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Marina El-Alamein: Conservation Work, 1999

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MARINA EL-ALAMEIN

CONSERVATION WORK, 1999

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The site of the ancient town of Marina el-Alamein – Houses H 9 and H 9a, as well as H 10, H 10a and H 19 – was for the fifth time the object of conservation activities conducted by a Polish-Egyptian expedition between March 16 and May 30, 1999.¹⁾

¹⁾ The mission is a joint project of the Polish Center of Archaeology of Warsaw University and Egypt's Supreme Council for Antiquities. On the Polish side, it brings together staff from the Architecture Faculty of the Wrocław University of Technology, the Institute of History of the Adam Mickiewicz University in Poznań and the Warsaw Academy of Fine Arts. Headed by Prof. Dr. Stanisław Medeksza, the team this year comprised the following: Dr. Rafal Czerner, architect; Mr. Wiesław Grzegorek, architect-constructor; Dr. Andrzej B. Biernacki, archeologist; Mr. Piotr Zambrzycki, conservator of stone; Mr. Maciej Dąbrowski and Ms Małgorzata Ujma, architectural painting conservators. The Egyptian side was represented by site director, Mr. Abdel Latif el-Wakil, and West Delta archaeology inspectors: Messrs. Sayed Ahmed Abdel Aseem Sayed Ahmed, to whom the expedition is indebted for their help every step of the way. Mrs. Iwona Zych was of assistance in giving this report its present shape.

CONSERVATION OF THE ARCHITECTURE

The conservation of architectural remains followed the principles and methods applied in previous seasons.²⁾ A lime-cement mortar

is generally used for the core of the wall, while the plaster for the wall faces is mixed of two parts of lime, six of sand and one of

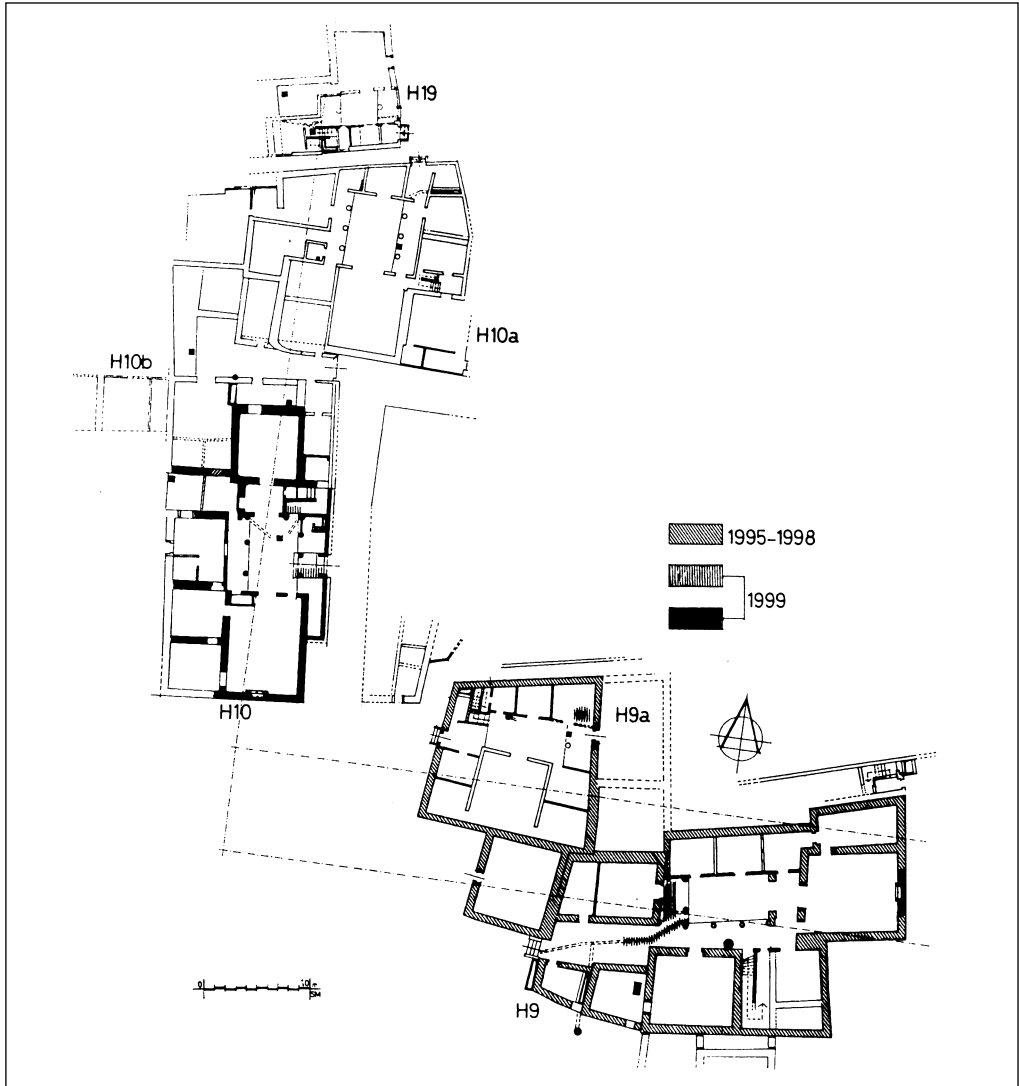


Fig. 1. Houses H 9 and H 10. Conservation work carried out in the 1999 season
(Drawing S. Medeksza)

²⁾ Cf. S. Medeksza, *PAM VII, Reports 1995* (1996), 42-52 (with references to earlier conservation work at the site); id., *PAM VIII, Reports 1996* (1997), 82-88; id., *PAM IX, Reports 1997* (1998), 72-76, *PAM X, Reports 1998* (1999), 51-62.

white cement. The pointing mortar, which was also used for consolidating the tops of the walls, was basically of the same composition.

The objective generally is not to recreate ancient building techniques, but to protect the surviving architectural elements from further corrosion and disintegration. The corroded parts of walls, columns and decorated elements have to be dismantled, the joints and the surfaces of particular blocks cleaned. The walls are then built up and consolidated. The top surface is shaped appropriately to provide for water runoff in the direction of both wall faces.

The pointing work especially has to be done with extreme care in order to protect the mortar in the walls from being washed out, leading to further corrosion and disin-

tegration. The pointing is depressed by c. 0.5 cm from the wall face in order to give the proper light-and-shade effects and to permit the restored parts of walls to be easily discernible from original ones.

The plaster on the walls is particularly susceptible to erosion. This is chiefly due to the ancient technique, which comprised a layer of mud mortar spread deeply into the joints between stone blocks, followed by one to three layers of lime plaster with increasingly finer sand fraction, the last, often mixed with gypsum, serving as the ground for the wall paintings. Wherever the plaster appeared to be in good condition, the team made it a point not to uncover more of the wall surface than can be protected in the course of the season. Missing plaster is not restored for both technical and aesthetic reasons.



Fig. 2. General view from the northwest of houses H 10 (foreground) and H 9 and H 9a, at the close of the 1999 season (Photo S. Medeksza)

HOUSES H 10, H 10A, H 10B
AND H 19

The brunt of the conservation and cleaning work this season was concentrated in this complex, which is now seen as including not only the recognized peristyle houses H 10, H 10a and H 10b, but also a smaller, as yet not fully excavated residence H 19 (Figs. 1, 2).

A major objective was to clear the portico courtyard (room 1 on the plan) and the adjacent complex of rooms 2-12 including the main entrance to the house. This was undoubtedly the principal part of the residence, in terms of layout as much as function. The clearing of room 3a was interrupted when it was discovered that the walls bear well preserved plaster with painted geometrical motifs.

The niche discovered last year in room 2 (Fig. 3) was now restored (Fig. 4), the mural removed to be displayed in the future on-site museum. The only step taken was to insert the two blocks directly supporting the columns of the niche. No effort was made to recreate in detail the ornamental profile of the parapet, eroded beyond recognition, but about 90% of the original decoration of the niche has been preserved (Fig. 5). Nevertheless, the structure was found unsound, the blocks of the engaged columns being only shallowly inserted into the original wall structure. Every second element of the columns was reinforced, using steel rods and epoxy resins, to bond the niche to the wall behind it. The inside of the niche, once decorated with paintings, has been finished in plaster.



Fig. 3. House H 10. Portico courtyard and room 2 with relics of niche before restoration. View from the northeast (Photo R. Czerner)

The cornices and conch, preserved in 70%, will be restored in the coming season, when it will be possible to recreate most of the missing stucco elements (*Fig. 6*).

The wall behind the niche has been restored to a height of 4.00 m. Other walls in the complex range in height from 0.70 to 2.00 m, depending on their originally preserved height and the context in specific rooms. The decisive factor was the visual effect of the restored parts (*Fig. 8*). None of the restored columns or walls were replastered. In the case of the columns and engaged columns, a lime-mortar wash was applied, mortar being used as a filler only for corroded elements.

HOUSES H 9 AND H 9A

The major work in House H 9 (*Fig. 9*; cf. also *Figs. 1, 2*) was the restoration of a niche

in room 14, made possible by last year's fortuitous discovery of the niche in House H 10. The niche, which had been excavated several years ago (*Fig. 10*),³⁾ had suffered considerably from lying out in the open. It now proved impossible to use all the original elements; the northern column had to be reconstructed entirely, and there is little chance for saving the conch (*Fig. 11*).

In House H 9a, the wall tops were cleared of disintegrating material and built up two or three courses to a height of no less than 1.00 m. Only one column, which marked the width of the eastern portico, was preserved sufficiently to permit its restoration to a height of 2.87 m. The column used as a drain pipe proved impossible to restore for lack of enough original elements.



Fig. 4. House H 10. Portico courtyard and room 2 with relics of niche after restoration. View from the northeast (Photo S. Medeksza)

³⁾ Cf. J. Radzik, "Aedicula", in: Archaeological background and conservation problems. The Polish-Egyptian Preservation Mission at Marina 1998. The Polish Excavation Mission at Marina, 1987-88, vol. 1 (Warsaw 1991), 45-46.

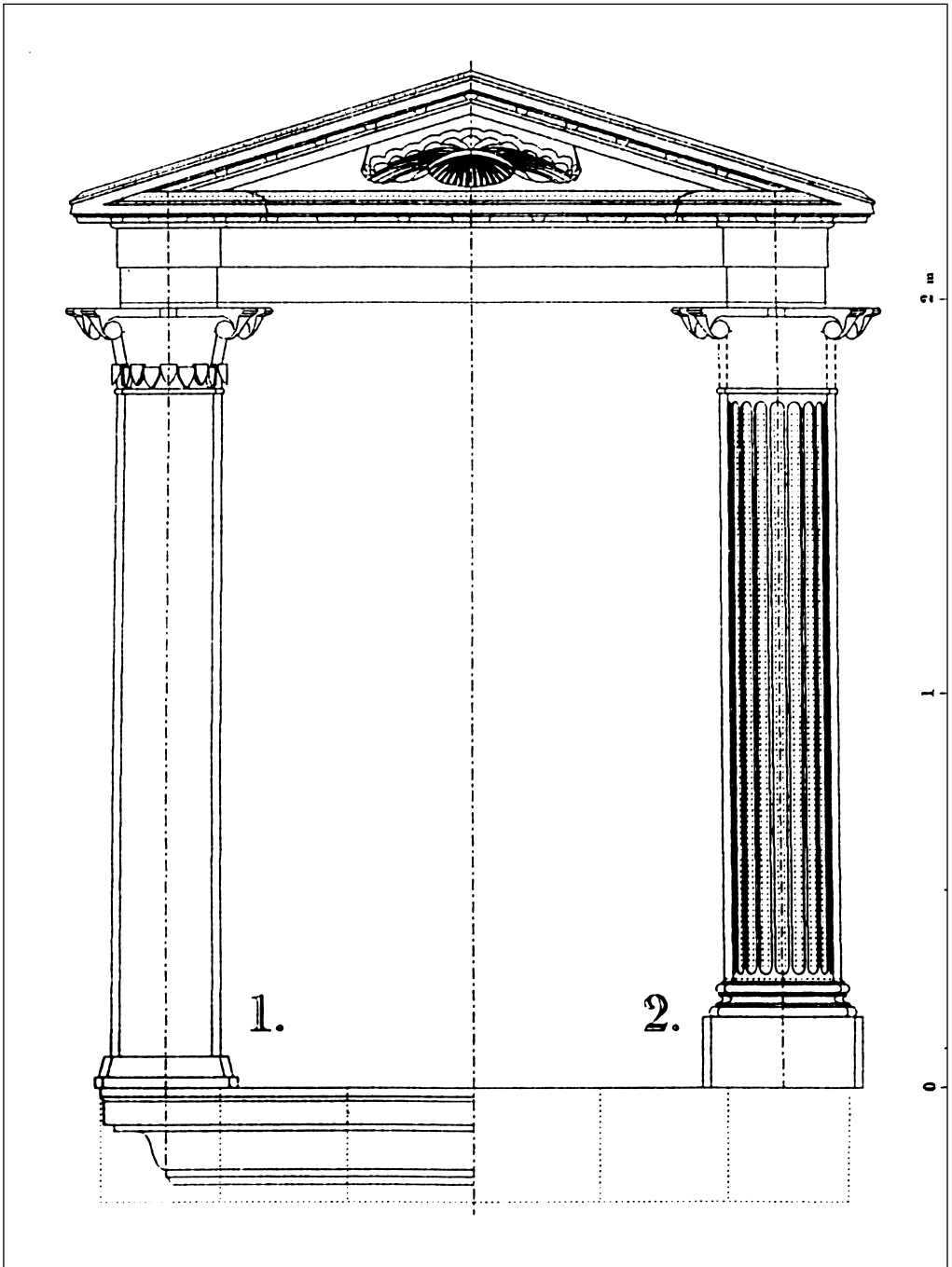


Fig. 5. House H 10, room 2. Reconstruction of two stages of the architectural decoration of the niche (Reconstruction R. Czerner)

CONSERVATION OF THE WALL PAINTINGS

The wall paintings that had been discovered in the previous season and subjected to preliminary treatment,⁴⁾ were now carefully examined. It was found that due to excessive salinity the underlayers of the mural from the niche had practically disintegrated. The only solution was to transfer it to an artificial support.⁵⁾

The first step was applying a solution of Primal AC-33 to preserve as much as possible of the original painted layer. Mechanical and chemical (eraser, sponge, brush, scalpel, and compresses of an 8% water solution of NH_4HCO mixed 1:1 with

a 3% solution of methylcellulose) cleaning followed. The filler used for the missing sections of the painting and for filling out the background was a putty containing 1 part lime putty, 3 parts sand, and 10% concentrated Primal AC-33. Finally, the surface was impregnated with a 3% and 5% solution of Paraloid B in toluene. Primal was not used in view of continuing salt efflorescence on the surface.

The mural surface was then protected with gauze and canvas attached with a 15% water solution of polyvinyl alcohol, after which the painting was cut away from

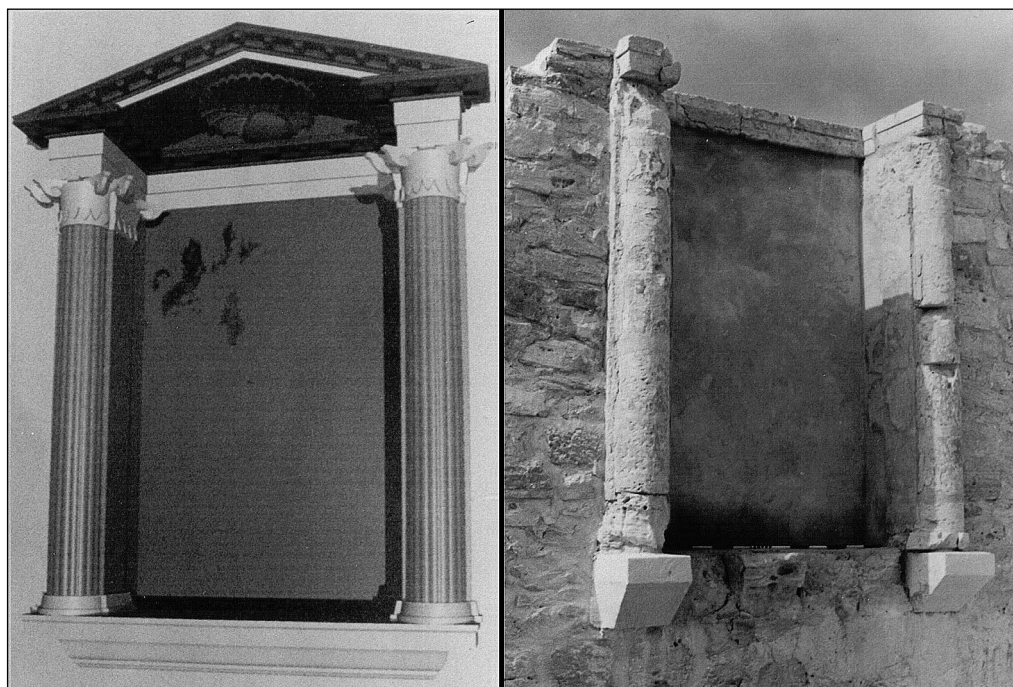


Fig. 6. House H 10, room 2. Niche viewed from the north. Computer reconstruction on the left (Rendering R. Czerner). The niche after anastylosis in 1999 on the right (Photo P. Zambrzycki)

⁴⁾ Cf. Medeksza, *PAM X, Reports 1988*, op. cit., 57-61, figs. 4-6; id., "Marina el-Alamein, grecko-rzymskie miasto w Egipcie. Badania architektoniczno-urbanistyczne i restauracja reliktyw architektury mieszkalnej", in: *Conservatio est aeterna creatio. In Homage to Prof. Jan Tajchman (Toruń 1999)*, 117-154.

⁵⁾ The wall painting from the niche in room 2 was treated by Maciej Dąbrowski.

the stone together with the plaster ground. Following desalination of the bottom surface, it was reinforced with Primal-coated plaster and layers of gauze and canvas. There followed a chalk adhesive ground laid under a polystyrol screen and layers of gauze and canvas, impregnated with natural resin (shellac) with sand imbedded in it. On top of this there came a layer of artificial glass fiber and, finally, a thick cardboard substructure. The final step was a color-merging of the composition after the surface protection had been removed. The painting is now fitted on panels in readiness for display in the future site museum.

The other discovered mural⁶⁾ was found to be in very poor condition with the colors dimmed and faded, highly friable with many air bubbles causing the painted layer to foliate (practically 90% of the surface). Desalination will have to be continued. At present, the surface of the painting was cleaned with a dry brush and the many separate fragments fitted together. The upper plaster layers and the painted layer were reinforced. Since a part of this mural is preserved on a stone, an artificial stone slab with steel rods was prepared to integrate the smaller preserved pieces. The painting was left in storage at the site until the next season when its conservation will be completed.

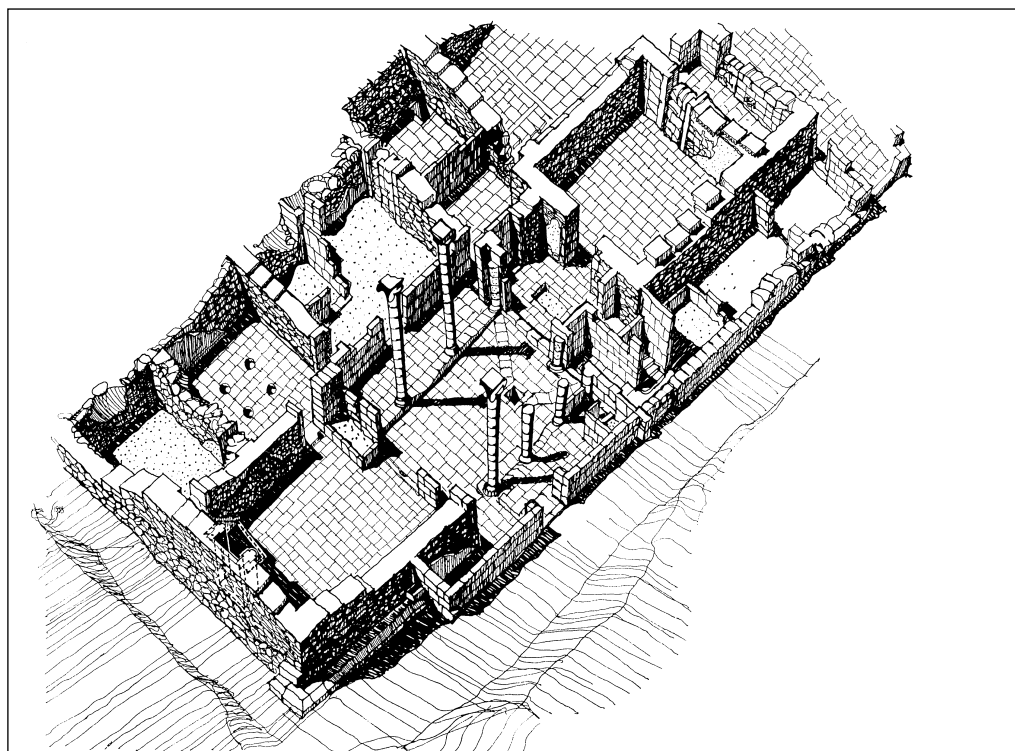


Fig. 7. House H 10. Axonometric view after restoration. View from the southeast (Drawing R. Czerner)

⁶⁾ Work on the mural from room 5S was carried out by Małgorzata Ujma.

EXPLORATION AND ARCHITECTURAL STUDIES

The cleaning work and architectural studies that normally precede conservation measures were concentrated around the courtyard of the H 10 complex and along the southern and eastern facades of the building.

A trench 1.50 m wide and 8 m long was dug along the southern wall of the house in order to facilitate the restoration of the niche in this wall, which is also the southern wall of room 2. This trench was later extended another 2 m east in order to connect the H 10 complex with House H 9 and H 9a on the level of the Late Roman street and square previously explored in front of H 9a.

Another trench, 2.50 m wide and 12 m long, was opened to clear the part of the

N-S street that runs alongside the eastern facade of House H 10. In an additional trial pit below the threshold a channel emptying into the street sewage system was discovered. At least three street surface levels were noted in this trench. The lowest was a lime and sand layer 1.00 m below the level of the main entrance. The second layer, c. 0.40 m above the first, is made up of grayish-yellow sand covered with a layer of burning, presumably evidence of the fire that destroyed the building. This level corresponds with the footing in the eastern facade of H 10. The next layer, appears still 0.20 m higher. This last phase of the street is linked to the threshold in the main house entrance. Also corresponding with this level is a curb of stone blocks erected

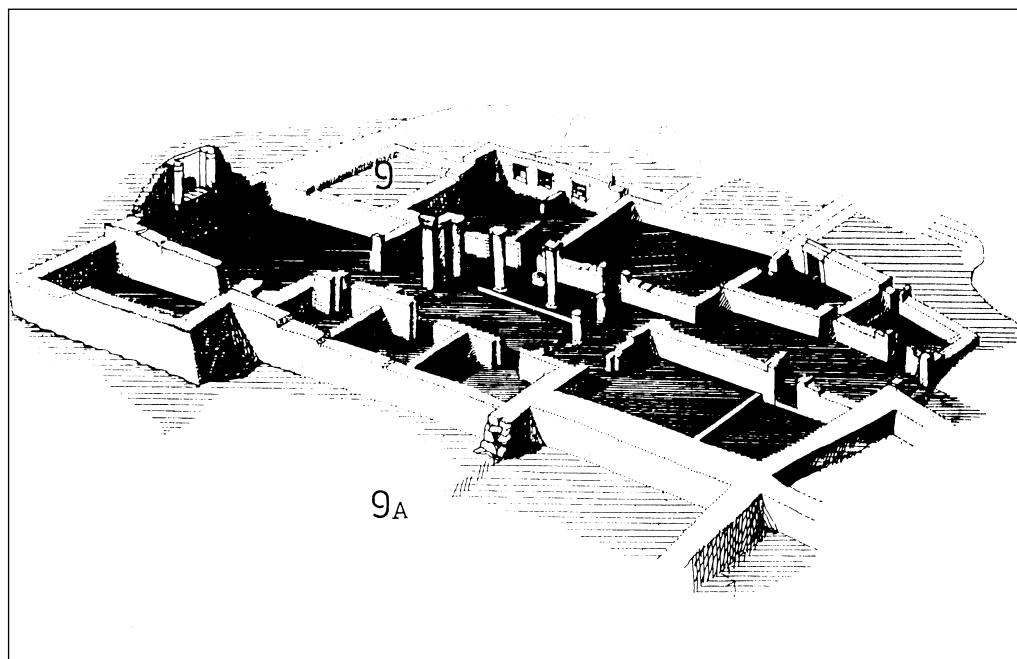


Fig. 8. House H 9. Axonometric view after restoration
(Drawing E. Łużyniecka, R. Czerner)



Fig. 9. House H 9, room 14. Wall with the setting of the niche before restoration (Photo R. Czerner)



Fig. 10. House H 9. View of the reconstructed niche from the west, in line with the principal axis of the complex (Photo S. Medeksza)

all along the eastern facade of the house, as well as a stone fender protecting the south-eastern corner of the house, evidently needed to reduce damage caused by carts turning the street corner here. At this level the eastern wall of the house shows clear evidence of a major rebuilding, presumably after the earthquake that caused the collapse of most of the building. The stratigraphy in front of the main entrance indicates that in the first two stages this entrance was in line with corridor no. 8 that adjoined the staircase.

Clearing the street area opposite room 5c led to the discovery of painted plaster

fragments, depicting part of a woman's figure and arm, and, in another case, a head. The plaster was found on the last street level and even slightly above it. This could suggest that it had been deposited at a time when the stone blocks from House H 10 were being plundered.

It took three steps to descend from the threshold corresponding to the last phase in the use of the street to the level of the house courtyard. Here, too, many repairs and rebuilding phases could be identified, including a different arrangement of the columns in the western portico, noted already in earlier reports.⁷⁾

⁷⁾ Cf. Medeksza, *PAM X Reports 1998*, op. cit., 61-62.