

# News & Notes

MEMBERS' MAGAZINE

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THE  
**ORIENTAL  
INSTITUTE**  
OF THE UNIVERSITY OF CHICAGO

# FROM THE DIRECTOR'S STUDY

We like to think that our scholarly research is always inspired by great ideas, and that we then find clever ways to test those theories. However, the truth is much more complicated — many of our best discoveries are, in fact, driven by technology. As new advances in computers and information technology become available, archaeologists and textual specialists find themselves able to ask new questions and larger-scale questions than ever were possible before. The three main articles in this issue of *News & Notes* highlight some of the innovative ways that we can do our fieldwork and analyze our data to see patterns in the past that had been in front of our eyes, but were invisible to us because we lacked the methodologies to tease them out.

Emily Hammer's article about the Oriental Institute's Center for Ancient Middle Eastern Landscape (the CAMEL lab) outlines some of the ways that digital technology — in particular the use of recently declassified spy satellite imagery — is transforming how we do "landscape archaeology." This is an approach to archaeology that does not just look at sites in and of themselves, but rather examines them as part of a patterned landscape of interconnected settlements, roads, irrigation canals, field systems, fortification systems, and pastoral encampments. The satellite images allow us to tease out the ways that the ancient civilizations of the Near East created and modified natural landscapes into cultural landscapes; at the same time, this technology allows us to see how human societies have both caused and been affected by environmental change. This kind of work would simply not have been possible forty years ago.

Foy Scalf and Anne Flannery's article describes one of the most ambitious undertakings of the Oriental Institute — the development of the "Integrated Database" (IDB). The IDB's goal is to digitize the many enormous data archives of the Oriental Institute — most of which have been until now recorded on paper or film. Traditionally these archives have been data "silos" — deep and massive, but difficult to connect with other data archives. Under Foy and Anne's direction, the IDB project staff has been working to digitize the different kinds of data archives, and then link them, so that a researcher will be able to jump seamlessly from looking up objects in the Museum's registry, to finding digitized images of the objects themselves and the sites where they were found, and then jumping to locate, download, and read the publication of those objects and their archaeological contexts. The IDB is emerging as both an invaluable tool for curation (of objects, images, publications, etc.), as well as an increasingly powerful tool that will speed up research and enable scholars to see things they never saw before.

Finally, the article by Yorke Rowan, Morag Kersel, and Austin "Chad" Hill shows how archaeologists combine field collections of artifacts with imagery from unmanned aerial vehicles ("drones") and digital terrain mapping to place the artifacts onto the landscape, define archaeological sites, and then decide where to place their trenches to start the work of actually excavating at their site of Marj Rabba.

Together, these articles show how technological advances are speeding up every aspect of research, from excavation, to broader-scale landscape archaeology, to the synthetic analysis of data. This digital revolution is allowing us to see and investigate the ancient world in an entirely new way — and it is sure to yield unexpected, wonderful insights in a "brave new world" of interconnected data.

Gil J. Stein, Director

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*On the Cover: 1960 U-2 "spy plane" photograph of a mass-kill hunting trap ("desert kite") and other stone structures in southern Syria. Animals such as gazelle would have been stampeded from the broad to the narrow end of the trap.*

# EXHIBITIONS



Winged bull from the Gate of all Lands, Persepolis.

## PERSEPOLIS: IMAGES OF AN EMPIRE

**Through September 11, 2016**

*Persepolis: Images of an Empire* presents large-format photographs of the ruins of one of the greatest dynastic centers of antiquity, built at the height of the Achaemenid Persian empire (550–330 BC). The photographs, taken during the Oriental Institute's Persian Expedition (1931–1939), record the forests of columns, monumental audience halls, and stone relief carvings of the people who came from all corners of the empire to honor the Persian king.

## A REVISED EXHIBIT OF THE ORIGINAL SHOW OUR WORK: MODERN JOBS – ANCIENT ORIGINS

**Through April 24, 2016**

*Our Work: Modern Jobs – Ancient Origins*, an exhibition of photographic portraits, explores how cultural achievements of the ancient Near East have created or contributed to much of modern life. To show the connections between the past and today, artifacts that document the origins or development of professions are paired with a person who is the modern “face” of that profession.

## A THREATENED HERITAGE **Ongoing**

In many parts of the world, political instability and conflict have displaced populations and created ever-greater threats to archaeological sites, landscapes, and museums. This series of panels in the galleries documents threats to heritage in the Middle East and suggests possible ways you can help prevent further losses and build a stronger future for the past.

Learn more at [oi.uchicago.edu/museum](http://oi.uchicago.edu/museum)



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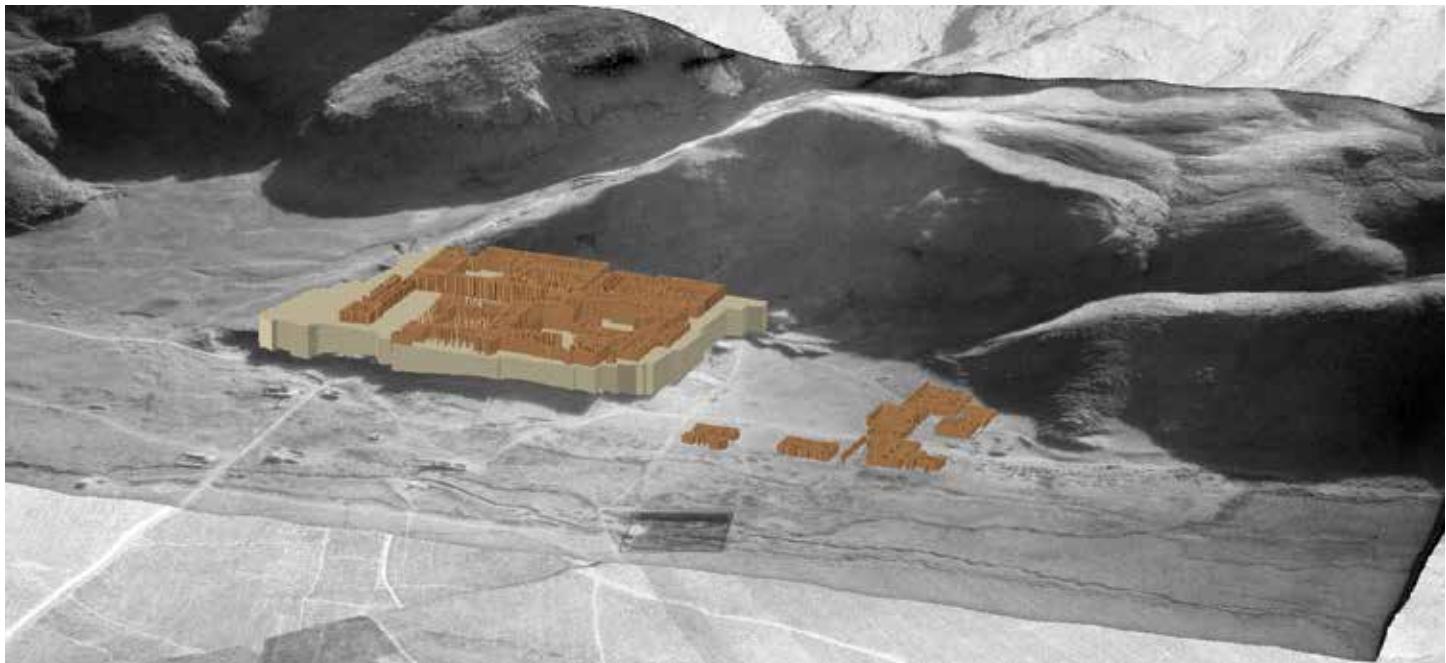
Shaheen Chaudry, MA student in Middle Eastern Studies, and Corey Husak, MA student in Public Policy, use the CAMEL Lab's large-format scanner to digitize an aerial photograph of southern Iraq taken in the 1950s. This photo was donated to the Oriental Institute by Robert McCormick Adams, as part of fieldnotes from his ground-breaking surveys of Mesopotamian settlement patterns in the 1960s. Photo by Anthony Lauricella.

A photograph of a man with a beard and short hair, wearing a blue and white plaid shirt over a grey t-shirt. He is seated at a desk, looking down at a large map spread out on the surface. His hands are visible, one holding a pen and the other pointing at the map. In the background, there's a computer monitor displaying a grid pattern, and various papers and office equipment are visible on the shelves and desk.

# NEW RESEARCH DIRECTIONS IN THE CAMEL LAB

By Emily Hammer

**O**n a recent afternoon in early October, Oriental Institute Room 202, the William Sumner Computer Laboratory and the home of the Center for Ancient Middle Eastern Landscapes (CAMEL), was a hive of activity. Assistant Director Anthony Lauricella darted between two computers as he trained new student lab assistants, Corey Husak and Samuel Cahill, to process historical satellite imagery of mass-kill traps called desert kites in southern Syria. In the lab's corner, PhD candidate Joshua Cannon hunched over printed articles spread across a computer keyboard. He was deep in conversation with undergraduate researcher Rolland Long about possible correspondences between textual descriptions of Hittite ritual processions and archaeological survey of contemporary settlements in Central Anatolia. MA student Austin Terry worked by herself,



Historical 3D model of Persepolis, Iran. Generated by Jennifer Altman-Lupu using aerial photographs taken by Erich F. Schmidt in 1936.

plotting the location and characteristics of figurines excavated from Bronze Age sites in Israel, the subject of her future thesis. Shaheen Chaudry, a new GIS analyst for the Oriental Institute's Archaeological Heritage of Afghanistan project, peered intently at a screen as he mapped the boundaries of a huge medieval fort in Balkh province using Google Earth imagery.

This has been a year of change and growth for CAMEL. In August 2014, I joined the Oriental Institute as CAMEL's new director, and the student staff saw an almost complete turnover. CAMEL seized this opportunity to dedicate its efforts in new directions that emphasize regional and local landscape-scale research, similar to the original vision of CAMEL's founder, the late Professor Tony Wilkinson. CAMEL's three-part mission remains the same since its founding in 1998: to investigate long-term change in Middle Eastern landscapes and environments, to develop innovative methods for analyzing spatial and remote sensing data, and to facilitate the research of scholars interested in Middle Eastern landscapes. The importance of landscape-scale research like that performed in CAMEL lies in its ability to detect regional patterns that are indistinguishable through other scales of research, helping us to place archaeological, historical, and philological work in its broader environmental and experiential context. In order to carry out this research, we use Geographical Information Systems (GIS) mapping and database software, satellite imagery, maps, archaeological survey results, reconstructions of ancient environment, and other types of data.

The goal of CAMEL's new research directions in the last year is to re-establish the lab as one of the pre-eminent groups conducting landscape archaeology in the Middle East and as a source of innovative methods and approaches within this field. Steps taken toward this goal have included research projects with concrete archaeological questions resulting in publications and presentations, collaboration with programs at other universities that have technical expertise that CAMEL would like to build,

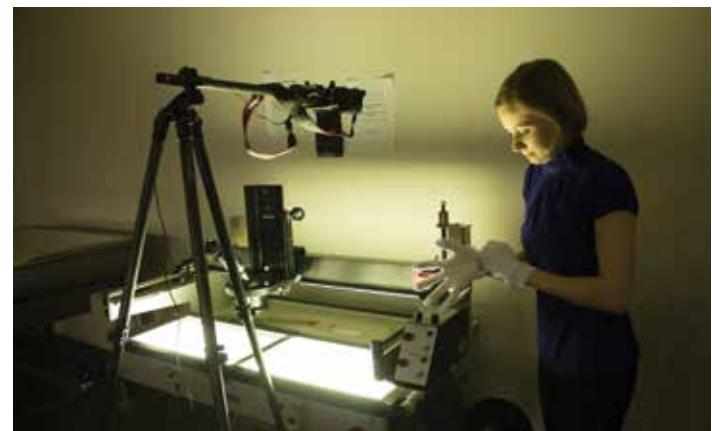
engagement with historians and philologists, and expansion of involvement in cultural heritage projects.

We began 2014 with an open house event in November, which was an opportunity for CAMEL to connect with the Oriental Institute and University of Chicago communities about possibilities for collaborative work. Several new CAMEL projects resulted from conversations with faculty during the open house, including a study of the landscapes around Persepolis using historical aerial photos, and an atlas of Bronze and Iron Age Anatolia. Thanks to Matthew Stolper and the Persepolis Gift Fund, we were able to hire a Masters in the Social Sciences candidate, Jennifer Altman-Lupu, to georeference aerial photographs of Persepolis captured by Erich F. Schmidt in the mid-1930s. A set of photographs taken in 1936 was selected and used to create a historical 3D model of the site, before modern development obscured many traces of historical and ancient features in the landscape. In particular, you can see series of holes arranged in lines in the vicinity of the site that have since disappeared. These holes mark underground irrigation channels, known as *qanat*, *karez*, or *flaj*. A video of the 1936 3D model of Persepolis is currently on display in the *Persepolis: Images of an Empire* exhibit in the Oriental Institute Museum, as well as on the Oriental Institute YouTube channel [youtube.com/watch?v=uJf5bnHUIQw](https://youtube.com/watch?v=uJf5bnHUIQw). CAMEL is in the process of making the spatial data generated from this project accessible to the public through a website, "Persepolis from the Air," [worldmap.harvard.edu/maps/6719/](http://worldmap.harvard.edu/maps/6719/). Conversations with Petra Goedegebuure about recent archaeological and text-based research concerning the historical geography of Bronze and Iron Age Anatolia resulted in preliminary efforts by undergraduate student Rolland Long and graduate student Joshua Cannon to create an online atlas that will spatially explore political and material landscapes of Bronze and Iron Age central and southeastern Anatolia, focusing on the Old Assyrian trading network, the Hittite empire, the Neo-Hittite states, and Urartu.

High-resolution aerial and satellite imagery has been one of the most powerful and transformative tools in archaeology over the last decades. We can see patterns from the air that we would never be able to recognize on the ground. The declassification of CORONA “spy satellite” imagery (images 1960–1972, declassified in 1996) transformed the field of Middle Eastern archaeology by providing a high-resolution window into the past, before the destructive effects of development and intensive agriculture took hold in many rural areas. Bronze Age tracks, Iron Age canals, and medieval city walls that have since disappeared from modern view appear clearly in the most high resolution of the CORONA images. These discoveries via satellite imagery have greatly enhanced archaeologists’ ability to analyze settlement patterns, map ancient peoples’ patterns of movement, and clarify the magnitude of ancient communities’ effect on the environment. In 2011, imagery from the spy satellite program that succeeded CORONA (named Keyhole-9 HEXAGON, images 1971–1984) was declassified. HEXAGON imagery is much higher resolution than CORONA and thus provides an even more detailed window into the past. However, archaeologists have not yet used HEXAGON imagery because it has not been scanned and is not available for purchase or download, unlike CORONA imagery. Several times through the year, I traveled to Greenbelt, Maryland, to re-photograph original HEXAGON negatives at the National Archives’ Aerial Film Section. Student workers then used these photographs to georeference and reconstruct the filmstrips using GIS software. HEXAGON imagery has already proved extremely useful in guiding my landscape archaeology fieldwork in Naxçıvan, Azerbaijan, helping the survey team to locate previously unknown ancient walls and canals.

In the winter and spring quarters of 2015, CAMEL kicked off two methodology projects using historical satellite imagery. In March, I traveled to the University of Arkansas’ Center for Advanced Spatial Technologies (CAST) to work with Jesse Casana and others on developing a methodology for building historical digital elevation models using CORONA images. Topography is important for the detection of mounded sites in the Middle East, as well as for the study of ancient landscape features such as irrigation canals. Historical topographic models are essential for areas where mounds and other archaeological features have been destroyed by development, agriculture, flooding, or other processes. The methodology developed during the course of ongoing collaboration with CAST will soon result in academic publications and inspire new projects.

Satellite imagery assists archaeologists in identifying sites and regional patterns, but it cannot alone provide all the information necessary to clarify the date, function, and significance of archaeological sites and features. Even with the most high-resolution imagery, fieldwork remains the most crucial stage of archaeological research. Both survey and excavation are essential for studying ancient settlement patterns, environment, economy, and society. My current fieldwork is an archaeological survey project that examines the relationship between South Caucasia’s earliest urban centers and hilltop fortresses in the Bronze and Iron Ages. The survey covers much of Naxçıvan, a semi-autonomous enclave of the Republic of Azerbaijan located between Armenia and Iran



Emily Hammer (director of CAMEL) examines film from a newly declassified “spy satellite” program (HEXAGON) at the National Archives and Records Administration in Greenbelt, Maryland. Photo by Jason Ur.



Newly declassified “spy satellite” imagery (HEXAGON) of a possible canal bringing water toward the Iron Age fortress of Sədərəkqala in Naxçıvan, Azerbaijan. Emily Hammer’s survey team surveyed this fortress in June 2015.

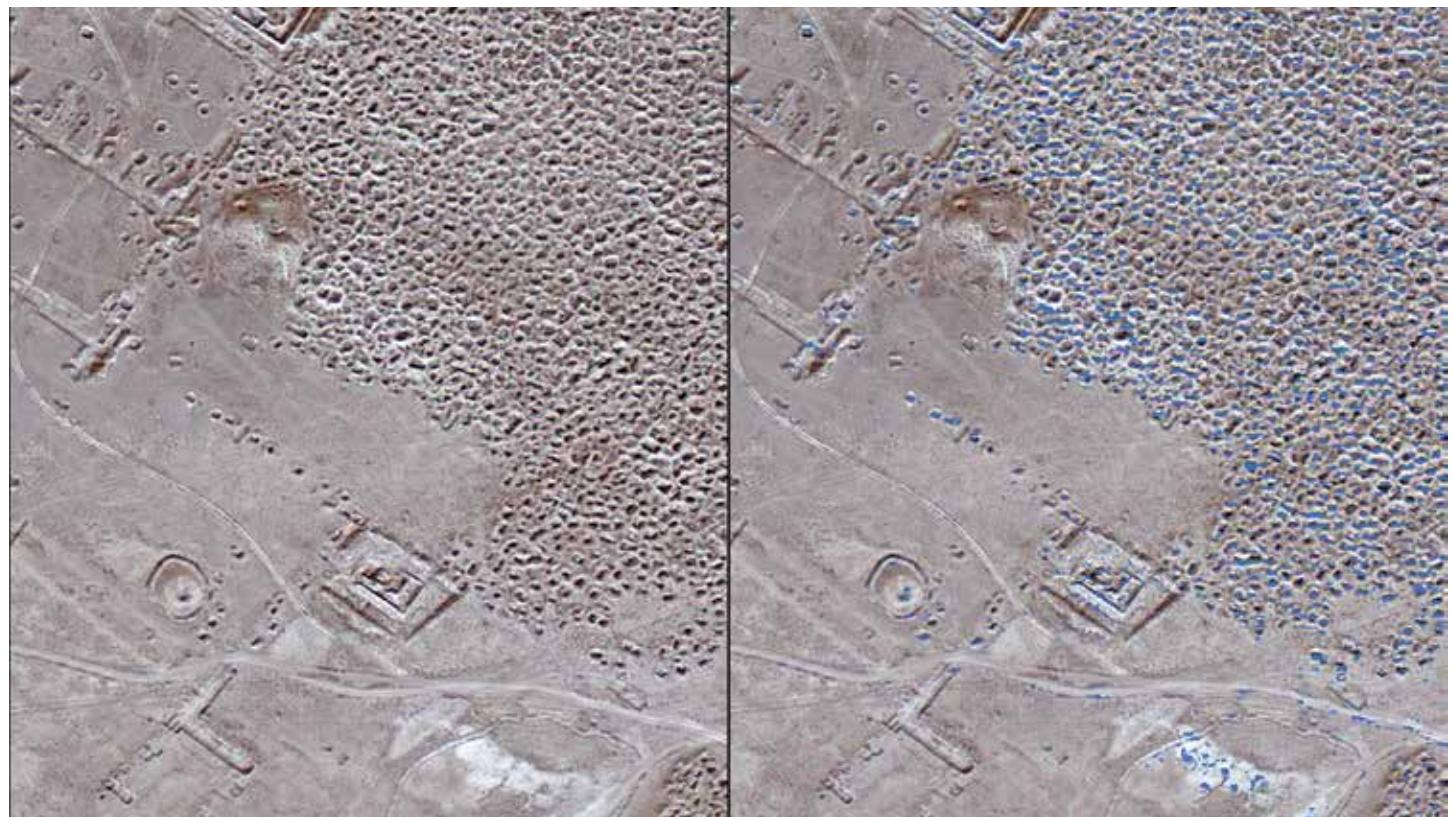
that is one of the least archaeologically explored areas of the Middle East and South Caucasus regions. With the generous support of the National Science Foundation and the National Geographic Society over the last four years, a team composed of graduate students from the University of Chicago, the University of Pennsylvania, and New York University has been gathering original data on stone fortresses that date ca. 1800–300 bc. The field methods involve iterative, back-and-forth use of satellite imagery and survey to identify ancient buildings, fortification walls, mounds, canals, and graves that are preserved and visible at or near the ground surface. Back in the lab, we are using spatial analyses of site locations and the environment to model vision and movement in order to show which areas could have been under surveillance by the people in the fortresses.

The methods of landscape research allow archaeologists to pursue questions about ancient environment and land use, which connect the field to other disciplines, including climate-change modeling. CAMEL has expanded its research interests to include environmental archaeology through participation in a global collaborative working group called LandCover 6K ([pages-igbp.org/ini/wg/landcover6k/intro](http://pages-igbp.org/ini/wg/landcover6k/intro); [landuse.uchicago.edu](http://landuse.uchicago.edu)). Humans have

been one of the forces shaping global climate for thousands of years. A major weakness of current global climate models is that they do not incorporate historical or archaeological data concerning pre-modern human transformation of the environment. The LandCover 6K project aims to address this weakness by bringing together researchers from three communities: paleoecologists who examine past vegetation changes through the study of pollen and other plant remains preserved in sediment sequences, archaeologists and environmental historians who study ancient and historical patterns of human land use, and climate modelers. CAMEL is playing an important role in the land use component of the project, which is directed by anthropology professor Kathleen Morrison. The lab staff and I are working with other historians and archaeologists to map land use in different periods over the

project. The first year award is just under \$1,000,000 and will fund the construction of a GIS database of archaeological sites. The database will then be used to train Afghan scholars in the use of GIS technology for cultural heritage management and the remote monitoring of archaeological sites using satellite imagery. CAMEL and other scholars will also use the amassed data to carry out research on the archaeological landscapes and settlement patterns of Afghanistan.

During the past academic year, CAMEL student workers and staff constructed a preliminary version of a digital archaeological heritage database for Afghanistan by digitizing information on 1,286 sites across the whole country that were included in Ball and Gardin's 1982 *Archaeological Gazetteer of Afghanistan*. Some of the old information is known to be inaccurate, so we began



Preliminary results of CAMEL's newly developed method for the automated detection of looter's pits, applied to a section of the major Hellenistic site of Ai Khanoum in northeastern Afghanistan by Anthony Lauricella and Joshua Cannon, PhD candidates in Near Eastern Languages and Civilizations.

last 6,000 years in the Middle East. The project relies on GIS in order to create maps of different land use zones at different historical moments and to build a database of different characteristics of land use practices through time. CAMEL serves as the global data manager for the land use component of the project, integrating data collected from teams working on different geographical regions.

The remote-sensing methods used in landscape research are also an important way to continue archaeological research and to monitor cultural heritage preservation in conflict zones. The archaeological heritage of Afghanistan formed the focus of several of our other research and methodological projects. In summer 2015, this work culminated in a successful Oriental Institute application for a three-year archaeological heritage mapping

working on improving the precision of site location records by locating them on satellite imagery, mapping them, and performing a brief preservation assessment of the sites visible on the imagery.

Parallel to this digitization and preliminary assessment project, CAMEL had three active graduate-student-led Afghanistan research projects. All three research projects were presented at the American Schools of Oriental Research Annual Meeting in November 2015.

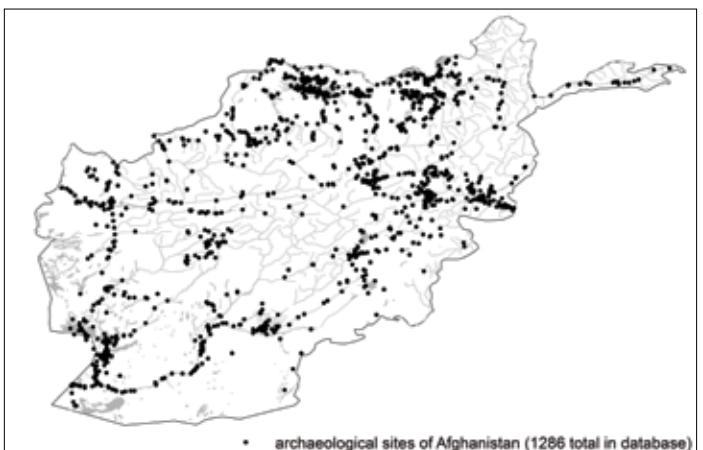
The first project used the digitized site locations and geological data available from the United States Geological Survey (USGS) to identify which known archaeological sites are in most danger of destruction by future mining activities. Such an assessment is desperately needed to prevent cultural heritage loss such as that currently threatening the site of Mes Aynak. Located in



Emily Hammer begins a long vertical hike to the top of a stone-walled fortress at part of her archaeological survey in Naxçıvan, Azerbaijan, July 2015. Photo by Eli Dollarhide.



Graduate student Sasha Rohret and Associate Professor Nadine Moeller discuss Sasha's GIS project at the Ancient Landscapes course student poster session. Photo by Emily Hammer.



Spatial distribution of known archaeological sites across Afghanistan that have been included in CAMEL's preliminary archaeological heritage GIS database.

southeast of Kabul, Mes Aynak is an unparalleled Buddhist city sitting atop Afghanistan's largest copper deposit, which has been leased to a Chinese mining corporation for thirty years. A Masters in Social Sciences candidate, Danielle Brown, wrote her thesis on theoretical and methodological issues surrounding the conflict

between archaeological heritage preservation and large-scale mining in Afghanistan, in part based on her role in CAMEL's GIS assessment of which sites might possibly be at risk.

The second project has endeavored to develop and refine a way to remotely monitor archaeological sites' preservation through the automated detection of looters' pits. The results of this methodological project, carried out by PhD candidates Anthony Lauricella and Joshua Cannon, are extremely important for our future archaeological heritage preservation work in Afghanistan since most sites cannot be visited. One of the sites analyzed, Ai Khanoum (Alexandria on the Oxus) in northeastern Afghanistan, showed approximately 17,000 individual looters' pits in a November 2010 image.

Our third project, "Mineralogical Hinterlands in Northeastern Afghanistan," uses USGS and Soviet-era geological data to analyze the relationship between Bronze and Iron Age sites and the mineral resources surrounding them. We have been working to identify statistical patterns in the location of archaeological sites in relationship to surface mineral data. Another component of the project has focused on modeling mineral trading networks using the locations of known mines, known sites, and environmental factors such as topography.

In addition to new research directions, CAMEL has continued to build its research capacities by reshaping its physical spaces and engaging in a number of important archival and database projects. In September 2014, we re-configured our computer laboratory to allow for detailed work on large monitors and to accommodate new software and scanners. A new open-door policy in the lab means that these facilities are in almost constant use: log sheets tally over a hundred visitors throughout the 2014–2015 academic year.

Student training has been essential to the process of building CAMEL's research capacity. In the 2014–2015 academic year, twenty graduate students in Near Eastern Languages and Civilizations, Anthropology, and the MAPSS social sciences program were trained in GIS through the Ancient Landscapes I and II courses, and an additional eight students were trained for research and work opportunities in the CAMEL laboratory. The course endeavored to make archaeological and anthropological GIS research more visible at the university through student projects and presentation in a well-attended poster session in March 2015, where students had the opportunity to discuss their independent GIS projects with faculty, staff, and peers.

Without committed students, our accomplishments over the last eighteen months would not have been possible. Our student staff has included Anthony Lauricella (assistant director 2015–2016), Kathryn Franklin (Afghanistan Mapping Project heritage analyst 2015–2016), and Elise MacArthur (associate director 2014–2015). Student workers in 2014–2015 were Jennifer Altman-Lupu, Danielle Brown, Matthew Cuda, Natasha Murtaza, Jamie Shapiro, Elizabeth Schuda, and Austin Terry. Rolland Long and Larry Lisek volunteered for specific projects. Anthony Lauricella and Joshua Cannon served as GIS teaching assistants. Student workers in 2015–2016 are Samuel Cahill, Joshua Cannon, Shaheen Chaudry, Corey Husak, and Gwendolyn Kristy.



Anne Flannery, project manager for the Integrated Database, and Brian Porrett, IDB volunteer, discuss cataloging procedures for archival records from the Oriental Institute Megiddo Expedition. Photo by Foy Scalf.

# MANAGING OUR PAST FOR THE FUTURE

The Oriental Institute Integrated Database Forges New Connections to the Worlds of Big Data and Digital Humanities, at a Critical Moment for Cultural Heritage Stewardship

By Foy Scalf and Anne Flannery

**“THE PROJECT IS ONE OF THE MOST IMPORTANT IN THE WHOLE RANGE OF HUMANISTIC RESEARCH. IT IS AN URGENTLY NEEDED TOOL. THE INSTITUTE IS THE OBVIOUS AGENCY TO PRODUCE SUCH AN ENCYCLOPEDIC ORGANIZATION OF THE EVIDENCES REVEALING THE LIFE AND HISTORY OF ANCIENT MAN.”**

— JAMES HENRY BREASTED

Recent global crises have heightened public awareness of the many threats facing sites that provide the “evidences revealing the life and history” of antiquity. These cultural heritage sites have already suffered from the damage done by early archaeological treasure seekers, urban encroachment, agricultural intensification, pollution, looting, and the simple ravages of time. And now they are at risk from groups seeking their destruction in order to meet ideological and political ends. It is in times such as these that those of us working in cultural heritage disciplines within museums and archival repositories realize the fundamental significance of the stewardship of this heritage. Furthermore,

these challenges strengthen our resolve to preserve the story of humanity for future generations. This cannot be accomplished without the daily management of our past with the goal of making it accessible to the most people possible.

The Oriental Institute is involved in many projects to excavate, restore, preserve, publish, and promote the languages and cultures of the ancient Near East. However, its mission to steward its internal collections is often overlooked. In order to fulfill the goals of maintaining, preserving, and accessing our collections according to the highest international standards, the Oriental Institute founded the Integrated Database Project (IDB), which requires a robust assemblage of database software, servers, and other infrastructure in order to capture institutional data and share it with the public. Although big data projects are sometimes criticized for the single-minded goal of data capture, the IDB does not fall into this trap. It quite literally helps to run the

part to funding from three successive grants, from the Institute for Museum and Library Services, the Oriental Institute, and Aimee Drolet Rossi. Since starting data migration in 2010, we have integrated the following departments into the IDB: Research Archives, Museum Registration, Museum Conservation, Photographic Archives, and the Museum Archives. The Center for Ancient Middle Eastern Landscapes (CAMEL) will finish their data migration in the coming months.

The daily work of this project has involved over a dozen staff members and up to two dozen interns and volunteers. Adoption of the system has been organized in phases, with CAMEL and Museum Archives currently part of Phase III. We hope to complete the IDB's start-up phases with Phase IV in 2016–2018, at which point we will take stock of the status of the project and plan for further long-term goals. These include ensuring the accuracy and comprehensiveness of information gathered on inter-



Timeline of the OI IDB project.

Oriental Institute, and many staff can't imagine doing their jobs without it. Managing this material is an enormous task involving dozens of faculty, staff, interns, and volunteers. Internally, the IDB helps us to organize collections, record exact locations for all objects, plan exhibits, run a library, improve work (in)efficiencies, and gather together a vast array of supplemental information. Because of the IDB, our information is updated regularly, is more accurate and complete, and is easier than ever before to access. Never before has more information about the OI's vast ancient Near East collections been available, and much has been made public for the first time. Prior to the IDB, there was no public source for searching our varied collections apart from the Research Archives library catalog. The IDB is now the official institutional repository for all information and data produced by the Oriental Institute.

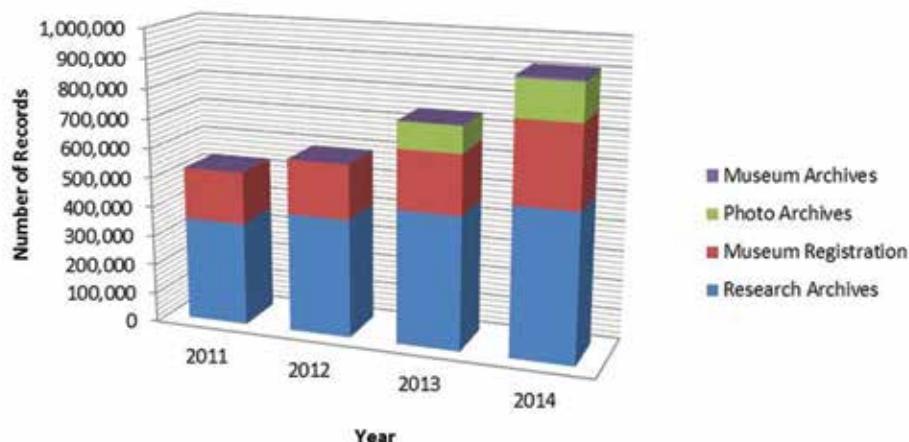
Although Breasted foresaw the need for such information-gathering projects (see “Fulfilling Breasted’s Vision: The Oriental Institute Integrated Database Project,” *Oriental Institute News & Notes* 218, pp. 9–13), the modern version of the IDB project has a history that began with meetings and discussions in the 1990s. However, it took over a decade to secure funding and get the project off the ground, while the first departments migrated their data into the system in 2010–2012. Over the last five years, the project has made tremendous strides, thanks in large

part to a major push to digitize material of primary importance to the Institute, such as photos of museum objects, scans of prints and negatives, and digital copies of excavation records and manuscripts.

The project is called the “Integrated” Database because of how the data are structured. Every unit shares the same database so that we can now link our data together in ways that were



Visualization of OI departmental integration.



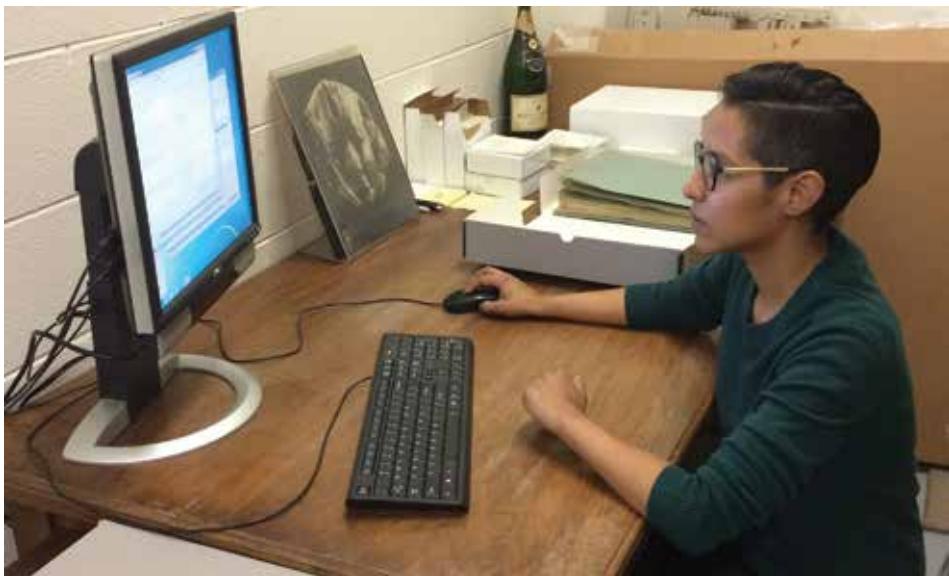
Growth of database records, 2011–2014.

previously impossible. Major efficiencies have been harnessed by this kind of information sharing. For example, each department kept bibliographic information about its work in a variety of formats and file types. Whenever a bibliographic note had to be made, the data were entered from scratch, over and over again. However, now that we have integrated, when a reference is needed — citations of a papyrus, notes on conservation materials, printed reference of a photograph — users can look up the reference in the extensive catalog of the Research Archives and simply “attach” the records together, making a relationship in the database so that the system knows a particular object was published in a particular book or article. Furthermore, the reverse is also true; for example, we can now easily list all the OI objects or photos published in a particular book. By integrating the data from internal departments, the OI has made a major step forward in how information about cultural heritage is managed, organized, and shared.

We now have roughly 1,000,000 records in the database, consisting primarily of 500,000 library items, 300,000 museum objects, 130,000 photos, and 10,000 archival records. Over the past four years, we've added nearly 400,000 records to the database, through either major migration or old-fashioned data entry. Additionally, in response to overwhelming demand, there are now over 214,000 (and counting) digital images in the integrated database. Over 50,000 represent scans of photos and negatives. In addition, volunteers have scanned over 25,000 museum registration cards, and they have also begun scanning the accession records so that the full provenance of an object is at our fingertips. The library has images of over 1,000 books and over 3,000 PDFs of publications attached to the corresponding catalog record. Almost 4,000 field registration cards from the Persepolis Expedition have been scanned. Over 20,000 large-format negative scans from the Epigraphic Survey have been incorporated. We have also assembled biographical data on hundreds of scholars associated with the Oriental Institute, incorporating this information into the provenance of each item and the finding aids for the Museum Archives.

For the Oriental Institute Museum Archives, the IDB is a revolutionary advancement. For the first time in almost 100 years, we are well on our way to having a publicly accessible catalog of the fascinating material stored here. We have never had a complete catalog of this material and only scattered selections have been known to outside researchers. Over the last year, we have begun cataloging the entire archival collection and presenting it online through the Online Collections Search at [oi-idb.uchicago.edu](http://oi-idb.uchicago.edu), the public interface of the integrated database. Already we

Records of the Khorsabad Expedition Collection, with links to the references in the Research Archives catalog and a download of the finding aid for the collection.



Elisa Landaverde, IDB volunteer, cataloging materials in the Museum Archives. Photo by Foy Scalf.

have cataloged over 10,000 records including 100 collections, 3,700 boxes, 2,200 folders, and 3,700 items. We have designed reports that will produce finding aids according to the international Encoded Archival Description standard for the collections. These finding aids are attached to collection records in the database and can be directly downloaded by public users. Prior to this, researchers had no way of knowing what was in the archival collection without contacting the archivist directly. Lacking information about the content of the archival collections, it would be difficult or impossible for a researcher to know that the collection might be useful for their research. This advancement is invaluable for researchers internal and external to the OI. A complete, comprehensive catalog will take many years and the help of many individuals to produce, but we have already made enough progress that users can get an excellent general outline of what is available in the archives.

The Integrated Database project is a long-term, large-scale, big-data project in the growing field of digital humanities. Producing a tool of this scale involves the labor of many individuals, including staff, faculty, students, and volunteers, all dedicating their time to further the mission of the Oriental Institute. An unexpected bonus from this project was the exponential increase in the number of volunteers working with us at the OI. They perform much of the laborious scanning, data entry, and accuracy checking needed for the success of the IDB. Many of them go on to serve as unofficial ambassadors for the OI and all things ancient Near East by recruiting others and spreading the word about their work here. It must be said that without the generosity of these individuals through their financial support and daily labor, projects such as the Integrated Database would never become a reality. The importance of this information to human history is such that we all owe them a debt of gratitude.

## LEARN MORE

If you would like to volunteer for the project, applications can be submitted through the Oriental Institute website [oi.uchicago.edu/support/research-archives-volunteers](http://oi.uchicago.edu/support/research-archives-volunteers)

Readers can search any of the collections mentioned in this article through the online collections search at [oi-idb.uchicago.edu](http://oi-idb.uchicago.edu)

Instructions for what to expect and how to use the database can be found on our instructional Wiki page [oicollectionsearch.wikispaces.com](http://oicollectionsearch.wikispaces.com)

For regular updates on the progress of the project, readers should visit the IDB web page [oi.uchicago.edu/research/oriental-institute-integrated-database-project-idb](http://oi.uchicago.edu/research/oriental-institute-integrated-database-project-idb)

For further visualization of our data structure, a bundle map of the OI EMu Schema is also available at [emudata.fieldmuseum.org/emu-schema-map/edgebundle-oi.html](http://emudata.fieldmuseum.org/emu-schema-map/edgebundle-oi.html)

# HOW DO YOU FIND AN ANCIENT SITE?

## 2014–2015 The Galilee Prehistory Project, Israel

By Yorke M. Rowan, Morag M. Kersel, and Austin C. Hill

**H**ow do archaeologists know where to dig? Some sites, particularly those with monumental architecture such as Persepolis or Palmyra, have visible architectural ruins. People often inhabit desirable places repeatedly, millennia after millennia, creating tells (archaeological mounds that are formed by building, abandonment, and rebuilding in the same place). Although they appear obvious to modern archaeologists, Middle Eastern tells were not always recognized as ancient sites. Early explorers to Palestine often identified biblical sites based on ancient site names preserved in the modern spoken Arabic place names. Yet notable scholars such as the historical geographer Edward Robinson assumed that the hundreds of tells dotting the landscape were natural formations. Sites such as Tel Keisan, a new Oriental Institute project directed by David Schloen, may be large and

unmistakable, but what about sites without massive architecture, occupied for a short period of time, or prior to texts – how do archaeologists identify such places on the landscape? What if the site lies hidden below the ground?

In the arid, more desert-like regions of the Negev in Israel, single-period Chalcolithic (4600–3600 bc) sites are sometimes discernible on the surface, with visible wall foundations. This is not the case in the more verdant Galilee. Prehistoric sites may be obscured because they are situated near water sources, where repeated flooding and sedimentation bury the sites. Such is often the case in the Galilee, where greater rainfall, alluvium, farming, and modern construction either bury or destroy ancient sites. We “found” our first Chalcolithic site in the Galilee, Marj Rabba, through conversations with Israeli colleagues who noted a con-

Image of Tel Keisan





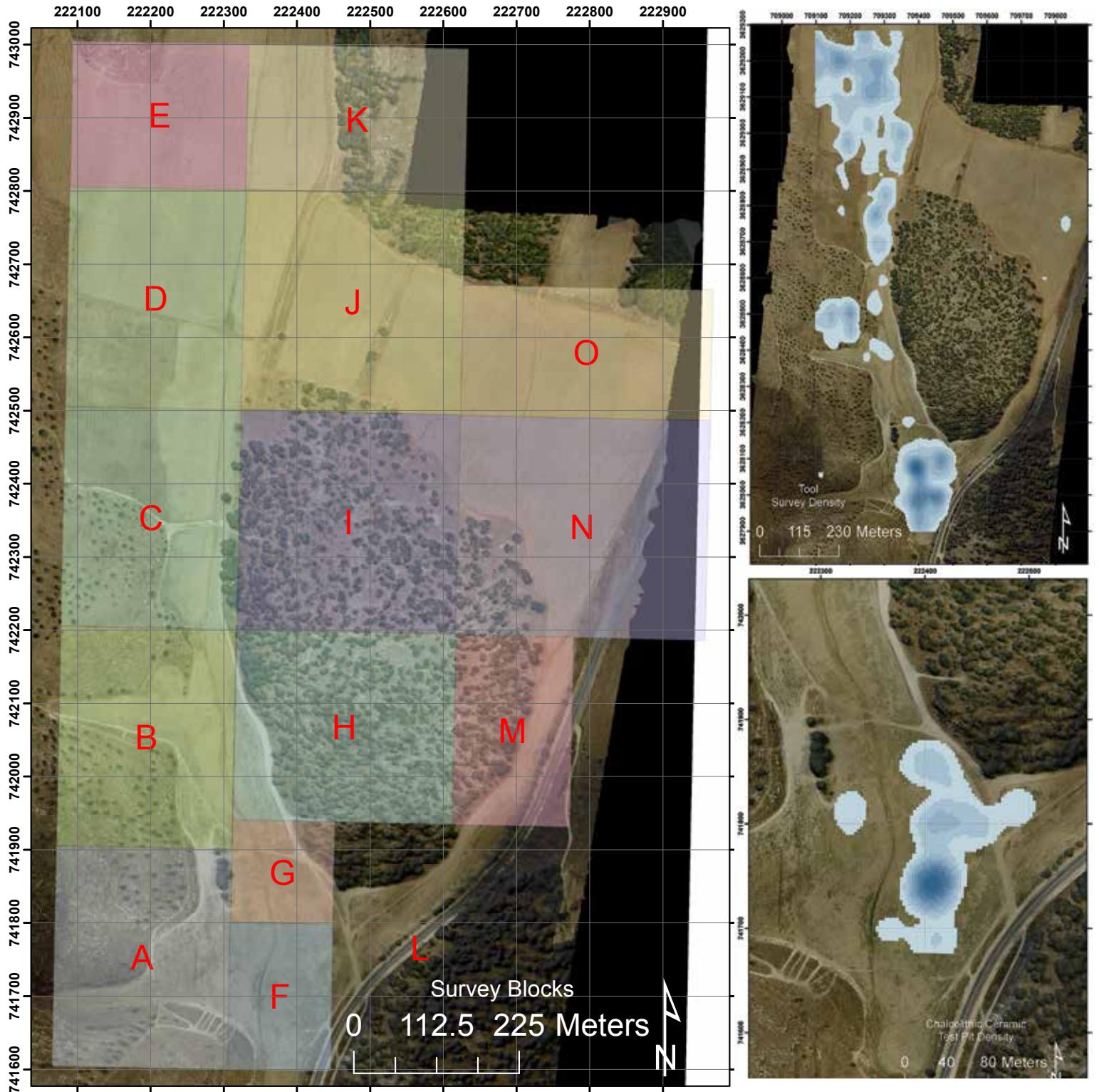
View up the Wadi al-Ashert from the multi-rotor drone, with two teams digging test pits.

centration of Chalcolithic artifacts on the ground while surveying the region of the Roman-period site of Yodfat. Recently we completed the excavations at the village of Marj Rabba — how did we decide where to go next?

During the summer of 2015, the Galilee Prehistory Project team explored an area of the Bet Netofa Valley (Sahel al-Batuf, Arabic), a graben formed by two parallel east–west faults that create the largest valley in the Galilee. On the west side of the valley, prehistoric artifacts were found along a small drainage known as the Wadi al-Ashert. Locals brought Chalcolithic ceramics and flint tools to the attention of Israeli archaeologists (Gilead 1989), and more recently, construction of a pipeline triggered salvage excavations that revealed Chalcolithic and Neolithic artifacts (Nativ et al. 2014). Unlike Marj Rabba, which is situated in a saddle between two promontories in an uplands area, Bet Netofa is low in the valley, on fertile agricultural ground near a water source. The different Galilean environmental zones could provide an excellent comparison of roughly contemporaneous sites in the region. With an eye toward a possible future project, we combined a suite of archaeological methodologies to maximize the information we could extract from the landscape in a limited amount of time, as no architecture was visible on the

surface. In an attempt to understand site size, the depth of deposits, and the periods represented, we carried out pedestrian survey, geo-physical sub-surface sensing (electro-magnetism), excavation of test pits (a test hole to determine whether sediment contains cultural remains), and comprehensive mapping with the fixed-wing and rotary-wing drones of the Wadi al-Ashert, approximately 65 hectares.

In order to carry out this work effectively in only four weeks, we first generated a local photomosaic map of the area around Wadi al-Ashert, where the Chalcolithic artifacts were found. Created with thousands of images from cameras aloft on the fixed-wing drone, this map (including 3D elevation data) was used to organize the methodical pedestrian survey, to select the area of highest potential for geophysical survey, and to place the shovel test pits. Although our post-season analysis is ongoing, the distribution of objects based on the pedestrian survey differs from those recovered during the shovel test pit excavations. For instance, the range of artifacts such as flint tools found on survey are distributed much more broadly on the surface than those recovered from the test pits. Flint tool distribution more closely matches the area where the Chalcolithic sherds from test pits were mapped, providing an idea of the site's limits.



Left: Photomosaic map created using the fixed-wing drone showing survey blocks. Top Right: Flint tool distribution based on test pit excavations. Bottom Right: Chalcolithic sherd distribution based on test pit excavations.

As a result of the 2015 field season, we have a better idea of the site boundaries, where the artifacts cluster most densely, and where there are blank spots in the landscape. The artifacts recovered from the pedestrian survey and the shovel tests indicate a range in occupation in the area from the Late Neolithic (6500–5000 BC) through the Chalcolithic, but neither preliminary geo-physical survey results nor the test excavations showed

clear subsurface structures. A final determination of whether we found a site worthy of a major project requires further analysis of the data. In the coming months, we will continue to assess the merits of Bet Netofa and decide whether to begin a full-scale excavation or move on to other Chalcolithic sites of potential interest in the Galilee.



# INVEST IN THE FUTURE.

Understanding our past — our history, our identity, and what it means to be human — is crucial to understanding our present and future. The Oriental Institute promotes understanding of the ancient Middle East by offering children's education programs.

## THE ANNUAL FUND

Become a partner in discovery

For more information about how to make a gift to the Oriental Institute, contact Brittany Mullins in the Development Office at 773.834.9775 or [bfmullins@uchicago.edu](mailto:bfmullins@uchicago.edu).

Your unrestricted support makes the groundbreaking research we do today possible. By contributing to the Oriental Institute Annual Fund, you help maintain an active research center, care for world-renowned collections, and provide resources for scholars, students, and visitors. By investing in our future your Annual Fund dollars ensure that the Oriental Institute will remain at the forefront in the study of ancient Near Eastern civilizations and help to preserve the past.

### LET US KNOW

Have you made provisions for the Oriental Institute in your estate plans? If so, tell us and you will be acknowledged as a member of the University's Phoenix Society, which comes with special recognitions and invitations to events.



# NEWS

## THE ORIENTAL INSTITUTE 2014–2015 COLLECTIONS RESEARCH GRANT

By Jack Green

Through the generosity of Jim Sopranos, the Oriental Institute awarded grants in the last year of \$10,000, distributed among four individual researchers. The newly created Oriental Institute Collections Research Grant is intended to allow researchers to carry out research on our collections, which includes Museum objects, Museum Archives, and the Tablet Collection. We allow for a broad selection of projects that generate new research on the collections as well as heighten the level of intellectual discourse and collaboration within the Oriental Institute. We welcome applications from a wide spectrum of researchers, from those at the graduate-student level to well-established professional researchers in their field of study. Below is a summary of the research conducted by our grantees in 2014–2015. To find out more about the grant, and for information on recent grantees, visit [oi.uchicago.edu/collections/oriental-institute-collections-research-grant](http://oi.uchicago.edu/collections/oriental-institute-collections-research-grant).

### ERIC CLINE, GEORGE WASHINGTON UNIVERSITY — AN ARCHAEOLOGICAL HISTORY OF MEGIDDO

This project involved the study of Oriental Institute Archives, and the selection of photographic archives and object images for a book (in preparation) about the history of excavations at Megiddo, including the Oriental Institute's expedition in the 1920s and 1930s. Cline was able to look through and scan much of the correspondence between the team in the field and those back at the Oriental Institute, as well as other archival materials. He has already begun writing the initial chapters of the book, incorporating some of the above materials, including brief quotes from a few of the notable telegrams that were sent back and forth concerning high-profile discoveries.



### ELON HEYMANS, TEL AVIV UNIVERSITY — TWO IRON AGE SILVER HOARDS FROM MEGIDDO

This project involved the detailed study of an Iron Age silver hoard from Megiddo in the Oriental Institute's collections. To date there has been no full typological study of the elements

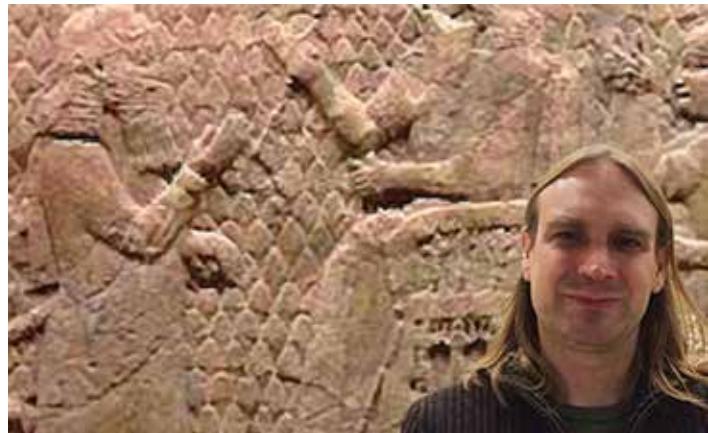
and multiple fragments of ingots and jewelry that make up the hoard. A detailed study of the objects in the hoards has offered a better understanding of its composition. The material characteristics of the objects, such as their weight and the types of objects, offer a lead in thinking about the ways in which the silver was used and valued. This has so far revealed that the silver was circulating rather intensively and was used in small denominations.



### JAMIE NOVOTNY, UNIVERSITY OF PENNSYLVANIA — SOURCES FOR ASSURBANIPAL IN THE ORIENTAL INSTITUTE

This study contributes to the final publication of prism fragments of Assurbanipal in the Oriental Institute collections, as part of the Royal Inscriptions of the Assyrian Period project at the University of Pennsylvania. Novotny collated all the fragments belonging to Prism F of Assurbanipal. A firsthand examination of the Oriental Institute Prism F material reveals much about the orthographic practices of Ashurbanipal's scribes, as well as how they constructed (using a coil technique) the prisms prior to inscribing them. Objects inscribed with this text are interesting

because of the high number of known scribal errors and in terms of how scribes distributed the text over the inscribed surfaces. There is still much to discover about what Prism F can tell us about Assyrian scribal practices.



### KATHARINA STREIT, HEBREW UNIVERSITY OF JERUSALEM — BLACK BURNISHED WARE: A SHARED TRAIT OF THE NORTHERN AND SOUTHERN LEVANT IN THE 6TH MILLENNIUM BC

This project examined prehistoric ceramic sherds from Tell Kurdu and Judaiah (Amuq Plains) stored at the Oriental Institute with similar material from excavations in Israel (Ein al-Jarba), both dating to the sixth millennium bc. Sherds from both sites were chemically fingerprinted with p-XRF analysis to test for the composition of both the clay of the body of the sherd and the burnished slip at its surface. The detailed analysis proves not only that typological shapes are comparable, but also the surface treatment of ceramics from the Wadi Rabah culture of the southern Levant and the Amuq C phase of the northern Levant are very similar. The results of the p-XRF analysis indicate that visually identical ceramic decoration has been achieved with locally available raw materials of very different chemical composition. The study shows that technological knowledge regarding raw material preparation and firing technology was shared between the northern and southern Levant.



## DONOR RECOGNITION

The Oriental Institute would like to recognize members who have made a contribution to the Oriental Institute at the James Henry Breasted Society level. The Breasted Society provides an annual source of unrestricted support for our most pressing research projects. Donors who direct their gift of \$1,000 or more to other areas of support at the Oriental Institute, however, receive complimentary membership to the James Henry Breasted Society.

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If you would like more information on the James Henry Breasted Society or how you can support the Oriental Institute, please contact Brittany F. Mullins at [bftmullins@uchicago.edu](mailto:bftmullins@uchicago.edu) or 773.834.9775

# GALLERY ENHANCEMENT

By Tracy Tajbl

**A**s the Oriental Institute approaches its centennial in 2019, an important new initiative is underway to enhance and refine our museum galleries. With a generous contribution of \$2 million from an anonymous donor, the Oriental Institute museum staff is planning a series of upgrades that will enhance the visitor experience while honoring the distinctive iconographic elements that are the hallmark of the Oriental Institute. The gift was presented to launch the program and to encourage other OI members and donors to contribute to complete the anticipated \$3 million project.

**"WE ARE REALLY GRATEFUL TO OUR ANONYMOUS CONTRIBUTOR FOR THIS GENEROUS AND VISIONARY GIFT," ORIENTAL INSTITUTE DIRECTOR GIL STEIN COMMENTED. "THIS GIFT, COMBINED WITH OTHERS IN THE ORIENTAL INSTITUTE COMMUNITY, WILL REMAKE OUR MUSEUM FOR ITS SECOND CENTURY."**

This fall, the museum staff began developing a new orientation area within the Edgar and Deborah Jannotta Mesopotamia Gallery by removing a wall and an information kiosk. Designed to be a gateway to learning within the context of the museum and its collections, the new orientation area will include a timeline and regional map to help guide visitors as they explore our collections. By visually and physically opening up this space, the galleries will be better able to accommodate both tour groups and individual visitors.

New display cases and upgraded lighting will be a key focus of the museum enhancements initiative and will allow visitors to literally see objects in the collection in an entirely new way. Crafted in the 1930s, many of the freestanding cases do not feature laminated safety glass and have wooden trim vitrines that make it difficult for visitors to view objects from a variety of angles. In addition, many of the free-standing cases depend on external track lighting. Replacing these cases with modern ones, many of which may be configured to incorporate in-case lighting, will highlight our collections. By eliminating the wooden vitrines, visitors will be able to view artifacts clearly and easily from all sides.

Galleries will be closed on a rolling basis to accommodate the case and lighting upgrades, and the project will be completed in time for the Oriental Institute's centennial celebration. Watch *News & Notes* for additional updates on this transformational initiative.

If you are interested in supporting the Oriental Institute Museum Enhancement Project, please contact Tracy Tajbl at [ttajbl@uchicago.edu](mailto:ttajbl@uchicago.edu) or 773.702.5062



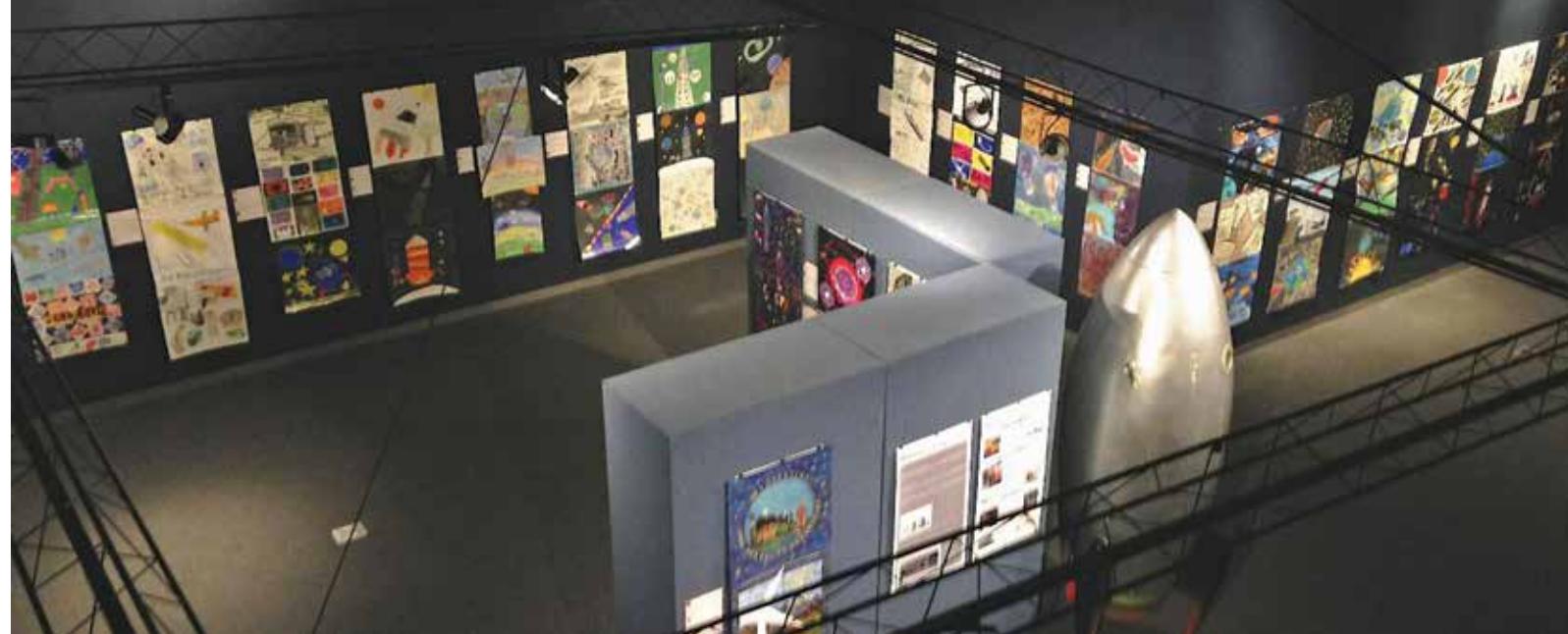
Lighting of the galleries being measured.

## BEN CARSON AND THE MYTH OF JOSEPH'S BARNS

By Robert K. Ritner

**E**gyptology made an unexpected appearance in the 2016 presidential campaign on November 5, when Republican candidate Ben Carson defended his 1998 assertion: "My own personal theory is that Joseph built the pyramids to store grain." Carson further dismissed "all the archaeologists" who think them royal tombs and "scientists" who attribute them to aliens. Carson's odd notion of scientists aside, the theory that the Giza pyramids were Joseph's granaries is not his but a long-discredited European myth.

Reference to the pyramids as Joseph's granaries appears in the *Cosmographia* by the Roman orator Julius Honorius (fourth or fifth century AD). The Irish monk Dicuil repeated the idea circa 814 in *Liber de mensura Orbis terrae*. In 870, the monk Bernard the "Wise" visited Old Cairo, "where once king Pharaoh ruled, under whom Joseph built seven granaries, which yet remain." Leslie Greener, former artist for Chicago House, commented on Bernard: "He was alluding to the pyramids, and he was not the first to publish this delusion that the pyramids were granaries. It infected many subsequent writers." One of the latest restatements of the idea — aside from Carson — is in *The Book of Marvels and Travels* (1357) of John Mandeville: "some say that these are graves of great people of olden times, but the general opinion is that they are Joseph's barns." Mandeville concludes that it is "not likely that they are tombs in as much as they are empty inside and they have porches and gates in front of them, and also tombs should not, rationally, be so high." Mosaics at St. Mark's in Venice (thirteenth century) depict the pyramids as Joseph's granaries, but the idea would be disproved by the recovery of Greek, and eventually Egyptian, texts. Ancient records now clarify what pyramids are, and excavations at Tell Edfu by Nadine Moeller reveal true Egyptian granaries.



## STUDENTS RESPOND TO THE DESTRUCTION OF ARCHAEOLOGICAL SITES

By Moriah Grooms-García

**T**oday heritage is under threat as never before. Political instability, conflict, and the lesser-known cause of urban growth have made the destruction and looting of archaeological sites widespread around the world. While the American contribution to the problem is not limited to its role as a significant consumer of the looted artifacts that make their way to the marketplace, it is a contribution that can be fought through public education.

With this goal in mind, the Oriental Institute Department of Public Education and Outreach is teaming up with the International Fiber Collaborative (IFC) to raise awareness about the effects that the looting and destruction of cultural heritage has on what an archaeologist can learn about ancient people — we are using primarily the voices of K–12 students to do so.

The special exhibit *Don't Take My Stuff: Tell My Story*, on display from May 1 to November 1, 2016, will be made up of forty-eight artwork submissions created primarily by Chicago-area students. Teachers are working with their students on two-dimensional art created in memory of the history that has been lost due to the destruction of archaeological sites and hope for the history yet to be discovered by archaeologists. Participation is not limited to Illinois, as national interest has led us to open ten of the forty-eight slots to students and adults beyond the Windy City.

Here is an excerpt from the prompt given to students for their artistic inspiration: “Even when an artifact that has been looted from an archaeological site is recovered by proper parties, the most important piece of information about that artifact has been lost: its context. An artifact that loses its context loses its story — we no longer know where it was last laid down thousands of years ago or what other artifacts it sat next to for centuries. When an archaeological site has been damaged, a page from the storybook about mankind (aka ‘history’) has been ripped out before it could ever be written.”

What is more, teachers are enthusiastic about the cross-curricular opportunity this exhibit presents. A teacher from Hayt Elementary in Chicago sent an excited note to the IFC coordinator for this project, Jennifer Marsh: “This will give us an opportunity to ingrate our school’s fine arts and social studies curriculum in a way that we have never explored!”

The *Don't Take My Stuff: Tell My Story* exhibit is part of the IFC’s Dream Rocket Project (DRP), an endeavor that boasts a sky-high proposal: the submissions for this and other participating exhibits will be part of a 2,000-square-foot wrap that will adorn the surface of NASA’s newest Space Launch System — the mission to Mars. To date, DRP has collected 3,609 artworks with another 665 pieces currently being created for upcoming exhibits.

The deadline for artwork submissions for the *Don't Take My Stuff: Tell My Story* exhibit is April 1st. If you are interested in learning more about how you or your students can participate in submitting artwork, contact Jennifer Marsh, the director of DRP and founder of the International Fiber Collaborative, at 614.561.9057 or [jennifer@thedreamrocket.com](mailto:jennifer@thedreamrocket.com). More information about the Dream Rocket Project is available online at [the-dreamrocket.com](http://thedreamrocket.com).

Teachers and the public interested in bringing their classes or groups to the Oriental Institute can do so by visiting the Oriental Institute’s website at [oi.uchicago.edu/tours](http://oi.uchicago.edu/tours). The *Don't Take My Stuff: Tell My Story* student opening and teacher appreciation night will be held at the Oriental Institute on May 18, 2016, with further details to be announced at a later date.

# FROM THE FIELD

The Oriental Institute has sponsored archaeological and survey expeditions in nearly every country of the Middle East. There are projects currently active in Egypt, Turkey, Israel, and the West Bank. These completed and ongoing excavations have defined the basic chronologies for many ancient Near Eastern civilizations and made fundamental contributions to our understanding of basic questions in ancient human societies, ranging from the study of ancient urbanism to the origins of food production and sedentary village life in the Neolithic period. Follow the upcoming projects through their websites. To learn more about the Oriental Institute's archaeology field projects, please contact Tracy Tajbl, Director of Development, at [ttajbl@uchicago.edu](mailto:ttajbl@uchicago.edu) or 773.702.5062.

**KHIRBET AL-MAFJAR, PALESTINIAN TERRITORIES**  
The Jericho Mafjar Project  
Dates tentative  
Director: Don Whitcomb  
[jerichomafjarproject.org](http://jerichomafjarproject.org)

**KABUL, AFGHANISTAN**  
Oriental Institute-National Museum of Afghanistan Partnership and Cultural Heritage Protection Work  
Ongoing  
Director: Gil J. Stein  
Field Director: Michael Fisher  
[oi.uchicago.edu/project/afghanistan.html](http://oi.uchicago.edu/project/afghanistan.html)

**LUXOR, EGYPT**  
Epigraphic Survey  
October 15, 2015-April 15, 2016  
Director: Ray Johnson  
[oi.uchicago.edu/research/projects/epigraphic-survey](http://oi.uchicago.edu/research/projects/epigraphic-survey)

**FIFA, JORDAN**  
Landscapes of the Dead Project  
March 12-19  
Co-Directors: Morag M. Kersel and Austin C. Hill  
[followthepotsproject.org](http://followthepotsproject.org)

# VOLUNTEER SPOTLIGHT

## ROBERTA SCHAFFNER

By Shirlee Hoffman

**S**hirlee, Oriental Institute volunteer, sits down and interviews volunteer Roberta Schaffner.

### 1. How did you become interested in volunteering at the Oriental Institute? How long have you been a volunteer?

The Oriental Institute has been a favorite place of mine since I first visited as a child. We left Chicago when I was thirteen, and I did not return until 2004. I soon became a member of the OI but couldn't volunteer because I was still working full time. As I was making my list of things to do when I retired from a varied career in food service, condo, and non-profit agency management, volunteering at the OI was the first item. I saw an article in *News & Notes* and was excited about the possibility of working behind the scenes. Retirement came in 2009, and in 2010 I took a great OI trip to Israel lead by Yorke Rowan, a senior research associate at the OI, on the archaeology of the Southern Levant. Toni Smith and Andrea Dudek, both of whom I met on the trip, got me involved upon our return. That was November of 2010, and I have been volunteering at the OI ever since.

### 2. Did you have any interest or training in the ancient Near East?

When I was nine, my grandparents took me to see the movie *The Egyptian*. That got me started, and then when I was twelve, my father got me *Gods, Graves and Scholars* by C. W. Ceram. That book got me hooked! I've been interested in the ancient Near East and archaeology ever since.

### 3. What have you done at the OI since you became a volunteer? What do you do now?

Since I began volunteering, I have been working in the Research Archives, cataloging and inventorying the books as a part of the larger Integrated Database Project. Working in the Research Archives is fun because when I come across an article of interest, I can read it on the spot. And I'm fascinated by the older books I get to handle. Besides, the Research Archives is reputed to be one



of the most (if not *the* most) gorgeous rooms on the University of Chicago campus. It is truly a pleasure to work near such a beautiful place even if I'm sitting in front of a computer down the hall.

Also, I worked on the Galilee Prehistory Project for three years digitizing the field drawings of the Marj Rabba excavation site (<http://galileeprehistoryproject.org/marj-rabba/>) for Yorke Rowan, and DePaul University's Morag Kersel. I had to learn a new software program, which is always a challenge.

Someday I'd like to work in the Museum Archives in the basement, where official OI correspondence and financial files, excavations records, and papers of retired scholars are stored.

### 4. What do you particularly like about being a volunteer?

I enjoy the atmosphere and the people at the OI, as well as learning about the work done at and by the Institute. It just feels like home to me. From the beginning I've felt a part of the OI family.

### 5. What has surprised you?

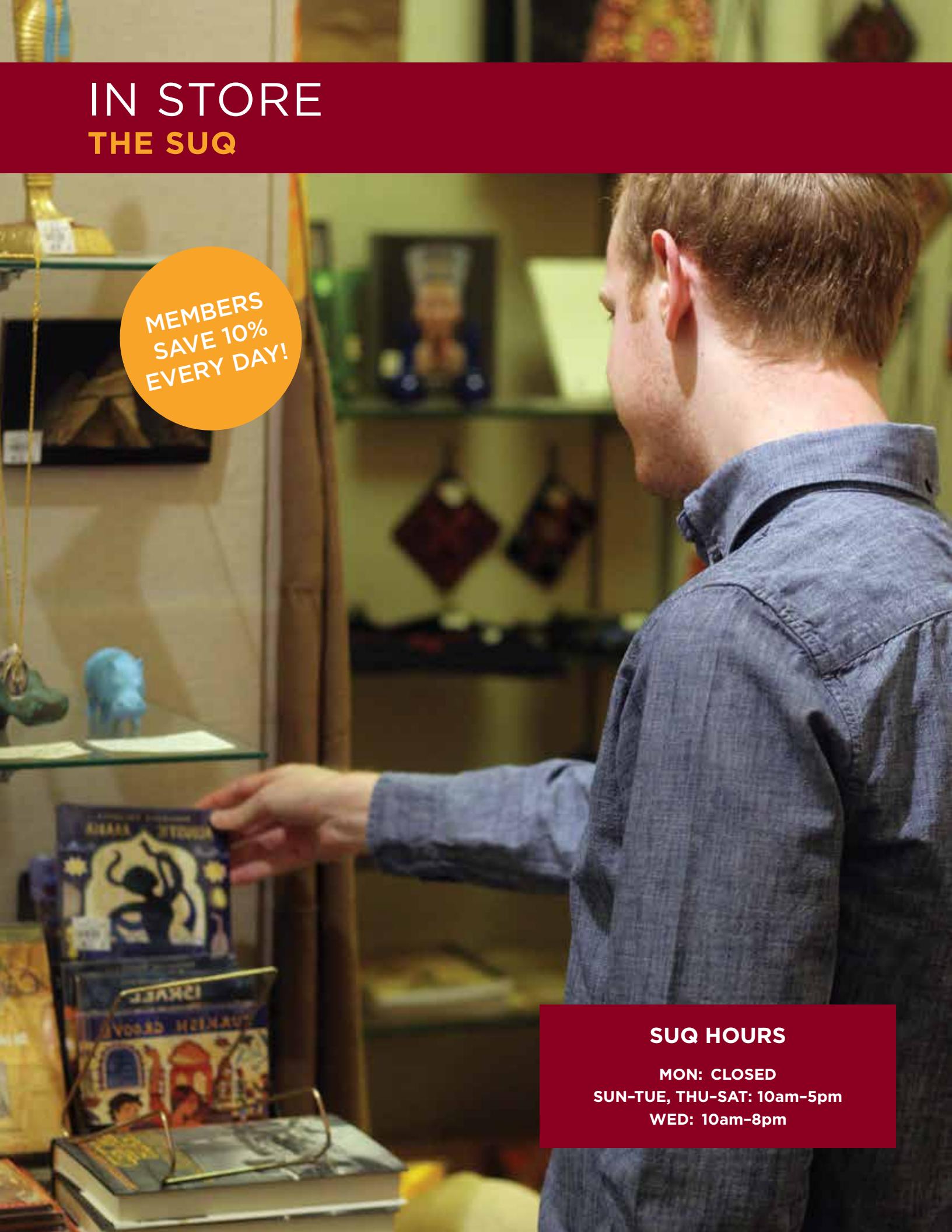
It initially surprised me how welcome everyone made me feel. I had only been working a few weeks when I was invited to the yearly Volunteer Luncheon. And Foy, Yorke, and Morag were all infinitely patient when I was just learning and couldn't remember from week to week what they'd taught me the previous week.

### 6. What would you say to someone who is thinking of volunteering at the OI?

Volunteering at the Oriental Institute is a very rewarding experience, both intellectually and socially. You will easily find something that fits your interests. The knowledge you will gain and the friends you will make will be invaluable and enrich your life.

Join in the fun and the meaningful work. Explore becoming a volunteer at [uchicago.edu/support](http://uchicago.edu/support).

# IN STORE THE SUQ

A photograph of a man from behind, wearing a blue denim jacket, looking at books on a shelf. He is reaching for a book titled "Raja Meets".

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EVERY DAY!

## SUQ HOURS

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WED: 10am-8pm

# PROGRAMS & EVENTS

## WINTER 2016



# ADULT PROGRAMS

## COURSES

### The Archaeology of Iraq: An Armchair Tour (6 weeks)

Sat, Jan 23-Feb 27, 10am-12pm

General \$350, members \$295.

*Registration required.*



MEMBERS  
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TO 20% ON  
CLASSES!

Mesopotamia — the area of modern-day Iraq — has fascinated archaeologists since the earliest days of exploration. This course, taught by Sam Harris, PhD candidate in Mesopotamian archaeology, takes students on a virtual tour of Iraq's archaeological heritage, including many sites that have been irrevocably damaged or destroyed. We examine the significance and history of key sites and regions and take a look at some of the preservation issues facing Iraq's archaeological heritage today.

### Tales of the Dead: From Bioarchaeology to Forensic Anthropology (6 weeks)

Sat, Mar 5-Apr 9, 10am-12pm

General \$350, members \$295.

*Registration required.*

This course, taught by Maureen E. Marshall, PhD, will examine the basic principles of analyzing human skeletal remains in both archaeological and modern forensic contexts. While forensic work focuses on identification and cause of death, bioarchaeology is used to investigate a suite of questions about aspects of people's lives in the past, including diet, disease, aging, activity, and violence. Participants will have the opportunity to apply various investigative methods through short lab exercises using skeletal remains and relevant materials from the Oriental Institute.

## NEW FEATURE

### Multisensory Tour: For Visitors Who Are Blind or Partially Sighted

Fri, Feb 12, 2-3pm

Free.

*Registration required.*

Visitors who are blind or have low vision are invited to experience touchable moments of the ancient world in the Oriental Institute Museum. The tour engages visitors with multiple senses while they learn from an archaeologist or Egyptologist. Sighted companions are welcome.

In honor of Low Vision Awareness Month, this tour is offered free of charge.

## Archaeological Reconstruction Drawing Workshop

Sat, Mar 12, 1-3:30pm

General \$25, members \$20.

*Registration required.*

Spend a Saturday afternoon creating a unique technical drawing of an ancient Egyptian pottery sherd from the Old Kingdom under the guidance of Natasha Ayers, PhD candidate in Egyptian archaeology. Students will also learn how archaeologists use pottery and pottery drawings in their research. No previous experience is necessary. Supplies can be purchased at registration.

## GALLERY TALKS

### Nubia in Chicago: Celebrating 10 Years of the Robert F. Picken Family Nubia Gallery

Thu, Feb 4, 12:15-1pm

Free.

*Registration not required.*

Debora Heard, PhD candidate in anthropology, provides a retrospective of the last decade of programming centered on the Nubia Gallery. The talk explores the gallery design, the Oriental Institute's historical role in bringing Nubian artifacts to Chicago and in preserving the history of Nubia's 4th Cataract region, and how the gallery brings ancient Nubian history to life in Chicago.

### Israel Outside the Bible

Thu, Mar 3, 12:15-1pm

Free.

*Registration not required.*

The Bible is an incredibly rich source for learning about ancient Israel. But did you know that there are inscriptions about Israel from elsewhere in the Middle East, and that there are important examples of these at the Oriental Institute? Join Joey Cross, PhD candidate in Hebrew Bible and Egyptology, and learn about ancient Israel outside the Bible.

**ADULT PROGRAMS** meet at the Oriental Institute unless otherwise noted.

**REGISTER** To register, visit [oi.uchicago.edu/register](http://oi.uchicago.edu/register).  
For assistance or more information, email [oi-education@uchicago.edu](mailto:oi-education@uchicago.edu).

# ADULT PROGRAMS

## LECTURES

Oriental Institute lectures are a unique opportunity to learn about the ancient Near East from world-renowned scholars. The following lectures are free and open to the public, thanks to the generous support of Oriental Institute members.

### The Battle of Kadesh: A Debate between the Egyptian and Hittite Perspectives

**Wed, Jan 6, 7–8pm**

Free.

*Registration required.*

Join us for a lively debate presented from the two sides of the ancient conflict, provided by noted Oriental Institute scholars Robert Ritner, for the Egyptian side, and Theo van den Hout, for the Hittites.

### Luwian Hieroglyphs: An Indigenous Anatolian Syllabic Script from 3,500 Years Ago

**Wed, Feb 3, 7–8pm**

Free.

*Registration required.*

This lecture, presented by Petra Goedegebuure, Associate Professor of Hittitology at the Oriental Institute, explores where Luwian Hieroglyphs came from, how widely the script was used, and who could read it.

### The Long and Winding Crossroads: The Evolution of an Exhibition Concept

**Wed, Mar 2, 7–8pm**

Free.

*Registration required.*

On the Ides of March 2015, the Milwaukee Public Museum opened *Crossroads of Civilization*, its latest foray into the ancient worlds of the Near East and Mediterranean. Carter Lupton, the curator for *Crossroads*, who also worked on the previous Milwaukee incarnation, *Temples, Tells and Tombs*, offers insights into the challenges of making an old topic new when faced with increased budgets, decreased space, and unfamiliar technologies.

Register for these lectures at  
[oimemberevents.eventbrite.com](http://oimemberevents.eventbrite.com)

## WATCH AN ORIENTAL INSTITUTE LECTURE

If you cannot attend in person, you can still watch full-length recorded lectures at your convenience on the Oriental Institute's YouTube channel, [youtube.com/jameshenrybreasted](https://youtube.com/jameshenrybreasted).

## TOUR

### Stroller Tour: Stars Over Mesopotamia

**Tue, Mar 8, 2–3pm**

General \$15; members, UChicago students/faculty \$10, for up to two adults.

General \$7, members \$5 for additional adult registrant. Babies in strollers are free.

*Registration required.*

Enjoy a light-hearted gallery tour that is open for caregivers and their pre-toddler-age (18 months or younger) children. Join us for a journey through the Mesopotamian night sky. We'll encounter familiar constellations and forgotten stories, and we'll talk about the role the stars played in Mesopotamian religion, mathematics, and daily life.

## SOCIAL

### Epic Wednesday

**Wed, Mar 9, 5–8pm**

General \$20, members \$15.

*Registration required.*

Break your mid-week routine. Celebrate the delight of the coming Persian new year — Nowruz — with artisan food, craft beer, wine, and music. Gain unique perspectives on our special exhibit, *Persepolis: Images of an Empire*, through expert-led gallery tours. Relax and immerse yourself in the glory of an ancient empire through the film *Persepolis Recreated*.

*Sponsored by the Federation of Zoroastrian Associations of North America, the Zoroastrian Association of Chicago, and Iran House of Greater Chicago.*

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**QUESTIONS?** To learn more visit [oi.uchicago.edu](http://oi.uchicago.edu). For assistance or additional information, email [oi-education@uchicago.edu](mailto:oi-education@uchicago.edu).

# EDUCATOR PROGRAMS



## ONLINE WORKSHOP

### Investigating Nutrition: The Advent of Agriculture in Mesopotamia (8 weeks)

**Feb 1-Mar 28**

General \$175, members \$135.

Registration required.  
30 Hours.

Use this virtual workshop to practice the basics of scientific inquiry (observation, inference, evidence, and classification) using authentic archaeological data. Trace the shift from hunting and gathering to the development of agriculture in the ancient world. Learn inquiry-based methods for teaching social studies, English language arts, science, and health enhancement with Common Core State Standard alignment.

Participants will receive a print copy of Project Archaeology's new *Investigating Nutrition* curriculum guide. Recommended for middle school teachers.

## EDUCATOR PASS

The Educator Pass provides two membership cards and all the benefits of a Friend of the Oriental Institute to two adults and their children or grandchildren under the age of 18. K-12 educators receive a special membership price of \$25 (regularly \$75).

### BENEFIT HIGHLIGHTS:

- Discount for professional-development programs
- A print copy of *Field Trip Planning & Exhibition Guide*
- Special benefits at the Hyde Park Art Center

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For more information, visit [oi.uchicago.edu/educators](http://oi.uchicago.edu/educators).

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For assistance or more information, email [oi-education@uchicago.edu](mailto:oi-education@uchicago.edu).

# FAMILY PROGRAMS

## WORKSHOPS

FOR AGES 10-18

### **Boy Scout Archaeology Badge Workshop**

**Sat, Jan 23, 9am-12pm**

General \$20, members \$15.

*Registration required.*

Earn your archaeology merit badge at the Oriental Institute. Some items must be completed prior to the badge workshop for badge certification. See [oi.uchicago.edu/events](http://oi.uchicago.edu/events) for prerequisites.

FOR AGES 9-12

### **Introduction to Hieroglyphs**

**Sat, Jan 23, 1-3pm**

General \$10, members \$5.

*Registration required. Adults must register and attend with child.*

Learn some basics of the Egyptian hieroglyphic writing system. By the end of this workshop, you will understand some of the principles of reading Egyptian hieroglyphs and recognize some key hieroglyphs and phrases that show up on Egyptian artifacts in many museums. Use our post-visit activities to create an ancient Egyptian-inspired code.

FOR AGES 5-12

### **Junior Archaeologists**

**Sat, Feb 13, 1-3pm**

General \$10, members \$5.

*Registration required. Adults must register and attend with child.*

Let loose your inner Indiana Jones! Children and parents dig into our simulated excavation while learning about the real science of archaeology at the Oriental Institute's Kipper Family Archaeology Discovery Center. This program includes an interactive guided tour of the galleries. Fun patches available onsite.

## HOMESCHOOL

FOR AGES 5-12

### **The Look**

**Thu, Feb 25, 1-3pm**

General \$10, members \$5.

*Registration required. Adults must register and attend with child.*

Explore the origins of the ancient "look" and how ancient make-up, clothing, and other elements might have helped (and sometimes hindered) a person's survival. Find out how the changes in ancient style help archaeologists understand the past.

## DROP-IN

FOR AGES 5-12

### **Secret of the Mummies**

**Sat, Feb 27, 1-3pm**

Free.

*Registration recommended.*

Help us prepare our simulated mummy for the afterlife, then go on a mummy scavenger hunt and tour. Fun patches available onsite.

FOR AGES 5 AND UP

### **Ancient Game Day and Nowruz Celebration**

**Sat, Mar 12, 1-4pm**

Free.

*Registration recommended.*



Play the favorite games of ancient Egypt, Nubia, Mesopotamia, and Persia in the museum galleries. Be the first to play the Oriental Institute's exclusive replicas of the game Hounds and Jackals. Learn the principles of making board games and create your own. Enjoy the stories and games associated with the Persian new year festival Nowruz.

*Sponsored by the Federation of Zoroastrian Associations of North America, the Zoroastrian Association of Chicago, and Iran House of Greater Chicago.*

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# MEMBERS' PROGRAMS



## YOUNG PROFESSIONAL

### Dine Around

**Thu, Feb 18, 6-8pm**

Attendees are responsible for payment of their own bill.  
*Registration required.*

Connect with new and familiar faces over casual dinner at a local Mediterranean restaurant with Oriental Institute scholars. RSVP to Amy Weber at 773.834.9777, or email [amyweber@uchicago.edu](mailto:amyweber@uchicago.edu).

## BENEFIT HIGHLIGHT

### Publication Discount

Aside from the complimentary online distribution of PDFs of all Oriental Institute publications, did you know you can purchase print titles for a discount through the Casemate Academic online store? Members receive a 20% discount on all titles. To receive the member discount, send an email to [oi-membership@uchicago.edu](mailto:oi-membership@uchicago.edu), with the subject line Member Discount Code. Happy shopping!

## EXCLUSIVE FIELD TRIP

### Crossroads of Civilization at Milwaukee Public Museum

**Sat, Mar 19, 10am & 11am**

Members are responsible for transportation and payment of museum entrance. The private tour is free.  
*Registration required.*

Following the March 2 lecture, there will be two private tours at the MPM by exhibit curator Carter Lupton. Get free entry into the museum using your ROAM membership benefits. (ROAM benefits are part of any membership over \$100. If you do not have ROAM, you will need to pay the museum entrance fee or upgrade your membership.) Registration is required and will open January 11, 2016, at [oimemberevents.eventbrite.com](http://oimemberevents.eventbrite.com). You must be an Oriental Institute member in good standing to attend this event.

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# TRAVEL PROGRAM

## THE ANCIENT LAND OF PERSIA

TEHRAN | SUSA | PERSEPOLIS | YAZD | ISFAHAN



**OCTOBER 13–28, 2016 | 16 DAYS | FROM \$6,995**



Led by Abbas Alizadeh

Senior Research Associate and Director of the Susa Project

Open the door to enigmatic Iran, once the seat of the mighty Persian empire that grew up alongside the ancient Greeks and Romans. Modern Iran is a place of soaring beauty, with billowing domes, mosaic-clad mosques, and madrasahs. Its monumental archaeological sites are some of the finest in the world, its architecture is infused with colorful energy, and its bazaars are without equal. Iranians are unfailingly warm and engaging, adhering to a culture that prizes hospitality. On this journey of discovery, admire the treasures of Iran, from the crown jewels in Tehran to the Zoroastrian fire temples of Yazd and the luminous bridges of Isfahan.

*The Travel Program is a series of international travel tours designed exclusively for Oriental Institute members and patrons.*

**GO ONLINE** to [oi.uchicago.edu/travel](http://oi.uchicago.edu/travel) to download the brochure. **TO BOOK**, contact MIR Corporation at 800.424.7289.

# ITINERARY

## THURSDAY, OCTOBER 13

### Tehran

Arriving in Tehran, transfer to the hotel for check-in and an overnight.

Hotel: Espinas Hotel

Meals: In flight

## FRIDAY, OCTOBER 14

### Tehran

After a late breakfast, touring begins at midday. An exploration of Iran's capital includes a visit to the UNESCO-listed Golestan Palace, begun as a fortress by the Safavid dynasty in the sixteenth century. The complex includes the Marble Throne, created from sixty-five pieces of yellow Yazd marble. Admire Iran's treasures at the State Jewels Museum, guarding the Darya-ye-Nur, the world's largest uncut diamond, and the Peacock Throne, covered with over 23,000 gems.

Hotel: Espinas Hotel

Meals: Breakfast & dinner

## SATURDAY, OCTOBER 15

### Tehran

This morning, start with a visit to Iran's Archaeological Museum, displaying Persian antiquities, art, and artifacts from Iran's long past. Tools thought to have been made by Neanderthals, figures from the Achaemenid empire, and bronzes, carvings, prehistoric pottery, and artifacts from Susa and Persepolis can be seen here. Next, explore the Reza Abbasi Museum, showcasing objects from Iran's distant past through to nineteenth-century calligraphy. Enjoy a festive welcome dinner at a local restaurant.

Hotel: Espinas Hotel

Meals: Breakfast, lunch, & dinner

## SUNDAY, OCTOBER 16

### Tehran • fly to Ahwaz

Survey the Carpet Museum this morning, with its wonderful collection of hand-loomed Persian carpets, kilims, and designs. Transfer to the airport for the flight to Ahwaz in southwestern Iran. The capital of Kuzestan province, Ahwaz sits on the banks of the Karun River. During the Umayyad and Abbasid eras, the town flourished as the home of many well-known scholars.

Hotel: Fajr Grand Hotel

Meals: Breakfast, lunch & dinner

## MONDAY, OCTOBER 17

### Ahwaz • day trip to Susa

Set out on a day trip to Susa, dating from at least 4000 BC. Susa was the Achaemenid capital from 521 BC, and the ruins of the Palace of Darius, dating from about this time, can still be seen and wandered through. In nearby Susa, visit the Tappeh-ye Chogha Mīsh archaeological site. Excavations lasting from 1961 to 1972 by archaeologists from the Oriental Institute found the low hill to be an incredibly rich site. Continue on to Shushtar, where the UNESCO-listed Shushtar Hydraulic System was begun by Darius the Great in the fifth century BC and completed by the Romans in the third century.

Hotel: Fajr Grand Hotel

Meals: Breakfast & lunch

## TUESDAY, OCTOBER 18

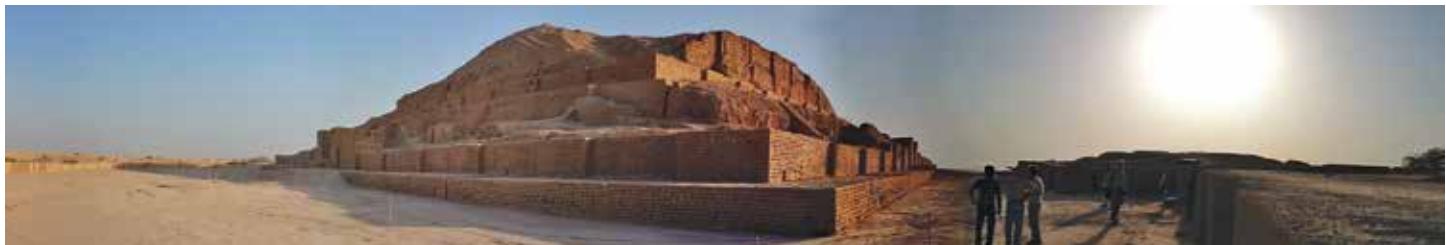
### Ahwaz

Begin the morning with a drive to UNESCO-listed Chogha Zanbil, an ancient Elamite sacred complex built in 1250 BC around what was once a lofty ziggurat dedicated to the most important Elamite god. This ziggurat is one of the largest of its kind to be found outside of modern-day Iraq. After lunch, pay a visit to Haft Tappeh (meaning "seven hills"), a city built around 1000 BC by the Elamite civilization. The remainder of the day is free for independent exploration.

Hotel: Fajr Grand Hotel

Meals: Breakfast & lunch





## WEDNESDAY, OCTOBER 19

### **Ahwaz • drive to Shiraz via Bishapur**

King Shapur I, the second Sassanid king, built Bishapur in 266, using defeated Roman soldiers from the armies of Emperor Valerian. Outside the city, Shapur and one of his successors used the steep walls of the Bishapur River canyon as a gallery for enormous carvings depicting military victories and investitures. The place is called Tang-e-Chogan.

Hotel: Homa Hotel

Meals: Breakfast, lunch & dinner

## THURSDAY, OCTOBER 20

### **Shiraz**

The fabled city of Shiraz is the capital of Fars province, where the Persian language of Farsi originated. Begin with a visit to Arg-e-Karim Khan, a massive medieval stronghold built in the twelfth century to house and protect Karim Khan and his retainers. The stunning Nasir-ol-Molk Mosque, constructed from 1876 to 1887, is an explosion of colors with some of the finest examples of Persian Islamic tilework, stained glasswork, and architecture in Shiraz. End the day with a visit to the exciting Vakil Bazaar, an eleventh-century covered bazaar lined with little shops, courtyards, and bathhouses.

Hotel: Homa Hotel

Meals: Breakfast & lunch

## FRIDAY, OCTOBER 21

### **Shiraz • day trip to Persepolis**

After breakfast, pay a visit to one of the most important sites of the ancient world — the ceremonial capital of the Achaemenid kings, UNESCO-listed Persepolis. Darius I initiated the building of Persepolis, a huge undertaking of art and architecture. In 1933, archaeologists from the Oriental Institute were instrumental in discovering and deciphering a trove of clay tablets in the palaces of Darius, Xerxes, and their successors at Persepolis. Continue to the tombs of Naghsh-e Rostam, where monumental rock carvings are thought to be the tombs of Darius the Great, Xerxes, and Artaxerxes.

Hotel: Homa Hotel

Meals: Breakfast & lunch

## SATURDAY, OCTOBER 22

### **Shiraz • drive to Yazd via Pasargadae**

Cyrus the Great founded Pasargadae, the first capital of the Achaemenid empire, in the sixth century BC. Set apart from the other ruins is the limestone mausoleum of Cyrus, which had been looted by the time Alexander the Great paid it a visit in 324 BC. Arrive in Yazd this evening.

Hotel: Moshir Garden Hotel

Meals: Breakfast, lunch & dinner

## SUNDAY, OCTOBER 23

### **Yazd**

Yazd was founded in the fifth century AD. Its isolated location proved to be one of its greatest assets, concealing it from waves of invaders. Zoroastrians fleeing Arab invaders found safe haven in Yazd. Visit the beautiful Friday Mosque and the covered bazaar before strolling the UNESCO-listed classical Persian Dowlat Abad Garden. Make a stop at the Fire Temple, where Zoroastrians from around the world come to see its eternal flame, said to have been burning since 470 AD. End the day with a sunset visit to the Zoroastrian Towers of Silence.

Hotel: Moshir Garden Hotel

Meals: Breakfast, lunch & dinner

## MONDAY, OCTOBER 24

### **Yazd • drive to Isfahan via Maybod and Naein**

Maybod is one of Iran's best-preserved ancient cities, with a massive mudbrick fortress, 2,000-year-old Narin Castle. Visit the small town of Naein, boasting one of the earliest remaining mosques in Iran, the tenth-century Jameh Mosque. Arrive in Isfahan, one of the most celebrated and beautiful cities in the world, in late afternoon.

Hotel: Abbasi Hotel

Meals: Breakfast, lunch & dinner

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## TUESDAY, OCTOBER 25

### Isfahan

Spend the day exploring Maiden-e Naghsh-e Jahan, also known as Imam Square, one of the world's largest public squares. A UNESCO World Heritage Site, the square was the symbolic center of the Safavid empire. Here, admire Imam Mosque, its massive entry portal decorated with cobalt, turquoise, and lapis lazuli mosaic tiles; Sheikh Lotfollah Mosque, a small, beautifully decorated seventeenth-century mosque; and the Ali-Qapu Palace, where Safavid kings watched polo games from the balcony. Then enter Isfahan's amazing seventeenth-century bazaar and stroll the narrow lanes lined with artisans' workshops.

Hotel: Abbasi Hotel

Meals: Breakfast & lunch

## WEDNESDAY, OCTOBER 26

### Isfahan

Today survey some of the five arched bridges over the Zayendeh River, visit the Armenian Quarter to see the sand-colored stonework of Vank Cathedral, and admire spectacular UNESCO-listed Friday Mosque, encompassing over 800 years of Islamic architectural styles. End the day with a visit to the Chehel Sotun Palace, built by Shah Abbas II in 1647. Its name means "Forty Columns" and refers to the twenty wooden columns supporting the entrance to the Great Hall, multiplied by their reflection in its pool. Gather for a festive farewell dinner to celebrate the journey.

Hotel: Abbasi Hotel

Meals: Breakfast, lunch & dinner

## THURSDAY, OCTOBER 27

### Isfahan

Walk through the Jewish Quarter, or Juibareh, one of the oldest neighborhoods of Isfahan. By special arrangement, attend a performance at a zoorkhaneh, a traditional Persian gymnasium where men practice and perform special exercises that have great historical and sometimes spiritual meaning. The remainder of the evening is free for last-minute souvenir shopping and preparations for departure early tomorrow morning.

Hotel: Abbasi Hotel

Meals: Breakfast & lunch

## FRIDAY, OCTOBER 28

### Isfahan

The tour concludes with a transfer to the airport for international departure.

Meals: Breakfast

**\$6,995 | SINGLE SUPPLEMENT \$1,395**

#### THE TOUR RATE INCLUDES:

- Economy-class airfare Tehran to Ahwaz (day 4) and surface travel by air-conditioned motor coach
- Accommodation at the best available hotels throughout, based on double occupancy
- Breakfast daily, and other meals as listed in the detailed itinerary
- Baggage handling at the hotels

**NOT INCLUDED IN THE TOUR COST:** International airfare, passport and visa fees, excess baggage charges, gratuities to tour manager, guides and drivers, transfers to/from the airport for travelers not arriving to Tehran on Oct 13 and departing from Isfahan on Oct 28, insurance, beverages, and items not on the menu

**DEPOSITS & PAYMENTS:** A \$500 deposit is required to book. Final payment is due 60 days before the tour start on August 14, 2016.

**SINGLE ROOMS:** For those traveling alone but who prefer to share with another, we will endeavor to work out congenial rooming arrangements. If impossible, or if a single room must be assigned due to the roommate's canceling or incompatibility, or for any other reason, even if at the last moment or while on tour, the single supplement of \$1,395 or prorate thereof must be collected.

**INSURANCE:** Insurance is available and is recommended. By purchasing trip cancellation insurance within 21 days of your initial deposit, Travel Guard will waive the usual exclusion for preexisting medical conditions.

**CANCELLATIONS:** In the event of cancellation, the initial \$500 deposit is fully non-refundable. Up to 61 days prior to departure, there is no further cancellation penalty. From 60 to 31 days prior to departure, the cancellation penalty will be 50% of the land tour cost. The penalty for cancellations received 30 or fewer days prior to arrival is 100% of the land tour cost. Airline cancellations are subject to the penalties of the carrier. Cancellation of the tour by the Oriental Institute: full refund.

**NOTE:** Neither the Oriental Institute nor MIR Corporation accepts liability for any airline penalties incurred by the purchase of non-refundable airline tickets.

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# ARTIFACT HIGHLIGHT

## What's in a Name? The Speckled-Lion Stone of Mesopotamia

By Kiersten Neumann, PhD

This stone bowl deserves to be an object of highlight because of the unique relationship between the votive inscription on its exterior face and the stone of which it was made. The inscription begins, “To the goddess Inanna of Zabala, his lady,” the divinity to whom the bowl was dedicated. The text then states that this dedication was made for the life of the king Rīm-Sīn I, the last king of the Larsa dynasty of southern Mesopotamia, who ruled for an impressive sixty years (1822–1763 BC). The individual who dedicated the bowl is then named — Šallūrum, the son of Lu-Assaluhi, followed by a reference to the object of dedication itself — *bur<sup>na</sup>pirig-gùn* “a bowl of pirig-gùn stone” (Frayne, *Royal Inscriptions of Mesopotamia: Early Periods*, 1990, p. 304)

*To the goddess Inanna of Zabala, his lady,  
for the life of Rīm-Sīn, king of Larsa,  
Šallūrum, the son of Lu-Assaluhi, her reverent servant,  
presented [this] bowl of pirig-gùn stone to her.*



What is particularly interesting about this inscription is that it names the stone of which the bowl itself was made and that the literal translation for the stone’s name matches the bowl’s appearance: *na<sup>pirig-gùn</sup>* = “speckled ‘lion’ stone” (*NA<sub>4</sub>*: determinative for stone; *pirig*: “lion”; *gùn*: “spotted/speckled”). A stone cylinder seal in the British Museum collection, dating to the Sargonic period (2334–2154 BC), presents the same correlation between text and object (BM 122125; see image below). Not only does the seal’s stone look the same as that of the bowl of Šallūrum, but its inscription similarly refers to the pirig-gùn stone of which it was made. Studies of this seal revealed that it is an igneous stone, such as diorite or gabbro. These findings led Piotr Steinkeller, Harvard University, to argue that the term *pirig-gùn* was used in antiquity to describe the formal properties of various stones that share this specific appearance — that is, black and white and speckled or mottled, which agrees with its translation, “stone which looks like the hide of a spotted ‘lion’,” possibly denoting “leopard” (*Zeitschrift für Assyriologie* 77 [1987]; *Zeitschrift für Assyriologie* 72 [1982], p. 253). Preliminary analysis of the bowl of Šallūrum indicates that it may be made from a similar type of stone.



Stone cylinder seal (BM 122125) and modern impression.  
© Trustees of the British Museum.

The use of *pirig-gùn* in the inscription on both the bowl and the seal demonstrates the value that was placed on the aesthetics and visual qualities of materials in ancient Mesopotamia. This cultural appreciation for a stone’s visual qualities is also demonstrated by the series *Abnu šikinšu* (“the stone, its appearance”), which includes a lengthy list of stones that details aspects of their appearance (Schuster-Brandis, *Steine als Schutz- und Heilmittel*, 2008, pp. w41–47). Yet these objects would have also been valued because of the skill and labor that went into transforming them from raw stone into worked objects. The descriptive language used for finished works of art in texts from ancient Mesopotamia confirms an appreciation for the wisdom and skill of the craftsmen who produced them; for example, kings speak of masterfully fashioning statues of the gods, and craftsmen are referred to as wise and skilled. Stones were also valued for their natural qualities. A principal component of the myth Lugale is its etiological classification of stones. Each stone was allotted a positive or negative destiny by the god Ninurta dependent upon whether the stone aided or hindered the god in his defeat of Asag in the mountains. In this text, the less a stone had to be altered from its natural state, the greater its value.

**Material:** Stone  
**Origin:** Iraq  
**Date:** Isin-Larsa Period, 2017–1763 BC  
**Height:** 8.3 cm  
**OIM A7462 (D. 20005)**  
**Location:** Mesopotamian Gallery

**FIND OUT MORE** about our collections. Search nearly 1,000,000 records from the Museum Collection, Photographic Archives, Museum Archives, and Research Archives using the Oriental Institute Collections Search at [oi-idb.uchicago.edu](http://oi-idb.uchicago.edu).



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## GENERAL ADMISSION

FREE

ADULTS

**\$10 suggested donation**

CHILDREN 12 OR UNDER

**\$5 suggested donation**

## MUSEUM & GIFT SHOP HOURS

*Closed Monday*

*Sun-Tue, Thu-Sat: 10am-5pm*

*Wed: 10am-8pm*

## THE MUSEUM IS CLOSED

January 1

July 4

Thanksgiving Day

December 25

## ACCESSIBILITY

The Museum is fully wheelchair and stroller accessible. The University Avenue west entrance is accessible by ramp and electronic doors.

## PARKING

FREE parking half a block south of the Museum on University Avenue, after 4pm daily and all day on Saturday and Sunday.

## GROUP VISITS

For information about group visits, please go to:  
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