

ACOR Newsletter

أخبار أكور



Vol. 23.2—Winter 2011

The Petra Church Revisited: 1992–2011

Barbara A. Porter

The excavations undertaken by ACOR from 1992 to 2002 on the hillside north of the Petra city center uncovered three Byzantine churches known today as the Petra Church, the Blue Chapel, and the Ridge Church. In early December 1993 in the process of preparing for the construction of an aluminum space frame shelter to protect the marvelous mosaic floors of the Petra Church, a group of carbonized papyri dating to the 6th century were discovered. These papyri make up the family archive of Theodoros, a member of the church elite who owned considerable property. These documents—with dates ranging from 537 to 592—have revealed many insights into Byzantine Petra and have led to the rewriting of the history of this period. We proudly announce ACOR's recent publication of *The Petra Papyri IV* in this newsletter.

The main publication concerned with these excavations is *The Petra Church* (Amman, 2001), edited by Patricia Bikai and co-authored by Zbigniew Fiema, Chrysanthos Kanellopoulos, Tomasz Waliszewski, and Robert Schick with many contributors for specialized studies. An appendix by Susan Tillack and Patricia Bikai entitled "After the Excavation" summarizes some of the conservation efforts particularly for the period of building the shelter before the church was officially turned over to the Jordanian Department of Antiquities in July 1998. Here we present primarily aspects of the conservation of the Petra Church since then and most particularly the work undertaken in fall 2011.



Antonio Vaccalluzzo preparing new mortar bed for mosaic sections lifted from the west end of the south aisle of the Petra Church



Franco Sciorilli examining and treating the back of a lifted mosaic section; both photos courtesy of Franco Sciorilli

The fire that took place around A.D. 600 caused the papyrus to be carbonized (and thus, ironically, preserved) but also caused considerable damage to the mosaic floors as the mortar bedding below the upper tessellated layer was destroyed in many places, creating voids that have proved challenging to conservators ever since the floors were discovered. The mosaic conservation efforts from June 1992 to August 1993 were directed by Tom Roby. His team included Livia Alberti and Fatma Marii, who wrote her 2008 University College London dissertation on the glass from the church—including the glass tesserae. The object conservator then was Noël Siver. At that time the floor mosaics were cleaned, gaps were filled with mortar, and some of the uneven areas reset. Roby described the planning and execution of that work in articles in which he stressed the importance of having a conservator involved in the project from the outset.

In anticipation of the public opening in 1998, the *opus sectile* floor was recreated for the nave and chancel area with nine patterns identified by Patricia Bikai. This central floor is made with pieces cut from different colored marbles—imported into Petra and certainly reused from earlier buildings—and with a local purple stone; the scant ancient remains are embedded in a modern floor made of stone from Maan, which was created so that the surface could be walked on. During that time the conservation for the mosaic floors was undertaken by Enzo Di Carlo and Claudia Tedeschi.

From July to September 2004, a new conservation effort was executed under the supervision of Franco Sciorilli. Sciorilli has for many years organized the conservation efforts at the Memorial of Moses on Mt. Nebo, as part of the Franciscan Archaeological Institute, which is under the aegis of the Studium Biblicum Franciscanum, and he worked closely with the late Father Michele Piccirillo. In that summer season, Hussein Hamad and Mohammed Nuweija were included in the team at the Petra Church and trained to do basic regular maintenance. ACOR's conservation technician, Naif Zaban, also took part in the work, as did Mohammed Nihad Ebraheem, a graduate of the Madaba Mosaic School. The problems that were addressed—then and now—as described by restorer Sciorilli include the detachment between mosaic layers, swelling, deterioration of the preparatory layers, the efflorescence of soluble salts to the surface, and the poor condition of tesserae due to fracturing, exfoliating, and erosion. Maps were prepared in order to document the problems and to show where interventions were most needed. Indeed, careful mapping of the work before and after is one way to document what needs to be done and another such study was undertaken by Sciorilli in July 2011.

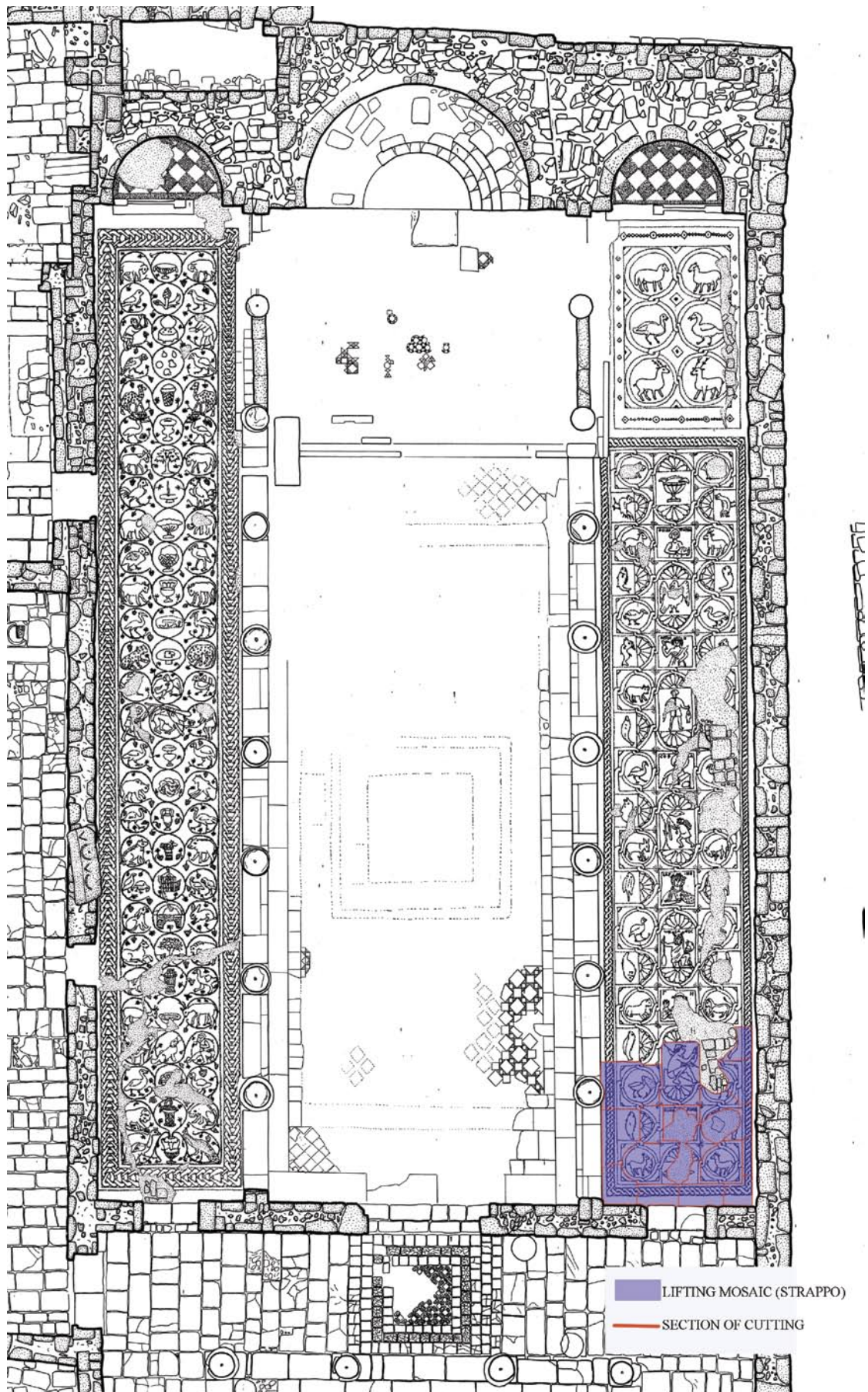
Thus by summer 2011, it was confirmed that conservation efforts were once again needed and that the simple maintenance in the interim years had not been sufficient to prevent deterioration in the church. A campaign was set for fall 2011 based on a work plan outlined by Sciorilli. Likewise, it was realized that the drainage system for the church had to be examined as it was not working efficiently and subsurface water was causing damage because salts were also rising to the surface of the walls. The logistics behind such projects take considerable thought and ACOR was fortunate this time

to have Maria Elena Ronza take on the role of on-site project coordinator. Her background in architectural restoration proved ideal for this multi-faceted undertaking, which considers the whole structure—ancient and modern (i.e. shelter, roof, frame, drainage etc.). Her language skills in English, Arabic, and Italian have also been a great asset. The Petra Archaeological Park under the directorship of Dr. Emad Hijazeen has provided assistance through the office of Eng. Tahani Al Salhi, the head of the conservation unit. This assistance has included providing water as well as workmen and other crucial logistical support.

Due to the damage of the strata below the mosaic tesserae layer, it was decided after considerable deliberation to undertake the lifting of certain sections—called the ‘strappo’ technique—in part of the south aisle and create a new mortar bed to support the mosaics. Since 1993, the floor mosaics have been subjected many times to injections to conserve them but these interventions have proven not to be sufficient. The lifting of mosaics is not undertaken lightly, and we consulted with several mosaic restoration specialists to explore the nature of the problems and the pros and cons of the various solutions.

On 15 October 2011, the project started under the guidance of Franco Sciorilli and Antonio Vaccalluzzo, a master restorer from Ravenna and an expert in lifting mosaics. For the fall season, the main assistants were Mohammed Freij, Mohammed Al Jamaliyya, and Hidar Al Abbadi from a team assembled at Mt. Nebo and Naif Zaban from ACOR. Each had specific tasks but acting as a fluid team is key to the success of such an undertaking. Much planning had gone into this endeavor. For example, the lime employed for mortar repairs and the new bedding layers had to be prepared months before by soaking it in vats and Sciorilli had arranged to do this at Mt. Nebo where he could monitor the process. An area north of the atrium was dedicated to storing project materials and became the place where the mortars were mixed.

The south aisle—the Mosaic of the Seasons—was the major focus of the conservation intervention for fall 2011 phase of the work. The process entailed many steps but the first was to clean the surface of the mosaic with different brushes and wash it gently with soft sponges. The next steps were to test the type of cloth to use for the lifting process and create a grid of reference points to be used for lifting sections. Due to the unevenness in the surface care was taken to fix the tesserae temporarily in place before a second layer of cloth was put down. The western end of the south aisle that needed to be lifted was mapped, numbered, measured, and marked and in the end divided into eighteen sections. A small sounding was made to find out whether there was another pavement underneath but this proved not to be the case. The modern lime mortar in the lacunae from previous interventions was removed to facilitate the lifting of the actual mosaics that were placed on boards. Two wooden boards sandwich the mosaic when it is turned upside down. The lifted sections were then cleaned individually and brushed with a solution of Primal AC 33 and water (7.5%). Afterward, a thin layer of mortar was applied on the lower surface. At the same time, the new mortar bed was prepared. It is made up of mortar and big stones below and an upper layer of fine mortar. The new lime mortar for under



Map of the Petra Church showing area to be lifted at the west end of the south aisle; plan by Franco Sciorilli, 2011

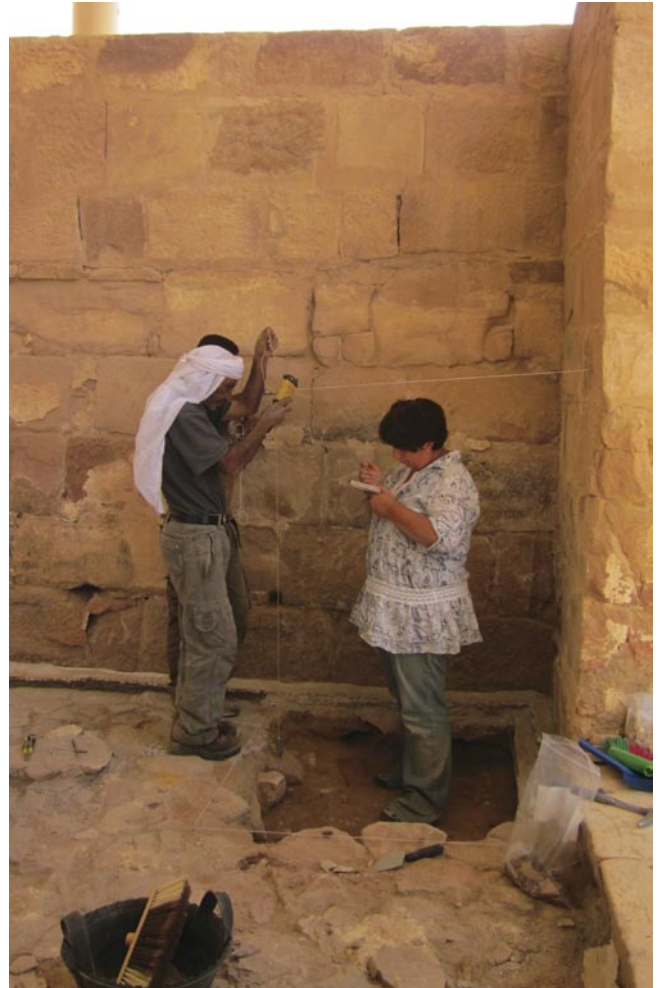


Hidar Al Abbadi and Mohammed Freij preparing mortar for the strappo; following photo series taken on 22 October 2011 by Barbara A. Porter

the lifted mosaic floor consisted of 4 parts stone powder, 1 part local sand, 1 part gravel, 1 part hydraulic lime (Lafarge), and 1.5 parts slaked lime.

The lifting exposed the stone bedding below. The original mortar bed consisted of ash, charcoal, and lime. Many discarded tesserae were found in the upper layer, which lay above a thin layer of sandy soil atop a stone bedding of unshaped, medium-sized sandstone pebbles. In the very southwest corner of the floor a small test trench (ca. 1.2 x 1.8 m) was dug to take advantage of the opportunity to examine the stratigraphy underneath; the results of that work are still to be studied fully. This probe was undertaken in one week so as not to interfere unduly with the mosaic intervention. The findings show comparable results to what was reported in the original excavation publication. Everything was back in place by 28 October and the process of putting the lifted sections back went smoothly due to the care in preparation and execution.

After the early November break for the Eid Al Adha, efforts concentrated on replacing the mortar on the rest of the mosaic floors and also on the walls. At the start of the project, the wall surfaces had been brushed to remove the salt efflorescence and the crust was removed. The areas in danger of falling had been treated with 20% Paraloid B72 diluted with thinner applied with a brush over a layer of gauze. The old cement plaster in



Elena Ronza recording details of excavation probe in southwest corner of the Petra Church

the joins of the wall was removed. The new mortars prepared for the walls were tested for the proper color. The detached plaster was treated by filling the gaps with injections of liquid hydraulic lime mortar mixed with fine pozzolana and acrylic resin. The consolidation of the wall plaster on the south side was completed by 16 November and the restoration team left the site on 17 November.

The third component of this project started in mid-October and continued until 22 November. It took place outside the church and concerned the drainage system on the south and east sides. The modern pavement on the south side was removed and the stones stored carefully to the east in a lapidarium. As the pavers were simply laid on sand with only a small amount of cement pointing, they were easy to lift. Below, there was a layer of gravel mixed with other material on top of asphalt sheets above the plastic drainage pipes. The asphalt rolls were removed with the help of the Petra Archaeological Park workmen by 24 October. The subsequent work uncovered the three large cement blocks that support the shelter columns (westernmost first and easternmost later) as well as the modern piping, which was cracked in places. This underground piping was eventually removed by late November and the vertical drainage pipes on the south side were closed.

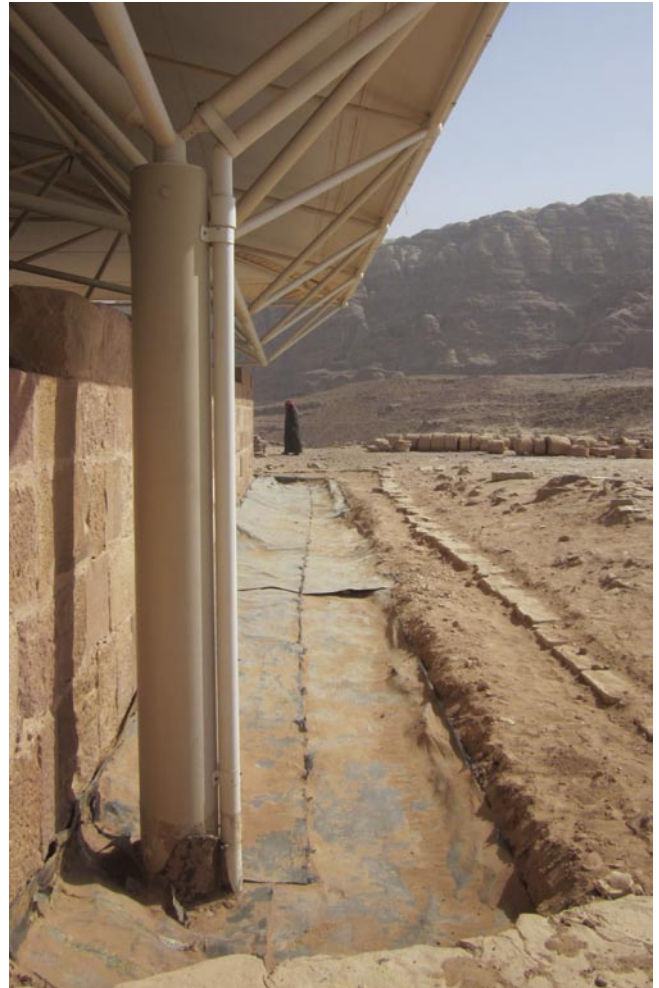
The main purpose of digging deep in this area is to expose



Naif Zaban and Mohammed Al Jamaliyya doing conservation work on the interior south wall

the lower reaches of the ancient walls and allow them to dry through the end of summer of the coming year. Along the south wall between two of the modern column bases it was necessary to expose eight courses of the wall to reach the level of the mosaic pavement and thus let the entire interior wall dry out over time. The subsoil was very damp in some places (and dry in others). Many bags of pottery had been used to fill these trenches and were buried under the piping. This material was removed, re-bagged, and at the recommendation of the Department of Antiquities representative Haroun Amarat, moved to Park storage. Most of the soil that was removed was sifted.

On 14 November there was a heavy rain storm that allowed Elena Ronza to study where water came in and how the pipes were functioning. On 20 November an inspection was undertaken with the Park technician Mahmoud Hasanat and that led to the decision to set up alternate piping to take the water toward the eastern wadi. The removed piping that was still in good repair was recycled for this purpose. During this fall season, the roof of the shelter also received attention; repairs were made in some places in the vinyl covering and the gutters were completely cleaned. Working out a schedule of regular maintenance of the modern structure was deemed an important action item by all involved.



Exterior area along south wall showing exposed asphalt sheeting before removal for drainage study

This summary of recent work at the Petra Church relied on the reports prepared by Elena Ronza and Franco Sciorilli and firsthand visits to the site while work was in progress. Christopher Tuttle, ACOR Associate Director, was the ACOR project director and he helped coordinate efforts with the Petra Archaeological Park and Department of Antiquities. A scientific article will be prepared for a future issue of *ADAJ* (*Annual of the Department of Antiquities*) once the project is completed.

Work is to continue through much of 2012, both for the 'strappo' of parts of the floor of the western area of the north aisle and for the drainage reconfiguration. New signage is planned and one new sign will identify the donors who, by adopting mosaics, helped create the Petra Church Conservation Endowment initiated by Pierre Bikai in 1999. This endowment has helped support this work, as has the ACOR USAID Endowment. It is clear that ACOR will need to find other funding sources to ensure the completion of what needs to be done. The Petra Church Restoration work is undertaken to preserve this building for generations to come. The visitors to Petra in recent months have enjoyed watching the work in progress and have had the benefit of friendly exchanges with all of the individuals who have undertaken this painstaking and demanding work.

Petra National Trust

Petra Junior Ranger Program

The Petra National Trust (PNT) is a non-governmental organization dedicated to the preservation of the archaeology, cultural heritage, and environment of the UNESCO World Heritage Site of Petra. To implement its goals, the PNT conducts projects in the preservation of the archaeological and natural heritage, as well as programs to raise awareness among the youth of Petra on the uniqueness and fragility of this site. To safeguard the significance and integrity of the site for future generations, PNT involves the local communities that surround the Petra Archaeological Park (PAP) in their efforts. For this reason, PNT now engages in education and outreach projects such as the Petra Junior Ranger Program. This program is an engaging and interactive day camp for young people that promotes identification with heritage and the need to preserve the values that render Petra a World Heritage site.

Today, for the main part, the communities surrounding the Park focus on the socio-economic value of Petra through tourism; unfortunately, few residents consider the site's legacy relevant to their cultural heritage and identity. In reality, unless judiciously managed, tourism can negatively impact the integrity of the site. The Junior Ranger Program addresses two issues: the recognition of and identification with Petra's heritage and the understanding of the urgent need for preservation and protection. The program connects children and youth to PNT's vision of preserving and maintaining the integrity of Petra.

Throughout a five-day workshop, participants learn about Petra, its significance, and why and how to preserve it. Moreover, the program tries to foster critical thinking skills and civic engagement, essential building blocks for a healthy civil society. The day camps conclude with a ceremony in which participants recite the Junior Ranger pledge and graduate as Petra Junior Rangers. The program targets young people from the six villages of the Petra region: Beidha, Dlagha, Rajef, Taybeh, Wadi Musa, and Um Seyhun. The program is divided by age group: 7–9, 10–12, and 13–15 year-olds. Each workshop includes twenty participants and five teenage volunteers from the Petra area. The Junior Ranger curriculum focuses on the outstanding universal values that render Petra a UNESCO world heritage site.

From January 2011 to February 2012 PNT implemented five workshops for the 7–9 year-old age group and two workshops for the 10–12 year-old age group. The program first addressed Petra's cultural value by introducing participants to the different peoples that contributed to their heritage. The 7–9 year-olds studied three cultures: the Nabataeans, the Romans, and the Byzantines; the 10–12 year-olds examined life in the Neolithic period as well. A number of classroom activities presented each historical period followed by field visits that relate this knowledge to the site.

Petra includes two Pre-Pottery Neolithic sites: Baja and Beidha. In the classroom, participants dressed up in Neolithic-style costumes and used flint stones to make sparks. Another classroom activity exposed participants to the round and

square Neolithic houses; they noted the similarities to modern houses, which helped them to identify with this heritage. When participants visited the Neolithic site of Beidha they did a bread-baking activity. First they saw the oblong quern that Neolithic people used to grind wheat and compared it to the rounded querns used today, then they baked bread over fire, in the manner attributed to Neolithic people. This activity further encouraged participants to connect with their heritage.

Following the sessions on the Neolithic period, the Nabataeans were also introduced using costumes. The Nabataeans are



Nabataean wall painting in the biclinium in Siq al-Barid after conservation; photo courtesy of PNT and Courtauld Institute of Art. See www.petrationaltrust.org



Completing the wall painting replica; all Petra Junior Ranger Program photos courtesy of Petra National Trust (PNT)

known for their fine and delicate pottery, and in the classroom participants learned to make and paint their own pottery. This creative activity also helped participants recognize their heritage. The “Decorating My Wall” activity encouraged appreciation of cultural and natural heritage, preservation practices, and creative expression. First, on a field trip to Siq al-Barid in Beidha, the instructor showed the Nabataean biclinium wall painting there. Back in the classroom, the instructor explained the content of the painting, which includes endemic plants and animals as well as figures from Graeco-Roman mythology. The instructor showed participants pictures of vandalism that damaged the painting, explained the PNT project to restore the painting, and connected this example to the general concept of the need for preservation. The real fun began as participants painted or colored a section of a mural modeled after the biclinium painting. Finally, each participant attached his or her portion of the painting to a master-board forming a replica of the original painting.

Participants further explored the history and culture of the Nabataean Kingdom on a field visit to Petra. They played a scavenger hunt game in which they received clue cards describing specific features that they must find and photograph. This activity helped participants understand better the monuments and other aspects of the site and encouraged them to pay attention to detail. Additionally they learned about the work of archaeologists, rangers, and tour guides.



Using clue cards



Photographing a water channel

Participants learned about Roman and Byzantine cultures through a similar process, beginning with the use of costumes. For the Romans, they used the Roman numeral system to write their birthdates and phone numbers and visited the Nabataean/Roman theater during the field trip to Petra. For the Byzantines, participants created their own mosaics of the first letter of their name in Greek and explored the Byzantine mosaics in the Petra Church.



Making mosaic letters

The students synthesized all they learned through a number of wrap-up activities which helped them “connect the dots” and relate the cultures to each other and themselves. One such activity is digging to demonstrate the work of an archaeologist. Participants carried out a small excavation in a dig box filled with several layers of sand. The dig box contained seeds, pottery sherds, imitation Roman coins, and mosaic cubes representing different periods, and they had to document and preserve their finds.

The week’s capstone activity was a field trip to Petra during which the participants applied what they had learned and were able to experience at the site. Each pair of participants used a digital camera to document what they saw; everything from features, such as water channels and sandstone, to bad practices, like vandalism and begging, was photographed. As part of promoting conscientious site use, they picked up litter to help keep the sites clean. In this way, they explored Petra while being responsible Junior Rangers.

PNT plans to expand further the Petra Junior Ranger Program and implement more workshops for 7–9 and 10–12 year-olds in the summer of 2012, as well as to pilot the curriculum for 13–15 year-olds in January 2013. PNT will use the momentum gained from the Petra Junior Ranger Program to launch more youth and adult engagement initiatives. The Junior Ranger Program has been funded by the United States Agency for International Development (USAID)/National Parks Service (NPS), Tourism Cares for Tomorrow, the Petra National Foundation, and Mr. Lester Fant. The PNT has a five-year plan to institutionalize the program including the youth engagement project by opening an office and conducting extensive teacher training in Wadi Musa. PNT hopes that the Junior Ranger Program will build a generation of aware, engaged, and active advocates for Petra.

Aysar Akrawi, Executive Director, Petra National Trust

Evening in Memory of Father Michele Piccirillo

Friends and colleagues of the late Father Michele gathered together on 2 November 2011 at ACOR to remember him and to launch in Jordan the book edited by Claudine Dauphin and Basema Hamarneh entitled *In Memoriam: Fr Michele Piccirillo, ofm (1944–2008)—Celebrating his life and work* (BAR International Series, 2011). The editors organized a series of presentations given by contributors to the book. The editors spoke, as did the following other authors: Osama Hamdan, Carla Benelli, and Catreena Hamarneh. There was a slide show prepared by Mohamed Ben Jeddou and guests were able to view the 3D reconstruction of the Church of St. Stephen at Umm ar-Rasas created by Qutaiba Dasouqi of the Department of Antiquities.

In the ACOR Upper Library the book was made available for sale so that people could have it signed. Memories were shared formally and informally that evening. The message from the Studium Biblicum Franciscanum (SBF) was delivered by Fr Rosario Pierri, ofm, the Secretary in Jerusalem. I welcomed everyone and showed a few images of Father Michele when he was working at ACOR in the Director's flat on page proofs for *The Mosaics of Jordan* (ACOR Research Publication No. 1, Amman, 1992), part of his legacy for increasing understanding of Byzantine Jordan.

Barbara A. Porter



Father Michele Piccirillo showing the Mosaic of Paradise in the Madaba Archaeological Museum to Jay Knott, former Mission Head of USAID Jordan, on a visit in September 2007 to see the work funded in part by USAID; photo by Marlene Whiting



Some of the presenters gather at the end of the evening in front of the slide presentation. From left: Fr Rosario Pierri, Catreena Hamarneh, Carla Benelli, Claudine Dauphin, Reine Dauphin-Jauffret, Basema Hamarneh, Francesco Clemente, Barbara A. Porter; photo: from ACOR Archives

ACOR's MISSION—To advance knowledge of Jordan past and present

ACOR's ORGANIZATIONAL DESCRIPTION

The American Center of Oriental Research (ACOR) in Amman, Jordan was founded in 1968. ACOR promotes study, teaching, and increased knowledge of ancient and Middle Eastern studies with Jordan as a focus. ACOR's permanent headquarters opened in 1986 near the University of Jordan.

ACOR's dedication to this mission appears in all of its activities:

- To provide a large library and residential and hostel facilities, creating a stimulating environment for researchers
- To offer fellowships and scholarships to faculty and students
- To connect foreign scholars pursuing research with Jordanian academic and government institutions
- To sponsor public lectures mainly on archaeology and other outreach programs
- To publish books and newsletters
- To facilitate teaching and training programs
- To assist archaeological field projects in Jordan
- To undertake cultural research management and conservation initiatives as well as excavation and documentation projects

ACOR is a private nonprofit academic organization registered with the government of Jordan and also tax exempt in the United States as a 501(c)(3) organization as determined by the United States Internal Revenue Service. ACOR is supported by grants, contributions from foundations, corporations, and individuals as well as by ACOR endowments and funds generated by the Amman operations.

As approved by the ACOR Board of Trustees on 19 November 2011

American Center of Oriental Research: 2012–2013 Fellowship Awardees Announcement

National Endowment for The Humanities Post-Doctoral Research Fellowship

Jennie Ebeling (Archaeology and Art History, University of Evansville) Bread Culture in Jordan: A Study of Women's Changing Roles in Bread Production in the 21st Century

ACOR Publication Fellowship

Burton MacDonald (Religious Studies, St. Francis Xavier University) Historical Archaeology of the Southern Trans-Jordanian Plateau and the Northern and Central Arabah

Jennifer C. Groot Fellowship

Lindsay Holman (Undergraduate, History, North Carolina State University) Petra North Ridge Project

Tareq Ramadan (Graduate student, Anthropology/Archaeology, Wayne State University) Brown University Petra Archaeological Project

Bert and Sally de Vries Fellowship

Jonathan Paige (Applying to graduate school in Archaeology and Anthropology) El-Hemmeh Project

Harrell Family Fellowship

Jordan Pickett (Graduate student, Art and Archaeology of the Mediterranean World, University of Pennsylvania) Jarash – Late Antique and Islamic Periods

Pierre and Patricia Bikai Fellowship

Teresa Wilson (Graduate student, Anthropology, University of Arkansas) Health, Nutrition and Disease: A Study of the Developmental Features and Defects of Teeth from Four Bronze Age, Roman, and Byzantine Cemeteries in Northern Jordan

MacDonald/Sampson Fellowship

Michael Fergusson (Graduate student, Classical Studies, Queen's University) Wadi Hafir Photographic Survey

ACOR Jordanian Graduate Student Scholarships

Asem Abu Doleh (Graduate student, Tourism, Yarmouk University) MICE Events in Jordan—Meetings, Incentives, Conferences and Exhibitions

Afaf Zeyadeh (Graduate student, Archaeology and Anthropology, Yarmouk University) Thesis topic not selected; coursework stage

Ghassan Nagagreh (Graduate student, Archaeology, Yarmouk University) Iron Age I (1200–1000 B.C.) Settlement Patterns in the Highlands of Palestine

Hassan Al Yassin (Graduate student, Archaeology of Ancient Arab Civilizations, Hashemite University) Jneneh, az-Zarqa Project

Kenneth W. Russell Fellowship

Khawlah Al Lahasih (Graduate student, Physical Anthropology, Yarmouk University) The Examination of Decayed Corpses at the National Institute for Forensic Medicine (NIFM), Jordan: A Forensic Anthropological Analysis

Frederick-Wenger Jordanian Educational Fellowship

Heba Sawalmeh (Graduate student, Archaeology of Ancient Arab Civilization, Hashemite University) Organic and Functional Analysis of the Early Bronze I and Iron Age II Pottery from North and Central Jordan

James A. Sauer Fellowship

Enas Al Zoubi (Graduate student, Archaeology of Ancient Arab Civilizations, Hashemite University) The Art and Technology of Mosaics in Madaba during the Byzantine Period

University Seminars at ACOR

ACOR is a place where visiting groups of university students can stay for informal and formal programs. Our setting near the University of Jordan can be ideal and our library provides excellent resources. We encourage such programs and would like to introduce more students to Jordan through our auspices. Below are comments from leaders of two different seminars to give an idea of the role ACOR can play.

Dr. Christopher Parker is a professor in Political and Social Science at Ghent University in Belgium and was an ACOR fellow. He has organized student seminars for the last six years to Jordan and writes “I have organized a study trip to Jordan for students in our “Conflict and Development Studies” master’s degree program. We typically travel with a group of 20–30 but we once arrived with 40 students. I simply would not have been able to organize such a trip at an affordable price if it were not for ACOR. The ACOR facility is uniquely equipped and staffed to support research and study-related travel. ACOR’s common areas provide places where students can get together

informally to have discussions amongst themselves and with other residents. ACOR offers expertise and resources that simply cannot be found elsewhere.”

Dr. Heather Keaney is a professor in the Department of History of Westmont College in California, and she wrote that “we brought 22 students and 4 leaders on the inaugural Westmont College semester abroad program in the Middle East. This included ten days in Jordan—the Amman portion of which was spent at ACOR. Quite simply the ACOR accommodation was stunning. Students loved the wonderful rooms, the quiet location, the generous food, the magnificent terraces, and the easy Wi-Fi access. The facilities were just what we needed. In particular, the meeting/class room with PowerPoint capability worked well for guest speakers and group sessions. ACOR provided the opportunity for our students to see what an overseas research center is like. They were thus able to envision ways in which their own academic engagement with the region might continue beyond their current study abroad experience.”

Fellows in Residence (July–December 2011)

ACOR-CAORC Post-Doctoral Fellow

Bridget Guarasci, Program in the Environment, University of Michigan; Jordan’s Green Economy: Biodiversity and Ecotourism at Dana’s UN Biosphere Reserve



H.R.H. Prince Raad bin Zeid talking with Bridget Guarasci at ACOR’s December Holiday Lunch

ACOR-CAORC Pre-Doctoral Fellow

Kristen Kao, Political Science, University of California, Los Angeles; Voting Preferences in the Middle East: Do Voters Equate Tribalism or Islamism with Patronage?

Brita Lorentzen, Department of Earth and Atmospheric Sciences and Cornell Dendrochronology Laboratory, Cornell University; Increasing the Precision and Accuracy of Levantine Chronologies, through Dendrochronological Dating of Historic and Archaeological Timbers in Jordan



Kristen Kao



Brita Lorentzen

Pierre and Patricia Bikai Fellow

Cassandra Bennett, Ancient History, Macquarie University; The Religious Beliefs of the Pre-Islamic Bedouin of Ancient North Arabia—As Seen in the Safaitic, Himaic, Thamudic, Dedanite/Lihyanitic, Taymanite, and Dumaitic Inscriptions

Bert and Sally de Vries Fellow and James A. Sauer Fellow

Monique Vincent, Near Eastern Languages & Civilizations, University of Chicago; Madaba Plains Project-Tall al-‘Umayri



Cassandra Bennett



Monique Vincent

Donations to ACOR (July–December 2011)

General Donations to the Annual Fund: Susan E. Alcock; Anonymous; Donna H. Antoon; Qais Al Awqati; Edward and Jocelyn Badovinac; Roger Bagnall; Rick and Carla Berry; Laurie A. Brand; Sarah Bush; Ellen and Nirmal Chatterjee; Mr. and Mrs. Henry Christensen III; Douglas R. Clark and Carmen L. Clark; Edward Curtis IV in honor of Sarah Harpending; William J. Deaton; Ralph W. Doermann and Laurel D. Doermann; Christel Faltermeier; Ruth G. Farnham in honor of Barbara Porter; Nancy Ferguson; Jane F. Geniesse and Robert J. Geniesse; Lawrence T. Geraty; Anna Gonosová; Ann H. Gordon; Gemma and Lewis Morris Hall; Spencer Harper III in honor of Barbara Porter; Ray Anita Hemphill in honor of Barbara Porter; Ellen Porter Honnet; Lois C. Houghton; Abed M. Ismail; Linda K. Jacobs; Mary Lou Jones in memory of Dwight J. Porter; Nancy S. Kader and Omar Kader; Karak Resources Project through the auspices of Gerald Mattingly; Michel de Konkoly-Thege and Harriette I. Resnick; Piet de Klerk and Victoria de Klerk-Rubin; Sara M. Knight; Herbert Krosney; Øystein LaBianca; Nancy L. Lapp; Peter and Anna Levin; James and Judith Lipman through Schwab Charitable Fund; Phyllis E. Linder; Holly Mak and Marc Hersh; Karen McCarthy; David W. McCreery; Marcia W. McHam in honor of Barbara Porter; Renee Menard; Anne M. B. Morgan and H. Brent Mashburn; Michael Neeley; Randolph B. Old; Megan Perry; Dwight A. Porter and Christina L. Porter; D. Richard Powell, Jr.; Suzanne Richard; Thomas C. Ragan; Elizabeth Barlow Rogers; R. Thomas Schaub and Marilyn Schaub; Edwin and Barbara Schick; Joe D. Seger; The Selz Foundation; Lita Semerad; Audrey Shaffer; Irfan A. Shahid; Landry T. Slade; Sandra R. Smith; Deborah K. Solbert; John and Dorothy Sprague Foundation; Sally B. Strazdins; Robin Tzannes; Andrew Vaughn; Terry Walz; Thomas R. Whetstine and Theresa A. Whetstine; Deborah D. Winters and Dan Onstad

Annual Fund Donations given in memory of Alice Stover Pickering: Association for Diplomatic Studies and Training; Michèle F. Bellinger; The Eurasia Foundation; Chris D. Hensman; Karl F. Inderfurth; Nancy L. Lapp; Thomas and Alina Levy; Middle East Investment Initiative through auspices of Jim Pickup; Phyllis E. Oakley and Robert B. Oakley; Pamela D. Pelletreau; Office of the Legal Adviser through the auspices of Katherine D. McManus; Gordon K. Pierson and B. Patricia Pierson; Gary O. Rollefson; Hershel Shanks; The Stanley Foundation; Daniel A. Witt

Annual Fund Donations for Library Support: Anonymous; Council of International Educational Exchange (CIEE) through the auspices of Allison Hodgkins; Bert and Sally de Vries; Carol G. Forshey in memory of Harold O. Forshey; Lawrence T. Geraty; Ellen Porter Honnet; John B. Oleson; Jean A. Peyrat; R. Thomas Schaub and Marilyn Schaub; Denise Schmandt-Besserat; Bethany J. Walker; Donald Wimmer

Annual Fund for the Roger S. Boraas Library Resources Fund: Miriam Boraas Deffenbaugh and Ralston H. Deffenbaugh, Jr.

ACOR General Endowment: Robert and Mette Beecroft; Lawrence T. Geraty; George E. Mendenhall; Ann Boon Rhea

The ACOR Jordanian Graduate Student Scholarship Fund: Mr. and Mrs. Henry Christensen III; Pamela Huntington Darling in honor of Barbara Porter; Ann and Allen Irvine; Øystein S. La Bianca; George E. Mendenhall

The Anne C. Ogilvy Memorial Library Endowment: Mousa Ayeshe; Robin M. Brown; Mr. and Mrs. Henry Christensen III; The Institute of Archaeology, Andrews University through the auspices of Randall Younker; Nancy L. Lapp

The Pierre and Patricia Bikai Fellowship Endowment: Lawrence T. Geraty; Thomas and Alina Levy in memory of Alice S. Pickering; Mary J. Mycek; Megan Perry; Barbara A. Porter in memory of Judy Zimmerman; Jane Swicegood; Marsha Vande Berg

The Bert and Sally de Vries Fellowship Endowment: Connie and Roger Brummel; Bert and Sally de Vries; Lawrence T. Geraty; Rami G. Khouri; Øystein S. La Bianca

The Frederick-Wenger Jordanian Educational Fellowship Endowment: Barbara A. Porter in memory of Nan Frederick

The Jennifer C. Groot Memorial Fellowship Endowment: Nelson G. Harris; S. Thomas Parker; Megan Perry

The Harrell Family Fellowship Endowment: Brooke B. Harrell and Philip J. Harrell in honor of Edgar and Paula Harrell; Paula and Edgar Harrell

The Kenneth W. Russell Fellowship Endowment: Jane Taylor

The MacDonald/Sampson Fellowship Endowment: Lawrence T. Geraty; Rami G. Khouri

James A. Sauer Fellowship Endowment: Lawrence T. Geraty; Seymour Gitin; Rami G. Khouri; George M. Landes; Nancy L. Lapp; Stephen F. Lintner and Pamela R. Johnson; George E. Mendenhall; S. Thomas Parker; Peter and Sylvia Sauer; Susan A. Sauer

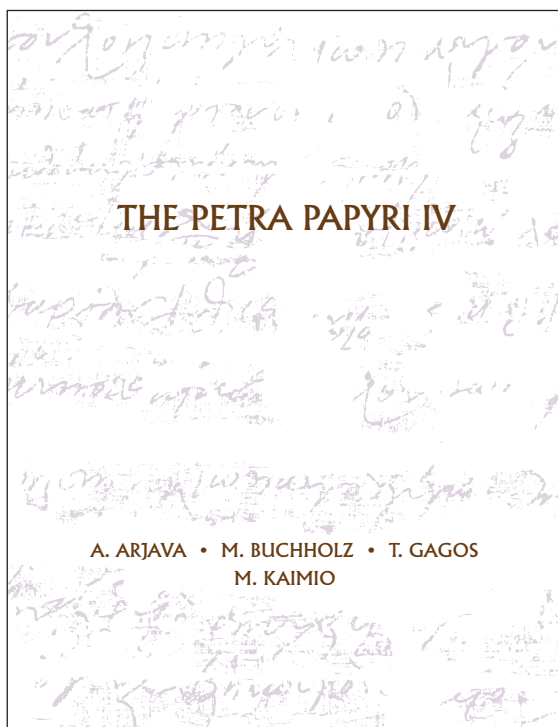
James A. Sauer Fellowship Endowment in Memory of Alice S. Pickering: Seymour Gitin; Thomas R. Pickering; Barbara A. Porter

Petra Papyri and Other Publications: George W. Justice Jr. in memory of Gladys Justice

Donations to ACOR Library (July–December 2011)

Stefano Anastasio; Cassandra Armstrong; Abd Al Sattar Al Azzawi; Karen Bartl; Carla Benelli; Patricia and Pierre Bikai; Ghazi Bisheh; J. M. Blázquez-Martínez; Douglas R. Clark; Claudine Dauphin; Muayyad S. Damarji; Department of Antiquities, Jordan; Khaled Douglas; Jennie R. Ebeling; Christoph Eger; Rose Espinola; Jaakko Frösén; Piero Gilento; Basema Hamarneh; Abd Al Aziz Hameed; Larry Herr; Zeidan Kafafi; Thomas E. Levy; Fatma Marii; Dana Moss; Lorenzo Nigro; Øystein S. LaBianca; Gaetano Palumbo; Meron M. Piotrkowski; John P. Oleson; Muhammad Al Otoom; Barbara A. Porter; Brennan Roorda; Jerome C. Rose; Mario Santana Quintero; Robert Schick; Smithsonian Institution, National Museum of Natural History (through auspices of Paul M. Taylor); Zeena Al Sultan; Juan Manuel Tebes; Laurent Tholbecq; Walid Yasin Al Tikriti; Christopher A. Tuttle; Sofie Van den Abbeele; Bethany J. Walker; Tomasz Waliszewski; Thomas Weber; Khair Yassine; Randall Younker; Ahmad Al Zawahrah

ACOR would like to thank Jerome Rose, Professor Emeritus of Anthropology, University of Arkansas at Fayetteville for donating 23 years of *The Yearbook of Physical Anthropology* and more than 65 volumes of *The American Journal of Physical Anthropology*. This thoughtful gift completed sets of these journals given by Mrs. Margaret Angel in the late 1980s in memory of her husband, Dr. J. Lawrence Angel (1915–1986).



ACOR is proud to announce the publication of *The Petra Papyri* IV, edited by A. Arjava, M. Buchholz, T. Gagos, and M. Kaimio (2011). With contributions by J. Kaimio, C. A. Kuehn, and T. Purola. Plates were prepared by M. Holappa and V. Vahtikari and the layout was undertaken by Isabelle Ruben. This volume is dedicated to the memory of Traianos Gagos (1960–2010). Thirteen documents are presented, including a Settlement of a Dispute by Arbitration known as Papyrus Petra H. M. King Hussein bin Talal and H. M. Queen Noor Al Hussein. This large format (33 x 25 cm), cloth-bound volume has 215 pages and 74 plates. Two more volumes in the series are in preparation. The cost to purchase this volume and the previously published volumes is:

Vol. IV (2011) \$60 purchased at ACOR; with shipping total \$100
 Vol. III (2007) \$60 purchased at ACOR; with shipping total \$100
 Vol. I (2002) \$50 purchased at ACOR; with shipping total \$80

To order, contact ACOR at acor@acorjordan.org. This volume is also available at Eisenbrauns (along with our other publications) at the same price. For all ACOR publications check the ACOR website—www.acorjordan.org.

For ACOR Fellowships

go to the ACOR websites

www.acorjordan.org

www.bu.edu/acor/

ACOR e-mail address in Boston:

acor@bu.edu

ACOR e-mail addresses in Amman:

acor@acorjordan.org

reservations@acorjordan.org

library@acorjordan.org

November 2011 Board Meeting

The ACOR Board of Trustees fall meeting took place on 19 November 2011 at the Westin St. Francis Hotel, San Francisco at the time of the ASOR Annual Meeting. The ACOR Board accepted the revised Mission Statement and Organizational Description as presented for approval. This was the first meeting presided over by Randolph B. Old as President. Several committee meetings were convened, including Long Range Planning. Joining the Library Committee as non-board members are Elise Friedland and Meryle Gaston.

ACOR Trustees

Class of 2012: Dr. Susan E. Alcock; H.E. Mr. Mohammed Asfour; Mr. William G. Bardel (Treasurer); Mr. Sami Habayeb; Dr. Moawiyah M. Ibrahim; Dr. Øystein S. LaBianca; H.E. Mr. Hazem Malhas; Dr. John P. Oleson; Dr. Megan A. Perry; Dr. Bethany J. Walker

Class of 2013: Mr. Henry Christensen III (Secretary); Dr. Bert de Vries; Mrs. Jane F. Geniesse; Mr. Artemis A. W. Joukowsky; H.E. Dr. Abdul-Ilah Khatib; Mrs. Nina J. Köprülü; H.E. Dr. Michel Marto; Mrs. Elizabeth Barlow Rogers; H.R.H. Prince Raad bin Zeid (First Vice President)

Class of 2014: Mrs. Widad K. Kaware; Dr. David W. McCreery; Mr. Randolph B. Old (President); Dr. S. Thomas Parker (Second Vice President); H.E. Senator Leila Abdul Hamid Sharaf; Dr. James R. Wiseman

Ex officio: Dr. Barbara A. Porter

Trustee Emerita: Prof. Nancy Lapp

Contents

The Petra Church Revisited: 1992–2011	1
Petra National Trust Petra Junior Ranger Program	6
Evening in Memory of Father Michele Piccirillo	8
ACOR's Mission and Organizational Description	9
American Center of Oriental Research: 2012–2013 Fellowship Awardees Announcement	9
University Seminars at ACOR	10
Fellows in Residence (July–December 2011)	10
Donations to ACOR (July–December 2011)	11
Donations to ACOR Library (July–December 2011)	11
November 2011 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, 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 Barbara A. Porter, Christopher Tuttle, and Isabelle A. Ruben.

Printed in Jordan by National Press.