

# The lost skin of the Library of Hadrian in Athens<sup>1</sup>

"... κίονες φρυγίου λίθου ... ὀρόφῳ τε ἐπιχρύσω καὶ ἀλαβάστρῳ λίθῳ"

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## ABSTRACT

*The article presents a brief description of the architecture of the Library of Hadrian in Athens, followed by a detailed analysis of the construction of the walls, the rooms in the east of the compound and the revetments. The Library of Hadrian was the only building in Athens that employed prestigious Phrygian marble (Synnadian or pavonazzetto). The study of 200 fragments of Phrygian marble from columns, pilasters and wall revetments allows for a reconsideration of the architecture. Three solutions are proposed with regards the architecture of the large, aedicular eastern hall, termed the Bibliostasio. Interpretation of its function –whether a book keeping hall or a Kaisersaal /Dio's sekos to Hadrian- is combined with the architectural features and the new data.*

The imperial forum termed conventionally the Library was Hadrian's response to the neighboring forum of Ceasar and Augustus. Characteristic of the importance of the compound is the layout with indirect and direct affinities with Hellenistic gymnasia and Plato's Academy, the Traianeum in Italica (Seville) and the Templum Pacis in Rome. Such forum would be the cultural and administrative center of Roman Athens, displaying symbolisms that propagated Rome's grandeur. In order for the new compound to be founded, 24 standard house blocks of a typical Roman city were expropriated and demolished. The façade was embellished with a propylon constructed with columns made of pink marble from Phrygia and with columns made

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1 I am deeply grateful to colleague and friend Dimitris Sourlas for bringing the architectural features to my attention, for the guidance and support at the hospitable site of the Library of Athens and for all the fruitful discussions, and professor Manolis Korres for prompting me to examine the buttresses in relationship with the beams of roof. Last but not least, special thanks are ought to all the volunteers during the documentation works, graduate and post graduate students in the Department of History and Archaeology in EKPA, dr. Giorgos Doulfis, Manolis Petrakis, Michalis Barlambas, Alexia Piperi, Lina Tsatsaroni, Niki Georgakopoulou, Sophia Spyropoulou, Despoina Papadopoulou, Anna Dalgkitsi, Dimitra Kovani and to VXF artist Dimitris Tsalkanis, for bringing to life the architecture of the Library. Professors of Archaeology in the University of Athens, Dimitris Plantzos and Georgios Pallis participated in the digital recreations of the compound. Creator of the roman toga: Anastasis Keramaris under guidance by prof. Stylianos Katakis. More photorealistic views of the Library of Hadrian can be seen in <https://www.facebook.com/AncientAthens3D/> and [http://www.ancientathens3d.com / el/romaiki-agora-vivliothiki-adrianou/](http://www.ancientathens3d.com/el/romaiki-agora-vivliothiki-adrianou/). All images are mine unless otherwise indicated. Mistakes, however, are all mine.

of green cipollino rock, quarried and transported from the island of Euboea. Upon the columns must have stood Nikae and, perhaps, gods sculpted in white marble from the Penteli mountain of Attica.<sup>2</sup>

It appears that the plan of the enclosure was designed on the basis of 300 and 400 Roman feet. The pool in the middle of the compound would have been exactly 200 same feet long and must be viewed in relationship with a garden in the interior space of the forum. With regards the architecture of the interior, surrounding, colonnade of 100 columns the following are noted: on the east and west sides of the peristyle the Corinthian columns were arranged on variable interaxial column spacings of 2.857 m. – 2.96 m. (ten Roman *pedes* or one rod<sup>3</sup>), with corresponding spacings of 2.855 m. on the north and south wings (Figs. 1, 3). The column shafts of Phrygian marble must have stood on Attic bases and a plinth made of white marble. The shaft diameter of  $\pm 0.64$  m. would have yielded columns with an overall height of 6.11 m., or 9.5 times the lower diameter. Thus, the architrave would have come directly below the main beams of the ceiling and roof; the level of the latter becomes known from the extant beam sockets on the north wall. Each beam would have been 0.45 m. wide and 0.60 m. tall, and would be arranged above every column of the peristyle. The semicircular exedrae are 9.37 m. wide, whereas the square exedra in the north has an internal width of 10.13 m.<sup>4</sup> A series of rooms lie on the east side of the compound; these are generally identified as auditoria flanking a library room (see below).

Only the exterior skin of the west wall of the compound was constructed of drafted ashlar from Pentelic marble. The inner skin of the same wall, as well as all other walls of the enclosure were built of hard Piraeus limestone.<sup>5</sup> The masonry has 13 ashlar courses (Pl. 1); the heights from bottom to top vary between 0.55 m. (toichobate), 0.654 m. and 0.88 m., with most courses in the range of 0.81 m. – 0.87 m. and a cornice course with a height of 0.433 m. The north and south walls are each 0.69 m. thick, whereas the west and east walls have a thickness of 0.91 m. The interior surfaces of the surrounding walls were covered with revetment slabs; the latter are apparent from the nail holes (dimensions 0.03 m. x 0.03 m.) that fastened the slabs onto place (Fig. 2). Evidence for the exact fitting techniques of the slabs comes from a good portion of the revetting molded toichobate, together with the fastening bronze nails and mortar which survives *in situ* in the north 'auditorium' (Fig. 13.21). The slabs, together with the mortar, must have projected an overall average 0.07 m. from the limestone wall surface.<sup>6</sup> The small arches with a diameter of 1.44 m., built of bricks at foundation level and against the walls, are the actual supporting infrastructure of the heavy revetment construction (Pl. 1.E).<sup>7</sup>

The revetment slabs imitate ashlar masonry composed of a molded base, an orthostate layer, a molded string course (*katalepter*), three courses of ashlar masonry, and a wall crown (*epikranitis*) course, all made of Phrygian marble. Two rows of tightly spaced nail holes reveal a bottom and crown molding and must have been in sequence with the corresponding moldings

2 Τυγινάγκα 1999, 297; Sourlas 2018 with related bibliography.

3 The Attic foot of 0.2945 m. (expanded to 0.296 m.) has been used in the Arch of Hadrian (Willers 1990, 90).

4 Kanellopoulos and Sourlas 2018.

5 This comes in contrast to the brick walls, above orthostate and *katalepter* level, in the neighboring Forum of Caesar and Augustus. M. Korres, Λίθοι κλασσικού ναού σὲ τοῖχο τῆς Ρωμαϊκῆς ἀγορᾶς, lecture in the Symposium in the Memory of S. Koumanoudis, Epigraphical museum 21/12/2018.

6 Koumanoudis (1885, 22) had noted that poor remains of the revetment were seen in place, in 3–4 corners of the compound and concludes on the luxurious appearance of the construction. Nicolaides (1888, 65) describes the existence of one fragment of such revetting slab, together with the mortar, against the wall of the northeast semicircular exedra. The latest on the fastening techniques of revetting slabs in Ball 2002.

7 Τυγινάγκα 1999, 303.

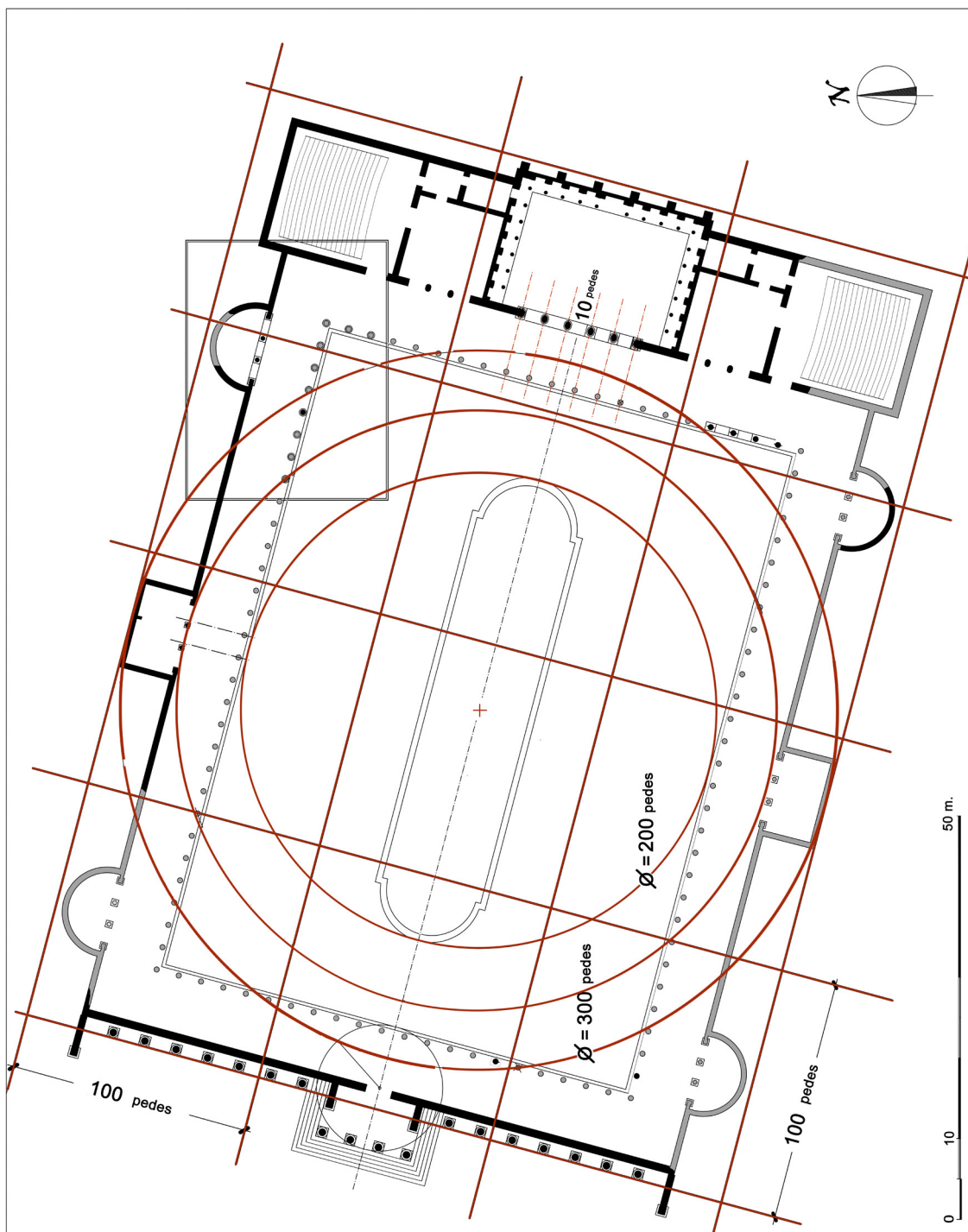


Fig. 1. Reconstructed ground plan of the Library of Hadrian. With black fill, the extant, *in situ*, surveyed features. C. Kanellopoulos, M. Petrakis and M. Mparlampas, 2013-14.

in the pedestals of the antae and columns. The heights of moldings (av. height of 0.107 m.), all made of Phrygian marble (pavonazzetto), fit the spaces between the rows of nail holes (#15–17 and #19–20 in Figs. 2, 13 and Pl. 1). The profiles and location of these moldings reveal, therefore, the height and style of the corresponding column and anta pedestals; the height of the latter is estimated 0.59 m.

Above the level of the column and anta pedestals nail holes on the masonry reveal impressive orthostate slabs with a height of 1.47 m. and a length of 1.44 m. (Pl. 1.D). In our opinion, only

the thickest revetment pavonazzetto slabs (fragments AB2375, AB 2344 and AB 2363) would be sound for features of these dimensions.<sup>8</sup> These are drafted near the borders with outlined panels (Fig. 13.1, 4–5, Pls. 1–2). Another two series of nail holes, above the square orthostates of the revetment betray a revetting course with a height of 0.089 m. The only feature that fits in this height is the molded course AB 2248, again of Phrygian marble (#12 in figs 2 and 13 and in Pl.1, 1.C). Quite possibly, this course, together with the one above (height of 0.262 m.), composed a molded *katalepter*.<sup>9</sup> The added heights of the orthostate and the *katalepter* (1.55 m.) is exactly half the height of the wall (3.12 m.) between the *katalepter* and the architraves. The vertical surface was, therefore, divided in three equal zones, with the orthostate layer occupying the lower third part.

Three rows of nail holes indicate three courses of revetment slabs with heights of 0.707 m., 0.857 m. and 0.857 m., each with a length of 1.44 m. Fragments AB 2363 and AB 2346 from revetment slabs of Phrygian marble suit best this area of the construction. Two closely spaced rows of nail holes at a level of + 5.29 m. from stylobate level indicate the location of the molding of the wall crown and, consequently, reveal the overall height of the exedra columns (6–11 in Figs. 2, 13 and Pls. 1–2). Moldings AB 2254, AB 2259, AB 2366, AB 2367, AB 2378, AB2379, AB 2380, AB 2381 and AB 2289, with an apophyge and an astragal and variable heights, can be reconstructed in this zone and in continuity with the abacus of the anta capitals.<sup>10</sup> The variety in heights is to be expected in a course that is 340 m. long and was realized by different contractors working simultaneously. The course of the wall crown is identified in the shorter revetment course, directly below the molding (Pl. 1.B). The height of this course is 0.37 m. (versus a height of 0.707 m. and 0.86 m. for the other revetment slabs). Quite interestingly, the lintels of the 'auditoria'/bouleuteria doorframes, accommodated directly below the *epikranitis* course of the revetment, reveal the height of these doorways.

The attribution of the Phrygian fragments to the revetting slabs of the walls matches Pausanias' description (1.18.9: "...πεποιήνται δὲ καὶ ταῖς στοαῖς κατὰ τὰ αὐτὰ οἱ τοῖχοι..."). Clear nail holes on the extant masonry indicate that the same courses of Phrygian revetment also ran on the interior surfaces of the exedrae. Nothing can be said with certainty for the type of revetment above the level of the column capital. This portion corresponds to the entablature of the exedrae; indeed, nail holes mark the height of the latter, at 6.29 m. above stylobate level (Pl. 1.A). Incidentally, this is the level of the cornice that runs on the exterior wall of the compound. The height of the entablature of the exedrae is, therefore, estimated 1.02 m.

The ends of the walls in all exedrae preserve large cuttings in the lowermost parts, apparently for the insertion of the molded antae pedestals (Pl. 1);<sup>11</sup> the height of the latter should be 0.59 m., as explained above. Similar pedestals must have occurred under the columns of each exedra, for reasons of uniformity in the same distyle *in antis* order. A large fragment (AB2100) of the upper part of, apparently, a monolithic column shaft made of Phrygian marble preserves a height of 2.77 m. and maximum diameter 0.535 m. near the middle of the shaft. The upper diameter of the shaft is 0.46 m. Two small fragments (AB2358 and AB 2175) from shaft necks seem to belong to the same order. These are recognized as column fragments of the exedrae. Indeed, the overall height of the order can be reached only with the aid of column pedestals and

8 Thank you to Dimitris Sourlas who stressed out the importance of varying thickness in the revetment slabs.

9 The *katalepter* in the adjacent Forum of Caesar and Augustus is also molded (Hoff 1988, 367, pl. 70).

10 The wall crown, with a similar profile, in the façade of the compound also corresponds to the abacus of the Corinthian capitals.

11 Obviously, these irregular cuttings in the foot of the wall ends would be concealed behind the revetment slabs.



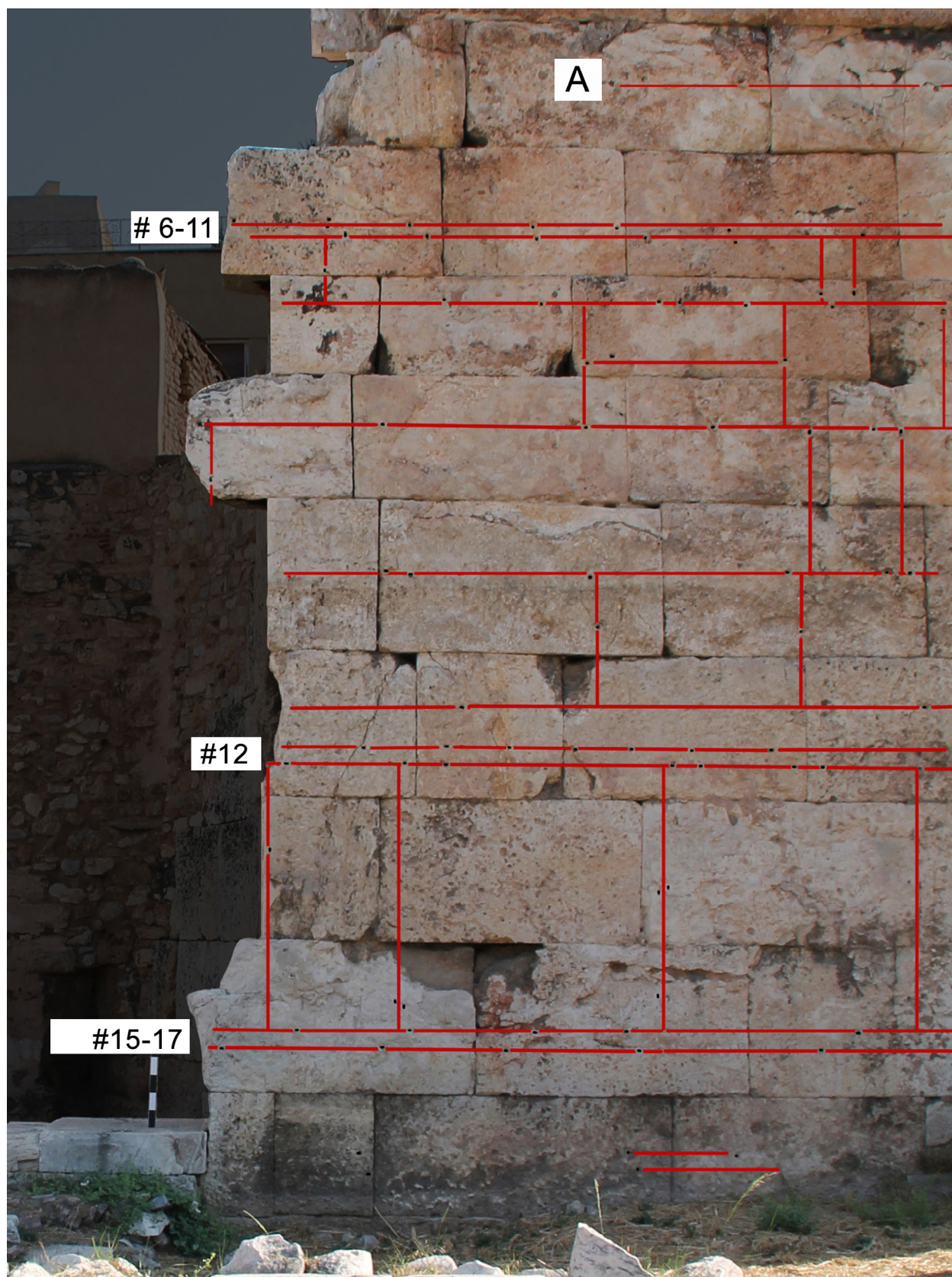


Fig. 2. The extant nail holes for fastening the revetment slabs on the inner face of the north wall. With red, the courses of the slabs and numbers of corresponding moldings in Fig. 13 and Pl. 1. Photo by G. Doulfis.

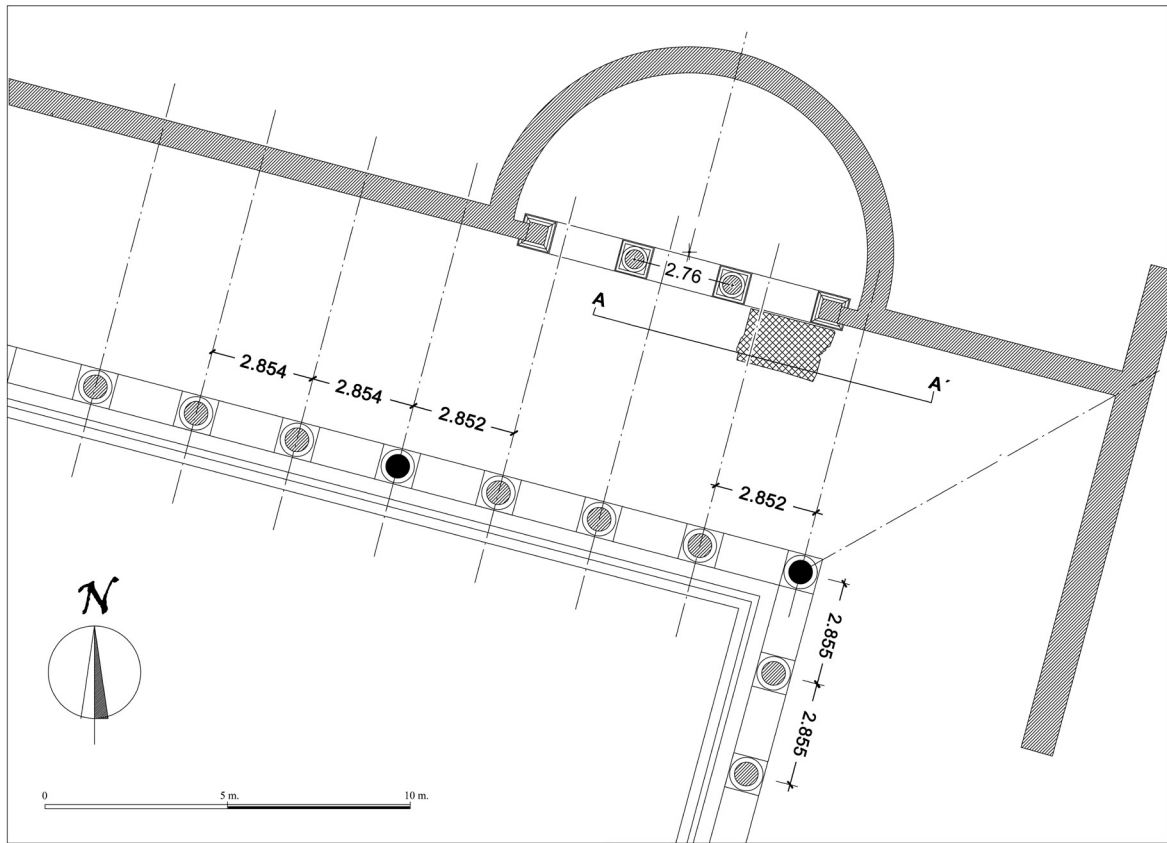


Fig. 3. Ground plan of the north east corner of the peristyle.

a ratio of 8.85:1 for the column height and its lower diameter respectively. The axial distance between the columns becomes apparent from two *in situ* stylobate slabs in the northeast exedra.<sup>12</sup> The *in situ* features speak for stylobate blocks with a length of 0.892 m. under the column and anta pedestals and for intercolumnar stylobate blocks, each with a length of 1.867 m. The interaxial column space would therefore, be 2.76 m. – 2.78 m. Capital BA 1712 with a lotus and acanthus, stored in the Library, is only tentatively reconstructed in the columns of the exedrae (Fig. 9.1, Pl. 1). The type matches the Hadrianic styles and date.<sup>13</sup> No traces of floor in the exedrae is visible.

The function of the exedrae remains unknown. It can be postulated that the projecting ashlar in the middle of the square exedra of the north side (Fig. 1) would have been part of a large pedestal built against the rear wall of the exedra and, most probably, intended for statue display. This pedestal would have also been dressed with slabs of prestigious marble.

The large hall on the middle of the eastern side of the compound has interior dimensions 23.35 m. x 15.85 m. and a tetrastyle *in antis* entryway (Fig. 5). Recently, it has been established that the composite pillars of this tetrastyle porch must have been aligned behind the columns

12 Nicolaides (1888, 65) describes the *in situ* stylobate slabs in the northeast exedra as a course of white marble that separates the floor of the exedra from the revetment onto its walls. The description is misinterpreted in Sisson 1929, 58.

13 This type of capital, with the exception of those employed in the colonnade at Trajan's temple at Pergamon, is commonly used in auxiliary orders, behind main elevations (Liljenstolpe 1996). On Hadrianic styles in the lotus and acanthus capital, Doulfis 2016, 31.





Fig. 4. The interior face of the east wall of the Bibliostasio. With red the reconstructed outline of the niches.

of the peristyle, at an interaxial distance of 2.94 m. or ten Roman feet. The walls are 1 m. thick and built of *opus testaceum*, that is masonry with ashlars and bricks dressed with revetment slabs. A podium with a height of 1.72 m. and a width of 1.55 m. – 1.68 m. runs against the three sides of the hall. Today only the east wall stands to a height of 9.80 m. Two rows of large niches (height 2.35 m., av. width 1.15 m.) on the interior face of this wall have justifiably been interpreted and *armaria* for the books of a library, in association with Pausanias' mention of books stored in the rooms of the compound of 100 Phrygian columns.<sup>14</sup> A row of smaller recesses (0.56 m. x 1.15 m.) between the large niches has been interpreted as beam sockets for the flooring features of two tiers (Fig. 4). These recesses are too large for the insertion of beam sockets of a continuous floor. Instead, the capitals of the wall pilasters and the tails of *aediculae* entablatures must have been inserted in these smaller recesses between the *armaria* niches of the two tiers, in the common manner (Figs. 6–8).<sup>15</sup> This reveals the exact height of the wall pilasters and, therefore, the height of the corresponding column (4.45 m.), but also the added heights of the column capital and the entablature of the lower tier (1.15 m.).<sup>16</sup> The relatively low height of the entablature may have been combined with two fasciae in the architrave, instead of the usual three, in the fashion seen commonly in Hadrianic monuments of Athens.<sup>17</sup> Fragments from the upper part of a column shaft made of Phrygian marble reveal an upper diameter of 0.372 m. and, therefore, a lower diameter of  $\pm 0.42$  m., as in figs 3, 7 and 11. The

14 Already Koumanoudis (1885, 21) identified these niches in the east wall of the large hall as bookshelves and associated them with Pausanias' mention of books lying in the rooms of the compound.

15 The most known examples are the nymphaea at Aspendos, Perge, Gerasa and Leptis Magna, the North Gate at Miletus, the Marble Court in the Gymnasium of Sardis, the Marble Hall ('Kaisersaal') in the Harbor Bath-Gymnasium at Ephesus, the Imperial Hall in the State Agora of Side: Finnochci 2015, 74, fig. 50–1; 75, fig. 53; 77, fig. 56; Yegül 1982, 8, 10, fig. 6; 20, fig. 21; 1986, 182.

16 Ττυλιβάκης 1999, 312; Kanellopoulos and Sourlas 2018.

17 Willers 1990, pls. 8, 10.3–4; Ττυλιβάκης 1999, 297, fig. 2.

diameter yields a Corinthian column height ( $\pm 3.99$  m.) that cannot reach the known level of the capitals; most probably, the desired height of 4.44 m. was gained with the proportions of the Corinthian order and with the aid of pedestals under the columns.<sup>18</sup> Strangely enough, this solution was first suggested by Martini who had not studied the extant fragments of the newly discovered column shafts.<sup>19</sup> The interaxial spacing between columns is 2.15 m.<sup>20</sup>

A column shaft made of Phrygian marble, stored in the neighboring area of Andronikos' Horologion, was brought to our attention by Dimitris Sourlas (Fig. 12). The lower diameter (0.354 m.) and reconstructed height (3.20 m. – 3.36 m.) suggest that such colonnettes belonged to the upper tier of *aediculae* (Figs. 6–8).<sup>21</sup> The combination of columns with pedestals in the lower tier and without such pedestals in the upper tier is not uncommon.<sup>22</sup> The fragment of a fluted slab made of Phrygian marble was discovered in the late structures near the south east corner of the Library, during the excavations conducted by Dimitris Sourlas in the Aiolos hotel (Fig. 9.2). In fact, this is a revetment slab which imitates a fluted pilaster shaft made of Phrygian marble.<sup>23</sup> The width is 0.335 m. and as such it matches well the diameter of the columns in the upper tier. The combination of unfluted columns and corresponding fluted pilasters belonging to the same porch is quite common (Pantheon in Rome, Marble Hall in Sardis, Temple of Augustus in Istria).

It has been suggested that the elaborate hall was a 'Kaisersaal' dedicated to the imperial cult,<sup>24</sup> and ornated with statues of the emperor and his family; following Martini's hypothesis, and rightly so, the bicolumnar *aediculae* would not allow access to the upper level. The individual *aediculae* suggest that there was no continuous colonnade with a gallery floor that could provide access to the *armaria* of the upper level.<sup>25</sup> Indeed, the column shaft of the upper level (Figs. 7, 12) preserves no holes for fastening a rail of an accessible upper level. Contrary to Martini's hypothesis, and in favor of the library theory, none of the extant niches of the ground

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18 The fragments were recovered in the Library only in 2008. Ratio column height (without the pedestal): column diameter would then be 3.977 m.: 0.42 m. = 9.6:1, a proportion found in the Library of Hadrian and in other Corinthian columns in Athens (Kanellopoulos and Sourlas 2018, 428). Previous reconstruction of the colonnade involved a hypothetical stylobate height of 0.13 m., hypothetical Ionic columns with a diameter of 0.43 m. and a height of 3.962 m. in the lower tier (Sisson 1929, 60). Τίγγινάγκα (1999, 312, 314–5) reconstructs a more reasonable stylobate height of 0.22 m. and hypothetical Corinthian columns in the lower tier with a calculated diameter of 0.46 m. and a reconstructed overall column height of 4.44 m. standing directly on the stylobate.

19 Martini 1985, pl. 22, fig. 2.

20 Τίγγινάγκα 1999, 303, fig. 4.

21 Column fragments of Phrygian marble, with diameters varying from 0.331 m. to 0.382 m. were seen by Sisson in 1929 (1929, 59–60), near the south east corner of the compound; however these were attributed to hypothetical Ionic columns in the lower tier of the Bibliostasio. As displayed above, the column fragments with a diameter of 0.38 m. should most probably belong to the columns of the lower tier of Corinthian columns, the thinner ones to the upper tier.

22 The restoration of a third tier of Corinthian columns by Sisson (1929, pl. 24) is entirely fictitious and must have been inspired from the Library of Celsus. The existence of a third tier of columns in Ephesos has been debated (Mamoli 2014, 151, 156, 525).

23 More fragments from the same type of pilasters have been recovered in the Library of Hadrian. See below, Catalogue, frgs. AB 2302, AB 2275, AB 2276 and AB 2290. Similar jambs with 7 flutes on the revetment slabs have been discovered in the Melitine Library in the Asklepeion in Pergamon (Mamoli 2014, 62, fig. 2.11; 189, fig. 3.50 after Radt, with related bibliography).

24 Martini 1985. Indeed, the architecture of Kaisersäle is frequently very similar to the architecture of libraries.

25 As in Sisson 1929, 60, pl. 24; Τίγγινάγκα 1999, 312–4, figs. 11–3. The continuous colonnade is reasonably suggested by the evenly spaced columns. A deck of an upper gallery would have been combined with a continuous recess in the masonry, for the insertion of floor supporting features, as in the Library of Celsus; such continuous recess, however, is not present in the hall of Athens.

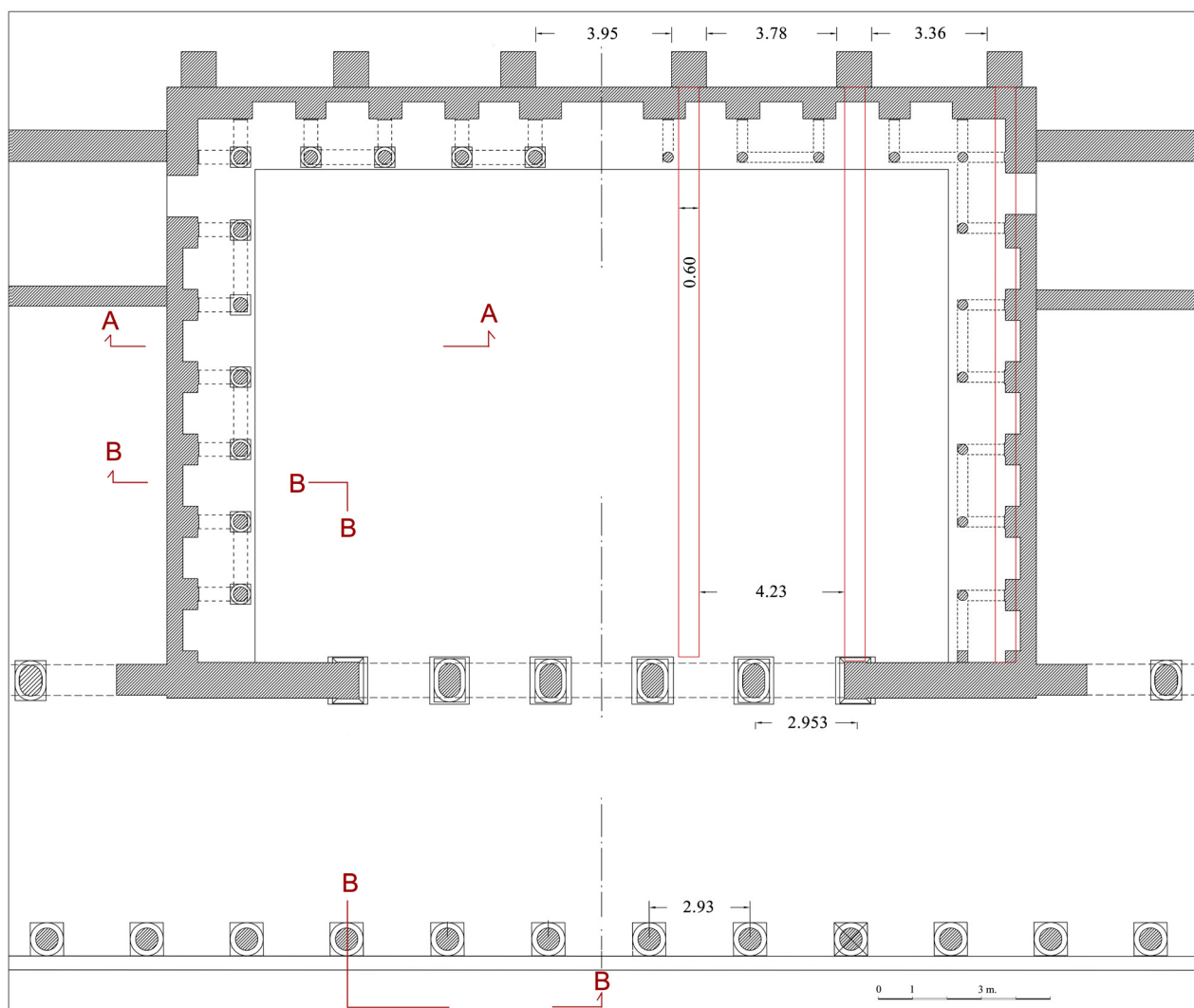


Fig. 5. Ground plan of the Bibliostasio; left: lower tier; right: upper tier. With red, the main tie beams.

floor has an arched top, which is more suitable for statue display, while the tops of the upper floor niches are unknown. It could also be hypothesized that *armaria* with books existed only in the lower tier, with niches for statuary in the inaccessible upper level (Fig. 7), as in the library of Nysa.<sup>26</sup> In Athens though, again in favor of the library theory, the niches of both tiers are too shallow (0.50 m.) to accommodate statues, even with the aid of projecting supports, as in the Nymphaeon of Leptis Magna;<sup>27</sup> as such it is hard to accept that the luxurious hall was an imperial hall/'Kaisersaal' which hosted statues of the emperor and the imperial family in its

26 In Nysa there is no evidence for stairs that would provide access to the niches of the upper tier (Hiesel, Gerhard, and Stročka. 2006, 85–6). Mamoli (2014, 185) argues that such halls could have a multifunctional use, being both libraries and Imperial halls. On the collection of books in shrines, see below, Conclusions.

27 The arched niches in the Nymphaeon have a depth of 1 m., which can accommodate statues (Finnochi 2015, 72, fig. 47). The niches in the Imperial Hall/library in the gymnasium of Side have a depth of 0.70 m. The depth of the *armaria* niches in the Melitine library is 0.66 m., in the library of Celsus 0.57 m., in the Ulpian Library in Rome 0.60 m. – 0.80 m., in Nysa 0.66 m., in the Library of Rogatinus in Timgad 0.50 m., in the library at Nîmes 0.60 m., in the private library at Hadrian's Villa in Tivoli 0.75 m., in the Baths of Trajan and in the Baths of Caracalla in Rome the corresponding dimension is 0.75 m. and in the Library at the Gymnasium of Rhodes 0.60 m. (Mamoli 2014, 240, 183, 155, 159, 166, 216, 246, 272, 116 with related bibliography). The niches in the hall of Athens appear to be the shallowest examples of the kind.



conches. Only busts on corresponding individual pedestals would fit in the niches. The same is true for the central arched niche which is 2.36 m. wide and 3.45 m. tall; however, same as the other niches, only 0.50 m. deep. This is too shallow to accommodate a statue of corresponding proportions, be it of Athena or Hadrian. A projecting ashlar of the wall, inside the large niche is even more puzzling, yet it may resolve the issue of space in this area of the construction. The protruding ashlar may have been incorporated inside a large, built and revetted, pedestal with a height of approximately one meter that would partially project beyond the space of the large, shallow, niche (Pls. 5, 7). The central niche of the upper tier has the same width and the same depth and is it, with the aid of a protruding mold. The latter is also reconstructed with a height of 3.45 m. Perhaps a large –yet not colossal– statue was standing in it with the aid of a protruding molded feature.<sup>28</sup>

Quite possibly, the *aediculae* supported a continuous marble deck, as in the North Gate at Miletus, with book *armaria* in the niches of both levels (Pls. 5, 7–8);<sup>29</sup> this solution is favored in the present study. A third possibility, though extravagant, would involve columns with individual portions of entablatures supporting a continuous marble deck (Fig. 8); the tails of the entablatures would be inserted in the large sockets between the two tiers.<sup>30</sup> This composition, had it ever been realized, it would have been reflected on the façade of the compound, albeit in much larger scale.

The common recesses for the insertion of the wall entablature parts are absent on the *opus testaceum* walls of the Bibliostasio. These would be marble blocks of the wall entablature that would span the part of the masonry between the *aediculae*. Distance between the latter in architrave level would be approximately 1.75 m. and at cornice level,  $\pm 1.25$  m. It would have been possible that the wall architrave, made of revetment slabs with a length of 1.75 m. and a thickness of  $\pm 0.10$  m. at their thinner parts, spanned between the *aediculae* and was carried onto the 0.07 m. thick revetment slabs and the mortar between the wall and the latter. The heavily projecting parts of the wall entablature (i.e. wall cornices) would have increased the thickness close to 0.25 m. These features of the wall cornice would practically be beams with a length of  $\pm 1.65$  m., height of approximately 0.30 m. and a thickness of 0.25 m. that would be partially supported on the revetment slabs, but also suspended at their ends from the cornices of the *aediculae*.<sup>31</sup>

Unlike the good state of preservation of nail holes in the surrounding ashlar walls and the exedrae of the compound, very little of the actual surface of the library hall is preserved. The use of *opus testaceum*, with large intervals of bricks between stone blocks, now looted and gone, leaves very little room for identification of nail holes and course patterns. The interior was undoubtedly dressed with marble slabs, yet only hypotheses can be made with regards materials, dimensions and shapes. The marble stylobate and the customary bottom and top moldings in the podium can only be hypothesized. The wall surface would have been revetted with white Pentelic marble, with columns and pilaster shafts made of Phrygian marble, very much like in the Marble Court/Kaisersaal in Sardis.<sup>32</sup> Fragments of the thin revetment slabs (AB

28 It is speculated that in Ulpia Library a statue of Trajan was accommodated in the ground floor and one of Minerva in the upper floor of the focal point.

29 McKenzie 2007, 114, fig. 187.

30 Such arrangement, with two storeyed colonnades and autonomous portions of entablatures inserted into the walls and between the two tiers is seen in the Severan Basilica (AD 209–216) of Leptis Magna (Ward-Perkins 1994, 387; di Vita *et al.* 1999, 122–7); these portions of architraves do not bridge the spans between the columns.

31 Yegül 1986, fig. 182.

32 In the latter the columns are made of pink *giallo antico*. It is postulated that the "Lion Table", installed in

2346, AB 2328) –some of them with drafted panels–, small crowns made of Phrygian marble, should most probably be attributed to the library hall. To these should be added the few fragments of cipollino revetment slabs collected in the Library. The attested use of cipollino in the façade of the large Hadrianic compound allows their tentative reconstruction in certain areas of the architectural compositions. The customary blue-blueish color for both Doric and Ionic friezes makes plausible the attribution of cipollino slabs to friezes of the Library. Considering the lavishly dressed interior, it looks improbable that the large space (1.85 m.) between the top of the *armaria* niches and the entablature of the *aediculae* was left plain. Quite probably this area of wall surface accommodated panels of elaborate marbles and/or paintings (Fig. 7, Pls. 5, 7–8). Such decorative compositions would match the mention of paintings in Pausanias' description (καὶ γραφαῖς). In our images, exemplito gratiae portraits of muses and corresponding personification of arts (Astronomy, Literature, Tragedy), together with panels of cipollino revetting slabs, would be suitable with the function of the library hall. The larger crown moldings AB 2283 and AB2285 of Phrygian marble can be restored to revetted pedestals of the wall pilasters. The smaller crowns (AB 2264, AB 2265, AB 2266 and AB 2267) would have belonged to the pilaster pedestals of the upper tier (Figs. 13.13–4).

The windows in the maquette of Hadrian's Library, now in the museum of the Colosseum in Rome, are between the buttresses of the east wall, and are based directly over the cornice of the latter. This is impossible; the interior space above the level of the outer cornice is occupied by the upper tier of *aediculae* (Fig. 6). In Sisson's reconstruction there are no windows in the east wall of the Bibliostasio. The windows, only in the west elevation, correspond to the spaces between the buttresses of the east wall.<sup>33</sup> In our reconstructions, each of the necessary windows on the west wall is above an intercolumnium of the peristyle and, therefore, above the corresponding intercolumnia in the porch of the Bibliostasio. These openings are reconstructed the same size with the *armaria* niches, for reasons of uniformity (Fig. 6, Pl. 7).

The massive wooden beams of the ceiling and roof should correspond to the buttresses in the east wall of the library hall.<sup>34</sup> These tie beams would carry the load of the roof to the reinforcing buttresses, today seen standing in Aioulou street.<sup>35</sup> The second beam from each corner is above each anta of the hexastyle portico, most probably belonging to a two storeyed composition on the west wall of the hall (Fig. 1, Pl. 7).<sup>36</sup> Only half the width of the beam that is attached to the wall would be seen, in the Greek manner.<sup>37</sup> In this aspect, the ceiling and roof were both Greek and Roman. In our photorealistic images, the floor of the hall was designed *exempli gratia* after the floor pattern seen in the contemporaneous Pantheon of Rome, however with marbles used in the Library of Athens (blue Hymettian, white Pentelic and pink Phrygian marble, Pl. 7). The

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the Synagogue of Sardis, was the altar in the Marble Court/Kaisersaal of Sardis (Yegül 1986, 5–6, fig. 115).

33 Sisson 1929, pls. 23–4.

34 Buttresses that correspond to ceiling beams can be found in the Odeion of Aphrodisias (Korres 2014, 77, fig. B3.25), in the Odeion at Epidauros (Aslanidis 2003, 308, fig. 8) and in Galerius' basilica in Thessaloniki (Μισσηλίδου-Δεσποτίδου and Αθανασίου 2013, 40–1). Thanks to M. Korres who pointed out the correspondence.

35 In Sisson's (1929, pl. 24) section of the Bibliostasio the 8 ceiling beams do not correspond to the reinforcing buttresses. Sisson (1929, 59) notes that in order for the builders "to counteract the weakening effect of the recesses, the external wall is strengthened by six buttresses". In Sarcone (2018, 112), the tie beams indeed correspond to the buttresses, however without half beams along the short walls of the hall.

36 The trusses that ran over the columns of the halls correspond perfectly to both the columns of the porticoes and the ends of the *aediculae* in the 'library'/'Kaisersaal' of the State Agora at Side, the Marble Hall at Vedio Bath-Gymnasium Complex and in the 'Marble Hall' at the Bath-Gymnasium by the harbor in Ephesos (Τζέλη 2020, 34–6; pl. 24–6; plans found in Yegül 1982, 10, fig. 8; 20, fig. 20).

37 See e.g. the ceilings of the Parthenon pronaos, of the temple of Apollo at Delphoi (Amandry and Hansen 2010, fig. 18.20) and in the temple of Athena Pronaia (Michaud 1977, pl. 76).

recreations of the Bibliostasio walls follow the scheme employed in the Marble Court at Sardis, with slabs of white marble for the walls and for entablatures and Phrygian marble for the shafts and pedestals of the columns and the pilasters. In our reconstructions, the *armaria* niches are revetted with plain frames of Phrygian marble; no evidence for the latter has been recovered.<sup>38</sup> Nevertheless, due to the quality of the pavonazzetto, they look like luxurious wooden frames.

## THE 'AUDITORIA'

Those rooms in the corners of the east portion of the compound have interior dimensions 16 m. (E-W) and 14.55 m. (N-S); their architecture has been documented and analysed extensively by Knithakis and Symvoulidou (1969). The grade of the seating area would have been approximately 27 degrees from horizontal plane; the location of the staircases on either side of the cavea is only conjectural yet sensible.<sup>39</sup> The rooms that flank the large hall are generally identified with *auditoria*, or lecture rooms, reasonably connected with the function of a library. This identification would be appealing, as it would connect the large halls with the philosophical schools in Athens. A more careful examination, however, reveals that these are unlike the known, oblong, Roman *auditoria*; instead, the large square rooms that flank the library hall, are alternatively identified as council halls (*bouleuteria*) of the Panhellenion, the league of Greek cities with Athens as its capital, founded by emperor Hadrian.<sup>40</sup>

Sisson reconstructs the doorway with a height equal to twice the width (clear opening 1.25 m.). Knithakis and Symvoulidou note that the height is unknown and any attempt should be avoided.<sup>41</sup> Had the doorframe came directly under the short, uppermost course of the revetment slabs (*epikranitis*) in the peristyle walls (Pl. 1.B), the ratio height: width of the clear doorway opening would be a reasonable 2.25:1 (Pl. 4). Indeed, this proportion finds quite a few parallels.<sup>42</sup>

The architecture of the 'auditoria' was solemn and less colorful. The base moldings against the *proedriai* and against the walls can be seen today (Fig. 13.21); unlike all other revetment features in the compound, these are made of white Pentelic marble. The floor design was formulated as a chessboard pattern, with deep red and cipollino square pavers, each with dimensions 0.50 m. x 0.50 m. (Pl. 6).<sup>43</sup>

38 These could as well have been frames treated with fasciae, as in Ionic doorways. Such are the frames of the niches in the Library of Celsus (Wilberg 1953, fig. 76).

39 Knithakis and Symvoulidou 1969, 112.

40 Corcella *et al.* 2013, 134; Monaco 2018.

41 Knithakis and Symvoulidou 1969, 117.

42 The suggested proportion of the Ionic doorframe is, after Vitruvius (4.6.1 and 4.6.4), 2.5:1 for the height and width respectively. Actual doorframes that can be reconstructed with accuracy reveal that this is a rather excessively tall proportion. The door of the Erechtheion (corresponding proportion of 2.18:1) has Ionic decoration combined with Doric proportions. In the doorframe of the temple of Asclepius in Athens (early 1<sup>st</sup> c. BC) the proportion of height over width is reconstructed close to 2.23:1 (Papaefthymiou and Christodouloupoulou 2014, 39–40). The doorway opening in the temple R at Pergamon (200–150 BC) is reconstructed with a corresponding proportion of 2.25:1 (Schazmann 1923, pl. 26).

43 On the original *in situ* paving slabs, Knithakis and Symvoulidou 1969, 110.

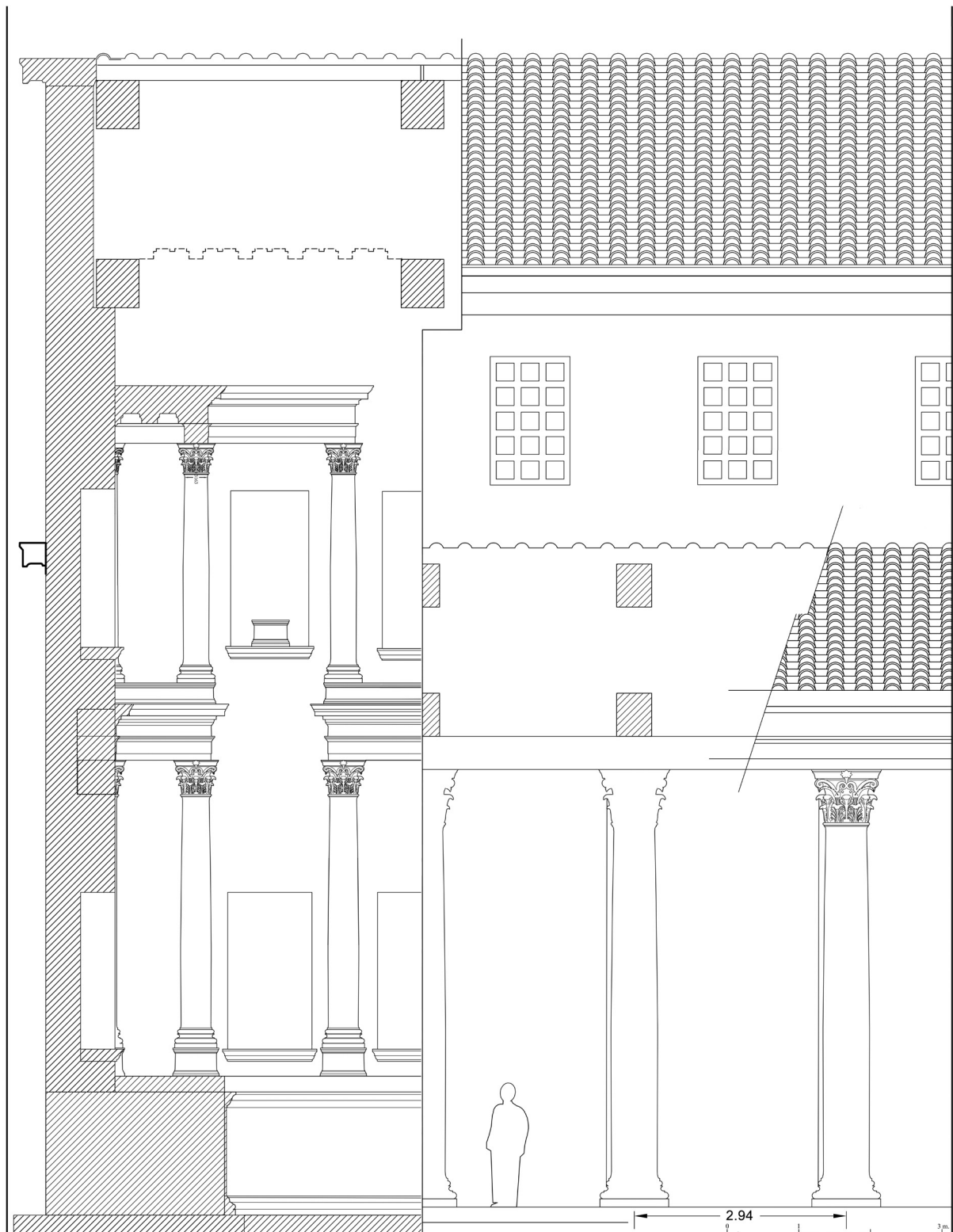


Fig. 6. Section B-B in Fig. 5 through the east hall and elevation of the west wing of the peristyle.

## CONCLUSIONS

It is noted that the Library of Hadrian was the only building in Athens that employed Phrygian marble.<sup>44</sup> In Pausanias' times this was considered the most famous (τὰ δὲ ἐπιφανέστατα) of all of Hadrian's works in Athens, as its 100 Phrygian columns exceeded in number all columns made of the same, costly, red marble in Rome (Portico of the Danaids in Apollo's sanctuary on Palatine Hill and in Hadrian's Pantheon).<sup>45</sup> Until present it was thought that Phrygian marble "was used in the exterior porticoes [of the Library], not an aedicular room, as in Sardis's".<sup>46</sup> Our research proves that Phrygian marble was used in the colonnade of the peristyle but also in the large eastern hall termed the Bibliostasio. Quite interestingly, after the identification of the columns of the peristyle, of the exedrae and those in the interior of the Bibliostasio, there is no column fragment made of Phrygian marble in the archaeological site that does not fit the known colonnaded architectural compositions of the compound. The drafted borders in the ashlar courses of the revetment slabs would match the panels on the masonry in the façade of Hadrian's compound. Pausanias (1.18.9) must have thought he was seeing alabaster when describing the Phrygian revetments of the rooms (οικήματα), namely the exedrae and the Bibliostasio. The creamy variety of the Phrygian marble used in the Library would have been responsible for this impression. Indeed, Strabo (12, 577) notes that the admirable Phrygian marble of Synnada was preferred for the columns of luxurious buildings due to its resemblance with the qualities of alabaster.<sup>47</sup> The gilded roofs mentioned by Pausanias had a great aesthetic and symbolic value for roman patrons who saw in them references to divine and celestial manifestations as well as connections with the royal palaces in the East and with the most important Greek temples.<sup>48</sup> Unlike the adjacent busy and loud, commercial, forum of Ceasar and Augustus, Hadrian's compound would be a peaceful island within the hustle and bustle of the city. And yet, by contrast with the monochromy of the loud Augustus' forum with its white Pentelic and Hymettian blue marble, Hadrian's quiet compound was combined with a pandemonium of colors (cipollino, Pentelic and Phrygian marbles and gilded ceilings). Fragments of schist slabs collected in the archaeological site could have become from any revetted wall in Athens, and therefore, are not presented in our documentation. Quite possibly, revetment slabs of Phrygian marble were combined with such slabs made of Pentelic marble but also cipollino, as reconstructed in the zone of the entablature of the exedrae (Figs. 2–4). The motif of square Phrygian slabs alternating with square slabs of darker stone appears in the frieze that corresponds to the pilaster capitals of the Pantheon in Rome.

The identification of the Hadrianic compound, whether a forum for the Panhellenion with a shrine to Hadrian (after Martini, Ferrera, Castren, Corcella *et al.* and Karivieri) or a library (Sisson, Makowiecka, Shear, Willers, Tigginaka and Sourlas) depends a lot on the identification of the large eastern hall as either a 'Kaisersaal' –the σηκός to Hadrian– or the main book keeping hall respectively. Corcella *et al.* have demonstrated that certain line or lines are missing

44 On the marbles used in Roman Athens, Brunno and Vitti 2018.

45 On the 54 Phrygian columns (diameter of 0.71 m.) in the Portico of the Danaids, Quenemoen 2006.

46 Burrell 2009, 783.

47 Νικολαΐδης 1888, 65–6. Since the 2<sup>nd</sup> century AD the quarries of the Synnadian marble were state property and its cost was higher than any other marble due to transportation expenses; its excessive weight would have to be carried through mountainous roads (Berk 2017, 202–4). The colorful Dokimeian/Synnadian Phrygian marble, commonly referred today as *pavonazzetto*, seems mostly to have been used for column shafts and wall revetment (Niewöhner 2013, 215–6).

48 Paus. 1.18.9; Marcus Manilius, *Astronomica* V, 285–92; Statius, *Silvae* IV, 2, 18–31; Seneca, *Epistulae* 90, 42; Τζέλη 2020, 59.



in Pausanias' excerpt, which includes within a few words brief mentions of the Panhellenion, the Pantheon, the great peristyle of 100 Phrygian columns and Hadrian's Gymnasium.<sup>49</sup> As demonstrated above, the architectural similarities between Kaisersäle and libraries are striking; in certain cases, both functions have been proposed for the same hall.<sup>50</sup> In Athens, the shallow niches point to a library; yet the existence of an imperial library outside of Rome would be an exception.<sup>51</sup> Undoubtedly, this rare donation in Athens would be in line with Hadrian's philhellenic attitudes. The combined use of a library and a shrine would not be unique: in one instance, in AD 142, and exceptionally to the placement of libraries in baths and fora, a library of books was donated to the headquarters of the guild of actors of Rome in a sacred temenos.<sup>52</sup> Quite strangely, the architecture of the flanking theatrical structures termed 'auditoria' matches the architecture of *bouleuteria*; the eastern hall for display of books would then have been only an addition to Hadrian's multifunctional forum, termed the 'Library'. Indeed, Sourlas argues on the multifunctional character of Hadrian's forum in Athens.<sup>53</sup>

As exhibited, only a few, small fragments of the Hadrianic peristyle and interior colonnades have survived. In the early 5<sup>th</sup> century AD the sacked colonnade of the peristyle was replaced with 108 columns on pedestals and corresponding architraves collected from ruined monuments of Athens. The complete destruction of the Hadrianic compound is in marked contrast with the limited damages caused in the neighboring forum of Caesar and Augustus. Had the Heruls sacked the Library to the ground, this would be an extreme act of disrespect towards the god emperor himself, a demonstration of force that would terrorize and bend the Athenians, perhaps stimulated by images of the emperor and the imperial family, and, indeed, would betray imperial cult in certain spaces of Hadrian's Forum.

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49 "Hadrian ... allowed the Greeks to build in his honour the shrine (σηκόν) which was named the Panhellenium..." (Dio Cassius 69.16, translation by Cary 1925, 455). "Hadrian constructed other buildings also for the Athenians: a temple of Hera and Zeus Panhellenios (Common to all Greeks), a sanctuary common to all the gods, and, most famous of all, a hundred pillars of Phrygian marble. The walls too are constructed of the same material as the cloisters. And there are rooms there adorned with a gilded roof and with alabaster stone, as well as with statues and paintings. In them are kept books. There is also a gymnasium named after Hadrian; of this too the pillars are a hundred in number from the Libyan quarries" (Paus. 1.18.9, translation by Jones 1918).

50 See for example hall M in the 'gymnasium' of Side (Yegül 1982, 20, fig. 20; Mamoli 2014, 235–40); on the issue, Burrell 2006.

51 Affleck 2012, 35.

52 Boatwright 1989, n. 89. Thank you to Lina Tsatsaroni for locating this parallel. A library opened to the portico of Danaids, also constructed of Phrygian marble, in the sanctuary of Apollo on the Palatine Hill (Pandey 2018, 84, fig. 3.1, cf. with Quenemoen 2006, 233, fig. 4).

53 Sourlas 2018, 391.

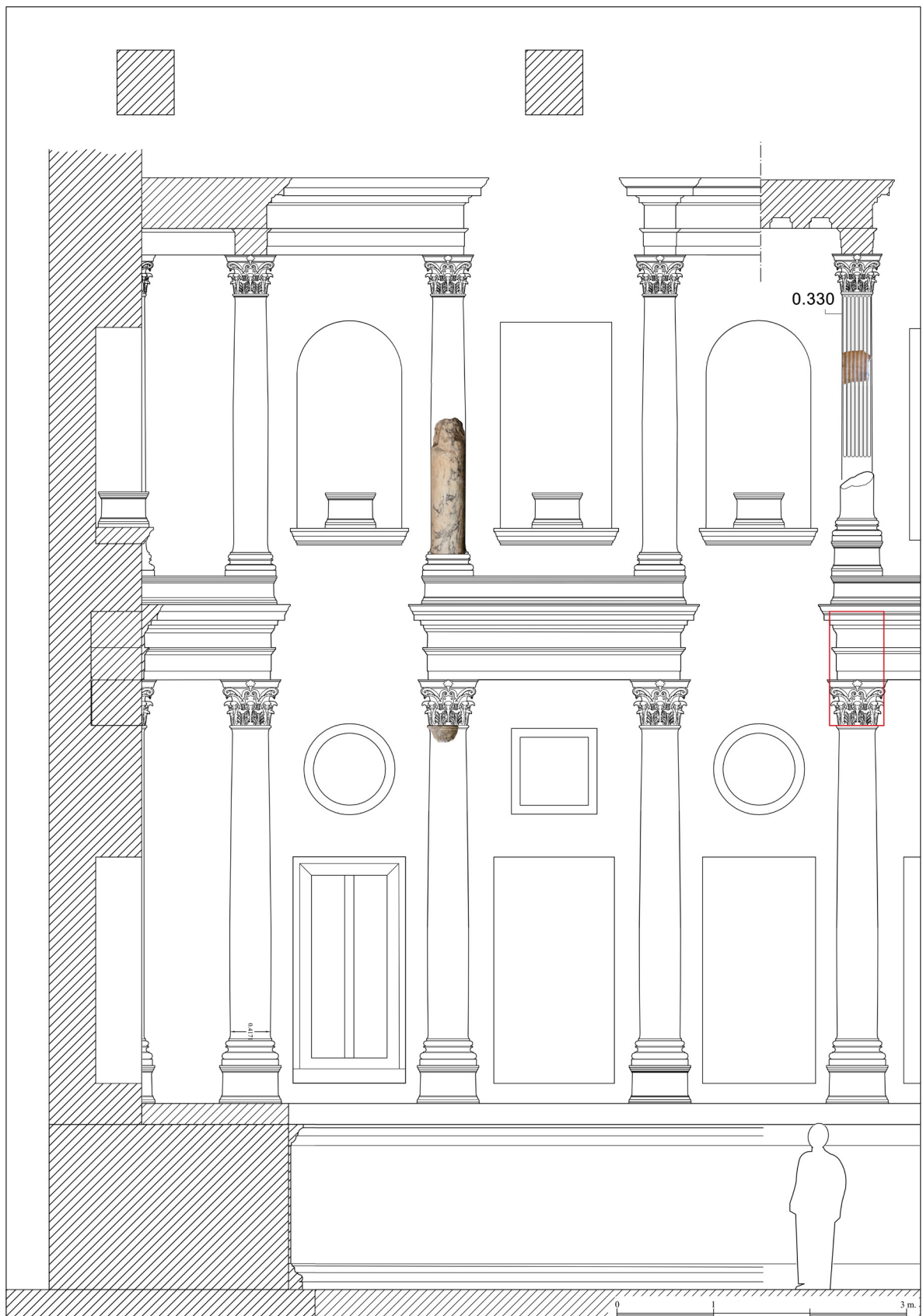


Fig. 7. Reconstructed section A-A in Fig. 5. The recesses on the east wall are marked with a red rectangle.

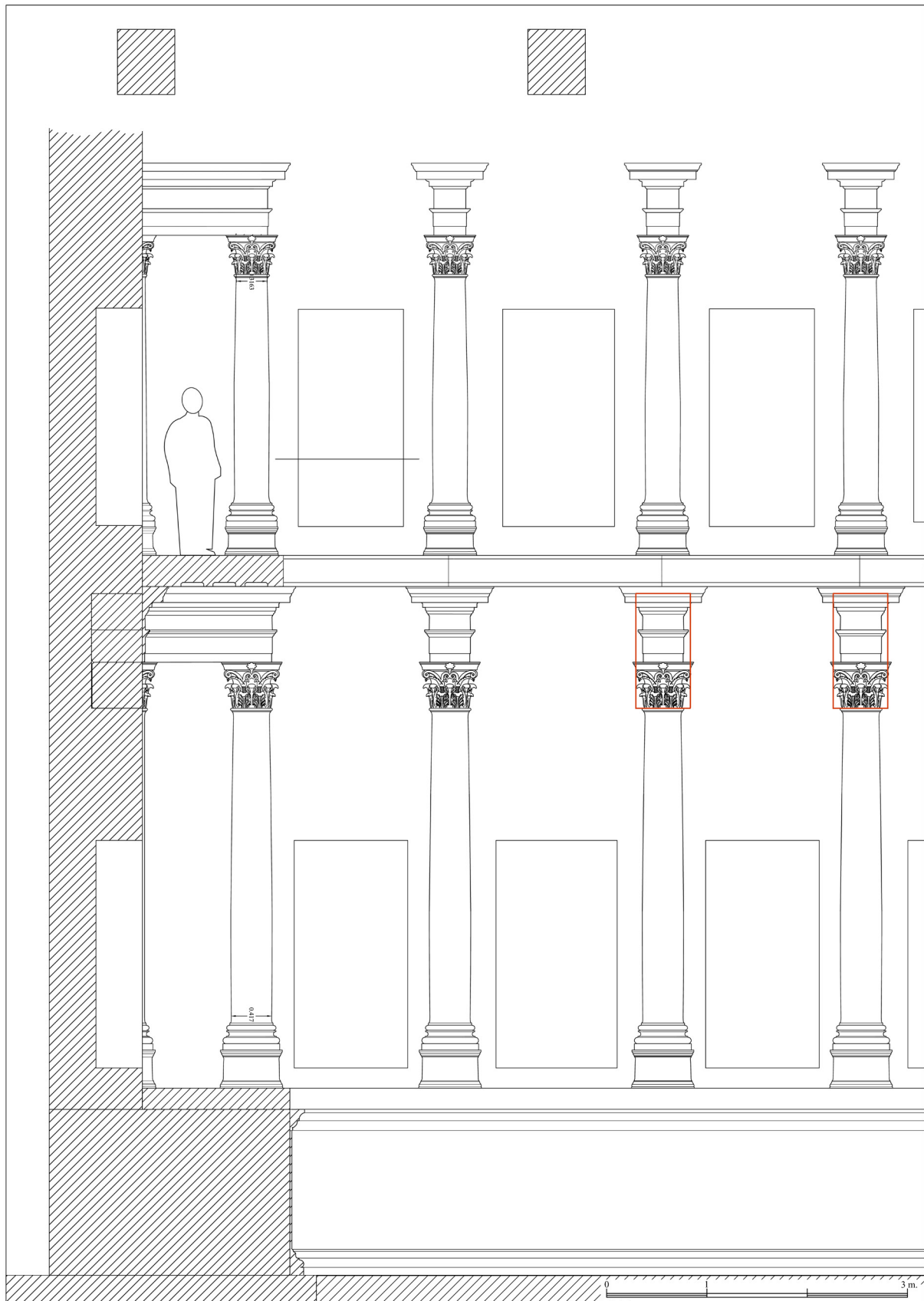


Fig. 8. Reconstructed section A-A in Fig. 5. The recesses on the east wall is marked with red rectangles.



Fig. 9. 1. Lotus and acanthus capital BA 1712. Photo by G. Doulfis; 2. Pilaster shaft discovered in hotel Aiolos.

## CATALOGUE OF SELECTED FRAGMENTS.

Since 2012 two hundred fragments stored in the Library, mainly of Phrygian and Pentelic marble, were documented and studied; survey works of the constructions provided the necessary background for the application of the revetment features accordingly. Below is a catalogue of selected fragments of Phrygian marble, unless noted otherwise; L = preserved length; W = preserved width; H = height; UD = upper diameter; LU = lower diameter; Th= thickness. The thickness of the revetment slabs and the height of the molded fragments are the identity/key dimensions of the corresponding courses, as can readily be seen in Fig. 13.

**WALL REVETTMENT SLABS** drafted with outlined panels. Preserved width and length of fragments is between 0.05 m. and 0.010 m.

AB 2344 Th: 0.0239 m. (Fig. 13.4).

AB 2346 Th: 0.0174 m. (Fig. 13.2).

AB 2348 Th: 0.0114 m. possibly from the Bibliostasio (Fig. 13.3).

AB 2363 Th: 0.0205 m. (Fig. 13.1).

AB 2375 Th: 0.0285 m. (Fig. 13.5).

**WALL CROWNS (*EPIKRANITIS*)** Preserved length of fragments is between 0.10 m. and 0.18 m.

AB 2254 = 2289 H: 0.071 m.

AB 2259 H: 0.069 m. (Fig. 13.7).

AB 2366 = 2380 H: 0.073 m. (Fig. 13.10).

AB 2367 H: 0.062 m. (Fig. 13.9).

AB 2378 H: 0.066 m. (Fig. 13.6).

AB2379 H: 0.07 m.

AB 2380 H: 0.085 m. (Fig. 13.11).

AB 2381 H: 0.0585 m. (Fig. 13.8).

AB 2289 H: not preserved



Fig. 10. Crown molding AB 2157. Photo by G. Doulfis.

#### STRING COURSE (*KATALEPTER*)

AB 2248 H: 0.084 m.; L: 0.21 m. (Fig. 13.12).

**BOTTOM MOLDINGS.** Preserved length of fragments is between 0.073 m. and 0.185 m.

AB 2372 H: 0.986 m. (Fig. 13.19).

AB 2252 H: 0.106 m.

AB2253 H: 0.106 m.

AB2256 H: 0.106 m.

AB2257 H: 0.106 m.

AB 2258 = H: 0.106 m.

AB 2270 = H: 0.108 m. (Fig. 13.20).

These may have belonged to molded column pedestals of the exedrae.

**CROWN MOLDINGS.** Preserved length of fragments is between 0.096 m. and 0.14 m.

#### a.SMALL

AB 2264 H: 0.079 m. – 0.081 m.= AB 2265 (Fig. 13.14).

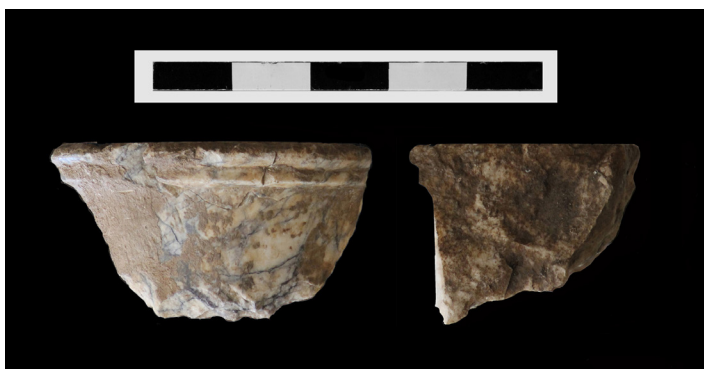


Fig. 11. Column fragment from the lower tier of the bibliostasio.

AB 2275 L: 0.158 m.

AB 2276 L: 0.109 m.

AB 2290 L: 0.09 m.





Fig. 12. Column fragment from the upper tier of the Bibliostasio.

AB 2265 H: 0.081 m. (Fig. 13.14).

AB 2266 H: 0.074 m.

AB 2267 H 0.068 m. (Fig. 13.13).

These may have belonged to molded pedestals of the pilasters in the Bibliostasio.

**b.MEDIUM.** Preserved length of fragments is between 0.065 m. and 0.106 m.

AB 2282 H: 0.113 m. (Fig. 13.15).

AB 2370 H: 0.106 m. (Fig. 13.16).

AB 2251 = AB 2157 H: 108 m. (Fig. 10; 13.17).

AB 2249 = AB 2301 = 2300 = 2299 = 2292 = 2291 H: 0.105 m.

AB 2277 H: 0.107 m.

These may have belonged to molded courses on the walls of the compound.

**c.LARGE.** Preserved length of fragments is between 0.125 m. and 0.194 m.

AB 2283 H: 0.146 m. Pentelic marble.

AB 2285 H: 0.125 m. (Fig. 13.18). Pentelic marble.

These may have belonged to molded pedestals of the pilasters in the Bibliostasio.

#### FLUTED PILASTER SHAFTS

Revetment of a wall pilaster discovered during the excavations in the hotel Aiolos. Phrygian marble. Width of the pilaster is 0.335 m. (Fig. 9.2); preserved height is 0.30 m. The shaft is treated with 7 flutes. Possibly, from the upper tier of the Bibliostasio.

AB 2302. L: 0.04 m.

AB 2275 L: 0.158 m.

AB 2276 L: 0.109 m.

AB 2290 L: 0.09 m.

#### COLUMN SHAFTS

Column shaft stored in the lapidaria next to Andronikos' Horologium. LD: 0.345 m.; H = 1.41 m. (Fig. 12).

AB 2100. Large portion from the upper part of an unfluted column shaft; H: 2.727 m.; UD: 0.462 m. (Pl. 1).

AB 2358 – UD: 0.42 m.

AB 2175. Column shaft with diameter  $\pm$  0.38 m. (Fig. 11).

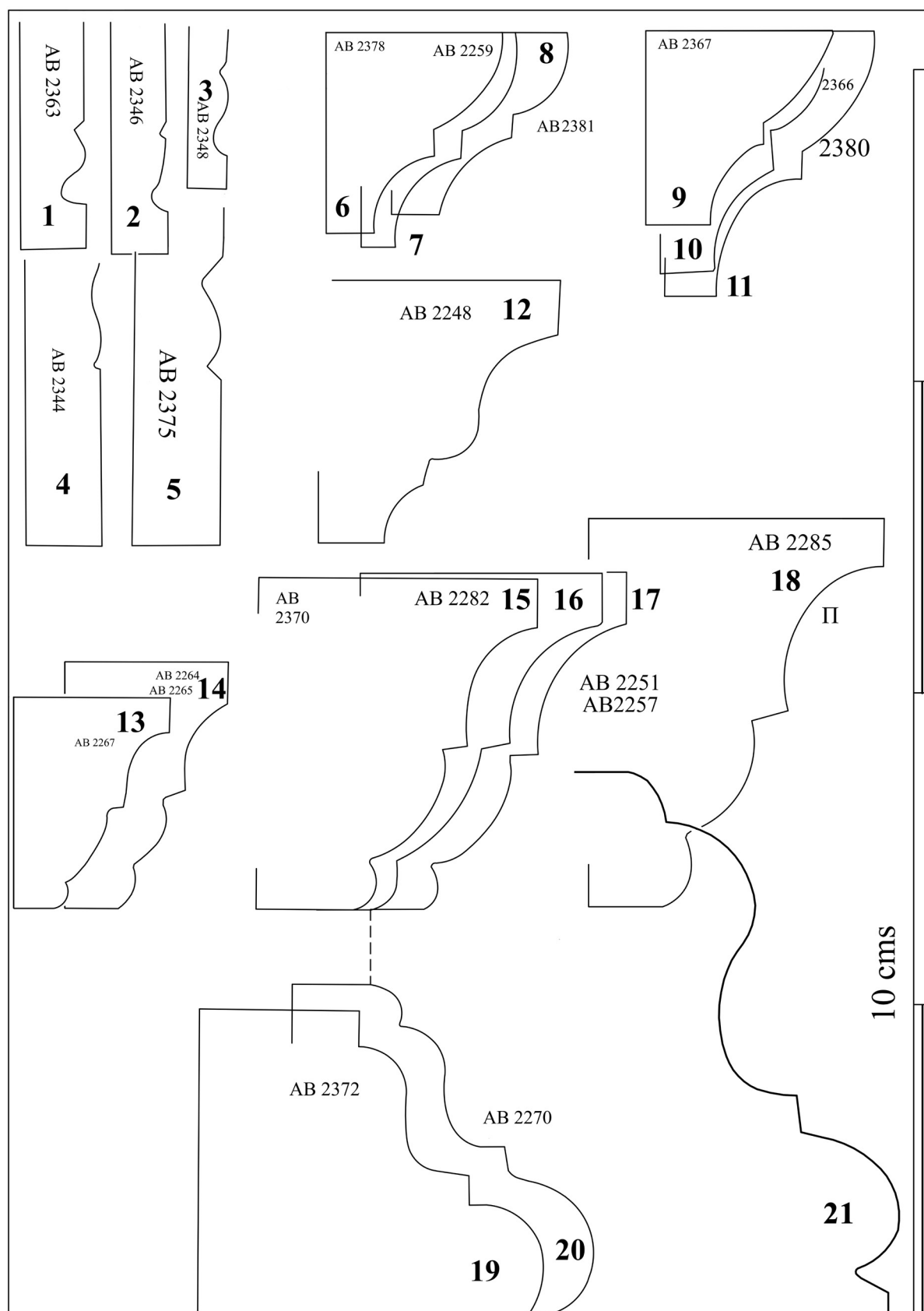


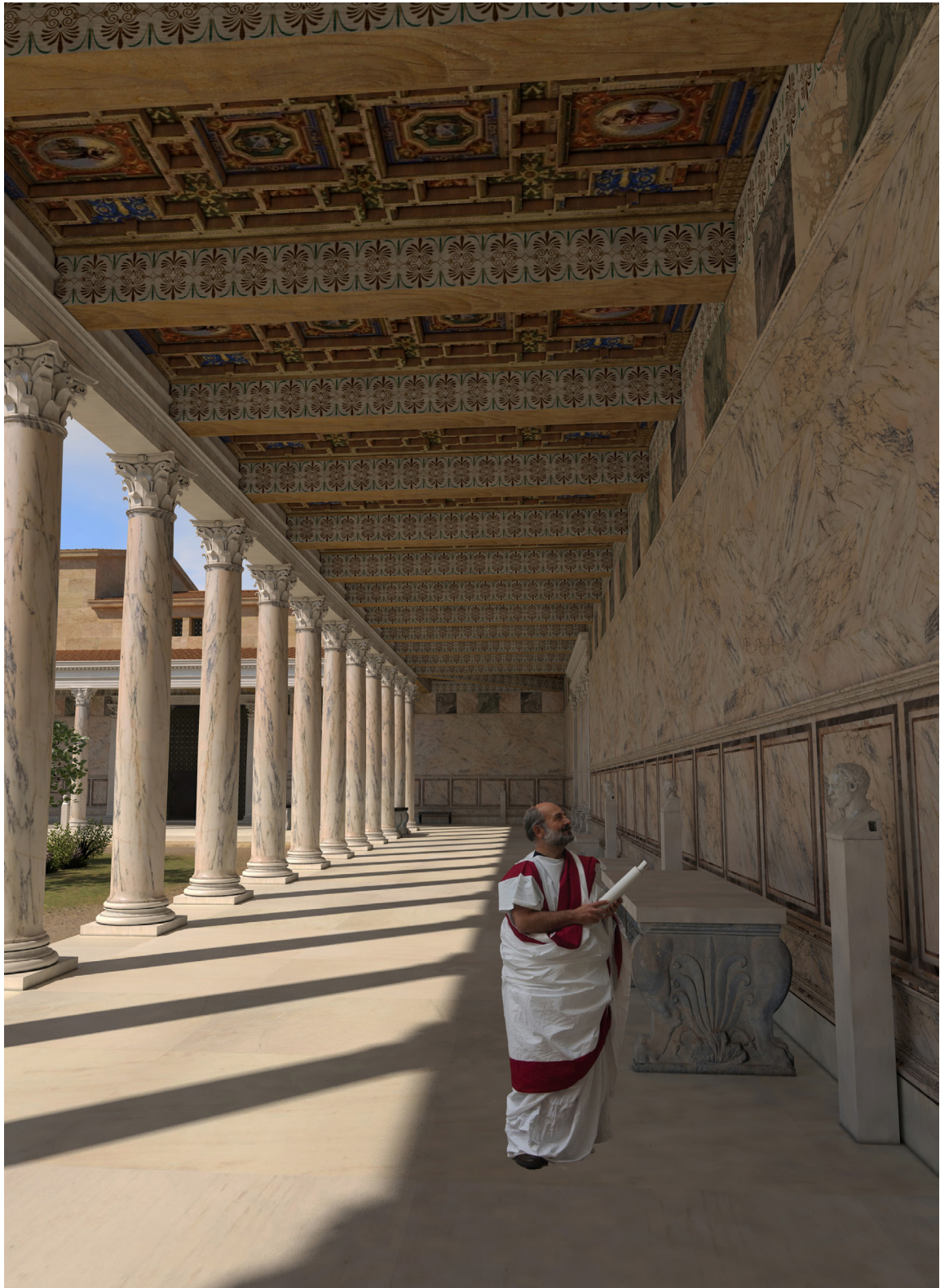
Fig. 13. Profiles of moldings. #1-20 are of Phrygian marble. #18 and 21 are of Pentelic white marble.





Pl. 2. The north wing of the portico. Image by Dimitris Tsalkanis.





Pl. 3. The north wing of the surrounding colonnade in the Library of Hadrian. Image by Dimitris Tsalkanis.





Pl. 4. The east wing of the portico with doorway of the north 'auditorium'/bouleuterion and the distyle *in antis* porch of the adjacent room. Image by Dimitris Tsalkanis.



Pl. 5. Photorealistic recreation of the east wall of the Bibliostasio. Image by Dimitris Tsalkanis.





Pl. 6. The interior of the south 'auditorium'. Image by Dimitris Tsalkanis.



Pl. 7. The west wall of the Bibliostasio. Image by Dimitris Tsalkanis.





Pl. 8. Photorealistic recreation of the east wall of the Bibliostasio. Image by Dimitris Tsalkanis.

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