United States Support for the World Heritage Site

PETRA

March 2004

For decades, American organizations have been closely associated with the excavation, presentation, and preservation of the UNESCO World Heritage site of Petra. Images from Petra have also from time to time entered into popular American culture. Perhaps the most notable example of this is the climax of the 1989 movie *Indiana Jones and the Last Crusade* featuring scenes filmed in the *siq* and "Treasury." In addition, Petra has featured in a variety of popular publications, ranging from the children's comic book *Tin Tin and the Red Sea Sharks* to the cover of the December 1998 issue of *National Geographic*.

Francesca Ripamonti

On a more serious note, American universities and academic institutions have played and continue to play a vital role in better understanding Petra's past and in presenting it to a wider public. Funding has come from many sources, including private donors and public institutions such as the National Endowment for the Humanities (NEH), the United States Information Agency (USIA) and the United States Agency for International Development (USAID). This paper highlights some of the major ways these and other American entities have contributed to one of the world's great archaeological sites and helped transform it into one of the premiere tourist destinations in the Middle East.

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Excavation

As long ago as 1934, William Foxwell Albright, Director of the American Schools of Oriental Research (ASOR) in Jerusalem and dean of archaeological studies in the Middle East, initiated excavations in the northern part of Petra. Subsequent excavations undertaken by the American Center of Oriental Research (ACOR), Brown University and the University of Utah, among others, have played an important role in better understanding the history, culture and legacy of the Nabataean as well as the later Roman and

Byzantine civilizations that once thrived at Petra.

Amphitheater: During the early 1960s, the American Expedition to Petra under the leadership of Dr. Philip C. Hammond, professor of anthropology at the University of Utah, initiated a detailed excavation of

Petra's main theater. Among other things, this work helped establish the Nabataean origins of this unique and impressive structure carved into the red sandstone that is characteristic of the region.

Private Houses: The American Expedition also played an important role in other excavation work undertaken in Petra. Specific work included the excavation of the first private residence in Petra (1959) and excavation of a series of private Nabataean houses on the northeast slope of Wadi Mousa (1974-1977).

Temple of the Winged Lion: Excavations at the Temple of the Winged Lion, located north of the Roman street, are another legacy of the continued involvement of American institutions in Petra. This work,

also undertaken by the American Expedition to Petra under the leadership of Dr. Hammond, commenced in 1973 and continues to date.

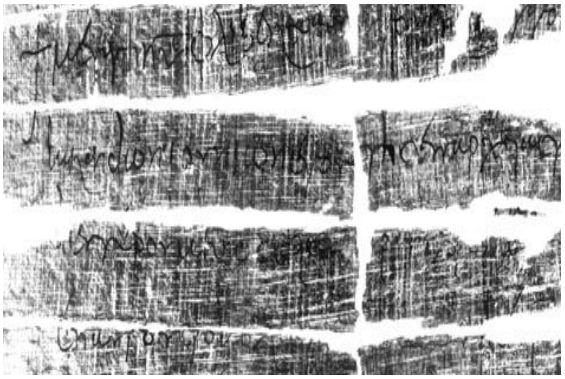
Great Temple: Beginning in 1993, Brown University under the direction of Martha Sharp Joukowsky, initiated a series of excavations at the Great Temple (originally called the Southern Temple), a massive complex located on the southern side of the Roman street and near Qasr al-Bint and the Petra rest house. The purpose is to ascertain the original ground plan for the temple and better understand its character and function. The impressive site was apparently

first developed for religious purposes during the Nabataean period and continued to be used into the late Roman period. The Temple was destroyed by an earthquake in the middle of the Fourth Century. Funding is provided by Brown University and other private donors, including the Replogle Foundation and the World Monuments Fund.

Byzantine Churches: For over a decade, ACOR has supported an ongoing series of excavations and related work on three Byzantine churches located on the hill opposite the Great Temple. Known as the Petra Church, the Ridge Church, and the Blue Chapel, the excavations are

shedding new light on Petra during the sixth and seventh century. Kenneth Russell and, later, ACOR Director Pierre

Bikai directed the Petra Church project, while Patricia Bikai directed excavations at the Ridge Church and the Blue Chapel. USAID provided funding for much of this work, with additional support coming from the Ministry of Tourism and Antiquities and the World Monuments Fund.



Petra Scrolls: One unexpected outcome of the Petra Church project was the discovery by ACOR of some 150 carbonized scrolls dating to the sixth century. The fragile but still decipherable texts are written mainly in Greek and offer a wealth of information on the economic and social situation in Petra during the Byzantine period. Many of the texts deal with wills and inherited property. Some references also point to the survival of Nabataean culture in the region well into Byzantine times. Apparently, the scrolls are the remains of the private archive of a wealthy family that owned considerable property in the area around Petra. Working with ACOR, the University of Helsinki and the

A Brief Summary of Archaeological Investigations Undertaken by American Institutions at Petra, 1934 – present

1934:	William Foxwell Albright (Director of the American School of Oriental Research in Jerusalem), working with George Horsfield (Director-General of Antiquities of Palestine), excavates what became known as the "Conway High Place" in the northern part of Petra.
1959:	American Expedition to Petra, under the direction of Dr. Philip C. Hammond from the University of Utah, works with Peter J. Parr of the British School of Archaeology in Jerusalem to excavate the first private residence at Petra.
1961-1962:	American Expedition to Petra, under the direction of Dr. Philip C. Hammond, works with the Jordan Department of Antiquities to excavate the Main Theater in the Inner Siq area, establishing its Nabataean origins.
1974-1977:	American Expedition to Petra excavates a series of Nabataean private houses on the northeast slope of Wadi Mousa.
1973-present:	American Expedition to Petra begins the first major long-term excavations at Petra at the "Temple of the Winged Lions," an activity that continues to this day.
1991-present:	American Center of Oriental Research (ACOR) begins USAID-funded excavations at three Byzantine churches, the Petra Church, the Ridge Church and the Blue Chapel, uncovering the "Petra scrolls" which contain a wealth of material contributing to the understanding of Petra's later history.
1993-present:	Brown University team, under the direction of Dr. Martha Sharp Joukowsky, begins excavations at the Great Temple on the southern slope of Wadi Mousa, across the temple of the Winged Lions.
1994-present:	ACOR initiates conservation work on the Petra scrolls in cooperation with the Ministry of Tourism and Antiquities, University of Helsinki, and University of Michigan; grant support is provided by the National Endowment for the Humanities and the Samuel H. Kress Foundation.
2004-present:	ACOR initiates conservation excavations in wine cellar in Beida (Little Petra).

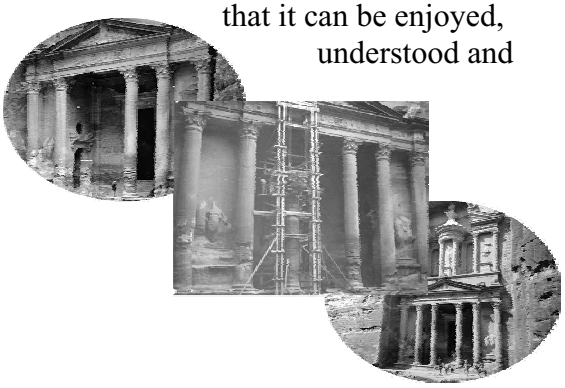
University of Michigan have published the first volume of a book on the scrolls. The National Endowment for the Humanities and the Samuel H. Kress Foundation and numerous private donors have provided major funding in support of this effort.

Roman Street Project: From 1997-1999, ACOR worked with the Department of Antiquities to excavate areas of interest adjacent to the colonnaded Roman street. The purpose was to enhance tourist interest as well as better understand Petra's urban history. Main features uncovered so far include five rooms that apparently served as shops or taverns and a stairway leading to the upper market. Once again, USAID was a major donor for this effort.

Presentation

Not surprisingly, archaeological research at Petra has been accompanied by a growing tourist interest in the site. In 1999 alone, more than 400,000 tourists visited Petra, by far the most to any of Jordan's impressive collection of tourist sites. The extent to which tourists decide to visit and then stay for more than a few hours depends largely on the level of services available and the extent to which historic sites are presented and made accessible to the general public.

"Treasury" Building: Effective preservation and presentation is vital, both to preserve Petra's historic past and ensure that it can be enjoyed, understood and appreciated by future generations. Initial attempts to do this were quite rudimentary and included a USAID-funded initiative to repair the "third column" in the Treasury building in 1958. The Treasury building, an impressive monument carved into the rock and immediately visible on emerging from the *siq*, has in recent years become perhaps the single most recognized symbol of Jordan throughout the world.

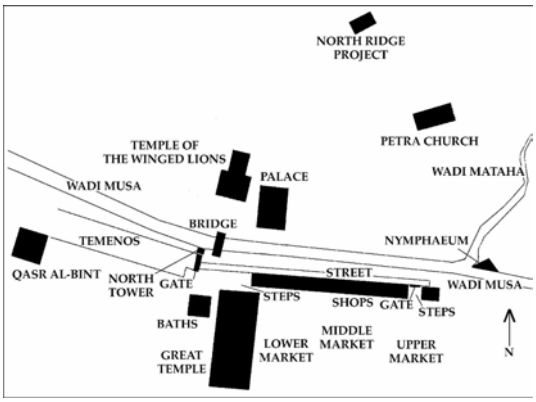


Master Plans for Petra I: During the late 1960s, USAID provided funding to the U.S. National Park Service to complete a master plan to guide future development of the Petra site. Although a number of planning exercises have been undertaken with respect to Petra, this study helped focus attention on preserving the site and on developing a comprehensive plan for managing the anticipated growth in the tourist industry. It also identified perennial flooding of the *siq* entrance as a major problem. Subsequently, USAID funded

USAID-funded Books on the History and Culture of Jordan

During the middle 1990s, USAID, under its tourism initiative, supported the publication of several books documenting important aspects of the history and culture of Jordan. These books, some of which cover sites related to Petra, include the following:

- *The Holy Sites of Jordan* (Turab, 1996)
- Kanellopoulos, Chrysanthos, T*he Great Temple of Amman: The Architecture* (ACOR, 1994)
- Koutsoukou, Anthi, Kenneth Russell, Mohammad Najjar and Ahmed Momani, *The Great Temple of Amman: The Excavations* (ACOR, 1997)
- *Old Houses of Jordan* (Turab, 1997)
- Piccirillo, Michele, *The Mosaics of Jordan* (ACOR, 1993)
- Z.T. Fiema, C. Kanellopoulos, T. Waliszewski and R. Schick, *The Petra Church* (ACOR, 2001)
- Antti Arjava, Yakko Frosen and Marjo Lehtinen, *The Petra Papyri: Volume I* (ACOR, 2002)



construction of a dam across the entrance to protect the site, replicating a much earlier structure that had performed a similar function during Nabataean times.

Master Plan for Petra II: In 1994, USAID funding resulted in the completion of a second, updated master plan for Petra and the surrounding region. Among other things, the plan recommended improvements to the visitor's center, trail identification, landscaping, and signage requirements.

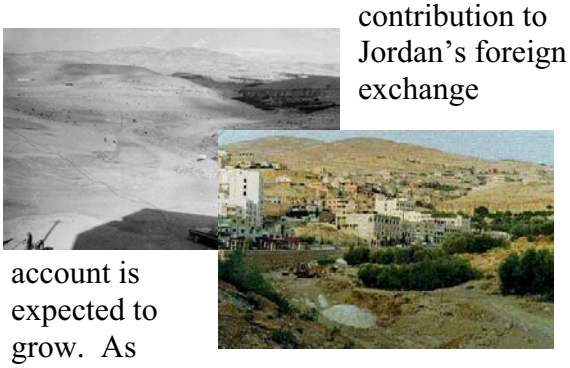
Shelter for Petra Church: What happens "after excavation" is a dilemma that all archaeologists face. In Jordan, this issue is especially acute in the case of mosaics which, once uncovered, must be protected from wind, rain and sun. In the case of the Petra Church, USAID provided funds to ACOR to design and construct an innovative shelter that now protects one of the best preserved examples of Byzantine mosaic work in the country. Designed by Shutler Architects of Arlington, Virginia and built by Starnet International Corp. of Longwood, Florida, the shelter covers 7,200 square feet and was completed in 1998 at a cost of approximately $250,000.

Additional Improvements: Local currency generated by a USAID-funded private sector commodity import program has been used to implement important elements of the various Petra master plans. Among other things, during the 1990s, this funding helped paint private residences in Wadi Mousa a rose-red color to blend in with the landscape; construct walkways and horse paths into Petra; and provide two-wheel horse-drawn carriages that provide access to Petra for children, the elderly or disabled, and other interested visitors.

ACOR Endowment: Finally, it should be noted that the ongoing USAID "partnership" with ACOR makes a significant and ongoing contribution toward archaeology and site presentation, both in Petra and elsewhere in Jordan. USAID-funded initiatives undertaken by ACOR in Jordan include the Madaba Archaeological Park; excavations at the early Islamic city in Aqaba; excavations at the Citadel in Amman; and excavations at the three Byzantine churches in Petra. In the late 1990s, this support was consolidated with the establishment of an endowment designed to provide ongoing financial stability for ACOR and support its long-term fundraising efforts. So far, USAID contributions to the endowment exceed $3 million. Additional funding has come from a variety of other sources, primarily American, including the National Endowment for the Humanities.

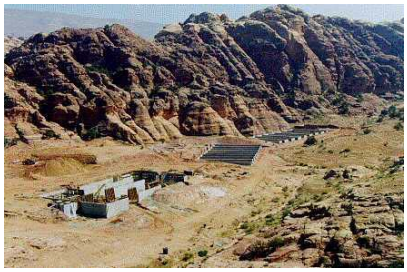
Preservation

Tourism has in recent years become one of Jordan's major growth industries. It is also the country's second most important source of foreign exchange (after remittances from workers abroad), providing nearly $1 billion annually by the late 1990s. Although world and regional events including September 11, 2001, the Intifada in the Palestinian Territories, and the war in Iraq, have had a negative impact on tourism, in the long term, tourism's contribution to Jordan's foreign exchange account is expected to grow. As tourism's contribution to Jordan's national economy increases, it will become even more vital to ensure that historical sites such as Petra are preserved to a high standard and that local inhabitants living in the surrounding regions benefit from this growth.



The rapid growth of Wadi Mousa, the community immediately outside Petra, is directly related to the growth in the tourist industry. Even in as recently as the late 1970s, Wadi Mousa was a small village with a single government hotel located just outside the entrance to Petra. Currently, nearly 20,000 Jordanians live in Wadi Mousa and the surrounding villages. There are also more than 70 hotels with some 3,000 beds in and around Wadi Mousa, enhancing employment and income opportunities for many in the local community. Unfortunately this rapid expansion in tourist facilities was not accompanied by a comparable growth in water, sewage and other facilities.

As part of a long-term effort to ensure world class infrastructure in the region, USAID, along with France and Germany, funded the $43 million Wadi Mousa water and wastewater treatment project benefiting not only Wadi Mousa, but also the neighboring communities of Taiba, B'doul and Beida. USAID's total contribution came to $27 million and included the design and construction supervision for the entire system, as well as funding for the new wastewater treatment plant and a series of pumping stations.



The plant fits in well within the Petra environment. Interestingly, digging and construction work resulting from the project has uncovered a variety of archaeological artifacts that would otherwise have remained hidden. A USAID-funded Jordanian archaeologist assessed and cataloged this material under a subcontract to the Petra National Trust. A selection of artifacts is scheduled to go on display in the Petra museum.

USAID has also funded a wastewater re-use project to encourage utilizing the effluents of the Wadi Mousa plant in agriculture.

Summary of USAID Support Related to Major Historic and Tourist Sites in Jordan

Amman

- Excavated and restored Byzantine church at Citadel (1990s)
- Excavated and restored Temple of Hercules at Citadel (1990s)
- Supported development and presentation of Citadel site (1990s)

Aqaba

- Supported excavations of Islamic Aqaba (Ayla) dating to the Umayyad and Abbasid eras (1980s)

Bethany Beyond the Jordan

- Local currency associated w cash transfer program used to help preserve and present this major new site traditionally associated with the baptism of Jesus (1990s)

Dead Sea

- Constructed Amman-Dead Sea Highway (1990s)

Jerash

- Constructed original tourist rest house at Jerash (1960s)
- Supported excavations and restoration work at Jerash (1960s)

Kerak

- Reconstructed wall sections at Kerak castle (1960s)

Madaba

- Developed Madaba Archaeological Park (1990s)
- Built protective shelter for Church of the Apostles (1990s)
- Built protective cover for Church of the Virgin (1990s)
- Built protective cover for Burnt Palace (1990s)
- Built protective cover for Church of the Prophet Elias (1990s)

Mt. Nebo

- Constructed first paved link road to Mt. Nebo (1960s)

Pella

- Constructed tourist rest house at Pella (1990s)

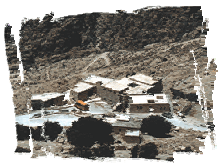
Petra

- Repaired third pillar of Treasury Building (1950s)
- Constructed first paved link road to Wadi Mousa (1960s)
- Supported excavations at "Little Petra" and Beida stone age village (1990s)
- Supported excavations at Petra Church (1990s)
- Built protective shelter for Petra Church (1990s)
- Supported excavations at Ridge Church (1990s)
- Supported excavations of commercial buildings near Roman street (1990s)
- Provided major funding for Wadi Mousa Water and Wastewater Treatment Project (1990s)
- Initiated Wastewater Reuse Project (2000s)

Um-Qais

- Constructed tourist rest house at Um-Qais (1990s)

Wadi Dana



- Helped develop Wadi Dana camp site (1990s)
- Helped develop Wadi Dana visitor's center (1990s)

Wadi Rum

- Constructed first paved link road to Wadi Rum (1960s)

Summary of Other International Support for Petra

Under support and coordination provided by the Petra National Trust and the Ministry of Tourism and Antiquities, numerous international organizations are at any one time extensively involved in a variety of work related to Petra. Specific programs that are currently active include the following:

1. GTZ (Germany) are funding research work aimed at better understanding stone preservation in Petra.

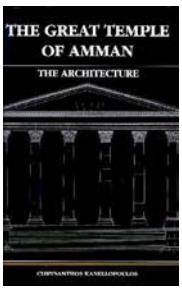
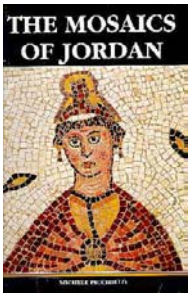
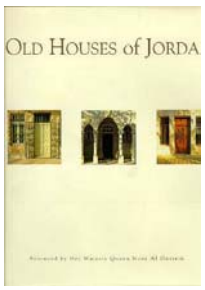
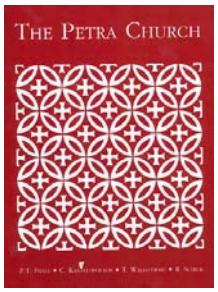
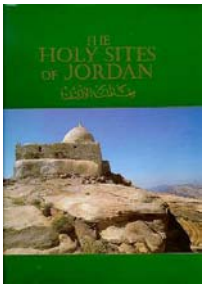
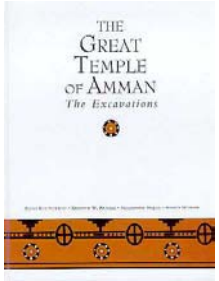
2. Swiss funding is being used to excavate the *siq* and better understand Nabataean approaches to water management.

3. The University of Basel in Switzerland is engaged in excavation work on Nabataean houses above the Great Temple.

4. The French are engaged in excavation work around Qasr al-Bint, near the Petra rest house.

5. Working with the Petra National Trust, the UNDP Global Environment Fund completed a biodiversity study of the flora and fauna in the Petra area.

6. Researchers from the University of Florence are investigating the Crusader Castle.

7. University of Helsinki is supporting excavations at Jebal Haruun (below Aaron's Tomb).

8. Finnish scholars are also heavily involved in ACOR's ongoing project to conserve and publish the Petra scrolls.