D (0.50 m thick) is made of poros blocks and sandstone blocks laid in horizontal layers (fig. 15: b, c). The wall enclosing the space to the northeast also marks the extension of the bath complex to the northeast (fig. 5: b). While its northeastern end consists of two poros blocks that are laid on top of each other and bonded with the *opus quadratum* wall, the remaining part of the masonry is made of horizontal layers of small sandstone blocks and some elongated rectangular sandstone blocks, similar to those found elsewhere in the bath complex.

Close to the wall between Rooms D and E, Becatti identified two structures, the foundations of which survived (fig. 5: d, e). The first, no longer extant (fig. 5: d), consisted of a row of stones laid on the ground at the same level as a recess in the foundations of the northeast wall (fig. 15: b); thus these stones seem to have belonged to a fairly low wall, of 1.80 m in length recorded in the drawings

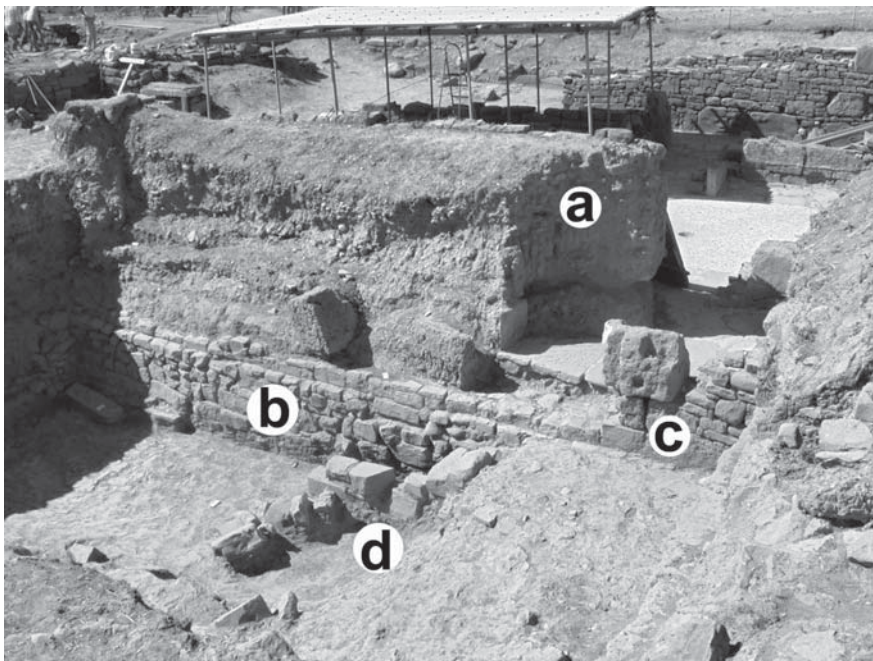


Fig. 15. Hephaistia, Baths: south corner of Room E, from north, 2002: a) filling between the Hellenistic baths and Roman-Byzantine walls; b) foundation of the wall between Rooms E and D; c) elevation of the wall between Rooms E and D; d) remains of the L-shaped structure visible in fig. 5: e (photo P. Vitti).



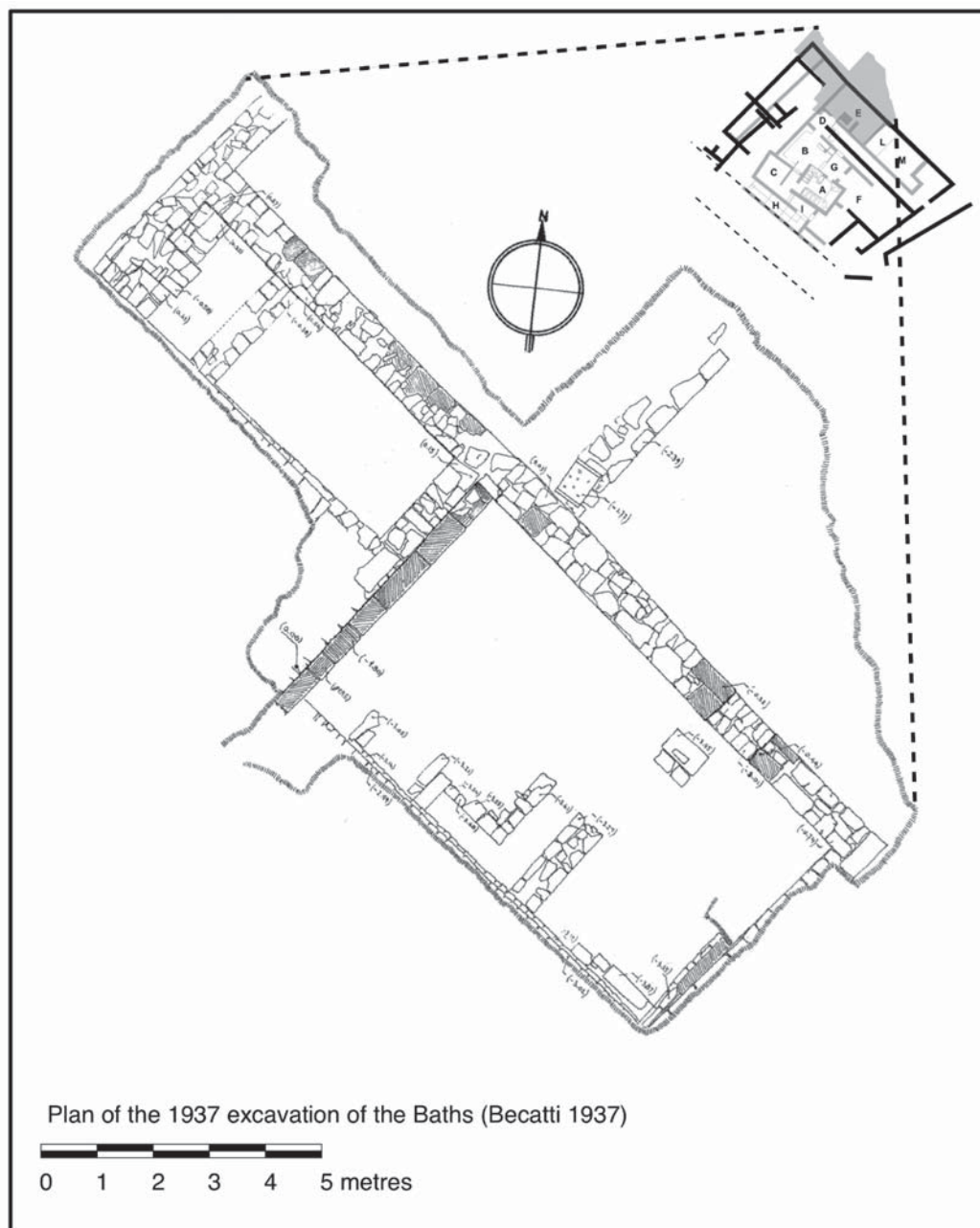


Fig. 16. Hephaestia, Baths: Room E after excavation in 1937 (drawing G. Becatti, SAIA archive).

made by Becatti (fig. 16). The second structure had deeper foundations and consisted of two rows of stones forming an L-shape, which were not connected to the foundations of the wall between E and D, however (fig. 5: e). This structure may have belonged to a rectangular structure of 1.3 x 1.7 m that was partially preserved at the time of the excavation, but was already badly preserved

in 2002 (fig. 15: d). In this room Becatti found two *pithoi* that were very similar to the cinerary urns from the archaic necropolis that Domenico Mustilli excavated between 1926 and 1930; this discovery marshaled the hypothesis that a second archaic necropolis existed in this part of the city. Deep trial trenches in the adjacent Room L allowed for defeating this idea, however, and demonstrated

that the baths were built on two layers dating to the Hellenistic and Classical periods and not on any earlier structure. These two strata, in turn, superimposed another layer that included no pottery and was set on bedrock.<sup>20</sup> Furthermore, the excavations of 2003 revealed a wall to the south-east that originally defined the boundary of Room L and was removed in a second phase to make way for a floor. The presence of an earth floor that abuts the foundations of the enclosing walls of Room L reveals the first period of use of the baths, datable to the 4<sup>th</sup> and 3<sup>rd</sup> centuries BCE. By contrast, the floor that subsequently obliterated Room L, combining it into a single unit with Room M, dates from the last phase of use, when a large open courtyard was installed in the area of L and M. Until the abandonment of the baths in the 2<sup>nd</sup> century BCE this upper floor of Courtyard L/M was repeatedly renovated. The traces of fired clay found at the far southeast end of the courtyard suggest that the courtyard and connected spaces to the southeast were used as artisans' workshops.

#### CONSTRUCTION PHASES AND INTERPRETATION OF THE BUILDING

The development of the bath complex was restricted by pre-existing structures and by the urban plan, which resulted in the combination of two distinct orientations and the formation of trapezoidal spaces. For example, Rooms B, D, E, F, G, L and M follow the orientation of the *opus quadratum* wall that lines and buttresses the slope. This wall is of much better quality than the other walls of the complex, predates the baths, and served as a retaining wall for an artificial leveled terrace. Its orientation was almost certainly conditioned by the slope of the land; thus it was positioned parallel to the natural rocky outcrop, which was trimmed to form a regular vertical surface. By contrast, Rooms A, C, H, and I were aligned with the road that ascended the slope and whose existence and course uphill to the northwest were confirmed by recent excavations (*fig. 2*).<sup>21</sup> This street ran from the Palaiopolis gulf to the dwellings that occupied the area above the baths.

The bath complex was therefore constructed on undeveloped terrain at the foot of a pre-existing building that was supported by the *opus quadratum* retaining wall. Room C and Ramp H were built beyond and abutting the *opus quadratum* retaining wall, with large roughly worked blocks that held the terrain above (*fig. 8*). The other walls were built in a mixed technique of alternating square poros blocks and smaller blocks in horizontal layers (*fig.*

5: b). Several later interventions, characterized by poor quality masonry, can be identified. Often, building material was reused, particularly poros slabs that were set vertically to form partitions of modest height. The alterations made to the elevation of the walls indicate a change of functions, including a new arrangement of the hip-bathtubs and the installation of new pavements. These observations suggest two main building phases.

During the first phase (*fig. 17*) Room B served as bathing room. The hip-bathtubs were arranged around the *opus segmentatum* pavement. The quality of this pavement is similar to that of pavements in the Greek public baths of Oiniadai in Acarnania<sup>22</sup> and pavements in private and public buildings of Late Hellenistic Delos. An examination of the pavement with sandstone slabs in Room B, which was laid after the removal of the bathtubs, suggests that originally the bathtubs were set up on three sides of the room. Sixteen bathtubs can be reconstructed, two of which were set diagonally into the corners of Room B, where the *opus segmentatum* floor shows a 45° beveled edge. There were certainly two entrances to Room B: one testified to by the threshold next to the north corner of Room A (1.37 m wide) and the other by the threshold to Room G (1.39 m wide). By contrast, no direct connection between Rooms B and D is reconstructed here, because this would not have been necessary if Room G served as the central distributive room of the baths. While the function of Room D is unclear, it seems likely that Room A served as a courtyard that gave light to the surrounding rooms; it is not clear whether Rooms C, B, and D could be lit through windows in the *opus quadratum* retaining wall, which must have been placed very high in the wall. There was possibly another opening in the northeastern wall of Room A, close to the north pilaster and which would have lit Room B, in addition to the door in the north-western wall of A.

Ramp H provided direct access to the city and possibly to the building (a sanctuary?) that was located on the adjacent higher terrace. The north-west door of Corridor I led to Room C, which probably served as a vestibule; Courtyard A, in turn, gave access to Room B with the hip-bathtubs. There was probably a second service entrance in the southeastern section (M), from the port area to the southeast. Room D functioned perhaps as distributive space or a changing room and Room E may have served as another bathroom. It is unlikely, though not impossible, that the potential entrance in the southeastern part (M) was open not only to servants, but also to bathers who could

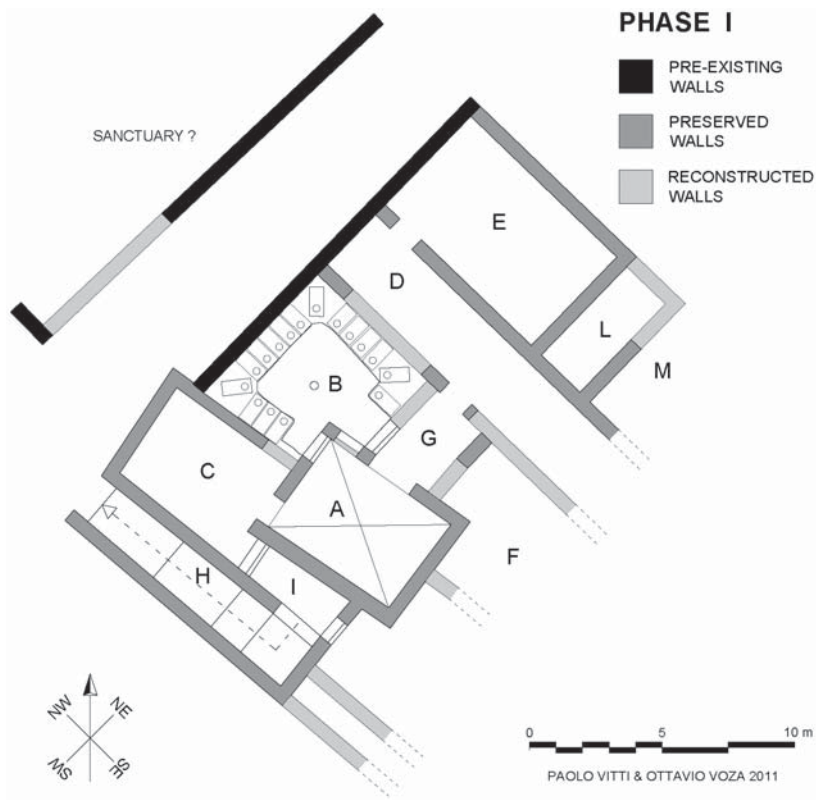


Fig. 17. Hephaestia, Baths: reconstructed plan of the first phase (drawing P. Vitti and O. Voza).

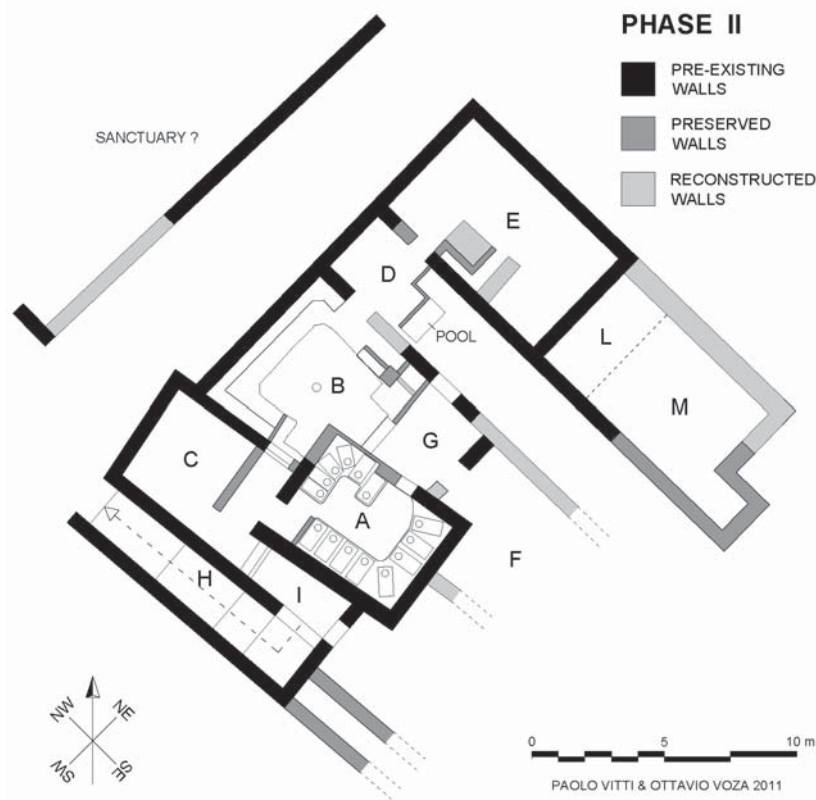


Fig. 18. Hephaestia, Baths: reconstructed plan of the second phase (drawing P. Vitti and O. Voza).

thus have gained quicker access to Bathroom B, avoiding the quite sinuous path via H, I, C, and A.

Unfortunately, the circulation pattern and the function of rooms in the original baths of the 4<sup>th</sup>-3<sup>rd</sup> centuries BCE currently cannot be fully reconstructed; more definite conclusions can possibly be drawn after further investigation.

In the second phase of use, the hip-bathtubs were moved from Room B to Room A (fig. 18). This intervention is difficult to explain because it would have been much easier and more logical to convert Room A into a changing room and to leave the bathtubs in Room B. The change of function of Room B must have been intentional and obviously did not go back to major destructive events such as an earthquake, which would rather have rendered the space unusable and have caused its abandonment. Thus, in order to understand what may have caused the change of use of Rooms A and B, all alterations related to this process must be analyzed.

Alterations included first the combining of Rooms L and M into one single space, notably an open courtyard that served as artisans' work space. Second, two structures were built in Room E against the partition wall between E and D, which probably also testify to a change of function of this room (fig. 5: d, e). They may have been part of a service area, possibly serving for the heating of water. Third, Room D was linked to Room B by a passageway and a pavement of sandstone slabs that was laid without solution of continuity in both rooms. The southeastern part of Room D was raised, perhaps in order to accommodate an individual immersion bathtub or even a collective immersion pool, which is suggested by the traces of a basin discovered in this area. The fragmentary state of preservation possibly indicates that the basin was destroyed during its construction or a repair process; this would also account for the pipes stacked up in front of the basin, next to the vertically placed slabs (fig. 13). Finally, the large-scale remodeling process may also have included the installation of Corridor I2 (fig. 3) and of a passageway between Corridor I2 and Room B; this, in turn, entailed the blocking of the northern door between Rooms A and B, as well as the construction of a screen between the southwestern bench in Room B and the new southwestern entrance door to Room B.

All of these transformations can be explained as part of a general overhauling of the complex, giving more importance to the western part of the baths at the expense of the east side, where Rooms L and M were transformed into an open courtyard

and Room E became a service area. The installation of a door between I2 and B may have been necessary in order to provide different circulation patterns. Thus, bathers could have proceeded either from Corridor I2 to the hip-bathtubs in Room A or directly through Room B to the bathing form in Room D. In this phase, Rooms A and G lost their original function as a distributive room and a passageway, respectively, and became integral parts of Room B, from which they were only separated by some modestly sized slabs. The presence of these slabs, which in the second phase were used to separate Rooms B and G as well as Room A from Rooms B and G, suggests a considerable permeability between these rooms.

In sum, the alterations in the second phase were obviously not carried out in order to increase the capacity of the baths, because the number of hip-bathtubs did not change significantly when they were moved from Room B to Room A. Instead, the remodeling was possibly motivated by functional requirements: most crucially, Room D was transformed into a bathing room, most likely receiving some relaxing (and maybe even collective) bathing form; Room A was provided with the old hip-bathtubs for individual cold or warm shower-baths; Room B now served as the changing room and central distributive space between the two different bathing forms; and Room E, whose original function cannot be securely determined, now certainly functioned as a service area. The function of Room F cannot be identified because the evidence found in situ and archival photographs do not shed sufficient light on its relationship to rest of the bath complex.

From an architectural point of view it must be stressed that the plan of the bath complex was from the outset restricted by the incorporation of the pre-existing *opus quadratum* wall. Thus, rooms could not be organized as freely and rationally as in other contemporary baths. Since windows possibly could not be integrated in the *opus quadratum* retaining wall, Room A originally was conceived as a courtyard, providing light and ventilation for the surrounding rooms. The transformation of this courtyard into a covered bathing room must have had dramatic consequences for the entire bath complex, removing the only available source of light and air. Whether and how this was compensated for in the second phase, which obviously entailed an overall improvement of the bathing facilities, can be determined only after excavation and examination of the baths have been completed.

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## NOTES

- <sup>1</sup> The survey and the observations on the bath were carried out together with O. Voza.
- <sup>2</sup> Della Seta 1927-1929, 711. For Della Seta's activity on Lemnos, see Beschi 2001.
- <sup>3</sup> Greco 2001.
- <sup>4</sup> Lemerle 1937, 468-470; Ficuciello 2004, 67. For Becatti's unpublished report, see Messineo 2001, 402-406.
- <sup>5</sup> At the end of the 1990s only clearing work and the restoration of the hip-bathtubs had been undertaken. Di Vita (1996-7 (2000), 477-478) indicates that the bath complex was partially rediscovered in 1995 and that the activity carried out in 1996 was related to the hip-bathtubs and to the graphic documentation. The rediscovery of Room B with its refined pavement ('bel pavimento in cocciopesto sul quale erano sistemate lastrine di marmo', p. 477) is specifically mentioned, which suggests that large parts of the baths had been filled to a considerable degree with earth, leaving only Room A with the hip-bathtubs visible. On this occasion Room A was covered with a protective shelter.
- <sup>6</sup> The existence of a sanctuary is suggested by the discovery of a pottery fragment with the graffito 'IEPON', which was found in the filling behind the retaining wall of Room C and is datable to 3<sup>rd</sup> century BCE. It seems that the baths were situated in a *proasteion*, but we have no evidence to securely evaluate their relation to the city walls.
- <sup>7</sup> The excavations were directed by E. Greco, assisted by E. Carando, S. Savelli, V. Consoli and E. Santaniello, students from the SAIA, and Dott.ssa G. Bucci for the excavation of Late Antique structures.
- <sup>8</sup> The study of the topography and the detailed architectural survey of monuments were carried out by the architects A. Dibenedetto, P. Vitti, and O. Voza.
- <sup>9</sup> The stratigraphy was examined during the excavation of Room E. The most recent construction consists of a rectangular courtyard which had two separate phases: 1) a layer of compact terrain datable to the 6<sup>th</sup> and 7<sup>th</sup> centuries CE; and 2) a layer of sand from the 2<sup>nd</sup>-3<sup>rd</sup> centuries CE, superimposed by a *battuto* of earth, gravel, and crushed ceramics. This floor covered a stratum of naturally accumulated material including rubble, pebbles, and clay, belonging to the period in which the bath complex was completely obliterated (US 2049). Below this was first a stratum of uncertain date and second a layer which gives evidence of the destruction of the bath complex, rich in fired clay, ash and charcoal and datable to the 2<sup>nd</sup>-1<sup>st</sup> centuries BCE. In this layer was found a small concave lead plate with holes at its borders for hanging it up, stamped with the three letters AQH. S. Savelli in Greco 2002, 969-973.
- <sup>10</sup> Messineo and Pellegrino 2001, 390.
- <sup>11</sup> Messineo and Pellegrino 2001, 415-416.
- <sup>12</sup> V. Consoli in Greco 2003 (2005), 1034-1035.
- <sup>13</sup> Messineo and Pellegrino 2001, 387-417.
- <sup>14</sup> Messineo and Pellegrino 2001, 397.
- <sup>15</sup> For the modern term *opus segmentatum* that is not used in ancient Latin literature, see Ginouvès and Martin 1985, 148. The pavement of Room B is made of irregular fragments of white and grey marble (Messineo and Pellegrino 2001, 397).
- <sup>16</sup> The slab is now ca 0.50 m high and has been reinforced with stone blocks on the southeast side, next to the passageway between B and I2 (*fig.* 9: e).
- <sup>17</sup> The pipes are 0.48 m long and 0.18 m wide. The segments fit into one another. They were discovered in 2002; see E. Santaniello, in Greco 2002, 974.
- <sup>18</sup> E. Santaniello, in Greco 2002, 974, pl. II (US 2037).
- <sup>19</sup> G. Becatti, in Messineo and Pellegrino 2001, 402-406.
- <sup>20</sup> S. Savelli, in Greco 2003 (2005), 1032.
- <sup>21</sup> S. Camporetti, in Greco 2002, 985-988.
- <sup>22</sup> Sears 1904.