

Excavations at Petra 1975 — 1977

by
Philip C. Hammond

The American Expedition to Petra, in cooperation with the Department of Antiquities of Jordan, has completed three further seasons of excavations at that site since its initial preliminary report (*Annual. The Department of Antiquities*, XX, 1975),¹ in 1975, 1976, and 1977. The project continues to be a field school in Middle East archaeology, under the academic sponsorship of Department of Anthropology, the Middle East Center, and the Division of Continuing Education of the University of Utah. The excavation seasons covered by this second preliminary report took place from 18 July through 4 September 1975, 16 June through 23 August 1976, and 17 June through 15 August 1977.²

The 1976 season was sponsored by the generous patronage of His Majesty King Hussein, the Triad Foundation (Mr. Adnan Khashoggi, donor), Mssrs. Tawfiq and Nabiah Nazzal, the University of Utah and Dr. Philip C. Hammond.

Senior staff was composed of Dr. Philip C. Hammond, Professor of Anthropology of the University of Utah (Director); Francesca L. Xaiz (Recorder); J.L. Brydson and K. Russell (Area Supervisors); S. Cuddy (Camp Manager); and R. Sorensen (Surveyor); student participants were A. Lichty, W. Glanzman, B. Verhaaren, M. Usfuja, J. Coleville (all of the University of Utah), N. Armstrong (Smith/Stanford), M. Hebert (University of Rhode Island), and N. McBroom (Graceland College). Department of Antiquities Representatives were Mssrs. Baseem Rihani and Abdusemih Abudiah.

The 1977 season was sponsored by the Triad Foundation (Mr. Adnan Khashoggi, donor) the

University of Utah and Dr. Philip C. Hammond.

Senior staff included Dr. P. C. Hammond (Director), F.L. Xaiz (Recorder), M. Najjab (Camp Manager), K.J. Hammond (Surveyor), K. Russell, A. Lichty, B. Verhaaren, and R. Sorensen (Area Supervisors), T. La Pine, F. Lisi, L. Malvitz, V. Smith, G. Stringer, and J. Williamson. Mssrs. Hifzi Haddad and Zaidun Muhasin were Department of Antiquities Representatives.

The Expedition's thanks are also especially due the late Mr. Yaqub Oweis, former Director-General of Antiquities, His Excellency Mr. Ghalib Barakat, Minister of Tourism and Antiquities, Dr. Adnan Hadidi, Director-General of Antiquities, National Citibank of Amman, Mssrs. Nasri and Elias Mukhar, Dr. S. Parker chairman Department of Anthropology (U. of U.), and Dr. Khosrow Mostofi, Director, Middle East centre, (U. of U.).

Excavation:

Excavations have continued during the past three seasons in the Areas selected as a result of the sub-surface survey and originally opened in 1974. PI: XL11 1,2

In 1975 excavation in Area I concentrated upon further clarification of the Nabataean structure on the West side and upon the features which had begun to emerge at higher levels on the East side of Site I.2. The extent and nature of the Byzantine hydraulic system which disrupted the South side and Southwest end of the Nabataean house court was determined and the floor surface of the court fully exposed. On the East side of I.2 excavation of the Byzantine structural features was begun.

In 1976 Site I.2 was not continued because of

1. This preliminary report included the seasons of 1973, during which an electronic remote sensing survey was made on the site, and 1974, the first season of excavations.

2. The 1975 season was sponsored by the University of Utah, the Triad Foundation (Mr. Adnan Khashoggi, donor), Mr. Adnan Khashoggi, and Dr. P. C. Hammond.

Senior staff included Dr. P.C. Hammond (Director), F.L.

Xaiz (Recorder), B. Bowman (Camp Manager/Drafting Chief), K. J. Hammond (Surveyor), J. Brydson and K. Russell (Area Supervisors). Participating were K. and G. van Lehrbergh-Voet, G. Hoagland, P. Bowman, P. Wyllie, M. Connelley, and T. Parker. Department of Antiquities Representatives were Mssrs. Nabil Qubain and Ibrahim Ismaadi.

the hazard posed by the Byzantine walls overlying the lower Nabataean structures at the lower levels. As a consequence, excavation was renewed in I.5, initially opened in 1974, but suspended at that time in order to carry I.2 into the Nabataean levels.

In 1977, I.5 was continued to the North, and I.2 was again re-opened, after approval was secured for the removal of certain of the more hazardous later walls in the area. Excavation was carried to bed-rock in parts of both site sectors, thus permitting completion of the entire stratigraphic sequence for this area and the chronology of occupation from the Nabataean period through the Early Islamic period. Pl. XLV,6

This Area (200 m²) has produced a total of 859 interrelated Stratigraphic Units since excavation began in 1974.

Details and Cultural Remains

Throughout all seasons of excavation this Area has produced specifically **domestic** cultural remains and structures, except for the necropolis period following occupational use. Pl XLIV.

Since the Area represents successive occupational use from (at least) the Nabataean period onward, the ceramic sequences recovered there will prove to be of exceptional importance for ordering the Byzantine period of this sector of Coele-Syria **and** for observation of Nabataean "influence" (actually **continuation**) into the "Byzantine" (Late Roman) period and possibly beyond.

Although this material will be considered elsewhere in publication, the range of the "domestic" cultural remains may be noted here.

1975: Grinding and rubbing equipment (R.I. 33, 144, 145, 196, 213, 209); spindle whorls (R.I. 198, 201); molded lamps (R.I. 36, 181, 184, 190); needles, pins, and miscellaneous small tool fragments (R.I. 24, 83, 84, 171); bone inlay fragments (R.I. 194); iron and copper/bronze architectural fixtures (R.I. 39, 80, 81, 93), including iron nails and copper plastering tacks (R.I. 59, 64, 88, 92, 73, 75, 79); a house type miniature incense burner (R.I. 30); a stone weight (R.I. 191); beads (R.I. 35, 49); gaming pieces (R.I. 37,

28); a large number of coins, generally illegible because of the effects of slope wash, but some identifiable as Nabataean and Roman mints; along with considerable pottery of distinctly domestic function--i.e. cups, plates, jugs, juglets, storage jars, and cooking pots, in sherd and complete/semi-complete forms, ranging from the Nabataean **through** the Late Roman periods (e.g. R.I. 183, 186, 164, 185, 188, 199, 214, 187, 207), including domestic and imported wares--e.g. stamped Rhodian jar handles (R.I. 146, 147, 148), and Late Roman "A" wares. Pl XLVI 2,3 XLV11,2.

During this season the East side of I.2 produced a Byzantine paved court, in association with the wall lines and rooms of the "Later House" complex. Included there was a deep storage sub-floor room filled with sterile drift/wash sand, extending below the wall lines of both that later building and the adjacent Nabataean wall lines beneath it.

Clarification was also possible, because of the occurrence of further burials on the East side, of stratigraphic questions raised concerning related burials found in 1974. Interrment was found to have been consistently made in "L" shaped graves (thus **undercutting** lower s.u.'s, as well as cutting **into** them).

1976: As noted above, Site I.2 was not reopened this season because of the Byzantine period architectural remains overlying the Nabataean complex discovered in 1974 and the generally hazardous situation produced by walls of the same period on the East side of I.2 as a result of excavation of that sector in 1975.

As a consequence, excavation was renewed in the adjacent sector of the Area (I.5), connecting it in depth with the stratigraphy of I.2 to the South.

Some 27 Byzantine Period burials were recovered in the course of excavation of the (upper) necropolis strata of the the site, none of which contributed burial goods of any significance. However, the manner of burial in almost every case (i.e. in an "L"- shaped dug grave) furnished conclusive evidence of standardization of interment and confirmed previous conclusions that this area served as a formal cemetery, rather than simply as a convenient, casual, burial area. This information further supports the previously offered view that a Byzantine

Period religious complex (church or chapel) probably is indicated close to the cemetery - a matter to be investigated in future excavations.

Below the necropolis strata the Byzantine Period architectural remains already recovered in Site I.2 were again encountered, providing a rather broad picture of the living complex constructed during that period in this area of Petra. Connections with wall complexes of Site I.2 were made and greatly expanded the size of the recovered complex, as well as significantly adding to information concerning daily life in the phases represented. Excavation was stopped for a short period at this site in order to use personnel for survey purposes below the temple complex of Site II. Upon resumption of work, connection was made, in one restricted part of the area (I.5.S), with the Nabataean house complex recovered in 1975. Significantly, a collection of Nabataean vessels was recovered in that sector, suggesting the importance, noted above, of removing the Byzantine wall systems overlaying the Nabataean remains of Site I in general!

Because of the domestic nature of the structures of this area, ceramic and other remains still reflected common wares, every-day vessel types and domestic-use artifacts. Noteworthy, in this respect, was the recovery of a small collection of Late Roman A ware vessels (along with the probable storage closet remains in which they had been kept). The presence of this ware suggests a relatively high level of living standards still being maintained at Petra, as do other sherds apparently also imported from outside of Petra during this period. Certain objects were also recovered which suggest a considerable carry-over of indigenous (i.e. Nabataean) cultic life, rather than any considerable rise in Christianization of the inhabitants. Pl.XLVIII, 1,3. The continued presence of the "eye-idol" type votive block, incense burners of earlier design, and the recovered "horned altar" all tend to support this view.

Among the recovered items of interest should be noted: the ostraca (R.I. 64, 65), the bronze cooking pot (R.I. 234), grinders, whetstones, whorls, and stone vessel fragments, cosmetic

items (R.I. 208, 20, 195, 169), cultic objects (R.I. 24,25,26,244,194), a hoard of cups, unguentaria and plates (R.I. 216-21, 222-24, 226-227), lamps and lamp fragments, ornamental bells, beads, tool fragments, one coin of Trajan commemorating his assistance in augmenting the food supply of Italy (R.I. 247), along with a hoard of coins (R.I. 329-414), generally from the reign of Constantius II which assist in the chronology involved. Pl.XLV,5 XLVI, 1,4,5 XLVII,1 LVI,5

1977: During this season bed-rock was reached in two sections (I.5 S, I.2), completing the stratigraphic sequence of the Area. The chronology of occupation has, therefore, been established from Nabataean (1st century A.D.) through E. Islamic (mid-8th century A.D.), with time markers especially at A.D. 355 and A.D. 747-48.

The Area produced totally domestic artifacts and architecture as in previous seasons. Among the former were: playing pieces (R.I. 2, 80), grinding stones (R.I. 6, 31, 104), tool fragments (R.I. 12, 17), spindle whorls (R.I. 14, 34, 159), beads (R.I. 16, 19, 119, 120, 121, 156, 157), plastering tacks, nails, and spikes (R.I. 26,29, 30, 79, 81, 132, 137, 143, 144), door sockets (R.I. 32, 138), lamps (R.I. 108, 109), juglets (R.I. 8, 201), coins (R.I. 4, 13, 14, 18, 19, 38, 41, 42, 44, 52, 54, 60, 61), cups and bowls (R.I. 93, 92), unguentaria (R.I. 95, 96), a figurine fragment (R.I. 111), and an associated group of bowls, jugs and cooking pots (R.I. 97, 100, 102; 94, 103, 140, 147). Recovered from the Hellenistic fill of a later building phase also came four Rhodian wine jar handles bearing stamps (R.I. 126, 127, 128, 129), in association with black glazed vase fragments. (Pl.XLIX,2-3). Architectural additions (floors, walls, foundation trenches, etc.) were also recovered for the plan of the successive occupations of this Area, along with additional data concerning building techniques, decoration, and every-day use.

Phasing

Although analysis has not been completed³, preliminary field phasing⁴, strongly suggests some 20 phases, with correlations to the ear-

³ Forthcoming as a Ph. D. dissertation, K. Russell, University of Utah.

⁴ Dr. P. C. Hammond/K. Russell, 1978.

thquake chronology established at the Main Theater in 1961-1962 and the adjacent temple site (Areas II-III) during the course of the present excavations. Ceramic and numismatic markers within this framework currently tend to strengthen the chronological conclusions offered below.

Phase II: Burial phase. Reuse of Area I as cemetery.

Phase III: Disuse Phase Possible use of Area as dump (?)

Phase IV: Disuse and Silting Phase.

Phase V: Occupation Phase (Transient).

Phase VI: Destruction Phase

Destruction of "Later House" structure.

Phase VII: Remodelling Phase- "Later House."

Phase VIII: Building Phase- "Later House." Filling, levelling and construction.

Phase IX: Occupation Phase.

Shift of occupation to SE sector of 1.2.

Phase X: Destruction Phase (ca.A.D. 355)

Collapse of Phase XI structure; associated with coin hoard, Late Roman "A" hoard and evidence of violent destruction (earthquake).

Phase XI: Remodelling Phase- "Middle House."

Phase XII: Building Phase- "Middle House."

Rebuilding, with destruction of parts of Phase XIII structure.

Phase XIII: Occupation Phase.

Shift of Area use towards W part of 1.5.

Phase XIV: Disuse and Silting Phase.

Phase XV: Destruction Phase.

Collapse of "Earliest House." Pl.XLV,4

Phase XVI: Rebuilding Phase- "Earliest House."

Phase XVII: Building Phase- "Earliest House." Pl.XLV, 1-4.

Phase XVIII: Disuse Phase.

Phase XIX: Occupation Phase.

Scant Hellenistic wares present; clay floor, pits and hearth.

Phase XX: Non-Occupation Phase.

Natural deposition of sand on bed-rock surface; no evidence of use.

AREA II/III

Excavation

The 1975 season completed the partially

excavated portion of Site II.3 and carried II.5 to the covering level of the first destruction phase. It was thus possible to secure a preliminary plan of the total structure at the conclusion of the season, as well as to secure the complete vertical stratigraphy of the temple interior. The additional 27 S.U.'s identified during this season also permitted clarification of the main building/remodelling phases which had appeared probable at the end of 1974, as well as additional internal phases absent elsewhere.

In 1976 work was completed in II.5 and the final sector of the temple interior (II.2). In order to examine the exterior wall of the structure at its highest remaining point, II.2 was carried to the West, beyond the SW wall line. Likewise, in order to examine the main entrance of the structure, portions III.8 and III.9 (designated III.SAS N and S) were opened. In addition, plane and topographic survey was carried out from the temple entrance area downward to and over the **Wadi** bed to the Paved Street in order to investigate the probability of an ascending monumental entry leading up to the temple complex. Archaeologically, therefore, the interior of the temple complex was completed during this season. The appearance, in the western portion of II.2, of a narrow room parallel to the "exterior" wall of the temple disclosed a far more complex architecture than had been previously apparent, as did the appearance of an arched sub-structure supporting that SW parallel room. Likewise, the apparent **absence** of any entry stairway on the exterior of the temple's main entry raised an entirely new set of architectural problems to be investigated.

The concentration of effort expended in the temple area during this season permitted the identification of 189 S.U.'s in the sectors excavated.

During the 1977 season the problems concerning the SW sector of the temple complex, as well as those associated with the design of the entire entry area, were given especial attention, with the opening of portions of II.1 and III.7 in the SW sector, along with III.8 and III.9 along the front wall of the temple. At the same time, the probable presence of structures adjacent to the rear of the temple--and possibly of cultic or administrative function--dictated the opening

of II.8 and 9 North of the rear wall of the complex. The southern sectors clarified the SW architectural features adjacent to the West wall of the temple, as well as disclosing the entry substructure as a whole. In the North, an entirely new complex of buildings was disclosed in close architectural connection with the rear wall of the temple complex, *per se*, which must be considered as an integral part of that structure.

A total of 258 S.U.'s were defined in the 1977 season in the 392 m² of area excavated. This brings the total of interrelated S.U.'s in Area II to 575, with about 688 m² now excavated or in progress.

Details and Cultural Remains

In contrast to Area I, the focus of Area II/III is obviously the temple complex, rather than the succession of phases subsequent to its building, use, and destruction. Further, no "occupational" sequences are substantively involved above the temple phases, as is the case in Area I. Hence major discussion of both details of excavation results and of cultural remains recovered will be concentrated upon the temple complex itself.

However, it is necessary to note certain details and certain cultural remains recovered in order to clarify architectural, decorative, and cross-cultural aspects emerging from the materials involved, as well as to support certain conclusions drawn from the cumulative data subsequent to the earlier preliminary report.

1975: With the exception of sherds, four molded lamps (R.I. 48, 184, 189, 197), a pendant (R.I. 149), a copper earring (R.I. 203), two beads (R.I. 21, 23), a bone tool fragment (R.I. 16), a stone pounder (R.I. 27) and a quantity of coins (mostly illegible), all from post-use phases, the majority of significant cultural remains recovered from Area II/III were, understandably, architectural, decorative, and, broadly, "cultic" objects from the build or use phases of the temple itself.

Among the latter were plaster affixes, floral (R.I. 7, 8, 9, II, 18, 205) and human heads (R.I. 3, 12, 85), including "tragic mask" types; fragments of felines from the altar pedestal capitals (R.I. 4, 5, 6, 208); fragments of plaster

sculpture (R.I. 1, 2); one fresco fragment showing a "putti" figure (R.I. 14); a great quantity of iron and copper plastering nails and tacks (R.I. 52-58, 60-71, 74, 76, 77, 87-91, 153, 157, 158, 160, 162, 174-180, 200, 202); and fixtures, generally in the form of lead strips (possibly curtain hangers?) (R.I. 38, 40-46, 86, 152, 155, 159, 161, 172, 223). Cultic objects or paraphernalia included a molded goddess figurine (R.I. 17), a fragment of copper (lamp?) chain (R.I. 210), tweezers (R.I. 211), a fragment of an Egyptian (locus-Athribis in the Nile Delta) funerary statue, probably placed in the temple because of the Osiris figurine still intact in front of the main figure (R.I. 13); a bell (R.I. 82); and an "eye-idol" block, unfortunately missing the upper register of its inscription, naming "the goddess" to whom it was dedicated by a named votary on the lower line of its inscription (R.I. 217).

In addition, an enormous quantity of plaster fragments were recovered, which further assist in reconstructing fresco moldings, architectural moldings and colours employed in decoration, along with certain "technological" materials showing how plastering, in particular, was done, the design of floor tiling, and ceiling techniques.

The 1975 season also provided more detail of the plan of the structure and of certain of its parts, clarifying certain questions still open at the end of the initial season.

1976: Archaeologically the interior of the temple complex was completed this season and future attention must be given to its entrance, side complexes, and the (probably related) structures directly to the North.

This season's excavations also provided answers to a number of architectural detail questions and raised a number of others to be resolved by future excavation. Most interesting, architecturally, was the discovery of vaulting below the SW side room adjacent to the West wall of the temple-- similar to that below the so-called "Hall of Justice" (Urn Tomb) on the West side of Jebel Kubtha. When this feature is related to the revetting on the East end of the temple, chronological implications are now apparent for cross-dating the Palace Tomb group on architectural grounds.

In the SW side room were also discovered a

row of stacked ashlar blocks, each bearing Nabataean letter (s) on their faces--probably indicating "work-in-progress" unfinished.

Likewise, the entrance to the temple is now seen to be relatively complex, with probable vaulting in that area as well.

The significance of the temple excavations in this season must also be appreciated from the point of view of new cultural contributions. In 1975, the Nabataean connection with the Arabian Peninsula and with Egypt was made through the recovery of inscribed artifacts related to those areas. In 1976 a further international connection was made via the fresco decorations (Site II.2.) In this case the connection is with the West, since the motifs of the fresco fragments recovered are "classical," in the sense of Graeco-Roman art forms and reflect the same approach as did the single "putti" figure shown on a fragment from 1975. However, the extremes of such motifs would appear to have been unacceptable locally, either originally or during subsequent remodeling of the building, and were pecked over and replastered. This may be the result of local artistic pride--or reflect a growing anti-Roman sensibility on the part of the population. In any case, the fact of the replastering of these particular motifs is culturally significant in the history of Petra.

The attribution of this temple to Atargatis (*sic!*) was further strengthened in 1976 by the recovery of a ring seal showing the nude goddess riding a dolphin (R.I. 99). This symbolism ties in with the dolphin motifs recovered on plaster niche moldings, the feline decorations of upper capital elements, and the votive block inscription of 1975 ("... the goddess of...").

In addition to the seal noted above, this season produced the usual collection of valuable (architecturally) fixtures in iron and copper, lead hangers, plaster moldings, shaped blocks and other architectural elements as did previous seasons. Better preserved plaster fragments, both painted and plain, were also recovered, along with a few fragments of more legible fresco panels. In addition, roof beam fragments, heavier copper fasteners (R.I. 137, 151, 210), floral and human affixes, two new types of votive blocks (R.I. 27, 152), fragments of a female

figurine (R.I. 93), a votive (?) warrior bust (R.I. 2), ornamental bells, a bronze lion affix (R.I. 87), more fragments of feline capital decorations (R.I. 1, 4, 52, 85, 163, 164), all added to the growing picture of the structure and its decoration. A great deal of detail on architectural technique was also secured (e.g. the applied column decoration- R.I. 240). Aside from the inscribed building blocks noted above, no inscriptional materials were recovered during the 1976 season, however.

1977: Site III represents the entrance area of the "Temple of the Winged Lions," the interior of which was completed in 1976, and is part of the probable monumental approach to the Temple from the *wadi* bed, some 125 m. in length, on ascending terraces.

Extreme architectural complexity, in terms of the entrance area to the Temple, was revealed in the Area: a forward platform carried on E-W arches, forward rooms pierced by doorways at each side, N-S arching, descending (once veneered) wall at least one marble stairway (on the W side) leading up along the walls of the complex from lower terrace levels. The presence of monumental (ca. 1.34 m. in diameter) columns in front of the main exterior wall was also demonstrated this season. Evidence was also secured of (ancient) clearing of internal debris resulting from the Temple's destruction, massive filling, and rebuilding of the frontal complex. Stratigraphic connections maintained throughout the four years of excavation will permit the chronological reconstruction of the complex up to the time of its final destruction in A.D. 747-48.

Although most of the artifacts recovered in this Area represent destruction debris from the Temple fall, they, along with sherds and architectural stone fragments recovered, assist further in the reconstruction of both interior and exterior aspects of the Temple complex. Most particularly of note among these were molded plaster affix fragments, mainly human heads (R.I. 23, 112, 113, 114, 152, 153, 154, 155, 184, 186, 187, 188, 189, 190), plastering tacks and nails (R.I. 25, 27, 142, 149, 150, 151, 166, 202, 203), and bits of statuary (esp. R.I. 163--a more than life-size toe in marble). One pavement slab fragment showed two Nabataean

letters (R.I. 181) and one fragment of dark red-painted wall plaster bore a Greek graffito (Pl.XLIX,1).

Of major importance in the above regard--and extremely valuable from the standpoint of local craftsmanship and technology--was the recovery of a painter's workshop on the floor of the vaulted SW side room adjoining the W wall of the Temple complex. That side structure had been found in 1976, but was not completely excavated. On its floor, near an entrance to the outer platform of the Temple complex, a hoard of pottery emerged, consisting of bowls (R.I. 36, 41, 42, 44, 48, 49, 50, 52, 54, 55, 59, 60, 61, 62, 63, 64, 65, 90), cups (R.I.37, 38, 39, 40, 43, 45, 46, 47, 51, 53, 56, 57, 58, 170), reused cooking pots (R.I. 68, 70, 71, 88), jugs (R.I. 66, 67), jars (R.I. 89, 91), small pots (R.I. 75, 76, 83, 84, 85, 86), a strainer-bottomed pot (R.I. 87), and funnels (R.I. 72, 73, 74). These were all completely crushed by destruction fall above them, but were *in situ* and were temporarily restored in the field for drawing and photography.(Pls.LIII,2-4, LIV,1-4, LV,1-4).

Even more rewarding than the fact of associated ceramic forms, however, was the fact that they contained the mixed paint-plaster pigments being used to refurbish the Temple decoration. Along with them was also a supply of raw, unworked pigment materials(e.g. balls of azurite and raw fibrous gypsum) along with a supply of 19 raw tile blanks in the (local) brown marble used extensively elsewhere in the Temple. Samples of each of the pigments and paint-plaster remains were taken for analysis.

Also recovered in the forward area were similar domestic artifacts and sherds belonging to the post-use period of the Temple--figurine fragments (R.I. 11, 198, 199), a lamp (R.I. 204), buttons/ornaments (R.I. 177, 178), coins (R.I. C8, 16, 22, 28, 39, 59, 62), and a pendant (R.I. 15), among others.

Two cast bronze handles (R.I. 205), also found in the forward area, may well have belonged to original door, main or otherwise, of the Temple, itself.

Site II.8 was newly opened this season against the North West wall of the Temple, in part to the foundation course of the Temple wall. The main feature uncovered was the

westward extension of a wall complex (most clearly defined in II.9 East), forming an adjunct building to the North of the Temple.

Aside from the destruction debris, the recovered materials from this site were generally (as in the frontal area of the Temple and in Site I) post-cultic occupational debris, resulting from casual ("domestic") use of the area after the destruction of the 4th century A.D. onward. Since the Temple fall line was toward the South-East, as previously demonstrated, little of its debris filled the area, but the adjunct building to the North contributed considerable stone debris which impeded excavation.

Recovered artifacts from this include: playing pieces (R.I. 1, 3), grinding stones (R.I. 5, 106,167, 175), a spindle whorl (R. I. 122), plastering nails (R.I. 131, 135), a weight (R.I. 161), a lamp (R.I. 180), a bead (R.I. 183), and coins (R.I. c9, 10, 11, 12, 30, 46, 47, 48, 50).

Site II.9 also represents a second one newly opened in 1977, adjacent to II.8 to the East, directly North of the Temple. On the extreme eastern side (II.9 East) the slope of the hill permitted excavation to reach the foundation level of the Temple complex--and the floor level of the adjunct building to the North. A series of complex cross-walls were explored, terminating at the North end in a corner with a podium set against one face. Flag floors and sub-floor drains were uncovered which further add to the picture of the architecture of this structure.

Once again, the majority of recovered materials were sherds, and domestic objects stemming from the post-Temple periods, along with fall debris from the actual use-period of the structure. Most obvious of the latter category were the number of plastering tacks/nails recovered (R.I. 24,28, 130, 133, 136, 148, 174, 176), along with wall plaster debris. In the former category was a bead (R.I. 9), pendants (R.I. 15, 23, 197), a grinding stone (R.I. 162), weights (R.I. 107, 146), lamps (R.I. 164, 165), a juglet (R.I. 200), and number of coins (R.I. 1, 2, 3, 5, 7, 20, 21, 26, 27, 29, 31, 33, 34, 35, 36, 40, 43, 45, 49, 51, 53, 55, 56, 57, 58).

Most important, aside from the architectural materials, however, was the recovery of a slightly larger than life-size statue head (R.I. 169). The break lines on the torso would indi-

cate that it probably fell *in situ* as a result of earthquake destruction and was not simply part of a fill. As a consequence, it is anticipated that the remainder of the lower torso may be below the destruction debris which broke off the upper part and may therefore be recovered in subsequent excavation. The break line at the neck precludes a decision at this time as to whether the statue represented a human (King?) or a deity. Should it be the latter, a cultic nature would also be established for the newly discovered northern complex--possibly in a *syn-naoi* relationship with the main Temple complex.

Phasing

At the conclusion of the 1974 season a tentative phasing of the temple area was put forward.⁵ In 1975 additions to the internal definition of that preliminary phasing were possible, along with final definition of the suspected building/remodelling stages then represented by Phase XV A/B. Subsequent to that season, no further modifications have come to light. The tentative chronological framework (especially concerning the use and destruction phases of the complex) originally suggested, with accommodations to the 1975 results, has likewise been strengthened by subsequent excavations. Additional S.U. equivalences have similarly strengthened earlier conclusions concerning phase function, generally by the addition of further cultural remains or by expanding the view of individual phases.

The succeeding seasons have, however, substantially advanced understanding and definition of architectural features of plan and markedly clarified certain of the architectural and decorative details involved. Likewise, recovery of certain cultural remains of a "cultic" nature have added to general understanding of the role of the temple, even if not the details of cultic practice, *per se*.

The following summary therefore represents the presently held phasing of the temple area, with additional data beyond that previously noted.

Phase I: Modern Surface.

No change noted from preliminary report.

Phase II: Disuse Phase.

The continued presence of architectural and

ceramic materials in this Phase--particularly as II. 5, II.3, and II.2 contributed to the makeup of it--reaffirms the effects of wash and erosion action seen also in Phase I, as noted in the preliminary report.

Phase III: Occupational Phase.

Additional S.U.'s in this Phase did nothing to change its original complexion from one of casual use, as previously noted. Sites II.5 and II.3, in particular, added to the quantity of ceramic materials previously encountered in II. 6--i.e. of the ribbed and plain store jar and cooking pot classes of the "Byzantine" period, with wares of light red-orange, light red, fine hard red, light orange, and black slipped orange-tan. Generally speaking, tan slips were preferred, along with a high occurrence of black slips. Other fire-pits emerged on the surface of this Phase, especially in II. 5, confirming its casual use as seen in II.6, previously.

Also recovered in this Phase were wooden beam fragments (again especially in II.5,) which showed obvious effects of fire, relevant both by that fact and position to the probable partial destruction postulated in Phase XVII below.

Phase IV: Localized Dumping phase.

No new evidence was recovered relating to any further clarification of this rather ephemeral "use" Phase and its previous description remains unaltered, since no additional S.U.'s could be associated with it.

Phase V: Occupational Use (Transient) Phase.

This Phase is the "cover" of the lower destruction debris, along with the phase below it, but its surface continued (especially in II.5) to indicate transient occupational use only (i.e. fire pits), without other significant indications.

The same (relative) decrease in the orange-red wares of higher phases was again evident, as were a few examples of black-slipped rim edges and continuation of the occurrence of the "wavy" combing patterns previously seen. The presence of "green" wares is to be noted in the additional extent of this Phase and for Phase VII immediately below the intervening destruction debris, which also shares the same characteristic ware. This relationship thus considerably narrows the total chronological difference between the two phases as well.

⁵ ADA, XX, 1975, pp. 6ff.

As a result of re-analysis of the partial stratigraphy of Site II.5, with the resumption of its excavation in 1975, the burial assigned to Phase VIII in the initial preliminary report, has been determined to have had its entrance in this Phase. Raising this burial to this Phase removes the possible explanation for the battered condition of the face of the skeleton, however, and possible frontal head blows may have to be postulated as the cause of death, rather than considering that defacement was the result of later fall damage as previously suggested. Since this Phase dates, ceramically, from the Byzantine period, location of this burial here presents no stratigraphic problem.

No change is necessary, also, in terms of the "industrial" nature of this Phase, as previously suggested.

Phase VI: Disuse/Silting Phase (S.U. makeup of Phase IV and V above)

No change is necessitated here from previous description.

Phase VII: Destruction Phase.

No change in either description or chronological set has been necessitated for this Phase. Additional S.U.'s from this Phase in II.5, II.3, and II.2 are composed of the same architectural debris as previously encountered and only add data for the reconstruction of the original building of the complex noted below.

Phase VIII: Occupational Use Phase (Transient).

With the exception of the removal of the burial previously assigned to this Phase (now to Phase V), no major change in ceramic materials was encountered.

However, the recovery of additional lamps (e.g. AEP 1975, R.I. 197), similar to that found in II. 5 in 1974, help to depress the use of this phase closer to phase X below (*cf* Horsefield's lamps of similar types and decorations, *cf* by him to Broneer Type XXVIII and dated to the 3rd/4th centuries A.D.; *cf* also the Beit Faijar lamps, 5, 10, 11, and 12, dated to first third of the 4th century A.D.). This would *increase* the duration of the use of this Phase, when compared with the suggested date of Phase, VII above. At the same time, the presence of "green" wares in this Phase, along with "wavy"

combing and other ceramic indicators, also suggests a relationship with Phase V above. This would suggest proximity in time, difficult to maintain stratigraphically and on the basis of the external markers (i.e. the datable earthquakes). Hence, it must be concluded that, although the datable lamps appear to establish ties of this Phase, chronologically, with the destruction date of Phase X, the other apparent ceramic links with Phase V above may indicate continuing technologies and decoration into later periods or, equally probable, indicate the intrusion of wares and decorations attributable to Phase VIII into the makeup of Phase V above.

Phase IX: Disuse and Silting Phase.

Additional S.U.'s in this Phase contributed no further changes to its previous description.

Phase X: Destruction Phase.

Again, the tremendous quantity of architectural debris of all kinds found in correlative S.U.'s during the succeeding seasons did nothing to modify previous characterization of the Phase nor its probable chronological set.

Phase XI: Disuse and Silting Phase.

This "floor" of the destruction of Phase X above produced larger cumulative quantities of ceramic materials with the extension of area, but no startling changes in their previous composition. However, more decorative treatments were able to be observed with the increase in quantity of sherds. Among these should be noted some incidence of "wavy" combing and some occurrences of "black drip" exterior painting, along with grey slipped wares, previously not encountered. These techniques further strengthen the chronological position suggested for Phase X.

The character of the surface of this Phase remained as previously described, further supporting the conclusion stated there that this Phase was, indeed, deposited *prior to* the destruction represented by Phase X above, but *after* a partial destruction (Phase XVII), during a period in which the structure was unroofed.

Hence, the materials recovered in the makeup of this Phase (Phase XII) and on its surface (Phase XI, *s.s.*) represent a combination of deposits (i.e. those imbedded after the fall of Phase X, or during it, and "belonging" to it, as

well as those representing the occasional dislodgement of elements during the build-up of phase makeup, along with wash debris).

That the temple complex was *not* totally destroyed previous to the fall of Phase X, as was also concluded in the earlier preliminary report, was further illustrated by the recovery of the Nabataean votive block (of the "eye-idol" type) noted above lying on the surface of this Phase (hence belonging to Phase X above). Had a previous destruction (other than that suggested for Phase XVII below) taken place this block would have been previously dislodged from its place in one of the North wall niches and would have rested at a lower level in the stratigraphy. Likewise, had partial destruction of the temple meant its desecration, prior removal of the block is also probable.

Phase XII: Disuse Phase-Building Open.

This phase must be postulated in order to account for the makeup of Phase XI above, as was previously suggested.

Phase XIII: Casual Use Phase.

In 1974, the single S.U. of this Phase then excavated (II. 6(34)) suggested that its non-fall related contents were too scant to consider as anything but a disuse period and it was combined with the S.U. below (II. 6(35)) into one such phase.

As a result of the 1975 season, however, further excavation modified that view and still subsequent excavation in later seasons confirmed the fact that the over-all phase had at least some casual surface use, on the basis of much greater non-fall related debris not able to be seen as simply wash material. At the same time, the other contents of the phase must be placed in the two latter categories and a dormant, silting, phase postulated to account for such materials.

Ceramic materials assignable to this Phase, include generally common crude thick and thin wares, plain and ribbed, from store-jars and cooking pots, especially. Wares were generally red, with tan, yellow and black slips. Late black painted Nabataean sherds also found here were probably intrusive wash debris, in the light of other evidences of date. Fragments of glass, bone, and shell also point to casual use of the surface, as do certain of the registered items.

Among the latter, the ones attributable to this Phase, *per se*, include the coin of Rabbel II and Gamilat, of the first five year mintage of that King, noted earlier; a coin probably of Elagabalus (A.D. 218-222), which may be close to the actual date of this Phase (1975 R.I. 94); two molded lamps (1975 R.I. 218, 168), the former of tan ware with a light tan slip, an unpierced knob handle, with raised lines around the nozzle and filler hole, decorated with vestigial volutes on the nozzle, slash decoration on the body and a six-pointed star on each side (*cf* Horsfield 239, *cf* to Broneer Type XXVIII, 3rd-4th century A.D.), the latter was of red ware with a light tan slip, a slightly elongated nozzle, raised lines around nozzle and filler hole, decorated with vestigial volutes with a center-line between on the nozzle and slash decoration on the body--both probably in the range suggested by Horsfield. The two lamps would place the probable use of the surface of this Phase in the early part of the fourth century A.D., quite reasonable in terms of the sequence above it and below it.

Not attributable to the period of this Phase were a number of architectural fragments, including registered items, which must be considered to have fallen during the silting and disuse period which built up the constituent S.U.'s of the Phase (see Phase XIV below).

As further evidence of the lesser destruction postulated in Phase XVII below, this Phase produced a quantity of ceiling plaster, recognized in the 1975 season and thereafter, along with geometric floor tiles from the "platform" floor whose surface was cleared in the 1975 season. The ceiling plaster fragments showed the impression of wood/bundles of reeds used as spanning elements. Some of these were cord wrapped in the fashion described by Vitruvius (*De Architectura*, VII, iii, 2) for the construction of curved ceilings. Paucity of spanning timber in any great abundance may well have been met at Petra by the adoption of this device even for flat plane ceilings.

Phase XIV: Disuse and Silting Phase (the contents of phase XIII above) As was noted above, the results of the 1975 season caused a change in the interpretation of the S.U. surface

and content, in comparison to the results of the 1974 season. Hence, this Phase was postulated to account for the non-“occupational,” non-fall debris recovered.

In any event, the comparative lack of weathering of architectural debris recovered in this Phase constituent S.U. build-up suggests a relatively rapid deposition of silt and no weathering period to be accounted for, even though the building was standing open to the elements.

Phase XV: Casual Use Phase.

Isolation of constituent S.U.'s into a separate phase here resulted from the discovery of five marks on the surface of II.3(104) in the 1975 season, although silt mixed with ash had characterized the make-up of II.6 (35) in 1974. Even with that surface evidence, however, the “use” of this Phase surface must have been extremely slight.

The material content of the Phase must reflect that use, but it also is the result of wash intrusion with silting, along with continued fall from the upper structural elements of the unroofed building. The latter are easily identified and will be discussed later, but differentiation, in terms of ceramic materials especially, of non-architectural material cannot actually be done in regard to “occupational” versus “wash” debris.

In any event, the ceramic remains recovered from the Phase as a whole were relatively scant, but included an increase of fine thin wares, common thin wares, and some light thicker common wares, both plain and ribbed. Red wares were predominant, with some light tan wares. Slips included red, tan, light tan and black. Some fine thin Nabataean wares in both red and black paint were recovered, probably indicating a date close to the transition in style.

Some bone fragments, including one worked specimen, glass, and shell were also recovered here, and probably belong to the “occupational” use of the Phase surface, as do some of the registered items.

Phase XVI: Disuse and Silting Phase (the contents of Phase XV above). This phase is just subsequent to the probably partial destruction of the structure (Phase XVII below), and thus represents the first silting in of the interior. The contents of Phase XV above, not assignable to

wash, as part of that silting, or to “occupational” use, therefore belong to this Phase, *per se*, and probably are mainly, if not all, architectural element fall resulting from the loss of the roof.

Phase XVII: Partial Destruction Phase.

Other than a change of number, necessitated by the insertion of the additional phases identified above, no new materials recovered modify the previous conclusions reached concerning its chronological set.

Phase XVIII: Remodelling Phase.

As a result of subsequent excavation, the tentative identification of a “remodelling” phase, following the original building and use of the temple complex, made in the first preliminary report was verified.

No change of plan or of internal parts is to be seen during this stage, but decorative changes were made. Some of these, at least, seem dictated by some sort of political reaction—possibly the increased pressure of Rome—rather than from actual necessity or even cultic austerity.

Most obvious was pecking of the surface of “classically” (i.e. Graeco-Roman) decorated niche fresco panels for replastering and repainting in solid, non-iconographic, colors. It was only in the 1976 season, when the area of II.2 was excavated and larger fragments of niche panels were recovered, that this specific remodelling step became clear.

Fragments of column plastering showing an originally fluted finish with subsequent overplastering to achieve a smooth surface (then painted) also began to be recovered to suggest more general “remodelling” than just that of the panels noted above. The painter’s workshop of the 1977 season may thus date to this “remodelling” stage, along with the lettered blocks found in 1976 along the W wall of the SW room. The partial destruction postulated for Phase XVII may have interrupted this work, accounting for the hoard of work materials found stored in the SW room, or that material may simply be continuing “maintenace” supplies dating closer to the time of Phase XIX below. No significant data were recovered subsequent to the completion of the 1974 season to

modify the tentative date of this "remodelling" as suggested earlier, however.

Phase XIX: Main Building Phase.

Likewise, the conclusions of the first preliminary report in regard to the possible dating of this phase to the reign of Aretas IV have not met with any conflicting data recovered in the subsequent seasons. The arguments put forward at that time appear to continue to be acceptable.

What *has* undergone subsequent modification, however, are the *details* of this Phase in regard to a more complete plan and more definitive identification of architectural parts, function, and form.

Plan

Fortuitously, as was noted in 1974, the layout of the excavation grids coincided with lines (and limits) of the structure, so that the East and West walls, with their exterior, followed the N-S excavation limits of II.3, II.6 and II.5, while those of II.5 and II.6 similarly coincided with the North wall of the structure, while II.3 and II.2 covered the southern wall line and immediate frontal exterior. Since the structure is symmetrical and square this exposure permitted a reconstruction in 1974 of almost all of the building plan, with the exception of the forward part of the central interior build which was obscured by a baulk, subsequently removed in 1975. Moreover, by staggering the depth of excavation possible during the 1974 season a complete vertical view of the stratigraphy of the area had been able to be secured. At the same time, certain questions remained to be stated and specific emphasis was made upon them during the excavation of the remaining parts of the structure in 1975, 1976 and 1977 in order to resolve them.

Additions to the plan were therefore made, as well as revision of certain tentative views held concerning plan, architectural techniques, and decoration in the initial preliminary report.

The original dimensions (17.42x17.42 m.) given for the temple apply to the *cella*, with the entry portico extending about 9.58 m. beyond the front wall.

Traces of double wall lines, running N-S, descend the slope of the hill on which the temple

rests for another 85m. A cross wall, within the inner set of descending wall lines, appears about 35 m. down the slope, with a narrower cross wall (?) about 2.2m. from the front wall of the entry portico.

Thus far, one side room, with its own exterior wall, has been found on the W side of the main structure. This is carried by arches, with a sub-basement room was blocked, in antiquity, from the N, against one of the supporting arches, and has not yet been excavated. A parallel room and sub-basement appear probable on the (as yet unexcavated) E side of the main structure also.

The floor of the entry portico appears to have been carried by arches running parallel to the E-W line. Two doorways (the one on the W having been subsequently blocked) open into the forward wall of the portico area.

One (only) fallen column, some 1.35 m. in diameter, with relatively short drums (to assist in reducing weight for handling?) lies near the main entry of the temple, on the W side, and suggests that the portico contained another on the E side (of which nothing can be detected), flanking the main entry.

No stairway from portico floor to the threshold of the main entry to the temple has been found, suggesting that it may have been originally carried by arches, ascending toward the entry door, as is the case at the "Hall of Justice" tomb on the West face of Gebel el-Kubtha.

Initial traces of a marble faced and treaded stairway were found in 1977, rising parallel to the exterior wall of the SW side room. This may have given access to both the top of the slope and the presumed main entry cross stairway.

Traces of columns along both of the wall line pairs leading up the slope from the *wadi* suggest that these walls were double colonnades, not full fence walls.

Behind the main temple structure in the N, a new complex was found in 1977, with integral connection with the temple proper. On the E side, where fall and other debris is sloped lower, a series of small rooms connected with the rear wall of the temple. The presences of bolt holes in the temple side of one of these rooms confirms the connection. The area E of these rooms was paved, probably forming a corridor, if the

side colonnade walls actually continue all the way up the slope. A sub-floor drainage system kept this area dry, as well. Continued excavation of this northern area is expected to define both extent and nature of the new complex.

The relation of the "monumental" colonnades to what appears to be a bridge springing across the *wadi* is as yet unclear. The latter would seem to be disaxial to a central N-S line through the main entry of the temple on top of the slope, but this may simply suggest a narrow pedestrian bridge, on the East side of the colonnade line, by which the *wadi* was crossed to reach the colonnade itself. A stairway leading up to the badly disturbed top of the presumed springing platform gives credence to the function suggested for it.

Walls.

The coursing of the main walls of the *cella* stand as originally described, but the inset-outset noted in the earlier preliminary report refers only to the NE and NW corners of the building.(Pl.LII,2.). The exterior face of the *cella* walls continued to be extremely well coursed and finished as it was further exposed. On the W side, however, definite evidence of plastering was found—probably since that "exterior" face actually formed one of the side (interior) walls of the SW room.(Pl.LII,3.)

The basic building technique continued to be that originally described, with the front face of the *cella* showing variation in build below the probable level of visibility (i.e. behind the suggested stairway arrangement) and with *crustae* holes appearing all along the (visible) face.

Internal Plan.

The identification of the interior wall niches, each flanked by semi-engaged column, made in 1975, was further clarified as the I. 5 and, especially, I.2 sectors were excavated.(Pl. LI,2). On the W side the walls had been preserved to a greater height and the niches were more visible.

As a result of the improved state of preservation found in the I.2 sector, the interior decoration of the niches was clarified. Each had a border molding around a flat panel, all done in applied plaster. The SW niche in the S wall showed faint traces of a bordered (painted) male (?) bust executed in a smaller panel within

the larger fresco panel face. Fragments apparently belonging to the SW niche of the W wall showed a scene or scenes of male and female figures in classical (ritualistic?) poses, comparable to some Pompeian examples.

The probable role of the niches, aside from architectural decoration, as loci for votive materials is also now more apparent, with the recovery of the fragment of the Egyptian funerary statuette and the virtually complete Nabataean block—both of which must have come from a position on a niche ledge in the vicinity of their find spots. In addition, the fresco fragments found in 1975 (e.g. the *putti* fragment), along with the decorative motifs (e.g. dolphins) of the niche frames, also point to a *cultic*, as well as architecturally decorative, role of these recesses.

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Below the SW corner niche on the W wall was a bench-like installation (asymmetrical to the E side!) whose purpose is unclear and which may have been a later addition, perhaps during the "remodelling" phase.

The internal column treatment described in the earlier report was unchanged after subsequent excavation had cleared the entire *cella*.

Altar Pedestal

In 1974, a "platform" had been partially uncovered in the *cella*, which clearly emerged as an altar platform /pedestal after excavation of the interior was completed.(Pl.LI,3). This platform was set off by columns engaged to the height of the platform and free-standing above its floor. These columns are line-positioned between the free-standing columns of the *cella* on the E and W sides, but not on the exact setting lines of the engaged semi-columns of the wall niches. This was apparently necessitated by the platform plan, *per se*, and resulted in some visual distortion.

Intercolumnation distances varied along the East and West sides of the platform to accommodate the columnar placing, i.e. North to South—1.23 m., 1.16 m., 1.18m. Columnar setting along the North and South ends of the platform was further interrupted by the entries to the sub-floor crypt and stairways on those

sides and again resulted in dislocation of position in regard to the semi-columns of the niches, although with less of a visual distortion apparent. Intercolumnation distances on the North and South end were, from East to West—1.40 m., 2.08 m. and 1.40m.

The ashlar faces of the platform, when completely cleared, showed typical diagonal dressing and were undoubtedly plastered and probably veneered with *crustae* as were the main interior walls of the building. The columns of the platform all also showed diagonal dressing for keying plaster.

A local brown marble was used for the base rings of the platform columns and were about 25% narrower than the white marble base rings used elsewhere in the structure.

Because of destruction (in Phase X) of the floor of the platform at the North end, the presence of a sub-floor “crypt” was first recognized there and excavated in 1975. (Pl.LI, 4). Considerable stratigraphic confusion was introduced to the interior because of the floor destruction and consequent siltings (Phases XVI-XI), but that affects only artifacts and not structure.

The open crypt at the North end of the platform originally contained three flat shelf-like slabs, set one above the other, each measuring ca. 80 cm. x 38 cm. These were supported by slabs, set on their narrow edges, with the highest one (destroyed by fall debris) inset slightly from the other two. The side walls of this feature were of relatively well-laid blocks, some diagonally dressed (indicating plastering?), but poorly bonded at the joints. At the “entrance,” there appears to be an inset cut for a door on each side. II.5 (115) marks the floor of the crypt, with an under-floor build consisting of S.U. (116), of rough flagging, with (117) and (118) serving as under-fill. These must correlate with II.3 (106) + (107) + (108) + (109) and II.6 (37) + (38) + (102), which are all the floor and sub-floor build of the main structure. No door or other closure was found *in situ*, but six shaped slabs, found in II.6 (35) and II.5 (112) may possibly represent the remains of the original crypt closure (?). Four (in II.5 (112)) of the fragments make up a thin slab with a circular hole off-set near the edge, the other two (in II.6 (35)) consist of part of a similar slab, with a

counter-sunk hole and a heavier slab with a long “tang” or “post” extending from one edge. The latter slab also has a rectangular recess cut into its wider portion. The dimensions of the “tang” or “post” (ca. 12 cm. x 12 cm.) conceivably could have fitted into the circular openings in the one or both of the two flat slabs (ca. 12 cm./15 cm. diameters), but no certainty of relationship can be established at this time. The “entry” opening was about 1.12 m. between the upright inset cuts, but the tanged slab measures only about 69 cm. wide and a second slab would have been necessary to span the opening, although no other similarly shaped stone was recovered.

At the southeastern end of the platform a stairway emerged in 1975 and another, on the southeastern side, in 1976. Although badly damaged, the stairways each consist of three steps, with plastered treads and backs, leading from the main floor level to that of the platform, occupying the entire intercolumnar distance between the side and front columns at that point. Since this feature is lacking on the North end of the platform, access to its floor level must have been from the South side only. On the southern side, a marble floor slab was found, next to the lowest riser of the stairway on that side, which had a semi-circular groove and a post hole, indicating a gate across the stairway. Traces of iron stain probably indicate an iron gate or one with an iron rod or pin as a pivot.

The destruction to the platform floor and crypt disclosed the internal build of the structure to be similar to the main walls--i.e. external (finished) ashlar blocks encasing cement-laid rubble.

The find spots of certain of the “winged lion” capitals or fragments thereof--i.e. adjacent to or between platform columns--strongly suggest that **only** the platform columns bore such capitals. The total number of such fragments recovered would seem to be confirmation of this use of the motifs. (Pls. LVIII, 1-2; LIX.)

As was noted above, the disturbance within the crypt interior, caused by the earthquake destruction and fall of Phase X, renders suspect the actual provenance, stratigraphically, of artifacts found within the silt deposits (II.5 (112), (113), (114) and even possibly those of

(108). Since the silts could not have been laid down prior to the destruction of the platform floor, they belong to Phases XVI-XI and their contents should be so assigned. However, it is also possible that certain of the recovered artifacts can be assigned to the crypt interior, on the basis of type or intrinsic date. Among the latter, it is suggested that fragments of a copper tweezer (1975 R.I. 211) and possibly a short length of chain (1975 R.I. 210), possibly from a lamp hanger (both identified by the Recorder, F. Xaiz, after cleaning) many belong to the crypt as part of ritual paraphernalia. A handle and a flat hook (1975 R.I. 216) formed of an iron core overlaid with copper, may likewise be seen as *in situ* (II.5 (114)) and may have functioned as the latch to crypt closure. A minute fragment of gold leaf (1975 R.I. 212), two illegible, but probably Nabataean coins (1975 R.I. 220, 221) and two coins attributable to Aretas IV (unusual series) (1975 R.I. 222, 224) can similarly be seen as probably *in situ* by nature and date. A number of brown spotted cowrie shells found, pierced for hanging or stringing, could also be considered as *in situ*, and presumably served as chimes. Other materials, largely consisting of architectural plaster and stone, along with a few bone fragments, and Nabataean black painted sherds, are seen as intrusive, i.e. belonging to the silting phases in the post-destruction period between the two earthquakes.

In view of the clarification of the over-all building use during the 1975 season, the purpose of the platform likewise was clarified. There can be no doubt that this structure represents the same "altar pedestal" feature as that found in the temple at Et-Tannur (N. Glueck, *Deities and Dolphins*, 1965: Pl. 101 a-b, p. 225; Pl. 110 b, p. 235). On the basis of the lead fixtures found in higher destruction fall levels, it may also be that the platform was partially curtained, being lit by hanging lamps (?). Since no "sacrificial" paraphernalia or installations were recovered, the manner of its exact use is not able to be determined. However, movable cult equipment and /or a cult image would have undoubtedly been removed (along with similar materials in the crypt) after the burning of the roof, postulated for the evidence of Phase XVII. Thus far, the platform floor has not revealed

any traces (i.e. wear, scratches, etc) of movable equipment, but its disrupted and robbed condition probably explains the lack of such evidence.

Free-Standing Columns

As was previously noted, the free-standing columns creating the double bays on each side of the interior were drum-built, of a reddish sandstone. The height of individual drums varied rather considerably--from 23 cm. to 72 cm.--but averaged about 45.6 cm., with a maximum of six drums (as far as recovered data suggest). In the only case of drum fall closely associated with a partially standing column (column (10) in II.6, recovered in 1974), the column height, less capital, appears to be about 2.87m., the double capital segments bringing the full height to between 3.62 and 3.65 m. Drum diameters appear to have been of two ranges: 65 - 66 cm. and 58 - 59 cm. As yet, no basis, architecturally, can be offered for the range variation and all may have been adjusted to one size via subsequent plastering. Since recovered capital segments appear to have a join diameter of 68 cm., it is assumed this was the final diameter achieved.

After further excavation, it now appears that intercolumnar distance (unplastered drum to unplastered drum, not base to base) was 1.75 m. for the free-standing columns, and 1.71m. between those and their facing engaged semi-columns on the walls. The asymmetry of the spacing of the North and South end platform columns has been noted above. Taking into account the base rings and final plaster coats, the free-standing columns were therefore set at roughly two diameters apart. None of these distances however actually respond to any exact multiple of the column diameters, even when the intercolumnar distance is reduced by the subtraction of adjacent base ring (36 cm.) diameters. Yet the regularity observable *does* suggest some intentional unit involved. Pl.LI,5.

Subsequent to the 1974 season more drums were recovered with the roughly rectangular cuts in tops or sides noted then, indicating even more certainly the use of the pulley for raising them into position. Such recesses were all covered by subsequent plastering, as were other

irregularities in the drum surface or joins.

As was discovered in 1974, and reaffirmed in subsequent seasons, the original plastering of the columns was worked into a flat-fluted surface, with 2 cm. flutes separated by 7 cm. valleys, resulting in the 24 flutes set by Vitruvius (III. V. 14) for the Ionic order in conventional form. (Pl. LXII,1). This coat was then painted in blue and yellow. A second plastering (during Phase XIX) covered the fluting and produced a smooth surfaced column which was painted in blue and black, or with red diagonal lines. Fragments of rather involved floral-type applied designs on column plaster were recovered in 1976 and 1977, suggesting that at least some of the columns (possibly those of the altar platform?) were so decorated. The designs were traced in red paint on the smoothsurfaced columns, and then additional plaster was applied over the guide lines. (Pls. LXI,2; LXII,3). Since no examples were definitive, it cannot be said whether this was part of original or later decorative treatment in terms of phases involved.

Engaged Semi-Columns

Flanking the niches were the engaged semi-columns noted above. (Pl.LI,1, 2, 6.). These were formed, in many cases, by rounding the faces of actual wall-build blocks, thus serving as part of the wall construction, as well as decorative features. A number were also composed of partial blocks, the result being neatly hidden when the surfaces were plastered.

The average drum height of these semi-columns was about 34.2 cm., which is probably to be explained by their greater bulk (i.e. and hence the need for reduction of handling weight) and the need for them to fit into the coursing of the walls of which they constituted a part.

“Bases”

The “bases” of the free-standing columns, the engaged semi-columns of the platform, and of the engaged semi-columns of the wall niches, were produced by affixing two or more partial rings or collars around the bottom of the lowest drum of each column and cementing them in place. (Pl.LI,5). These elements were of white local marble for the free-standing columns and of a dark brown marble for the platform col-

umns. The latter were also about 25% narrower than for the aisle columns.

This device would seem to be unique to this structure.

Capitals

The seasons following that of 1974 have permitted securing a more definitive view of the capitals of this structure. Basically, they are all similar in execution to those elsewhere at Petra and at certain other sites, with especial affinity to those of the first story of the Khazneh Far‘un -i.e. combining the acanthus and volutes of the (Nabataeanized) Corinthian order, as earlier noted.

The complexity of the upper elements of recovered capitals from the temple was noted in the first preliminary report; but subsequent examples have permitted a detailed analysis of the styles (A and B) involved (Hammond, **BASOR**, 226, April 1977, pp. 47ff.). Further excavations also suggest that the altar platform was the locus for the less frequently occurring (and more ornate) B type.

Floor

The main floor of the building was paved in local marble paving tiles, white and brown-banded, set in cement, with a secondary sub-build beneath (rubble and flagging), set in clay. (Pl.LI,5, 6.). Although most of the floor was robbed away (probably very soon after Phase XVII), the thick cement has preserved the general pattern. The tiles vary somewhat in size, but measure some 63 cm. x 86 cm. on the West side, reducing in size toward the East side. The pattern is straight lined, with curved cuts made for abutting the columns, but with both the base rings and wall **crustae** cemented to the floor surface.

The sub-floor build levels have produced interesting mixtures of architectural and ceramic debris, wherever examined, indicating that building trash was simply incorporated into the floor sub-building operation. One section of the floor still intact produced hollow sounds during excavations (II.6)-- which were (illicitly!) “investigated” following the 1975 season. Although subsequently relaid, a report (B. Bowman) on that portion of the sub-floor area revealed conventional methods of sub-floor construction, already partly known from the

excavations -- i.e. clay and rubble bedding, with or without sub-floor slabs for the marble floor tiles. Timber being scarce in Petra, that nicety of Vitruvius was ignored, since sandstone slabs set on clay would have served the same purpose for providing "resiliency." A sub-floor drain, constructed of flat tile work, was also uncovered by the illicit digging and is similar to that found in 1977 in II.9.

Doorway

The main entry doorway area of the South end of the building measures about 4.36 m. in width. Such a width probably necessitated double--or folding--doors.

Crustae

In view of the relatively shoddy interior build of the structure, interior decoration must have completely covered the ashlar construction. It was originally (1974) felt that entire decorative technique was that found in the Main Theater--i.e. marble **crustae**. However, in view of the preservation of portions of the interior of the South and West walls found in the course of excavations this view is modified.

Remnants of **in situ crustae**, recovered in 1974 and again in subsequent seasons all were found bonded to the side walls only at floor surface level. On the evidence of exposed walls, therefore, it is evident that plaster, rather than **crustae**, was liberally applied from about 12 - 13 cm. above floor surface level.

Hence, it is now suggested that **crustae** were employed only as a baseboard molding, with the rest of the height of interior walls completely finished in plaster.

The **crustae** were, however, affixed in the same manner as at the Main Theater, namely by laying the marble against a thick layer of plaster covering the ashlar surface, and pinning the **crustae** in place with copper fixtures. Contrary to the situation at the Main Theater. However, few fixtures have been recovered at this structure, although the notches in **crustae** sides, discolored by copper oxide stains, indicates the similarity of methods.

The view offered in 1974, that extensive robbery of marble **crustae** took place following the destruction of the roof (Phase XVII) must therefore be modified in terms of gross diminution of quantity of **crustae** involved.

The **crustae** beddings of plaster would suggest lengths of some 120 cm. to 180 cm., allowing for slab widths similar to those used at the Main Theater. **Crustae** thicknesses, continuing to average about 1.7 cm., in recovered examples, were slightly thicker than at the Main Theater.

Vertical Moldings

In 1974, gaps in plastering residue were obvious along the East and, as far as uncovered, South wall lines in II.3. These were then seen to indicate the probability of vertical moldings, presumably also of local marble and presumably having suffered the same fate as suggested for the **crustae** following Phase XVII. The gaps varied from 6 cm. to 13 cm., not unlikely for applied stone moldings.

However, when the South interior wall face in II.3 was fully revealed in 1975, and the rest of the West interior faces were revealed in 1976, modification of viewpoint again is necessary. As far as can be seen from the few places where the "gaps" were first noted, these are merely breaks in plastering caused by the shifting of the ashlar masonry during the first earthquake period, and were originally filled with the finished plasterings of the whole interior wall face. That these gaps are all remarkably straight suggests that a vertical molding, in plaster, was applied or affixed, in the final plastering coat decoration. This possibility is confirmed when the "molding" against the South-east corner of the South wall interior is compared with the "gap" in the niche area adjacent to the doorway, to the West.

Ceiling

Following the 1974 season, as noted above, the discovery of building plaster with the molds of reed-like bundles, some string-tied, disclosed the presence of a plastered ceiling, otherwise unidentifiable in the debris of other architectural plaster remains, but completely in keeping with known techniques of this period.

Interior Stonework

The "concave-sided" blocks, "bevelled-ended slabs," and "L" shaped blocks, which proved so enigmatic as to function in 1974 were all clarified as to use following that season--namely as bearers of **plaster** decoration.

Likewise, occurrence of such blocks remained primarily in Phases V and VIII, evidencing probable height above the floor level--hence indicating such blocks as carriers for upper decorative elements above the capitals.

Although the plaster had fallen off in most cases of such speciality stones recovered, two examples initially provided the necessary data: one "bevelled-ended slab" was found with a molded egg-and-dart (tongue) molding; and one "concave-sided" block was recovered with plaster dentils still in place. Both examples were found in the 1975 season and subsequent season provided further ones.

Presumably, also, the "L" shaped blocks served a similar purpose--as a carrier to one or more types of (plaster) decoration. Blocks with plug-holes had been recovered in 1974, but subsequently, examples were found with plaster and plaster (molded over wood?) plugs still visible. Thus it is clear that the "speciality" blocks, along with plain interior ashlar, served as carriers for the lavish interior plaster decorations of the building.

Plastering Fixtures

As in 1974, succeeding seasons recovered large quantities of iron and copper nails and tacks, mostly fragmentary, used to key plaster to ashlar. The distribution difference, noted in 1974, continued, with the copper plastering tacks primarily in the two earthquake cover phases, whereas the more plentiful iron fixtures, although heavily concentrated in those two phases, were distributed through phases XI, XIII and XV, as well. This underlines the fact that the former are to be related to more delicate plaster applications, as their size also suggests, while the iron was employed to key the heavier frieze / *fasciae* plaster elements not affixed by the plugs noted above. Likewise, the susceptibility of copper to oxidation probably caused an apparent loss in sheer numbers of recovered specimens, as the specks of green in the cover S.U.'s of the second destruction debris clearly attest.

Tesserae

The presence of *tesserae* in rather prodigious quantities, especially in II.5 (from S.U. (9)

downward to (11)), is totally anomalous, but the distribution spread, as noted in 1974, still is seen to provide a possible explanation, namely, a result of the "casual use" of the area as a quarry for (later) constructions in the Byzantine period. Although tessellation is part of the decorative approach to the floor of the platform (hence in S.U.'s (107), (109), (110), and (111)) the vast quantity of *tesserae* recovered cannot be accounted for from that floor, nor could their heavy occurrence in the post-destruction S.U. levels higher.

Pavement Slabs

Pavement slabs recovered in excavation must now, as a result of subsequent excavations, be differentiated between floor and "platform" paving sources. Excavation of the latter showed the same type of paving stone as that found earlier on the actual floor level of building, although with the addition of geometric variations from floor tile (i.e. triangles, especially). The possibility of misidentification of the latter was acknowledged in 1974 and now ascertained.

Roofing

As was noted in the discussion of Phase XVIII above, it would be reasonable to suggest a conventional roofing of this structure on the basis of evidence recovered. Ash, charred stone, charcoal, and (in 1975) charred beam members and *tegulae* along with structural masonry (II.3 (11), II.5 (12)) now recognized as probably beam supports (i.e. with grooves along their width) all point to that conclusion

Tegulae

Roof tiles continued, in succeeding seasons, to be low in occurrence in recovery and continued to be found in the cover S.U.'s of the two destructions. Hence, the conclusion reached in 1974--i.e. that the postulated roof damage in Phase XVII resulted in the fall and "reclamation" of *tegulae*--remains. The fragments found to date were between 3.1 cm. and 3.5 cm. thick, with the usual right-angle upturned edge for overlap laying of the roofing cover (cf. Hammond, 1965, Plate XXXIX, 5, 6).

Drain Pipe

Following the 1974 season, the distribution

of fragments of recognizable drain pipe makes it reasonably certain that their location must have been as part of the roofing of the building, and not part of any floor drainage system. As previously noted, they are similar to drain piping found elsewhere at Petra (the Siq, the Theater) and cannot have served any other purpose here. Their occurrence continued to be high, especially in the Phase V debris (i.e. actual debris from the destruction of Phase VII in the 8th century A.D.), confirming the 1974 attribution. Similarly, their occurrence in Phase VIII (the actual fall debris of Phase X) also remained high, offering still further confirmation of that attribution.

Ashlar

General, unspecialized building stone continued to be encountered primarily in the two fall-related cover phases (V, VIII). As a result of other indentifications made in 1975, noted above, less confusion now exists in terms of the identification of wall ashlar, roof beam supporting ashlar and trabeation and other special internal wall blocks.

Entablature / Exterior Wall Decoration

The architrave and upper elements of the order of this building presumably would have been of stone, of which at least a few remains **should** have been recovered, especially in II.5 and II.2, following the direction of fall. Few (e.g. carved decoration elements) were actually found, however, and it must be tentatively concluded that the exterior was possibly left plain, with architectural decoration left to the interior only, aside from marble veneer over the front (South) exterior wall face

Interior Decoration-Plaster

As has been noted, the major decorative medium employed within the interior of the building was plaster. Here use and architectural ordering must be combined in discussion for the sake of clarity.

Considerable variation in plaster quality was encountered during the 1974 and the succeeding seasons, as would be anticipated. Masses of rather crude architectural (i.e. building) plaster were recovered, often contaminated by the charcoal residue of the firing

of the raw materials, along with pebbles, grog (pottery sherds), straw marks, and other impurities. This plaster formed the base coats or fill for the successive layers (2-3) of finer "finishing" plasters which were the bases for painted decoration. Pl.LXI,3.

However, a number of aspects may be noted at this points, as a result of the cumulative body of materials recovered, in addition to the discussion of fragments made in the earlier report.

a) **Niche frames.** Contrary to the view held in 1974, it became apparent in the succeeding seasons that the wall niches were decorated with plaster, not **crustae**. This decoration consisted of molded border frames and interior panels. The frames consisted of a series of flat bands with quarter and half-round moldings. These were apparently painted with a relatively fixed order, from outside to interior edges:

fascia in blue

ovals in red

torus in red

cavetto in blue

wide fillet in white (?) /gold (?)

fillet (?) in blue.

The cavetto appears to have carried at least two painted motifs--dolphins flanking a chalace, and "flame" or "tongue" geometric decorations. In at least one case both appear, with the "tongue" motif on the **fascia**. Eye-and-rhombus "hearts", "sawtooth," "gralands," floral motifs also occur.

All motifs were generally outlined in black, using the base color of the molding element as interior color, with or without additions. However, many variations in color usage appear in fragments recovered including white outlines and red outlining of motifs.

b) **Niche frescoes.** It would appear that, although a single color might even been used to fill the rear wall panel of a niche (e.g. red-11.6 area especially; 11.5, 11.3 - dark blue), in the original building period (Phase XIX) and certainly later (Phase XVIII), floral and other motifs were also present, including "**putti**" types, which can be referred to the "Pompeian IIIrd Type" seen at EL-Barid, the "ritual" scene type (also Pompeian style), and simply framed busts (as on the SW wall).

Some fragments were recovered showing faintly incised (scratched) outlines, which may

have been the result of a “master-apprentice” type of painting guild or school at work on the Temple decoration (e.g. II.3 (101-3), II.6(34)), in the same vein as the tracing of designs for applying plaster decorations on the columns.

The possibility also exists that some relief work was present--but whether in the niche panels or elsewhere cannot be determined (e.g. II.3 (103), II.6 (22), II.5 (110)).

The niche framing was a unit with the panels and, on the exterior, formed a continuous finish coat over the semi-columns on each side. Hence the gaps noted in 1974 must have been the result of the plastering technique and not recesses left for applied stone moldings, as noted above.

c) **Cornices.** Since a tremendous quantity of cornice-related elements on plaster were recovered, it is possible now to suggest that a number of cornices were involved in the interior decoration--i.e. at the ceiling level, probably at the altar platform level, and probably at the top of the niche level. This would seem to be indicated by the presence of at least three size categories of molded dentil elements and related egg-and-dart (tongue) elements, along with painted varieties of both **and** variations within that category. In addition “double dentils” (lengthwise) were also recovered, in molded and painted types. Large molded dentils were recovered in II.5; painted varieties were recovered in II.3, II.6, and II.5; large egg-and-dart fragments were found in II.6 and II.5; painted varieties appeared in II.3, II.5, and II.6; and corner fragments were recovered in II.6.

Variations in sequence of moldings were observed, as well, further suggesting a number of such cornice levels. Egg-and-dart motifs appeared in connection with dentils and with decorated **fascia** bands.

Affixed egg-and-dart elements were also recovered, including one showing traces of a copper fastener.

All of these elements were affixed to their carrying/ support stones, sometimes by means of the same “plugs” used to affix molded heads.

The colours of all of these elements were extremely tender and fugitive, with the result that some recovered fragments displaying no

paint were probably painted and had lost their colour.

Gilding was also in evidence on a number of elements, but it, too, was extremely tender and fugitive.

Rather hasty work was also observed, and in actuality, the painted dentil and egg-and-dart elements may be a result of expediency or haste in completing the interior decoration, but appears elsewhere.

In addition to the more common reds, blacks, and blues, other colours appeared, including green, tan, brown, fuchsia, orange-red, light blue, brick-red.

d) **Affixes.** Affixes in plaster had already been recovered in 1974 (fragments of molded “tragic masks”, floral and leaf fragments), to which succeeding seasons added a number of molded head fragments and a large number of floral fragments. More of the “plugs” used to affix these additional decorations have also been recovered. The specific locus of these affixes on the walls is still in doubt, but **fasciae** bands above the columns would seem to be reasonable locations, particularly in view of the probable “Doric” nature of the cornice remains (i.e. dentils/ mutules with egg-and-dart astragals, wide **fasciae**, dentils/ guttae and lower fillets). (Pl.LX; LXII,2, 4).

Summary

The seasons succeeding the 1974 excavations have clarified the stratigraphy of Site I and contributed considerably to the quantity of cultural materials recovered. Most especially in this regard the quantity of ceramic materials from strictly controlled stratigraphy will contribute greatly to an understanding of the ordering of such materials in this part of Coele-Syria. It is anticipated, also, that the contributions of originally “Nabataean” potters into the Late Roman period (“Byzantine”) will be able to be appreciated for the first time.

In the area of occupation history Site I has shown that the Roman occupation of A.D. 106 did **not** materially alter the lifeway of Petra and that a relatively high standard of living persisted. In addition, evidence is now much more firm for suggesting that the population level at Petra continued to be fairly high through the Later Roman period.

Still further, both the site strata and the later burials recovered from this site contribute new insights into the religious history of Petra. The lack of specifically Christian indications in both the burials and the cultural remains from occupational strata suggests a very attenuated form of Christianity was present at Petra. Rather, the recovery of "eye idols" and house altars, the absence of Christian iconography, and the lack of Christian small finds, all suggest that some form of the original cults of Petra appear to have continued. Likewise, from the lack of any clear evidence of destructions present, it would also appear that conversion or accommodation to Islam took place with a minimum of local resistance, as well. The implications of this, for the continuation of (originally) Nabataean-inspired ceramic and other artistic elements into the Early Islamic period, are also made more possible, if not actually probable.

The contributions of Site II are of an equal value, in terms of the cultic history of the Nabataeans. The fact of the temple, its decoration, its plan, and the material remains recovered from its use period are all of primary importance, as are the evidence of "influences" at work--from the Arabian Peninsula and Egypt, as well as from the Graeco-Roman world. The suggested influence from the latter area upon the "Painted Tomb" at El-Barid has

been considerably magnified (and clarified) by the temple materials. Similarly, architectural details not otherwise reported from Petra will contribute to further understanding of technology during the Nabataean period.

Basically speaking, Site I has been completed, with the completion of the stratigraphic sequences to bed-rock in 1977. Further excavation will therefore concentrate upon the remaining aspects of Site II--the North complex, the entry and arch complexes, and the monumental entry from the wadi floor.

The succeeding seasons have also seen advancements in the processing, field cleaning and preservation of artifacts, pottery drawing, and other aspects under the direction of the Recorder and laboratory staff. These advances obviously enhance the accuracy of recording and preserving data secured by excavation. When the methodology of both excavation and recording is advanced, the validity of analysis and interpretation of results is similarly advanced.

Philip C. Hammond
Director, American Expedition
to Petra
Professor of Anthropology
University of Utah