

# RECENT EXCAVATION & RESTORATION AT QASR EL BINT OF PETRA

by  
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A campaign of excavation was resumed at the temple of Qasr el Bint<sup>1</sup> (Pl. LV,1) from the 3rd of October to December 20th, 1983 and in May 1984. The main objectives were to secure more dating evidence and architectural elements by the clearance of the eastern compartment 1 of the triabsidial *cella* (Fig. 1) which was obstructed by 2.90 m. of stone tumble. Excavations were also continued along the southern wall. In 1984, a programme of consolidation of the architectural stucco decoration together with the northeastern *anta* was also initiated (see below). The work was supervised by the writer and architect F. Larché who prepared the drawings but was also responsible of the excavation in November. Miss Marylene Barret and Mr. Patrick Blanc were in charge of the stucco consolidation while Abdel-Majid Mjelli from the Jerash Project conducted the consolidation of the northeastern *anta*.

## Progress of Excavation:

As has been previously noticed,<sup>2</sup> the remarkable feature of the stone tumble in compartment 1, was a layer of burn, about 20 cm. thick (Fig. 2). This layer resulted from a fire which destroyed the roof timbers of the balcony which were fitted in the square lodgments of the South wall (Pl. LV,2) and rested on the two columns *in antis* of the compartment. It is now clear that arches (Fig. 3) spanned the columns as can be deduced from many voussoirs recovered in the tumble. Curiously, the arches were covered on the north and south sides by a wooden frame. Recently, the two cavities in the eastern wall where the beams were engaged, have been cleared.

The South cavity averages 1.30 m. in depth, 0.65 in height for a width of 0.22 m. but the northern one is smaller in size: the height is 0.65 m. while the depth is 0.47 and the width not more than 0.10 m. (Pl. LVI, 1,2). Both of the cavities yielded carbonised wood and in the southern one, a long iron nail was found.

After the removal of the burned layer 2 in the compartment, seven irregular enclosures, built with reused stones and marble fragments were brought to light (Fig. 1 & Pl. LVII,1). Enclosure 2, north of the eastern column, was of rectangular shape and averages 2.50 m. long and 0.96 to 1.04 m. wide with a height of 1.13 m. An inscribed marble base and other fragments (see below) were built in the western wall and lion's head and stands were engaged in the other walls (Pl. LVII,2). Two other lion's stands were constructed in the next enclosure 3 and a fragmentary fluted column of white marble was built across (Pl. LVII,3)

The function of the enclosures could not be determined for they were filled with rubble. It could be assumed that they were intended to raise the floor of the *cella*, after the premeditated destruction of the temple. This intentional violence is made clear by the discovery of the middle marble step of the compartment which was stripped out and propped against the eastern column (Pl. LVIII,1), at the level of the enclosure walls.

The compartment which measures 8.27 m. E-W by 7.72 m. N-S, was paved with white marble slabs (Pl. LVIII,2,3), and a greyish marble dado revetted the walls to the height of 0.70 m. as could be concluded from fragments still *in situ*, between the eastern *anta* and the wall.

1. For a preliminary report, see F. Zayadine, *ADAJ*, XXVI (1982), p. 374-380 with bibliogra-

phy.  
2. *Idem*, p. 377.

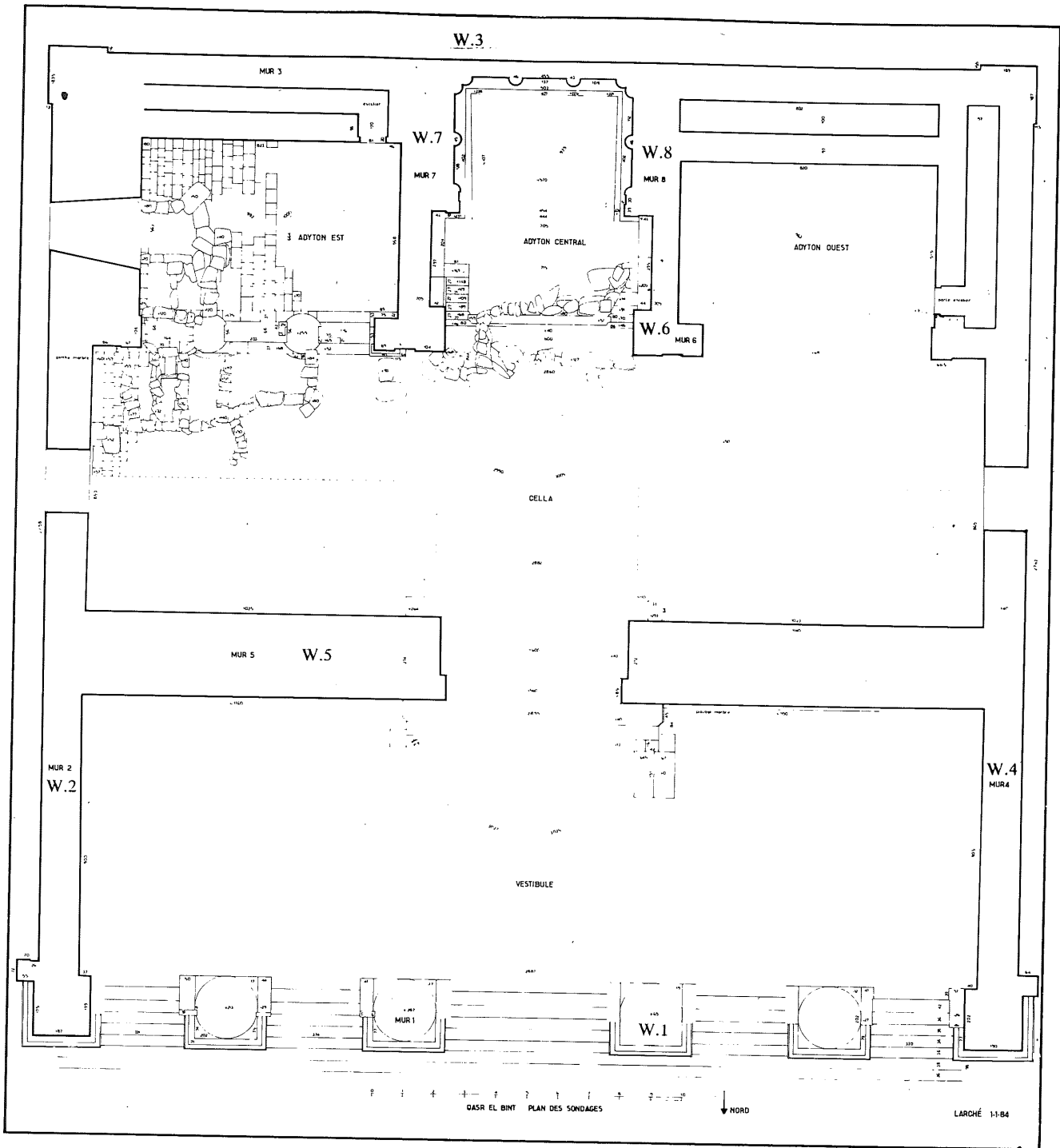


Fig. 1. Ground Plan of Qasr el Bint (after F. Larché)

Very little dating material has been retrieved in the excavation. A fragmentary lamp in locus 2 and a bronze coin of Gallienus found on the floor to the North of the columns are the only relevant objects (see below). On the other hand, a large amount of moulded stucco was collected and some fragments were coated with a golden leaf, a discovery which gives some credit to the description of the *idoleion* of Petra by the Byzantine lexicon Souda (10th century A.D.): “The whole

temple is shining with gold”.

#### Elevation of the East Compartment:

In his hypothetical elevation of the side compartments, Kohl<sup>3</sup> has reproduced the two columns *in antis* in the balcony. But no elements of this upper order was found in the excavation. As a working hypothesis, architect Larché reconstructed a plain wall. (Fig. 4). This reconstruction is supported by remains of stucco revetment

3. *Kasr Firaun in Petra*, Leipzig, 1910, p. 13, Fig. 12.

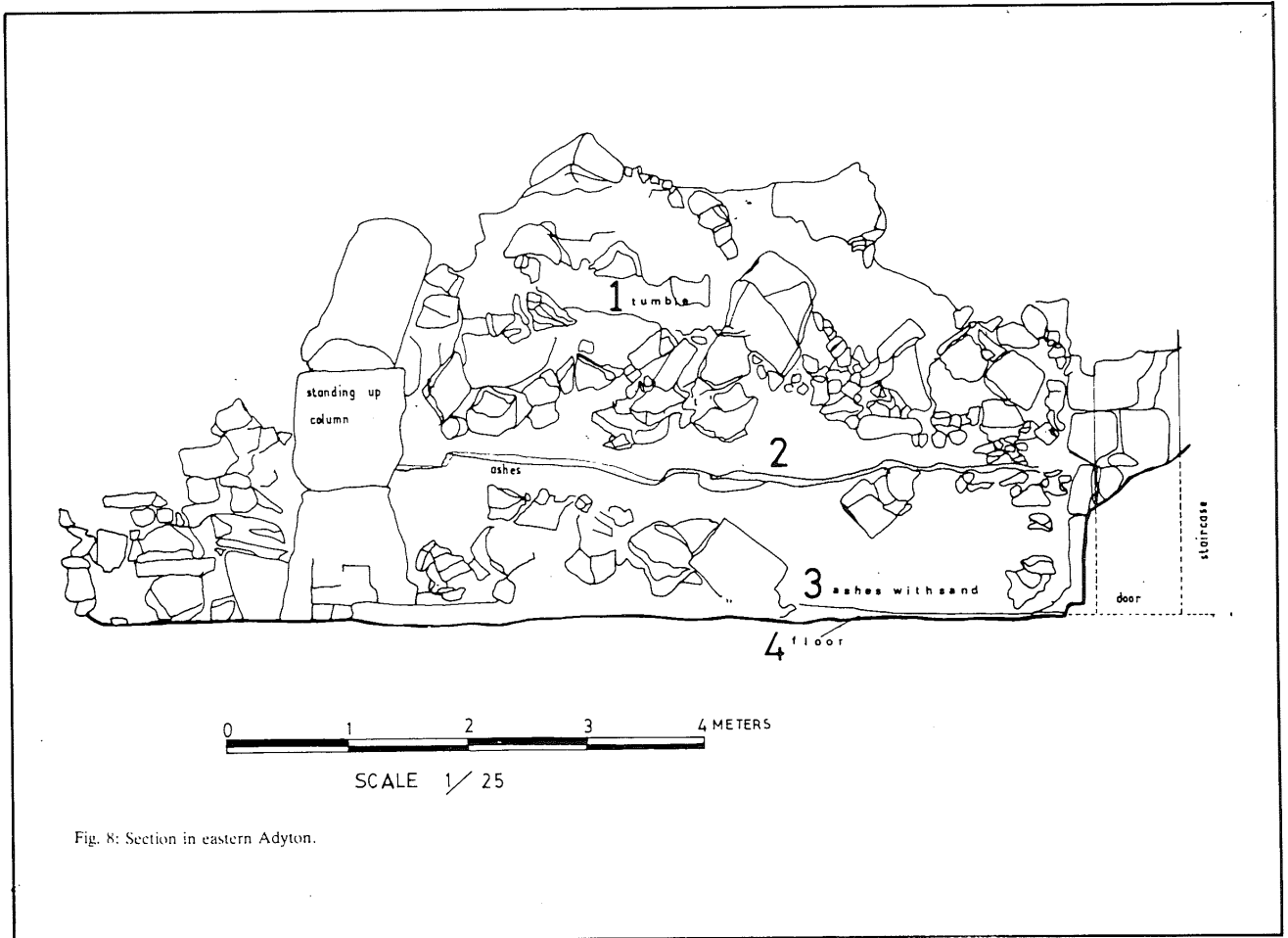


Fig. 8: Section in eastern Adyton.

Fig. 2. Section of tumble in East compartment 1.

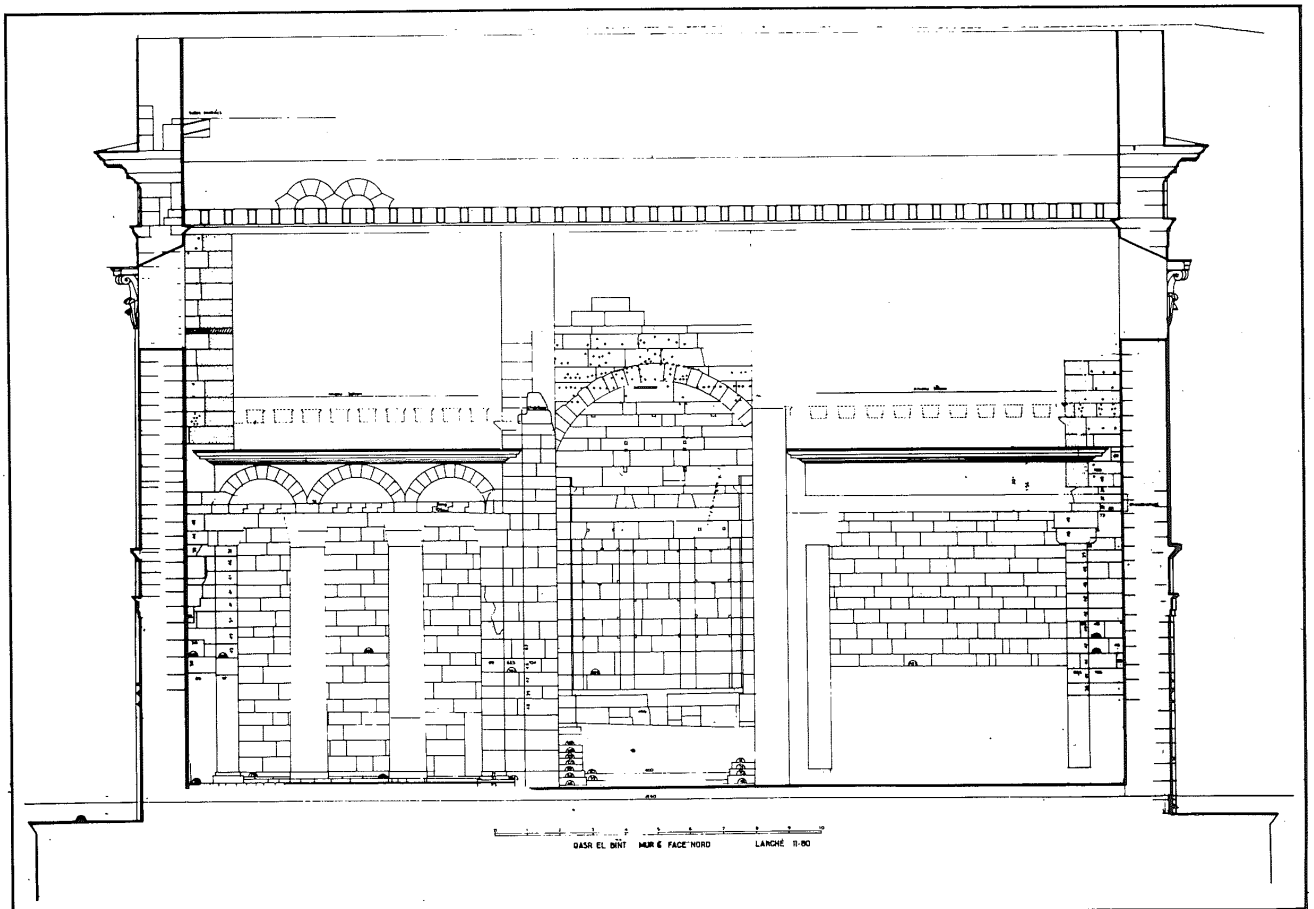


Fig. 3. North elevation of the triapsidal *cella*.

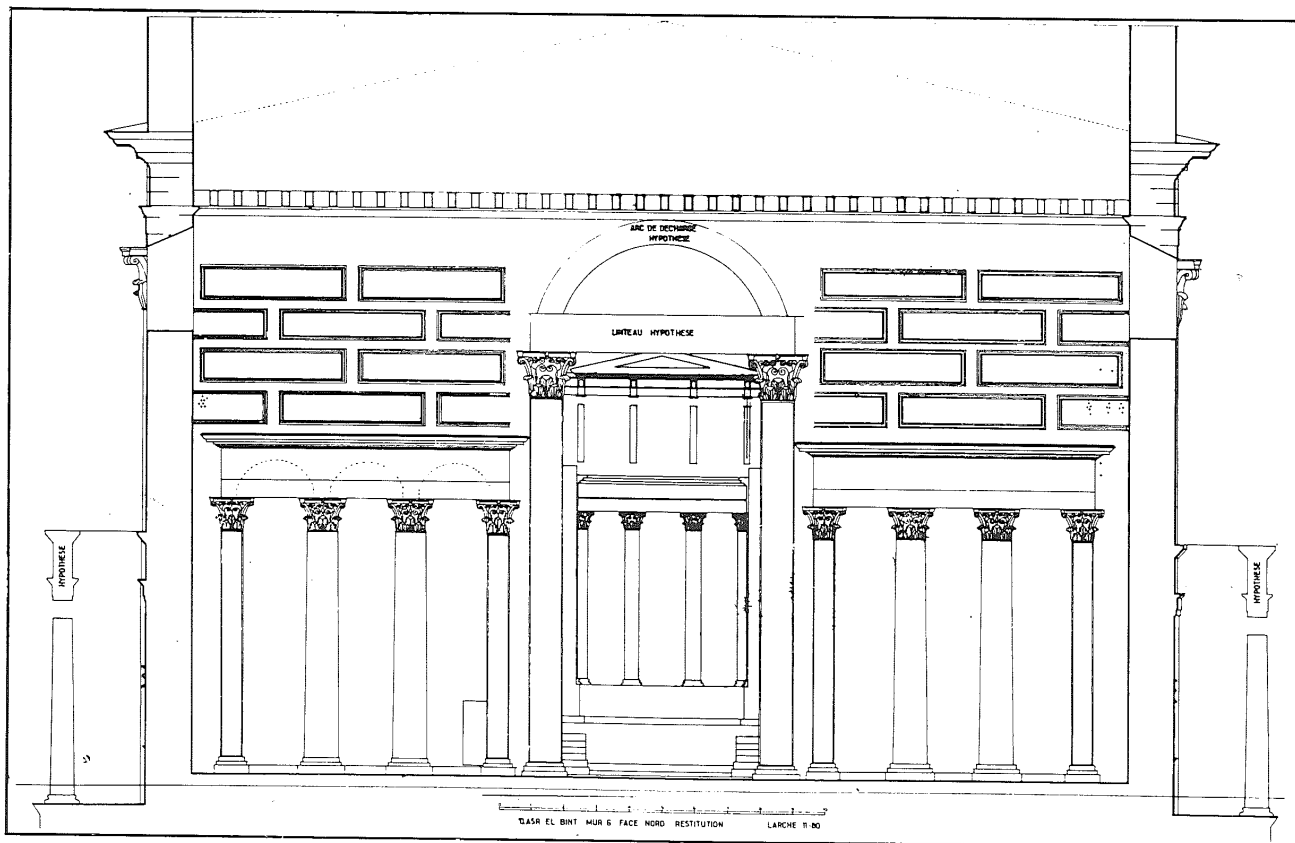


Fig. 4. Reconstructed elevation of the N. facade of the triabsidal *cella* (after F. Larché).

in the western compartment and finds a parallel in the South *Thalamos* of the Bel Temple at Palmyra,<sup>4</sup> dedicated in April 32 A.D. It can be assumed that the balcony chamber was lit by narrow slits. A stairway, 0.82 m. wide which is lodged in the South wall ascends to this chamber and continues to the attic. The access to the second flight was through a doorway pierced in the South wall (see below). A cornice fragment (0.40 m. by 0.27 m.) is built in the north wall of the stairway and can be considered as evidence of an earlier monument (Pl. LIX, 1).

#### Roofing:

The problem of the roofing of the temple was discussed by architect G.R.H. Wright<sup>5</sup> in his 1961 review, prior to any major excavation. He reconsidered, in a recent note,<sup>6</sup> this puzzling feature which can be re-analysed in the light of the recent observations:

1. There is no doubt that the side

compartments were covered by a terrace roof, supported by timbers which were placed in square lodgements (Pl. LV,2).

2. On a higher level, the *cella* was roofed in two spans of 6.72 m. and 8.70 m.

3. The *pronaos* was also covered by a terrace roof of 9.06 m. in width, the beams supporting this terrace being lodged two by two in square cavities, protected by an arch. There is no reason to suppose that these arches (Pl. LIX,2,3) were decorative as stated by G.R.H. Wright<sup>7</sup>: thanks to the scaffoldings, some of the cavities has been recently cleared and yielded carbonised wood.

4. Above the level of the *pronaos* terrace, there is a high parapet of about 5 m. Wright was annoyed by this wall and concluded: "...unless there were another roof at a higher level, no structural purpose can be seen in carrying this wall above the terrace."<sup>8</sup> On the other hand, he reports "in the clearance of the podium some remains of roofing tiles"<sup>9</sup> ...and a corbel stone was noticed by him in the upper

4. H. Seyrig, R. Amy, E. Will, *Le temple de Bel à Palmyre*, Paris, 1975 p. 53-64.

5. *PEQ*, (1961) p. 17 ff.

6. *Damaszener Mit.* 2 (1985) p. 321-325.

7. *PEQ* (1961) p. 27 & *D.M.* ., 322.

8. *PEQ*, *op. cit.*, p. 27.

9. *Idem*, p. 29.

course of the eastern wall.<sup>10</sup> Although he was intrigued by these elements, he could not accept the possibility of a pitched roof because he thought this solution “so contrary to the tradition to which the temple belonged”.<sup>11</sup> In his recent note, he made a hypothetical comparison with the Solomon Temple in Jerusalem, where the *pronaos* (*ulam*) was roofed at a “higher level than the rear parts of the building”.<sup>12</sup> But our recent discoveries prove that this comparison cannot stand. On the one hand, a large amount of roof tiles were collected all over the excavated areas, in the *pronaos* as in the cella. On the other hand, many stone blocks, provided with one or two parallel grooves were found in the tumble. Some of them still preserve the remains of roof tiles (Pl. LX,1) and others are *in situ* in the upper course of the eastern wall. A pitched roof, covering the entire sanctuary, is the only reasonable solution to these structural elements. Two blocked doorways are noticeable in the southern face of the *pronaos* wall (Fig. 5) and permitted the circulation from the inner attic to the stairways on both sides of the main gate (Pl. LX,2) and probably to the *pronaos* terrace. Besides, there is a pediment fragment *in situ* in the northern facade of the *pronaos*. Another pediment fragment has been reported in Sq. 7/7 (<sup>12 bis</sup>). There is no room here to discuss the origin and parallels to this unexpected feature in an Oriental temple. But its existence at Qasr el Bint is beyond any doubt.

### The Finds:

Because the temple was looted and reoccupied through different periods, very

little relevant objects were collected from our digs. Nevertheless, some finds of significant chronological value will be discussed here:

#### 1. *Lion's stands* (Pl. LXI, 1-4).

Marble elements, representing lion's heads and paws were found reused in the enclosure walls mentioned above in the East compartment. Most of the stands were damaged but some of them were restored and the complete examples average 0.37 m. to 0.40 m. in height, with a width of 0.14 to 0.18 m. The best preserved stands show a lion's head with an outstretched tongue and two fangs; a mane encircles the animal's face. The head stands on a leg with four roughly carved claws. Since the top of the stands is flat and preserves traces of a small ridge on one side, it is likely that these furniture elements were used to support couches (*klinè*) or tables. A good parallel can be observed on a Syrian sarcophagus,<sup>13</sup> now in the Istanbul museum. It is dated to the first half of the third century A.D. and depicts a reclining lady on a couch with a table in front supported by a similar lion's stand.

There is no clear indication that the couches or tables were in use in the East compartment for a triclinium. But it is not impossible that this chamber was the gathering place of the sacred *symposia*, in relation with the cult of Dusares-Dionysos. We know from Strabo,<sup>14</sup> that 13 members, accompanied by two girl-singers gathered for the sacred banquets and that the king holds many drinking-bouts. He served his guests himself,<sup>15</sup> probably as a *symposiarchos*. Many rockcut triclinia are known at Petra<sup>16</sup> and it is probable that the cultic *symposia* of the temple were held in the

10. *Idem*, p. 28.

11. *Idem*. p. 28.

12. *D.M. op. cit*; p. 322 & Fig. 5c. Although the Herod's temple & Qasr el Bint, may belong to the same period, there is no connection between the two monuments as far as the roofing system is concerned.

12 bis. *ADAJ*, XXVI (1982) Pl. CXXX.

13. G.M.A. Richter, *The Furniture of the Greeks, Etruscans & Romans*, The Phaidon Press, 1966, p. 109 & Pl. 551.

14. *Geog.* Loeb Classical Library, Translated by H.I. Jones, London, 1966, XVI, 4,26.

15. “The king is so democratic that, in addition to serving himself, he sometimes even serves the rest himself in turn” (*Geog.* XVI, 4, 26). What the informant of Strabo considered as a sign of democracy is no more than Oriental custom, still in use in the bedouin society.

16. For the Triclinia of Petra, see Dalman, *Petra und seine Felsheiligtümer*, Leipzig, 1908. For Beida, see F. Zayadine, *ADAJ*, XXI (1976), p. 139-142 and *Syria*, LXII (1985) p. 151-152.

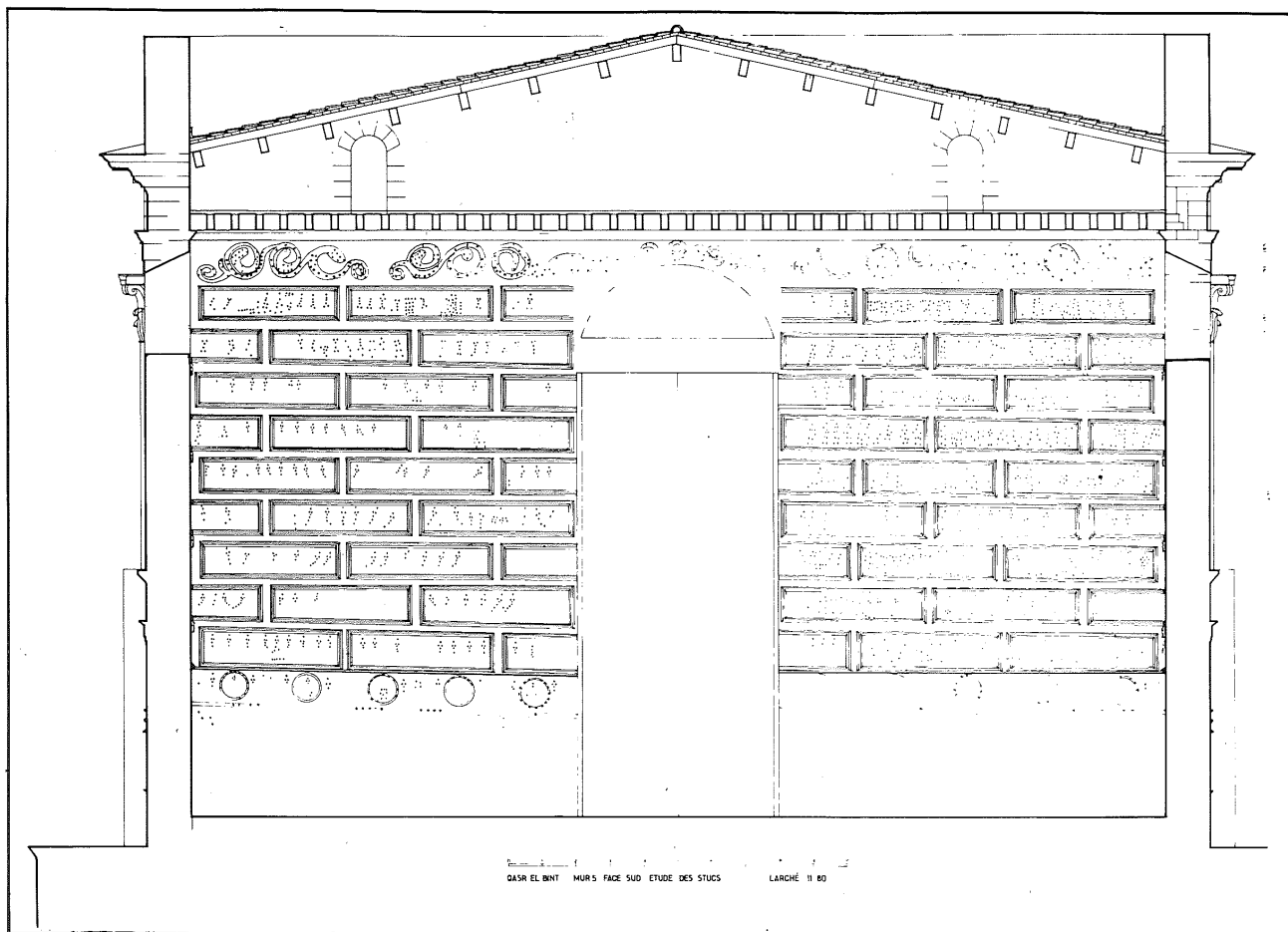


Fig. 5. Inner S. facade of wall 5 in the *cella*.

side compartments of the triabsidial *cella*. At Palmyra, the banquet hall in relation with the temple of Bêl, was identified with a large construction, near the main altar.<sup>17</sup> A good amount of tesserae which were tickets of the *thiasis*' members were collected in the drainage system. Some of these tickets represent the members on a couch with a cup of wine.<sup>18</sup> According to the Roman Geographer, the symposium members of Petra were permitted to drink not more than eleven cupfuls of wine, "each time using a different golden cup".<sup>19</sup> The tesserae of Palmyra were interpreted by H. Seyrig as the remains of the last drinking bout,<sup>20</sup> before the capture of the city by Aurelianus in 272 A.D. The fragmentary marble stands of the Qasr could be the testimony of the last symposium, in the Roman period.

2. A bronze coin: (Pl. LXII,1)

A badly preserved coin was found on

the floor of the *cella*, in front of the East compartment.

*Ob.*: Rad. bust of emperor.

*Rev.*: Seated Tyche, holding trophy with left hand, right unclear. The bust of Gallienus is recognisable, but the inscription is almost completely eroded. It should read: IMP C P LIC GALLIENUS P F AUG.<sup>21</sup> But only a few letters are visible. The image of the Petra Tyche on the reverse is well preserved.

3. A lamp fragment was found in the burned layer of the East compartment. It is of red clay with a rounded discus decorated with ribs. The protruding triangular nozzle is burned. (Pl. LXII,2).

There is no close parallel to this lamp in the Petra corpus. But the shape and ware are similar to the collection of lamps found at the potter's kiln of Zurrabeh,<sup>22</sup> at the entrance of the site and at tomb 64 B,<sup>23</sup> opposite the Khazneh. This group is dated

17. H. Seyrig, *Le temple de Bel à Palmyre*, *op. cit.*, 241-243.

18. *Ibid.*, p. 242.

19. *Geog.*, *op. cit.*, XVI, 4,26.

20. *Le temple de Bel*, *op. cit.*, p. 241-242.

21. *ADAJ*, XXV (1981), p. 210 N° 143 & Pl. LIII.

The rev. is different in the Samaria example.

22. *ADAJ*, XXVI (1982) p. 393 & Pl. CXLI, N°s 55-56.

23. *Idem*, p. 369 & Fig. 2, 4.

to the Late Roman period, in the 3rd-4th century A.D.

#### 4. Greek Inscriptions:

A- An inscribed marble base, about 7,5 cm. high, was built, as noticed above, in enclosure 2. The Greek inscription is fragmentary. It reads:

Σ ΥΨ...ΙΑ. = [Δίω] ς υψ [ιστος]... ια  
It is possible to restore in this fragment: (Pl. LXII,3)... of (?) Zeus Hypsistos  
The second part IA ends with an ivy leaf.

The block was probably a base for a statue or a couch. At Palmyra, the name of Bel was inscribed on a tessara, below the representation of a bed.<sup>24</sup> At any rate, this poorly preserved inscription is the first testimony of the god venerated in the Qasr: Zeus Hypsistos or Heavenly Zeus is the equivalent of Baalshamin or Dusares.

B- Marble fragment inscribed with 3 lines, found in enclosure 3 (Pl. LXII, 4):

Text:

1. τ]ησ οίκου [μένης
2. ἀντοκρ]άτορι Καί [σαρι
3. ...]ευσ [εβών 'ανέθηκεν]

Translation:

1. of the universe....
2. ...to the emperor ceasar
3. ...in piety (erected)

This is an imperial dedication of the 2nd century A.D., probably from the time of Hadrian or Antoninus Pius.<sup>25</sup>

#### Excavation along the South Wall:

Excavation along the South Wall 3 was resumed from April 2nd to May 15th, 1984. A Square, 5 by 5 m. was plotted east of Sq. 7/7 A and designated as Sq. 7/7 B. As in the adjacent Squares, the first two layers Loc. 1-2, were modern rubbish from the Nazzal Camp. But after the removal of Loc. 3, a light brown sand, a layer of stone fall was encountered which included a small cornice fragment. The stone blocks which fell in regular courses were left in

situ and numbered for a future restoration project. For this reason, the Square was reduced to only 1.50 m. from the South Wall. The collected sherds were Nabataean (minority), Late Roman, Byzantine and Medieval. The other loci yielded mainly Byzantine pottery. Loc. 7, a loose gray sand lay under a fallen block and contained 5th-6th century Byzantine pottery. It indicates that an earthquake shock<sup>26</sup> destroyed the monument at this period. The last layer of limy mortar was the bedding for the pavement.

The next Sq. 6/7 which has been excavated by Dr. Hammond's team, corresponds to the central *adyton*, below the architectural stucco decoration (see below). The level of the podium was reached and consisted of hard limy surface. A column drum, fixed in this layer at the distance of 3.60 m. from the wall was exposed, but it could not be ascertained whether this drum, without base, is *in situ* or not.

#### Consolidation:

The Qasr el Bint temple is in bad condition of preservation through earthquake tremors and weathering. Wooden laces were also inserted in between the stone courses and their disintegration caused the dismantling of the walls. The restoration of the monument was considered in this condition as a complicated job. A British company offered to consolidate the building with epoxy resin. But this solution was refused by the Department of Antiquities because it is irreversible and very costly. The traditional methods of restoration seemed to be more appropriate. Already in 1961-62, the southeastern angle has been restored with the original sandstones and the work was considered as acceptable by archaeologists. In 1979-80, the doorjambs of the main gateway were restored with the same method under the supervision of architect Yusef Alami and

24. *Le temple de Bel*, *op. cit.* p. 242.

25. M. Sartre who examined the inscriptions, kindly informed me that he is inclined to place the texts

in the 2nd century A.D.

26. According to Ph. Hammond, Syria, LXII (1985) p. 159, an earthquake destroyed Petra in July, 9th, 551.

Muhammed Murshed from the Department of Antiquities, on behalf of the Petra-Jerash Project.

Since the northeastern *anta* was disjoined and threatening to fall down, it was decided to undertake urgent consolidation. After consultation with experts such as Pr. R. Lemaire from Louvain and H. Kalayan, working for the Jerash Project, it appeared that the best solution was to dismantle and rebuild 10 courses (Pl. LXIII,1,2 & Fig. 6). The operation was entrusted to Abdel-Majid Mjelli from the Jerash project.

The width of the *anta* averages 1.85 m. while the wall is 1.35 m. thick. The sandstone blocks were laid in the header-stretcher technique and the core consisted of rubble and limy mortar. A wooden lace is partly preserved under the 10th course but its disintegration from the North, together with the earthquake tremors caused many blocks to be dislodged. It appeared that many dressed blocks were integrated into the fill of the wall: a drafted block of 1.60 m. by 1.00 m. and about 0.50 m. to 0.60 m. thick and another one of 0.65 by 0.39 and about 0.40 m. high preserved traces of stucco (Pl. LXIV,1). A smaller block was coated with yellow-ochre stucco. Wood wedges, the largest of which being 24 cm. by 8.5 and about 3 cm. thick (Pl. LXIV,2) were found under the stone blocks. One of them was a spatula about 16,5 cm. long, pierced with a hole at one end. But its original function remains unknown. The wood pieces are of the local juniper tree (Arabic 'ar'ar).

The dismantling of the *anta* and its rebuilding was complicated by the absence of a good crane. On the other hand, the *anta* was revetted with geometrical stucco reliefs which made the removal of the stones very delicate. Nevertheless, the flaking out stucco on one of the blocks was consolidated with epoxy, before removal. A moveable crane (*palanko*) was used to lower the stones one by one and set them back. It was a long process from April to July 1984 but the results are satisfactory.

At the level of the wooden lace, a

concrete bed reinforced by steel was laid but a cavity of 16.5 cm. was left to restore the lace. It is the opinion of the present writer that such operations, are very expensive and delicate. It is more reliable, in the future, to concentrate on consolidation and protection of the walls from rain infiltration.

#### *B. Consolidation of the stucco revetment:*

As has been noticed in earlier reports,<sup>27</sup> the inner and outer walls of the Qasr were coated with architectural stucco decoration. Although Kohl stated in 1910 that this decoration was for him 'the most precious element of the whole construction,'<sup>28</sup> little attention was paid to his remark by modern archaeologists. Important remains are extant on the *antae*, the eastern and southern walls. But where the stucco decoration has vanished, the affix holes, carefully plotted by architect Larché, help reconstruct the original revetment: the inner southern face of the pronaos was coated with medallions at the height of 3 metres from ground. Then follow rectangular pannels, terminated by a vegetal scroll under the roof (Fig. 5). The outer face was decorated with a register of pilasters at the same level and the same ornamentation continued. On the eastern wall, above the socle and the orthostats courses of 1.60 m. and 170 m., a register of stucco pilasters averages 2.65 m. The stucco was consolidated by Miss Marylene Barret in September 1985. The cleaning of the register from the sand deposit revealed in the upper panel frieze the traces of blue paint.

More elaborate architectural stucco is preserved on the southern wall: the pilasters of the East wall reappear but in the central part, corresponding to the *adyton*, the architectural stucco depicts a shrine facade decorated with six pilasters or columns (Fig. 7, 8 & Pl. LXV,1), which support an architrave and a frieze of cupids holding garlands, between relief panels. The whole decoration is crowned by a central segmented pediment, flanked by two half pediments. This composition was

27. *Syria*, LXII (1985) p. 147.

28. *Kasr Firaun*, *op. cit.*, p. 26.



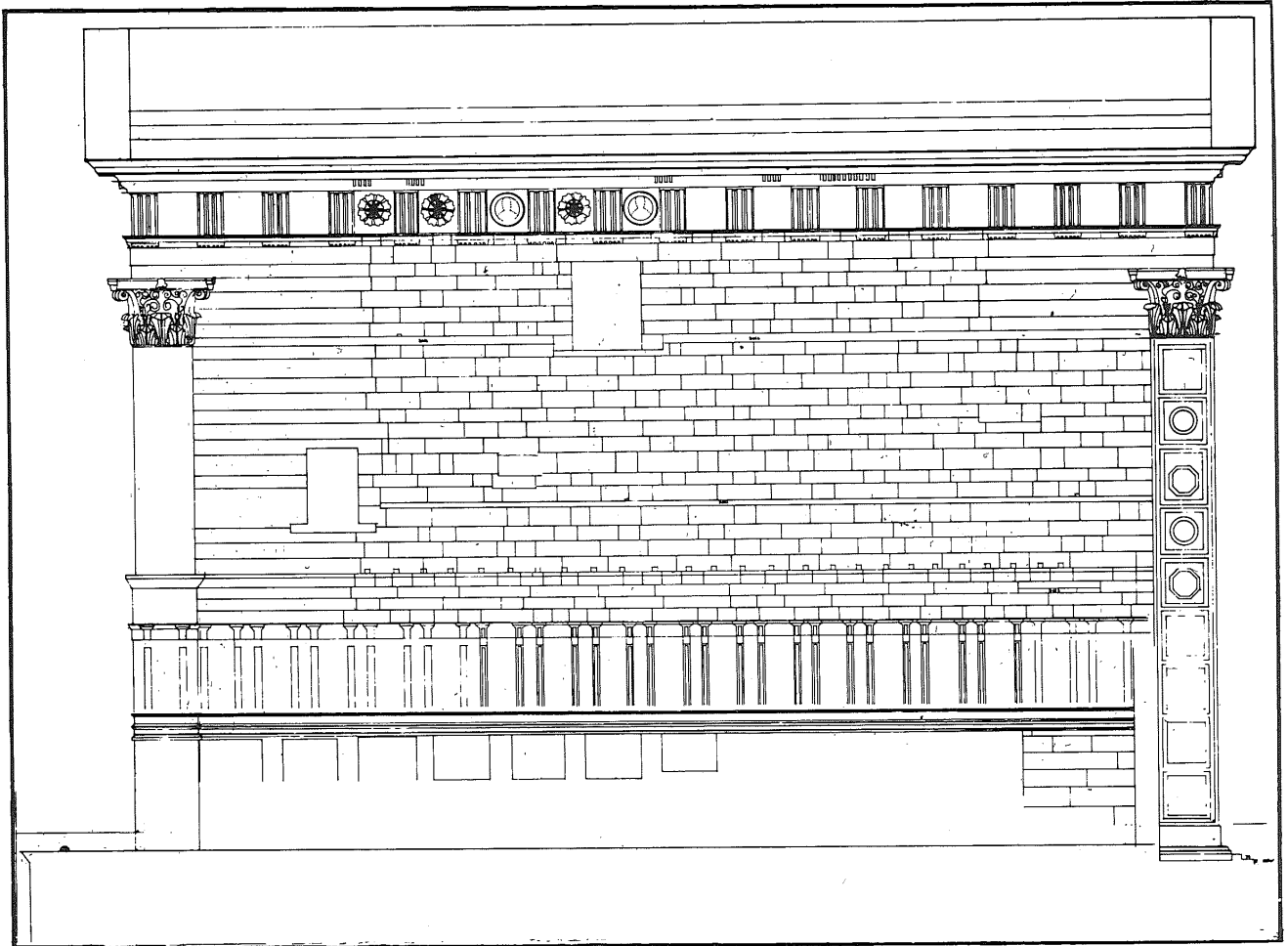


Fig. 6. Outer facade of East wall 2.

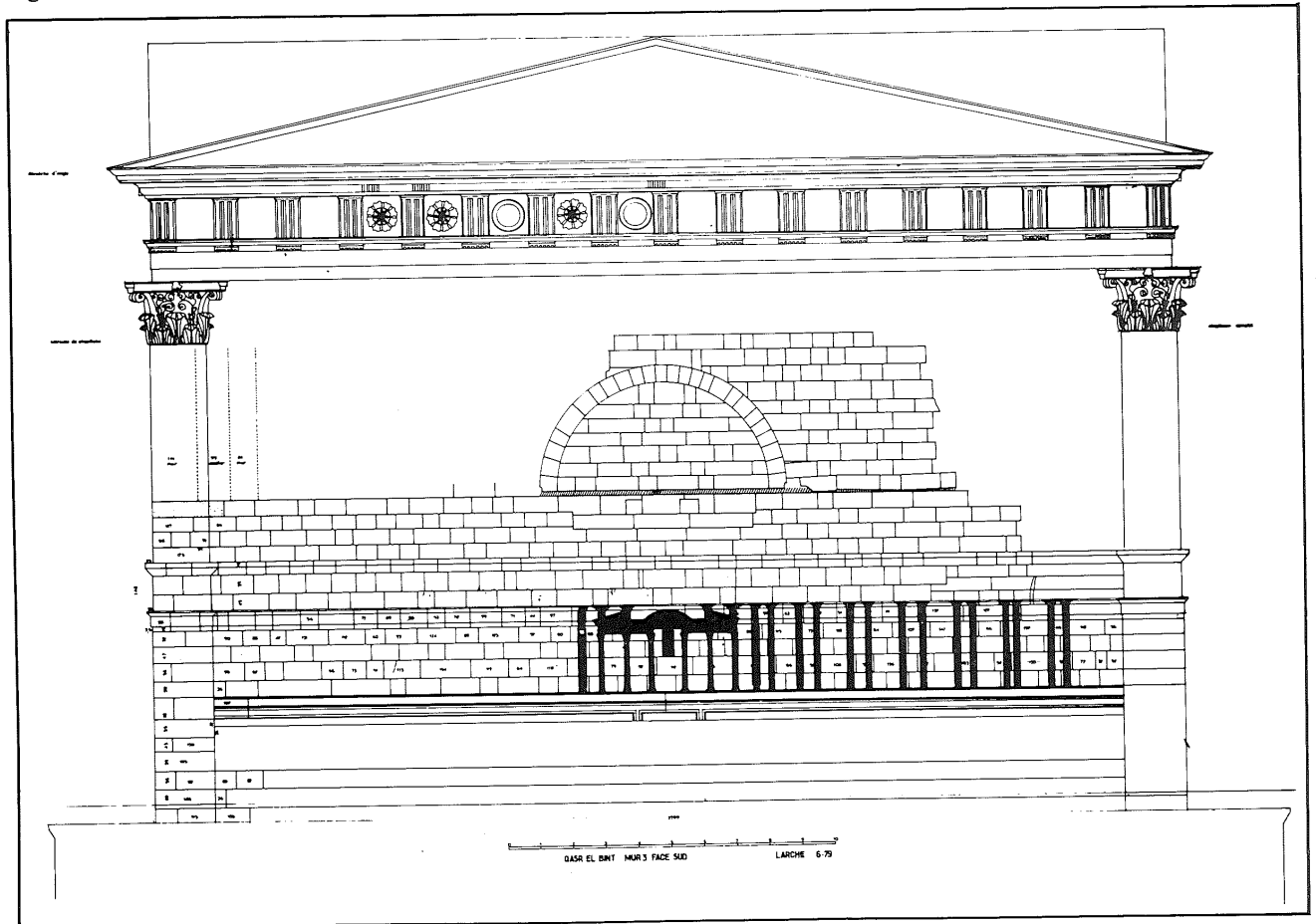


Fig. 7. Elevation of S. Wall 3.

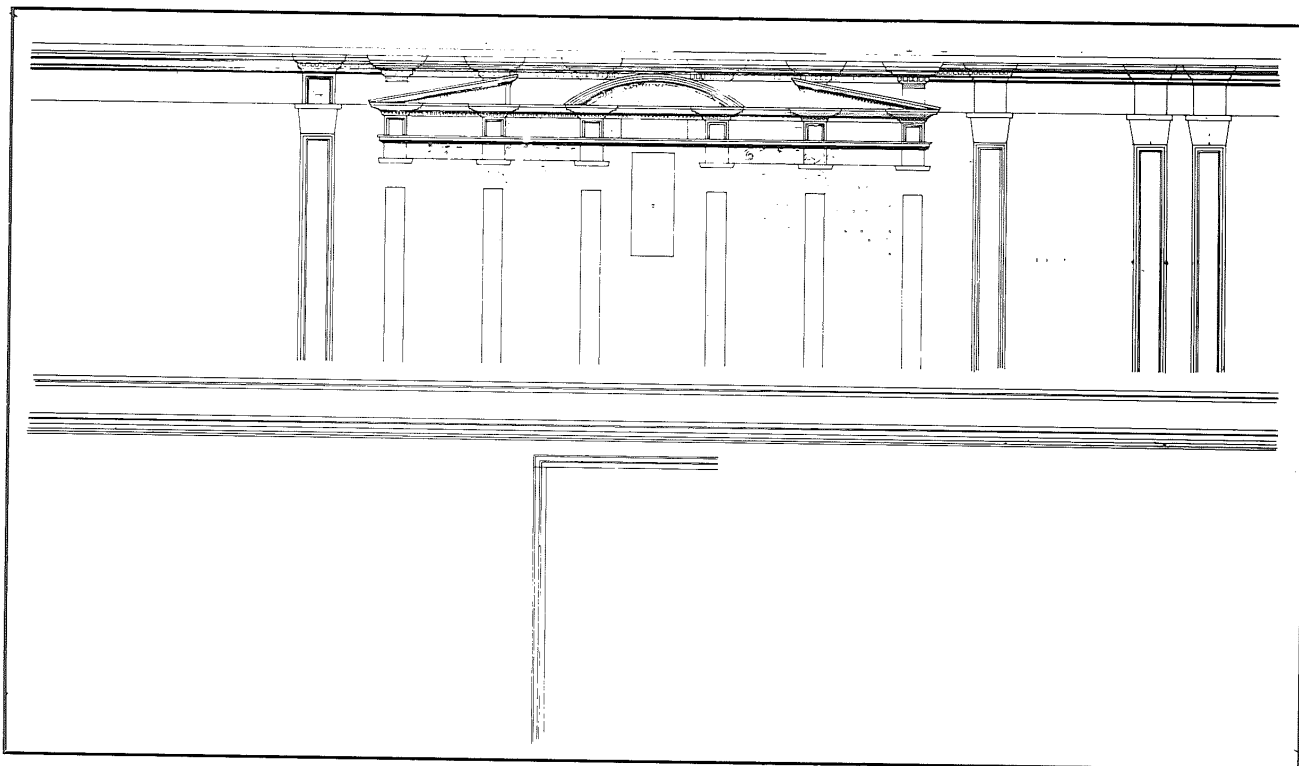


Fig. 8. Architectural stucco on S. Wall (F. Larché).

compared by Kohl to the Corinthian Tomb and other similar monuments of Petra,<sup>29</sup> carved in the rock. To make this comparison more plausible, the German scholar filled the plain attica between the two cornices, above the stucco decoration, by a tholos and broken pediments. But there are no traces of stucco or affix holes to support this reconstruction. It can be better compared to the decoration of the Forum of Trajan in Rome.<sup>30</sup> The architect of this monumental market place was Apollodoros of Damascus, according to historical traditions, and similarity of its decoration with the Qasr stucco may account for the Oriental influence on the Roman architecture.

The consolidation programme entrusted to Marylene Barret and Patrick Blanc (Pl. LXV,3) from October 10 to 21 was urged by the bad preservation conditions of this outstanding decoration. The operation included surface cleaning from intrusive deposits such as blown-in sand and insects' nests. The following steps included the injection of a resin solution (paraloid B 72 in 5% of trichloroetane and the consolidation of the edges by a mortar

composed of  $\frac{1}{3}$  of lime with local sand of Petra. The same mortar was used to fill the gaps between the sandstone blocks. A cleaning test with butylamine revealed traces of yellow-ochre paint on the stucco. It is hoped that this short campaign will be followed by an exhaustive programme of restoration.

#### General conclusion:

New dating evidence for the constructional and occupational history of Qasr el Bint have been gathered from the recent excavations and may be summarised as follows:

1. The assumed date of the construction of the temple under Obodas III (28-9 B.C.) can be confirmed by the architectural stucco. This revetment is necessarily later than the building of the temple and was probably remodelled in later periods. But the affix holes all over the walls is a good proof of its existence in the original phase.

2. An earlier monument of some importance preceded the Qasr and was coated with stucco as demonstrated by the

29. *Ibid.*, p. 36 ff.

30. See for example, L. Crema, *Encyclopedia Classica*, III, Torino, 1959, Fig. 416.

many blocks retrieved during the restoration of the northeastern anta. It is not possible to give credit to the date postulated by T.J. Milik<sup>31</sup> in the 3rd century for lack of precisely datable material. But it is not impossible to push back the origin of the monument to a generation before Obodas III.

3. A Roman imperial phase is now confirmed by the fragmentary Greek inscriptions. The looting and destruction by fire is evidenced by the coin of Gallienus and the pottery sherds.

4. The Byzantine occupation can be ascertained by the finding of a burial along the southern wall and a coin of Arcadius (383-408), found in Square 7/7 provides the *antequem* date of this occupation.

5. The earthquake of 19 May 363 ruined the Qasr and another tremor in the 6th century A.D. caused more destruction and made the monument practically inaccessible.

6. It is for this reason, I believe, that the Ayyubid house<sup>32</sup> was built on the monumental stairway.

7. In the last century, the temple was visited by explorers and tourists who left their signature in the *pronaos*.<sup>33</sup>

Other informations are still buried in the western compartment and need to expend more efforts.

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31. *Le Monde de la Bible*, 10 (1981) p. 14.

32. *ADAJ*, XXVI (1982) p. 374-376.

33. *Ibid.*, p. 377.