

ACOR Newsletter

أخبار أكور

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Ancient Landscapes of the Ghor es-Sāfi: Surveys and Excavations 1997–2009

Konstantinos D. Politis

The Ghor es-Sāfi is located at the southeastern end of the Dead Sea. At 400 m below sea level, it is the lowest place on the earth's surface. The ancient site is known from the Old Testament (Genesis 19) as *Zoar*, one of the 'cities of the plain' which was not destroyed by fire and brimstone. The area has good archaeological evidence for a substantial settlement of the Early Bronze Age, more limited Middle Bronze Age sites, and an extensive Iron Age occupation. It is attested in Roman documents, for example the Babatha Archive and the *Notitia Dignitatum*, as *Zoara*, an agriculturally rich district and the station of a cavalry unit. On the Byzantine mosaic map at Madaba, it is depicted as the walled city of *Zoora* surrounded by date palms and it is also known to have been the seat of a bishop who attended the Nicaean Councils. During Crusader and medieval Islamic periods, historical sources such as Yakut, Al-Maqdisi, and Foulcher of Chartres name it as *Segor* and/or *Zughar* and mention that it was a major center for sugar and indigo production as well as the most important market for these products.



Aerial view of Wadi al-Hasa in the Ghor es-Sāfi from the west; photo by Jane Taylor



Byzantine-period *Zoora* as depicted on the late 6th century A.D. mosaic map at Madaba; photo by Michele Piccirillo

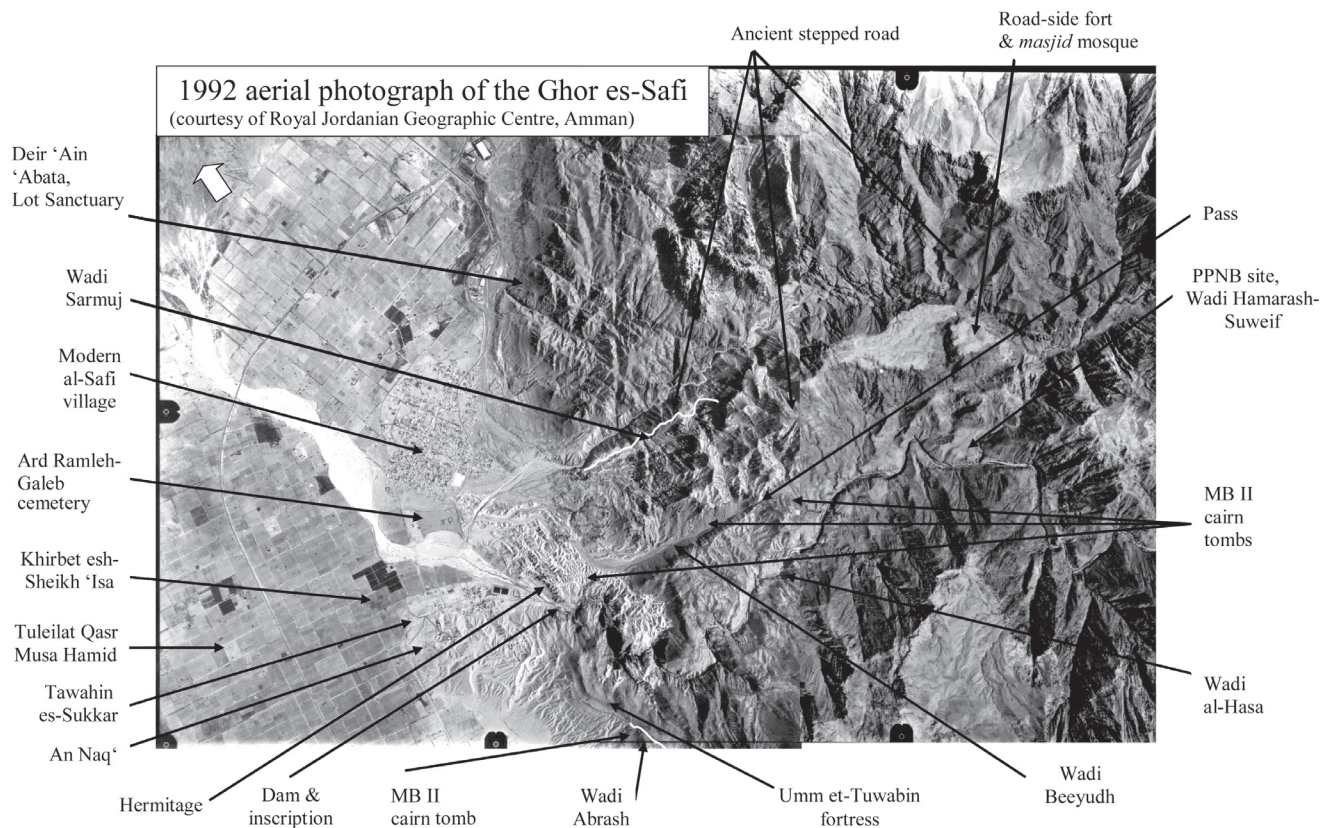
Early archaeological surveys of the Ghor es-Sāfi area by Albright and Kyle in 1924, Frank in 1934, Alt in 1935, King et al. in 1982, and MacDonald in 1986 identified remains associated with the Bronze and Iron Ages, and Roman, Byzantine, and Islamic periods. These scholars alluded to the site's biblical and historical associations identifying it as *Zoar*, *Zoora*, *Segor*, and *Zughar*.

The important discoveries of the Sanctuary of Lot at Deir 'Ain 'Abata and the Nabataean cemetery at Khirbet Qazone made in the late 1980s and 1990s renewed archaeological interest in the Ghor es-Sāfi region. This was compounded by significant finds uncovered by illicit looting in the area, which spurred further field work.

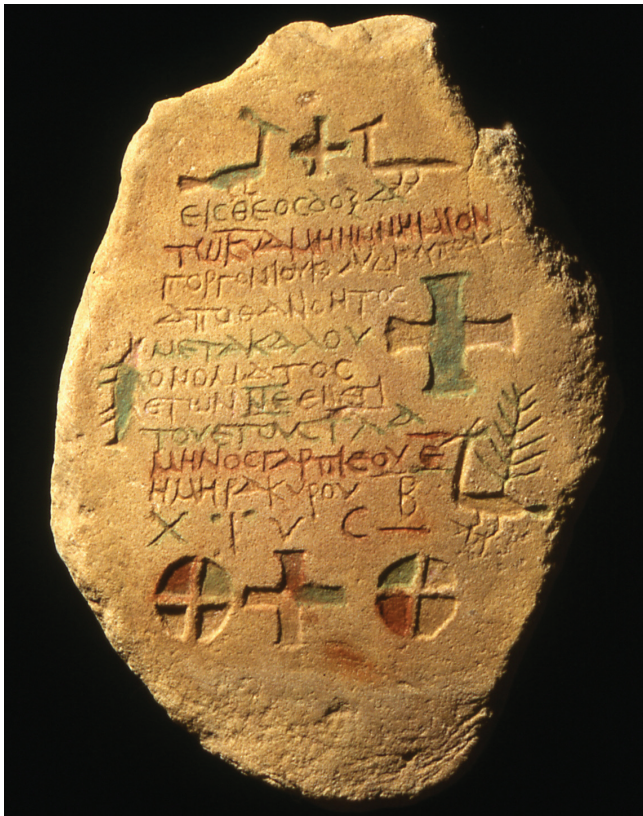
The Ghor es-Sāfi project

Over a period of twelve years beginning in 1997, the Ghor es-Sāfi project located and mapped dozens of archaeological sites in the region. The main components within the general area are the early Byzantine–medieval Islamic urban center of Khirbet esh-Sheikh 'Isā, the associated adjacent industrial complex of Masna' es-Sukkar (commonly known as Tawāhīn es-Sukkar), and the Early Bronze Age and Byzantine cemeteries at An Naq'. Other parts include the sprawling Iron Age agricultural settlement of Tuleilat Qasr Mousa Hamid, the Nabataean fortress of Umm et-Tawabin with an associated dam below it, the early Christian hermitage at the Wadi al-Hasa, and the ancient road along the Wadi Sarmūj. Further east at the junction of the wadis Hamarash and Suweif is a substantial Pre-Pottery Neolithic B (PPNB) settlement.

After a series of initial surveys and geophysical tests carried out in the late 1990s, trial excavations were made in 2002 at the southwestern edges of Khirbet esh-Sheikh 'Isā exposing the southern extent of the city walls and a number of internal rooms. At the western and eastern perimeters there was good evidence for churches. A wider survey of the vicinity and surrounding slopes identified the limits and discerned the ancient agricultural field system. This surviving evidence on



1992 aerial view of the Ghor es-Sāfi annotated with sites and wadi locations



Byzantine period tombstone discovered in the Ghor es-Sāfi (and currently on display in the new museum there) made for Gorgonios (son) of Claudius, the vice-deacon, who died aged 55 years on 23 August 436; photo by Trevor Springett

the ground was then compared to 1961 aerial photographs taken before the area was developed and consequently disrupted. Limited excavations were also conducted of a few of the thousands of Early Bronze Age tombs at An Naq' and at the Iron Age settlement of Tuleilat Qasr Mousa Hamid.

The 2004 season saw the survey of the greater Ghor es-Sāfi environs and expansion of two excavation trenches opened during the 2002 season: the eastern pressing chamber at Masna' es-Sukkar (in the sugar factory complex) and at Khirbet esh-Sheikh 'Isā (the city center). The latter is a key area not only because it is the location of the main market but also because of its substantial, stratified deposits rich in material and environmental finds. New excavations were made in the Byzantine part of the cemetery at An Naq', where over five hundred important 4th–6th century Greek and Aramaic inscribed tombstones have been recovered in recent years. This cemetery has been badly looted by tomb robbers and it had never been officially excavated before so these excavations have been essential in identifying the origin of these tombstones.

The 2004 survey precisely located a newly identified dam with a Nabataean inscription, an ancient road leading to the eastern plateau, the fortress of Umm et-Tawabin, and the agricultural lands to the west near Tuleilat Qasr Mousa Hamid (thus confirming the Iron Age shoreline south of the Dead Sea).

Work also began on establishing a basis for mapping the entire area: every known site was revisited and basic coordinates taken using a GPS and a Total Station Theodolite. In addition to this, various aerial photographs were gathered including a set taken in 1992 by the Royal Jordanian Air Force, a complete set of 1:50,000 maps of the area, and selected 1:25,000 maps, Shuttle Radar Topographic Mapping (SRTM) data, and low resolution NASA satellite imagery. This information has been 'geo-corrected' to establish a Geographical Information Project using the newly established Jordanian coordinate system and it will serve as the main system of recording.

In 2006–2007 the survey continued with more field walking and verification. In order to understand the nature and extent of communication routes between the Ghor es-Sāfi and the interior, the routes running into the Ghor es-Sāfi from the wadis Sarmūj and Abrash were traced and recorded employing GIS/GPS. Following excavations, a detailed plan was made of the hermitage on the north bank of the Wadi al-Hasa. On the south bank, the ancient water canal and associated dam with the newly discovered Nabataean inscription next to a rock-cut niche were also recorded. Additional aerial photographs taken in 1953 and 2000, now available at the Royal Jordanian Geographic Centre in Amman, were incorporated into the GIS/GPS database of the Ghor es-Sāfi.

Further east along the Wadi al-Hasa at the intersection of the wadis Hamarash and Suweif, excavations at the PPNB settlement revealed 'Basta-type' buildings standing over 1.5 m high, flint tools, and many grinding stones attesting to early agricultural activities. Two more Neolithic sites were identified and recorded nearby.



A section of the ancient road leading to the Ghor es-Sāfi; photo by Georgios A. Papaioannou



Eastern Sugar Pressing Chamber in the Masna' es-Sukkar; photo by Konstantinos D. Politis

Immediately north of Wadi al-Hasa lies Wadi Sarmūj, in which the ancient road leading up to the Kerak plateau was identified and mapped. Although it was originally a Roman stepped 'Imperial' road, three open-air *masjid* mosques along the route indicated that it was also used during medieval Islamic periods. Copper mining was also evident here. The smaller Wadi Beeyuth in between wadis Sarmūj and Hasa was also investigated. South of Wadi al-Hasa beyond the Nabataean fortress of Umm et-Tawabin, a track was identified in Wadi Abrash with evidence of pack animals still using it. In all these wadis on the Late Pleistocene terraces, Middle Bronze Age II cairn tombs similar to those at Deir 'Ain 'Abata were identified and mapped.

On the Ghor es-Sāfi floor, surveying was extended around Khirbet esh-Sheik 'Isa and Tuleilat Qasr Mousa Hamid in order to identify more clearly the extent of these two settlement sites. The former medieval Islamic city is much more extensive than the current officially claimed antiquities property and it is obvious that additional lands need to be acquired. The latter site also proved to be a more extensive Iron Age II agriculturally based (primarily wheat and barley) settlement with evidence of Roman occupation in the upper levels. Finally, in the Ard Ramleh-Galeb on the north bank of the mouth of the Wadi al-Hasa, a previously unknown Nabataean cemetery site was identified but was not surveyed because it is on private property.

During 2008 and 2009 fieldwork in the Ghor es-Sāfi continued. At Khirbet esh-Sheik 'Isa the excavation trenches were expanded reaching a depth of over 2.5 m where an Abbasid-period paved street and mosaic floor were revealed. In situ finds included pottery associated with the sugar and indigo industries known from medieval historical sources to have flourished there. At Wadi Hamarash-Suweif, more well-preserved PPNB buildings were exposed in the excavations and included a very large rectangular one, aligned with streets, and containing possible cultic objects which may have served a ceremonial function. The survey identified a third ancient stepped road, at Wadi Kuniya just north of the Ghor es-Sāfi, leading up to the Kerak plateau.

The whole region is undergoing constant development which unfortunately threatens the ancient landscape.

Origins of the Sugar Industry

Particular emphasis needs to be given to the sugar industry in the Ghor es-Sāfi where large-scale production in the region first began. During the 7th to 9th centuries, Arab scholars advanced their study and development of ancient Greek science, particularly in chemistry, in part resulting in the development of a chemical industry. Combined with knowledge of processing sugar cane acquired from India via Persia, they perfected its mass production. Consequently, the wide-spread cultivation of sugar cane was introduced and gradually established in Egypt, Syria, Palestine, and Jordan.

The Masna' es-Sukkar, or sugar factory, in the Ghor es-Sāfi is important because it has three presses, making it the largest known in Jordan and Palestine. Sugar cane was crushed in water-powered installations and the product was then pressed to extract the juice. The extract was boiled for evaporation and subsequently poured into conical-shaped perforated pottery jars and the molasses dripped into the jars below. Large-scale production of sugar required a great number of these custom-made pots as well as *dusut*, unusually large metal bowls needed for the boiling process. These specialized vessel types contributed to the productivity of the sugar industry.

Analysis of the pottery and other finds suggests that the Masna' es-Sukkar in the Ghor es-Sāfi may have functioned as early as the 8th century and was certainly fully operational during the 12th–14th centuries in the Crusader and Ayyubid-Mamluk periods. The late 15th century burials found within the crushing chamber testify that operations had ceased by then.

The adjacent site of Khirbet esh-Sheik 'Isa was medieval Zughar, the major market center in the southern Bilad esh-Sham (Levant) where the sugar product was traded and exported via an east-west road network to the port of Gaza through which there was access to the European markets. Because sugar was so closely associated to Zughar, it is likely that its name became the name of the product.

The sugar industry reached its peak in the Jordan Valley during the Mamluk Period (12th–15th centuries) and proved to be a highly profitable trade. Sugar factories and plantations were declared royal property and the sultan appointed a special supervisor of the Jordan Valley called *astadar al-aghwar* to collect the sugar products and manage their finances. Some of these factories were even put under the *na'ib* of Damascus (the delegate of the sultan) who went to the Jordan Valley

during the sugar cane harvest for inspections and to promote irrigation projects for the plantations.

The sugar industry represented the apogee of medieval Arab science and technology at the time and its international impact cannot be overstated. The already high demand for sugar in Europe grew further, prompting the development of the industry there. Eventually those factories superseded the Arab ones, dominating sugar production during the subsequent centuries. Sugar became a major world commodity and ultimately, sugar production and its industrial by-products were key to the foundation of the 'Industrial Revolution' in 18th century Europe.

The Lowest Place on the Earth

An overall objective of the Ghor es-Sāfi project is to distinguish the relationship of humans over millennia within the unique environment of the Rift Valley at its lowest place on land by the Dead Sea. The dramatically fluctuating landscapes of the area clearly affected people's ability to live in the terrain and determined their relative success in doing so. It is evident that the most vital feature was the perennial waters of the Wadi al-Hasa. Unfortunately though, these well-watered, soil-rich lands remain ideal for agriculture activities which often obliterate evidence of previous occupation.

Thematic presentations in the new Museum at the Lowest Place on Earth located in the Ghor es-Sāfi highlight the human use of this unique part of the world over some ten thousand years through the exhibition of finds from archaeological work in the region. 'The First People' focuses on prehistory, particularly the Neolithic-period stone tools related to the earliest agriculture. 'The First Cities' displays the oldest wheel-made pottery, stone vessels, early metal work, and jewellery from Early and Middle Bronze Age tombs at Bab

edh-Dhra', An Naq' and Deir 'Ain 'Abata. 'The Story of Lot' illustrates one of the most dramatic episodes in the Old Testament book of Genesis and its association with Deir 'Ain 'Abata. 'A Monk's Life' describes daily life in an early Christian-Byzantine monastery. 'Nabataeans on the Dead Sea Shores' shows what ordinary Nabataean Arabs looked like, how they were dressed, and some of the artifacts from Khirbet Qazone. 'Hellenism and Islam' is a special exhibition which explains the influence and one thousand year continuity of Hellenic culture through the ages. 'The Story of Sugar' describes the origins of the sugar industry in the Ghor es-Sāfi region. 'On-going Excavations' highlights the finds from the latest archaeological work in the region. 'Mosaic-Making and Conservation' details the technology of an important ancient art and presents a unique way to preserve one mosaic. 'Rescued Antiquities' displays the most significant finds salvaged from looted sites, most important of which are the 4th–6th century inscribed tombstones. Another special exhibit is on 'Ancient Technologies' including pottery making, metallurgy, and stone working. Finally, the thematic flow of the museum exhibition ends with ethnographic collections from the modern peoples living on the southeastern Dead Sea shores.

The design and interpretation of the Museum at the Lowest Place on Earth was prepared by the Hellenic Society for Near Eastern Studies under the auspices of the Ministry of Tourism and Antiquities of Jordan. The Ghor es-Sāfi project is sponsored by the Hellenic Society for Near Eastern Studies in collaboration with the Department of Antiquities of Jordan and supported by Aramex LLC. The Palestine Exploration Fund (London) and ACOR supported post-excavation studies on all the finds with the objective of publishing the results in a monograph.



Aerial view of the Museum at the Lowest Place on Earth; photo courtesy of APAAME_20091022_DLK-0305 (for more aerial images of Jordan, see the Aerial Photographic Archive for Archaeology in the Middle East available at www.classics.uwa.edu.au/research/cah/aerial-archaeology)

ACOR Board Presidency Changes



Artemis Joukowsky presenting the ACOR Distinguished Service Medal to Mohammad Asfour at ACOR's 25th Anniversary Celebration in July 1993; Pierre Bikai, the ACOR Director, looks on; photo by Bill Lyons

Artemis A. W. Joukowsky, ACOR's Board President since 1992, announced his decision to step down as president at the April 2011 Board of Trustees meeting in Arlington, Virginia. He took the opportunity to reflect on ACOR and invited HRH Prince Raad bin Zeid to do so as well. Many more reminiscences as well as accolades followed by fellow board members. At this same meeting, Randolph B. Old, who has served on the ACOR board since 1990 as the Treasurer, was elected to be the eighth President of the ACOR Board of Trustees. Both Arte and Randy were present at the July 1993 gathering in Amman celebrating ACOR's 25th Anniversary as well as the 40th anniversary gathering in June 2008 and have each played major roles in our history.

The minutes of past ACOR board meetings show clearly that from the outset Arte Joukowsky took on the role of president with great determination and worked hard with fellow trustees and the director in Amman to bring his vision to the board structure. He was introduced to ACOR by Pierre and Patricia Bikai, friends from Lebanon, who had moved to Jordan from California when Pierre was chosen to be the ACOR Director in 1991. The financial security of ACOR was another important aspect of Arte's vision and through the years he has set many goals and offered several successful challenge grants. Five years into his stewardship his concerted efforts were duly acknowledged when he was presented with the W. F. Albright Award at the ASOR 1997 Annual meeting. Since April 1994, seven spring ACOR board meetings were hosted by Arte in Providence, Rhode Island on the campus of Brown University. Arte served as the Chancellor of Brown in 1997-98 and holds the title of Chancellor Emeritus; he continues to work tirelessly for the benefit of his alma mater (class of 1955).

From 1993 to 2009 he spent his summers in Jordan as the photographer for the Brown University Petra Great Temple Project directed by distinguished archaeologist Martha Sharp Joukowsky in the ancient city center. Jordan was already known to the Joukowsky family from their years of living in



Martha and Arte Joukowsky on the day of their 50th wedding anniversary, June 9, 2006; photo by Barbara A. Porter

HRH Prince Raad bin Zeid, Artemis A. W. Joukowsky, and Randolph B. Old after the April 30, 2011 ACOR Board Meeting in Arlington; photo by Barbara A. Porter



Jody and Randy Old at the ACOR Board Reception hosted by HRH Prince Raad and Princess Majda, June 3, 2010; photo by Barbara A. Porter

Beirut in the late 1960s and early 70s when they traveled there with their children (Nina, Artemis, and Michael). Martha and Arte's passion for archaeology led to the creation in 2004 of the Artemis A. W. and Martha Sharp Joukowsky Institute for Archaeology and the Ancient World at Brown University.

Arte Joukowsky was an international businessman with American International Group Incorporated. The model of having an individual from the business world as board president of a non-profit overseas research center continues with Randy Old whose career started with Chase Bank in Singapore, Tokyo, and Amman. He and his wife Jody lived in Amman from 1975 to 1982 and have maintained strong ties in Jordan ever since. While they were in Jordan, Jody was a teacher at the American Community School in Amman. Additionally, Randy helped the Central Bank of Jordan liquidate a subsidiary of Petra Bank, located in Washington DC, called Petra International Banking Corporation. In recent years after receiving their Masters of Science in Herbal Medicine, they have established an herbal medicine practice in Florida where they make their home in Vero Beach. Randy's more than twenty years of experience in corporate management and finance have already served ACOR well for more than two decades. The ACOR community is pleased that he has accepted the role of the President.

Arte Joukowsky noted in his last President's Report that "a gathering of the ACOR Board always brings to mind the expression of *esprit de corps*" and that feeling will clearly be sustained in the years to come.

Barbara A. Porter, ACOR Director

In Memoriam: Judy Zimmerman and Nan Frederick

Two long-term and dedicated trustees have passed away and both are much missed and will long be remembered by the ACOR family.



Judy Zimmerman
on a board trip to
Syria; photo by
Patricia M. Bikai

Judy Zimmerman, who served on the ACOR Board from 1987 to 2006, died in her home state of Washington in October 2010. Judy came to the board through her love of Petra. She was elected trustee emerita in 2006 and continued her interest in ACOR even when she could no longer attend meetings. She and her husband Hal were generous donors to ACOR and helped ACOR in times of dire need, particularly in the early 1990s. Indeed in late 1991, a generous donation from Judy may have saved ACOR from closing. She supported the ACOR Endowment for many years. She was a very loyal person and her support for ACOR's mission was touching at times. She loved Jordan and expressed that in many ways, one of which was her support for Jordanian students. She and Hal attended almost every meeting during her time as trustee and this was no small effort as her home was on the west coast.

Nancy (Nan) Frederick was an ACOR board member since 1991 and was elected trustee emerita at the April 2011 board meeting but sadly died just a few weeks later. In November

2010 she received well-deserved recognition at the ASOR Annual Meeting in Atlanta. She was not there to receive it but the award citation reads (in part):

Nancy (Nan) Frederick is worthy of the W. F. Albright Award for her outstanding services to ACOR and ASOR over the past thirty years. This service includes very substantial support for the building of ACOR's facilities from 1980 to the present, her wise and hard-working tenure on the ACOR Board from 1991 to the present, and the creation/donation of the Frederick/Wenger ACOR Fellowship for Jordanian students. Nan's advice and oversight of applications for funding to American Schools and Hospitals Abroad (ASHA) as its Deputy Director before 1991 and as ACOR Board member after that, was the single most crucial reason ACOR was able to build and develop its wonderful facilities. As a board member Nan's sage advice based on her experience as an institution builder and her innate astuteness has contributed immensely to the working of the ACOR Board and its committees.



Nan Frederick and Frank Wenger; photo courtesy of Nan Frederick

In 2003, Nan Frederick created the Frederick-Wenger Jordanian Educational Fellowship to honor her husband's memory and their mutual interest in preserving the cultural heritage of Jordan by advancing the higher education of Jordanian students.

ACOR benefited from the care and guidance from both of these special women over two decades. Their commitments and passions were inspirational.

Patricia M. Bikai and Barbara A. Porter

American Center of Oriental Research: 2011–2012 Fellowship Awardees Announcement

National Endowment for The Humanities Post-Doctoral Research Fellowship

Karen Britt (Art History Program, University of Louisville) Eudokia: Byzantine Palestine and Arabia hath no better Patron than an Empress Scorned

Glenn Corbett (Independent Scholar) Mapping the Mute Immortals: Thamudic Inscriptions and Rock Drawings in Context

All ACOR/CAORC awards are still subject to funding due to possible Department of State/ECA budget cuts for FY 2011

ACOR-CAORC Post-Graduate Fellowship

Katherine Adelsberger (Environmental Studies, Knox College) Small-Scale Hydrologic Interactions on the Dhiban Plateau

Björn Anderson (Art History, Minnesota State University, Moorhead) Negotiating Identity in Nabataean Arabia

Karen Britt (Art History Program, University of Louisville) Eudokia: Byzantine Palestine and Arabia hath no better Patron than an Empress Scorned

Patricia Fall (Geographical Sciences, Arizona State University) Long-term Formation of Natural and Human Landscapes in the Middle East

Bridget Guarasci (Program in the Environment, University of Michigan) Neoliberal Ecologies and Environmental Hazards: Iraqi Refugees in Amman

Nancy Lapp (Museum Curator Emerita, Pittsburgh Theological Seminary) Research and Editing for the Final Publication of the Tell er-Rumeith Excavations of Paul W. Lapp in 1962 and 1967

Jason Rech (Geology, Miami University) Assessing the Early Holocene Wet Phase in Southern Jordan: A Case Study from Wadi Hasa

The Andrew W. Mellon Foundation East-Central European Research Fellowship

István Hajnal (Institute of Oriental Studies, Eötvös University, Budapest, Hungary) Relations between the Nizari Isma'ilis [Assassins] and the Crusaders and other Muslim Political Powers in the 11th–13th Centuries

Beata Kowalska (Institute of Sociology, Jagiellonian University, Krakow, Poland) Gender and Citizenship in the Middle East: the Jordanian Case

Ülle Rannut (Integration Research Institute, Estonia) The Rise of Ethno-linguistic Awareness within Circassian Community in Jordan

Tomáš Waliszewski (Institute of Archaeology, University of Warsaw, Poland) Farming the Borderland: Agriculture in Late Antique and Early Islamic Transjordan

ACOR-CAORC Fellowship

Nora Barakat (History, University of California, Berkeley) Rethinking the Modern: Animals, Pastoral Nomads and Property Relations in Late Ottoman Syria

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 (Geological Sciences, Cornell University) Increasing the Precision and Accuracy of Levantine Chronologies Through Dendrochronological Dating of Historic and Archaeological Timbers in Jordan

Michael Makara (Political Science, Syracuse University) Defiant Legislatures: Understanding Legislative Strength in the Middle East

Theodore Van Loan (History of Art, University of Pennsylvania) 'Umar's Bargain: Image Making and Image Beholding in Early Islam

ACOR Publication Fellowship

Steven Falconer (School of Human Evolution & Social Change, Arizona State University) Early Bronze IV Village Life During Urban Collapse in the Southern Levant: Publication of the Tell Abu en-Ni'aj Excavations

Reem Al-Shqour (Institute of Archaeology, Andrews University) The Aqaba Castle Material Culture Publication Project

Jennifer C. Groot Fellowship

Nermin Abdulla (Graduate Student, Classical Art and Archaeology, King's College London) Bir Madhkur Project

Adam Bean (Graduate Student, Emmanuel School of Religion, A Graduate Seminary) Karak Resources Project

Tiffany Key (Undergraduate, History, North Carolina State University) Petra Pool and Garden Project

Harrell Family Fellowship

Heather Parker (Graduate Student, Near Eastern Studies, The Johns Hopkins University) The Levant Comes of Age: The Ninth Century B.C.E. through Script Traditions

Pierre and Patricia Bikai Fellowship

Cassandra Bennett (Graduate Student, Ancient History, Macquarie University) The Religious Beliefs of the Pre-Islamic Bedouin of Ancient North Arabian – As Seen in the Safaitic, Hismaic, Thamudic, Dedanite/Lihyanitic, Taymanite, and Dumaitic Inscriptions

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

Monique Vincent (Graduate Student, Near Eastern Languages & Civilizations, University of Chicago) Madaba Plains Project - Tall al-'Umayri

MacDonald/Sampson Fellowship

Christopher Ames (Graduate Student, Anthropology, McGill University) Druze Marsh Archaeology and Palaeoecology Project

Kenneth W. Russell Fellowship

Autumn Whiteway (Graduate Student, Anthropology, University of Calgary) Ethnomedicine and Ethnobotany amongst the Bedouin of Jordan: Archaeological and Paleoecological Applications to Increase the Visibility of Pastoral Nomads through the Identification of Plant Subfossils

Frederick-Wenger Jordanian Educational Fellowship

Muaffaq Al-Khadir (Undergraduate Student, Archaeology, Yarmouk University) Completion of BA in Archaeology and Epigraphy at Yarmouk University

ACOR Jordanian Graduate Student Scholarship

Wael Al-Hajaj (Graduate Student, Archaeology and Anthropology, Yarmouk University) Ethnoarchaeology Study, Grain Storage Unit in Rhaba Village

Luma Haddad (Graduate Student, Archaeology and Sustainable Tourism, Queen Rania Institute, Hashemite University) Amman and its Surrounding Areas in the Late Bronze Age: Sahab, a Case Study

Dima Khraishan (Graduate Student, Archaeology and Sustainable Tourism, Queen Rania Institute, Hashemite University) The Role of Museums in Children's Education: A Case Study of the Children's Museum in Jordan

Amira Laban (Graduate Student, Archaeology of Ancient Arab Civilizations, Hashemite University) Functional and Geographical Analysis of the Distribution of the Stone Cairns in the Upper Wadi al-Zarqa

ACOR Jordanian Travel Scholarship for ASOR Annual Meeting

Reem Al-Shqour (Institute of Archaeology, Andrews University) The Excavations at Aqaba Castle: A Window into the Islamic History of Jordan

Zakariya Na'im (Archaeology, Mu'tah University) Shuqayra al-Gharbiyya: An Early Islamic Elite Community on the Karak Plateau

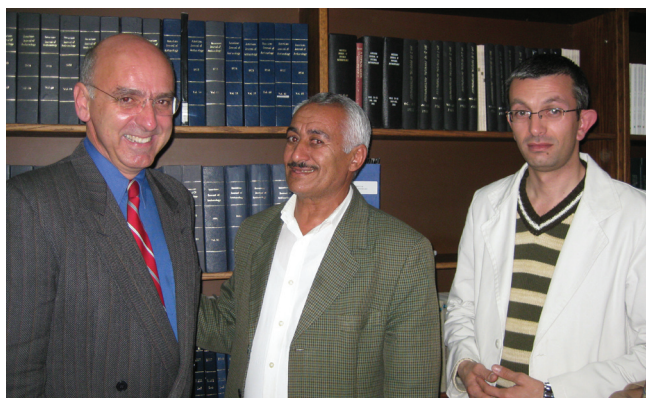
*2010 Award Recipients for the
Kenneth W. Russell Trust Annual
Tawjihi Prize for Students in Umm Sayhoun*

**Faris Musa Salmaan Al Musah
Isra Abdallah Muhammed As Samaheen**

Fellows in Residence (July–December 2010)

ACOR-CAORC Post-Doctoral Fellow

Konstantinos D. Politis, Hellenic Society for Near Eastern Studies: Archaeological Landscapes of Zoara: Results of the Survey and Excavations in the Ghor es-Sāfi from 1997 to 2009



Dino Politis with Jihad Darwish and Tamman Khasawneh at his fellow's lecture

ACOR-CAORC Fellows

Matthew Gasperetti, Biological Anthropology, University of Cambridge; The Foundations of Agriculture: A Biocultural Study of Diet, Health, and Behavior in the Prehistoric Levant

Carolyn Swan, Joukowsky Institute for Archaeology and the Ancient World, Brown University; The Archaeology and Technology of Early Islamic Glassmaking in the Eastern Mediterranean

Anya Vodopyanov, Department of Government, Harvard University; Getting Served? Politicians, Constituents, and the Politics of Social Service Provision in Modern Jordan
Samuel H. Kress Foundation Fellow

William Zimmerle, Near Eastern Languages and Civilizations, University of Pennsylvania; "Spices of All Kinds": A Philological and Archaeological Investigation of the Archetypal Arabian Incense Burner in Cultural Motion from the Neo-Assyrian Empire until the Rise of Rome



Matthew Gasperetti



Carolyn Swan



Anya Vodopyanov



William Zimmerle

For ACOR's fellowship information:

**ACOR, 656 Beacon St., 5th Floor,
Attn: Dr. Donald Keller
Boston, MA 02215-2010
Tel.: 617-353-6571; e-mail: acor@bu.edu
www.bu.edu/acor or www.acorjordan.org**

Donations to ACOR (July–December 2010)

General Donations to the Annual Fund: Donna H. Antoon; Anonymous; Edward and Jocelyn Badovinac; Roger S. Bagnall; Farouk El-Baz; Robert M. and Mette O. Beecroft; Julia R. Bradford; Joseph A. Bruder IV; Nirmal and Ellen Chatterjee; Caroline Chester; Henry Christensen III; Susan B. Downey; Dana M. Dunn; Raymond C. Ewing; Christel Faltermeier; Nancy Ferguson; Tim C. Ferrell; Lawrence T. Geraty; Anna Gonosová; Ann H. Gordaon; Philip Gould; Bernard J. Grisez; David Hale; Spencer Harper III, in honor of Barbara A. Porter; Dale K. Haworth and Karen F. Beall; Ray Anita and Walter Hemphill; Abed M. Ismail; Walter and Kathy Jamieson, in memory of Ambassador Dwight J. Porter; Nancy and Omar Kader; Dale Burchard Kenney and Eugene J. Kenney; Herb Krosney; Øystein LaBianca; Nancy Lapp; Peter and Anna Levin; P. Eleanor Linder; James F. Lipman; Michel Marto; Stanley M. and Phemie C. Maxwell; Robert and Patricia McWhorter; George and Eathel Mendenhall; Anne Morgan and Brent Mashburn; Charles R. Morgan; Don and Jeanette Nadler; Megan A. Perry; Thomas and Alice Pickering; Dwight and Christina Porter; Thomas C. Ragan; Harriette I. Resnick and Michel de Konkoly Thege; Ann Boon Rhea in memory of Kamal Kavar; Suzanne Richard; Elizabeth Barlow Rogers; Tom and Marilyn Schaub; Joe D. Seger; Audrey Shaffer; Denise Schmandt-Besserat; Lita A. Semerad; Cynthia L. Shartzter; Donald L. Snook; Deborah K. Solbert; Sally B. Strazdins; Gail Vander Heide; Andy and Amy Vaughn; Terry Walz; Nancy K. Webster; Deborah Winters and Daniel Onstad; James C. Wright and Mary K. Dabney

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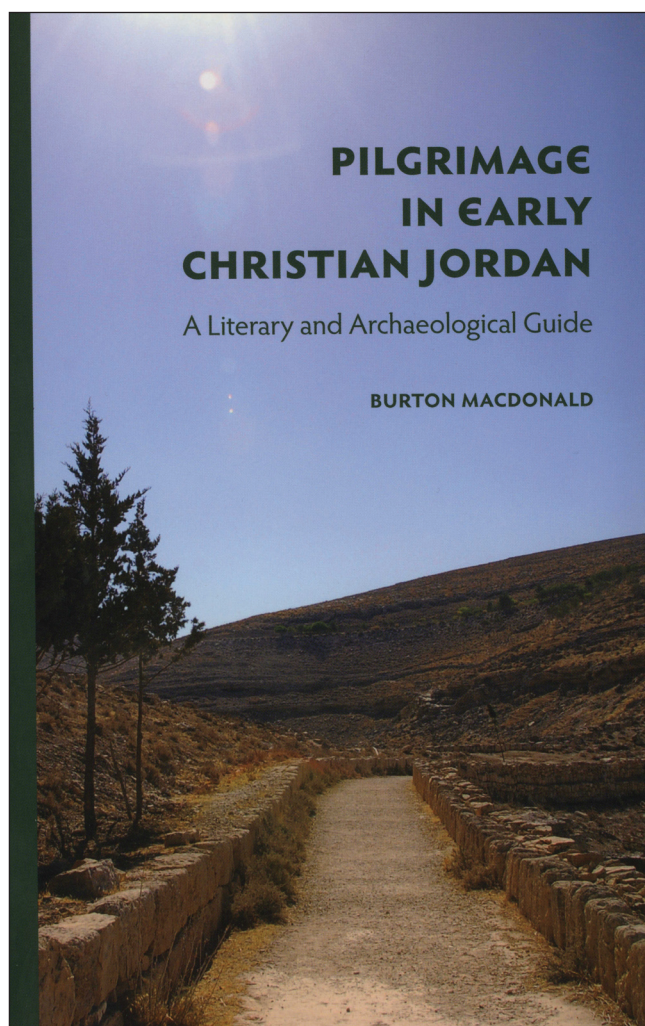
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ACOR would like to thank the Boraas Family for their Library Support donations that have enabled us to acquire the major encyclopedic reference on the ancient world—*Brill's New Pauly*. This is the English edition of the authoritative *Der Neue Pauly* and includes *Antiquity* vols. 1-15 devoted to Greco-Roman antiquity; the *Classical Tradition* I-V; and three supplements, all of which will be invaluable reference works for the Jordanian and international scholars who use the ACOR Library.



This recently published book (Oxbow Books, 2010) includes a general introduction followed by a presentation of the early Christian sites arranged by area. There are many maps and photographs as well as travel tips and recommendations on site visits. It is available from Oxbow Books (www.oxbowbooks.com) and sold at ACOR (Price 15JD) along with other publications relevant to Jordan.

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check the ACOR website:
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November 2010 Board Meeting

The ACOR Board of Trustees fall meeting took place on 20 November 2010 at the Sheraton Atlanta Hotel at the time of the ASOR Annual Meeting. The ACOR Board approved the recently revised ACOR By-Laws. The director of the Jordanian Department of Antiquities, Dr. Ziad al Saad, met with several ACOR board members and many archaeological project directors at the North American Dig Directors' gathering organized by Bethany Walker on the morning before the ACOR board meeting.

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