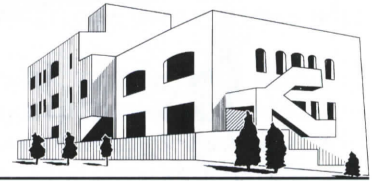


# ACOR Newsletter

## أخبار أكور

Vol. 13.1—Summer 2001



### In Search of Petra's Buried Garden *Leigh-Ann Bedal*

The Petra Garden Feasibility Study was carried out in July in an area of Petra commonly known as the "Lower Market," but identified as a pool-complex and garden during a survey and excavation carried out in 1998. The feasibility study was made possible by the Department of Antiquities of Jordan and by funding provided by Dumbarton Oaks (Trustees of Harvard U.) and by an ACOR-CAORC fellowship.

The goal of the two-week season was to identify the major components and layout of the garden and to determine the degree of preservation of its earthen terrace utilizing ground-penetrating radar (GPR) in combination with soil cores and strategic excavation to test the results of the GPR. A core team of specialists, including Larry Conyers (geologist, Denver U.), John E. Foss (agronomist, U. of Tennessee), and Kathryn L. Gleason (garden archaeologist/landscape architect, Cornell U.), provided an interdisciplinary aspect necessary for this investigation.

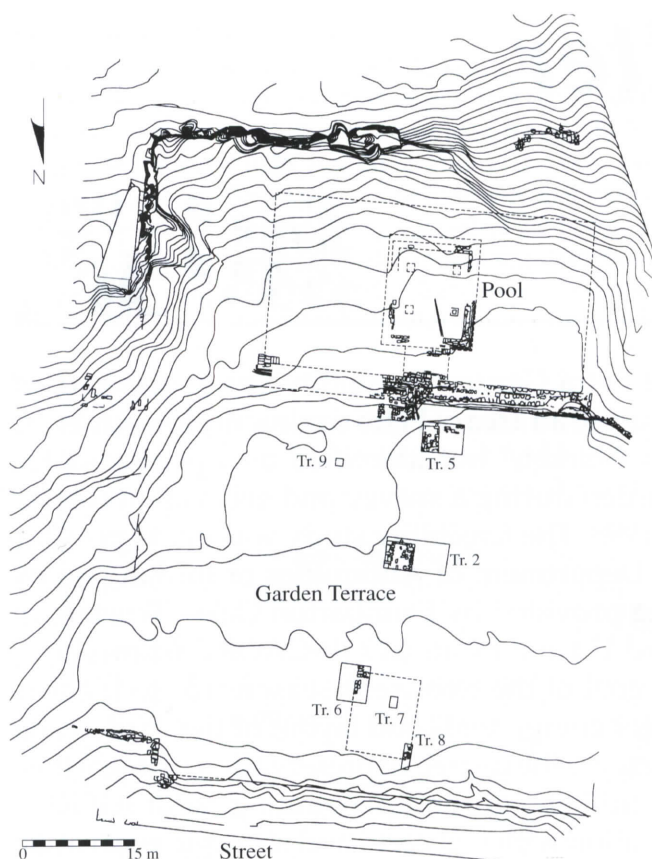
The first three days in the field were devoted primarily to the collection and processing of data using GPR in order to obtain a subsurface mapping of

the garden's earthen terrace, an area that measures approximately 65 x 53 m. The GPR team, headed by Larry Conyers, employed a Subsurface Interface Radar (SIR)-2000 system that is the latest version of the digital systems that control radar propagation in the ground and record the resulting reflections. As the radar was moved along measuring tapes laid out in a grid, data was collected every 50 cm for maximum illumination of subsurface features based on the known energy transmission cone of a 400 MHz antenna; this can obtain reliable readings to a maximum depth of approximately 3.5 m.



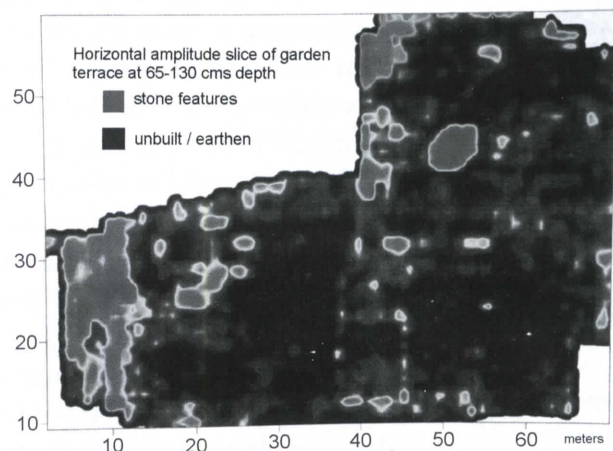
Eileen Ernenwein (right), assisted by Ahmed Abdullah, collects subsurface data of the terrace using ground-penetrating radar. Under the tent, Larry Conyers observes the results as they are displayed on a computer monitor.





Plan of the Petra Garden and Pool-Complex at the end of the 2001 season (F. Ishaqat and L. Bedal)

The results were displayed on a computer monitor in the form of vertical profiles in which we were able to immediately identify the location of major architectural features as well as unbuilt areas. The relationship of these features was further illuminated with the production of preliminary maps of horizontal amplitude slices. By the end of the second day, it was clear that the earthen terrace was mostly unbuilt, but had a series of stone structures laid out along its central north-south axis and another major stone structure along the northeastern border. In addition, this preliminary data revealed a



Horizontal slice of the garden terrace generated by GPR and showing stone-built structures along the central north-south axis and a large stone structure along the eastern boundary

number of smaller, less defined features in various locations and depths across the site.

As a result of the GPR, three areas stood out as of primary interest to the goals and scope of the feasibility study for further investigation through excavation. The first was what appeared to be a large and deep stone structure located along the southern edge of the terrace, just north of the pool's monumental east-west wall and immediately northwest of the *castellum* and stone conduits which composed a system for the collection and distribution of water. Trench 5 was opened to test the GPR results and to expose a portion of this feature, which proved to be a solid stone platform packed with roughly hewn and unhewn sandstones and gray mortar and faced with ashlar typical of Nabataean masonry. A second parallel ashlar wall was built 3 m to the west. The space between the two walls was filled with architectural fragments in secondary context. The stone con-



Stone conduits (foreground) that carried water from the pool's *castellum* to the platforms in Trench 5 (center); view to the north

duits that emerge from the *castellum* lead directly underneath the stone platform in Trench 5, suggesting that the platform functioned as a hydraulic installation, perhaps a basin or fountain.

The second area of interest was the indication of a large stone-built feature at the center of the terrace, a small portion of which was exposed in 1998. Trench 2 uncovered a square platform (3.67 x 3.85 m), constructed



Stone platform at the center of the garden terrace (Trench 2), looking east

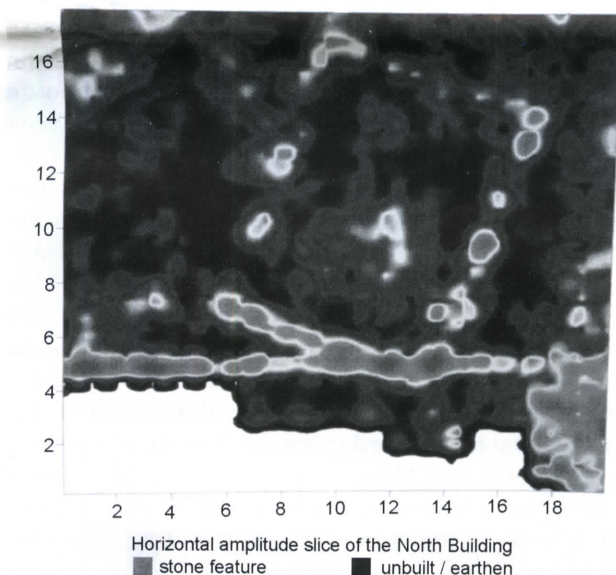
of a core of roughly hewn and unhewn sandstone blocks faced with well-hewn sandstone ashlar. A small limestone D-shaped basin was situated along the platform's southern face, just east of center. A tiny hole allowed drainage through one side of the basin.





A small basin along the southern edge of the central platform, indicating that the platform had a hydraulic function

The third area of interest was a rectangular outline revealed by the GPR as oriented along the terrace's central axis a few meters south of the northern retaining wall. Before trenches were placed to explore this feature, a 25 cm grid was laid out at a 45° angle to the site's major axis in order to conduct a detailed GPR study and to disqualify any chance that the wall lines were actually a function of the direction the antennas had been moved along the surface, creating linear anomalies that might "look like" buried architecture. The resulting data clearly showed a stone rectangle (ca. 8.5 x 11 m) in the upper levels of the terrace (0.4 to 1.6 m below the surface), referred to here as the North Building, as well as an intriguing bold line running at an oblique angle along the northern edge of the terrace below the level of the rectangular feature (1.2-2.4 m below the surface). This line appears to originate from a large stone feature revealed in the northwestern corner of the grid. It is likely that these deeper features are associated with houses dated to the 3d-1st centuries B.C. that were buried by the construction of the garden



Horizontal slice generated by GPR and showing the rectangular outline of the Northern Building and a bold line of stone running at an oblique angle from a deeper (earlier?) stone structure (bottom right)

terrace, probably during the reign of Aretas IV (9 B.C. to A.D. 40). Two test trenches (6 and 8) exposed sections of the North Building's walls just 10-30 cm below the surface. The rough construction of the walls suggest that only the foundation of the North Building (two courses high) is preserved. It is unclear from the limited exposure what the function of this building is, but its strati-

graphic association suggests that it is post-Nabataean-Roman, possibly Byzantine. That the building is well-aligned and centrally oriented with the site's other major architectural elements may suggest, however, some continuity in the use of the garden terrace in this later period.

In addition to aiding in locating and excavating architectural elements, the application of GPR proved useful for the investigation of the garden soils. In addition to providing a map of the stone structures on the terrace, the GPR indicated where there were no structures and thus where we should search for remnants of the garden soils which might provide information on the nature of the garden itself. Vertical profiles of the subsurface provided by the GPR, showed what appeared to be several laminated surfaces to the east of the North Building that should be explored. Auger tests provided a preview of the stratigraphic sequence that would be encountered in excavation. Samples of the major soils at the site will be subjected to characterization analyses by Dr. John E. Foss; these analyses will aid in establishing the morphology of soil units.

In Trench 6, three surfaces were detected to the east of the North Building that have the characteristics of cultivated soils—mottling and a high content of charcoal bits and pottery sherds. The uppermost soil is gray in color and represents the modern use of the terrace as an agricultural field by the modern bedouin inhabitants of Petra. The lower two soil strata are each likely candidates for the garden surface of the classical period. A coin of Aretas IV found at the bottom of the earliest soil layer provides a *terminus post quem* for its cultivation. Future excavations will involve large horizontal exposure of each of these strata in the hopes of identifying subtle features such as tree pits, root cavities, and earthen irrigation channels that cannot be easily detected in vertical soundings or with GPR, and to determine their relative relationship to the architecture.



Trench 6: southeastern corner of the North Building and a stone-lined pit (foreground) that appears to pre-date the construction of the garden terrace, looking southwest

Underlying the lowermost cultivated stratum was an oval stone-lined pit (1.5 x 1 m). Pottery sherds found within the pit are consistent with a 1st century B.C. date. The pit is oriented perpendicular to the bold oblique line that the GPR data locates 10 m to the north. The function of the pit is currently unclear, but the discovery of a feature that apparently belongs to the site's pre-garden phase offers promise for future clarification of the chronological development of the center of Petra.



## Field Reports

### Wadi Araba Earthquake Project

The 2001 season of the Wadi Araba Earthquake Project, directed by Dr. Tina Niemi, was conducted at Qasr Tilah and Aqaba during May. The main goal of this season was to define and date archaeological structures that have been offset by earthquake motion along the fault in order to constrain the location and magnitude of known historical earthquakes. Our investigations used three different methodologies: 1) archaeological excavation, 2) geophysical surveys, and 3) geologic subsurface probes. The research team included senior staff and students from UMKC, New Mexico Tech, Grand Valley State, and Yarmouk University. Funding for the field work was provided by the National Geographic Society.

Archaeological excavations and geophysical surveys were undertaken at Qasr Tilah in order to map the distribution of buried earthquake-damaged structures. Qasr Tilah is a particularly useful site to make these kinds of determinations because there are a number of architectural features present at the site, including the birkeh, a series of buried aqueducts, and other features that apparently cross the fault. The archaeological record can constrain the age of past earthquakes by providing the age of construction of earthquake-damaged features. The magnitude of earthquake events can be assessed through measuring the amount of displacement of architectural features that lie across the fault. Our excavations uncovered a portion of an aqueduct that is offset along the fault. Magnetometer and ground-penetrating radar surveys at the site were used to exactly locate the fault.

The northwest corner of the birkeh at Qasr Tilah lies across the Wadi Araba fault and is visibly offset by about 2 m. From surface mapping of only the fault trace, it is impossible to determine whether this offset occurred in one, two, or more earthquakes. In order to document the number of ground-rupturing earthquakes on the fault, a trench was excavated 7 m north of the birkeh. The exposed 3-m-wide zone of upward branching faults plays showed evidence of at least two and as many as five earthquakes. The most recent earthquake clearly cuts through sedimentary layers full of mortar, charcoal, building blocks, and other tumble debris from the collapse of the birkeh. These data indicate that there is at least one earthquake that postdates the collapse of the northwestern birkeh corner. It also indicates that the offset of the birkeh wall occurred in at least two earthquakes.

Several earthquakes are known from historical records to have occurred in the vicinity of the southern Dead Sea, Kerak, and Wadi Araba. These include the earthquakes of A.D. 31, 363, 659/60, 1068, 1212, 1293, and 1456-59. At this time, we do not have enough age control to assign any of the known historical earthquakes to this section of the fault. Radiocarbon samples from key

stratigraphic horizons were collected and should enable us to date the individual seismic events identified in the trench. Further excavation and trenching at the Qasr Tilah site is needed to fully document the earthquake history along this section of the Wadi Araba fault.

*Tina Niemi, University of Missouri-Kansas City*

### Karak Resources Project

The Karak Resources Project (KRP) completed its fourth season of research on central Jordan's Karak plateau in 2001. A team of 35 participants worked on three fronts: (1) regional archaeological survey; (2) regional scientific studies; and (3) the systematic excavation at al-Mudaybic, an Iron Age fortress along the Karak governorate's southeastern desert fringe.

KRP's primary purpose is to document ways in which inhabitants of this 875 km<sup>2</sup> section of tableland utilized natural resources, including water, soils, surface geology, plant and animal communities, and site location. For example, KRP 2001 made a systematic collection of basalt samples from the plateau so that researchers can investigate local and regional use of this raw material in the production of ground stone implements. KRP's soil scientist collected data on the soil deposits from Mudaybic, the regional distribution of loess (i.e., windblown silts), and the ancient and modern productivity of Karak's soils. The project applied GIS in its study of the plateau and concentrated on ground confirmation of satellite imagery.

This season, the project's Contemporary Studies Team examined economic interactions between the bedouin and villagers, especially in the vicinity of Smakiya. KRP's Regional Survey Team identified 41 archaeological sites in the plateau's southeastern section. These sites, which included a number of water management systems, were outside the area examined by Miller-Pinkerton; 35 of them are not listed in JADIS. The large Roman, Byzantine, and Islamic site of Kh. al-'Askar, first examined in 1999, was studied in greater detail, and a number of Miller-Pinkerton sites were revisited to document damage caused by regional development. For example, the team noted extensive looting of graves at ancient Nakhl and Mhai.

After three seasons of digging at Mudaybic, Field A, which now includes excavation in five squares, has yielded evidence of occupation from Iron II to the Late Islamic period. Work in Squares I3 and I4, located south of the northern defense wall, clarified the phases of Iron Age occupation but yielded remarkably few artifacts. J3 was opened to shed light on the site's original construction and subsequent use, and large quantities of Middle and Late Islamic sherds were found. Excavation in H5 was begun to help understand the Middle or Late Islamic architecture encountered in previous seasons.

In Field B, the monumental Iron II gate complex, KRP has worked in a total of eight squares—three of them new in 2001. All evidence from the gate—ceramics,





Field B, looking south across the Iron II gate complex (photo by David R. Berge)

this massive four-chambered gatehouse is clear, there are, in fact, some indications that the gate was never completed.

Work in Field C was discontinued in 2001, but three squares were opened in the new Field D, in the northwest corner of the fortress. Islamic and Byzantine sherds were found in the uppermost loci, but building remains from Iron Age II were encountered just below the surface of E4 and E5. The former included walls of a structure with a stone-paved interior. On the east side of Square E5, an Iron II surface yielded remains of an oven, animal bones, potsherds, and a large cache of perforated clay balls/loom weights—the first concentration of “domestic” remains found at Mudaybic.

For more information on the Karak Resources Project, you may visit our website at <http://www.vkrp.org>.

Gerald L. Mattingly, Johnson Bible College



Field D, Square E5, with loom weights scattered on an Iron II surface (photo by John Mark Wade)

## Petra: Great Temple Excavations

### Great Temple

The ninth 10-week season of excavation by Brown University archaeologists at the Petra Great Temple took place from June to August 2001 and helped to clarify the architecture of the precinct. Eight trenches and two special project areas were excavated with startling results.

Earlier excavations in the West Propylaeum had uncovered elephant-headed capitals from the Lower Temenos, and this season another elephant-headed capital, which was completely preserved, was brought to light. Continuing excavations in the West Propylaeum also revealed double limestone betyls in a niche. These sacred aniconic (non-figurative) representations of Nabataean deities were in remarkably pristine condition and were attached in the niche with plaster. These betyls measure approximately 50 cm in height, 21 cm in width, and approximately 9 cm in thickness at their slightly rounded tops.



Betyls

A limited test trench in the West Propylaeum yielded new information on the stratigraphy of this area and confirmed that the earliest wall of the Propylaeum was a terrace wall that separated the precinct from the main thoroughfare of the central city. At the close of this year's work, the architectural scheme of the West Propylaeum

architectural plan, style of volute capitals, and radiocarbon readings—points to a date of construction in the 8th century B.C. Excavation in these squares revealed no well formed surfaces and relatively few artifacts, perhaps indicating that the gate had a very short period of use before it was destroyed. Although the overall plan of

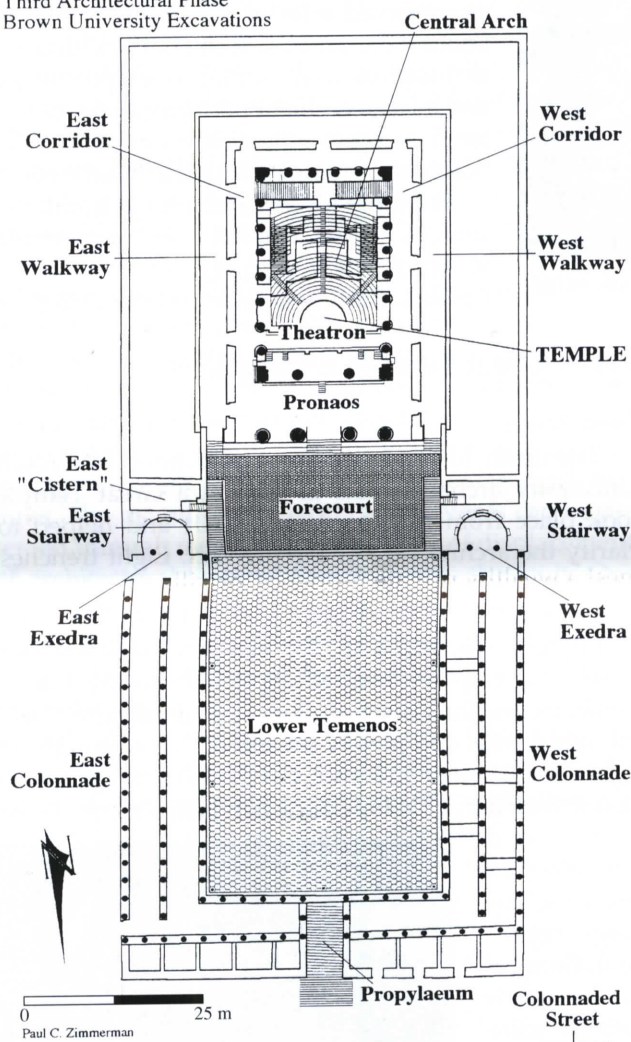


had been clarified and its overall dimensions assessed.

Preliminary excavations in the East Propylaeum confirmed that it was constructed in a similar order as that of the West Propylaeum. However, there were some modifications because its destruction pattern differed slightly from that of the West Propylaeum. Evidence suggests that the east cryptoporticus was accessed from an as yet unexcavated doorway from the Colonnaded Street.

## Petra Great Temple

Third Architectural Phase  
Brown University Excavations



The Upper Temenos excavations, which concentrated on the east and south perimeter walls and the south precinct walls, revealed more of the chiseled-away bedrock escarpment. In the substantial clearance of the temple surround, a partially-excavated chapel with frescoed walls, hexagonal pavement, and an empty cult niche were recovered as part of the installation of the south perimeter wall. The chapel anteroom had considerable amounts of collapsed roof tiles, some of which were left *in situ*. We expect to undertake consolidation of the frescoed walls and to continue excavation in the chapel to the west so that its overall dimensions can be determined.

Excavations in the Upper Temenos east also revealed a subterranean cistern measuring 8.5 m x 7.8 m. The cistern was partially excavated by a test trench to its original depth of 5.88 m from its roof—in all it would have held 390 m<sup>3</sup> of water. In its interior were remains of two arches and a massive support column carved out of bedrock. Above this cistern was a bedrock chamber with what appears to have been a domestic installation, with a chiseled-out bedrock basin and an oven. There were considerable amounts of ceramics found associated with these features.

The partially collapsed east perimeter wall arch was removed so that excavations could continue below it. We found a small room with high arched niches and a later installation of an oven and trough. Additionally, a substantial cache of Nabataean utilitarian wares was found here associated with the oven.

The only large project remaining in the Great Temple, which has now been completely excavated, was to clear the south corridor of collapsed debris. This project revealed the entire south corridor wall, which was exquisitely embellished with stucco. Between the wall segments are three doorways leading into the structure from the south, an interior doorway which led into the east and west corridors, and a central doorway which accessed the temple's central arch. The canalization system under the Great Temple was also found to continue under the flooring of the south corridor and the central arch. Most surprising here was the recovery, in the collapse, of two massive sculpted stucco lions which must have been positioned opposite each other above the central doorway leading into the south corridor.

Besides the artifacts mentioned above, we recovered 21 coins, 10 lamps, 23 more elephant head components, 14 bone pins, one bone spatula, and a stunning limestone sculpture of a youthful male (15.84 cm in height; the torso, right leg, and part of his left forearm are preserved). Another sculpture consists of a marble base from a small statue with a booted foot trimmed with a panther head. In the stucco catalog were 11 fragments with graffiti or with gold overlay. Our databases continue to swell with additional architectural fragments and considerable amounts of cultural materials.

### Small Temple

Excavation of the Small Temple continued this season under the supervision of Sara Karz, who recovered approximately 360 marble fragments inscribed in Greek, Latin, and Nabataean. The dimensions of this edifice were also redefined. Tentatively, it would appear that this small building might have served as a *hieron*. Additional excavation, scheduled for 2002, will hopefully complete the definition of this structure, and a study of the recovered inscriptions is currently underway.

We are indebted to the Jordanian Department of Antiquities for their help in making this season a tremendous success, most particularly to Fawwaz al-Khraysheh, Director General.

Martha Sharp Joukowsky, Brown University



## Tell Madaba: the West Acropolis

The 2001 field season of the Tell Madaba Archaeological Project (TMAP) was devoted primarily to the consolidation and restoration of several Late Byzantine and Early Islamic structures preserved along the lower western slope of the tell acropolis (Field C). Begun in 1998 and continued through the 2000 season, our excavations have uncovered the remains of a large rectangular building, preserved in two architectural phases that span the Late Byzantine/Early Islamic transition (6th-7th/8th centuries A.D.). Initially believed to have been a series of isolated shops that backed against the pre-classical town fortification wall, it is now clear that these structures were the back rooms of a large building complex, at least 20 m (N-S) X 30 m (E-W) in size. It is assumed that the building faced a north-south street farther to the west. The complex was erected on a series of bed-rock terraces that ascended eastward toward the fortification wall.



Mosaic floor

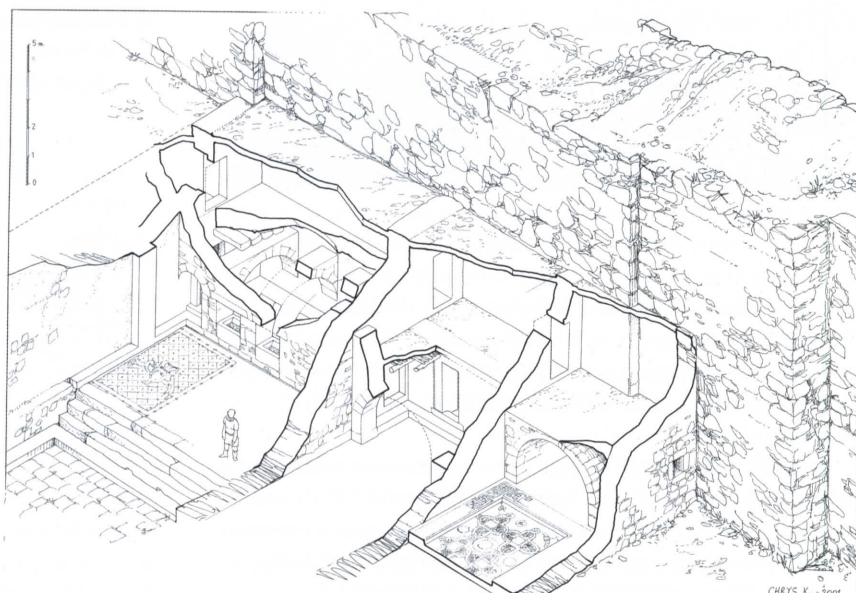
Although the building has not yet been fully excavated, thus far excavations have revealed a series of interconnected rooms with variously paved floors. In at least two rooms, the floors were paved with decorated mosaic pavements. One contained a field of fleurettes or rosebuds framed by a double-swastika meander border, while the second depicted a large amphora flanked by a ram and a horned stag, with a simple border of diamonds along the periphery (above). Several rooms preserved the remains of arches, and in one case an intact vault, which together supported a second story to the building. At least one second-floor room contained a decorated mosaic floor.

One of the more striking features of the Field C building is the elaborate water system that serviced it. Fragmentary pieces of large ceramic drain-pipes were recovered from the excavated debris, and several meters of intact clay piping were found embedded behind plaster in one of the building's walls. In another room, the excavations revealed a network of water channels and trap-dams concealed beneath a heavy flagstone pavement. In addition, many of the building's rooms were equipped with rectangular stone drainage basins.

The pottery found in the rubble sealing the complex consisted predominantly of 6th-7th, with some early 8th century A.D. material. In addition, excavations in the central room along the back wall produced a well-preserved surface strewn with smashed pots (including bowls, cooking pots and storage vessels), and a number of bronze (an intact jug) and iron implements. The soil that filled this room also contained numerous fragments of painted plaster, including discernible portions of a Late Greek inscription and parts of two crosses. The small finds recovered from the other rooms in the complex included several coins and a ceramic stamp seal incised with a cross.

When combined with the presence of 6th century mosaics (dated on stylistic grounds), our excavations suggest that the complex experienced two distinct architectural phases, which straddled the Late Byzantine-Early Islamic transition. The first phase was constructed in the 6th century (or Late Byzantine period), and included the mosaic pavements now on display in the Madaba museum. The building was then renovated in the 7th or early 8th century (*i.e.*, the Umayyad period), when a vault was built over the mosaic floor in the southern room along the back wall, and supplementary walls were judiciously inserted to shore up several sagging walls elsewhere in the complex. The entire complex apparently was abandoned sometime later in the 8th century. Although its primary function remains unclear, the building's layout and associated finds suggest a wealthy private residence, or villa.

As a part of the 2001 consolidation effort, the Italian restorer Franco Sciorilli has begun preparing a mosaic pavement removed from the site in 1980 in anticipation of its return to the site as part of a conservation and restoration program we plan to launch in 2002. Finally, detailed plans have been made of the entire west acropolis area, including architectural reconstructions of the



Reconstruction drawing by C. Kanellopoulos



Late Byzantine villa drafted by Chrysanthos Kanellopoulos, to provide supporting documentation for a proposal in progress to transform the west acropolis area into an archaeological park, designed to benefit the local community as a self-sustainable cultural resource.

#### *Historical Context*

Christianity gained an early foothold in the Madaba region, and by the mid-5th century, the Christian community had grown large enough to warrant the services of a bishop, a development revealed in the Acts of the Council of Chalcedon (A.D. 451). Although the town goes unmentioned in the literary sources for the remainder of the period, as the seat of a diocese, the town clearly continued to prosper, and over the succeeding two centuries (ca. 6th-7th centuries A.D.) witnessed the construction of numerous churches and other public structures. It was during this period that the many mosaic pavements for which Madaba is renown were laid, including the famous Map of Palestine.

Following the Islamic conquest and the establishment of the Umayyad Caliphate in the mid-7th century, Madaba continued to flourish. Renovations were carried out on a number of Byzantine churches, and the town remained the seat of a bishopric. During the Early Abbasid period, mosaic dedicatory inscriptions from the Church of St. Stephen at Umm er-Rasas mentioned the names of two bishops from the diocese of Madaba, Bishop Job in A.D. 756 and Bishop Sergius II in A.D. 785, when the church was completed. Interestingly, however, in an episode also dating to the Early Abbasid period involving the pursuit of rebellious Umayyad partisans through the Madaba Plain region, the town of Madaba fails to receive any mention, in spite of specific references to the nearby towns of Hesban, Masuh, Ziza, Amman, and Fudayn (?). References to Madaba, including inscriptions, cease entirely by the end of the 8th century, and the town is not referred to again until the early 19th century, when western explorers began traveling through the region.

#### *The TMAP Regional Survey*

As part of the broader TMAP research objective to develop a regional database, and in keeping with our commitment to document the visible archaeological remains at sites in the Madaba region that face expanding modern development, intensive mapping and surface collection efforts were initiated during the 2000 field season at a series of hinterland sites to the west and south of Madaba. This initiative was continued during the 2001 field season, with the primary focus aimed at completing mapping and surface surveys begun in 2000 at Libb, Khirbat al-Mukhayyat and Masuh.

#### *Acknowledgments*

Funding for the 2001 field season was provided by a research grant from the Social Science and Humanities Research Council of Canada. The excavations were conducted in collaboration with the Department of Antiquities of Jordan and the Municipality of Madaba.

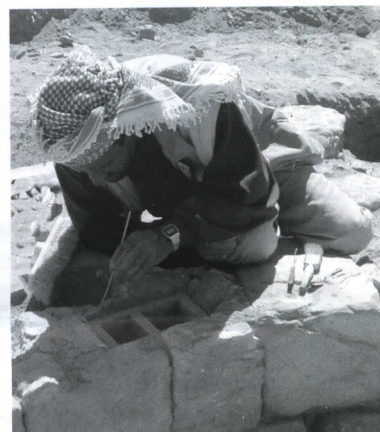
*Timothy P. Harrison, University of Toronto*

## **Petra: North Ridge Project**

In cooperation with the Department of Antiquities, the eleventh season of excavations on the North Ridge at Petra was conducted from March 25 through May 3, 2001. Under Director Dr. Patricia M. Bikai and Assistant Director Megan A. Perry, and with the assistance of Eng. Tahani es-Salihi of the Department of Antiquities, work this season concentrated on the Blue Chapel Complex which lies between the Ridge Church and the Petra Church.

The major objective this season was to complete the excavation of the lower area, called Building 2. As had already been determined, the building has three architectural units: the Blue Chapel to the east; the central unit with a hallway opening into a room to the south and the staircase to the north; and the large rectangular room to the west. The room itself contains four short columns (reused from the Temple of the Winged Lions) which, together with eight pilasters on the walls, supported the ceiling. An elaborate drainage system suggests that the central part of the room was open.

Excavation in the chapel itself was completed. The north apse was found to be centered on a niche accessed by three steps. In the center of that niche a reliquary was found.



Excavation of the reliquary

All excavation areas continued to yield remains of the post-Byzantine occupants of the site. Their major activities appear to have been the looting of the many Nabataean and Roman tombs that occur in the bedrock of the North Ridge area. In Building 1, it is apparent that they had systematically lifted the stone paving of that



View of an abandoned Petra, ca. the 8th century, with the Ridge Church in the foreground, the west room of the Blue Chapel Complex at lower left, and Qasr al-Bint at upper left (drawing by C. Kanellopoulos)



building to reach the bedrock. Additionally, it appears that, as had already been observed at the Petra Church, one of their other main activities was scavenging; a large cache of glass found in the south room of Building 2 may reflect such activity. Among the glass recovered was a nearly intact lamp. These occupants apparently ceased their activities in parts of the complex after an earthquake that brought down the colonnade (probably the

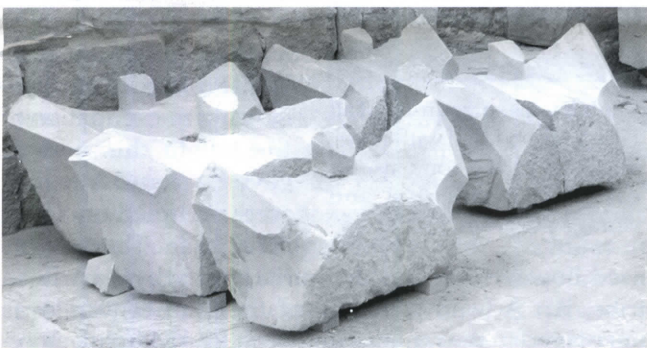


The section of the chancel floor where the upper drum of the northeast column impacted during the earthquake that demolished the Blue Chapel

748/49 quake), but evidence in the hall area, the west room, and Building 1 appears to suggest that occupation continued even into the Mamluk period.

Conservation work also continued. This

included stabilization of the north wall of the Blue Chapel which had a serious structural defect; restoration of the capitals; pointing of the walls with mortar, consolidation of wall plasters, and preparation for the reconstruction of the columns of the chapel. In the last season, 11 of the 12 drums necessary for the reconstruction



Five of the eight upper capital sections after restoration

tion were found at the site. The 12th drum was identified as being in the wadi and was brought back to the site. Except for two lower capitals, which are absent, all elements necessary for the restoration of the colonnade have been found. As those two pieces are perfectly round, the manufacture of copies will not be difficult.

Staff members were architect Chrysanthos Kanellopoulos, archaeologists Jane Baxter and Neal Bierling, and conservator Na'if Zaban.

Work was funded by a donation given in honor of Dan and Gert Vos of Ada, Michigan, and by income from ACOR's Petra Endowment. ACOR thanks the Department of Antiquities, in particular the director, Dr. Fawwaz al-Khraysheh, and at Petra, Mr. Suleiman Farajat and Mr. Mohammed Shobaki, for their assistance.

*Patricia M. Bikai and Megan Perry, ACOR*

## Tall Hisban 2001: Countering the Urban Bias in Islamic Studies

To date, most research on the history of Islamic civilizations in the Middle East has suffered from an urban bias. This bias begins with the fact that most documentary research on Islamic culture is based in large cities such as Cairo, Damascus, Istanbul, and Jerusalem. What we know of material culture has until recently emphasized the standing architectural remains of urban citadels. As a result, what is known of the rural hinterlands of the Islamic world is limited.

Research by the Madaba Plains Project at Tall Hisban in Jordan during May and June of 2001 provides a counter to this urban bias. The site, which is located in the Transjordanian highlands northeast of the Dead Sea, presents researchers with a unique opportunity to examine the intersection of urban officialdom with rural communities. The main goal of the 2001 field season was to shed light on these interactions from the Islamic conquest to the present.

The political role of Hisban for the Umayyad (A.D. 630s/40s to A.D. 750) and Abbasid (A.D. 750 to the 12th century) periods was illustrated clearly for the first time this season. Excavations of the 1970s, while providing some evidence of early Islamic occupation in the form of tabuns and pottery, left the impression that these periods were ones of abatement in the settlement history of



Bowl of glazed relief ware; inscriptions cover many of the largest vessels used in the Mamluk-period citadel.

the site. In 2001, excavations uncovered two rooms in Field N, in the northwest corner of the tall. This is the first Umayyad-period architecture identified at Hisban. The rooms, built against the Hellenistic fortification wall and close to the northern sally gate, attest to continued occupation of the site well after the Islamic conquests. After an earthquake of the mid-7th century A.D., which was responsible for the collapse of the stone barrel vaults, the structure was reoccupied and used into the Abbasid period. In an account by Yaqut, an Abbasid-period historian, Hisban was a well-fortified site that



played a pivotal role in an uprising against the Abbasids in the 9th century. Tribesmen closely allied with the Umayyad state had long controlled the site. The ceramic record supports the documentary picture of Hisban as a politically connected site. Fine Umayyad wares, in addition to imported Abbasid "splash" wares, clearly illustrate that Hisban was connected politically and economically to Damascus and Baghdad.

In the Mamluk period (1260-1516 A.D.), Hisban was an important provincial site, occupying a strategic location on the postal, pigeon, and caravan routes and just off the pilgrimage route from Damascus. This physical location kept the site in regular communication with both the provincial capital of Damascus and with Cairo, the capital of the Sultanate. We know from historical sources that Hisban was made the administrative capital of the Belqa in the first half of the 14th century. Excavations in 1998 and 2001 uncovered most of what is believed to be the residence of the governor of the Belqa



Partially restored bathhouse



Storeroom of the Mamluk "Governor's Palace," destroyed by an earthquake in the late 14th or early 15th century

in this period. The residence proper consists of a series of rooms around a paved, open courtyard flanked by a private bathhouse and protected by a reinforced, rectangular tower. On the south side of this complex is a large, barrel-vaulted storeroom full of sugar jars, glazed wares with military-style inscriptions, and javelin points. There is evidence of earthquake collapse and fire in the mid-14th century; the destruction preserved the contents of the storeroom. That room and the bathhouse provided the best evidence for the ways in which Hisban was a center for official exploitation of the rural hinterland. A large quantity of imported glazed wares, in addition to locally made handmade jars and bowls, attests to this rural center's connection to larger markets. The bathhouse, not attested at any citadel elsewhere in the Mamluk state, may have been used by the governor to entertain local tribal leaders, much in the style of the Transjordanian Umayyad *qusur*. In this sense, official and local politics intersect.

While the Umayyad, Abbasid, and Mamluk periods at Hisban provide material evidence of official interest

in the provinces, the Ottoman period (1516-1918) stands out for the ways in which withdrawal of the central government impacts rural communities. To facilitate what is relatively new research into the Ottoman and modern periods in Jordan, the Madaba Plains Project has come up with six successive cultural periods into which we are subdividing these centuries: the post-Mamluk (1500-1520); Early Ottoman (1520-1600); Aceramic Tribal (1600-1850); Pioneer (1850-1920); Mandate (1920-1940); and Hashemite (1940-present).

The post-Mamluk period is characterized by wholesale withdrawal from Transjordan of the Mamluk Sultan who was beset with economic and political problems in Cairo. With the withdrawal of the Egyptian garrisons, villagers had no defense against marauding tribesmen and gradually abandoned their homes for a semi-nomadic life-style. Hisban's tall was also abandoned at this point. When the Ottomans took Transjordan from the Mamluk state in 1516, their immediate concern was to re-garrison strategic points and rebuild a tax-collecting apparatus. There is some evidence on Hisban's tall of squatter occupation of the Mamluk ruins in this period.

By the end of the 16th century, Istanbul had tired of its defensive responsibilities in Transjordan and with-



The hillsides surrounding Tall Hisban are riddled with caves, attesting to the long use of caves for residential and storage purposes.

drew its forces and its economic support, leaving administration (such as it was) in local hands. Once again, villagers abandoned their homes and began to live in caves. While there is no evidence of re-occupation of the tall in this period, caves around the tall were occupied on a seasonal basis. The tall was

used, however, as a seasonal burial ground by the Adwan tribe. An Adwan cemetery of the 19th century was uncovered in the remains of the vaulted Mamluk storeroom during the 1998 and 2001 seasons.

The Pioneer period was one of renewed settlement and market-oriented agriculture. Architectural and ethno-historical investigations of the fortified farmhouse (*qasr*), located in the present-day village of Hisban, have shed light on the history of the village during this era. Leen Fakhoury, a professor in the Department of Architecture of the University of Jordan, and four of her students assisted with architectural studies of this *qasr*.

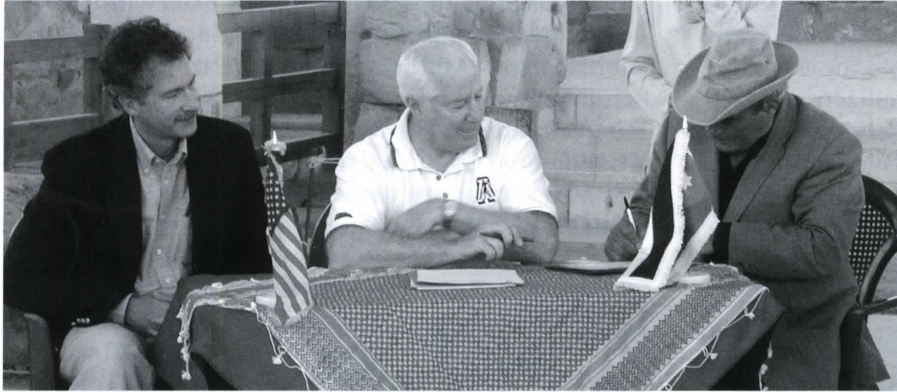
As in previous seasons, work has continued on restoring ruins of the Islamic and earlier centuries. In efforts to protect and present Hisban to the local public and to foreign visitors, our team has collaborated with the Ministry of Tourism and Antiquities, the governor of Hisban, the village mayor, the Hisban schools, and the families of our local staff.

*Oystein S. LaBianca, Andrews University*  
*Bethany J. Walker, Oklahoma State University*



## Endowment News

In May 2000, ACOR received an additional \$2 million for its existing Project Endowment from the United States Agency for International Development. The Memorandum of Intent for this funding was signed in Petra on April 21 by ACOR Vice-President H.R.H. Prince Ra'ad bin Zeid, ACOR Director Pierre M. Bikai, Representative James T. Kolbe of Arizona, and then Ambassador to Jordan William J. Burns. Before the signing ceremony at the Petra Church, Pierre took Rep. Kolbe and



Pierre Bikai signs the memorandum as Ambassador William Burns and Representative Jim Kolbe look on.

the congressional delegation on a tour of Petra that included the Siq, the Treasury, the colonnaded street, and of course, the church.

Income from the endowment will be used to fund projects that preserve and present Jordan's fascinating cultural heritage. The endowment is currently funding three projects: the Petra Mapping Project, a joint project between ACOR and Hashemite University to create a map of Petra's city center; the Petra Documentation Project, which is documenting Petra's freestanding buildings; and the North Ridge Project, which includes the excavation and restoration of an area in Petra that was probably the military quarters during the Nabataean period and which later became part of the ecclesiastical quarter of the Byzantine city.

The following are excerpts of the speeches delivered at the ceremony in Petra on April 21:

*U.S. Ambassador William Burns:*

Your Excellencies, Ladies and Gentlemen: I'm delighted to be here today to take part in the signing of this grant agreement through which the United States Government will provide an additional \$2 million to the American Center of Oriental Research of Jordan. ...

I am very proud that the United States has managed over the years to contribute to the work of many Jordanians in preserving Petra, in bringing it back to life for people from around the world. I think that this work is not only of great historical and cultural significance, but also helps create economic opportunities for Jordanians—as people from all over the world come to visit Petra and the many other sites of Jordan and as more businesses are developed to help support their visits.

I want to express particular appreciation and respect for the work of Pierre and Patricia Bikai and all of their staff and colleagues at ... ACOR. I would also like to express appreciation and respect to the superb work of Jordanians both inside the Jordanian government and their various agencies and in non-governmental agencies in preserving again Petra and many other sites around the country.

Finally, I am especially happy to be able to welcome to this event today and to Jordan the delegation from the American Congress whose generosity has made possible the grant that we are going to sign today, and whose presence here today represents the very best spirit of partnership between Americans and Jordanians.

It is a special honor and privilege to introduce to you the leader of that Congressional Delegation, Congressman Jim Kolbe from the state of Arizona.

*Congressman Kolbe:*

Thank you very much for the introduction and thank you, Ambassador, for your hospitality for our delegation and for the great work you do ... to promote Jordanian-United States relations. Eng. Shahdeh Abu Hdaib [director of the Petra Regional Planning Council] for your hospitality ... and for the work you do for your people, we thank you. Pierre, for your lively commentary today as well as for the on-going work you are doing in preservation, we also thank you.

I am truly honored to be here today to speak on behalf of this delegation. As a native of the state of Arizona, I am of course struck by ... the similarity in the landscape which I see around here—at least to parts of Arizona. It truly is amazing. But the archaeology we have been seeing here today is very special and unique. It is very important not just for Jordan, and not just for its tourism, but it is important for the world that this be preserved.

So, I am delighted today to be able to make good on a second portion of the endowment for the American Center of Oriental Research (ACOR) and to make that available today. ... It is because of the work that you and others are doing that Jordan's history and its contribution to the world is being preserved.

Clearly there are many that make this possible: His Royal Highness Prince Ra'ad, whom we met this morning, the ACOR staff and its directors, and the many different NGOs and other Jordanian organizations that take a part in all of this important work and make all this possible — The Petra National Trust, the Petra Regional Planning Council, all who are represented here today. I thank all of you for the work that you are doing! ... I want to commend ACOR for the many opportunities they provide for scholars and researchers from the United



States, representing states all the way from Brown University to California on the other coast. ... I think it is a wonderful opportunity for our universities and archaeologists to participate in this, but also a wonderful opportunity for making a contribution to this heritage that is so important to all of us.

Of course, we all recognize that this not only about archaeology. There are many jobs which are created here for local citizens. It about jobs and economic opportunities for the people who live in the Petra region. Here it is pretty obvious from the moment we arrived here in Petra — from the many of the hotel employees to the handicraft-makers, also many of whom benefit from USAID microenterprise grants. These are the other opportunities that we have for the local citizens to have economic well-being. So we are ... preserving a world-class site at the same time that we are making for better lives for the people who live here.

Once again, on behalf of the members of the delegation, I want to thank all of you for your hard work in preserving and developing sites like Petra and the dedication that you have shown. I also speak for my colleagues in wishing you success in everything that you do and we look forward to coming back and observing again as more archaeological sites are not only discovered but preserved. Thank you.

*Pierre Bikai responds:*

Your Excellencies, ladies and gentlemen: Good afternoon and welcome to the Petra Church. Today marks an important milestone in the history of the American Center of Oriental Research, and it is a pleasure to share this occasion with all of you, especially with Representative Kolbe and the delegation. I thank many people, without whom this would not have happened. First I thank Senator Richard Shelby of Alabama and the U.S. Congress who initiated this grant. I thank U.S. Ambassador William Burns, the directors of USAID—present director Toni Christiansen-Wagner, former director Lou Lucke, and former acting director Jonathan Addleton—and the many members of the U.S. mission who worked so hard to make this happen. I thank them for believing in our mission.



Senator Richard Shelby

Finally, I thank the Government of Jordan, not only for their cooperation in establishing this grant, but also for their cooperation with all of our work here. ...

In our efforts here in Jordan, we follow in the footsteps of Lt. Commander William Francis Lynch, whose U.S. naval expedition in 1848 was the first scientific expedition from the west to Jordan. This grant will allow us to continue what Lynch started for many years into the future. Again, thank you.

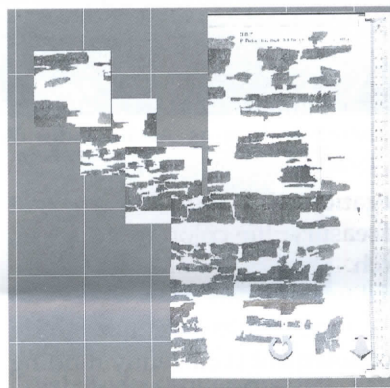
## Petra Papyri

The Petra Papyri Publication Project has made significant progress over the past year. With funding from the Gonda Arts and Education Foundation, The Gonda Family Foundation, and Mr. Louis L. Gonda, the Center for the Preservation of Ancient and Religious Texts (CEPART) of Brigham Young University was able to complete the first stage of the publication project. This initial stage entailed stitching the papyri images together and enhancing the final images.

The original digital images were taken with a Kodak Mega Plus 4.2I high-resolution camera with an attached multispectral (MSI) filter system. Each glass plate of scroll fragments was imaged 82 times images using a 9 x 9 grid pattern. The total number of images for each plate of scroll fragments (using 5 MSI filters) was 410 (5 x 82). Each image or file was over 6 megabytes in size. With 498 glass plates of scroll fragments, this resulted in

a total number of 204,180 images or files. The total amount of data gathered on tapes and discs was approximately 1.3 terabytes (1,300 megabytes).

Prior to the actual stitching, the images were visually evaluated to determine which filter produced the best contrast between the ink and the papyrus.



Once a complete set (containing 82 images) was chosen, the images were stitched together with a software program called Powerstitch by Enroute.

The actual stitching process involved three steps. First, each image was brought onto a workscreen and manually placed together one at a time. Then, Powerstitch was used to align each image. This second step ensured accuracy in aligning each image with the adjacent image by evaluating the pixel patterns so that the alignment was as accurate as possible. In the final step, Powerstitch was used to render or merge all 82 images into a single graphic image. The result was a single file or graphic image of an entire plate of scroll fragments. The size of the image was 380 megabytes, which is fairly large. All the final images were then placed on CDs. Each image was copied onto CD in four different versions, which include: 1) the final or original rendered image in TIF format; 2) the same image reduced to 60% of its original size, also in TIF format; 3) the reduced image in JPG format, which reduced its size even further; and 4) an enhanced version of the JPG image. The file names are the roll and plate numbers which will make identification and location of the images easy in this set of 154 CDs. Steven Booras, CEPART



## Director's Report: January through June 2001

*Pierre M. Bikai*

### ACOR Projects

**Petra, Petra Mapping Project**, ACOR and Hashemite University, USAID Petra Endowment

**Petra, Petra Documentation Project**, Chrysanthos Kanelopoulos, USAID Petra Endowment

**Petra, Petra North Ridge Project**, Patricia Bikai, Megan Perry, and Naif Zaban, USAID Petra Endowment and a donation given in honor of Dan and Gert Vos of Ada, Michigan

**Petra Papyri Publication Project**, U. of Helsinki/Academy of Finland: U. of Helsinki/Academy of Finland: Jaakko Frösén, Marjo Lehtinen, Antti Arjava, Maarit Kaimio, Jorma Kaimio, Mari Mikkola, Marja Vesterinen, Tiina Rankinen, and Marja Vierros; U. of Michigan: Traianos Gagos; Brigham Young University, CEPART, Steve Booras

### ACOR-Assisted Field Projects

Phillip Edwards, La Trobe U., and Steven Falconer, Arizona State U., Archaeology and Environment of the Dead Sea Plain Project: Zarat adh-Dhra 2

Timothy P. Harrison, U. of Toronto, Tell Madaba Archaeological Project

Donald O. Henry, U. of Tulsa, 'Ain Abu Nekheileh Archaeological Project



Pierre Bikai (director 1991-), Artemis Joukowsky, David McCreery (director 1981-88), Kurt Zamora, and Bert de Vries (director 1988-91)

Martha Sharp Joukowsky, Brown U., Petra Great Temple Chang-Ho Ji, LaSierra U., 'Ataruz Excavation and Survey Project

Oystein S. LaBianca, Andrews University, and Bethany Walker, Oklahoma State U., Tall Hisban Excavations Burton MacDonald, St. Francis Xavier U., The Tafila-Busayra Archaeological Survey Project

Tina Niemi, U. of Missouri, Kansas City, The Dead Sea Rift Earthquake Project

### Lectures

Feb. 12. Phillip Edwards, La Trobe U., The Dead Sea Plain at the Dawn of the Holocene: The Latest Results from ZAD 2

May 5. Fred M. Donner, U. of Chicago, The Rise of Islam

May 19. Juan F. Moreno, U. of Liverpool, Spatial Distribution and Lithic Analysis at Site WF 001: A Pre-Pottery Neolithic B Site in Southern Jordan



Fellows Juan F. Moreno, Jr., Donald J. Zeigler, Denise Schmandt-Besserat, and Fred M. Donner

May 30. Tina Niemi, U. of Missouri, Kansas City, Locating Historical Ground-rupturing Earthquakes along the Dead Sea Rift, Jordan

June 13. Burton MacDonald, St. Francis Xavier U., The Tafila-Busayra Archaeological Project 2001

June 20. Traianos Gagos, U. of Michigan, The Petra Carbonized Papyri: Eight Years After the Discovery

June 25. Patricia M. Bikai, ACOR, Petra North Ridge: Who Really Destroyed Petra

June 27. Oystein S. LaBianca, Andrews U., and Bethany Walker, Oklahoma State U., New Discoveries at Islamic Hisban

June 20. Traianos Gagos, U. of Michigan, The Petra Carbonized Papyri: Eight Years After the Discovery

June 25. Patricia M. Bikai, ACOR, Petra North Ridge: Who Really Destroyed Petra

June 27. Oystein S. LaBianca, Andrews U., and Bethany Walker, Oklahoma State U., New Discoveries at Islamic Hisban

### Fellows in Residence

*National Endowment for the Humanities (NEH) Fellow:*

**Fred M. Donner**, University of Chicago, The Rise of Islam

*Council of American Overseas Research Centers (CAORC) Senior Fellows:*

**Denise Schmandt-Besserat**, University of Texas, Austin, The Plastered Skulls at 'Ain Ghazal

**Donald J. Zeigler**, Old Dominion University, Changing Geographies of the Christian Population in Amman Near and Middle East Research and Training Program (NMERTP) Post-Doctoral Research Fellow:

**Salman H. Alani**, Indiana University, Arabic Prosody: An Acoustic Syllable Based Analysis

*Near and Middle East Research and Training Program (NMERTP) Pre-Doctoral Fellow:*

**Juan F. Moreno, Jr.**, University of Liverpool, Spatial



Distribution and Lithic Analysis at Site WF 001: A Pre-Pottery Neolithic B Site in Southern Jordan  
For information on ACOR's fellowships contact:  
ACOR, 656 Beacon St., 5th Floor, Boston, MA 02215-2010, tel.: 617-353-6571, fax: 617-353-6575, e-mail: acor@bu.edu, or on the web at www.bu.edu/acor

## Happenings at ACOR

- Jan. 9. Kathy and Nisreen are temporarily displaced, along with all their files, while Abed and Hani paint their office.  
Jan. 26. Pierre leaves for Beirut to meet Trustee Neil Silberman.  
Feb. 5. Trustee Randy Old stops in for a visit.  
Feb. 10. ACOR hosts a lunch to bid farewell to Jonathan and Fiona Addleton of USAID.  
Feb. 19. Abed and Kurt hang ACOR's new carpet in Kurt's newly painted office. Kathy and Nisreen are jealous because Kurt's office is nicer.  
Feb. 20. Amman receives a very light snowfall during the evening. It is the only snowfall of the season.

March 9. Pierre takes a group, including H.R.H. Prince Ra'ad, H.R.H. Princess Majda, Karen Asfour, Maroussia Zimmerman, Aysar Akrawi, and the Austrian Ambassador and his wife, out to the desert to see Safitic rock art.

March 21. ACOR staff host a breakfast for Patricia and Megan who will leave for the field shortly. Pierre delivers a lecture at Yarmouk University's workshop "Conservation and Management of Cultural Resources: Reality and Ambition."

March 22. ACOR staff attend Hans Dieter Beinert's farewell reception at the German Institute.

March 23. A rainstorm is welcomed by Amman and the surrounding region.

March 31. H.R.H. Prince Ra'ad donates 140 books from his personal library to the ACOR library.

April 5. Chrys Kanellopoulos arrives for a night before heading down to Petra to work on the North Ridge Project

April 21. This is a big day in the history of ACOR. Pierre takes a Congressional Delegation on a tour of Petra. At the Petra Church, a Memorandum of Intent from

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## Donors to ACOR

From January through June 2001, the following friends of ACOR made donations:

The ACOR Endowment received donations from Kathryn Kelly and Nicholas Clapp, and Josephine and Randolph Old.

General Donations were made by Pauline Albenda, Andrews University, Fatima and Gamal Badr, Ann and George Bass, Stephen Bonadies, Adele Bowker, Sarah and Oscar Brooks, Mr. and Mrs. Candler, Helen M. Cecil, Broom, Paula Chabot, Ellen and Nirmal Chatterjee, Lois and T.W. Christiansen, Carmen and Douglas Clark, Constance Clarke, Kathleen Corrigan, Nancy and Ken Daughety, Carolyn and John Davis, Sally and Bert de Vries, Martha Demas, William Dickens, Fred Donner, Barbara and Mohamed El-Baroudi, Laura and William Fyffe, Jane and Robert Geniesse, J. Paul Getty Trust, The Charles U. Harris Living Trust, Bonnie and Frank Hole, Russell Hopley, III, Romanna Jakymec, Louise and Robert Johnston, Marjorie Kelly, Asta and Oystein LaBianca, Peter Lampinen, Peter Liashkov, P. Eleanor and L.H. Linder, Joann and Jesse Long, Patricia March, Eugene Majerowicz, Anna Martin, Donald Mayo, Eathel and George Mendenhall, Mary J. Mycek, Virginia Nichols, Elizabeth Platt, Erika B. and A. Dean Pratt, Carolyn Rivers, Tori Rohl, A.E. Rogge, Barbara and Edwin Schick, Jimmy Schmidt, Keith Schoville, Jacques Seigne, Beverly and Robert Shumaker, Donald L. Snook, Mark Swenson, Terra Nova Television, C.M. Thomson, Claudia Vess, Gladys and Frank Vocci, Carla and James Wheeler, Eileen and Russell Wilkinson (Josephine C. Wilkinson Charitable Lead Trust), and

W. Chelsey Worthington.

Donations to the Harrell Family Fellowship Endowment were received by Patricia and Pierre Bikai, Matthew P. Harrell, and Renathe and Erik Harrell.

The Kenneth W. Russell Memorial Trust received a donation from Gaetano Palumbo and Glen Peterman.

The North Ridge Project received a donation given in honor of Dan and Gert Vos of Ada, Michigan.

Donations to the Petra Church Conservation Endowment were received from The Gambs Family Foundation, Cynthia Infantino, Leticia and William Jarvis, Nancy and John Neerhout, Anne and Charles E. Roos, Ruth Anna and Ronald Stolk, and Mr. and Mrs. Grant M. Wilson (Carlisle Foundation).

The James Sauer Fellowship Endowment received donations from Robin Brown, Martha and Artemis Joukowsky (Joukowsky Family Foundation), Nancy Lapp, Burton MacDonald, Linda and David McCreery, Josephine and Randolph Old, Elizabeth and William Overstreet, and Joan and Richard Underland.

Donations to the library endowment were made by Aina and Roger Boraas, Carol and George Landes, John R. Lee, Annette Kestell Mellott, Charles E. Miller, and John Oleson.

Donations of books and journals were received from the Abdul Rahman al-Sudairy Foundation, Badi Yousef al-Abed, Alison Betts, Ghazi Bisheh, José Blázquez Martínez, Karen Borstad, CARCIP/GTZ (courtesy of May Shaer), Nicholas Clapp, Nancy Coinman, Thomas Dailey, Caroline (Molly) Davies, Fred Donner, Steven Falconer, Mariusz Gorniak, H.R.H. Prince Ra'ad bin Zeid, Jennifer Jones, Gloria London, Russell Lucas, George Mendenhall, Yusef Patel, Marsha Pripstein Posusney, H. Williams Prescott.





Pierre Bikai, H.R.H. Prince Feisal, and Artemis Joukowsky

USAID to add funds to ACOR's project endowment is signed (see page 11). After the ceremony, ACOR staff and Trustee Widad Kavar celebrate by having ice cream at the Mövenpick.

April 29. Kurt takes Fred Mednick, Executive Director of Teachers Without Borders, to Madaba to meet with officials about donating computers to the schools there.

April 30. Pierre delivers a lecture at Yarmouk University on dendrochronology.

May 12. Patricia attends a lunch for the World Monuments Fund hosted by Trustee Widad Kavar.

May 15. Pierre, Fawwaz al-Khraysheh, Ghazi Bisheh, and Mohammed Najjar, attend the University of California at San Diego Workshop on Jordanian Archaeology organized by Tom Levy.

May 19. The Board of Trustees meets in Providence and welcomes two new members, Mary Wilson, a history professor at University of Massachusetts, Amherst, and Vincent Fay, an attorney from NY.

May 26. Pierre gives a tour of Petra to U.S. embassy employees.

May 28. Patricia presents a lecture, hosted by Karen Asfour, on the North Ridge Project to the Basira Club.

June 5. There is a dinner in the director's apartment for a group from Brown University. H.R.H. Prince Feisal bin Hussein, a Brown graduate, attends.

June 8. Word comes that ACOR has received a 3-year grant for the library from the Getty Grant Foundation.

June 13. Pierre and Patricia leave for Belgium to visit Trustee Neil Silberman at the Ename Center for Public Archaeology and Heritage Presentation.

June 28. Kurt, Nisreen, and Fatma attend the wedding of former ACOR fellow Mohammed Hafez.

## Library Update

With the assistance of two grants, the ACOR library is rapidly expanding its already impressive collection of over 28,000 books and periodicals. Last summer, ACOR was awarded a three-year grant by the U.S. Department of Education to broaden its library collection outside the

traditional fields of archaeology and anthropology. The grant was also awarded to support ACOR's slide scanning project, which entails scanning the center's collection of over 12,000 slides, most on Jordan's archaeological sites, and saving the images on CDs. Funds were used to purchase computer hardware and to scan the slides. To date, Fatma Marii has saved approximately 4,800 images. Under this grant, ACOR was also awarded additional funds to purchase bookshelves and a new computer for the librarian.



Fatma Marii scanning slides

This past June, ACOR was awarded a three-year grant by the Getty Grant Program. Funds from this grant will be used to purchase books in the fields of archaeology, art history, and conservation. With this grant, ACOR will be able to develop its library into an important and well-equipped resource center for art historians, conservators, and archaeologists working in Jordan.

With the assistance of these two grants and those individuals who support the library through monetary and book donations, the ACOR library continues to develop into an invaluable resource center in Jordan.

*Kurt Zamora*

## Sean W. Dever Memorial Prize

The W.F. Albright Institute of Archaeological Research in Jerusalem announces the establishment of The Sean W. Dever Memorial Prize. This is an annual award of up to \$500 for the best published article or paper presented at a conference by a Ph.D. candidate in Syro-Palestinian and Biblical Archaeology.

The first award will be given for the year 2001. Authors may be of any nationality, but the articles/papers must be in English. All submissions should include the academic affiliation of the author and his/her mailing, fax, e-mail addresses, and phone number. Submission of conference papers should also include the name of the conference and the date when the paper was presented. The deadline for submissions is December 31, 2001. Articles/papers should be sent to the W.F. Albright Institute, P.O. Box 40151, Philadelphia, PA 19106. The announcement of the award will be made on March 1, 2002.



## New Publication

*The Petra Church* by Zbigniew T. Fiema, Chrysanthos Kanellopoulos, Tomasz Waliszewski, and Robert Schick. Report on the church excavated by ACOR in Petra. With more than 700 illustrations, the volume contains reports on all aspects of a project that excavated what was probably the cathedral of Petra, a building lavishly decorated with mosaics and marble. This large format (33 x 25 cm), cloth-bound volume has 464 pages, 36 in full color. \$150.

## Other Publications

*The Mosaics of Jordan* by Michele Piccirillo. Large format, cloth-bound volume includes 303 pages in full color with 824 illustrations, plans, and aerial photographs. \$175.

*The Great Temple of Amman: The Architecture* by Chrysanthos Kanellopoulos. The architecture of the temple that was excavated and partially restored by ACOR. Large format, cloth bound. \$80.

*JADIS: The Jordan Antiquities Database and Information System: A Summary of the Data*, edited by Gaetano Palumbo. Basic information on nearly 9,000 archaeological sites from all periods, plus 117 maps. This 453-page, hard-bound volume is xerographically reproduced. \$40.

*The Great Temple of Amman: The Excavations* by Anthi Koutsoukou, Kenneth W. Russell, Mohammad Najjar, and Ahmed Momani. Description of the 1990-93 excavations undertaken by ACOR and the Department of Antiquities. This hard-bound volume has 180 pages and 3 fold-out plates. \$65.

*Madaba: Cultural Heritage* edited by Patricia M. Bikai and Thomas A. Dailey. Catalogue of the remains from the Early Bronze Age through late Ottoman vernacular houses (113 pages, paperbound) Over 150 illustrations, five in color. Includes a separate large map. An Arabic translation is available for free. \$35.

*Ancient Ammonites & Modern Arabs: 5000 Years in the Madaba Plains of Jordan* edited by Gloria A. London and Douglas R. Clark. Life across the centuries in the area excavated over the past 30 years by the Madaba Plains Project. \$27.

### ACOR and its Newsletter

ACOR, the American Center of Oriental Research, is a nonprofit academic institute whose services are supported through endowments, donations and grants. ACOR is tax exempt as a 501(c)(3) organization, as determined by the U.S. Internal Revenue Service. Inquiries may be sent to ACOR, P.O. Box 2470, Amman 11181, Jordan, Tel.: (962-6) 534-6117, Fax: (962-6) 534-4181, e-mail: ACOR@go.com.jo, or to ACOR, Boston University, 656 Beacon St., 5th Floor, Boston, MA 02215-2010, Tel.: 617-353-6571, Fax: 617-353-6575, e-mail: acor@bu.edu. The *ACOR Newsletter* is edited by Patricia M. Bikai and Kurt Zamora. Printed in Jordan by National Press.

*The 150<sup>th</sup> Anniversary of the United States' Expedition to Explore the Dead Sea and the River Jordan* by Robert E. Rook. An assessment of the Lynch expedition in 1848. Hard-bound volume of 32 pages. Many reproductions of Lynch's illustrations, including his three maps. \$20.

*Madaba Map Centenary 1897-1997*. With assistance from ACOR, the proceedings of the international conference on the Byzantine map have been published, edited by Michele Piccirillo and Eugenio Alliata. This well illustrated hard-bound volume has 278 pages, and is available for \$125.

All prices include shipping.

## ACOR Trustees

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