While their research is focused on the distant past, archaeologists have always been “early adopters,” who embrace new technologies to advance their work. Starting with balloons and early cameras and moving to iPads, CAT scans, and remote-sensing technologies, archaeologists see new possibilities in many different technological advances and have creatively incorporated technology in their work, sometimes in ways that inventors could never have imagined.

Drones are the latest technological advance that archaeologists have adapted for their work. While certain major retailers are contemplating use of drones to deliver your packages faster than ever, Oriental Institute researchers have already put drones to work in the field. In this issue you’ll find two fascinating articles on drones in archaeology. Yorke Rowan, Morag Kersel, and Chad Hill share how drones are being used to photograph and collect data over very large areas as part of the Galilee Prehistory Project. In a related article, Morag Kersel and Austin Hill discuss how drones are being put to work in documenting — and hopefully preventing — looting.

New discoveries take place every day at the Oriental Institute and our next special exhibition highlights some fascinating objects from our collection. Tanya Treptow and Tasha Vorderstrasse, co-curators will introduce you to A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo, which explores how medieval Cairo became known for a diverse population that peacefully coexisted, along with great wealth and a lively artistic community. The Oriental Institute is home to an important and rarely seen Islamic collection, which includes documents from the Cairo Genizah, the world’s oldest fragment of *A Thousand Nights*, decorative pottery, and colorful textiles that reflect the range of exotic and beautiful wares available in medieval Cairo. I hope you’ll join me in February for the opening of this exciting exhibition.

From the Director’s Study

Gil J. Stein
Director

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Cover image: Photo of Areas AA and BB at Marj Rabba, taken from multirotor drone.

Credits
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Special Exhibitions

In Remembrance of Me: Feasting with the Dead in the Ancient Middle East
Through January 4, 2015
This exhibit is about how the people of the ancient Near East and Egypt commemorated and cared for their deceased ancestors. Throughout this region some part of the living person was believed to survive death in the form of a “soul,” “spirit,” or “ghost,” but depictions of the afterlife varied. All agreed that the quality of the soul’s continued existence depended in part on its remembrance and care or nourishment by descendants. Archaeologists have found many statues, steles, and inscriptions that show this desire for preservation by posterity.

For the living, rituals that honored the family dead not only provided continuity with the past, but could prevent harm inflicted by vengeful, neglected ghosts and gain the protection of benevolent spirits. Artifacts and texts demonstrate how the living provided for the dead, and describe annual festivals of remembrance.

A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo
February 17–September 13, 2015
How did modern Cairo come to be? Unlike many cities in Egypt, which originated during ancient pharaonic or Greco-Roman times, Cairo is relatively young. The first permanent urban settlement began only in 642 AD but it grew quickly into a sprawling capital city. This exhibit highlights the diversity of people who were the first to make Old Cairo their home.

In the exhibit, visitors will explore how Old Cairo’s communities lived together and melded their traditions to create an ever-growing, multicultural society during the 7th to 12th centuries AD. Although the city was governed by Muslim Arabs, its neighborhoods were populated by people from a patchwork of religious and ethnic communities, including native Egyptians and many immigrants. The exhibit puts a special focus on the three main religious communities — Muslims, Christians, and Jews — whose members helped shape Old Cairo’s neighborhoods, markets, and public places. See the feature article on this exhibit on page 10.

A Revised Exhibit of the Original Show: Our Work: Modern Jobs — Ancient Origins
Through August 30, 2015
This exhibition of photographic portraits explores how cultural achievements of the ancient Middle 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 such as baker, stonemason, manicurist, poet, potter, policeman, and judge in the ancient world are paired with a person who is the modern “face” of that profession. The resulting photographic portraits represent the diversity of Chicago residents, ranging from ordinary workers to local luminaries. The portraits are accompanied by commentary on the specific contribution of the past and remarks from the modern representative, resulting in fascinating new insights into how members of the public view their relationship to the past. In the Lower Level of the Oriental Institute.
In 1913, Sir Henry Wellcome suspended a camera from a kite to document excavations in the Sudan. Since then, archaeologists have wanted to get a bird’s-eye view of ancient sites and their landscapes. An aerial perspective allows recognition of patterns that are easily missed or cannot be detected at ground level, and most archaeologists have probably experienced the pleasure of identifying a feature, pattern, building, or site from above that was previously unknown. Recently, rapid technological developments and increasingly accessible and affordable sophisticated software are combining to create the perfect storm of factors for new uses of aerial photographs.

There are obstacles with these photographs because of the distortion introduced by the camera lens, the angle of the camera, and the topography of the ground, though these difficulties may be mitigated with geo-referencing information that allows correction for these distortions.

The process of extracting spatial information from two-dimensional images, called “photogrammetry,” is not a new technology. However, in recent years, software for building Digital Elevation Models (DEMs), high-resolution orthophotographs (spatially accurate undistorted aerial images), and 3D models has become more affordable, and less complicated to learn. The combination of this software with improved camera technology, and the commercial availability of small, Unmanned Aerial Vehicles (UAVs), commonly referred to as “drones,” has created a revolution in aerial survey for archaeology. Drones complement other aerial technologies such as balloons, kites, and piloted aircraft, all of which may be used for low-elevation aerial images and provide higher-resolution alternatives to satellite imagery.

Drones are not the only platform for elevating cameras. At our field sites, we position cameras over archaeological features in a variety of ways, from over 60 meters above the ground to only centimeters above the ground. Ground resolution, the area of ground covered by each pixel in an image, is of course directly linked to camera elevation, but the scalability of photogrammetric 3D data means that the amount of field time necessary to record 3D data is not necessarily related to the area to be covered.

At Marj Rabba, Israel, and the sites in the Black Desert of eastern Jordan (Maitland’s Mesa and Wisad Pools), we use a 9-meter fishing pole with a lightweight
tripod mounted on the end to take sets of aerial photos for photogrammetry. This “Pole Aerial Photography” (PAP) has no moving parts, no batteries, and no vibration problems, and can be set up quickly and easily. This is the most efficient way to collect high-resolution images for smaller areas such as individual excavation units and archaeological features (e.g., rooms, walls, buildings). At Marj Rabba, a set of photographs for a 3D model of the entire site, with accuracy down to the centimeter, can be collected in about thirty minutes (fig. 1). For larger areas, particularly at a large site such as Zincirli, this would not be an efficient image-collection strategy for the excavated exposure.

For our projects, we use drones for a number of reasons. Although one can spend a great deal of money on a drone, they can be purchased and maintained relatively cheaply, can fly in a variety of conditions, and can collect data over large areas very efficiently when flown autonomously. We have discovered that a variety of different platforms work well, depending on the goal.

Multirotor helicopters, typically hexacopters, quadcopters, or octocopters, are becoming increasingly popular with archaeologists and have captured the public imagination as well (see opposite photo). These can be purchased cheaply, need little space to take off or land, and can hover over points of interest. Moreover, these can be flown autonomously over a predetermined path that allows comprehensive collection of images to ensure the correct amount of overlap for the accurate construction of photogrammetric data.

To date, fixed-wing aircraft seem less popular with archaeologists, although for some purposes they are a better alternative to multirotors. A fixed-wing aircraft will fly significantly longer on the same battery. At higher altitudes, they are more easily controlled and can cover larger areas more efficiently than multirotors. Fixed-wing planes are also more durable than multirotors; they are less likely to sustain irreparable damage in a crash, and an experienced pilot is more likely to overcome in-flight problems. In short, a crash landing of a fixed-wing plane may sustain little or no damage; a multirotor will typically fall like a rock. Fixed-wing drones, however, do require more space to launch or land, generally require more flying space than the copters, and cannot be hovered over a specific location.

We use a variety of drones at the field sites of Marj Rabba and Wisad Pools. We use quadcopters, hexacopters, and fixed-wing aircraft, which we construct from components purchased (and donated) from manufacturers. For our fixed-wing aircraft, we use a “Skywalker” foam model, designed for hobby-level radio-control flight. To this foam model is added servos, an electric motor, a radio-control receiver, and a sophisticated on-board computer that can commu-

1 Screenshot of 3D model of Area CC at Marj Rabba, showing the position of the camera on a 9-meter pole for each photograph used to construct the model.
cate with an Android tablet, track position with a GPS antenna, and provide autonomous control. We launch the plane by hand (see fig. 2), while landing is accomplished either via a gliding skid on the ground, or through a carefully timed catch in mid-air. For multirotors, we use a variety of low-cost frames and motors, controlled by the same sophisticated onboard computer.

In order to obtain photographs from higher altitudes than can be easily recorded with a pole, primarily focused on the walls, buildings, and more enigmatic structures, we find the multirotor copter ideal for controlling elevation and perspective and collecting photography quickly and efficiently. We collect sets of photographs from the multirotors by programming in autonomous flight paths that are designed to cover a specific area, at a specific altitude, with a specific amount of overlap between photos. By collecting photographs in this manner on a regular basis during the excavations, we gain a highly detailed visual record of the excavations through time, collecting quantifiable 3D data that allow us to track the removal of sediment. Rather than estimating the volume of excavated sediments and features by counting the number of buckets or rough calculations based on inaccurate field plan sketches, we can calculate volumetric information of different features and excavation areas based on the differences among different 3D models. In this we can track the amount of excavation in different units and the relative heights of different features, floors, loci, artifacts, and stratigraphic units with great accuracy.

Whether on the end of a pole, a multirotor copter, or fixed-wing drone, we typically use standard Canon S100 point-and-shoot cameras to document our excavations and the surrounding landscape. In addition to providing reasonable resolution, the cameras run the Canon Hacker’s Development Kit (CHDK), firmware that allows us the ability to set the camera to continually take a picture every second or two for the entire time it is aloft (or until the battery dies!). The Canon S100 includes GPS geo-tags for every photograph; although not particularly accurate, these are helpful when constructing georeferenced 3D models and maps. Building upon our traditional total station mapping of the topographic area around Marj Rabba, we added undistorted and georectified orthoimages to the GIS model, creating a clearer visualization of the field system and landscape of the site (fig. 3).

On the fixed-wing plane, the camera sits in the belly, pointed straight down at the ground through a gap cut into the fuselage. On the nose of the camera, pointed at oblique angles, we can mount an additional camera, usually a GoPro Hero camera set to record video. Although not useful for mapping due to the exaggerated distortion of the lens, these GoPro videos provide a fascinating

2 Launching a fixed-wing plane at Marj Rabba.
and sometimes stunning visual experience. They allow viewers to experience the archaeological landscape from a perspective that is not usually available.

In the desert of eastern Jordan, where we have been investigating two areas, Wisad Pools and Maitland’s Mesa, working with drones presents additional challenges. In this remote area without modern infrastructure, there is no power (nor cell phone reception, or water). Drones rely on large lithium-polymer batteries, and one large battery may allow a flight of 15–25 minutes, depending on whether it is powering a multirotor or fixed wing, and the demands placed on the drone in terms of speed, wind, and other factors. A generator is used to recharge these batteries, which is also used for recharging the batteries for the flight controller, tablet, camera, and laptop. In addition, any potential repairs or parts must be carried with us, along with glue, a soldering iron, and copious quantities of rubber bands.

Located approximately 107 kilometers east of Azraq and 17 kilometers north of the Saudi Arabian border, the site of Wisad Pools contains at least nine natural pools and was used intermittently by people from at least 12,000 years ago until the first centuries AD. In this area hundreds of collapsed structures of basalt are spread over an area of several square kilometers, most of unknown date, along with hundreds of petroglyphs (pecked rock art). We used the fixed-wing drone over the central core of the site in order to construct topographic maps of the area to show the precise locations of the collapsed basalt buildings (fig. 4). We used a hexacopter and PAP to take aerial photographs of the recent building we excavated. These photographs will be used to build successive 3D models of the structure, which we believe was a Late Neolithic (ca. 6500–6000 BC) house.

In addition, we flew the hexacopter over the pools in order to collect more precise data for mapping the locations of more than 400 rock art carvings concentrated around the pools. These carvings primarily represent wild animals, but also depict humans, structures, and geometric designs; our goal is to use the drone in order to map these petroglyphs and, we hope, allow insights into the spatial distribution of the rock art types. We also used photogrammetric techniques to record selected petroglyph examples at a much finer scale (sub-millimeter), which allows us to accurately record topographic features of the natural rocks that seem to have influenced the design of the petroglyphs carved into them.

We are in the middle of a revolution in aerial survey for archaeology. Drones and photogrammetry provide a cost-effective means of quickly recording 3D data at a variety of scales for an array of research goals. Our experiments at Marj Rabba and the Wisad Pools is an example of how drones can be used for documenting excavations, landscapes, and features. We are recording our work at levels of detail that were previously impossible.
As part of the interdisciplinary Follow the Pots project, the Landscapes of the Dead Research Project (co-directed by Morag M. Kersel and Austin C. Hill) is using drones (Unmanned Aerial Vehicles) to document changes in the archaeological landscape (fig. 1). At the Early Bronze Age site of Fifa, identified by early explorers to the region as one of the cities of the plain (Genesis), there has been ongoing looting and site destruction since the late 1980s; there is demand for pots from the “time of the Patriarchs.” The Early Bronze Age IA (EBA, cs. 3600–3200 BC) cemetery of Fifa contains thousands of cist tombs whose use coincides with the emergence of the first walled, urban settlements in the region. In the archaeology of the southern Levant, this site represents an incredibly important resource for researchers: it is one of only four known large EBA cemeteries (the others being Bab-adh Dhra’, Jericho, and Naqa). While there have been two short seasons of systematic excavation (1989/1990 by Walter Rast and R. Thomas Schaub and in 2001 by Mohammad Najjar on behalf of the Jordanian Department of Antiquities), unfortunately since the 1980s the site has been the target of extensive systematic illegal excavation in search of artifacts destined for the antiquities market.

Over the decades the Jordanian Department of Antiquities has tried different strategies to combat illegal excavation but with very little success. In 2011 Follow the Pots (co-directed by Morag M. Kersel and Meredith S. Chesson) in cooperation with the Department of Antiquities began a comprehensive interdisciplinary project that examines two elements of the looted landscape: the more conventional archaeological mapping, surveying, and site monitoring of this cemetery, and ethnographies with the multiple stakeholders about the multiple and contested values of this archaeological heritage. We are surveying the land and the current inhabitants who interact with the landscape.

In the 2011 season, Follow the Pots surveyed and mapped the extent of the cemetery using a handheld GPS unit and a total station. The initial mapping of the site provided an estimated area of 64,000 square meters for the cemetery. We recorded over 800 graves in the looted landscape, although thousands more exist, yet to be looted or excavated. In the examination of backdirt piles from looting, we were able to determine that there were different looting episodes. As part of the mapping we included the Iron Age structures (at the western edge of the site) and modern military trenches and structures in addition to the EBA I tombs. The 2001 excavation area was also included in the map, providing a comprehensive plan of the cemetery.

Between 2013 and 2018, we intend to survey Fifa each year using UAV flyovers.
— both fixed and rotary wing — to create high-resolution digital elevation models (DEMs) and orthophotographs. We will compare the results year to year to identify new looting episodes, to assess other changes at the site, and to evaluate any Department of Antiquities schemes to lessen or stop looting. We have completed two seasons of flyovers at Fifa, providing a baseline in 2013 and one year of comparison (2014). The continued mapping and groundtruthing of the landscape have allowed us to conclude that there is ongoing recent looting, current Department of Antiquities protection efforts are not working, and looters are revisiting previous looters’ holes. Our high-resolution 3D drone survey documentation system provides the ability to rapidly chronicle the landscape and identify the tiniest changes in the shape of the ground. While satellite imaging is a great technology for remotely surveying looted landscapes and identifying major destruction events, our drone surveys are providing a finer level of detail that allows us to catalog the ongoing destruction of Fifa to an extent that would not be possible with the satellite images alone.

Why use drones? First, it can be done very rapidly. Our survey can document the entire site in three dimensions, at a resolution of 1–2 cm/pixel, in mere days. This level of detail allows us to recognize every hole in the ground and quickly detect places where the ground has changed due to human or natural causes. In some cases we could identify new looting areas in real time while in the field. Additionally, our pedestrian survey in combination with the results from the 2001 excavations show that tombs often share a wall (fig. 2) — looters know this, and instead of digging from the top, they frequently revisit old looted graves and dig sideways into adjacent tombs. These events would not be visible from two-dimensional aerial images only, such as satellite images, but using the 3D data generated from drone work, we can identify them by measuring the changing depths of extant pits when they are refilled by the backdirt from an adjacent grave. Drones are changing the way we record archaeological site looting, providing more information that may help in understanding how looting occurs. Why looting occurs and why people want to own the pots from this site are other elements of this research project. For further information on the FTP project, please visit our Arabic and English website http://followthepotsproject.org/.
A12029A. Mamluk Qur'an given as a waqf by Sultan al-Faraj (1399–1412 AD)
A Cosmopolitan City
Muslims, Christians, and Jews in Old Cairo

by Tanya Treptow and Tasha Vorderstrasse, Co-Curators of the Exhibit

Although known for its collections of ancient Middle Eastern cultures, the Oriental Institute Museum also has a rich collection of Islamic materials. Only a small percentage of these artifacts have been on public view, including material from the Istakhr excavations (now on display in the Robert and Deborah Aliber Persian Gallery), the exhibition “Daily Life Ornamented: The Medieval Persian City of Rayy” (2007), and the mini-exhibition “The Silk Road and Indian Ocean Traders” (2014). This forthcoming exhibition brings well-deserved attention to Egyptian artifacts of the Oriental Institute’s Islamic collection. These objects illuminate the origins of one of the Middle East’s great urban centers, the city of Cairo.

We are proud to present the exhibition “A Cosmopolitan City: Muslims, Christians and Jews in Old Cairo,” which will run from February 17 to September 13, 2015, in the Marshall and Doris Holler Gallery for Special Exhibits at the Oriental Institute Museum. In this exhibition, visitors will have the opportunity to explore how urban communities in this city lived together and melded their traditions to create an ever-growing, multicultural society during the seventh to twelfth centuries AD. The exhibit puts a special focus on the three main religious communities — Muslims, Christians, and Jews — whose members helped shape the neighborhoods, markets, and public places of Old Cairo that still exist today.

The origins of modern Cairo go back to 642 AD, when Arab armies conquered Egypt and chose a new capital city along the Nile River. They set up their tents near the Roman military fortress of Babylon, which led to the settlement’s first name of al-Fustat, meaning “tent.” The city grew quickly and organically as Egyptians and foreigners migrated to the thriving new capital. Its neighborhoods were populated by people from a patchwork of religious and ethnic communities. Over three centuries later, in 969 AD, the sprawling city was officially designated as al-Qahira (Cairo), meaning “the Victorious.” Over time, the administrative center of the city had shifted to the north. While Fustat continued to be inhabited as port neighborhood of the larger city, areas along its edge gradually were abandoned as people moved their homes northward. By the Mamluk and Ottoman periods, parts of Fustat were used by the residents of Cairo to dump their trash.

People now designate the earliest center of urban settlement in Cairo as “Old Cairo” (or less commonly by its historical name, “Fustat”). Even now, the core of this area continues as a living neighborhood within the larger city of Cairo. It is still famous for its historical mosques, churches, and synagogues. Underneath its modern streets, and also on the outskirts of the neighborhood, lie the archaeological remains of the earliest foundations of the city. As a result, the site has been excavated a number of times, first by the Egyptian archaeologist Aly Bahgat (1912–1924) and then by George Scanlon for the American Research Center in Egypt (1964–1980). The site has continued to attract interest by Japanese, French, and Egyptian institutions, all of whom have conducted additional excavations that add to understanding of medieval life at the site.

We were inspired to pursue this exhibition after Tasha Vorderstrasse and Donald Whitcomb conducted a systematic examination of the Islamic period collections of the Oriental Institute Museum. These explorations rediscovered a wealth of artifacts collected during Scanlon’s archaeological excavations of Fustat as well as numerous manuscripts in the Oriental Institute collection. These findings led to the idea of an exhibition that would juxtapose archaeological materials from the excavations with seldom-displayed manuscripts from medieval Egypt, including religious and administrative documents along with the earliest surviving fragment of the Arabian Nights.

This exhibition will provide visitors with the opportunity to explore the traditions of everyday life in Fustat as well through the activities, words, and beliefs of the people who lived there. Highlights of the exhibition include religious materials from all three of Fustat’s historical religious communities. This material indicated that there were a variety of languages spoken at early Fustat, including Greek, Coptic, Arabic, and Hebrew, along with other Middle Eastern languages.

Of special note will be the display of several documents from the Cairo Genizah, a repository of Jewish manuscripts from the Ben Ezra Synagogue that have been preserved for over a thousand years. Scholars now consider these documents to be one of the most important sources for understanding how people lived in the Middle East during the medieval period. They provide us with information not otherwise available in other sources, since they include letters and other documents that provide detailed information about the daily life. In the early twentieth century, some documents from the Genizah were purchased by the Dutch book dealer Erik von Scherling and then sold to the Oriental Institute in 1932. After they were purchased, these documents were not studied and seem to have been largely forgotten until the recent project rediscovered them. This exhibition will highlight several of
these Genizah texts, which include parts from the Hebrew Bible and a writing exercise, reflecting the intellectual life of the Jewish community.

In order to add context to the history of the Genizah documents, visitors will also be able to view a decorated and inscribed wooden door from a Torah shrine of the Ben Ezra Synagogue. This door is now in the collection of the Walters Art Museum, Baltimore, and the Yeshiva University Museum, New York. The Torah shrine was a special cabinet in the synagogue that was meant to hold the scrolls of the Torah. It was likely constructed in the eleventh century and adorned the synagogue for many centuries. In the 1890s the Ben Ezra synagogue was refurbished, and new shrine doors of pearl inlay were installed. It is likely that the original door was placed with letters of the Genizah, since the door also was inscribed with the name of God and so was too sacred to be discarded. The door is particularly interesting from an artistic standpoint. Other than for Hebrew inscriptions, its design is similar to that in mosques and churches in medieval Egypt, showing that artistic traditions spanned religions during the “Islamic” period.

In our explorations of the Oriental Institute archives, texts were not the only things rediscovered. The upcoming exhibition also highlights numerous archaeological artifacts from the pioneering excavations at Fustat by George Scanlon fifty years ago. Most of these archaeological materials were recovered during the 1965 excavations and for many years were stored at the Princeton Art Museum. Princeton gave a selection of these objects to the Akron Art Museum, which years later donated them to the Oriental Institute.

We are fortunate to be able to display many of these artifacts publicly for the first time. Scanlon found many different types of artifacts, including items made from pottery, glass, bone, stone, and metal. The artifacts highlight the wide range of materials that were available to Fustat’s residents. Fustat’s households possessed fine ceramic bowls, dishes, and cups. Its children played with toys such as dolls and other games. The collection includes artifacts that represent the city’s robust economy, including stone molds used in metalworking, objects used in textile production, reed pens used to write. Through these artifacts, visitors to the exhibit will be able to explore daily life in the early city of Fustat, such as how to start a business, what to cook for a feast, or when to send children to school.

Archaeological finds throughout Fustat suggest that its many neighborhoods were united by a common urban, cosmopolitan way of life. For instance, people throughout the city shared traditions of cooking, craftsmanship, games, and stories, no matter in what community its people belonged. In general, it is not possible to make religious distinctions based on archaeological objects alone. A few exceptions, however, include a vessel from Scanlon’s excavations with a Christian cross on the base as well as ceramic fragment showing the deposition of Christ. This deposition fragment is on loan from the Walters Art Museum and may have originated from Fustat.
While archaeological artifacts from Fustat highlight the shared lives of Fustat’s residents, the Oriental Institute object storage also contain a number of manuscripts that highlight differences between communities as well. The exhibition will display a number of exceptional documents that highlight the challenges Fustat’s governors faced in managing a diverse, multi-lingual society of Egypt. In order to collect taxes effectively, the governor and his officials needed to communicate effectively with a number of provinces. Many provincial administrators in this period were Coptic Christians who spoke Coptic and Greek. This meant that official communications were in multiple languages. The Oriental Institute Museum collection preserves part of the correspondence between Qurra ibn Sharik, the governor of Egypt between 709 and 714, and Basileus, the pagarch of Aphrodito in Middle Egypt. Thanks to this archive, which is scattered among a number of institutions, Qurra ibn Sharik is one of the best-known Islamic officials in Egypt.

Over time, Christian provincial officials were gradually replaced with Muslim Arabs to better centralize the administration of the country. After the Islamic conquest of Egypt, Fustat’s Muslim administrators implemented a system of taxation based on religious affiliation. Muslims who lived in Fustat were not required to pay a governmental tax but instead could be drafted into military service. Non-Muslims, who included Christians and Jews, were required to pay a special tax, called jizya, in lieu of military service. Originally, a land tax was also collected from non-Muslim landowners. Later, this tax was also applied to Muslim land holders, as the numbers of Muslims holding land had increased and tax revenue was critical to the government’s functioning. Egypt was a very important tax base for the Islamic empire because of its rich resources, but high taxes meant that it also suffered from numerous revolts due to discontent over taxes, starting in the eighth century.

Beyond the realm of taxes, however, Fustat’s government took a more hands-off approach to the management of the city. Non-Muslim communities in Fustat were generally allowed freedom to worship and to impose their own community-based laws. Christian and Jewish communities for example enforced their own legal codes in disagreements among its members. In contrast, disputes between Muslims and non-Muslims remained centralized, and the case would be brought before official government courts.

We invite you to explore the historic communities of Fustat and Old Cairo further within the exhibition. Objects throughout the exhibit showcase the connections among people in these early Islamic period communities as well as highlight the challenges of negotiating a multi-cultural society. While the religious manuscripts in the exhibition highlight the different beliefs of Fustat’s communities, the majority of the artifacts found from excavation show a more united, shared way of life across the city.

This exhibition marks the first time a museum has covered the topic of communities at Fustat using an object-based approach. The artifacts here also provide an important perspective on the history of religion and ethnicity in the Middle East, especially in consideration of continuing modern tensions among Middle Eastern communities.

This exhibition will be complemented by number of in-depth talks and events, along with an academic catalog. The exhibition and programs are made possible through support from Center for Middle Eastern Studies, Divinity School, Chicago Center for Jewish Studies, and the Franke Institute for the Humanities. See page 30 for details on the Members’ Preview Event (February 15).

Tanya Treptow and Tasha Vorderstrasse are co-curators of the A Cosmopolitan City exhibition.

Torah ark door, 11th century AD, with later carving and paint. The Walters Art Museum, Baltimore, Maryland (Museum purchase, in conjunction with Yeshiva University Museum, with funds provided by the W. Alton Jones Foundation Acquisition Fund, 2000), 64.181.

Vessel from Fustat with cross on the base, 12th century AD. OIM E25513. A: side view; B: bottom view.
The Oriental Institute recently received a grant from the Antiquities Endowment Fund of the American Research Center in Egypt (ARCE) to conserve an important ancient Egyptian coffin in our collection (OIM E12072; see fig. 1). The First Intermediate Period (ca. 2064 BC) coffin of the commander and scribe of the army troops Ipi-ha-Ishutef was purchased by James Henry Breasted in Cairo in 1923. It is an excellent example of the coffin maker’s art, being constructed of large planks of what was assumed to be cedar from Lebanon. The outside is inscribed with funerary texts invoking offerings for the soul of Ipi-ha-Ishutef. A pair of wedjat eyes allowed the soul of the deceased to see the rising sun, a symbol of eternal rebirth. The interior is painted with a colorful scene of weapons, jewelry, food, and supplies for the soul of the deceased in the afterlife (fig. 2). The decoration also includes the representation of a door that allowed his spirit to leave the dark realm of the coffin to enjoy offerings left in the tomb. Unlike contemporary coffins inscribed with what are known as the Coffin Texts, the lid of this example bears an earlier composition known as the Pyramid Texts.

The coffin, a prior museum “highlight object,” was displayed in the Egyptian Hall until the 1996 gallery closure to
prepare for the major refurbishment project and the creation of the new Joseph and Mary Grimshaw Egyptian Gallery. When the coffin was removed from display and transferred to storage, it was realized that a program of conservation would be required to stabilize its fragile wooden structure and its painted surface. Due to the vertical nature of the coffin walls, some fragments of pigment are literally hanging off these surfaces. Our commitment to dedicate adequate funding and staff time to carry out this conservation treatment on the coffin motivated us to make the recent funding request to the Antiquities Endowment Fund. We’re very grateful to have ARCE’s support — this organization mainly provides grants for cultural heritage and preservation projects in Egypt itself, but it also supports conservation projects on Egyptian collections in American museums.

The grant will allow conservator Simona Cristanetti to work on the coffin in the Oriental Institute’s conservation laboratory. The first stage (in preparation at the time of writing) is to move the coffin from our Organic Storage to the conservation laboratory, where it can be fully documented and conserved (fig. 3). Prior to conservation treatment, the coffin will be carefully analyzed using a variety of scientific techniques. The information we hope to gain from these analyses will add to the growing body of information on the organic and chemical compositions of pigments used in ancient Egypt.

The coffin conservation project follows a study of the wood of the coffin done at the Laboratory of Tree Ring Research at the University of Tucson. In the 1930s, cores of the wood were sent to Tucson. Now, after more than three quarters of a century, a study, headed by Sturt Manning and Pearce Paul Creasman, aided by Oriental Institute doctoral candidate Kathryn Bandy, has been published in the *Journal of Archaeological Science* (vol. 46, 2014). Their study verified that the coffin is made of cedar, and it assigned a date of 2081–2064 BC to the last extant tree rings. The final report will include a description of the coffin and its iconography, its conservation, and an analysis of the wood and pigments. A report on the current conservation project will also be published in the ARCE Bulletin.

Once the conservation treatment of the coffin has been completed, it will be displayed in the Joseph and Mary Grimshaw Egyptian Gallery positioned near the Ptolemaic mummy of Petosiris and the Third Intermediate Period cartonnage of Meresamun, giving our visitors a vivid illustration of the evolution of coffin design. We look forward to welcoming back commander Ipi-ha-Ishufet’s coffin in the summer of 2015!
Celebration of Terry Friedman’s Retirement

by Carlotta Maher, Visiting Committee Member and Former Volunteer Chair

I am speaking for all of us, especially the former Volunteer Chairs — Cathy Dueñas, Janet Helman, Peggy Grant, and myself — and we agree that Terry Friedman has done many amazing things! For the first forty-seven years of its history, the Oriental Institute was a very quiet place. The only sound was brains humming on the second and third floors. There was no education office, no travel program, no adult classes, no Suq, and no volunteers! In cosmic terms, Carolyn Livingood was the Big Bang, who started the Volunteer Program in 1966, and all of these public programs came into being. I took over from Carolyn, and in 1974 I did a very brilliant thing and answered my phone in the Volunteer Office. It was Terry, new in Chicago with her wonderful husband Chuck, inquiring about the docent training course about to begin. We talked for a while and I said “Come!” Terry said, “Don’t you want to meet me first?” “Not necessary,” said I, “just show up.”

Working with Carolyn, I had developed a finely calibrated sense of who was really serious. I could spot the intelligent, convincing applicants who would disappear quickly upon discovering that the society columns were not featuring their gallery tours; or the Suq volunteer who would finish training and announce she could only work on rainy days because of her commitment to her golf game. So Terry did show up. We both remember that day vividly. She remembers that I was wearing a red pantsuit. I remember this beautiful woman walking into Breasted Hall while I was shouting for help with a recalcitrant projector, propped up on books in the center aisle of Breasted Hall, wires all over the place. Mac Gibson was our first lecturer that day, and Terry’s fate was sealed. She became a stellar docent in charge of Tuesday afternoons. Whatever docent disasters might happen, the Tuesday afternoon shift was always rock solid. Terry was by my side when the Tutankhamun show hit Chicago, with more visitors than we had ever seen before or since.

Time passed — twenty years, in fact. Terry was working as a manager of Chuck’s residential buildings (a nightmare when the phone rang at 3 a.m. with complaints from disgruntled tenants), and then she and Chuck welcomed their wonderful son Peter. Despite these pressures, Terry and her Tuesday afternoon shift carried on. Peggy Grant became chair after me, followed by Janet Helman, which takes us to 1994, when Janet was ready to step down. She and Carole Krucoff came up with the perfect plan. The responsibilities of the Volunteer Chair had grown so much that they proposed that the job should be shared by two people. And further, that these would be regular paid staff positions. And so it happened!

I can see Terry and Cathy setting up their desks and the coffee machine, planning some interesting things for the volunteers: a training here, a faculty lecture there, when word came down that the Museum would be closed for climate control and renovation!!! Can you imagine the horror of accepting the job and then finding out that the physical focus of the program would disappear for at least two years? And like every construction project it only got worse; the Museum would not be fully open for ten years! Terry and Cathy made a heroic and wildly successful move — they took the Oriental Institute to the people. Cathy’s family had given her a Cherokee Jeep, which was loaded up with projectors, slides, snacks, replicas, costumes, and docents. They hit the road, taking the program throughout Chicago, Indiana, Michigan, and Wisconsin. The docents who were not on wheels were at home, working on the slides and text, or packing up objects as the Museum closed down gallery
by gallery. Some exhibits were arranged at the Smart Museum of Art with Oriental Institute docents on hand. There were field trips, docent training manuals, tours focusing on a single theme, contact with other volunteer chairs. If you read the Annual Reports, now available online, you will see how reports from the Volunteer Department grew from basically a list of names to pages of exciting ventures. For the first time statistics were assembled on visitors to the Museum, who they were and what they want! There were Docent Days with faculty speakers, and for the first time speakers were filmed, and the DVDs were kept in the Docent Library as a resource for volunteers. If Carolyn was the Big Bang, Terry and Cathy were binary stars in our firmament.

The miniseries was invented, lectures on a broad theme, featuring speakers from the Oriental Institute and faculty from other departments. Now in its seventh year, it has been so successful that it has been folded in to the members’ lecture program. Terry is a rare combination of creative, artistic, and at the same time meticulous, efficient, and fiercely intellectual — a woman who is not afraid of a database, but at the same time totally warm and kind, as we all know. As the ancient Egyptians would say, “She is beloved of her husband and son, beloved and praised by her brothers and sisters [that’s us]!”

Terry — don’t think you are going to escape the force field of the Oriental Institute. No retired Volunteer Chair ever has! Cathy gives special tours in the Museum; Carolyn, Peggy, and Janet descended immediately into the basement; I took my operations overseas to Nippur and Chicago House. I can’t wait to see what your next chapter will be! It was destiny when you walked into this very hall exactly forty years ago. Not only are you loved and admired, but Carolyn would be proud of you. I know I am.

Members on the Road

by AMY WEBER

In September, members of the Oriental Institute traveled to Georgia and Armenia and explored the ruins of ancient settlements and fortresses, early churches and monasteries, and intriguing cave towns. The tour, a new addition to the Travel Program, was escorted by Tasha Vorderstrasse. Tour highlights included a privately led tour through the Armenian History Museum and archaeological site Damanisi.

“This was a terrific trip largely due to the excellent preparation and amazing knowledge of Tasha and the enthusiasm and organizational ability of Amy.” — William Bosron

Open House Chicago

by SUSAN GESHWENDER

Open House Chicago is an annual event allowing public access to over 150 spots around Chicago. The Oriental Institute, with the help of twenty-five volunteers, showed off the Director’s Office and Research Archives to 997 visitors.
Kiersten Neumann joined the Oriental Institute in July as the curatorial assistant at the Oriental Institute Museum. A native of Vancouver, Canada, Kiersten received her BA and MA at the University of British Columbia, with a focus in classical and Near Eastern art and archaeology. She then proceeded to the University of California–Berkeley, where she completed her PhD in Mesopotamian art and archaeology this past May under the guidance of her advisor Marian Feldman; her dissertation is entitled “Resurrected and Reevaluated: The Neo-Assyrian Temple as a Ritualized and Ritualizing Built Environment.”

Kiersten’s research interests range from Mesopotamian art and architecture, to Neo-Assyrian royal inscriptions and correspondence, to ritual theory and practice, visuality, and phenomenology. She is currently working on a book that examines the ways in which the visual culture and practices associated with the Neo-Assyrian house of a god (i.e., the temples), through their culturally valued and prioritized aesthetic and experiential qualities, marked the special status and divine aspect of the house of a god, differentiating the built environment within the Neo-Assyrian landscape and making it fit for a god. In addition, she is working on an article that analyzes a group of mythological wall reliefs from a Neo-Assyrian palace in order to understand how visual artifacts interacted with their viewers, the role of the gaze, and the relationship between these motifs and their strategic placement in the architectural layout of the palace. She enjoys teaching courses that grow out of her research on cultures of the ancient Near East and Mediterranean, and her multidisciplinary interests in art history, archaeology, anthropology, visual studies, and ritual theory.

While pursuing her doctoral studies, Kiersten worked at the Badè Museum of Biblical Archaeology in Berkeley, as collections manager, assistant curator, associate curator, and most recently interim director. She has spent a number of summers in the field, as part of the American School of Classical Studies’ excavations at the Athenian Agora and the University of Toronto’s excavations at Tell Tayinat in Turkey. She has presented papers at the annual meetings of the American School of Oriental Research and the North American Theoretical Archaeology Group, and will be presenting a paper at the upcoming Archaeological Institute of America meeting on the temples of Nabu at Nimrud and Khorsabad. She is also co-chair of the Art Historical Approaches to the Near East session at the upcoming annual meeting of the American Schools of Oriental Research.
Emily Hammer joined the Oriental Institute in August as the director of the Center for Ancient Middle Eastern Landscapes (CAMEL) and as lecturer in the Department of Near Eastern Languages and Civilizations. CAMEL’s ongoing overall mission is to investigate long-term change in Middle Eastern landscapes through the analysis of spatial and satellite remote-sensing data. Over the last years, CAMEL has concentrated its efforts on building an enormous, unparalleled database of georectified historic satellite imagery and maps covering all corners of the Middle East. This database continues to be of invaluable service to many scholars all over the world. Moving forward, CAMEL is shifting its focus to two landscape archaeology research projects concerning settlement patterns in southern Mesopotamia and cultural heritage management in Afghanistan. For both projects, CAMEL is digitizing and re-analyzing pioneering early survey datasets and site inventories and further expanding upon previous work by identifying new sites and archaeological features using remote-sensing data and environmental modeling. These projects provide students with training in Geographic Information Systems-based analyses and the interpretation of satellite imagery as well as hands-on team research and publication experiences. Archaeologists are by no means the only scholars who use spatial analyses and make maps; CAMEL hopes to interact with researchers of all stripes at the University in order to expand the range of ways that anthropologists, historians, and philologists engage with geographical data.

Emily is an anthropological archaeologist whose research focuses on cultural landscapes, environmental history, and complex societies in the Middle East and South Caucasus. Her methodological expertise is in landscape archaeology, GIS, and satellite remote-sensing techniques. Through field research in southeast Turkey, the United Arab Emirates, and presently Azerbaijan, she has studied the relationship between mobile pastoral and sedentary communities of the Bronze Age, Iron Age, and medieval/Ottoman periods in agriculturally marginal landscapes. Her current collaborative projects include a survey in Naxçıvan, Azerbaijan (funded by the National Science Foundation and the National Geographic Society), focused on the relationship between South Caucasia’s earliest urban centers and fortresses in the Bronze and Iron Ages, publication of extensive regional settlement data to investigate demographic patterns of the last 8,000 years on the plains of the Tigris River of southeastern Turkey, and geological dating of rock-carved cisterns located adjacent to archaeological campsites in southeastern Turkey (funded by the Wenner-Gren Foundation and the National Science Foundation). Emily holds a PhD in anthropology from Harvard University (2012) and a BA in mathematics and Classical and Near Eastern archaeology from Bryn Mawr College (2006). Prior to coming to Chicago, she was visiting assistant professor in the Institute for the Study of the Ancient World at New York University, where she taught in the Anthropology Department.
Projects Currently in the Field

The Oriental Institute has sponsored archaeological and survey expeditions in nearly every country of the Near East. There are projects currently active in Egypt, Turkey, Israel, Armenia, Afghanistan, 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 while they are in the field, through their websites below.

Epigraphic Survey
Luxor, Egypt
October 15, 2014–April 15, 2015
Director: Ray Johnson
http://oi.uchicago.edu/research/projects/epigraphic-survey

Kabul, Afghanistan
Ongoing
Director: Gil Stein
Field Director: Michael Fisher
oi/research/projects/afghanistan.html

The James Henry Breasted Society Recognition

The Oriental Institute would like to recognize new and returning members who have made a contribution to the Oriental Institute at the James Henry Breasted Society level. The James Henry Breasted Society was formed to provide 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.

Mr. William and Ms. Sheila Bosron
Joseph T. Lach, PhD
Ms. Barbara and Mr. Douglas McDonough
Dr. Miriam Reitz
Mr. Mark Rudkin
Dr. Joe Smolik
Mr. Ed and Mrs. Sandi Thayer
Mr. Bruce and Mrs. Patrica Williams

If you’re interested in supporting one of the Oriental Institute’s archaeology field projects, please contact Tracy Tajbi, Director of Development, at ttajbi@uchicago.edu or 773.702.5062.

For information on the James Henry Breasted Society, please contact Brittany F. Mullins, Assistant Director of Development, at bfmullins@uchicago.edu or 773.834.9775.
Exploring Ancient Brew

by AMY WEBER

On Thursday, October 16th, the Young Professional Leaders hosted their second annual fundraiser, Beer & Wine through Ancient History: A Scavenger Hunt. We would like to thank all the sponsors, members, and patrons who attended this sold-out event and helped us raise over $6,000 benefiting the Oriental Institute Museum Feature Exhibits. Congratulations to our winning teams of the evening:
1st Place: Andrea Dudek’s Team
2nd Place: Murrelizzie
3rd Place (tie): Not My Forte and Cardinals Go Wes!

Thank you to all our sponsors:
Great Lakes Brewing Company
Chicago Reader
Gold’N Pear Catering
Katten Muchin Rosenman, LLP
United Fulfillment
Medici on 57th
Ujamaa Construction
Linn-Mathes

Special thank-you to our event photographer,
David Turner Photography
Volunteer Spotlight

Katherine Lieber

by Shirlee Hoffmann, Oriental Institute Volunteer

Shirlee Hoffman, Oriental Institute Volunteer, sits down and interviews volunteer Katherine Lieber.

1. How did you become interested in volunteering at the Oriental Institute?
I first came to the Oriental Institute (OI) during one of the University of Chicago Humanities Open House days. I remember standing in front of the titanic Lamassu in that museum hush and just being in total awe of it and the OI’s excellent artifact collection.

2. Did you have any interests or training in the ancient Near East?
As a kid, I was fascinated with ancient Egypt and was always at the library reading “grownup books” (sometimes scholarly) about Egypt and the pharaohs. Later my reading expanded into Mesopotamia and the Gilgamesh Epic. As an adult, cylinder seals and other relics of Mesopotamian cultures caught my attention.

3. What do you do now at the OI?
In part because of an interest in museum data management, I earned the University of Chicago Artifact Collection Care Certificate from the Graham School at the University of Chicago in 2010. In class, I met Sue Geshwender of the OI Education Department, who mentioned that they were trying to develop a tour database in FileMaker Pro. I’m a FileMaker developer.

Using the Education Department team’s specifications, I volunteered several hundred hours to develop, from scratch, a completely customized OI Tour Database. Today this system holds about 1,400 tours with complete functionality for scheduling and tracking. I still maintain the database and build in new features on request.

In 2013, I did one of the more unusual things a volunteer probably has done for the OI — I served as Project Registrar in Iraq. I was privileged to work with Dr. Gil Stein’s team at the Surezha Project archaeological dig in Erbil, Kurdistan, Iraq, for nearly three weeks, including some 115-degree days. In the mornings, I “registered” or logged, cleaned, photographed, labeled, and described artifacts from the previous day’s digging. In the afternoons, I worked with data entry, oversaw the four computers linked to the networked database, assisted users, and did ad-hoc programming.

Since only the data and none of the artifacts would come home with the team, data collection on this project was crucial. Working morning to night with a team of international scholars and grad students was truly rewarding.

4. What do you particularly like about being a volunteer?
The way it leverages both giving and receiving. I enjoy the giving because I really engage with the OI by donating my specialized skills in data and its management, which is of course my passion. And I receive so much — the work I do there and the people I meet give me valuable new perspectives and insights into my interest in data and user communication.

5. What would you say to someone who is thinking of volunteering at the OI?
Definitely do it! The OI is one of the world centers for the ancient Near East, and every encounter with it is a link with history. It is a privilege to contribute to the workings of this world-class institution and all the scholars, researchers, staff, and other volunteers who make it function.

“Kate Lieber is a perfect example of the ways that our volunteers can draw on their own careers and skills to make major contributions to Oriental Institute research. Kate did a wonderful job as the registrar on our excavations at Surezha in Kurdistan (northern Iraq). She kept track of the vast amounts of pottery, chipped stone tools, scientific samples, and small finds that came out of the ground every day. At the same time, as a database expert in her career in the ‘real world,’ Kate was able to help to develop, implement, and ‘tweak’ the Surezha excavation database so that it worked perfectly to help us archaeologists keep track of what we were doing in the field. Kate worked alongside the rest of us in the horrendous heat with patience and good humor and was a real asset to our field team. Volunteers like Kate Lieber are true ‘Partners in Discovery’ for the researchers at the Oriental Institute.”
— Gil Stein, Director Oriental Institute

Join in the fun and the meaningful work. Explore becoming a volunteer at oi.uchicago.edu/support.
The archaeological heritage of the world’s first cities is at great risk during modern times. With your support, the Oriental Institute continues to document, preserve, and protect these vital links to human history.

YOU CAN HELP LEAD THE WAY.

THE PHOENIX SOCIETY
Plan a gift. Define your legacy.

Learn more about the Phoenix Society and planned gift opportunities. Visit phoenixsociety.uchicago.edu/mgs and facebook.com/uchicagophoenixsociety. Contact us at 866.241.9802 or phoenixsociety@uchicago.edu.

THE OI LEGACY
Since 1919 Oriental Institute researchers have been committed to understanding and preserving the ancient cultures of the Middle East. Graduate student Jonathan Winerman, AM’10, copies hieroglyphic inscriptions for an Oriental Institute archaeological excavation in Tell Edfu, Egypt, providing precise documentation that could stand as a replacement in the absence of the original monument. Explore the Oriental Institute’s commitment to cultural heritage preservation at phoenixsociety.uchicago.edu/oi.
In Store

The Suq

Members save 10% in store and online.

Iranian artist Rezgar Mamandi demonstrating at October’s Epic Wednesday. His beautiful one-of-a-kind pottery is now available in the Suq. Find Hittite, blue and white, and turquoise arabesque designs in tear bottles, mugs, plates, bowls, and wine decanters.

A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo
Edited by Tasha Vorderstrasse and Tanya Treptow
Catalog for our next special exhibit, available from the Suq on February 15

This is the first special exhibit to examine life in Old Cairo (also called Fustat) — the multi-cultural city that was founded in 642 AD. This fully illustrated catalog of the show contains essays on what it was like to live in Old Cairo, including the administration and the different religious communities, languages, businesses, food, leisure, and personal adornment. Many of the seventy-five objects excavated at Fustat a half century ago, and now in the collection of the Oriental Institute Museum, are pictured and described here for the first time.
## January

**Wednesday, January 7**

- **Oriental Institute Lecture Series**
  - Lecture
  - 7:00–8:00 p.m.

**Saturday, January 17**

- **Boy Scouts: Archaeology Merit Badge Workshop**
  - Family & Youth Program
  - 9:00 a.m.–12:00 p.m.

**Saturday, January 17**

- **Junior Archaeologists**
  - Family & Youth Program
  - 1:00–3:00 p.m.

**Sunday, January 18**

- **Breaking Ground: The Story of the Oriental Institute**
  - Film
  - 2:00 p.m.

**Thursday, January 29**

- **All Bones About It**
  - Family & Youth Program
  - 1:30–3:30 p.m.

**Saturday, January 31**

- **ALBA Consort: A Musical Workshop Celebrating Oud, Voice, and Vielle**
  - Adult Program
  - 2:00–4:00 p.m.

## February

**Thursday, February 5**

- **Lunchtime Traveler Series**
  - Lecture
  - 12:15–1:00 p.m.

**Tuesday, February 10**

- **Homeschool Edition: Artifact Analysis**
  - Family & Youth Program
  - 1:00–3:00 p.m.

**Sunday, February 15**

- **Members’ Preview Event**
  - Members’ Event
  - 1:00–4:00 p.m.

**Saturday, February 21**

- **Boy Scouts: Archaeology Merit Badge Workshop**
  - Family & Youth Program
  - 9:00 a.m.–12:00 p.m.

**Saturday, February 21**

- **Junior Archaeologists**
  - Family & Youth Program
  - 1:00–3:00 p.m.

**Thursday, February 26**

- **Introduction to Egyptian Hieroglyphs**
  - Family & Youth Program
  - 1:30–3:30 p.m.

**Saturday, February 28**

- **Secret of the Mummies**
  - Family & Youth Program
  - 1:00–3:00 p.m.

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Unless noted, all programs take place at the Oriental Institute. All programs are subject to change.
Thursday, March 5

**Lunchtime Traveler Series**
Lecture
12:15–1:00 p.m.

Saturday, March 7

**Archaeological Reconstruction Drawing Workshop**
Adult Program
1:00–4:00 p.m.

Sunday, March 15

**Sign, Symbol, and Script: Origins of Written Communications and the Birth of the Alphabet**
Film
2:00 p.m.

Wednesday, March 25

**Epic Wednesday: Spring Equinox**
Adult Program
5:00–8:00 p.m.

Thursday, March 26

**Not Pi**
Family & Youth Program
1:30–3:30 p.m.

Saturday, March 28

**Boy Scouts: Archaeology Merit Badge Workshop**
Family & Youth Program
9:00 a.m.–12:00 p.m.

**Junior Archaeologists**
Family & Youth Program
1:00–3:00 p.m.

Unless noted, all programs take place at the Oriental Institute. All programs are subject to change
Adult Programs & Films

Adult Programs

ALBA Consort: A Musical Workshop Celebrating Oud, Voice, and Vielle
Saturday, January 31
2:00–4:00 p.m.
Registration required. Free
Presented in conjunction with the exhibit “A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo”

Join ALBA Consort for a workshop exploring melodic and rhythmic modes of early Arabic music. The workshop takes patrons on a journey through Old Cairo to experience melodies, textures, rhythms, and poetry of this ancient world. ALBA Consort specializes in early Mediterranean music, which bridges the ancient and the new.

Archaeological Reconstruction Drawing Workshop
Saturday, March 7
1:00–4:00 p.m.
Registration required. $15 students and members; $20 non-members
3 CPDUs for Teacher Re-certification

Join Natasha Ayers, PhD candidate in Egyptian archaeology, for instruction in pottery drawing. Students will spend most of the workshop creating a technical drawing of Bronze Age pottery excavated from the Levant. After the workshop, students will enjoy a thirty-minute talk about how archaeologists use drawings like these in their research. No previous experience is necessary. A supplies list will be provided upon registration.

Epic Wednesday: Spring Equinox
Wednesday, March 25
5:00–8:00 p.m.
Registration required. $10 students and groups (5 people or more); $12 members, faculty, staff; $15 non-members
Mark this season of renewal and rejuvenation at this evening event featuring the new special exhibit “A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo.” Take a guided tour of the Museum to explore creation myths in the Museum’s galleries. Enjoy live music amid the Museum’s collection. Admission includes access to all exhibits, guided tours, food and drinks, hands-on projects, and participation in the trivia challenge.

Sunday Film Screenings

Join us on the following Sunday afternoons to enjoy the best in documentary films on the ancient Near East at the Oriental Institute. Films’ running times range from 30 to 50 minutes. Docents are in the galleries following each film.

Oriental Institute Museum, 2:00 p.m.
Registration not required. Free

Breaking Ground: The Story of the Oriental Institute
Sunday, January 18

The Oriental Institute of the University of Chicago is a world leader in uncovering the origins of the earliest civilizations. Drawing initially on support from John D. Rockefeller Jr., the Institute’s scholars have worked from Egypt to Turkey to Iran for over eighty-five years. Breaking Ground includes footage from projects near Antakya, Turkey, and in Luxor, Egypt.

Sign, Symbol, and Script: Origins of Written Communications and the Birth of the Alphabet
Sunday, March 15

Written language is arguably humankind’s most important invention. This documentary traces the progression of communication through various stages including gestures, picture writing, and phonetic writing.

REGISTRANT To register, visit oi.uchicago.edu/register. For assistance or more information, email oi-education@uchicago.edu.
Courses & Lectures

Oriental Institute Lecture Series
The Oriental Institute lecture series is a unique opportunity to learn about the ancient Near East from world-renowned scholars. Lectures are free and open to the public thanks to the generous support of Oriental Institute Members.

Oriental Institute Breasted Hall, 7:00–8:00 p.m.

The Study of the Clay Envelopes from Chogha Mish, Iran, Using State-of-the-Art CT Technology
Wednesday, January 7
Chris Woods, Associate Professor of Sumerology, Oriental Institute, University of Chicago

On-site Course
Mesopotamian Mythologies
Saturdays, March 21–April 25
10:00 a.m.–12:00 p.m.
Registration required by March 14. $175 members; $245 non-members
12 CPDUs for Teacher Re-certification

The myths and legends of Mesopotamia are rich in gods, goddesses, demons, monsters, heroes, and kings. This course explores mythological literature that spans millennia, introduces memorable figures like Ishtar and Gilgamesh, and provides some of the earliest descriptions of the creation of the world, the Great Flood, and the journey to the underworld.

Instructor: Sam Harris is a PhD candidate in the Department of Near Eastern Languages and Civilizations at the University of Chicago, specializing in Mesopotamian archaeology.

Online Course
Course participants must have a reliable Internet connection, a technical facility with computers and downloading software, and the ability to navigate the Internet as a learning tool.

The Art and Architecture of Ancient Egypt
January 25–March 14
Registration required by January 18. $295 members; $345 non-members
24 CPDUs for Teacher Re-certification

Use in-depth online tutorials, readings, and online discussions to explore a wide range of resources, from royal monuments to private art of ancient Egypt over a time span of 4,000 years. We will investigate iconography, style, materials, and techniques within the broader context of their cultural significance in ancient Egyptian society.

Instructor: Megaera Lorenz, PhD candidate in Egyptology at the University of Chicago.

Courses & Lectures meet at the Oriental Institute unless otherwise noted.

Register To register, visit oi.uchicago.edu/register.
For assistance or more information, email oi-education@uchicago.edu.
Family & Youth Programs

Boy Scouts: Archaeology Merit Badge Workshop
Saturday, January 17
Saturday, February 21
Saturday, March 28
9:00 a.m.–12:00 p.m.
Registration required. $15 members; $20 non-members
Earn your archaeology merit badge at the Oriental Institute! Items that are required to be completed prior to the badge workshop will be e-mailed to participants upon registration. Badge certification will be available at the workshop.

Junior Archaeologists
Saturday, January 17
Saturday, February 21
Saturday, March 28
1:00–3:00 p.m.
Registration required. One child age 5–12 plus one adult
$10 members; $14 non-members
Each additional registrant: $5 members; $7 non-members
Let loose your inner Indiana Jones! Children and parents have a chance to dig in our simulated excavation in the Oriental Institute's Kipper Family Archaeology Discovery Center. The program also includes an interactive guided tour of the galleries.

Secret of the Mummies
Saturday, February 28
1:00–3:00 p.m.
Registration recommended. Free
Help us prepare our simulated mummy for the afterlife, meet our real mummies, and discover tomb treasures.

Homeschool Edition: Artifact Analysis
Tuesday, February 10
1:00–3:00 p.m.
Registration required. $3 members; $5 non-members. Parents need not register
Investigate replicas of artifacts to solve the archaeological puzzle of your dig site. Make inferences and draw conclusions about the people who created and used these artifacts. Gain insight into the science and philosophy behind archaeology. Recommended for children ages 5-12, accompanied by an adult.

Introduction to Egyptian Hieroglyphs
Thursday, February 26
1:30–3:30 p.m.
Registration required. $10 members; $16 non-members
Each additional registrant: $5 members; $8 non-members
Work with Egyptologist Megaera Lorenz to discover some sneaky tips that will get you reading some ancient Egyptian artifacts. Recommended for children ages 5–12, accompanied by an adult.

Not Pi
Thursday, March 26
1:30–3:30 p.m.
Registration required. $10 members; $16 non-members
Additional registrant: $5 members; $8 non-members for each additional registrant
Kids ages 5–8 learn about place value through the story of an ancient Nubian boy, while kids ages 9–12 learn how to multiply like an ancient Egyptian (which is also how binary code works!). We all bring our skills together to solve the mystery of the ancient Egyptian waterclock.

HOMESCHOOL PROGRAMS

All Bones About It
Thursday, January 29
1:30–3:30 p.m.
Registration required. $10 members; $16 non-members
Each additional registrant: $5 members; $8 non-members
Did you know that the life of a person is written on his or her bones? Get a kid's crash course in bioarchaeology and get hands-on with real and simulated skeletons. Recommended for children ages 5-12, accompanied by an adult.

Recommended for children ages 5–12, accompanied by an adult.

REGISTER To register, visit oi.uchicago.edu/register.
For assistance or more information, email oi-education@uchicago.edu.
Members’ Preview Event

Sunday, February 15
1:00–4:00 p.m.

Join us for an exclusive members’ preview of “A Cosmopolitan City: Muslims, Christians, and Jews in Old Cairo.” This evening we will explore how modern Cairo came to be. Unlike many cities in Egypt that originated during ancient pharaonic or Greco-Roman times, Cairo is a relatively young city. The first permanent urban settlement began only in 642 AD, but it grew quickly into a sprawling capital city. This exhibit highlights the diversity of people who were the first to make Old Cairo their home.

Members, look for your invitation in the mail! You will be the first to preview our new exhibit. To receive an invitation, become a member. Call 773.702.9513 or visit us online at oi.uchicago.edu/support.

Light Up the Night at the 2015 Oriental Institute Gala

Thursday, April 30
6:30 p.m.
The Four Seasons Hotel Ballroom
120 East Delaware Place

HONORING
Thomas C. Heagy
with the James Henry Breasted Medallion

For inquiries, contact Brittany F. Mullins at 773.834.9775 or bfmullins@uchicago.edu.

Georgia & Armenia

May 15–30, 2015

Join us on a unique tour of the archaeology, landscape, and culture of Georgia and Armenia on this joint departure with the Oriental Institute and the University of Chicago Alumni and Friends. The South Caucasus is a complex land of contrasts — filled with many languages, peoples, and cultures — and this tour will examine its full history, allowing you to fully experience the region. In Georgia, you will view Byzantine wall paintings and visit Stalin’s birthplace in Gori. In Armenia, visit archaeological sites, prehistoric standing stones, the magnificent Roman temple of Garni, and medieval monasteries.

MEMBERS’ TRAVEL is a series of international travel programs designed exclusively for Oriental Institute members and patrons.

FOR ADDITIONAL INFORMATION about the tour, call the Oriental Institute at 773.702.9513 or email oi-membership@uchicago.edu. For questions about bookings, call Archaeological Tours at 866.740.5130 or email archtours@aol.com.
Social Media Snapshot

via Facebook by DePaul University Honors Program

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Follow us on Facebook, Twitter, YouTube, and our e-publications to experience each day at the OI as it happens! We’ll also keep you up to date on events and programs, and we encourage you to share your experiences, too.

Education Programs Registration Form

Don’t miss out — register early!

PLEASE ENROLL ME IN THE FOLLOWING PROGRAM(S):

- **Boy Scouts: Archaeology Merit Badge Workshop ($15/$20)**
  - Saturday, January 17, 9:00 a.m.–12:00 p.m.
  - Sunday, February 21, 9:00 a.m.–12:00 p.m.
  - Saturday, March 28, 9:00 a.m.–12:00 p.m.

- **Junior Archaeologists ($10/$14 for 1 adult and 1 child; additional registrants $5/$7)**
  - Saturday, January 17, 1:00–3:00 p.m.
  - Saturday, February 21, 1:00–3:00 p.m.
  - Saturday, March 28, 1:00–3:00 p.m.

- **The Art and Architecture of Ancient Egypt ($295/$345), Online, January 25–March 14**

- **All Bones About It ($10/$16; $5/$8 for each additional registrant), Thursday, January 29, 1:30–3:30 p.m.**

- **Mesopotamian Mythologies ($175/$245), Saturdays, March 21-April 25, 10:00 a.m.–12:00 p.m.**

- **Artifact Analysis ($3/$5), Tuesday, February 10, 1:00–3:00 p.m.**

- **Introduction to Egyptian Hieroglyphs ($10/$16; $5/$8 for each additional registrant) Thursday, February 26, 1:30–3:30 p.m.**

- **Epic Wednesday: Spring Equinox ($12/$15; $10 group or students), Wednesday, March 25, 5:00–8:00 p.m.**

- **Not Pi ($10/$16; $5/$8 for each additional registrant), Thursday, March 26, 1:30–3:30 p.m.**

- **Archaeological Reconstruction Drawing Workshop ($15/$20) Saturday, March 7, 1:00–4:00 p.m.**

All programs are subject to change without notice

Total enclosed: $ ________________

Enclosed please find my check or money order made payable to The Oriental Institute.

Please charge my:

- Visa
- MC

Name ____________________________________

Address ____________________________________

City/State/Zip ____________________________________

Daytime Phone Number ____________________________________

E-mail ____________________________________

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Exp. Date __________________ Signature __________________

Send to: The Oriental Institute
Public Education Office
1155 E. 58th St.
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Chicago, IL 60637

Free parking half a block south of the Museum on University Avenue, after 4:00 p.m. daily and all day Saturday and Sunday.
Accessibility
Handicapped and Stroller Access. 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 4:00 pm daily and all day on Saturday and Sunday.

Group Visits
For information about group visits, please go to oi.uchicago.edu/museum/tours.

Proud Partner of Museum Campus South
For information go to www.visitmuseumcampussouth.com.

General Admission
FREE
Adults $10 suggested donation
Children 12 or under $5 suggested donation

Museum & Gift Shop Hours
Closed Monday
Sun-Tue, Thu-Sat: 10:00 a.m.-5:00 p.m.
Wed: 10:00 a.m.-8:00 p.m.

The Museum is closed
• January 1
• July 4
• Thanksgiving Day
• December 25

Membership
Your Partnership Matters!
The Oriental Institute depends upon members of all levels to support the learning and enrichment programs that make our Institute an important — and free — international resource.

As a member, you’ll find many unique ways to get closer to the ancient Near East — including free admission to the Museum and Research Archives, invitations to special events, discounts on programs and tours, and discounts at the Institute gift shop.

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$75 Annual Family / $65 Senior
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How to Join or Renew
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