

BROWN UNIVERSITY 1997 EXCAVATIONS AT THE PETRA GREAT TEMPLE¹

by

Martha Sharp Joukowsky

Introduction

With the continuing support of the Department of Antiquities of the Hashemite Kingdom of Jordan and Dr Ghazi Bisheh, Director-General, excavations were carried out at the Petra Great Temple from June 14 to August 11, 1997. The 1997 plan and trench layout of the excavations can be seen in Figures 1a and b.

The staff of 1997 was comprised of Martha S. Joukowsky, Director; Artemis A. W. Joukowsky, Administrator and Photographer; Joseph J. Basile, Associate Director; Elizabeth E. Payne, Assistant Director; Paul C. Zimmerman, Chief Architect-Surveyor; Michael F. Slaughter, Assistant Director, Photographic Recorder and Photo Development; Deirdre G. Barrett, Finds Recording; Monica L. Sylvester, Computer Data Base; Simon M. Sullivan, Draftsperson; and Sara G. Karz, Glass Analyst and Archaeologist. Senior Archaeologists included Leigh-Ann Bedal, Laurel D. Bestock, Brian A. Brown, Katrina M. Haile, Elizabeth A. Najjar, Margaret G. Parker, and the field excavators were Hilary Mattison, Constantinos Sistovaris, Thomas Smolenski, and Benjamin H. Kleine, who also served as our 1997 Web Page Designer. John Forasté, Brown University Photographer and his wife, Diane, spent one week recording our work. Volunteers included Betsy F. Alderman, David Barrett, Francesca and Thomas Bennett, Fr. David Clark, Patricia and John Payne, and Joyce and Frank Coffey.

Besides Terry E. Tullis, geologist, 1997 Great Temple Consultants included archi-

tectural historians Judith S. McKenzie and Jacqueline Dentzer-Feydy; Thomas R. Paradise, geologist; Zbigniew T. Fiema, archaeologist; May Shaer, consolidation and preservation; Christian Augé, numismatics; Stephan G. Schmid, Nabataean fine wares analysis; and Yvonne Gerber, plain wares analysis; Dakhilallah Qublan, foreman, who also has been responsible for the carrying out of the consolidation and conservation of the Great Temple.

Ghalib Abbadi was again assigned to us by the Department of Antiquities for help in moving architectural components and soil removal. His service to us was indispensable. Once again, the Jordanian Department of Antiquities appointed Mohammad Abd Al-Marahale as our Department of Antiquities Representative.

Figure 2 identifies the columns, antae, and stairways by "names" (see *ADAJ* 41, 1997: 196) and in the following text when describing an area, the "name" of the column, anta wall and stairway also will be used.

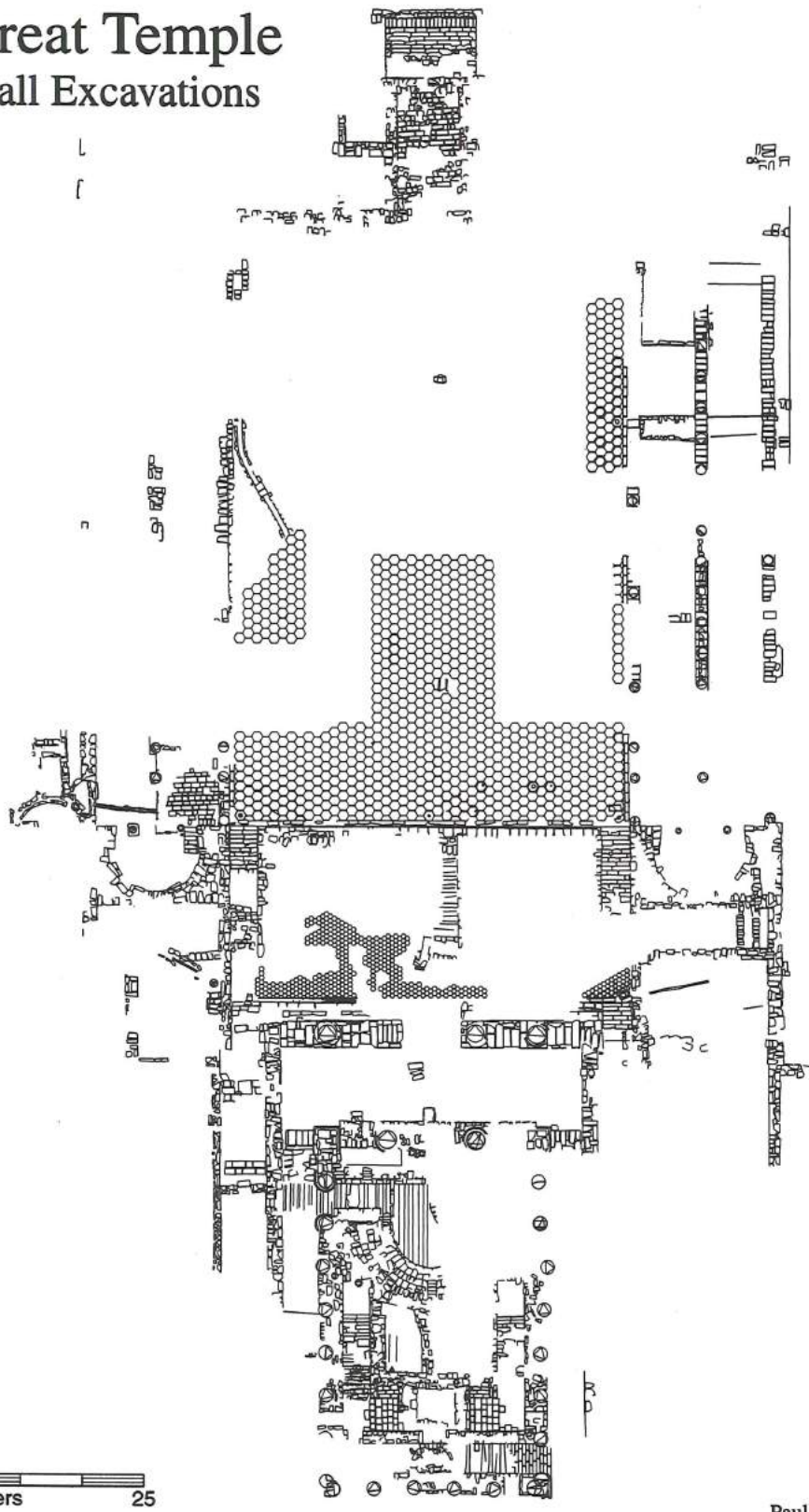
Goals

1997 marked the fifth year of two-month excavations by Brown University at the Great Temple. Not only did this season of excavation research, consolidation, and publication planning promise to be productive, but also it was intended to serve as a time of reflection of our work during the past four years. Our research design was in place, and our focus was on the multi-disciplinary nature of the documentation of the excavations. Additionally, it was to be a field sea-

1. Please refer to our past annual reports in *ADAJ*.

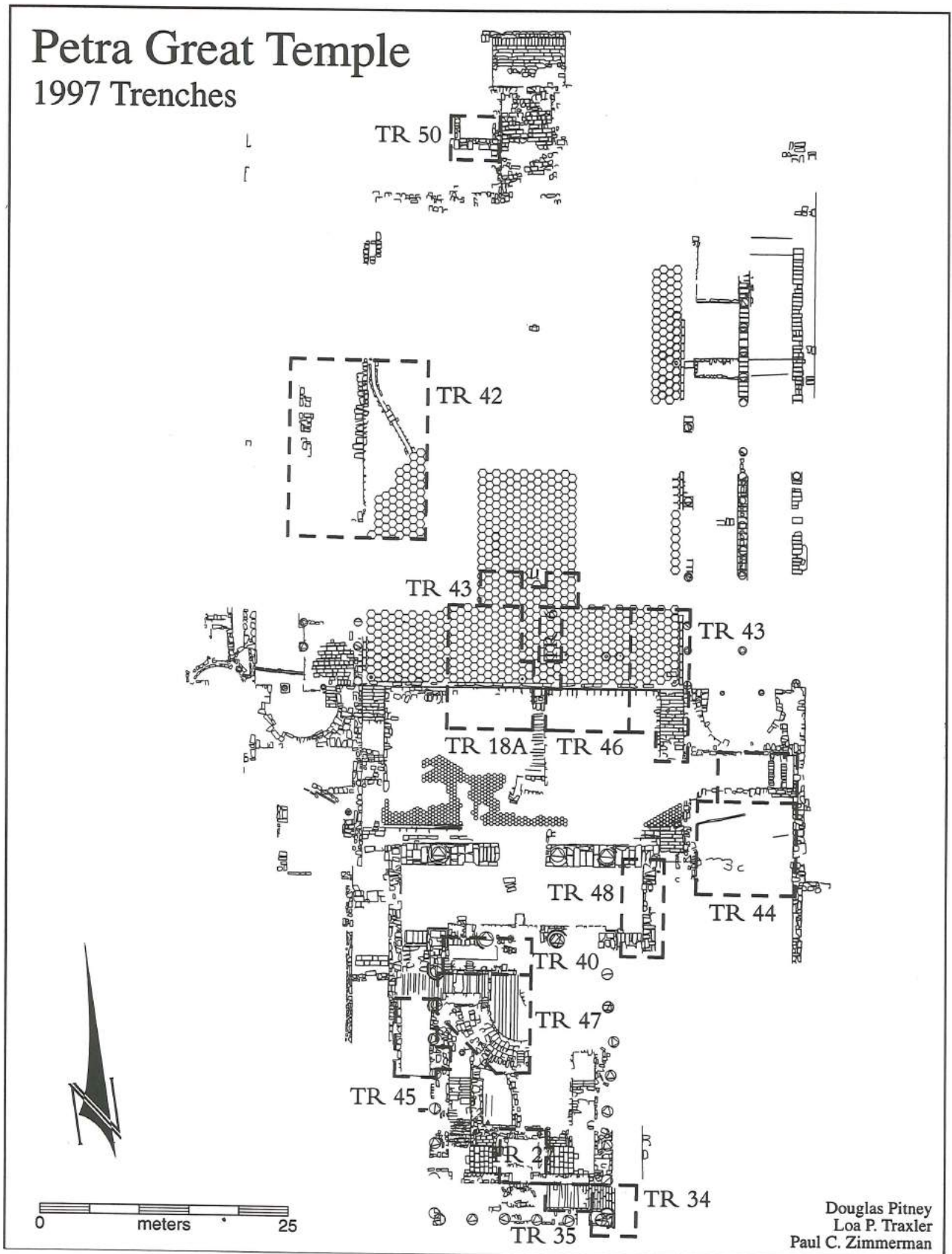
Petra Great Temple

1997 Overall Excavations

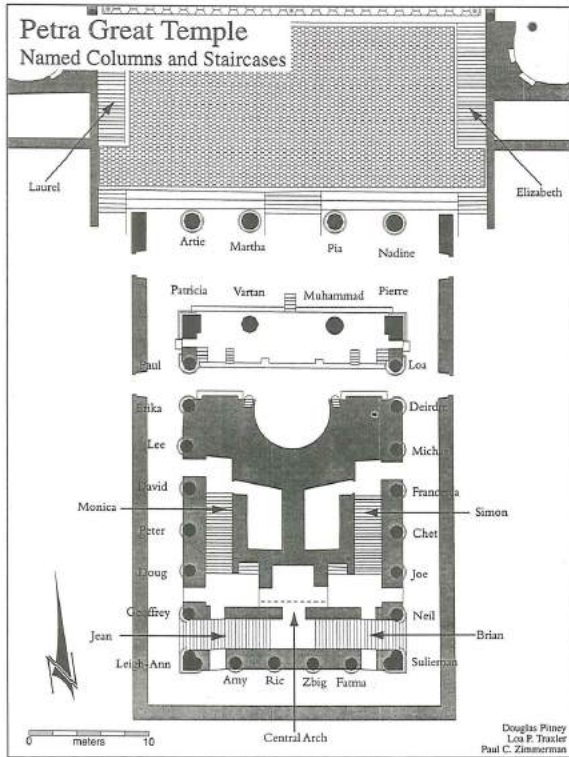


Douglas Pitney
Loa P. Traxler
Paul C. Zimmerman

1a. Great Temple: 1997 Plan of overall Excavations.



1b. Great Temple: 1997 Trenches .



2. 1997 Named Temple Elements.

son designed to carry out priorities established in 1996 excavations were planned to continue in several areas.

- In the Lower Temenos, the completion of the area east of the West Stairway and the East-West retaining wall — (1996, Trench 18) — would undergo excavation until the area west of the Central Stairway was cleared.
- Excavation also would be undertaken in the West Lower Temenos to better understand its shared connection with the Hexagonal Pavement and the East Colonnade, and to confirm their architectural plans. The East Stairway (Elizabeth Stairway) from the Lower Temenos to the Upper Temenos would be located and excavated.
- Once excavation had been completed in the above two areas, the East Exedra, which had been partially excavated in 1996, was to undergo continued investigation.
- In the Upper Temenos, excavation would continue in the Arched Passage from the Upper Temenos to the presumed 'Lower

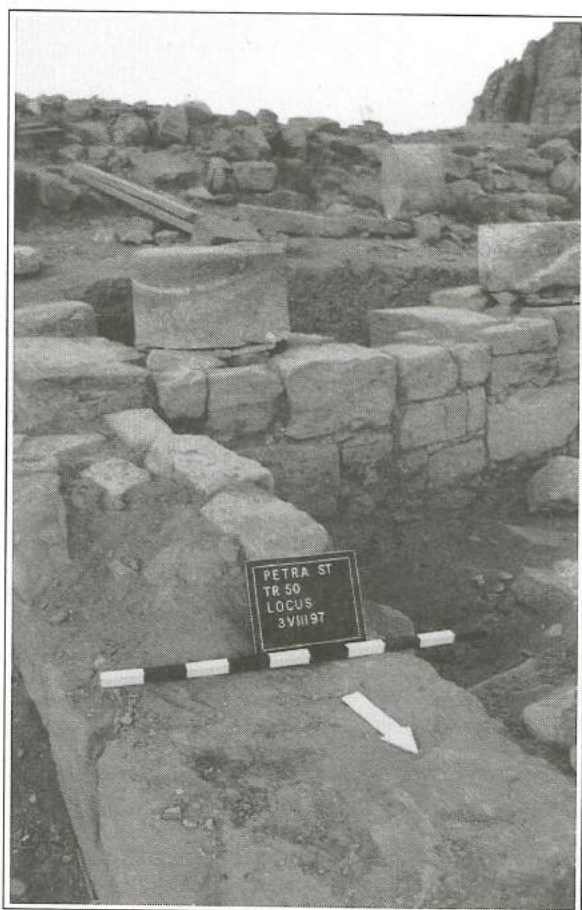
Market' (1996, Trench 38).

- In the Great Temple, a new trench would be located behind the West Anta Wall (Patricia Anta) in the Temple cella to define the architecture of this area. Of particular interest was our 1996 discovery of the upper courses of a major east-west semi-circular wall. We speculated that this wall might clearly define the area and held the promise of being a major architectural component of the Great Temple. This curvilinear wall would be cleared on the west in a new trench to expose its upper courses, and to understand how it interrelated with the West 'Adyton' Stairway (Monica Stairway) and the West 'Adyton' room.
 - Research also would continue in the rear of the Temple (1996, Trenches 34, 35, and 26) to better understand the interrelationship between the 'Adyton' Arch and the Temple rear.
 - Continued excavation would also take place on the east side of the Temple rear near the Sulieman Column in the East Corridor (Trench 34) to locate its founding level.
- To aid visitors, signs with the site plan and explanation of the major features of the site in Arabic and English, were placed on site. The major objective of 1997 was to further clarify the ground plan of the Great Temple and to publish the results of our five years of research.

RESULTS

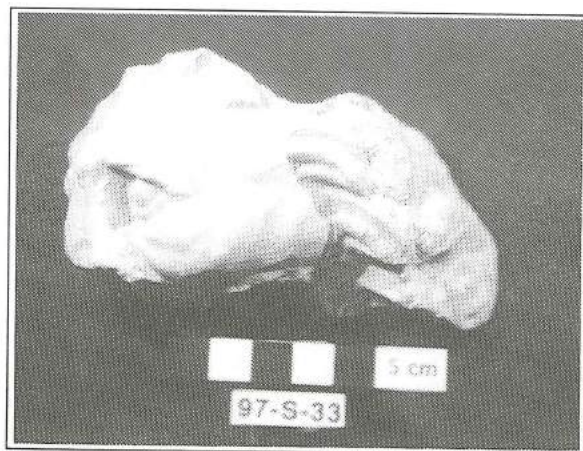
Propylaeum

In order to better understand the Propylaeum, work was initiated in Trench 50 to the west of the stairs of the Propylaeum. Defined here was a columned terrace structure with limestone stylobate blocks, many of which bore mason's marks. This structure (Fig. 3) extended 5 m east-west x 3.28 m north-south. Once a series of wall structures were cleared, the column drums found



3. 1997 Propylaeum (Photo: A. A. W. Joukowsky).

lying nearby were re-erected. The small exquisite limestone sculpture of a lion's head (Fig. 4) was recovered in this excavation. More excavation must take place in this area if we are to define the Propylaeum and its relationship to the Stairs.



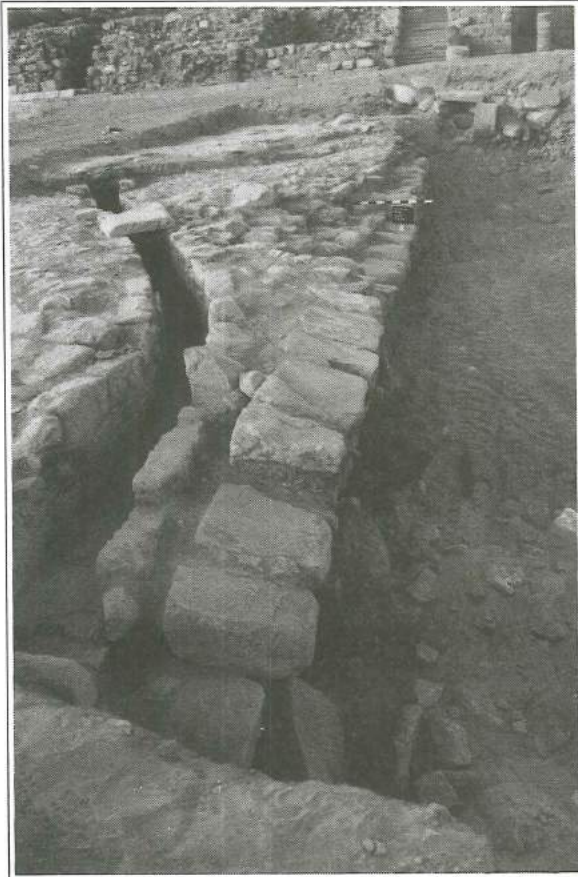
4. Lion's Head found in the Propylaeum (Photo: A. A. W. Joukowsky).

Lower Temenos

Lying to the west of the Temple Precinct near the Temenos Gate was the backfill from the so-called "baths" excavations left there from the 1950s and 1980s. This fill, conspicuous in our 1994-1996 aerial photographs, was covering an area of possible excavation that might delineate the architecture of the Lower Temenos and locate what interconnections, if any, existed between the Temple and the baths. After days of work, this backfill was finally removed. Excavations in this area will take place in the future. We designed a drainage abutment with the soil reinforced with stone so that the winter rains would be drawn away from collecting in the excavated 6 m depth of the bath structure excavations.

Excavation was undertaken in the west Lower Temenos to better understand its shared connection with the central sector of the Hexagonal Pavement and the East Colonnade, and to confirm their architectural plans. In Trench 42, a large portion of the Hexagonal Pavement was cleared. To the trench west, under the Hexagonal Pavement a portion of the Nabataean rebuiltreconstructed Canalization System was excavated. Extending south-east to north-west, this shallow canal presumably connected to the system discovered in the center of the Lower Temenos. This part of the system was found in 1994, when the disturbed pavers had lost their support and had tumbled into the early Nabataean subterranean Canalization System drainage. Recovered from a segment of this shallow canalization (Fig. 5), at a point where the water system took an abrupt turn to the west, was an extraordinary cache of first century CE Nabataean wares which in antiquity had clogged the canal. Also found here was a bronze finial with a floral motif shown in Figures 6 and 7.

Excavations continued in several areas along the East-West Retaining Wall of the Lower Temenos. The area east of the West



5. Canalization in the Lower Temenos (Photo: A. A. W. Joukowsky).



7. Bronze finial from the Canalization System (Photo: A. A. W. Joukowsky).

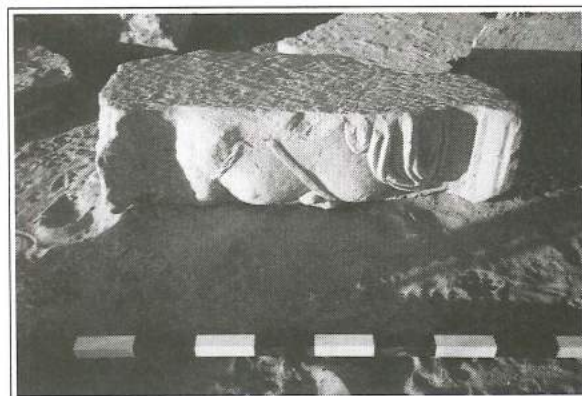
46, to recover the full expanse of the massive East-West Retaining Wall which, when fully exposed, measured some 27 m in east-west length. From Trench 18A, a fragmented pilaster of a torso with drapery was recovered (Fig. 8). In one of the openings under the Hexagonal Pavement a fragmented painted Nabataean plate was found (Fig. 9).

From the east corner of the East Exedra, to the west corner of the West Exedra, the



6. Bronze Finial from the Canalization System (Photo: A. A. W. Joukowsky).

Stairway and the East-West Retaining wall (1996, Trench 18) underwent excavation until the areas east and west of the Central Stairway were cleared. This major project was undertaken in Trenches 18A, 43, and



8. Limestone pilaster block of a fragmented figure 18A042 (86 cm in length, 24 cm in height, 50 cm in width) found in the Lower Temenos (Photo: A. A. W. Joukowsky).

width of structural elements in this southern terminus of the Lower Temenos was now found to measure approximately 55.7 m in total length. Time, however, precluded the continued excavation of the East Exedra.

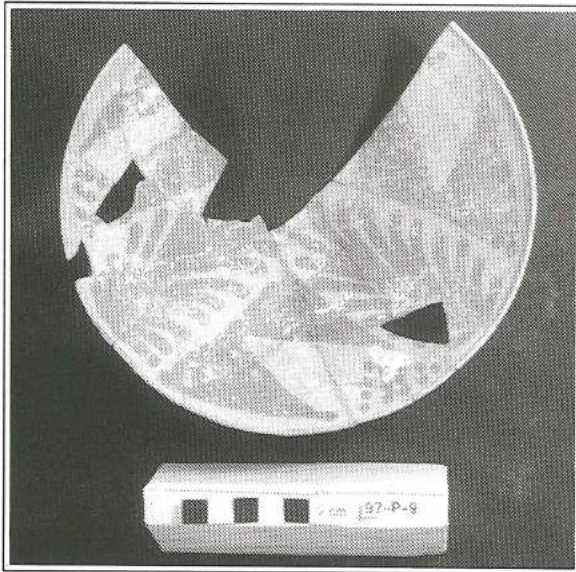
Time permitted the East Stairway (Elizabeth Stairway) from the Lower Temenos to the Temple Forecourt to be located and excavated in Trench 49. Two-thirds, or a

north-south length 7.20 x 2.61 m east-west width, was excavated of the East Stairway. Many of the stair treads of this stairway were found cracked, broken, and slumped at downward angles into a branch of the Nabataean Subterranean Canalization System, which lay below the stairs.

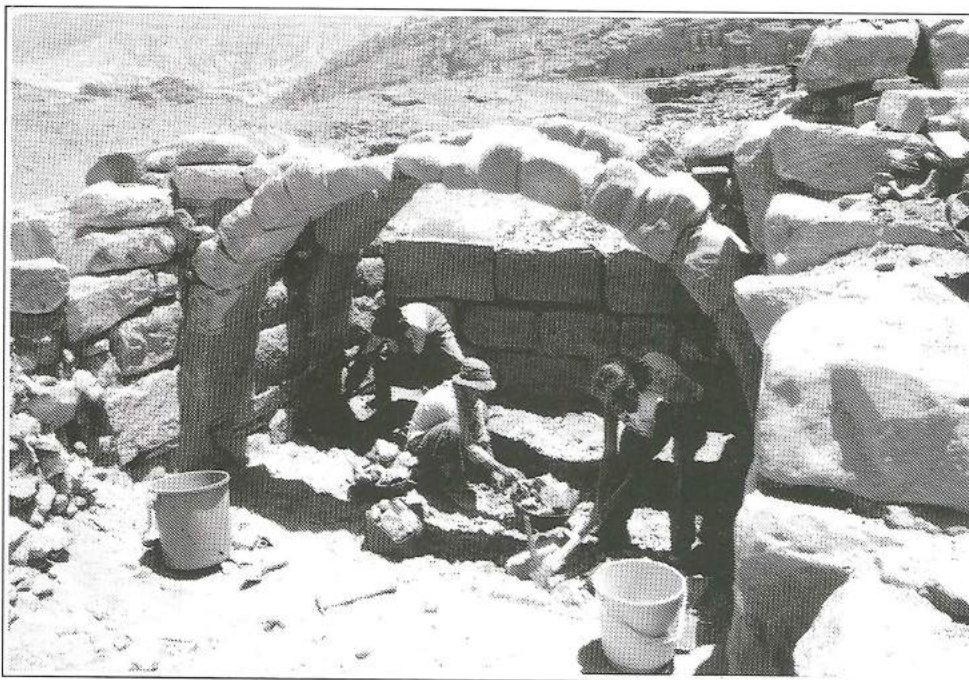
For better public understanding of the precinct we continued to re-erect columns in the East Triple Colonnade (Special Project 48).

Upper Temenos

In the Upper Temenos, excavation continued in the Arched Passage from the Upper Temenos to the presumed 'Lower Market' (1996 Trench 38, 1997 Trench 41). Found in Trench 41 (Trench 38, 1996) and bonding with the rear wall of the East Exedra were an elegant series of seven arches, however, all but the two recognized in 1996, and consolidated in that year, had collapsed in antiquity and could not be re-constructed. Shown in Figure 10 during excavation, this area was excavated to a 5 m depth, a portion of this probable cistern contained numerous Nabataean wares as well as stacks of imported marble pavers. It is



9. Nabataean plate of the second Nabataean style from the Lower Temenos below the Hexagonal Pavement in Trench 46, Locus 17 (Photo: A. A. W. Joukowsky).



10. Arched structure (cistern?) (Photo: A. A. W. Joukowsky)

estimated that the original measurements of this structure were 10 m east-west length x 3.23 m north-south width. More work has to be undertaken in this area before the full extent of this structure is fully understood. (The excavation of this area is planned for 1998.)

Undertaken as Special Project 50 in the Temple Forecourt, the massive, precariously fallen one-ton sandstone drums which had tumbled from the Temple Porch were stabilized in 1997 to prevent their further collapse onto the Lower Temenos. This involved the re-positioning of the drums and providing them with additional support to arrest slippage that might be caused by earthquake action or winter rains. Figure 11 shows the arrangement of the drums after their repositioning.

Great Temple

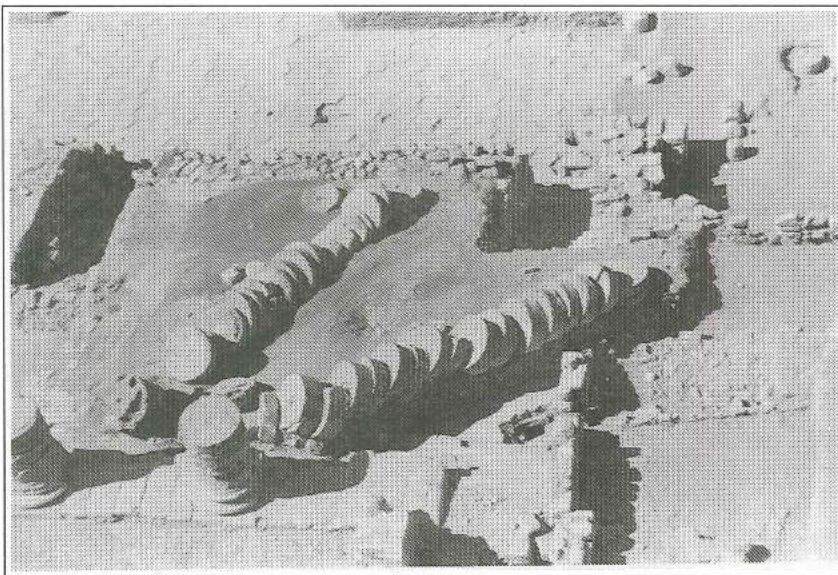
The earth choking the east exterior wall by the excavation of the East Interior Anta (Pierre Anta) was removed in Trench 48, so that the full sweep, measuring approximately 6.40 m width x 24.5 m length, of the Temple Pronaos could be viewed. Here it was found that the East Corridor Wall extending between the Temple Stylobate and the Anta wall, and the beginning of the East

Colonnade was in a better state of preservation than its twin counterpart (Patricia Anta) excavated in 1994 on the west.

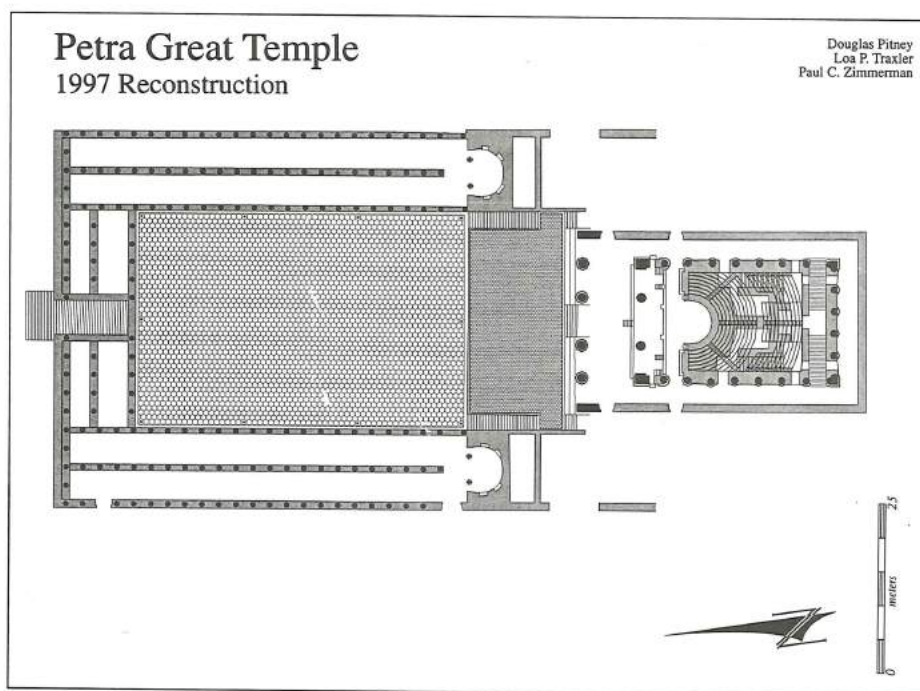
The *Theatron*-shaped Structure and Related Features

In the Great Temple, several new investigations were undertaken. One of the major excavations was of the east-west semi-circular wall (the upper courses of this wall had been discovered at 1996). We posited that this excavation would define the cella — it held the promise of being a major architectural component of the Great Temple. In exposing the upper courses of this wall, we also wanted to understand how it interrelated with the West 'Adyton' Stairway (Monica Stairway), the West 'Adyton' room, the Central Arch, and of course, with the Great Temple architecture as a whole.

What was found was a theater structure; a summary of our findings are presented below under subdivisions: Cavea, Orchestra, Pulpitum or Platform, Walkway between the Orchestra and the Cavea, the West Corridor and the Temple rear. This is followed by a discussion of the structure's tentative flow pattern. Figure 12 shows the reconstruction of the precinct with the theater.



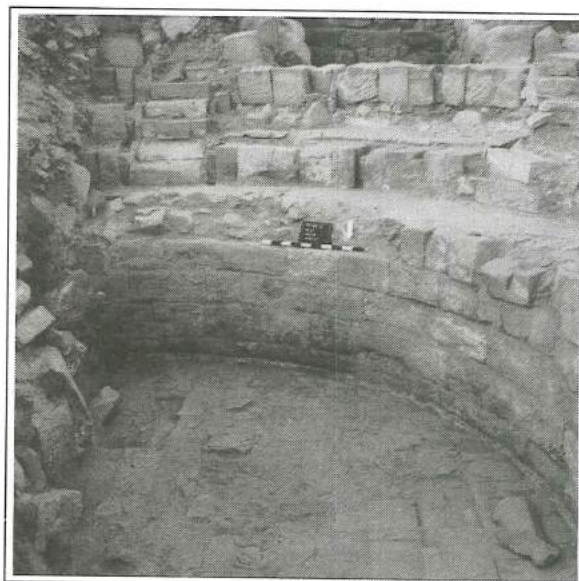
11. Upper Temenos showing the Porch Column Collapse, after stabilization (Photo: A. A. W. Joukowsky).



12. Petra Great Temple precinct, 1997 Reconstruction of the Precinct.

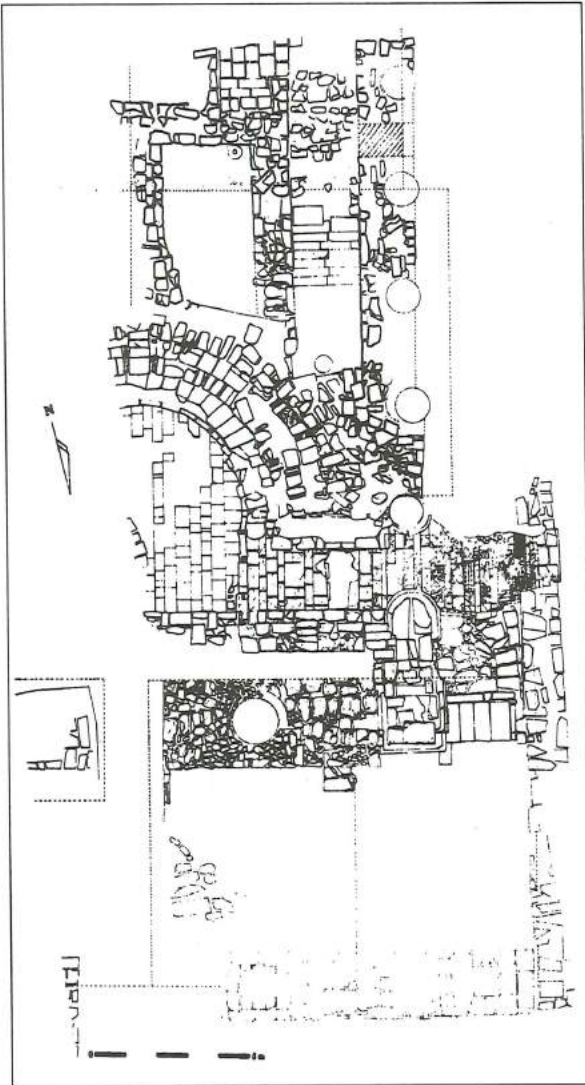
Cavea

Trench 40, measuring 9.8 x 6 m, was located to the west of the Lee Column and extended to the center of the cella; before excavation; we thought this would define the front wall of the curvilinear cella. In an irregularly shaped Trench 47, excavation was undertaken to define the rear wall of the cella. One half of an apsidal structure with tiers of seating was discovered, which we tentatively identified to be a Nabataean structure in the form of a theater. The photograph in Figure 13 shows its extant seating, and Figure 14 its plan. Facing north, were five extant courses of carefully hewn limestone seats with two six-step stairways (*scalaria*) in the *cavea*. This *cavea* was above a 1.5 m high plastered apsidal wall. Below the lowest tier was a paved *diazoma* (horizontal passageway or aisle) on the lower *cavea* wall measuring 1.5 m in width and set with alternating white and dark red sandstone pavers. The extant lower five-course *cavea* wall was constructed with carefully dressed blocks, 0.20 - 0.30 m in height, with curved faces. Unquestionably, the auditorium was central to the structure and it dominated the monument's interior.



13. Theater *cavea*. Detail of Theater Seats (Photo: A. A. W. Joukowsky).

The *cavea* seats averaged 0.35 - 0.40 m in height and 0.55 - 0.70 m in depth. The second to fifth tiers were of white sandstone ashlars which were divided into four wedge-shaped sections (*cunei*). Based on the excavated evidence, we can predict that the *cavea* was divided by three staircases — with one in the center and two on either side. Although the collapse of the West Colonnade scarred the structure, further ev-



14. Plan of the *Theatron* Area, scale: 5m. (Drawn by M. S. Joukowsky).

idence for the seating was be found to continue up to the east and west platforms to where the rear of the *cavea* must have stood in antiquity. The complex is built up to the casemate Inter-Columnar Walls, over the vaulted substructures of the East and West stairways (the Simon and Monica Stairways), the 3m x 5.5 m Vaulted West Chamber, the as yet unexcavated East Chamber, which is presumed to exist, plus the center area of the Central Arch.

Of note was that some of the blocks in

the seating area were channeled ashlar — their tops and facing surfaces had been chiseled out to produce narrow, 0.02 to 0.05 m deep, rectilinear, channel-like slots, which may have served as the socles for wooden arm rests or dividers. We hypothesized they may have delineated single and double seats.² In the massive collapse that fell into the West ‘Adyton’ Staircase (Monica Stairway), the West ‘Adyton’ Room, and the Central Arch area, many channeled ashlar were found in the debris — we reason these slotted blocks were used throughout the *cavea*. To reiterate, the *cavea* extended over the Monica and Simon Stairs, the Vaulted Rooms and the Central Arch to the rear of the Temple, at least to the north edge of the Brian and Jean Staircases.

Unfortunately, the upper portions of the structure were either in poor condition or were completely missing. In spite of this, we project that there may have been as many as 20 original courses of seats, with a *diazoma* bisecting the *cavea* between the tenth and the eleventh row of seats.³ A conservative estimate of the seating capacity would be a minimum of 550 and a maximum of 630 persons. This is based on the probability that the excavated preserved portion held at least 52 people, and, if originally, there were a total of 20 tiers of seats extending to the south stairways, this would account for substantial additional seating. These calculations must remain tentative, however, until we can confirm the extent of the *cavea* to the south.

On the north is a small and narrow, 0.7 m stepped sandstone stairway that leads up to the *cavea*. Although there are post holes for a railing, it does not appear as if this stairway provided a major access to the auditorium; it is so poorly constructed that it may well have been a later addition for access

2. That these served as water channels or as roof supports have also been suggested, but these ideas have been rejected.

3. This estimate has been arrived at by our architect-surveyor, Paul Zimmerman.

into the *cavea*.

Orchestra

The projected preserved diameter of the orchestra is approximately 6.5 m. The floor of the orchestra is paved with rectilinear sandstones longitudinally placed, north-south, and perpendicular to the center of the *cavea*. These were set in place after the *cavea* was constructed. A line of red pavers led us to speculate that originally this floor may have had a variegated patterned design. Unfortunately, the damage to it is appreciable — perhaps in our future excavations of the remaining part of the structure, the floor design may become better delineated. In the excavation of the orchestra, several capitals were found (see Fig. 15).

The orchestra area is too restricted and small for any large function, but may have been used for speeches, dramatic presentations, simple religious rituals and ceremonies. In the east balk of Trench 47, the orchestra, is a collapsed stone feature of four ashlar that has yet to be excavated. This may have served as a platform, or as the base for a statue or even as an altar. Future excavation will clarify the function of this feature. Also in this trench was found a fragmented plaque with Harpocrates represented (Fig. 16).



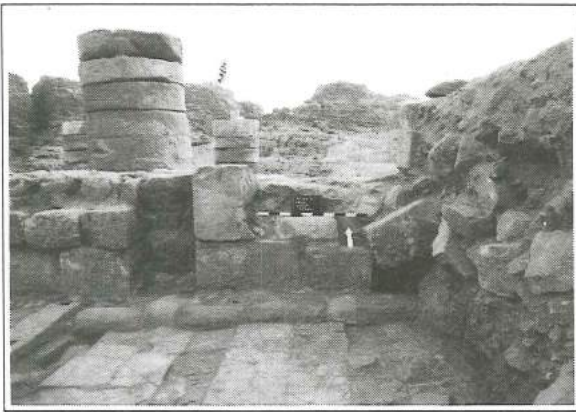
15. Capital Element in the *Theatron* TR47:Loc23 VII 97 (Photo: A. A. W. Joukowsky).



16. Plaque of Harpocrates found in Trench 47 of the *Theatron* area. (Photo: A. A. W. Joukowsky).

Pulpitum or Platform

The east-west excavations in Trench 40, between the Paul Column (to the rear of the east Pronaos) and to the Mohammed Column, were very productive, for there is an architectural component that we tentatively identified as a pulpitum or the front of a raised platform, which at this time has been incompletely excavated. Constructed of sandstone ashlar four courses in height, the excavated portion of this feature is 1.3 m in height x 5.66 m in length by approximately 1 m in width. It is curbed by sandstone ashlar, 0.4 m in width which lie 0.3 m above the orchestra floor (Fig. 17). In the south wall facing the *cavea*, interrupting the wall of diagonally-dressed sandstone blocks, are two small staircases, and in the center there is a niche 0.5 m in width x 0.4 m in depth.



17. Pulpitum of the *Theatron* (Photo: A. A. W. Joukowsky).

It is assumed that this feature if a *scaenae frons* (stage building) cut off the visibility to the Temple Pronaos and the entrance of anyone seated in the *cavea*, but if it was a raised platform, visibility to the Temple Forecourt would still have been possible.

Walkway-entry

A paved walkway of some 3 m width lies between this stage-like structure or platform – either the pulpitum or the *scaenae frons* – and the orchestra. At the east end of the excavated portion of this walkway and positioned perpendicular to the pulpitum or platform is a threshold, 3 m in length and 0.30 m in width, with deeply-cut, squared hollow cavities in its upper surface. Because quantities of metal were found in this area, it is probable that these cavities supported a gate or door with metal fittings.

West Corridor

As already seen in past years, the interior of the Great Temple was found to have been highly decorated. The 1.9 m casemate walls of the West Corridor (Trenches 45 and 47), constructed up to and behind the West Anta pier (Patricia Anta, Trench 48), were frescoed with red, yellow, green, and blue stucco. More columns were found covered with vestiges of red painted and white stucco decoration.

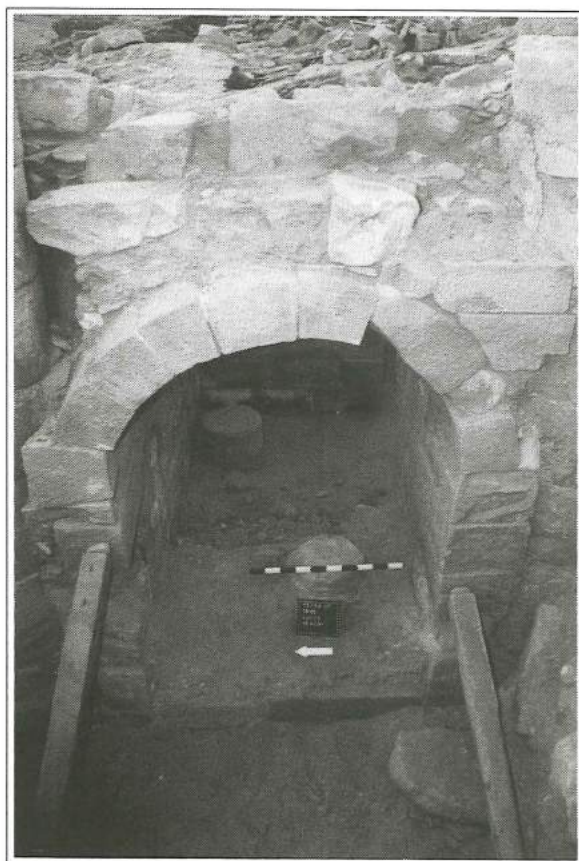
Excavations also took place in the West

Corridor to define the architecture of this area. These investigations took place behind the West Anta Wall (Patricia) and from the engaged Paul Column to the Erika Column extending to the Temple center west. Recovered were many well-preserved, worked decorative stucco fragments: some with egg and tongue and egg and dart motifs, and vegetal elements, and some painted cornice fragments. One limestone acanthus capital fragment still had traces of gold leaf adhering to its surface.

In the southeast of Trench 45 (between the Lee and David Columns), we also excavated the arched doorway in the casemate Inter-Columnar Wall at the bottom of the ‘Adyton’ West Stairway (Monica Stairway), between the West Stairway and the West Corridor. Presumably this arched doorway provided access to the steps that led up to the platforms in the rear of the *cavea*. Erosion damage to the arched doorway had been appreciable from annual winter rains that had been trapped at the bottom of the exposed stairs. Therefore, the main purpose of this work was to open this area for the passage of water from winter rains. During excavation, the structural integrity of the arch, its Inter-Columnar wall and the Lee Column showed a serious need for stabilization (Fig.18). The ashlar had not fallen, but had been jostled out of their original positions and were listing to the west. This stabilization was completed during the fall of 1997 before the advent of the winter rains.

Temple Rear

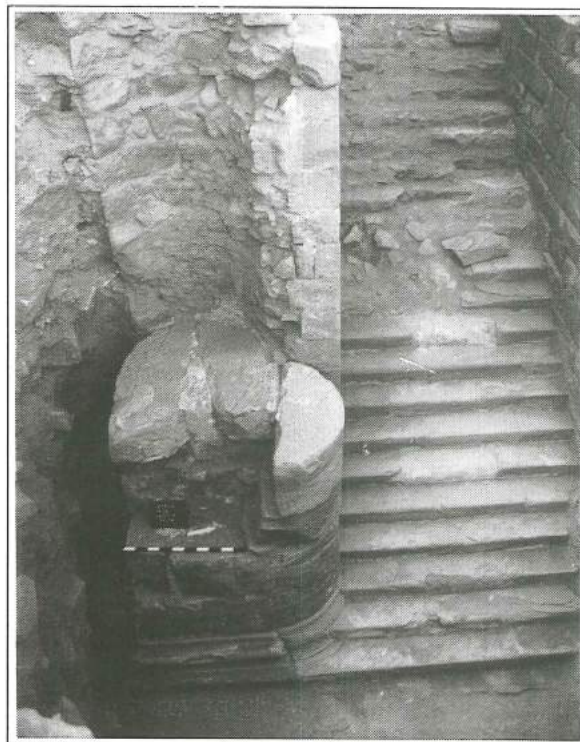
Continued research was devoted to the rear of the Temple (1996, Trenches 34, 35 and 26), to better understand the inter-relationship between the ‘Adyton’ Central Arch and the Temple rear. Excavation resumed under the now-consolidated Central Arch in Trench 26, but, when the arch ashlar were found to be further compromised by earthquake, the project was abandoned until additional consolidation measures



18. West Corridor Arched Doorway into the West Stairs (Monica Stairway, Photo: A. A. W. Joukowski).

To our great surprise, in the center south of the Temple leading up to the platform that was supported by the Central Arch, was the recovery of an east-west flight of stairs (Brian Stairway), approximately 7 m in length x 2.2 m in width, extending from the upper 'Adyton' to the East Interior Corridor. At the foot of these steps at 885.93 m elevation, we discovered that these stairs were built around, and were therefore constructed after, the Attic heart-shaped column base of the Sulieman column in Trench 34 (Fig. 19). A large window and an arched doorway were found in the south wall of the stairwell. At their top, they accessed the small paved platform and the north-south West Staircase (Simon Stairway) excavated in Trench 15 in 1995. (The elevation of the East Corridor floor lies at a 7 m depth below present day ground level.)

In the Temple rear, continued excavation



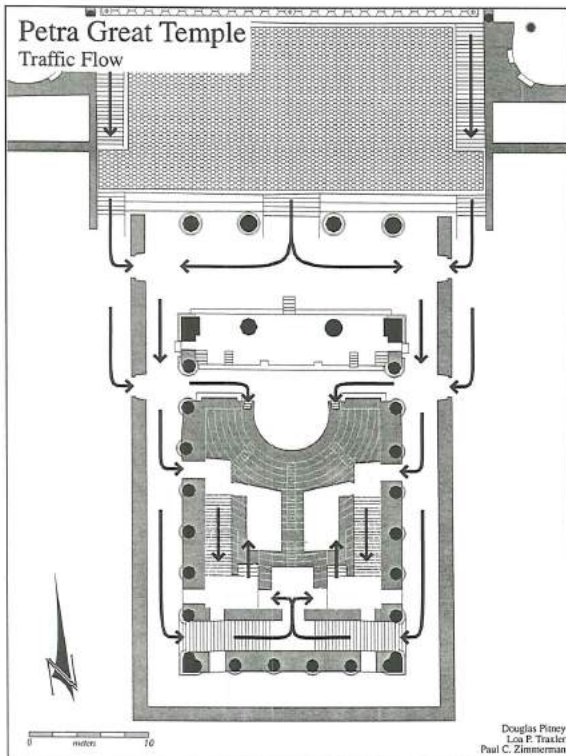
19. Temple southeast, east-west rear stairs (Brian Stairway, Photo: A. A. W. Joukowski).

also took place on the east side of the Temple in the East Corridor (Trench 34) to locate its founding level. (This operation continued the Trench 34 excavations initiated in 1996.) Eight courses of the massive heart-shaped southeastern column (Sulieman Column) were removed, section x section, for re-erection. Here, too, large amounts of multi-colored — green, red, blue and yellow — decorative stucco were recovered.

Design — Flow Pattern

Now, given a new plan for this building, how did it work? We found the flow pattern at the time it was used as a *theatron* to be extraordinarily well-planned and efficient. A tentative traffic flow pattern is shown in Figure 20.

On the ground level, access was from the Lower Temenos, up the East or West Stairways, (Laurel and Elizabeth Stairways) to the East or West Walkways, and from the Walkways into the East or West Corridors. Alternatively, access might also have been through the Temple Entrance, if it too was



20. Petra Great Temple, proposed traffic pattern.

not blocked,⁴ to the front of the now blocked Temple Pronaos. (As the pulpitum wall had been constructed between the two center columns, the participant was obliged either to turn to the right, and then left into the West Corridor — or to turn to the left to gain entry into the not as yet excavated East Corridor).

Once in the Corridors, the major route which would be taken by most participants who wished to access the cavea, would have been from the now-excavated West Corridor. The major access would have been through the arched doorway between the Lee and David Columns. (We anticipate a similar entrance to the East Stairway (Simon Stairway) from the East Corridor between the Michael and Francesca Columns.) Returning to the structure west, once the West Stairway (Monica Stairway) had been mounted, access to the cavea was via the paved platforms at the top

of these stairs, which with a 90° turn accessed the twin small flights of steps which may have led to an arched passage which exited at the middle *diazoma*. Once in the cavea the participant would have had the option either to descend to the lower rows of seats or mount the *scalaria* that led to the upper seating and up to the *diazoma*, if one existed, at the upper reaches of the *cavea*.

Entry or egress from the rear of the Temple theatron could also have been from the East or West Corridors. These participants would have elected to walk up the Trench 35 recently-excavated southeast stairway (the Brian Stairway), or the as yet unexcavated southwest stairway (Jean Stairway) which led from the East and West Corridors to the twin platforms which accessed the rear of the cavea. Also from the Corridors either entry or exit could have been gained to the exterior East and West Walkways.

As for the narrow series of steps found leading up the side of the cavea to the lower west cavea walkway, it would appear that this was a minor access, perhaps for special purposes, and that these served as “emergency” steps to the front of the *cavea* walkway (and from there to one of the three major *scalaria*).

For the performers, from the west, we do know that between the Paul and Erika Columns there must have been a secondary entrance along the paved walkway which led to the orchestra on the west. (We assume the same plan existed on the east between the Loa and Deirdre Columns.) This access would also have served the performers, speakers, in short, any person who was to perform on the orchestra floor. An additional entry onto the top of platform is the narrow 0.8 m passageway from the West Corridor cut into the wall between the Patricia Anta and the Paul Column. (It will be

4. Erika L. Schluntz believes that it may have been blocked by a screen wall that extended between

the porch columns, and that the former pronaos area should now be considered “backstage.”

of interest to excavate the corresponding East Anta (Pierre Anta) and the Loa Column wall to find if an opening existed here as well.)

Discussion

The Great Temple stands alone above a large colonnaded Lower Temenos among thousands of architectural fragments, including elephant-headed capitals. The Temple itself is embellished with floral Nabataean capitals, and it cannot be forgotten that this well-preserved building is also decorated with masks, recovered from the West Walkway in 1995. The whole precinct is built with an emphasis on axuality and frontality.

Interpreting this large public edifice is at the heart of the archaeological process — there has been a great deal of debate regarding the identity of this building. If our structure is, in fact, a Great Temple, the theater is certainly its dominant architectural element.⁵ On one hand, this structure is built like a temple, and on the other, it has a theater-like structure in place of the cella. It cannot have served as a sacred space, a religious building that was decommissioned and desacralized. In other words, it could not have been built as a temple and then have become transformed into a civic structure — one has to assume that a shift in function would go against Nabataean religious tradition. Therefore, it must have served either as a religious or as a secular structure. And if it is a religious structure, why could it not have served as an instrument of religio-political propaganda? The kings of Nabataea certainly utilized religion to further their political ambitions.

For some time the author has been puzzled about this monumental structure. Although the conventions of classical architecture proscribe this building to be the

Great Temple, it is clear that Nabataean creativity, their lack of preconceived ideas, and their unusual architectural borrowings from the classical world could have led them to utilize the Great Temple either for ritual or administrative purposes. The purpose of this structure has yet to be determined — it remains a riddle. We know that this theater-like structure must have served as the central focus for the Great Temple after it was rebuilt. Since the interpretation of this building is somewhat enigmatic, future excavation will hopefully clarify its function.

In future seasons we will test several hypotheses to explain and understand this building.

- 1) It was a temple or a theater-temple;
- 2) It served as the civic center for Petra in the Nabataean and Nabataean-Roman periods as,
 - a) a bouleuterion where the boule (city council) met or as a *comitium* or *curia*, a Roman political meeting place;
 - b) an odeum or small concert hall;
 - c) a law court, council chamber, meeting hall.

Now it is possible that this is a civic structure — perhaps it is where the Nabataean “popular assembly” held their meetings. It is worth quoting Strabo (16.4) who states:

Petra is always ruled by some king from the royal family; and the king has as Administrator one of his companions, who is called “brother.” It is exceedingly well-governed; at any rate, Athenodorus, a philosopher and companion of mine, who had been in the city of the Petraeans, used to describe their government with admiration, for he said that he found both many Romans and many other foreigners sojourning there, and that he saw that the foreigners often engaged in lawsuits, both

5. Few roof tiles were excavated in the center of the structure, for that reason we believe the side colonnades may have been roofed; because few roof

tiles were found in the Temple center, I believe the area over the auditorium was unroofed.

with one another and with the natives, but that none of the natives prosecuted one another, and that they in every way kept peace with one another...

The king is so democratic that, in addition to serving himself, he sometimes even serves the rest himself in his turn. He often renders an account of his kingship in the popular assembly;⁶ and sometimes his mode of life is examined.

We must be mindful of the Latin Imperial inscription studied by Stephen V. Tracy and dated between ?112 and 114 CE, found in the rear West Vaulted Room on the floor.⁷ Further investigations of the parallel room to the east (the east chamber has yet to be excavated) may determine the actual purpose of these interior chambers in the rear of the Temple. There is but a single entry into this West Chamber. This room, 3.5 m in width-by 5.5 m in depth, with walls 4 m in height did serve for storage in the late Nabataean-Roman period (for stacks of roof tiles were found here — lying in an earth deposit above the Latin inscription), but originally it may have served as a secure space for keeping records, a room for the storage of arms, a holding pen for prisoners, or, although dark, a changing room for ac-

tors. Or its purpose may have been solely for the support of the *cavea* extending above it.

But perhaps the Great Temple was rebuilt as a bouleuterion? We should not forget the multiple references to the boule at Petra in the Babatha Archives discovered by Yigael Yadin from the *Cave of the Letters*.⁸

The Great Temple precinct's location adjacent to the Temenos Gate and the most sacred Qaṣr al-Bint is not accidental. A Great Temple or a bouleuterion-odeum should be accessible to the citizens of Petra and provide a gathering place where the decisions of the day could be announced and discussed by the populace. So, was the Great Temple a center of worship where performances of a ritual nature were performed or was it the location of the highest court? Or did this structure serve other or perhaps even multiple civic functions? We seek scholarly discussion of this issue.

Even if we restrict the interpretation of the function of the building, we are still left in the dark with a number of compelling questions. If it is a temple, what deity is worshipped here? And if it served as a civic center, what was its intended use — bouleuterion, odeum, (bouleuterion and odeum, it is conceivable that it could have been

6. In the strict sense of the word, this building would have been for the meeting of the *deme* (the popular assembly), not the *boule* (city council).

7. Can we state that this find adds the appropriate force to the argument that this should be identified as a civic structure? In a private communication, G. W. Bowersock stated: "The monumental Latin inscription is perfectly compatible with a temple, particularly one in which the emperor might have been *a sunnaos theos*. There is nothing about this find to suggest identification of the building as civic. Of course, it does not weigh against this possibility either."

8. From the Nahal Hever cave, these priceless finds are known as documents from "the Cave of the Letters." Published in 1989 by the Israel Exploration Society, The Hebrew University of Jerusalem and the Shrine of the Book, as *The Documents from the Bar Kokhba Period in the Cave of the*

Letters, Naphtali Lewis (ed.), the letters and transactions tell us that Babatha was a wealthy Jewess from the village of Maoza in the provincial administrative center of Zoara, located on the shores of the Dead Sea.

For reasons still not fully understood, sometime around the beginning of the Bar Kokhba Revolt, Babatha and her family left the region of Mazoa for En-Gedi where they hid in the cave at Nahal Hever until their untimely demise around 132 CE. When Babatha fled to the cave near her second husband's home in Judaea, she took with her this extraordinary collection of legal documents that were obviously vital to her and her family. Nearly 2000 years later, these priceless documents, which were once merely family archives, have become our single most important source of information on the legal affairs of the inhabitants of the province of Roman Arabia and Petra.

used for both purposes).⁹ How does this precinct relate to the urban fabric of the city itself? It must be considered in relation to the city plan of central Petra. While the function of this structure remains obscure, it surely presents a significant architectural component of Petra.

Although we have shed new light on urban Petra, the implications of these finds have certainly opened new questions about the site and the city. The reappraisal of the Great Temple architecture, chronologically and stratigraphically, will greatly enhance our understanding of the socio-political and religious culture of Petra.

Catalog

The 1997 catalog contains an additional 33 coins, 68 lamps, and 46 other items including Nabataean wares, a partial Greek inscription, a Rhodian-style stamped amphora handle dated from ca. 146 to 108 BCE, two bronze finials, and the sculpture of a lion's head found in Trench 50 of the Propylaeum. Portions of elephant-headed capitals continued to be recovered in the Lower Temenos; however, although they fit the diameters of the Lower Temenos column drums, the mystery yet remains as to what part of the Lower Temenos these capitals adorn. Architectural decorative elements continue to be prolific, but of particular interest is a pilaster found in the Lower Temenos fill above the Hexagonal Pavement. This is a limestone block with the relief of a life-sized headless torso, whose identity has yet to be discovered.

Sara G. Karz has been studying the glass fragments which had not been given close attention up to now, and has prepared her research for the soon-to-be-published *Five Year Report*. Our data base now stores some 115,742 items — in 1997 the Grosso Modo

data base had 31,181 objects recorded with approximately 21,300 or 68% representing pottery sherds. Our architectural fragment data base, totaling 5078 fragments, numbered an additional 832 pieces recorded in 1997, again, many of which were capital elements. Thus our corpus of objects was updated, not only with the new finds, but also with a fuller documentation of those we have identified as having been unearthed in important loci.

Consolidation and Preservation

1997 consolidation projects continued the work of previous years. An additional 75 m of fencing was installed to protect the areas excavated as well as the large architectural fragments that were recovered. Before excavation can resume we were devoted to the time-consuming quarrying and cutting of new blocks for step areas that have been robbed, and to the pointing and consolidation of the architectural elements of the precinct.

In the **Lower Temenos** are three projects. The East Exedra, excavated in 1996, suffered structurally during the 1996 winter rains. Because it was in danger of collapse, this structure underwent extensive consolidation. Now that it has been reinforced with mortar and painting, it is planned to excavate it in 1998.

The curbing in front of the East-West Retaining Wall has been consolidated, for its blocks over time have shifted from their original positions.

The 1997 excavations found the Eastern Stairs (Elizabeth Stairway) from the Lower to the Upper Temenos in varying states of collapse into the subterranean canalization system which extended below them. It is planned to create extra support for these steps before they are consolidated and re-

9. F. Zayadine, (pers. comm.) further suggested that the structure may have served as the seat of the Principia. Z. T. Fiema dismisses this suggestion by commenting that the archaeological evidence

suggests that the Headquarters of the Arabian Legion was in Bostra and that the Principia would have had to be there as well.

installed.

In the **Upper Temenos** and the **Great Temple**, columns that had collapsed from earthquake tremors continued to be re-erected. In addition, there was the consolidation of deteriorated blocks found in all areas of the site.

Both the East and West 'Adyton' Staircases (Simon and Monica Stairways) suffered erosion from the heavy rains of 1996. An enormous effort has been made for their consolidation and restoration. The re-erection of seven courses of the five-to-six part engaged drums of the heart-shaped Sulieman Column in the rear east of the Great Temple now has been completed. Before this process could be undertaken, the Nabataean support wall behind the Sulieman Column had to be dismantled and reconstructed, for it had all but collapsed to the west and was intruding on the area occupied by the column.

The Central Arch, once again, required support before excavation can continue. Partially conserved in 1995 and 1996, this area was partially excavated again in 1997, because we wanted to see it in its entirety. To our disappointment further consolidation has to be undertaken before further excavation can take place. This will be completed before the onset of the 1998 season.

The West Corridor and the Inter-Columnar Wall arch required complete dismantlement for anastylosis to take place. The west flank of this wall, its arch, and the Lee Column was excavated in 1997. It was discovered that these architectural elements had undergone significant earthquake damage — both the wall and the arch had slumped out of position at awkward angles to the west. The Lee Column had to be completely dismantled and re-erected during the 1997 field operations. This time-consuming re-erection during the 1997 field season placed an enormous strain on the progress of the 1997 field schedule. But, because of logistics, it had to be completed

before work in the theater-like structure could be initiated.

The theater-like structure requires consolidation. But we thought it better to postpone this effort until some point in the future when this structure will be fully excavated.

We continue to be committed to the consolidation of this great edifice, which in part has been made possible by the World Monuments Fund. Although our major subventions are through Brown University, we have received significant support not only from the Department of Antiquities, but also from the newly-formed Petra Regional Council.

Major scale consolidation which has been carried out under the direction of Dakhilallah Qublan. Knowing that the site was susceptible to deterioration from the winter rains, the main areas of focus were the repair of the 'Adyton' East Stairway (Simon Stairway), the Trench 45 arch and wall at the bottom of these stairs, and the Inter-Columnar wall between the Lee and David Columns that required complete removal and re-erection. In the Temple rear, the Sulieman Column was also re-erected with the elements that had been removed during the 1997 excavation season. Once this project had been completed, a dam was constructed at the east rear of the Great temple to divert rainfall.

Donna D'Agostino created an upgrade of the Architectural Fragment data base, and the author entered the data. At ACOR, the bronze finials were restored by Fatma Marii. The 1997 coins, which had been given a preliminary reading during the field campaign by Christian Augé, were cleaned in Amman, also by Fatma Marii. They await a final reading. After Yvonne Gerber had studied the pottery, the Trench 42 fragments were sent to Providence where the author drafted and described them. Simon M. Sullivan undertook the drawing of catalogued items and several of the architectural fea-

tures, but in the main, the trench drawings were drafted in Amman by Ala H. Bedawi. The site catalog was organized for publication by Deirdre G. Barrett.

The plans for a full digital reconstruction and virtual reality tour of the Great Temple is being prepared by Eileen L. Vote, Brown University graduate student in the Department of the History of Art and Architecture. The complete model of the whole edifice generated in Auto CAD is being exported to a 3D modeling program. Because a large part of the Great Temple is no longer standing, producing such a simulation will enable our archaeology colleagues, architectural historians and anthropologists to work on a visual reconstruction of the site as a whole and to experience how the Temple may have looked during the various stages of its use. A digital simulation also will provide us with the ability to show in a realistic way what the architecture of the central part of Petra looked like in antiquity. The completed project will allow the viewer to experience the whole building in its setting by creating a full virtual environment. It is projected that this study will be completed in 1999.

The compilation and final editing of the five year report entitled, *Petra: Great Temple Volume I: Brown University Excavations 1993-1997*, has been the focus of our home schedule during this winter. Editing has been completed by David A. Detrich, and the author corrected and annotated the text as Kirsten K. Hammann put it into PageMaker and Simon M. Sullivan oversaw the layout. Interdependently, Simon M. Sullivan consulted experts for the CD-ROM, for there was far too much data to be presented in book form. What we attempted to do was to plan ahead for problems, that

is, the illustrations, that had to be selected and given size considerations as the publication was put together.

Now that the summaries of our five years of excavation have been discussed, we turn to our phasing of the site and place its progressive stages of architectural development into a chronological scheme.

V. Site Deposition Analysis

If possible, we wanted to find the primary building phases of the site, as it became abundantly clear that the Great Temple precinct had a complex deposition history. Moreover, there were multi-depositional contexts whereby soils and features had been spatially altered. There were multiple occupations as well as long term occupations that had also altered the site over an extended period of time. Additionally, there had been geophysical changes and erosion that had to be dealt with and analyzed. We realized the complexities of the situation, and implemented our recovery methods to provide us with data on the phasing of structures. Our understanding and constant restudy of the stratigraphy of the temple site itself has been hampered by the lack of sealed archaeological contexts (see below).

Based on site deposition, our annual excavations have determined the general sequence or phases of the Great Temple construction, collapse and abandonment. Seven phases have been tentatively identified. These may be modified by subsequent excavations, but at present are used as the backbone of the archaeological evidence. The ideas espoused below are tentative and hypothetical.

Phase I is labeled, Nabataean I.¹⁰ This represents a major construction of the Tem-

10. I suggest that there may have been an earlier small temple that was distyle in antis (two massive columns on the façade set between wall ends or pilasters — the Vartan and Mohammad Columns). This is an almost square structure,

measuring approximately 18 m east-west-by 22 m north-south. If there was a roof, there is no evidence for it. This structure then underwent a transformation, and with remodeling had its side and rear walls dismantled when the building

represents a major construction of the Temple Precinct. The major goal of the project was to construct a building of importance in Central Petra and to orient it toward the main thoroughfare of the city. The dramatic backdrop of the al-Katute provided a perfect siting for the building. Built into the rocky site, an enormous amount of fill was brought in to create the setting for an imposing structure set on a high terrace platform. As the upper terrace sloped away, a flat terrace had to be leveled out in the planning for the Great Temple. An early Canalization System was also constructed, perhaps even before the Temple was laid out. This had to be functional, for it was feared that the terrace fill might otherwise erode. A Central Stairway was built to lead up to this structure. It probably originated from what then was the central artery of the city (the later paved Colonnaded Street), through the then non-existent Lower Temenos up to the Upper Temenos.¹¹ (These are the Center Stairs that were later blocked-off in Phase II.) The Lower Temenos may not have been developed in this phase, or it may have seen the building of the arched system excavated in the east. At some point in Phase I, we assume that this Lower Temenos Arch System was put in place.

The massive Great Temple was then constructed. The building façade became what we see today as tetrastyle in antis — four columns in the front of the building with wall ends or pilasters at the extremities of

the antae walls of the Temple Cella. A roof probably existed between the Porch Columns and the Pronaos Columns, but its architectural design is unclear — the Porch Columns could have been surmounted by either a “regular” pediment or a broken pediment — but as for this structural detail, we have no archaeological evidence. What we do see today are the Great Temple Stylobate (the upper step or platform on which the columns rested) and the Pronaos (the Porch in front of the Temple Cella), and we assume they were built, roughly, at the same time.

As far as the building’s interior was concerned, Phase I also included the erection of the eight interior bichrome plastered sandstone columns on the building’s flanks and six columns at the rear. At least in late Phase I, these columns were decorated with flat red plaster on the bottom with white ridged plaster above, for there is still evidence for this decor. These columns were decorated with deeply-carved limestone capitals with fine sculptural decoration. The side corridors were also constructed, and were decorated with multi-colored plaster. To protect both the wall and column plaster, roofing probably extended around the structure from the side columns to the tops of the corridor walls.

What the central part of the structure looked like in the Phase I architectural plan is not clear. If this structure is a temple, it must have held a cella and an adyton, but no

= scheme was enlarged to construct a grander edifice by later Nabataean architects — our now, Phase I structure. This modified Phase I structure, saw the extension of the building to the north by approximately 9 m, with the construction of the Pronaos, plus two new antae with four new columns between them.

A paucity of masonry indicates this phase, and I have little stratigraphic evidence to support it, but it appears to me that the construction of the Pronaos and the Stylobate as seen today is considerably different than the Patricia and Pierre Anta Walls and the Pronaos columns which served the original structure. Future excavations

will clarify if this earliest building existed, but I suspect it did. This then was a small structure, probably a temple which crowned the hill, and could be viewed from all parts of central Petra. With the construction of the Phase II Lower Temenos and Propylaeum, the Temple was not visible from the Colonnaded Street.

11. This good suggestion offered by Z. T. Fiema in an informal communication, may be confirmed by the GPR results which seem to indicate a subterranean stepped structure in the Lower Temenos. This structure may also be part of the Canalization System, at this point the evidence is not clear.

basis of the few roof tiles found, the center of the structure may have been open to the sky, or hypaethral.

From the style of the floral decoration, especially the limestone capitals, the Petra Great Temple iconographic evidence appears to be similar to that of the al-Khazna.¹² Tentatively the evidence suggests this structure was constructed sometime in the last quarter of the first century BCE¹³ by the Nabataeans who combined their native traditions with the classical spirit. By this reckoning, therefore, this structure was built during the reigns of either King Malichus I (62-30 BCE), or Obodas II (30-9 BCE), or perhaps both.

Phase II is what we refer to as Nabataean II. There is a new, complete monumental rebuilding program — an architectural metamorphosis was launched in this phase. The architects wanted to make a strong statement and might have drawn their inspiration for the precinct perhaps from Alexandria which at that time epitomized the architecture of a great city. It is obvious that the rulers of Petra took pride in the embellishment of their Precinct while providing for its functional demands with a sense of spatial logic. The Precinct had to emanate a sense of power befitting Nabataean wealth. This construction period is placed in the later Nabataean period based on the Trench 18 Locus 10 pottery identified as belonging to the last quarter of the first century BCE.¹⁴

So, what did these Phase II architects have in mind? To begin with, there had to be a building of an elegant columned Propylaeum for access to the Precinct and a series of new steps had to be laid to be built up to the level of the Lower Temenos.

At the same time the architects ably conceptualized the Lower Temenos as a symmetrical, formal presence which purposefully emphasized the Great Temple. The Central Staircase may have remained in use for part of this time, but there was a challenging and exasperating problem confronting the planning of the area. It was the Canalization System. It must have been either inadequate or non-functional, or both. The answer, as with so many architectural questions, was clear; the Canalization System had to be reconfigured, and the most expedient way to do this was to completely rebuild its interior for drainage and enlarge its exterior, reusing a portion of the Central Stairs for water flow. With this rebuilding, the Phase I Central Stairs had to be blocked-off. This set in motion a completely new series of changes which made the design of the Lower Temenos radically different from what it had been before. Although a new standard was about to be set, this created a difficult situation, for the architects had to decide how to lead people from the Lower Temenos to the Upper Temenos. This may have provided the impetus for a scheme which would involve precise planning for the complete remodeling of the Lower Temenos. The architects approached all as-

12. As mentioned earlier, the most detailed study of Petra monuments has been undertaken by Judith S. McKenzie in her tome, *The Architecture of Petra*, Oxford 1990, also see the discussion regarding the site of Medain Saleh in Saudi Arabia. Judith McKenzie and Angela Phippen in "The Chronology of the Principal Monuments at Petra, Levant 19, 1990:152 summarize their views of Nabataean sculpture by stating, "Simplification of the classical elements of architectural decoration is related to chronological development. This change was seen in the moldings, Doric

frieze, capitals, florals and sculpture."

13. This idea was put forward in a public lecture on August 24, 1993 in Amman, and in the discussion period, the archaeologist, Nabil Khairy, stated that an early first century date was accurate. And McKenzie's typology assigns the structures including the Qaşr al-Bint, al-Khazna, the Temple of the Winged Lions and the Baths to this time period.

14. This is a pocket of pottery that was left *in situ* near the east wall of the West Lateral Stairs.

pects of the Lower Temenos design simultaneously from laying out the stairways and the Exedrae to enhancing the area with triple colonnades. In short, they converted the area, creating a vast architectural foreground for the Great Temple.

For the bold new plan to work, the Phase II Lower Temenos had to serve as a functional space on its own. The wall with arch springers had to be filled-in with earth; this was key for this area had to be level and have proper drainage. Because the Central Stairs were dysfunctional, there had to be lateral staircases, and these had to have accompanying luxurious exedrae and other appurtenances to complete the finished look of the ensemble.

In closing off the Central Stairs, a massive East-West Retaining Wall had to be built on the same line as the twin lateral stairways and the Exedrae which delimited the Lower Temenos on its south. This east-west wall would also serve to support the Upper Temenos fill. New lateral stairways on the east and west (Elizabeth and Laurel Stairs) also had to be built connecting the Lower Temenos to lead people to the Upper Temenos and the Temple Forecourt. Other monumental structural changes in the Lower Temenos included the construction of the roofed Triple Colonnades with elegantly carved elephant-headed capitals which flanked the area on its east and west sides. This Lower Temenos court-plaza was then embellished with a sweeping, white limestone Hexagonal Pavement, which tied all the elements together and gave them and the area as a whole the feeling of association.¹⁵ These architectural components were all interconnected features that boldly defined the area's spacious importance.

The Phase II Temple continued to crown the composition of space, and the edifice we know today as the Great Temple emerged. The exterior was enlarged with exterior walkways on its flanks which connected with the twin east and west lateral stairs leading from the Lower Temenos. These walkways may have been roofed, but this is not at this point clear from the archaeological record. This is also when the limestone pavement of small hexagonal pavers put in place to embellish and finish off the Great Temple Forecourt, and if it had not been there in Phase I, a nine-step stairway was installed to lead into the Temple from the Temple Forecourt.

In the Great Temple interior, there was the careful construction of the Inter-Columnar Walls (walls with arched doorways and windows between the columns). The building of these inter-columnar walls disturbed and all but destroyed the plaster decoration of the columns. How high these casemate walls were is still a matter of conjecture, but we do know they fell short of covering the capitals. As some of the Phase I capitals had been damaged, restoration had to be undertaken, and we have evidence for their repair.

Also at this time, there was the major re-configuration of the Temple interior. The Phase I core of the Great Temple, the Cella, was reconstructed as an approximate 600 seat *theatron*-like structure, open to the sky and descending to the orchestra or pulpitum. The building of the pulpitum between the two Antae (Pierre and Patricia) and the Pronaos columns (Vartan and Mohammed) post dates the building of the *cavea* and orchestra. Its bottom courses, still *in situ* are definitely superimposed on the theater floor-

15. The date of this pavement is also open to question. It can be paralleled to other such pavements at the site, which, at this point, have been imprecisely dated. In a personal communication, Professor Stucky stated (pers. comm.) that the pavement he recovered from the Petra site of az-Zanṭūr and the

pavement from the site of al-Katūta, excavated by N. Khairy in the 1980s, were Nabataean Classical. At that time, I believed this pavement to be later in our phasing of the Great Temple site. Now, it is agreed to assign its construction to the later of two Nabataean construction phases.

ing which extends under it. The heart of the Great Temple was now the theater, and the architects blended the proportions of the theater to blend in with the Phase I architecture. Its transformation must have reflected the changed circumstances of Petra royalty.

Additionally, multiple sets of new stairs were installed in the Temple rear — East and West (east-west) Stairs (the Brian Stairway and the probable Jean Stairway). These accessed the lateral Inner Corridors, and the East and West (north-south) Stairs (the Monica and Simon Stairways) with adjacent East and West Vaulted rooms. These four stairways accessed the Inner Corridor which led to the Temple exits, the Walkways.

This renovation we have placed sometime near the end of the reign of Aretas IV, ca. 40/44 CE, or to the rule of Malichus II (40/44-70 CE), and possibly to the reign of Rabbel II (70-106 CE). It is therefore suggested that these modifications took place sometime in the first or early second century CE. But questions persist: What was the transition between the earlier Nabataean structure and what we know as the Great Temple? Why was the transition from one type of installation to another so swift, in less than 100 or so years?

The next phase, **Phase III**, we call Nabataean-Roman. Serving as a buffer state against the desert tribes, Nabataea retained its independence but paid taxes to Rome. Completely subsumed by the Romans under the Emperor Trajan in 106 CE, Petra and Nabataea then became part of the Roman province known as *Arabia Petraea*. Under Roman rule, Roman Classical monuments abounded, many with Nabataean overtones — thus it is appropriate to identify this time, post 106 CE, as the Nabataean-Roman phase.

When Petra entered into the “Roman” world in the second century CE, we assume that the Great Temple was recycled by

Nabataean-Roman architects, and this is our Phase III or Nabataean-Roman period. The precinct continued to serve the Romans as one of the principal monuments of the city. And if there were post 106 CE changes made to the Temple and its Precinct. These changes are not altogether clear from the stratigraphy.

We posit, however, that at some point during the Nabataean-Roman period — in the last half of the second century CE — the Lower Steps of the Propylaeum were modified to conform with the paving of the Colonnaded Street and were added to for ease of entry into the Precinct.

As we know, Petra continued to flourish during the Roman period, with a Monumental Arch spanning the as-Siq, and tomb structures either carved out of the living rock or built free-standing. There is no reason why the Great Temple should not have continued to serve as a principal monument of the city, and the fragmented Latin imperial inscription, if we assume it is in some way associated with this building, attests to its importance and one of its last uses.

The evidence suggests that the Great Temple continued to serve the people of Petra until some point in the late third or early fourth centuries CE. This is our **Phase IV**, in which the evidence suggests that there was a minor collapse and abandonment of the structure. In the archaeological record, this period was represented on the Temple West by the accumulation of fill, 1 m in depth. The areas in use were worn with neglect, but the precinct as a whole was remarkably well preserved.

By 313 CE, Christianity had become the state-recognized religion of the Roman Empire. In 330 CE, the Emperor Constantine established the Eastern Roman Empire with its capital at Constantinople. Although the 363 CE earthquake destroyed half of the city, it appears that Petra retained its urban vitality into late antiquity, when it was the seat of a Byzantine bishopric.

Our **Phase V** begins with a major destruction, probably related to the fourth century CE earthquake. At least part of the structure collapsed onto the fill accumulated in Phase IV. Up to this point, we have no evidence to suggest the Great Temple continued to function. What is clear, however, is that the temple structure was devastated by the earthquake presumed to have taken place in the fourth century, which is said by some to have brought the city of Petra to the brink of ruin and total abandonment, but we have reason to believe that this was not the case.

In **Phase VI** dated to the Byzantine period there was reuse of the Temple Precinct, but this reuse was probably domestic in nature. At this point in our investigations, the Byzantine reuse does not provide us with a clear picture of how the various architectural components of the precinct were used and were interrelated, if they were at all. Therefore, this phase is problematic, with a series of differing activities that take place in different sectors of the Temple Precinct and having varied time spans; these are difficult to correlate. In the Great Temple, the floor pavers and the upper stair treads were robbed. Numerous surface drains were constructed over the extant remains, and some doorways were narrowed, indicating that only parts of the structure were in use at this time. In the Lower Temenos, a platform and stairs were constructed the West Exedra, and later this area was used either to house a kiln or to serve as a dump for burned debris.¹⁶ In the east Lower Temenos, lime slaking was a major activity which probably consumed many of the limestone elements of the Great Temple's decorative program — architrave blocks and capitals—perfect fodder for such

activity. Slowly fill accumulated and the Precinct was worn by time and neglect.

Phase VII represents the modern reuse of the site. Although, thankfully, the major portion of the Great Temple lies under its massive collapse, farming activities had taken place in the Lower Temenos, which had been subdivided by the Bedouin farmers into two plots of ground using fallen column drums to separate the areas. Here too it is a miracle that any of the Hexagonal Pavement remains, for in the north the farmer's fill lies centimeters below the modern ground level surface, whereas to the south near the East-West Retaining wall, the soil build-up is greater; one to two meters in depth.

At the turn of the century, European scholars began to explore the area, but notice of a Great Temple received scant reference in the record. In the 1930s Petra began to capture scholarly and tourist interest, and accommodation was provided at first with tents and then Nazzal's Camp was constructed behind the Qasr al-Bint as a hotel for tourists and visitors with the hotel dump positioned in the Great Temple Forecourt between the east Porch Column fall of the Nadine and Pia Columns.¹⁷ Recently, this complex is now known as the Burckhardt Archaeological Center which serves as the headquarters for our archaeological campaigns.

As excavations continue, it must be borne in mind that this phasing is tentative and may be revised in light of future excavation. Our understanding of the site has been difficult, not because of the lack of dateable materials, but because the mixture within archaeological contexts of artifact stylistics ranges from the first century BCE to the early fifth century CE in date — the

16. The area may have served as the dump of a praefurnium for the adjacent baths. But of this we cannot be sure.

17. This dump can be viewed in pre-1997 aerial photographs. Positioned between the Nadine and

Pia porch column fall in the Upper Temenos, it is a rounded structure bordered by stones, and is almost 1.5 m in diameter. The fact that it is a dump is hearsay — it has not been excavated.

Great Temple Precinct was in use for approximately 500 years. There are few sealed deposits, and much more has yet to be explored before we can understand the archaeological deposition of these remains.

The existence of the Great Temple is now an established fact. Our discoveries over the past five years will enable scholars and the public at large to study and visit this great edifice. Before the excavation is closed, I hope to reveal not only more of the architectural layout of the building and its sacred precinct, but to understand better its function, its phasing, and how it was woven into the fabric of its Nabataean, Nabataean-Roman, and Byzantine urban environment.

The wealth and importance of Petra as the Nabataean capital had to be made clear to both her subjects and those powers with whom she interacted. In the heart of the city, the Great Temple must have been impressive. The visitor entering the complex from the Propylaeum and crossing the great open expanse of the Lower Temenos became involved in a great architectural experience. The drama of the Nabataean planning is evident — there are exciting vistas of the Exedrae, the double great staircases, the seemingly limitless rows of columns and the remarkable façade of the Great Temple itself. The fabulous architectural decoration of the elephant-headed capitals set against the monumental architecture of the Lower

Temenos and the height and breadth of the impact of the Temple structure with its deeply sculpted, elaborate floral capitals demonstrated power and wealth. The overall construction of the precinct must have been directed by royal patronage, and it clearly is a response to the needs of the Nabataean court and its administration.

Conclusion

Some of the questions that still abound about this structure we hope will be answered as our work progresses. We now know why this temple seems to be so different in architectural plan from the traditionally established canon of the classical temple. What is the relationship of the theater-like emplacement to the Temple? Could this be a theater-temple? Or could it be a civic bouleterion?¹⁸ Could it have served dual or several functions, be they either religious or secular, or does it have yet other functions? What is the relationship of this structure to the fabric of the city? What are the earliest structures constructed on this site, and what and when did modifications take place to the temple complex?

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18. A most useful source is John Arthur Hanson's 1959 publication entitled, *Roman Theater-Temples*, Princeton. Hanson looks at the plans of these structures. But those at Dura Europos associated with the temples of Atargatis, Artemis Nannaia, and Artemis Azzanathkona are not in the same design as our structure. The closest Dura parallel in architectural design is "H" associated with the Sanctuary of Artemis Nannaia, but the theater lies outside the sanctuary proper. The lack of models for our structure leaves us without definite answers. The temple at Seleucia-on-the-Tigris is also hypaethral, but again it is not inside the temple structure. The Nabataean temple of Baal Shamin at Si' has three steps facing the central court — the theater is the

courtyard for the temple. This is true also of the theaters at Sur and Sahr. Hanson explores the concept of the theater-temple, and on p. 98 he states: "In addition to what may properly be called sanctuary theaters, we find numerous cases in which temples are located near theaters and easily accessible to them, cases which seem to represent more than meaningless accident." And on p. 77, "What is common to all [theater-temples] is a location on the central axis of the theater overlooking the orchestra with the front facing the stage building, with provision for a statue of the divinity. Most have a colonnaded façade and many are approachable by special steps or entrances through the back wall of the *cavea*."

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