



**ACOR**  
AMERICAN CENTER OF  
ORIENTAL RESEARCH  
المركز الأمريكي  
للأبحاث الشرقية

# أخبار أكور NEWSLETTER

Volume 26.2 Winter 2014

## What Lies Beneath: New Insights into Petra's Temple of the Winged Lions

*Glenn J. Corbett and M. Elena Ronza*

Rarely when archaeologists excavate do they set out to find nothing. But this was exactly the goal of the TWLCRM Initiative when the team began digging several small test trenches at the site in October and November 2014. Our excavations were focused not on making new discoveries related to the temple's rich Nabataean past, but rather on reaching the level of the natural sandstone bedrock over which the temple was built nearly 2000 years ago.

Why was it so important for us to reach bedrock? In the temple's southwest quadrant, amid the arched supports of the building's monumental foundations, there is a substantial 10 m high wall of loose soil and rubble that was exposed by the earlier American Expedition to Petra (AEP) during the major excavation of the site in the 1980s. After decades of exposure, the wall is now in serious danger of collapse. If this happens, the walls, floors, and columns of the main temple complex above would likely come crashing down as well. As such, a chief goal of the TWLCRM Initiative is to buttress this rubble wall and thereby prevent further destabilization of the site.



View of the Temple of the Winged Lions site within Petra. Since its inception, a major goal of the TWLCRM Initiative has been the stabilization of the temple complex's southwest quadrant, particularly the large exposed rubble section (visible behind the arches near the bottom of the photo) that is in danger of collapse (photo by Giuseppe Delmonaco).





The southwest quadrant excavation team and affiliated project staff:  
Standing in the back, from left to right: Allison Mickel (ethnographer), Khatima Ruwei Jdeilat (team member), Ahmad Lash (DOA representative), M. Elena Ronza (project co-director), Tali Erickson-Gini (ceramologist), Glenn J. Corbett (project co-director)

Sitting in the front, from left to right: Shaker Salama Faqeer (foreman) and team members Haroun Sabbah Sa'adin, Bassam Ayedh Faqeer, Amal Arbey Samahin (standing), Ibrahim Hamed Mowasa (sitting in front), Qais Naif Faqeer, and Ahmad Salama Mowasa (photo by Ghaith Al Faqeer)

The recent excavations in the southwest quadrant hoped to determine if the underlying bedrock—which we initially thought to be just a few meters below the surface—could support our buttressing strategy, whether in the form of stone-filled metal gabions or hundreds of sandbags stacked against the wall. Helping us make this determination was the project's engineering geologist Giuseppe Delmonaco and his colleague Luca Puzzilli, both of Italy's ISPRA: Istituto Superiore per la Protezione e la Ricerca Ambientale (Institute for Environmental Protection and Research), who arrived during the last week of excavation to conduct a battery of geophysical tests on site.

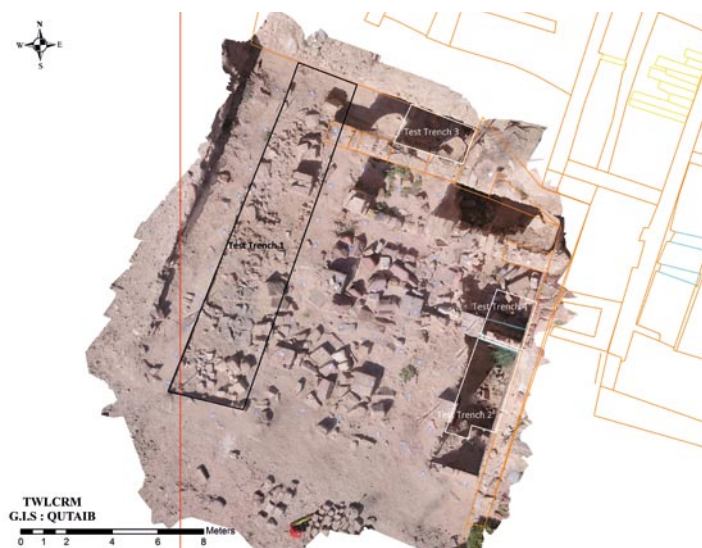
Ultimately, our limited test trenches in the southwest quadrant did not even come close to reaching bedrock (and for good reason, as Delmonaco and Puzzilli were able to determine [see below]). As might be expected, however, the excavation produced fascinating new insights into various phases of the temple's use and abandon-

ment, while the geophysical survey data are providing tantalizing glimpses of various manmade and natural features that still lie hidden beneath the surface.

#### ***The Southwest Quadrant Excavation***

The excavation, overseen by TWLCRM co-director M. Elena Ronza in collaboration with Department of Antiquities representatives Ahmad Lash and Asem Asfour, opened several test trenches in different parts of the temple's southwest quadrant. The team began by excavating a long, narrow trench (16 x 3 m) running parallel to the southwest quadrant's western section. After a few days of digging, dozens of large architectural fragments and building stones began to appear just below the surface, scattered across the trench with no perceptible pattern to their deposition. Amid the toppled blocks were fragmentary pieces of painted plaster, as well as the darkened, ashy traces of a small fire pit imbedded with remains of animal bone and egg shell. Based on the jumbled architectural remains and the recovered pottery, all of which, according to project ceramologist Tali Erickson-Gini, dates no later than the earthquake that devastated Petra in A.D. 363, we believe that the southwest quadrant was likely used as a dump area when the destroyed temple above was being cleared of debris following the earthquake. Intriguingly, the fire pit may provide an intimate snapshot of a meal that was enjoyed by some of the workers responsible for clearing the temple.

The density of collapsed blocks, however, made it impossible to probe for the underlying bedrock in this area. As such, two additional test trenches were opened in the eastern part of the quadrant, in an area directly abutting the west wall of the main temple complex where the earlier AEP project had already excavated to considerable depth. In addition to finding more evidence of architectural debris cleared from the temple following the A.D. 363 earthquake, including large chunks of painted plaster that once adorned the temple's interior, the excavation revealed puzzling new details about the temple's architectural history and stratigraphy. Most perplexing was the discovery that the temple appears to have been built without



Orthorectified boom photograph of the temple's southwest quadrant, with locations of the excavation trenches highlighted (plan by Qutaiba Dasouqi)





DOA representative Ahmad Lash surveys Test Trench 1 in the southwest quadrant, where architectural debris cleared from the temple following the A.D. 363 earthquake was discovered (photo by Ghaith Al Faqeer).



DOA representative Asem Asfour excavates a large piece of painted plaster that was discovered in Test Trench 4 in the southwest quadrant (photo by Ghaith Al Faqeer).

proper foundations, with the bottom courses of its west wall laid down directly on a thick layer of compacted soil and rubble. What is more, there are indications that the temple was built atop earlier structures, evidenced most clearly by a fragmentary stone pavement that was laid down before the west wall of the temple was built. Below the level of these structures, and after passing through the soil and rubble upon which the temple was built, the excavation finally reached virgin soil. The bedrock we had been searching for, however, still eluded us. With time running short, it was time for the project's geophysical survey team to take up the challenge.

#### ***A Glimpse Below the Surface***

During their week on site, Delmonaco and Puzzilli used the latest geophysical survey methods to investigate the presence of both natural and manmade features that lie buried well below the present surface. These methods, in addition to detecting the depth of bedrock, were able to identify the presence of previously unknown archaeological remains, as well as intriguing geological features that may help explain why particular areas of the temple

are more susceptible to the damaging effects of weathering and salt efflorescence than others.

The first method, known as geoelectrical resistivity tomography, involves deploying a series of current-injecting electrodes deep into the ground to measure the electrical resistance of buried features relative to the surrounding geology. In general, archaeological remains have a higher resistivity (i.e., present more of an obstacle to the passing electrical current) than surrounding natural soil, sediments, and geological formations that have more predictable resistivity signatures. The second method involves studying the behavior of subsurface seismic vibrations, whether caused by "microtremors" created through everyday geological, atmospheric, and human processes (passive seismic survey) or by simulating a small seismic event that sends shockwaves directly into the earth's surface (active seismic survey). By measuring the relative velocity of the seismic waves, geologists can then obtain detailed information about the depth and makeup of subsurface features, obtaining a pseudo-stratigraphic reconstruction of the site.

#### ***New TWLCRM Directors***

Upon leaving Jordan in July 2014 to become Executive Director of the Council of American Overseas Research Centers (CAORC), original TWLCRM director Christopher A. Tuttle handed off the directorship to Glenn J. Corbett and M. Elena Ronza, who now serve as project co-directors. Ronza, who lives in Wadi Musa, is chiefly responsible for the day-to-day management of the field project as well as designing and implementing a fieldwork plan that best meets the project's overall goals and objectives. Corbett, who is based in Amman but makes brief monthly trips to Wadi Musa, is primarily responsible for donor reporting, official correspondence with the Department of Antiquities (DOA) and the Petra Archaeological Park, and working with ACOR Chief Financial Officer Nisreen Abu Al Shaikh to make sure there is appropriate budget support for the project's fieldwork. In ongoing discussions with the DOA, the Director General, Monther Jamhawi, agreed to serve as the project's associate director.



Former TWLCRM director Christopher A. Tuttle (center) sitting on site with new project co-directors Glenn J. Corbett (right) and M. Elena Ronza (left) (photo by Barbara A. Porter)

### Conservation Update 2014

Following a successful first round of conservation interventions in March 2013 (see *ACOR Newsletter*, Vol. 25.2), a second conservation season was initiated in spring 2014 to resolve lingering problems affecting the temple's main cultic podium and the east wall of the cella.

Building off techniques and best practices established during the first season, a team of seven conservators, led by Lead Conservator Christina Danielli, focused their efforts on carefully cleaning encrusted salts from the sidewalls of the cultic podium and the cella's east wall. Where necessary, the team used a water-based stone consolidant to prevent further deterioration of the features. In addition, the relatively poor condition of both the podium sidewalls and the east wall required mortar repairs using a lime-based hydraulic mortar.

The podium surface, once covered with decorative opus sectile flooring, is at present a crumbling mass of detached bedding-mortar. While the team was able to do a general surface cleaning and also make mortar repairs to the platform's fragile edges, a more thorough and attentive intervention was postponed for a future conservation season.



Members of the TWLCRM conservation team apply mortar repairs and stone consolidant to the east wall of the temple's cella (photo by Ghaith Al Faqeer).

In all, 11 different geoelectrical resistivity surveys were conducted on site. For the tests, two dozen current-emitting electrodes connected by a cable and attached to a resistivity meter were laid out across the site in various linear, L-shaped, and U-shaped arrangements. The surveys consistently detected clearly defined, higher resistivity anomalies to a depth of 2 m below the surface, suggesting the presence of a lower layer of previously unknown structures, walls, and pavements associated with the temple. Particularly intriguing and worthy of further investigation are several chamber-like volumes identified beneath the temple's inner sanctuary. Furthermore, survey data from below the level of the archaeological deposits revealed uniform but lower resistivity readings associated



TWLCRM team member Ahmad Mowasa cleans the excavated surface near the bottom of Test Trench 2, where a fragmentary stone pavement (right half of photo) was discovered. It appears to date to before the temple was built (photo by Ghaith Al Faqeer).



Giuseppe Delmonaco uses a geoelectrical resistivity meter to gather data about buried archaeological remains and subsurface geological features (photo by Ghaith Al Faqeer).



Luca Puzzilli uses a sledgehammer to strike a metal plate on the ground during an active seismic test performed on site (photo by Giuseppe Delmonaco).

with a minor geological fault running almost directly beneath the eastern portion of the temple. Such features tend to promote the accumulation, circulation, and percolation of underground water, and therefore likely explain why the eastern columns and walls of the temple so rapidly develop encrusted layers of destructive water-driven salts that have to constantly be cleaned.

When coupled with geoelectrical survey, passive and active seismic tests taken around the site furnished similar results, with slower wave velocities and resistive anomalies occurring up to a depth of 2–3 m, likely indicative of the site's main archaeological deposit. Below this depth, however, wave velocities increased significantly, as the waves moved through layer upon layer of silt and clay deposited by millennia of fluvial and geological action. Then, at a depth of around 45 m, the seismic waves gained even greater velocity, nearly doubling in speed as they passed through endless depths of porous sandstone... the bedrock we had been searching for beneath the temple had finally been reached, though at depths far deeper than anyone would have imagined.

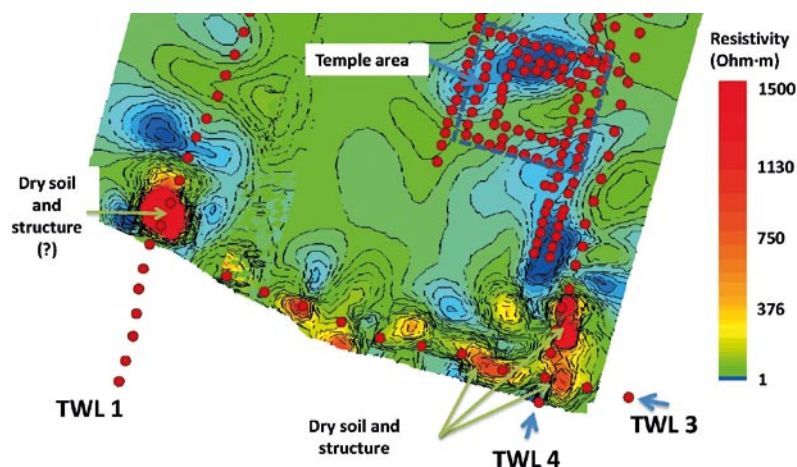




Geophysical surveys suggest the destructive salts that plague the temple (the whitish encrustation being cleaned in this photo by conservation technician Milena Zafirova) are the result of subterranean fissures that allow underground water to percolate to the surface (photo by Ghaith Al Faqeer).



Computer simulations indicate that a large sandbag buttress, similar to this smaller sandbag support built in the north exedra, would sufficiently stabilize the southwest quadrant's soil and rubble wall (photo by Qais Tweissi).



Nearly a dozen geoelectrical resistivity surveys were conducted across the TWL site. This map shows the results of three surveys (TWL 1, 3, and 4), with higher resistivities (orange to red in color) associated with buried archaeological features (map courtesy of Giuseppe Delmonaco and Luca Puzzilli).

### *Documenting the Temple of the Winged Lions*

TWLCRM Documentation Specialist Eman Abessalam worked throughout 2014 to produce elevation drawings of large portions of the TWL complex, including the expansive southwest and northwest quadrants. In addition, Abessalam has been taking final photographs of all recorded and publishable pottery and artifacts recovered during the landscape rehabilitation program. Finally, she has worked as a translator and interview assistant with project anthropologist Allison Mickel, who has been conducting research related to host community perspectives on archaeology.



Eman Abessalam while drawing a wall in the temple's northwest quadrant (photo by Barbara A. Porter)

### *Seeking Stability*

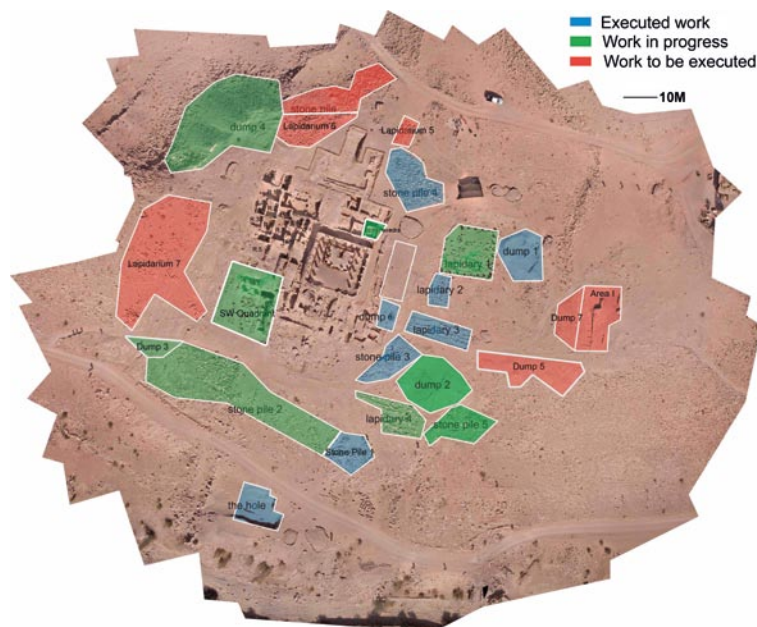
In addition to conducting geophysical surveys of the temple's subsurface, Delmonaco and his colleague Francesco Traversa also implemented an analytical model for assessing the structural stability of the southwest quadrant's exposed soil and rubble wall. The model, developed using high-resolution topographic survey data and advanced computer software, evaluates how the wall will behave under varying conditions, such as soil-saturating rain events or destabilizing earthquakes. The model predicts that the wall is presently pseudo-stable under normal dry conditions, while a particularly heavy rain or a modest-size earthquake would cause the lowest, weakest part to buckle, resulting in the full-scale collapse of the entire slope. According to

### Rehabilitation of the TWL Landscape Continues

Through the efforts of the TWLCRM local team, under the direction of M. Elena Ronza and project foreman Shaker Faqeer, substantial progress was made in removing (and recycling when possible) the soil, rubble, and ashlar dumps from the AEP excavation. The team focused primarily on clearing and sifting the massive mound that makes up Soil Dump 4 (also called “Jabal Hammond,” after the temple’s original excavator), the largest of the AEP project’s soil dumps, located to the northwest of the temple. While some team members continued the process of removing the dump level by level, others thoroughly sifted all the removed soil looking for archaeological materials like pottery, bone, and plaster. The sifting process produced “clean” dirt and sorted stones that are being stored for later backfilling operations, as well as a handful of exceptional objects that were missed by the original excavation, such as the nice Byzantine oil lamp recovered by Ageleh Jmeidi.



TWLCRM team member Ageleh Jmeidi holds a Byzantine lamp recovered during the clearing and sifting of Soil Dump 4 (photo by Qais Tweissi).



Work on the TWLCRM’s important landscape rehabilitation component has continued apace. This color-coded image shows the status of the various work areas—including soil dumps, stone piles, and lapidaria—as of December 2014 (image courtesy of University of California, San Diego and ACOR; annotated M. Elena Ronza).

ISPRA’s simulation, however, adding a stepped sandbag buttress (measuring roughly 2 x 2 m) against the base of the wall, together with reinforcement measures on the upper slope, would preserve its overall structural stability except in the most powerful of earthquakes. Delmonaco will be working with the TWLCRM team in 2015 to assess this buttressing strategy and help resolve one of the main obstacles to the temple’s long-term preservation.

*The TWLCRM Initiative is grateful to the U.S. Ambassadors Fund for Cultural Preservation large grant program for its generous support since 2012 and for additional funding from ACOR’s USAID Endowment.*



### Royal Jordanian Sponsorship of the TWLCRM Initiative

In 2014, Royal Jordanian continued to support the TWLCRM Initiative through sponsorship of seven round-trip tickets from Rome. During the spring, specialists came from Italy to undertake conservation work on the inner sanctum of the temple under the direction of Lead Conservator Christina Danielli. In November 2014, engineering geologist Giuseppe Delmonaco’s trip to Jordan was also supported by RJ. He came to Jordan in order to conduct geophysical surveys of the temple area with his colleague Luca Puzzilli. The lead article in this newsletter highlights the achievements of these activities. ACOR remains grateful for this ongoing sponsorship from Royal Jordanian, and we proudly announce it at all ACOR public events.



## ACOR TWLCRM Intern

In September 2014, Sarah Oeffler started a six-month internship at ACOR during which she assisted the TWLCRM project in many ways. She managed the project's Facebook page ([www.facebook.com/twldrm](http://www.facebook.com/twldrm)) and substantially increased the page's followers and daily shares. Sarah worked closely with the TWLCRM ACOR Co-Directors, Glenn Corbett and Elena Ronza, on projects in Petra. She also joined the team that organized mountains of pottery sherds from previous excavations.

During her time in Amman, she was involved in part of the organizing process of the original AEP archives. She also instigated ACOR's new blog ([www.acorjordan.wordpress.com](http://www.acorjordan.wordpress.com)) and wrote several articles reflecting her interests. In 2012–13, she was in Japan teaching English and American culture to high school students. Her 2014–15 sojourn in Jordan gave her the chance to get to know more about another area of the world. She is a native of Colorado and will be going to graduate school in London in fall 2015.

Barbara A. Porter

## ACOR and the AJA's Newsletter on Archaeology in Jordan

The October 2014 issue of the *American Journal of Archaeology* (AJA 118/4: 627–676) includes the newsletter article entitled "Archaeology in Jordan, 2012 and 2013 Seasons" as edited by Glenn J. Corbett, Donald R. Keller, Barbara A. Porter, and Christopher A. Tuttle. This is a team effort that relies on the contributions of those who work in Jordan and the editorial staff of the Archaeological Institute of America (AIA). The brief entries provided information on 54 projects conducted in Jordan during those two years. Although not all such work is captured, the sample is representative of current research in Jordan. There is additional content, as well as the article abstract, to be found at [www.ajaonline.org](http://www.ajaonline.org).

There is quite a long history to this endeavor which is part of our mission "to advance knowledge of Jordan past and present." ACOR has been editing this update on projects conducted under the auspices of the Department of Antiquities of Jordan since 1991 (AJA 95/2, April 1991) when it was initiated by Bert de Vries, ACOR Director from 1988 to 1991.

This summary of the editorship is a reminder of just how many people have been involved to maintain this effort. De Vries edited "Archaeology in Jordan" also for AJA 95/2 (April 1991) and AJA 96/3 (July 1992). For AJA 97/3 (July 1993) he had as his co-editor Pierre Bikai, ACOR Director from 1991 to 2006. Glenn L. Peterman, then ACOR Assistant Director in Amman, took on the challenge for AJA 98/3 (July 1994). As of 1995, Patricia Bikai, Associate Direc-

tor in Amman, was a co-editor with others through 2000, namely Deborah Kooning (AJA 99/3, July 1995) and Virginia Egan (AJA 100/3, July 1996, to 104/3, July 2000) with the latter also edited with Kurt A. Zamora, then ACOR Assistant Director in Amman.

Donald R. Keller, the Associate Director who has run ACOR's Boston office since 1996, has been the constant person since 2000. He edited the annual update with Stephen H. Savage and Zamora for the 2000 to 2004 seasons; with Savage for the 2005 and 2006 seasons; and with Savage and Tuttle for 2007 (the last of one-year submissions) and for 2008 and 2009 (for the first of the two-year submissions). For the 2010 and 2011 seasons' reports (AJA 116, October 2012), I joined the editorial team and Glenn Corbett did so in 2014. This was his first major project for ACOR and ACOR benefited from his considerable editorial experience.

The *Annual of the Department of Antiquities of Jordan* (ADAJ) presents more robust articles on archaeological projects. These AJA newsletters, however, provide more readily accessible overviews of work in the Kingdom and are a contribution to understanding Jordan's past. We look forward to presenting summaries of the results of archaeological field work in Jordan for the 2014 and 2015 seasons in a future issue of this prestigious journal. That article will mark 25 years of this endeavor.

Barbara A. Porter



## ACOR Special Announcement

### USAID SCHEP—Sustainable Cultural Heritage through Engagement of Local Communities Project

On 10 November 2014, ACOR signed a four-year Cooperative Agreement under the Economic Growth Sector of USAID Jordan with the acronym SCHEP. This project aims to help communities preserve and promote cultural heritage resources through site development projects. The core concept was built around lessons learned from implementing ACOR's Temple of the Winged Lions Cultural Resource Management (TWLCRM) Initiative in Petra. Over the four-year period, SCHEP will provide fixed award grants to at least eight projects in Jordan. SCHEP will also work closely with the Department of Antiquities, the Ministry of Tourism and Antiquities, and the relevant university departments to create a core Community of Practice that will help promote knowledge of best practices in site preservation, management, and presentation. Furthermore, SCHEP aims to increase the visibility of the project sites by engaging with various stakeholders involved in tourism in Jordan.

For the USAID SCHEP Fact Sheet, see [www.acorjordan.org](http://www.acorjordan.org) under SCHEP, and to read a summary of SCHEP's key objectives, visit the ACOR Blog ([www.acorjordan.wordpress.com](http://www.acorjordan.wordpress.com)).

## American Center of Oriental Research: 2015–2016 Fellowship Awardees Announcement

*National Endowment for The Humanities Post-Doctoral Research Fellowship*

**Aseel Sawalha** (Anthropology, Fordham University) Amman's Art Scene and the Changing Urban Landscape

*ACOR-CAORC Post-Graduate Fellowship*

**Austin Hill** (Atlas of Innovation, German Archaeological Institute) Wadi al-Qattafi Aerial Archaeology Survey

**Suzanne Richard** (History and Archaeology, Gannon University) Final Report on the EB IV Settlements at Khirbat Iskander, Jordan

**George Potter** (English, Valparaiso University) Mapping Amman: Social Geography and Cinema in Jordan

*ACOR-CAORC Fellowship*

**Ali Hamdan** (Geography, University of California, Los Angeles) Tracing the Roots of Conflict: Geographic Perspectives on Sectarian Violence in Syria

**Sarah Islam** (Near Eastern Studies, Princeton University) The Evolution of Blasphemy as Legal Category in Medieval Islamic History

**José Martínez** (Politics and International Studies, University of Cambridge) The Politics of Bread: Neoliberal Economic Reforms and Authoritarian Persistence in Contemporary Jordan

*Jennifer C. Groot Fellowship*

**Karlene Shippelhouse** (Undergraduate, Anthropology, Near Eastern Studies, University of California, Berkeley) Dhiban Excavation and Development Project 2015

**Ashley McKinney** (Undergraduate, Anthropology, University of Tennessee) The 'Ayn Gharandal Archaeological Project

*Pierre and Patricia Bikai Fellowship and Harrell Family Fellowship*

**Craig Harvey** (Graduate Student, Classical Art and Archaeology, University of Michigan) The Publication of Ceramic Building

Material from the Roman Fort at Humayma and the Study of the Heating System of the 'Ayn Gharandal Bathhouse

*Bert and Sally de Vries Fellowship*

**Conor Fagan** (Undergraduate, History, Art History and Archaeology, Anthropology, University of Missouri, Columbia) The 'Ayn Gharandal Archaeological Project

*Burton MacDonald and Rosemarie Sampson Fellowship*

**Adam Kuntz** (Undergraduate, Near Eastern and Classical Archaeology, Wilfrid Laurier University) Khirbat al-Mukhayyat Archaeological Project (KMAP)

*ACOR Jordanian Graduate Student Scholarship*

**Muaffaq Al Khadir** (Graduate Student, History, Al Bayt University) History and Archaeology of Arab Settlement in the Levant before Islam

**Aven Al Qatameen** (Graduate Student, Archaeology, University of Jordan) University Study

**Mohammad Al Zubi** (Graduate Student, Epigraphy, Yarmouk University) New Safaitic Inscriptions from Jordan—Wadi Salhub

**Rita Dawood** (Graduate Student, Conservation and Management of Cultural Resources, Yarmouk University) Ancient Icons, Intervention and Preventative Conservation

*James A. Sauer Fellowship*

**Sahar Al Khasswneh** (Graduate Student, Ancient Near Eastern Archaeology, Free University Berlin) Establishing a First Chronology for Near Eastern Desert Hunting Traps (Kites) Using Luminescence OSL Technique

*Frederick-Wenger Jordanian Educational Fellowship*

**Fatmeh Darawad** (Graduate Student, Archaeology of Ancient Arab Civilizations, Hashemite University) Umayyad Cultural Heritage Significance in Jordan and the Issues of Developing Touristic Routes: Assessment and Recommendations

### ACOR Jordanian Travel Scholarship for ASOR Annual Meetings

*San Diego, November 2014*

**Khaled Al Bashaireh** (Department of Archaeology, Yarmouk University) "Multi-method Analyses of Marble Architectural Elements from Churches in North Jordan: Preliminary Results of Provenance Investigation"

*Atlanta, November 2015*

**Hanadi Al Taher** (Department of Antiquities) "Transitional Period between Ayyubid-Mamluk and Ottoman Periods in Light of the Archaeological Excavations at the Site of Umm Zuwaytina"

**Basem Al Mahamid** (Department of Antiquities) "Transition from Nomadism to Stability—Life in Iraq al-Amir village (1800–1950)"

### Public Lectures at ACOR (Fall 2014)

September 17—David Graf (ACOR NEH and CAORC Fellow and University of Miami), "Glimpses into Nabataean Culture and Society Based on Inscriptions from the Hisma (Southern Jordan)"

October 29—Leigh-Ann Bedal (ACOR-CAORC Fellow and Associate Professor of Anthropology at the Behrend College of the Pennsylvania State University at Erie), "Pipe Dreams and Paradise: The Water System of the Petra Garden and Pool Complex"



David Graf during his lecture, with Jehad Haroun (on left)



Leigh-Ann Bedal and Fawzi Zayadine



## Roger Stuart Boraas Remembered



Roger Boraas was one of ACOR's founding fathers. He was born in Stillwater, Minnesota on 4 February 1926 and died on 3 December 2014 in Pennsylvania. He was associated with Upsala College in East Orange, New Jersey from 1958 to 1991.

He is survived by his wife Aina, whom he married in 1948, and their children Miriam Deffenbaugh,

Marcia Boraas, and Roger Boraas, as well as six grandchildren and many nieces and nephews. In 2006, he received the P. E. Macalister Award from the American Schools of Oriental Research. The following is excerpted from the award citation written by Bert de Vries and augmented by him with new reflections.

The P. E. MacAllister Field Archaeology Award honors archaeologists who have made outstanding contributions to ancient Near Eastern and Eastern Mediterranean archaeology and was given to Roger Boraas for his pioneering role in the development of scientific archaeology in Jordan. He demonstrated a life-long dedication to the rigorous and disciplined application of sound

scientific methods to archaeological field research, which ranged from Tell Balatah in Palestine to Hesban and Rujm al-Malfouf in Jordan. Specifically, this included his teaching and overseeing of the stratigraphic method of excavation at Hesban, including rigorous excavation procedures, meticulous and faithful recording of field data, and disciplined restriction of interpretations to their logical derivation from evidence in hand.

His legacy in the continuation of that scientific methodology is reflected in the plethora of projects begun by young scholars who graduated from his Hesban "school of stratigraphy." Roger himself adapted his field manual to the work at Khirbat Iskander in Jordan, where he served as project stratigrapher in the 1982 and 1984 field seasons.

Roger was a pioneer in the transition from the Old Archaeology of the 1930s to 60s to the New Archaeology of the 70s to 90s, and his influence continued to provide methodological substance. He could apply his critical wit with equal ease to the analysis of a confounding soil layer or to a subtle sub-theme in a Pinter play. The archaeological search for understanding how our fellow humans lived came through careful examination of the material evidence. This became clear to all who associated with Roger on the massive seasons at Hesban where he served as the Chief Archaeologist. In 1969, he also directed a small group—including his wife Aina—at the site of Rujm al-Malfouf, which lies in front of the Department of Antiquities' headquarters in Amman. That was a special season fondly remembered by both of us, and to me Rujm al-Malfouf will always serve as a monument to his involvement in Jordan.

*Bert de Vries with Miriam Deffenbaugh and Barbara A. Porter*

In 2006, Roger and Aina Boraas set up a fund for support of the ACOR Library and designated it for research materials. They and their daughter Miriam and her husband Ralston Deffenbauh, Jr. have given generously. This fund has allowed ACOR to purchase some expensive books for the ACOR Library and will also make our dream come true to install compressed shelving units in the ACOR Lower Library, thereby providing for future library needs. The family designated this fund as one way for friends and family to honor the memory of Roger Boraas.



Wendy Botham at  
ACOR's 40th Anniversary  
Celebration in June 2008  
(photo by Beata Kowalska)

## Remembering Wendy Botham

Wendy Botham, a champion of Jordan and a dynamic presence in the Wadi Musa community, died on 25 September 2014 in Amman. She was from Texas and first came to Jordan in 1992. She served as the General Manager of Petra Moon Tourism Services from 1992 to 2013 and she also served on the Board of Directors of the Jordan Inbound Tour Operators Association. On the ACOR Blog ([www.acorjordan.wordpress.com](http://www.acorjordan.wordpress.com)), there is a special tribute to Wendy.

In fall 2014, Wendy spent time at ACOR, while she was undergoing her last treatments at the nearby King Hussein Cancer Center. At that time she spoke often with ACOR Director Barbara Porter and she was able to convey her hopes that her personal library would come to ACOR. This bequest came to be so that ACOR now has in its private, hostel space, a designated Wendy Botham Memorial Library section which will provide fun reading for many in the years to come.

## Kathy Nimri Retires



Kathy Nimri served as ACOR's Administrator from July 1991 to December 2014, and her retirement at the end of the year was just shy of 25 years in the front office. She joined ACOR under director Pierre Bikai and managed the administration of ACOR during a period of expansion and growth in the organization's activities. During her time at ACOR, she helped countless visitors and was the main point of contact for many students and scholars.

Kathy was born in Pennsylvania and her marriage in 1968 to Majid Nimri from Jordan brought her to the Middle East. She and her husband have four children and they now have nine grandchildren spread from Amman to Chicago.

Majid and Kathy Nimri at ACOR's Holiday Party in December 2013  
(photo by Barbara A. Porter)

## Fellows in Residence (July–December 2014)

*National Endowment for The Humanities Post-Doctoral Research Fellow and ACOR-CAORC Post-Graduate Fellow*

**David Graf**, History and Religious Studies, University of Miami; A New Corpus of Ancient North Arabian Inscriptions: A Different View of Nabataean and Roman Arabian Society

*ACOR-CAOR Fellows*

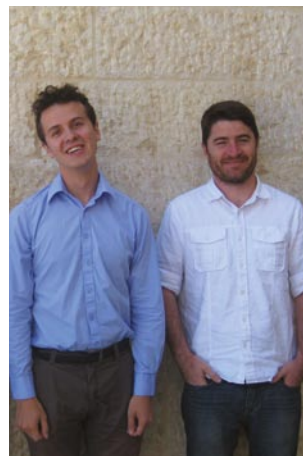
**Patrick John Adamiak**, Middle Eastern History, University of California, San Diego; Importing Ottoman Nationals: The Ottoman Settlement of Caucasian Refugees and Ottoman Governance in Anatolia and Greater Syria 1860–1918

**Alex Brey**, History of Art, Bryn Mawr College; Images of Hunting in the Umayyad Empire

**Mary Pancoast**, Anthropology, University of Virginia; From Victim to Citizen: The Production of “Real” Refugees in the Resettlement Process from Jordan to the United States

*Pierre and Patricia Bikai Fellow*

**Vladimir Troyansky**, History, Stanford University; Integration and Resistance; North Caucasus Refugees in Ottoman Transjordan, 1878–1914



Vladimir Troyansky and Patrick John Adamiak



Mary Pancoast



David and Linda Graf with their son John, daughter-in-law Alma, and grandson Peter



Alex Brey and Ghazi Bisheh



## Donations to ACOR (July–December 2014)

### *General Donations to the Annual Fund*

Bjorn Anderson; Anonymous; Edward and Jocelyn Badovinac; Roger S. Bagnall; Laird H. Barber; Robert and Mette Beecroft; Rick and Carla Berry; Martha Boling-Risser in memory of her parents, Bob and Jean Boling; Nancy Bookidis; Karen A. Borstad; Julia Bradford and Charles Warner; Nancy H. Broeder; Joseph A. Bruder IV; Robert W. Cash; Nirmal and Ellen Chatterjee; Sandra Chesrown; Henry Christensen III; Douglas R. Clark; Donna B. Curtiss; Piet de Klerk and Victoria de Klerk-Rubin; Bert and Sally de Vries; Neil Dearberg; William J. Deaton; Jonathan and Emme Deland; Fred Donner; Phillip Edwards; Raymond C. Ewing; Angel Foster; Robert J. and Jane F. Geniesse; Edward W. Gnehm, Jr.; Anna Gonosová; Philip Gould; Mark Gravenier; John H. Hall; Prudence O. Harper; Sarah Harvey; Ray Anita Hemphill; Claire W. Henriques; Ellen Herscher; Ellen Porter Honnet; Violet Jabara Charitable Trust; Omar and Nancy Kader; Paul and Brenda Katerberg; Eugene J. Kenney and Dale Burchard Kenney; Sara M. Knight; Christoph Knoch; James L. and Morley M. Knoll (through the auspices of The Saint Paul Foundation); Herbert Krosney; Øystein S. LaBianca; Peter and Anna Levin; James and Judith Lipman (through the Judy and Jim Lipman Fund at Schwab Charitable Fund); Edward J. and Eileen T. Lundy; Joan Porter MacIver; David W. McCreery; John McDonald and Caroline Chester; Anne H. Melvin; Renee Menard; George E. and Eathel L. Mendenhall; Eugene H. and Janet L. Merrill; Donald G. Mook; Anne B. Morgan and Brent Mashburn; Richard W. and Anne C. Murphy; Randolph B. Old; Megan A. Perry; Thomas R. Pickering; Barney Popkin; Samuel Popkin; D. Richard Powell, Jr.; Nanette Pyne; Jennifer Ramsay; Benjamin Rauch and Margaret Scott (through the auspices of the Brim Fund Foundation); Thomas C. Ragan; Francis B. Randall; Lewis and Margaret Reade; Suzanne Richard; Gary O. Rollefson; Nerina Rustomji; S.A.D. Foundation (through the auspices of Stewart A. Dunn, Jr.); Peter and Sylvia Sauer; Susan A. Sauer; James Schryver; Joe D. Seger; Bernard and Lisa Selz; The Selz Foundation, Inc.; Audrey Shaffer; Landry T. Slade; Henry and Adelaide Smith; Pamela H. Smith; Sandra R. Smith; John A. Sprague; Joseph T. Stanik; Sally B. Strazdins; Lucine Taminian; George and Robin Tzannes; Tony and Gail Vander Heide; Terry Walz; The Malcolm Hewitt Wiener Foundation; Nancy K. Webster; Charles L. Wilkins; James C. Wright and Mary K. Dabney

### *Annual Fund in honor of Barbara A. Porter*

Spencer Harper III; Marcia W. McHam; Ann Boon Rhea; Lita A. Semerad; Lola K. Semerad

### *Annual Fund Donations for Library Support*

Mitchell Allen; Robin M. Brown; Council of International Educational Exchange (through the auspices of resident director Elena D. Corbett); Michèle Daviau; Nita Dawson; Gemma S. Hall; Ellen Porter Honnet; Morag M. Kersel; Nancy L. Lapp; Lutheran Theological Seminary Library; Stanwell M. and Phemie C. Maxwell; John P. Oleson; Carolyn D. Rivers in memory of Harold Forshey; Mohamed Sawaie; Herbert and Marie-Claude Stetzenmeyer; Bethany J. Walker

### *Annual Fund Donations for Roger S. Boraas Library Support Fund*

Roger S. and Aina E. Boraas

### *Annual Fund Donations in memory of Roger S. Boraas for the Roger S. Boraas Library Support Fund*

Bert and Sally de Vries; John R. and Audrey A. Fox; Mary Luberdia; Andrew Vaughn; Joel M. and Linda K. Weissman

### *The ACOR General Endowment*

Ellen Porter Honnet; Michel Marto; Robert Rook; R. Thomas and

Marilyn M. Schaub; Deborah K. Solbert; Herbert and Marie-Claude Stetzenmeyer; Nancy K. Webster

### *The ACOR Jordanian Graduate Student Scholarship Fund*

Gemma S. Hall; Mohammed Sawaie

### *The Anne C. Ogilvy Memorial Library Endowment*

Roger S. and Aina E. Boraas; Henry C. Christensen III; David W. McCreery; Moors Myers in memory of her mother, Anne C. Ogilvy

### *The Pierre and Patricia Bikai Fellowship Endowment*

Judith H. Adams; Henry Christensen III; Wesley and Virginia Egan; Megan A. Perry; Denise Schmandt-Besserat; Marsha Vande Berg

### *The Bert and Sally de Vries Fellowship Endowment*

Roger and Connie Brummel; Robert W. Cash; Bert and Sally de Vries; Peter G. and Laurel J. Northouse

### *The Jennifer C. Groot Memorial Fellowship Endowment*

Nelson G. Harris; Laurel L. G. Hendrickson; David W. McCreery; S. Thomas Parker; Megan A. Perry

### *The Harrell Family Fellowship Endowment*

Edgar and Paula Harrell

### *The Burton MacDonald and Rosemarie Sampson Fellowship Endowment*

Geoffrey A. Clark; David W. McCreery

### *The Kenneth W. Russell Memorial Fellowship Endowment*

Neal Bierling; Lysbeth Marigold

### *The James A. Sauer Memorial Fellowship Endowment*

Seymour Gitin; George M. Landes; Nancy L. Lapp; Stephen F. Lintner and Pamela R. Johnson; S. Thomas Parker; Peter and Sylvia Sauer; Susan A. Sauer

### *Petra Church Conservation Initiative*

Judith H. Adams; Donna H. Antoon; W.H.V. Elliott; R. Allen and Ann L. Irvine; Samuel Popkin

### *Temple of the Winged Lions (TWLCRM) Initiative*

Donna H. Antoon; Giorgia Cesaro; Barbara A. Porter; Jane Swicegood

### *In-Kind Donations*

Wendy Botham Estate; Samuel Popkin; World Monuments Fund

## Donations to ACOR Library (July–December 2014)

Qahtan Al Abeed; Muhammad Adnan Bakhit; Karin Bartl; Ghazi Bisheh; J.-M. Blázquez Martínez; Wendy Botham Estate; Laurie A. Brand; The Catholic Biblical Association; Elliott Colla; Glenn J. Corbett; Edward E. Curtis; Eid Abdullah Al Dahiyat; Department of Antiquities; Yvonne Gerber; Omar Al Ghul; Seymour Gitin; Nayef G. Goussous; The Hardt Foundation for the Study of Classical Antiquity (through the auspices of Gary Vachicouras); Hani Hayajneh; Sarah Harpending; Werner Jobst; Zeidan Kafafi; Morag Kersel; Mohammad Tallal Ghaleb Mahmoud; David A. McDonald; Steve Monroe; Mohammad Najjar; National Defense University; Michele Nucciotti; John P. Oleson; S. Thomas Parker; Barbara A. Porter; Habibeh Rahim; Real Academia de la Historia; Elias Salameh; Giancarlo Scardia; Robert Schick; Mohammad Shaheen; Nahla Tabbaa; Laurent Tholbecq; Vladimir Troyansky; Guido Vannini; Salam Al Waked; Afaf Zeyadah

**Thank you to those who donate their new  
publications to the ACOR library!**

## ACOR Announcement: New Administrator



Firas A. Bqain in the ACOR Library

Firas A. Bqain joined the ACOR staff in Amman as the Administrator in November 2014. He was previously the Events Administrator for the British Institute in Amman and before that worked at Caritas, Jordan from 2007 to 2011 in educational and volunteer programs. He received his M.A. degree with a focus on Islamic Archaeology from the University of Jordan in 2004 and his B.A. degree in Archaeology and Tourism in 1999 from Mu'ta University in Karak. He participated on several archaeological projects including on the citadel of Amman in 2000 and 2001. Read more about Firas and the many skills he brings to the position on the new ACOR Blog.

**For the ACOR Blog, see  
[www.acorjordan.wordpress.com](http://www.acorjordan.wordpress.com)**

**ACOR e-mail addresses in Amman:**  
[acor@acorjordan.org](mailto:acor@acorjordan.org)  
[reservations@acorjordan.org](mailto:reservations@acorjordan.org)  
[library@acorjordan.org](mailto:library@acorjordan.org)

**Find us on Facebook**  
**ACOR – American Center of Oriental Research**

**To donate to ACOR use the Annual Appeal  
Notice or PayPal via our website  
[www.acorjordan.org](http://www.acorjordan.org)**

## November 2014 Board Meeting

The ACOR Board of Trustees' fall meeting took place at the Westin San Diego Hotel in San Diego, California on Saturday, 22 November. Board members were officially informed that on 10 November ACOR was awarded the USAID SCHEP (Sustainable Cultural Heritage through Engagement of Local Communities Project) cooperative agreement for four years. The Board received many other updates including ones regarding the staff changes with the retirement of Kathy Nimrias ACOR's long-term administrator. This ASOR Annual meeting was attended by the Director General of the Department of Antiquities of Jordan, Dr. Monther Jamhawi, who addressed the North American Dig Directors' group at the breakfast hosted annually by ACOR, and he had the chance to meet all attending ACOR board members at the ACOR Board dinner.

## ACOR Trustees

Class of 2015: Dr. Susan E. Alcock; H.E. Mr. Mohammed Asfour; Dr. Moawiyah M. Ibrahim; Dr. Øystein S. LaBianca; H.E. Mr. Hazem Malhas; Dr. John P. Oleson; Dr. Megan A. Perry; Mrs. Elizabeth Barlow Rogers; Dr. Bethany J. Walker

Class of 2016: Mr. Henry Christensen III (Secretary); Dr. Bert de Vries; Mrs. Jane F. Geniesse; H.E. Dr. Abdelelah Al Khatib; Mrs. Nina J. Köprülü; H.R.H. Prince Raad bin Zeid (First Vice President)

Class of 2017: Mrs. Anne M. Dunn, H.E. Mr. Edward W. Gnehm, Jr., Dr. Mary Ellen Lane; Dr. David W. McCreery; Mr. Randolph B. Old (President); Dr. S. Thomas Parker (Second Vice President); Dr. James R. Wiseman (Treasurer)

Trustee Emeriti: Mr. Artemis A.W. Joukowsky; Mrs. Widad K. Kavar; Prof. Nancy Lapp; H.E. Senator Leila Abdul Hamid Sharaf

Ex officio: Dr. Barbara A. Porter

## Contents

What Lies Beneath:

New Insights into Petra's Temple of the Winged Lion .....	1
Royal Jordanian Sponsorship of the TWLCRM Initiative.....	6
ACOR TWLCRM Intern.....	7
ACOR and the AJA's Newsletter on Archaeology in Jordan.....	7
USAID SCHEP .....	7
ACOR: 2015–2016 Fellowship Awardees Announcement.....	8
ACOR Jordanian Travel Scholarship for ASOR Annual Meetings.....	8
Public Lectures at ACOR (Fall 2014) .....	8
Roger Stuart Boraas Remembered.....	9
Remembering Wendy Botham.....	9
Kathy Nimri Retires .....	10
Fellows in Residence (July–December 2014) .....	10
Donations to ACOR (July–December 2014) .....	11
Donations to ACOR Library (July–December 2014).....	11
ACOR Announcement: New Administrator .....	12
November 2014 Board Meeting .....	12
ACOR Trustees .....	12

ACOR, the American Center of Oriental Research, is a nonprofit academic institute, the services of which 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@acorjordan.org](mailto:acor@acorjordan.org), or to ACOR, Boston University, 656 Beacon St., 5<sup>th</sup> Floor, Boston, MA 02215-2010, Tel.: 617-353-6571, Fax: 617-353-6575, e-mail: [acor@bu.edu](mailto:acor@bu.edu)  
The ACOR Newsletter is edited by Barbara A. Porter, Glenn J. Corbett, and Isabelle A. Ruben.

Printed in Jordan by National Press.