

# THE MONUMENTAL ENTRANCE TO THE UPPER MARKET AND THE TRAJANIC INSCRIPTION AT PETRA, THE ARCHITECTURAL CONTEXT

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*Dedicated to the memory of Antony Ostrasz*

## Introduction

Since Kirkbride's initial publication in 1960 (p. 120), three inscribed blocks found in the staircase to the Upper Market at Petra have been consistently associated with the architectural remains of what appears to be a monumental arch. The architectural remains connected with the inscription consist of one molded pedestal, which Kirkbride interpreted as the pier of the arch, and several arch voussoirs found in the same context (Figs. 1, 2 and 7). These fragments and the inscription, honoring Trajan, have always been considered as a single unit with canonical reconstructions placing the imperial inscription on a free-standing arch located at the edge of the street pavement. Indeed, Kirkbride's general conclusions have been widely acknowledged; the remains are often cited as the Trajanic Arch of Petra (Browning 1989: 144). Recently however, S. Tracy (1999: 53) has argued that the dedication could have been inscribed on any masonry in the area and that the inscription need not necessarily relate to the arch. This paper provides documentation of the architectural blocks and examines the Trajanic inscription in relation to the material remains and the original architectural context.<sup>1</sup>

## The Inscription

Restored, the text covers a length of ca. 5.80m or about 20 Roman *pedes* of 0.296m. The text was inscribed on seven ashlar blocks with a total length of 6.30m. Only three survive today (Tracy 1999: figs. 1-5). Each block is ca. 0.89-0.93m long. All are ca. 0.57m tall. It should be noted that the right side of the inscription ends in the middle of the blocks, while the left side ends exactly at the reconstructed joint (Fig. 3). This indicates that the ashlar masonry was perfectly canonical, with one half-block and one full-length block at either end of the

course. The lengths of the inscribed blocks — unlike masonry blocks in the area of the staircase, which have randomly arranged joints and lengths (Fig. 4 and Kanellopoulos 2001: fig. 5) — are also perfectly regular. This evidence indicates that the blocks were part of a frieze rather than elements of wall masonry.

Indeed, the three courses of the inscription, as restored by Tracy, are almost perfectly symmetrical. Though perfect symmetry is not required, it would be expected in this sort of formal dedication and assists the reconstruction of the text. Specifically, the second course of Tracy's restoration involves 52 letters right of the axis of the first course and only 45 letters left of the same axis (Fig. 3).

1. [ΑΥΤΟΚΡΑΤΟΡΙ ΚΑΙΣΑ]ΡΙ ΘΕΟΥ [ΝΕΡΟΥΑ ΥΙΩ] ΝΕΡΟΥΑ ΤΡΑ[ΙΑΝΩΙ ΑΡΙΣΤΩΙ]
2. [*vac.* ΣΕΒΑΣΤΩΙ ΓΕΡΜΑΝΙΚΩΙ ΔΑΚΙΚ]ΩΙ ΑΡΧΙΕΡΕΙ ΜΕΓΙΣΤΩΙ Δ[ΗΜΑΡ]ΧΙΚΗΣ ΕΞΟΥΣΙΑΣ ΤΟ [Ι]Η' ΑΥΤΟΚΡΑΤΟΡΙ ΤΟ Ζ ΥΠ[ΑΤΩΙ ΤΟ C' ΠΑΤΡΙ ΠΑΤΡΙΔΟΣ *vac.*]
3. [*vac.* Η ΤΗΣ ΑΡΑΒΙΑΣ ΜΗ]ΤΡΟΠΟΛΙΣ ΠΕΤΡΑ. ΕΠΙ ΓΑΪΟΥ ΚΛ[ΑΥΔΙΟΥ] ΣΕΟΥΗΡΟΥ *vac.* ΠΡΕΣΒΕ[Υ]ΤΟΥ *vac.* ΑΝΤΙΣΤΡΑΤΗΓΟΥ *vac.*

Theoretically, the epithet "Παρθικωι" — although improbable — would fit in the second course of the inscription, resulting in perfect symmetry. Tracy rejects the older reconstruction of the epithet "Παρθικωι" on the ground that Trajan did not officially receive it until late AD 115 or early 116, while the inscription from Petra dates from early autumn of AD 114. However, there is a single known exception: Trajan is styled Parthicus in an inscription dated from the year 114 (Tracy 1999: 54).

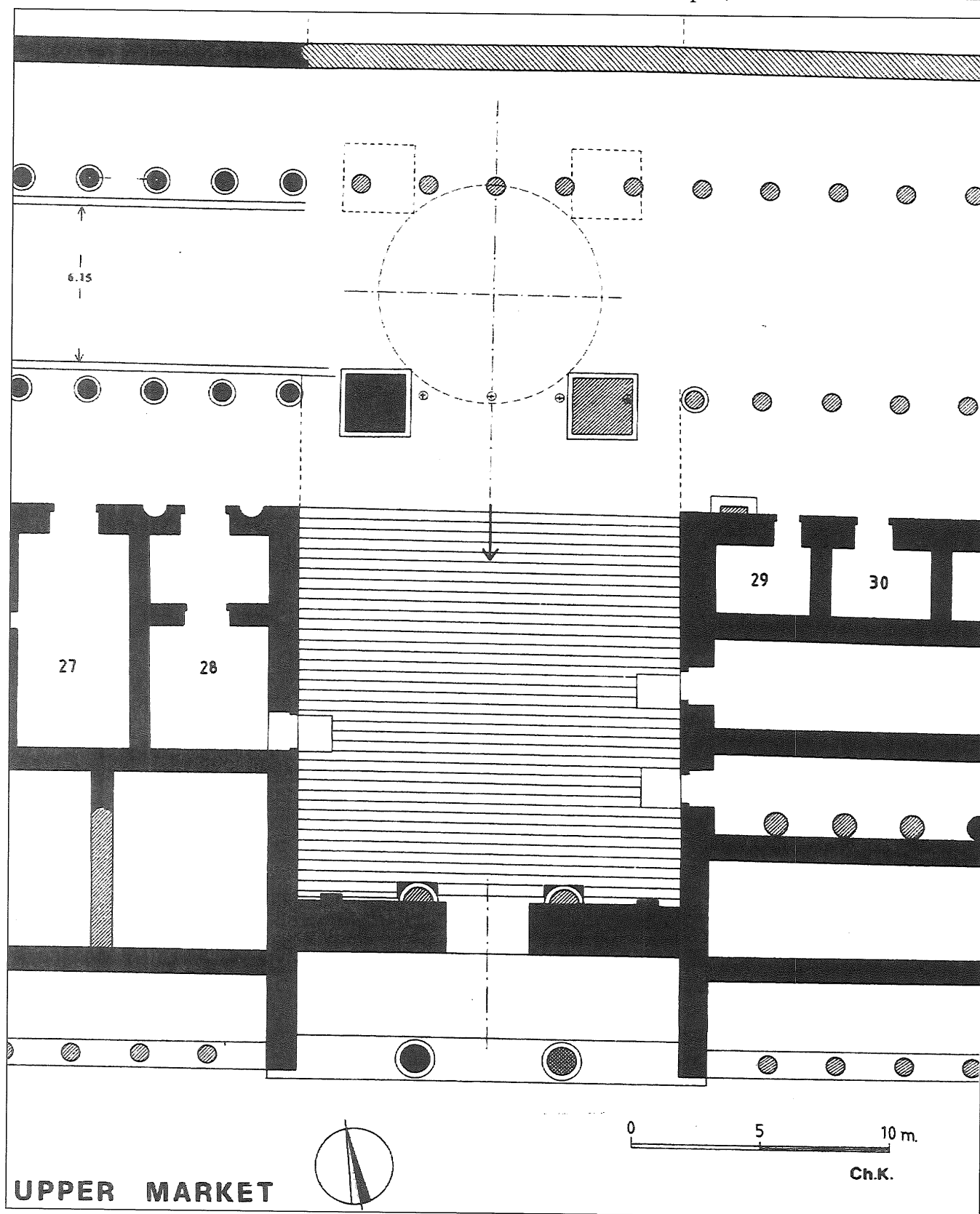
1. The architectural survey of the structures described below was conducted during the reconstruction phase of the Petra Roman Street Project in August and October 1996 and from October 1997 to May 1998, under a contract with the American Center of Oriental Research and U.S. Agency for International Development. This area around the staircase to the

Upper Market was excavated under the direction of Zbigniew T. Fiema between March and June 1997 (Fiema 1998). I wish to thank Julian Bowsher for all his thoughtful suggestions on the inscription, Pierre Bikai, and Peter Schultz for editing my text. All illustrations are by the author.

# The Architectural Features of the Staircase

The Upper Market's grand staircase is located

between Shops 28 and 29. It is 14.65-14.66m wide in the lowermost part, and 14.70-14.78m wide in



1. Reconstructed ground plan of the street, Shops 27-30, the staircase and Propylaea of the Upper Market, and the piers of the Trajanic Arch. Hypothetical elements are rendered with hatched lines.



2. The staircase of the Upper Market; view from North. Note the remains of the pedestals which were attributed to a Trajanic Arch (below) and the massive pilasters in the foundations of the Propylaea.

the upper part (Figs. 1 and 2).<sup>2</sup> The width of the stairway corresponds closely to the rhythm of the adjacent colonnade. Indeed, the stair's width of 14.65m is actually the same distance as that between the seven columns positioned according to the average interaxial column space of the colonnade (2.604m).<sup>3</sup> This cannot be a coincidence. It appears as if the colonnade originally ran in front of the staircase with columns corresponding precisely to the staircase's corners. It also seems that this section of the colonnade, made up of five columns, was dismantled in order to accommodate the piers of the so-called Trajanic Arch (Fig. 1). It should also be noted that the stylobate of the colonnade does not end at the corner of Shop 28 but rather continues further east (Fig. 4).

The broad landing in the front of the staircase is as deep as the portico between the Shops and the Colonnade (5.45m). Only the southern sections of its pavement are preserved. Its pavement slopes to the north by 0.18m:3.00m, a feature possibly designed for drainage. The upper parts of the staircase have been destroyed, exposing the foundations of the Propylaea wall. The length of the stairway is ca. 15.44-15.60m. The overall height of the staircase from the lowermost step to the level of the Propylaea stylobate is 11.14m.

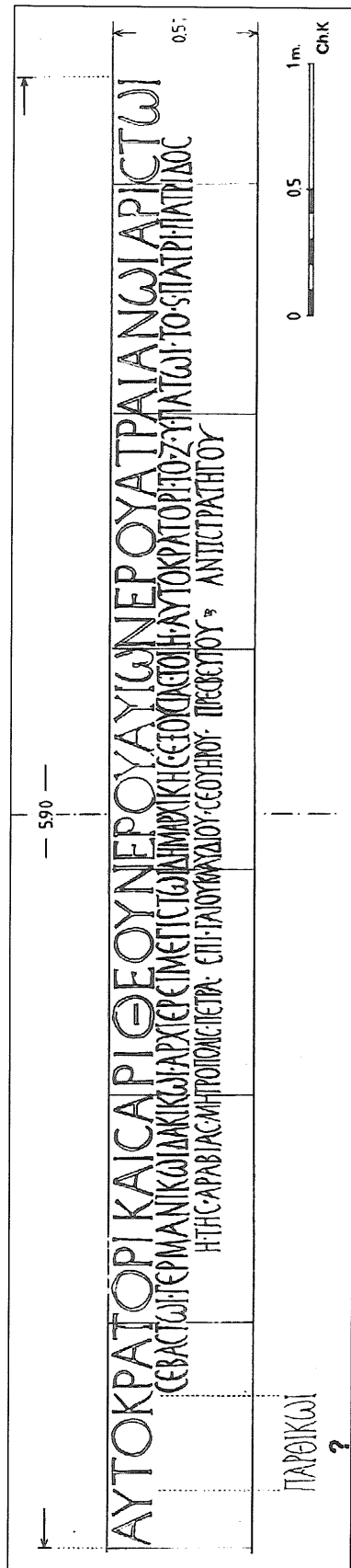
#### The Molded Pedestals (Piers of an Arch) in Front of the Staircase

The remains of a rectangular — or square? — pedestal with a molded base are preserved in front of the stairway (Figs. 1, 2 and 4). Its northern end is missing. Its width on the upper edge of the mold-

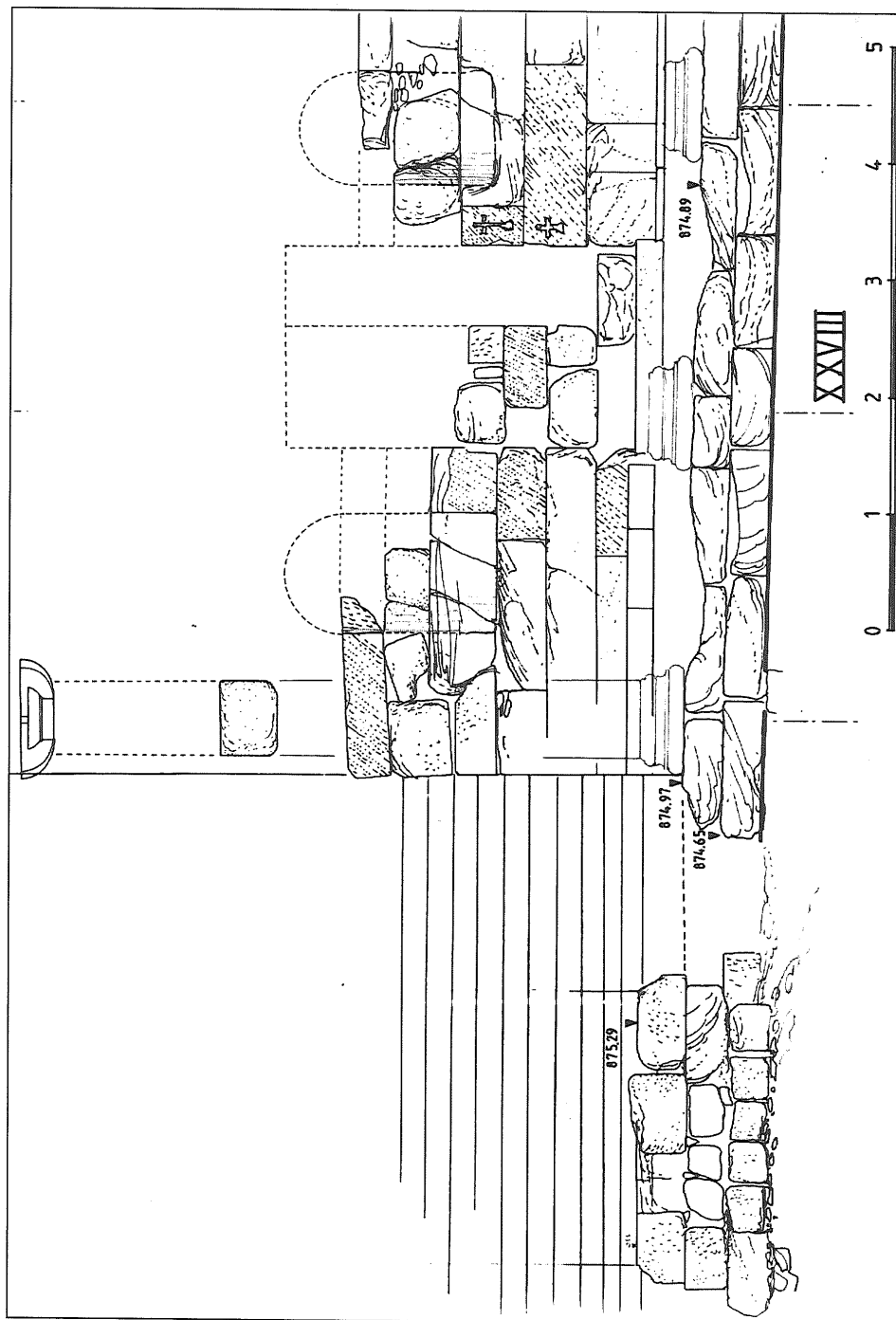
ing is 2.37m while its overall width, including the projection of the bottom molding and socle, is 2.59m. The top of the molding is 3.05m from the end of the staircase and 1.83m from the eastern end of the Shops (the corner of Room 28). The upper surface of its socle, or the beginning of the molding, is at the same level as the surface of the stylobate in front of Room 28. If the northern end of the pedestal was in line with the stylobate, then the pedestal was perfectly square. The overall width of the pedestal is 2.59m, almost identical to the average interaxial column spacing of the Colonnade (2.605m; Kanellopoulos 2001: 17). This indicates that the dimensions of the pedestal conformed to and respected the rhythm of the Colonnade. The poorly preserved blocks on the eastern side of the sidewalk, in a symmetrical position, can also be interpreted as the foundations for a second pedestal. These pedestals could have served as bases for dedications or statues or could have been piers of a monumental composition in front of the staircase like the so-called Trajanic Arch. Had the second pier been symmetrically positioned within the setting of the staircase and relative to the extant pedestal, the restored arch would span ca. 6.20m. Indeed, several members of a monumental arch survive in the immediate vicinity of the staircase. The span of the single passageway of this arch, ca. 6.20 meters, would be one of the largest in Jordan. The arched central opening of the Temenos Gate in Petra, for example, is only 3.40m while the corresponding opening of the large Triumphal Arch at Jarash is 3.71m wide. The main passageways of the East Triumphal Arch and the Central Triumphal Arch in

2. This width is almost equal to 50 Roman *pedes*. Indeed,  $50 \text{ pedes} \times 0.296\text{m} = 14.800\text{m}$ .

3.  $15.624\text{m} (= 6 \text{ interaxial spaces} \times 0.2.604\text{m}) - 0.977\text{m}$  (overall diameter of the column base) = 14.647m.



3. The Trajanic inscription, following Tracy's (1999) reconstruction. Note the lack of symmetry in the second course.



4. Actual elevation of the staircase to the Upper Market, the remains of the western molded pedestal/pier of the Arch and Shop 28 (from left to right).

Buṣrā are respectively 5.07 and 6.20m wide (Segal 1997: 134-135).<sup>4</sup>

### A Tetrapylon in Petra?

The alternative restoration of a *tetrapylon* as opposed to an arch in this area is tempting, even though it is based on weak evidence.<sup>5</sup> As noted, the restored distance between the piers is 6.20m, almost identical to the width of the Colonnaded Street between the two stylobates. This distance allows the hypothetical restoration of another two piers on the north edge of the Street. Indeed, all four piers would then be symmetrically positioned around a perfect square with distances of 6.20m between them (Fig. 1).

Ideally, the *tetrapylon* would be placed on an intersection, but this is not the case in the area of the Trajanic Arch. It is remotely possible, however, that an intersecting street once existed across from the staircase to the Upper Market. This street might have been associated with a hypothetical bridge across from Wādī Mūsā (وادي موسى). Unfortunately, the evidence is shaky: the street pavement, the sidewalks and the banks east and north of the monumental staircase were washed away during floods coming from Wādī al-Maṭāḥa (وادي المطاحه) (see hatched features in Fig. 1). There is no trace of another two piers, a bridge or an intersection in the examined area.

It should also be noted that the Tetrapylon, whether a tetrakionion or a cross vaulted quadri-frons “is purely decorative and is never erected to honour a specific personality or important event... Tetrapyla appear in the region somewhat later than the triumphal arches, the earliest being the quadri-frons at Gerasa, dating to the sixties of the 2nd century C.E.” (Segal 1997: 140-141).

### The Propylaea of the Upper Market

The remains of what seems to be a large Propylaeon at the top of the staircase were documented in 1997-1998. This structure consists of a wall with semi-columns at the edge of the staircase and a large portico behind with either two columns *in antis* (i.e., framed by pillars or pilasters) or with four columns (Figs. 1, 5 and 6).

Two roughly square bases (each 1.64 x 1.64 and 1.73m) remain *in situ* in the Upper Market. They are set 4.23m apart and 5.5m behind the edge of the Upper Propylaea wall. An Ionic column base of the Propylaea portico still stands on one (Fig. 5). The

rectangular slabs should be understood as parts of a stylobate rather than individual column plinths, thus accounting for their slightly irregular dimensions. This would explain the fact that they are at the same level and aligned with the stylobate of the smaller colonnade which ran inside the Upper Market. Had the former slabs been individual column plinths, they should have emerged from the stylobate's level.

The axial distance of the Propylaea columns from the north façade of the Propylaea wall is 6.27m. The height of the Ionic Attic base is 0.339m. The overall diameter of the base, at the level of the lower trochilos is 1.53m. The lower diameter of the shaft is 1.097m. The upper diameter 1.03m. The distance between the axis of the western column and the western wall of the staircase is 4.58m. The interaxial column space between the two large Propylaea columns should be ca. 5.63m.

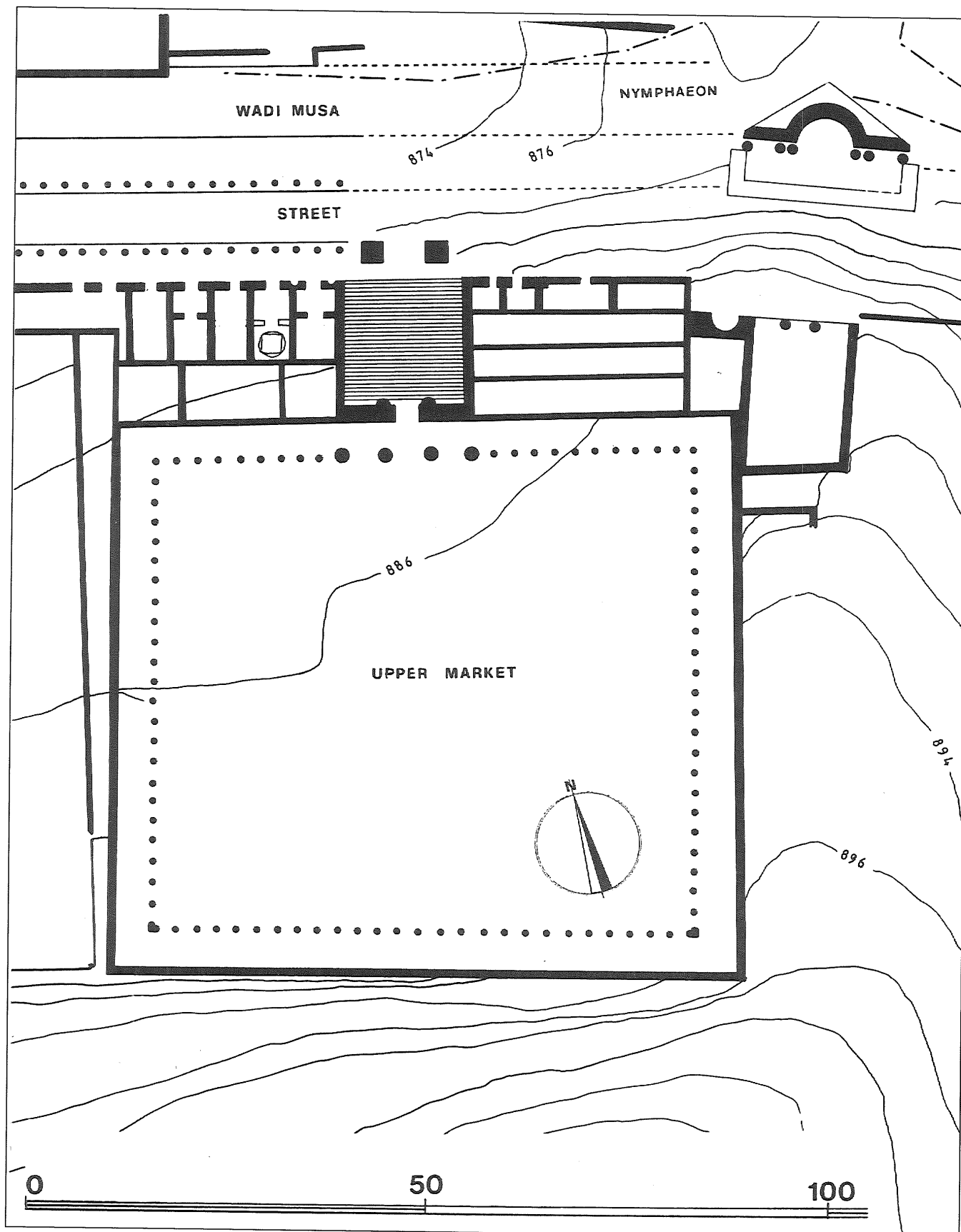


5. The collapsed Propylaea column with what is interpreted as stylobate of a lesser, surrounding colonnade in the foreground. View from West.

4. A few examples of single arches are the Arch of Titus in Rome, AD 81 (Sear 1982: 146, fig. 85), the North Gate at Jarash (AD 114-115), the Arches of Trajan at Timgad and Beneventum, ca. AD 117 (Sear 1982: 165, fig. 95), the Arch

of Hadrian in Athens, the Antonine Arch in Eleusis, and the Arch at Leptis Magna, Libya.

5. Thanks to Pierre Bikai who prompted me to investigate the possibility of a Tetrapylon.



6. Reconstructed ground plan of the Colonnaded Street, the Upper Market and its monumental entrance, the piers of the Trajanic Arch and the area of the Nymphaeon.

The western column shaft has collapsed to the south (Fig. 5). Eight upper drums and the pseudo-Corinthian capital of the Nabataean horned type (Type I, in McKenzie 1990: diagram 14.g.) lie on the ground in a row running NW-SE. The upper part of an identical capital, apparently from the east column, was found in the upper parts of the staircase. Its overall width is 1.90m. The height is 0.54m. Only one small fragment from the lower part of these capitals was discovered. Elements of the eastern column were found among debris that covered the staircase. At present, it is unclear whether antae or columns existed in the corners of the four-pillared south elevation of the Upper Propylaea.

The north wall of the Upper Propylaea projected 2.2m from the retaining wall of the Upper Market and bonded with the walls that flank the staircase. These two elements seem to have been constructed in the same phase. The foundation of the Upper Propylaea's north façade was a wall 1.80m thick marked by four objects that resemble pilasters: two large pilasters (1.53m) in the center and two narrow pilasters (0.80m) at the sides (Figs. 1 and 2; also Fiema 1998: 400, fig. 3). The distance between the broad eastern pilaster and the narrow east pilaster is 2.08m, practically half the distance between the large pilasters ( $4.12\text{m}:2 = 2.06\text{m}$ ). Each of the two large pilasters of the Propylaea wall corresponds to one column of the large portico behind. Furthermore, the interaxial spacing of the two large foundation pilasters is identical with the corresponding distance between the two portico columns (5.65m). The projection of the pilasters (0.75m) is half their width (1.53m). As such, what appears in the foundations as pilasters or buttresses could, in fact, have been the bases of half columns attached to the Propylaea north façade. It is also worth noting that the width of the pilasters is 1.53m, a dimension equal to the diameter of the large column bases of the Propylaea porch to the south. Thus, the foundation pilasters could support and accommodate semi-columns with dimensions equal to the dimensions of the freestanding Propylaea columns. The perfect correspondence of the Propylaea columns to the pilasters of the Propylaea northern wall supports the hypothesis.

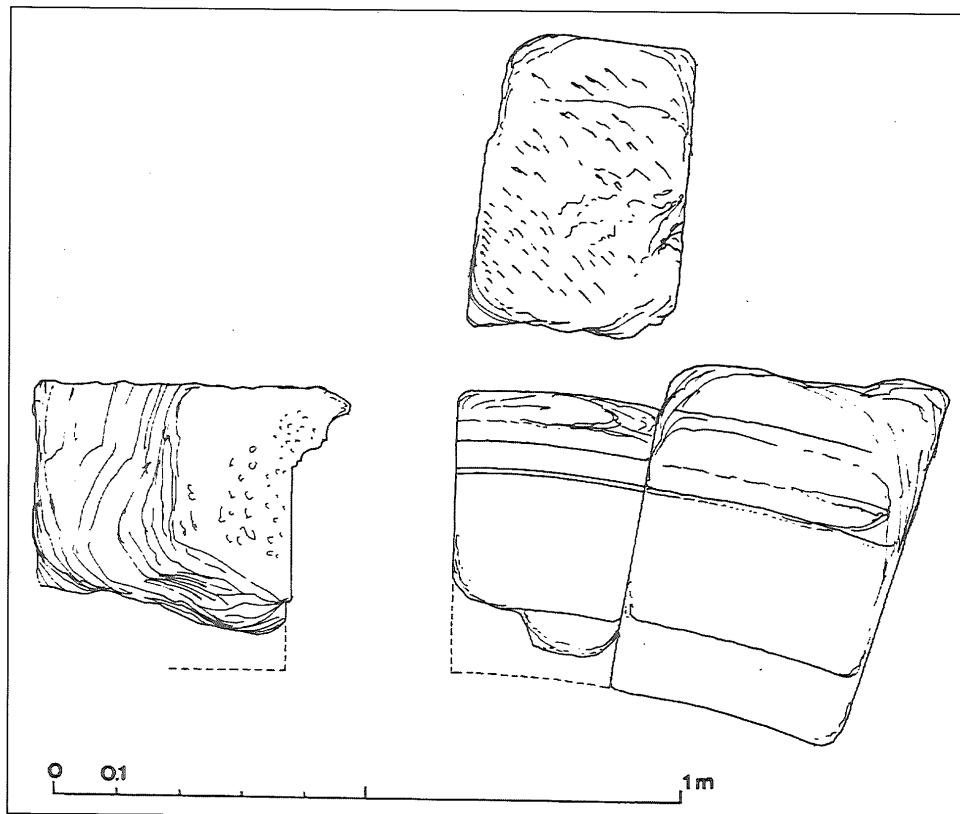
A few large half drums are scattered on the staircase, but at present it cannot be ascertained whether these are broken columns of the Portico behind the Propylaea Wall, or parts of the proposed semi-columns. It is difficult to assess whether the rear surfaces of these members are quarry surfaces or just broken. It is also worth noting that at least

one of the two types of arch voussoirs which were discovered at the lower parts of the staircase might be restored above the Propylaea.<sup>6</sup>

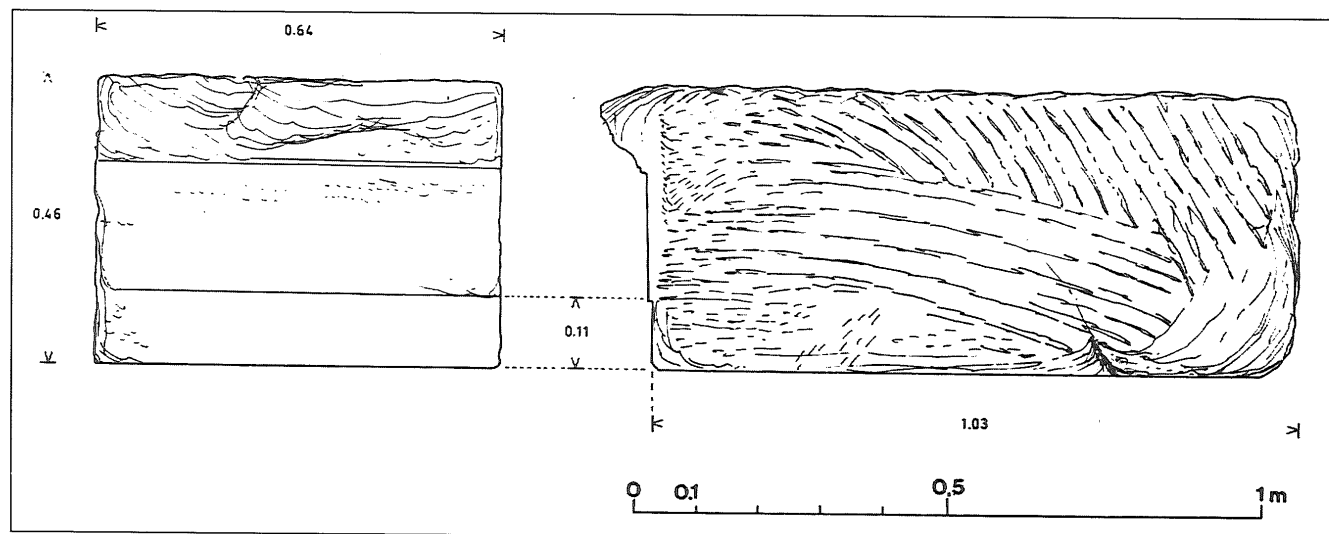
### Distinct Entablature and Portico Elements Scattered in the Lower Parts and Landing of the Staircase

1. Arch voussoirs (Fig. 7). Four molded voussoirs of this same arch were discovered in a late barrier wall in the NE part of the staircase (Fiema 1998: 402) or buried in the debris in the lower parts of the staircase. Kirkbride (1960: 120) identified only two of them. The height of the voussoirs is ca. 0.46m. The front is divided by two bands (*fasciae*) and a crown molding composed of a square *astragal*, a *cyma reversa* and a *cavetto* on the top. Height of lower fascia: 0.11m.
2. Wall crown (Fig. 8). Two blocks of what appears to be a wall crown were discovered near the lower parts of the staircase. The height of the blocks (0.46m) as well as the moldings and the *fasciae* of the front are identical to the corresponding features which decorate the front of the voussoirs above. The wall crown must factor into the reconstruction of the arch.
3. Arch voussoir (Fig. 9). Another voussoir of a second molded arch was found in the debris that covered the staircase. Its length is 0.905m. Its height (approx. 0.38m) is different from the height of the aforementioned voussoirs and the front is not treated with *fascias*. This could be evidence for a second arch in the area of the staircase (i.e. the Upper Propylaea).
4. Frieze (Fig. 10). One block of a frieze, lying in front of the flight, was also measured and drawn. The height of the block is 0.44m, the width of the lower surface is ca. 0.42m, and the width of the upper surface 0.62m. Obviously, the trapezoidal block belonged to a frieze that was constructed as a relieving flat arch, with inclined joints meeting at a center. It is interesting that the frieze block was manufactured from a reused Nabataean pilaster capital. This evidence, combined with the column drums inside the molded pedestals of the suggested arch, indicates that some older buildings were demolished and reused during the construction of the new structures. Several column drums from the colonnade have also been reused for the construction of the retaining wall of the Upper Market (for reused architectural elements in the Temenos Gate, and Qaşr al-Bint, see Zayadine 1986: 136; McKenzie 1990:

6. See *infra*. Conclusions.



7. Molded voussoirs from a monumental arch, found on and in front of the staircase to the Upper Market.



8. Wall crown identical to the voussoirs of Fig. 7.

138). Such phenomena during the Roman period (after annexation in AD 106) often relate to recycled older buildings damaged during the early second century AD earthquake. This earthquake accelerated the transformation of the city center of Petra into a city plan in line with second century Roman urban schemata (Stucky 1996: 14, 21; Fiema 1998: 419).

5. Cornice with sima (Fig. 11). One large fragment which preserves the upper moldings of a cornice is situated on the landing of the staircase. Its lowest possible height is 0.41m. The moldings

from top are a *cyma recta*, *cavetto*, soffit, bevelled *ovolo*, and finally an eroded dentil element. The lowermost molding is completely destroyed. The minimum overall length is 0.805m. The member might be attributed to an entablature on the wall of the Upper Propylaea or the speculated Arch in front of the Staircase.

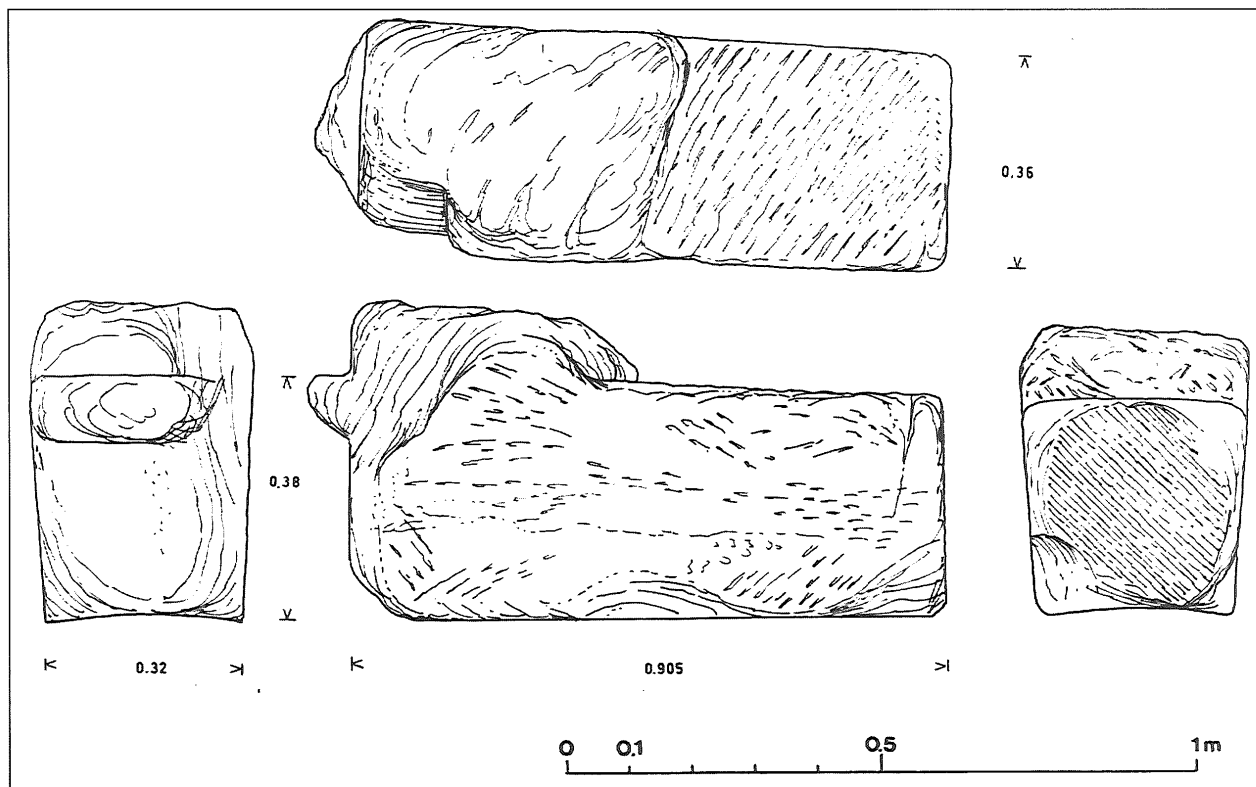
6. Block from a large cornice (Fig. 12). A block from the corner of a large cornice or from a large ceiling coffer (?) was also found at the landing of the staircase. Its height is ca. 0.58m on the right-hand side and ca. 0.44m on the left.

The width is 0.815m. The member retains on its bottom surface parts of an *ovolo* and a dentil element. This cornice block could be attributed to the entablature of the Upper Propylaea or to the hypothetical Trajanic Arch. Its restoration to the

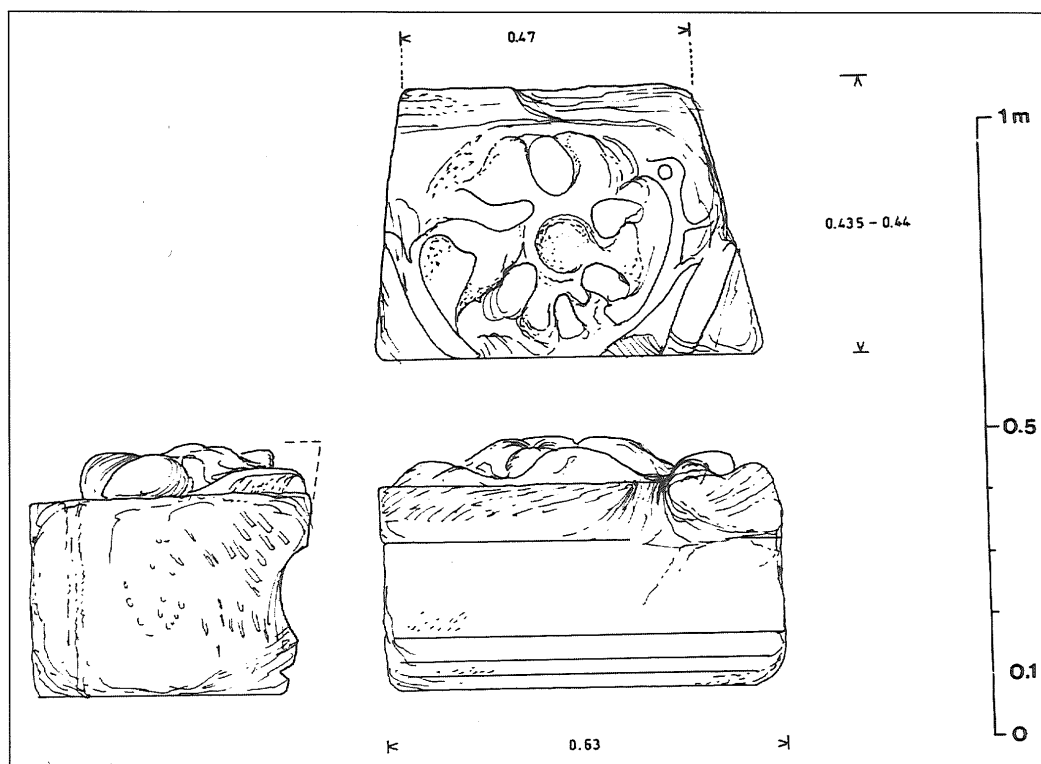
nearby Nymphaeon cannot be excluded.

### Surrounding Colonnade, Retaining and Enclosure Walls of the Upper Market

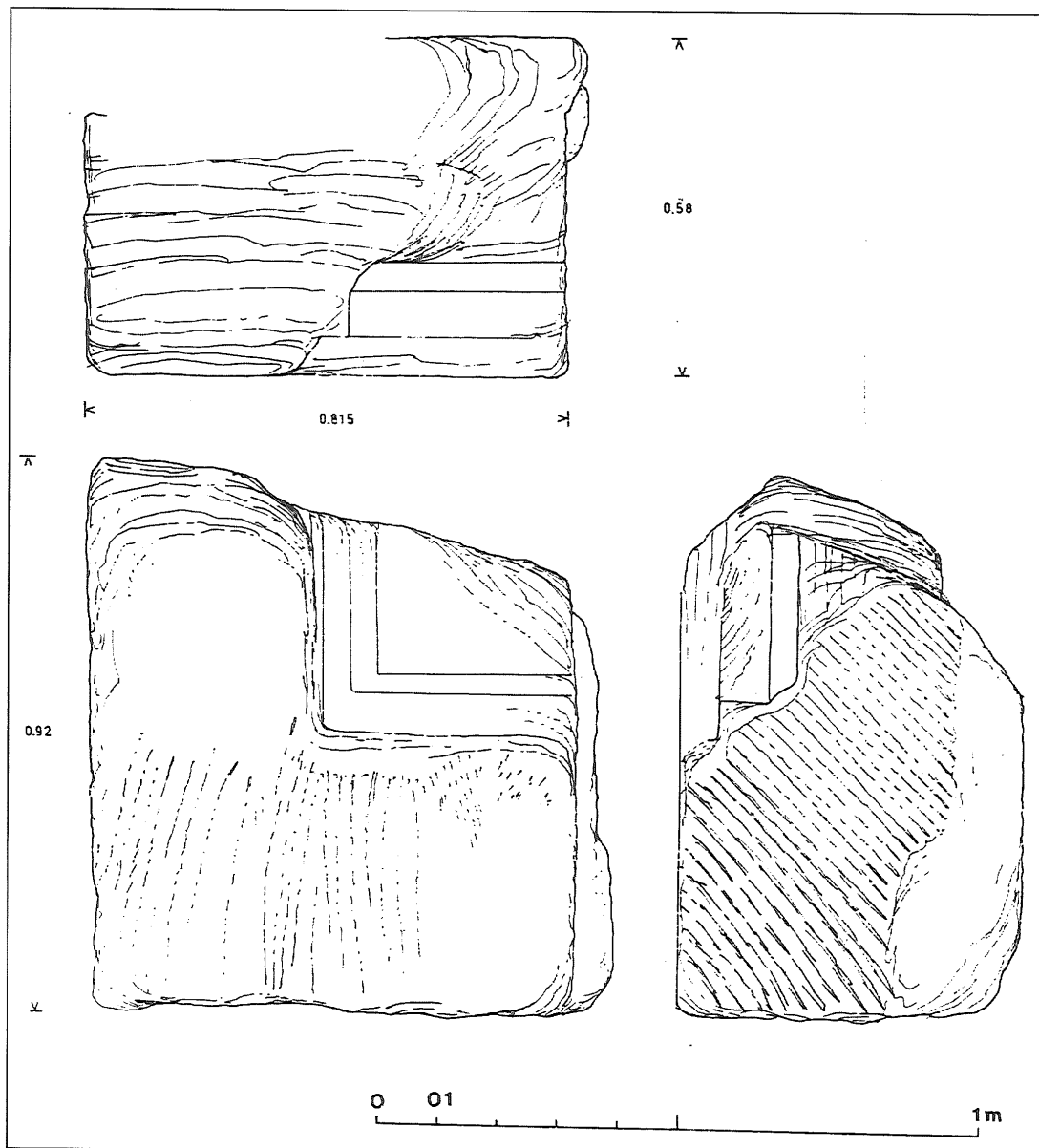
The Upper Market was located on an artificial



9. A molded voussoir found on the staircase to the Upper Market.



10. A frieze block made up from a reused pilaster capital.



11. A block from a large cornice (?) found on the staircase to the Upper Market.

plateau ca. 70m wide by 75m long surrounded by a retaining wall ca. 11.5m tall. The effort and expense invested in the creation of this platform should not be underestimated. The creation of the space alone, with its four-meter-thick retaining wall to the north, the 12-meter high enclosure walls, and the quarrying operation which extracted masses of rock in its south and east sides, may have cost a great deal more than the monumental structures with which the Market was decorated. It is also likely that the material quarried from the cliffs south and east of the Upper Market was used in the construction of the Propylaea, the retaining walls of the Upper Market and its fill, the hypothesized colonnade inside the piazza, the construction of the phase two shops and, perhaps, for the "Trajanic"

Arch, and the rest of the monuments in this area. It has also been suggested by L.-A. Bedal (2001; personal communication) that this extracted material might have been used for the Street Colonnade itself and for the conversion of the Great Temple into an *odeion*. This hypothesis is intriguing and works well with the chronology of those structures that were constructed around the annexation to Rome in AD 106.

On the north side of the Upper Market, the earth fill of the artificial plateau was held by a massive retaining structure ca. 3.70m thick and made of successive walls.<sup>7</sup> Apparently, the enclosure of the Upper Market on the north side was erected on the edge of the retaining wall. As described above, a colonnade ran parallel to this

7. Some column drums from scrap of the colonnade are built into the retaining wall.

wall (Figs. 1 and 6). Hypothetically, this colonnade may have run along all four sides of the Upper Market, but direct evidence exists only on the northern side. Specifically, the two large columns of the Propylaea are in line with the poor remains of another course, which runs E-W on the Upper Market. This course (1.07m wide) can be interpreted as the stylobate of a portico running along the north side of the Upper Market at a distance of 3.63-3.75m from the edge of the retaining/enclosure wall (Fig. 5).<sup>8</sup> The clear space of the hypothetical stoa between the suspected colonnade and the enclosure wall would be 2.70m. This stylobate, as mentioned above, is at the same level with the stylobate of the large Propylaea columns. As such, it seems that the massive portico of the Propylaea was interrupting, apparently near the middle, a smaller colonnade near the north side of the Market.

On the south and eastern sides of the Market, the natural rock was cut at a right angle and at a uniform height. The enclosure of the Upper Market on these two sides was the vertical face of the rock itself, some 10 meters high. A row of beam sockets is preserved on the vertical face of the rock. These sockets are 7.55m above the stylobate and are uniformly spaced on an even level (Fig. 13). The sockets served for the insertion of the beams of a roof which must have existed between the colonnade and the enclosure of the Market (Fig. 6). While this colonnade might have belonged to a second phase, the features of its roof are "Classical" being both tall and consistent with an extended length (at least 40 meters). The colonnade can thus be considered contemporary with the stylobate remains on the northern side.

A portion of the south enclosure wall (built against the vertical face of the rock) is still standing at a height of 11.30m. It is also noteworthy that the floor level of the Upper Market is 11.45m above the stylobate of the Street Colonnade. Possibly, the Market was designed as two equally tall compounds, one on top of the other, with a common height of 11.40m.

## Conclusions

Recent excavation and re-examination of struc-

tural details (Fiema 1998: 416, 419) suggest that the staircase to the Upper Market, the renovated shops, colonnade, paved street and as well as the Upper Market itself were all constructed in the early decades of the second century AD. It is not a coincidence that the Trajanic dedication was placed exactly at this key commercial junction which included a public fountain (the Nymphaeon), a tavern (Shop 28) and nearby treasury (Shop 29) (Kanellopoulos 1999; 2001: 20-22). It is the same area where, according to Segal (1997: 166), the Nymphaeon (was the first monument that) "greeted the wayfarers on their way to Petra and heralded their entrance into the city itself" (Fig. 6). The broad staircase of the Upper Market is probably the product of architects working under the second century AD standardization of the Roman town plan, and was integrated into the designs of the street colonnade, the Nymphaeon and the concert hall (*odeion*) — and assembly (*bouleuterion*) hall? — inside the Great Temple, only after annexation to Rome.<sup>9</sup> Distinctive assembly halls and *odeia* which could, alternatively, be used for other popular assemblies, appear similarly in the neighboring Decapolis only during the second century AD, perhaps with the exception of the Hellenistic "Municipal Basilica" at Scythopolis (Bowsher 1992: 275-278).<sup>10</sup>

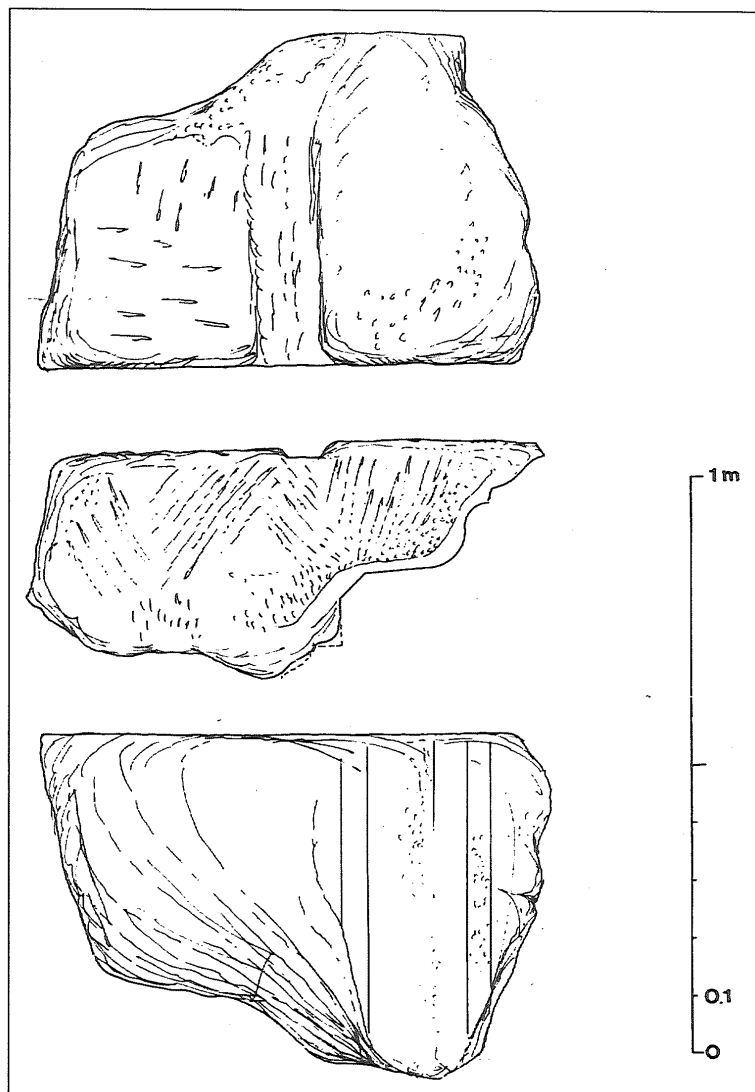
## Some key conclusions might also be noted:

1. For Tracy (1999: 53), the dedicatory inscription to Trajan, which dates from the early autumn of AD 114, could be incised on any masonry in the area of the staircase or the Upper Market. It need not be linked to the speculated arch.
2. The inscribed blocks, however, do not appear to belong to wall masonry. They are more appropriately attributed to a finely crafted monument.
3. The arch voussoirs discovered in the vicinity of the piers and the inscription belong, in fact, to two different monumental arches. One of these arches might be associated with the Propylaea of the Upper Market or even the nearby Nymphaeon (Fig. 6).
4. The material found on the staircase and the landing before it (including the arch voussoirs and the inscription blocks) is also associated

8. The foundations of this stylobate, now exposed, were interpreted as the retaining wall of the Market (Browning 1989: map 4).

9. The architectural features, specifically the capacity of the *theatron* inside the Great Temple, supports its dual function as an *odeion* and as a *bouleuterion*. Five or six hundred *boule* members were common in eastern cities of the Roman Empire (Clark, Bowsher and Stewart 1986: 229; Bowsher 1992: 276). For the function of the Great Temple and the added *odeion*, see Schluntz 1998 and Tholbecq 2002.

10. Frézouls (1961) had speculated that *odeia* in the Middle East could have been used as *bouleuteria*. This dual function was successfully established through epigraphical evidence by J. Bowsher (Clark, Bowsher and Stewart 1986: 205-229, esp. 229; Bowsher 1995: 70-72). Tribal names recovered on the seats of the theater at Nāblus suggest that the latter was used as a theater (perhaps also as an *odeion*) and as a *bouleuterion*.



12. A cornice block with sima.



13. Beam sockets on the eastern cliff of the Upper Market, possibly from the roof of a surrounding colonnade. View from West.

with the collapse of the Propylaea to the Upper Market.

5. One of the two voussoir types is identical with a wall crown or wall architrave. The two elements would normally belong to the same course. This course would have been arched in the middle. While the adoption of this feature is not unique for engaged façades in the Nabataean style (see the West Gate and the Central Triumphal Arch at Būsrā in Segal 1997: 91, 136), its combination with a gabled elevation in the manner of a Syrian pediment should be excluded. The occurrence of this feature so far south of Syria would be unprecedented.
6. The two known piers of the so-called Trajanic Arch could belong to a perfectly square composition. The possibility of a conjectural *tetrapylon* was noted above. This would be a particularly convenient solution, as the hypothetical single arch is traditionally restored at the edge of the sidewalk instead of spanning across the street, like arches are normally expected to span. Unfortunately, the material evidence is inconclusive due to the poor preservation of this area of the site and as such the whole the argument for a Tetrapylon is too weak.
7. The colonnade was designed to run in front of the Staircase to the Upper Market. The width of the staircase can accommodate exactly 5 columns and 6 intercolumnar distances of the street colonnade (Fig. 1). However, it cannot be ascertained whether the colonnade originally ran in front of the staircase and that a section of this colonnade was demolished for the construction of the piers of the "Trajanic Arch".
8. The width of the staircase to the Upper Market (14.78m) is, by far, the largest of its kind in Petra. Indeed, it is 2.5 times wider than the staircase leading to the immense complex of the Great Temple. The size of the Upper Market staircase can be compared to the monumental staircases of the Artemis and Zeus sanctuaries at Jarash (ca. 15 and 20m wide respectively) and betrays the adoption of the new landscape schemes introduced after Trajan. The large size of the Upper Market would have made it an ideal space for open-air assemblies and gatherings. As such, it would have performed an important role in the social life of the city.<sup>11</sup>
9. The unexpected discovery of a pool complex in

the area known since 1921 as a "Lower Market" (Bedal 1999; 2001) makes caution necessary when referring to the unexplored Middle and Upper "Markets".

10. The suggested plan of the Propylaea in Figs. 1 and 6 is both general and hypothetical. Still it does seem that the north façade consisted of two large semi attached columns that corresponded to the freestanding columns of the south porch. No further details can be suggested. Although this design is somewhat unusual for Propylaea, which would be expected to exhibit a colonnaded portico *before* the entrance wall, it makes sense within the given context. The main façade was a wall with doorway(s) and attached semi columns which corresponds in turn to the wall of the market enclosure while the porch behind it corresponds to the internal colonnade of the piazza. This arrangement would be morphologically acceptable within the tradition of the Nabataean "façade architecture", in which the screened-blind openings and semi-columns became a style in itself in both rock cut relief tombs and free-standing temples (at-Tannūr التنور and adh-Dhāiح الذريح).

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11. The clear public use of this, as yet unexplored, square is emphasized by the accessibility provided by the monumental staircase. And yet, the obvious lack of substantial structures in the interior of the "market" is puzzling especially when compared, for example, to the sanctuaries of Jarash

where similar a monumental Propylaea and staircase give entrance to prominent sanctuaries. That the Upper Market was the site of open-air meetings seems to be the best solution.

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