

ANNUAL REPORT | 2021-2022



ORIENTAL INSTITUTE
THE UNIVERSITY OF CHICAGO

ANNUAL REPORT | 2021- 2022

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and columns of the Apadana (audience hall), viewed
northward from the Central Building, at Persepolis, Iran.
Joseph Lindon Smith, 1935. Oil on canvas. OIM G6.

Back cover: Photograph of the same area, 1930s.
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INTRODUCTION

THEO VAN DEN HOUT

If 2020–21 was an *annus horribilis* (as I put it in my introduction to last year’s annual report), 2021–22 had a distinctly more positive outlook. We started to fill many gaps in both faculty and staff positions. On July 1, 2022, we welcomed Mehrnoush Soroush, our new assistant professor for landscape archaeology, and by the time this year’s annual report went to press, Augusta McMahon had taken up permanent residence as our professor of Mesopotamian archaeology. In January 2023 they will be joined by Jana Matuszak, who will succeed Christopher Woods as our new assistant professor of Sumerology. On the staff side, Kate Hodge now heads the OI’s Youth and Family Program, Drew Baumann became our managing editor of publications, Bill Cospser took over as director of development, Logan Conley now takes care of all things IT, and Stanford Carpenter is our new manager of community engagement and volunteer programs. At the end of the summer we also hired a new chief curator for the OI Museum, Marc Maillot, who will start in January 2023. With all these new appointments during the past year, we enter an exciting period of rejuvenation.

The hiring processes that brought (or will soon bring) all these new faces were conducted by ever so many committees. The heaviest burden was carried by the faculty: literally every faculty member was called on to serve. In fact, many sat on multiple committees. But staff likewise shared in this work, as did a number of members of the OI’s Advisory Council. Less visible perhaps, but just as important, was the assistance of Brendan Bulger, associate director of administration and finance, and his staff; Mariana Perlinac, executive assistant to the director; Amanda Young, former NELC department administrator; and Annie Diamond, NELC/OI academic affairs coordinator—all of whom made it happen as smoothly as possible. I want to take this opportunity to express my endless gratitude to all in getting us to where we are now. It has been a truly communal effort!

Meanwhile, new searches are underway for an Egyptian philologist and an archaeologist of the Arabian Peninsula and the Gulf States, the latter chair expanding our traditional reach thanks to the generosity of OI Advisory Council member Howard Hallengren. Hopefully, this time next year, I can introduce you to some more new faces.

Of course, there were also losses to bear. Professor emeritus Walter Kaegi and two important and long-time volunteers, Stephen Ritzel and Norma van der Meulen, passed away. For decades Walter was affiliated as an OI voting member from the University of Chicago’s Department of History, and we will miss his vast institutional knowledge. You will find brief portraits of Walter, Stephen, and Norma in this annual report.

On August 2, 2022, Ray Johnson retired as the director of Chicago House and the Epigraphic Survey in Luxor, after an unprecedented run of twenty-five years in that role and a career of more than forty years there in total. We thank him for his many achievements. We are also grateful to Brett McClain, who will serve as interim director of the Epigraphic Survey while the search for a new permanent director is launched.

All this activity took place as post-pandemic life at the OI resumed and research and teaching went on as before. Philologists analyzed their texts, and archaeologists again went into the field. Together they produced thirty articles and four books. The special exhibition *Joseph Lindon Smith: The Persepolis Paintings* opened; a new special exhibition, featuring Roman sculpture excavated by

INTRODUCTION

the OI at Ptolemais, was prepared; and loans from the OI collections went out to the Louvre in Paris, the Getty in Los Angeles, and the Morgan in New York. Volunteers returned, groups toured the Museum, lectures and events for all ages were held, and books rolled off the presses. Finally, the rejuvenation (as I described it earlier) was reflected this past summer in a very concrete way in the courtyard renovation carried out by Berglund under the watchful eye of assistant project manager Elise Cone. The courtyard looks like new again, and great care was taken to shield the courtyard garden (and its ducks!) from any harm.

In my introduction last year, I expressed the hope for a “less singular” year than the one that had brought us so many challenges—a year in which we could “live and work again as a real community.” We may not be there yet a full hundred percent, but we definitely have come close to normal—thanks to the efforts of the entire OI community.

IN MEMORIAM

WALTER KAEGI JR. (1937–2022)

Walter Kaegi Jr. passed away on February 24, 2022, at the age of 84. A professor emeritus in the Department of History, Walter specialized in the military history of the Late Roman and Byzantine empires and of early Islam. He joined the University of Chicago in 1965 with a PhD from Harvard University. With his focus on the Byzantine and early Islamic periods, he was a natural affiliate of the OI and was closely associated with many other University departments and units including History, Art History, Classics, Slavic Languages and Literatures, and the Divinity School. We will miss his wisdom and reminiscences about the decades he spent in our midst.



STEPHEN RITZEL (1946–2022)

Longtime and loyal volunteer Stephen Ritzel passed away on May 14, 2022, at the age of 75. Stephen was a tremendous pillar of the OI community, reliably coming in every Sunday for years. He started as a volunteer in 1981 and helped train legions of docents, including the most recent class of 2019. He had an unquenchable thirst for knowledge about the ancient Near East. He was a fixture at Mummies Night and loved to dress up and talk to children about all things Egyptian.

NORMA VAN DER MEULEN (1925–2022)

Longtime Suq gift shop volunteer Norma van der Meulen passed away on August 15, 2022, at the age of 96. A docent since 1978, Norma worked closely with Denise Browning in the Suq, for which she also designed unique jewelry often based on ancient designs. She educated customers about their Suq purchases and engaged them in conversation whether they were schoolchildren, visiting scholars, or University of Chicago dignitaries. Many people will miss her welcoming presence.





PROJECT REPORTS

OVERLEAF: A lion and bull in combat from the reliefs of the eastern staircase of the Apadana (audience hall) at Persepolis, Iran (detail). Joseph Lindon Smith, 1935. Oil on canvas. OIM G1.

CHICAGO DEMOTIC DICTIONARY

JANET H. JOHNSON AND BRIAN P. MUHS,
WITH ROLLAND X. LONG

Progress continued to be made on the Chicago Demotic Dictionary (CDD) from July 2021 to June 2022. This progress can be quantified as follows:

- Four new files (Y, H, days of the month, and months of the year) were completely converted to InDesign and uploaded to the server, joining fourteen files (β, B, P, F, M, N, H, H, S, Š, Q, K, T, T) previously completed and uploaded.
- Four files (I, ‘, L, G) were completely converted but had yet to be uploaded.
- Conversion continued on four other files (W, R, D, and numbers).
- Only one file (H) awaited conversion.

This year several stalwart research assistants had to turn much of their attention to other projects, so CDD editors Jan Johnson and Brian Muhs were grateful that Rolland Long, an alumnus of the University of Chicago and now a graduate student at the University of Pennsylvania, was able to join the CDD team and provide part-time assistance. Rolland has kindly contributed his view and voice to the rest of this year’s report.

UPDATE BY ROLLAND X. LONG

The staff at the CDD this year continued to prepare the updated first phase of the dictionary for publication. The endeavor of converting the original Microsoft Word files to Adobe InDesign documents is virtually complete. This long process began in 2017 and aims to create a dictionary that displays images better and that benefits from a far more flexible and detailed format. The new dictionary will be both aesthetically pleasing and much easier to read and understand. The conversion of only four letter files and one supplementary file (numbers) needs to be completed. We hope that the conversion process will be completed during the coming year.

Thanks to the reopening of the OI to all students, staff, and faculty, the CDD staff (and its friends in the Egyptology graduate program) could resume frequenting the dictionary office, rendering in-person meetings between members of the project much more viable. As editors, Jan Johnson and Brian Muhs head the CDD, whose staff this year included Rolland Long and Ariel Singer. Rolland is a graduate of the College of the University of Chicago and currently a PhD candidate “on loan” from the University of Pennsylvania. He is writing his thesis on the urban development of South Abydos, where he has worked several field seasons this academic year. He has completed several CDD entries since joining the project in 2021 and is currently converting the last supplementary entry (numbers). Ariel, in addition to being a senior PhD candidate wrapping up her dissertation on Egyptian medicine, is the CDD’s InDesign expert and instructor, as well as the coordinator of its many files. She spent the winter of 2021–22 working at Chicago House in Luxor, Egypt, but consistently found time in her busy schedule for the CDD despite spending most of the year outside Chicago.

After completing the conversion process in the coming year, the staff at the CDD will transition to proofreading its many entries. Johnson and Muhs already began this process in 2019–20 and will involve the rest of the staff once the conversions are finally complete. They will primarily check for transcription and formatting mistakes, insert missing images, and ensure that formatting decisions were uniform across all entries. After this step, the files will be published both online and in hard copy.

CHICAGO HITTITE DICTIONARY

THEO VAN DEN HOUT

There is no doubt that work on the Chicago Hittite Dictionary (CHD) slowed down over the past year because of COVID-19 and CHD chief editor Theo van den Hout's serving as the Oriental Institute's interim director. Progress was made, though, thanks to the work of editors Richard Beal and Petra Goedegebuure. Over the past year, Beal worked on 188 entries in the T volume, many of which were written more than twenty years ago. Since then, new texts and new editions have appeared that he checked through the invaluable *Konkordanz der hethitischen Keilschrifttafeln*, a joint undertaking of the Academy of Arts and Sciences in Mainz and the University of Würzburg in Germany. The authors of these new editions often have found a duplicate to an already-existing Hittite text that fills a hole in the text we want to quote. Or sometimes a recently published fragment will join an older known one, giving us a completely new and fresh context. The *Konkordanz* also gives the approximate date of each tablet, whereas many of our dictionary entries dated only some of the texts, and Beal straightened all this out as well. It can also happen that new evidence forces us to rethink entire entries, or that some entries had not yet been written at all, so Beal wrote new articles for them. Finally, all entries were put into proper CHD style, which will save time later.

Goedegebuure, as usual, worked on the often-difficult “function words” such as conjunctions, postpositions, and adverbs (see page 17 of last year's annual report for a more detailed description). One example among many is Hitt. *ta*, usually translated as “and” (though that is a very simplified meaning). Goedegebuure has also been working on lexical items such as the verb *tarna-* “to let, allow,” *tiššai-* “to shape, ready, align, match,” and *tarru-* “firm.” She also worked hard on finishing the editing of the proceedings of the 10th International Congress of Hittitology, hosted by the OI in 2017, which has meanwhile been submitted to the OI's publications office. Together, Goedegebuure and van den Hout hosted a virtual session of the “Drinks with the Dictionaries” series organized by Tasha Vorderstrasse for the OI's adult education program.

Throughout the year, we had the pleasure of having Semra Dalkılıç, a PhD student from Turkey, as a guest in the CHD room, working on her dissertation on Anatolian seals and sealing practices. We were also glad that Dr. Susanne Görke (see last year's report) stayed with us for another year.

With sadness we report the passing of one of the CHD's very first research associates, Silvin Košak (fig. 1). A native of Slovenia (formerly part of Yugoslavia), Silvin studied in Ljubljana, where he received his PhD in 1975. He further honed his Hittite skills with Heinrich Otten in Marburg, Germany, and Oliver Gurney at Oxford. After Hans Güterbock and Harry Hoffner secured funding for the CHD in 1976, Silvin was one of their first hires in 1980, and he stayed in Chicago until 1985. He then moved to Changchun, China, where he taught Hittite at the Northeast Normal University. Subsequently he became a researcher at the Academy of Arts and Sciences in Mainz, working for the Boğazköy Archiv. There, he started the project that became his life's work—the *Konkordanz der hethitischen Keilschrifttafeln*, a complete overhaul of the *Catalogue de textes hittites* that Emanuel Laroche had started in the 1960s. Published at first in print, it soon started its digital life and grew into a powerful database that every Hittitologist now has on her/his computer screen every day.

As always, we would like to thank our donors, in particular Walter and Susan Güterbock, for their generous support.

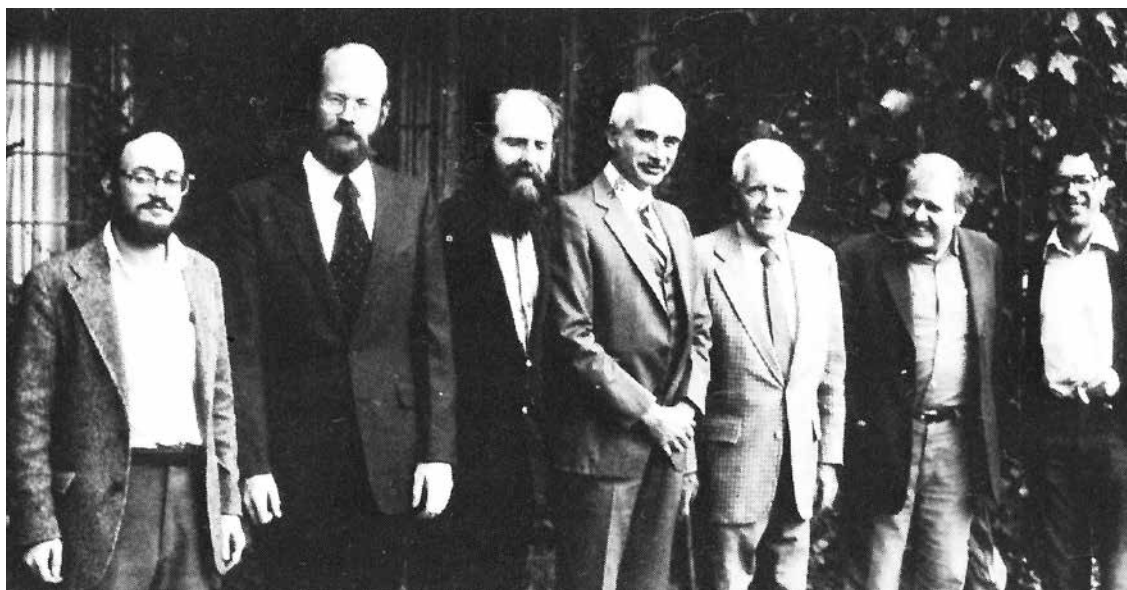


Figure 1. The staff of the CHD and Prof. Eric Hamp in the early 1980s. From left: Howard Berman, Gregory McMahon, Richard Beal, Harry Hoffner, Hans Güterbock, Eric Hamp, and Silvin Košak.

COPING WITH CHANGING CLIMATES IN EARLY ANTIQUITY: COMPARATIVE APPROACHES BETWEEN EMPIRICISM AND THEORY

HERVÉ RECULEAU

Coping with Changing Climates in Early Antiquity (3CEA): Comparative Approaches between Empiricism and Theory is a collaborative project sponsored by the Humanities Without Walls consortium (<http://www.humanitieswithoutwalls.illinois.edu/>) through its competitive research initiative “The Work of the Humanities in a Changing Climate,” which is funded by a grant from the Andrew W. Mellon Foundation and based at the University of Illinois Humanities Research Institute (<https://hri.illinois.edu>). In January 2018, 3CEA was awarded approximately \$136,000 over the course of three years (2018–20) through the Franke Institute for the Humanities (<http://franke.uchicago.edu/>), the consortium’s partner institution at the University of Chicago. The award was extended to July 2022 because of the COVID-19 pandemic.

Projects members include ten faculty and graduate students from three institutions: Hervé Reculeau (associate professor of Assyriology, University of Chicago, principal investigator), Michele Buzon (professor of anthropology, Purdue University, project coordinator), Jay Crisostomo (associate professor, George G. Cameron Professor of Ancient Near Eastern Civilization and Languages, University of Michigan, project coordinator), Gary Beckman (George G. Cameron Professor of Ancient Near Eastern Civilization and Languages, University of Michigan), Catherine Kearns (assistant professor of classics, University of Chicago), Timothy Leonard (PhD candidate, University of Michigan), Thalia Lysen (PhD 2022, University of Chicago), and Émilie Sarrazin (PhD candidate, University of Chicago). Katie Whitmore (PhD 2019, Purdue University) was replaced in 2019 by Jenail Marshall (PhD candidate, Purdue University). A founding member of the project, Nadine Moeller (formerly University of Chicago), became in the course of our grant professor of Near Eastern languages and civilizations at Yale University.

3CEA investigates, in a comparative perspective, the social and cultural perceptions of and experiences with climate change in the Bronze Age and Early Iron Age (third to first millennia BCE) through a multidisciplinary approach that convenes archaeologists, bioarchaeologists, and text specialists to foster interdisciplinary collaboration among the three partner institutions in the Midwest and between faculty and graduate students. The project uses ancient texts, archaeological and paleoenvironmental data (including ancient skeletal remains), and geospatial analysis to address the ways in which societies in the Eastern Mediterranean, North Africa, Anatolia, and Mesopotamia were affected by ancient episodes of climate change (see the 2017–18 annual report for a detailed presentation of the working groups and research questions). Focusing on social perceptions of and reactions to changes in local, regional, and global climates, the project members addressed the well-documented (and abundantly discussed) episodes of rapid climate change (RCC) that marked the transitions from the Early Bronze Age to the Middle Bronze Age (the so-called “4.2ka event” from ca. 2200 to 1900 BCE) and from the Late Bronze Age to the Early Iron Age (the “3.2ka event”

from ca. 1200 to 950 BCE), framing these transitions in the longer-term perspective of the periods that preceded and followed them. One important aspect of our collaboration was to integrate the archaeological data with the emic perspectives gained from ancient texts, our primary source of information on how the ancient peoples of the region may have perceived changes in their climate and environment—a precondition for developing adaptive strategies, successful or not.

Hervé Reculeau and Catherine Kearns organized the final conference of the project, held on December 4–5, 2021, at the University of Chicago’s OI and Franke Institute for the Humanities. The conference provided an opportunity to present the project’s results to the campus community and beyond and to invite guest speakers from various research universities to frame, complement, and discuss the work. The invited speakers were Joseph G. Manning (Yale University), Sturt W. Manning (Cornell University), John M. Marston (Boston University), Antonio Simonetti (University of Notre Dame), and Lynn Welton (University of Toronto). The talks presented relevant textual, archaeological, and environmental data from a region that ranges from Nubia in the south to Anatolia in the north, and from Egypt and the Eastern Mediterranean in the west to Mesopotamia in the east, during the third to early first millennia BCE. The conference thus attracted a cross-departmental audience of colleagues and students and highlighted the work of our graduate students, who offered joint presentations of their work. Additionally, a poster session showcased research by students from the three partner universities who had attended a joint graduate seminar during the winter and spring quarters of 2019.

The conference was also an opportunity to address, from an interdisciplinary perspective, the theoretical and methodological issues surrounding the integration of datasets of highly divergent natures, temporal and spatial scales, and methodologies and to discuss best practices for efficiently articulating research at the intersection of the natural, social, and humanistic sciences. A specifically humanistic aspect of the discussions concerned the use of emic categories of weather and climate, found in the textual records of the respective places and times under study, as a way to address the repertoire of actions that any given society—and, more crucially, various stakeholders in that society—had at their disposal to address changes in their environment, provided that they perceived them in the first place. Finally, the conference was an opportunity to reassess a number of paradigmatic case studies that are ubiquitously cited as examples of social devolution caused by episodes of RCC and to show that careful analysis of the extant material with proper consideration of its heuristic limits does not warrant such broad-brush conclusions—that new, more nuanced narratives are needed. Beyond the ongoing collaborations among some of the participants, the conference will result in an edited volume of proceedings, currently in progress.

CULTURAL HERITAGE PRESERVATION PROJECTS IN AFGHANISTAN AND CENTRAL ASIA

GIL J. STEIN

In 2021–22, we completed the tenth year of cultural heritage preservation projects in Afghanistan and carried out the third year of our heritage training initiative in the post-Soviet republics of Central Asia. Three cultural heritage grants in Afghanistan have been funded by the US Department of State and the US Embassy in Kabul. The Central Asia heritage project is based in Uzbekistan and supported by the US Embassy in Tashkent.

AFGHANISTAN

Since 2012, we have been carrying out our cultural heritage projects in Afghanistan in partnership with the National Museum of Afghanistan (NMA), whose current director is Fahim Rahimi, and the Afghan Institute of Archaeology (AIA), whose director is Noor Agha Noori. Grants from three sources fund these efforts: Core Operations, the Mobile Museum Project (MMP), and the Afghan Heritage Mapping Project (AHMP). At the US Department of State, our key partners have included Dr. Laura Tedesco, who is responsible for Afghanistan and Pakistan as cultural heritage program manager at the Office of Press and Public Diplomacy, and Jacqueline Viselli, who has overseen financial management of the grants.

In winter 2020, it became impossible for us to work on-site in Afghanistan because of the COVID-19 pandemic. But our international team continued to work remotely in 2021 and early 2022 on all our projects in tandem with the on-site work conducted by our Afghan project staff and local partners in Kabul. By July 2021, the continuing pandemic and the decline in security conditions in Afghanistan made it impossible for even our Afghan team members to continue their work on our projects. As a result, we reluctantly decided to suspend all in-country project work in Afghanistan and shut down the “OI House” in Kabul. On August 15, 2021, the Ashraf Ghani government of Afghanistan collapsed with the military takeover of the country by the Taliban and their establishment of the Islamic Emirate of Afghanistan. At that point, all formal institutional contact between the OI projects and the NMA came to a halt; but our international team’s remote work on the three Afghan heritage grant projects continued in the US and Europe. As our three projects entered their final year of funding in 2022, we accelerated our efforts to preserve Afghan heritage through analysis, documentation, and publication.

The Hadda Sculptural Project

In spring 2001, before they demolished the two monumental standing Buddha statues in the Bamiyan valley, members of the Taliban systematically worked their way through the NMA in Kabul, smashing every statue they could find, including hundreds of sculptures that had been recovered by excavations at the early Buddhist monastic center of Hadda, near the Khyber Pass in southeastern

PROJECT REPORTS | CULTURAL HERITAGE PRESERVATION PROJECTS

Afghanistan. The museum's curators, at great risk to themselves, secretly swept up and stored the thousands of sculptural fragments (fig. 1). Since its inception in 2016, the OI's Hadda Sculptural Project (HSP) has been working to document, conserve, and reassemble the hundreds of rare early Buddhist, Gandharan-style sculptures from Hadda, while also training the NMA's conservation staff—first through in-person training sessions and then, from 2020–21, through online workshops.



Figure 1. A curator from the NMA with some of the thousands of fragments of rare early Buddhist sculptures smashed by the Taliban in 2001. Photo by Robert Nicklesberg.

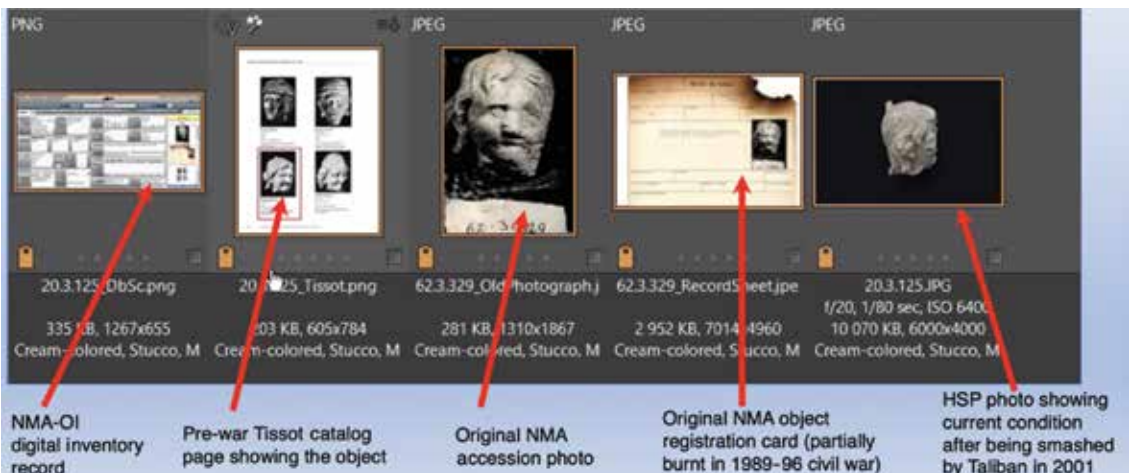


Figure 2. The HSP Digital Assets Management System is an image database for use in both cultural heritage documentation and scholarly research. This folder brings together all relevant images documenting partially reassembled Hadda sculpture 62.3.329.



Figure 3. Left: 3D manipulation of rope impressions on an interior fragment of a Hadda sculpture to produce a “positive” raised relief rendering of the rope fragments. Center: Fragment of 20.3.454, probably part of a seated figure. On its interior (exposed when the statue was smashed) are clearly visible impressions of a bundle of sticks bound together with ropes. Right: Schematic section drawing of the support structure for a multimaterial sculpture, as described by Z. Tarzi (1986) in his publication about the techniques used to fabricate Hadda clay sculptures.

We have sorted, conserved, and documented more than 7,600 sculptural fragments and partially reassembled more than 480 of the sculptures smashed by the Taliban in 2001. We have made 3D digital models of the forty best-preserved, partially reassembled sculptures and used these models to reassemble those sculptures digitally. We have also pulled together thousands of images and whatever records survived of the Hadda sculptures into a searchable digital assets management database as a resource for both cultural heritage documentation and scholarly research (fig. 2).

An especially interesting discovery made by the HSP team is that the sculptural fragments preserve rope and wood impressions on their shattered interiors that allow us to reconstruct the ways the master craft specialists and artists actually produced the sculptures. They started with a core of bundled sticks tied with ropes, then added layer upon layer of progressively finer stucco until they completed, and then painted or gilded, the finished sculpture (fig. 3).

In 2021–22 the HSP team focused on completing our digital image database and on writing a series of technical reports to document the project’s analyses and conservation work.

The Afghan Heritage Mapping Partnership

The AHMP with the AIA has focused on three key areas: (1) discovery and spatial inventory of archaeological sites across Afghanistan by using remote-sensing satellite imagery of the country, along with other available resources (Soviet-era maps, aerial photography, and archaeological data from surveys and excavations); (2) detection and monitoring of looting of heritage sites; and (3) training the AIA staff in geospatial techniques for heritage preservation and management. The AHMP Chicago staff included Tony Lauricella, acting director of the Center for Ancient Middle Eastern Landscapes lab; Andrew Wright, project manager; and five students who serve as data analysts. Although we can no longer conduct training sessions for the AIA, we have continued with our primary project goals of site discovery/documentation and detection/monitoring of looting at cultural heritage sites across Afghanistan. In the fifty-seven search areas examined through late spring 2022, the AHMP identified 12,394 sites and 17,230 underground irrigation systems, for a total cleaned dataset of 29,624 locales with cultural heritage significance (fig. 4).

In the seven years since the project began, we have conducted visual searches of approximately 55 percent of the land surface of Afghanistan. The process of visual inspection is highly accurate but is also labor-intensive and time-consuming. To complete coverage of the entire country of

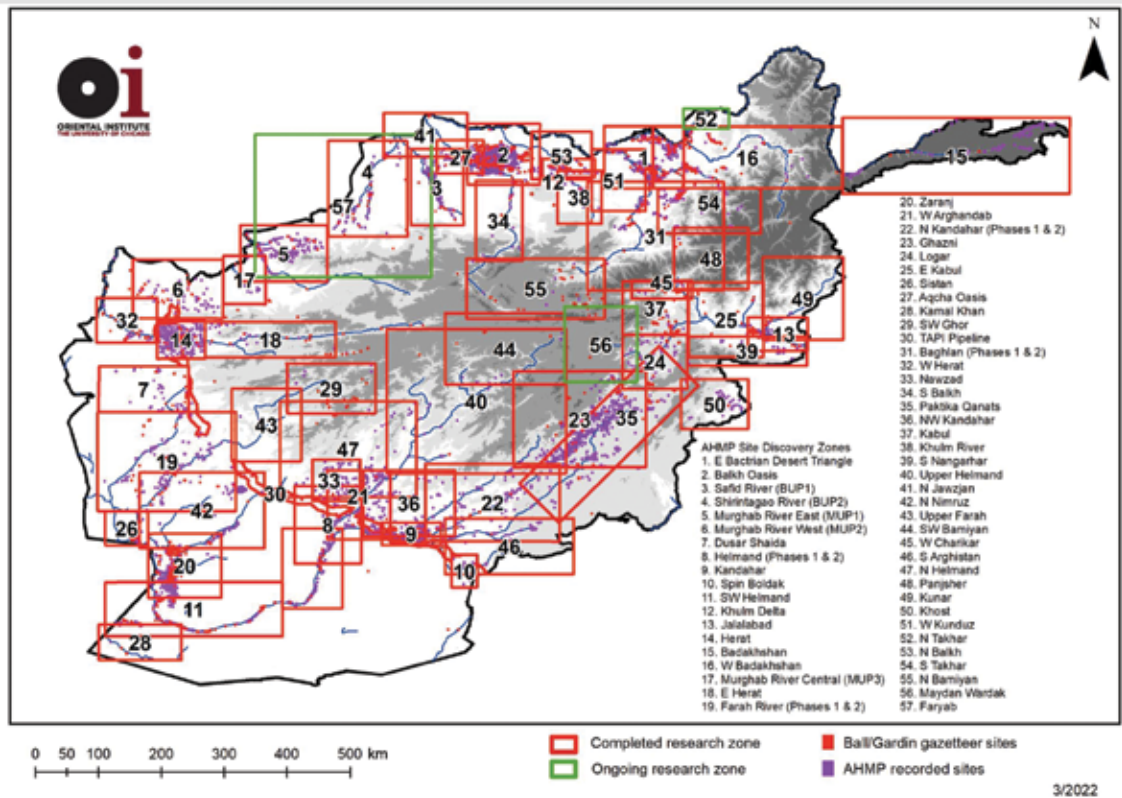


Figure 4. AHMP site search areas through spring 2022.

Afghanistan before the end of the AHMP grant in December 2022, in 2021 the AHMP entered into a collaboration with the University of Chicago's Research Computing Center (RCC) to develop an artificial intelligence (AI) deep-learning model that will teach the RCC computer to scan the remote-sensing images and identify the archaeological sites. In 2021–22 the RCC developed the AI deep-learning model, and our project used its data of thousands of site identifications to train the model to identify the main archaeological site types: mounds, caravanserais, forts (“qalehs”) and qanat underground irrigation systems (fig. 5A). After these identifications are made, AHMP data analysts visually check the computer's site predictions to verify their accuracy (fig. 5B). We are using four kinds of remote-sensing imagery: light detection and ranging (LiDAR), BuckEye, Digital Globe, and the Environmental Systems Research Institute (Esri) World Imagery basemap. Together, these imagery classes cover almost the entire surface area of Afghanistan. Once developed and tested, the deep-learning model took just one week to search every LiDAR image of Afghanistan and identify tens of thousands of sites (fig. 5C–D). Our AHMP data analysts are about halfway through the six-month process of verifying every predicted site that has a probability of more than 80 percent. We are now adjusting the model so it can also analyze BuckEye images in the next stage of the project.

The Mobile Museum Project

In 2021–22, the OI's MMP focused on writing *A History of Afghanistan in 100 Objects: Treasures from the National Museum in Kabul*. The NMA is the world's most important repository for the

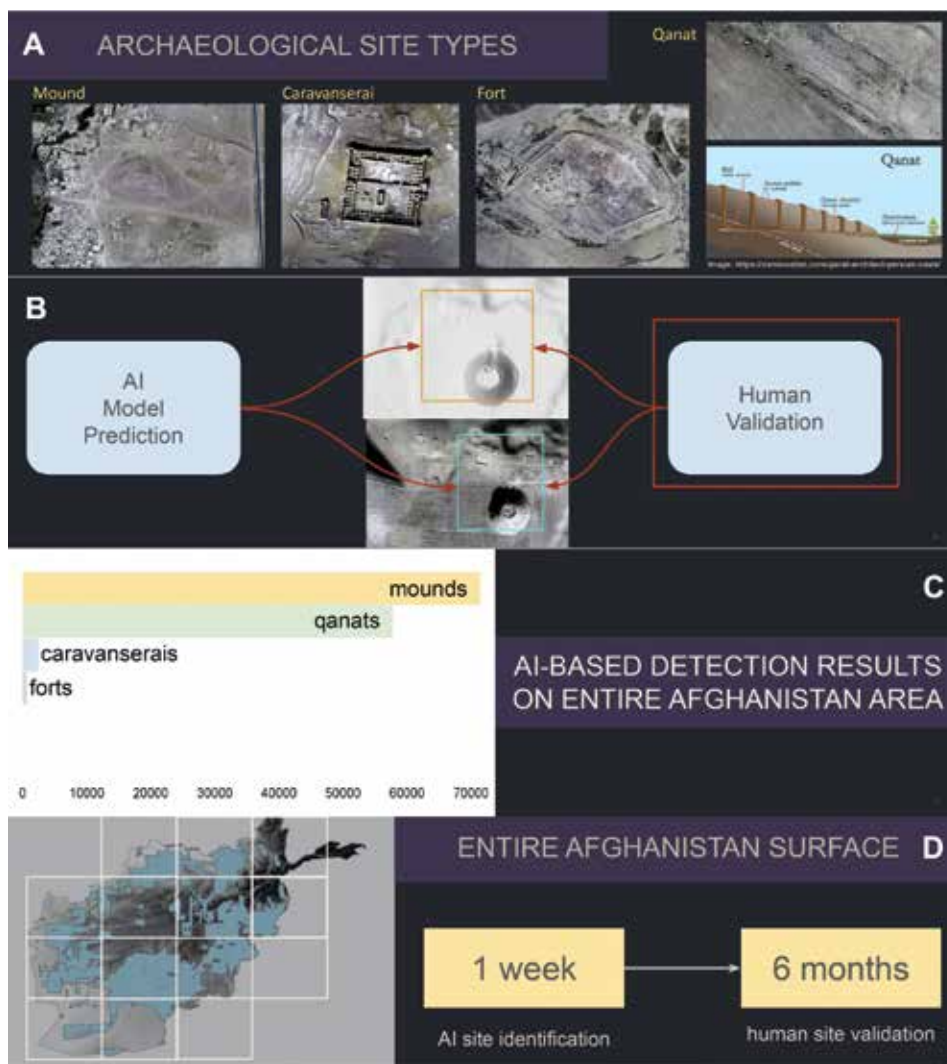


Figure 5. The OI-RCC's AI deep-learning model for computer detection of archaeological sites in remote-sensing satellite images of Afghanistan. *A*, The main types of archaeological sites the deep-learning model has been trained to identify. *B*, Illustration of the deep-learning model's identification of sites at different levels of probability, which are then checked and verified through close examination by AHMP data analysts. *C*, Breakdown of types and numbers of sites identified by the deep-learning model through its examination of the LiDAR imagery of Afghanistan. *D*, Blue areas in the left-hand map showing the parts of Afghanistan covered by LiDAR imagery. The power of the RCC computers allowed the deep-learning model to scan every available LiDAR remote-sensing image and identify all archaeological sites in just one week. We estimate that it will take the AHMP data analysts up to six months to check and verify visually the tens of thousands of sites identified by the model.

artistic masterpieces and objects of daily life that exemplify Afghanistan's 50,000-year history and role in world cultural heritage. The 100 objects presented in the book illustrate the creativity and cross-cultural connections that shaped Afghan culture through the millennia (fig. 6). The chapters are organized by chronological period to highlight the key transformations in Afghanistan's history, from the stone tools of the Ice Age to twentieth-century ethnographic collections.



Figure 6. One of the pieces featured in the MMP's forthcoming e-publication *A History of Afghanistan in 100 Objects: Treasures from the National Museum in Kabul*. The photo shows a gold-and-turquoise clasp of a garment from the "Bactrian treasure" found at Tillya Tepe in northern Afghanistan. The site contained the burials of a Yuezhi tribal leader and his household dating to the first century CE. At that time, the Yuezhi nomads from Central Asia who had invaded Afghanistan were settling down and forming what would become the Kushan Empire. Photo courtesy of Alamy Images.

CENTRAL ASIA

Two cultural heritage projects comprise the OI's pursuits in Central Asia. The C5 Cultural Training Partnership for Artifact Conservation (C5 CTPAC) began in 2018. A second capacity-building program, Cultural Heritage and Economic Development, is currently under development.

The C5 Cultural Training Partnership for Artifact Conservation

The C5 CTPAC is a three-year program of capacity building and advanced training for artifact conservators at the national museums of the five republics of Central Asia: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan (fig. 7). The workshops take place at the State Museum of the History of Uzbekistan in Tashkent, where we have been fortunate to work in partnership with the museum's director, Ms. Jannat Ismailova, and deputy director, Dr. Otabek Aripdjanov.

In September–October 2021, we carried out Conservation Workshop 3, taught by Fabio Colombo (workshop coordinator), Susanne Gaensicke (head of antiquities conservation, J. Paul Getty Museum), and Alison Whyte (OI associate conservator). The training focused on a range of key topics: conservation photography (fig. 8), metal conservation, condition assessment of public monuments (fig. 9), preventive conservation, object assessment and treatment planning, emergency planning, and new technologies for object assessment. The workshop itself was conducted with live translation from English to Russian as the shared language of all participants.

Overall, the OI's cultural heritage projects in Afghanistan and Central Asia span a range of complementary foci. All the projects share the common themes of training local museum specialists in methods and approaches for preserving their own heritage, and all are direct projects that emphasize the concept of "preservation through documentation of objects, monuments, and sites."



Figure 7. C5 CTPAC participants and OI team at Training Workshop 3 at the State Museum of the History of Uzbekistan in September 2021.



Figure 8. Workshop coordinator Fabio Colombo leading photography training in the C5 CTPAC Training Workshop 3 in Tashkent.



Figure 9. Workshop participants learning how to conduct documentation and condition assessment of the Soviet-era cosmonaut monument in downtown Tashkent.

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EPIGRAPHIC SURVEY

W. RAYMOND JOHNSON AND J. BRETT MCCLAIN,
WITH CONTRIBUTIONS BY JENNIFER KIMPTON, OWEN MURRAY,
FRANK HELMHOLZ, MOHAMED ABO EL MAKAREM, JAY HEIDEL,
KRISZTIÁN VÉRTES, AND ANAIT HELMHOLZ

From October 15, 2021, to April 15, 2022, the Epigraphic Survey returned to Luxor after a year's absence due to the COVID-19 crisis and resumed the work of documentation, conservation, restoration, and site management at Medinet Habu, Theban Tomb (TT) 107, Luxor Temple, and Khonsu Temple at Karnak in cooperation with the Supreme Council of Antiquities (SCA) and the Ministry of Tourism and Antiquities (MoTA). It was a great relief to be back in the field and to make up for the lost time. Our work at each site is summarized below.

MEDINET HABU

During the 2021–22 field season, we focused on a range of ongoing projects within the Medinet Habu temple precinct, made possible by a grant from USAID Egypt that supports our documentation, conservation, restoration, and site management programs. Our work at Medinet Habu this year was supervised by SCA/MoTA inspectors Ms. Fatma Ahmed Salim Hussein, Mr. Mohammed Sayed Yousef Mohammed, Ms. Shaimaa Hamed Mohammed Ibrahim, Mr. Mohamed Ahmed Selim Abu el-Haggag, Mr. Hassan Youssef Mohammed Ahmed, Mr. Mahmoud el-Azzab Abd el-Razek Mahmoud, Ms. Heba el-Nady Abu Zaid Ahmed, Ms. Wafaa Abu el-Hamd Mohammed Mahmoud, Ms. Doaa Awadd Allah Gad Ahmed, Ms. Nahed Ali Mohammed Mohammed, Ms. Sahar Mohammed el-Mahdi Amin Ibrahim, and Ms. Christine Oncy Fahim Abd el-Qodos, along with SCA/MoTA conservators Mr. El-Tayib Abu el-Haggag Hussein Qandil and Mr. Gaber Mohammed Ahmed Louth.

Epigraphic Documentation

Epigraphic documentation in the Small Temple of Amun this year (fig. 1) focused on photography, drawing, and collation of scenes and inscriptions to be published in *Medinet Habu X* (the pillars of the Thutmocide peripteros), *Medinet Habu XI* (later additions to the Thutmocide peripteros), *Medinet Habu XII* (the bark shrine of Thutmose III), and *Medinet Habu XIII* (the Late Period portico, Taharqa gate, and Kushite pylon), as well as documentation of the graffiti in the North Annex. Team members working on these projects included senior artists Susan Osgood and Margaret De Jong; artists Krisztián Vértés, Keli Alberts, and Dominique Navarro; assistant director/senior epigrapher J. Brett McClain; epigraphers Jennifer Kimpton, Ariel Singer, Christina di Cerbo, and Aleksandra Hallmann; and digital photographer Owen Murray. Field director W. Raymond Johnson checked and gave final approval to eight drawings for publication, and significant progress was made on approximately fifty additional drawings at various stages of completion.

Chicago House senior photographer Yarko Kobylecky, assisted by Gharib el-Wair and photo archivist Susan Lezon, continued large-format photography of the inscribed wall surfaces in the chapel of the God's Wife of Amun Amenirdis (fig. 2). Yarko completed the photography of the west and

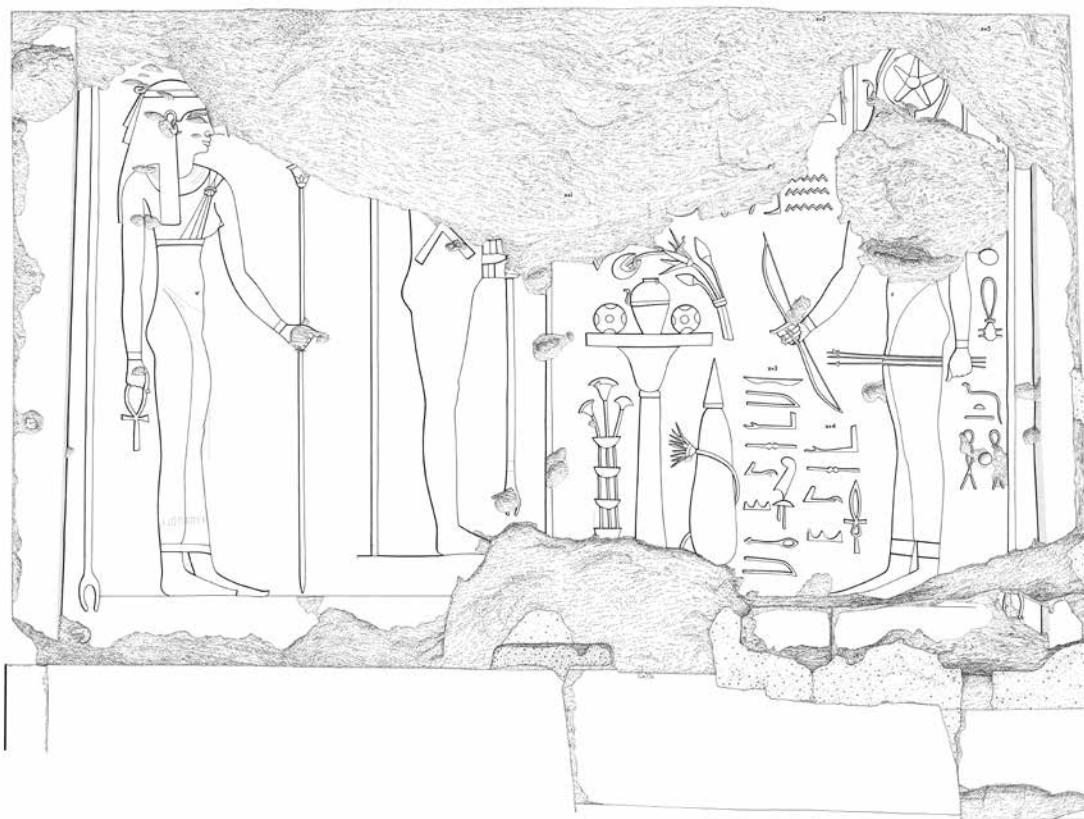


Figure 1. Inscribed window blocking stone from the Small Temple of Amun, east facade, to be published in *Medinet Habu X* (forthcoming). Drawing by Susan Osgood.

north corridors, the corridor entrance, and the interior of the cella, and he also carried out reference photography of the Amenirdis court and pylon/gateway. Photographic recording of the chapels of Shepenwepet II, Nitocris, and Mehetenweskhet will continue in October 2022.

Julia Schmied returned to the Medinet Habu blockyard this season to assess, reorganize, and continue the documentation of the blockyard holdings. About three quarters of the more than 4,000 blocks currently stored there have been numbered and cataloged; the rest need to be sorted and entered into the new database.

The 2021–22 season’s work at the Western High Gate (WHG) was undertaken by artist Keli Alberts and epigrapher/WHG supervisor Jennifer Kimpton, along with senior photographer Yarko Kobylecky (assisted by Gharib el-Wair) and digital photographer Owen Murray



Figure 2. Yarko Kobylecky photographing the north corridor of the chapel of Amenirdis. Photo by Dominique Navarro.



Figure 3. Photography and drawing in progress at the Western High Gate. Photo by Jennifer Kimpton.

(fig. 3). The WHG team continued documentation of the gate fragments, including the penciling of new drawings, photography and photogrammetry of blocks and fragments, and a comprehensive review of the WHG corpus. As in previous seasons, Keli undertook the entire task of penciling the blocks and fragments of the WHG, producing ninety-five new drawings. The material she recorded was primarily from the WHG's interior chambers (including the slab reveals thought to belong to the structure's mudbrick rooms), along with fragments newly recognized as belonging to groups already penciled in previous seasons.

In all, Yarko photographed forty-one fragments from the WHG, including both film and digital shots of each object (fig. 4). Owen made digital photographs of several blocks and fragments to build 3D computer models, from which orthographic drawing enlargements can be derived. This material included decorated cornices and sculptural fragments, whose curved surfaces are impossible to render without distortion in a film photograph. In total, Owen photographed forty-two separate fragments and applied image enhancement techniques to the digital images of four painted WHG blocks.

Jen's work during the 2021–22 field season included reexamining several blocks and



Figure 4. Joined window reveal from the Western High Gate. Photo by Yarko Kobylecky.

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fragments in response to questions or hypotheses that had been formed during the extended off-site period of 2020–21. These evaluations included thirty-one field tests for proposed joins (fig. 5). Several more join tests involved fragments too large to be manipulated safely on-site; for these tests, Jen did the field photography required to produce photogrammetric models of the twenty-nine fragments in question. She also reexamined 241 blocks and fragments, recording the new information in the database, including extensive field notes and isometric drawings.

Photogrammetric documentation and 3D scanning were undertaken by Owen and 3D consultant Luke Hollis at a variety of locations throughout the Medinet Habu complex (fig. 6), including architectural details in the small Amun temple bark shrine, a series of conservation photographs of the Taharqa and Claudius Gates taken in November 2021 prior to conservation, and documentation of the Taharqa Gate while it was being disassembled. At the Claudius Gate, reconstruction elevations were produced in November from photographs taken during our previous season, and we recorded the removal of the gate's deteriorated foundation stones in mid-January. A detail of the walkway north of the main temple was produced before the restoration work continued at the beginning of November 2021. Subsequently, documentation of the north pavement restoration in progress was overlaid with Uvo Hölscher's 1934 chronological plan of the area.

Luke laser-scanned the exterior of the Eastern High Gate in February 2022, with the scans referenced to the Medinet Habu local coordinate system. Thereafter, the exterior model of the Eastern High Gate will be merged with an earlier 3D computer model that our team produced in 2018–19 to produce a full composite. Laser scanning and production photography for the documentation of the first pylon of the chapels of the God's Wives of Amun was also carried out in March 2022. Twelve hundred photos were shot and will be processed together with



Figure 5. Testing a join at the Western High Gate. Photo by Jennifer Kimpton.



Figure 6. Owen Murray photographing in the Small Temple of Amun. Photo by Dominique Navarro.

the laser-scan data to produce models, profiles, sections, drawing enlargements, and high-resolution color photographs.

Stone Restoration/Site Development in the Medinet Habu Complex

This component of our USAID-funded restoration project, supervised by master mason Frank Helmholtz, included several areas of activity:

1. *General site management.* At the request of the SCA/MoTA, more than 716 m of chain barriers were installed around the temple to block access to some areas and to protect the sensitive surfaces from tourist traffic. These chains were installed with sixty-five vertical metal posts attached to the new paving stones, so as not to damage the historic paving stones.
2. *Ramesses III pavement restoration.* This season, the restoration and re-creation of the Ramesses III pavement around the main temple continued on the north side. In the western part of this area, mostly new stone was required (fig. 7). Farther east, a large number of historic stones, in varying states of preservation, were still in situ, requiring several different treatments depending on their individual state of preservation. The guiding principle was to preserve as many of the historic stones as possible. Many were only partially replaced with restoration inserts of varying sizes and shapes, which were blended with the historic stones.
3. *Claudius Gate.* A small gate erected during the Roman period under the emperor Claudius was in imminent danger of collapse (fig. 8). During the 2019–20 field season, the gate was documented using photography, survey with a Leica Total Station, and photogrammetry. After the documentation was sufficiently completed to obtain all necessary data, scaffolding



Figure 7. Restored Ramesses III pavement north of the main temple, April 2022. Photo by Frank Helmholtz.

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was erected and most of the stones were removed and transported inside the temple precinct, to an area adjoining the blockyard.

At the beginning of this field season, the site was cleared of debris and vegetation. The foundation stones still in place were documented and then carefully removed and taken inside the precinct. There, they were treated by the conservation team led by Mohamed Abo El Makarem. The lowest course consisted of large blocks of sandstone, most of which were decayed and partially or mostly disintegrated. Two stones, one on the east side and one on the west side, had the carvings typical of a door socket and groove to place a door leaf. The portions of the stones with the door sockets were saved and will be integrated into new stones. A historic foundation consisting of irregular small fragments of sandstone and large natural limestone gravel was revealed below the lowest course of foundation stones and cleaned, studied, and documented by archaeologist Gregory Marouard. Most of the fragments were not inscribed, but a few that had traces of carving were taken to the blockyard. After a final survey of the area, a new foundation was built, consisting of a layer of sand over the smaller fragments and a thick plastic layer for waterproofing, on top of which a 15 cm thick concrete slab was then poured (fig. 9). The top of the concrete was covered with a 2 cm layer of white cement and lime mortar with the additive Sicka for waterproofing. The sides will be covered with bitumen for further waterproofing at the beginning of next season.



Figure 8. Claudius Gate prior to dismantling.
Photo by Frank Hemholz.



Figure 9. *Left*, Claudius Gate foundation before dismantling, January 2022.
Right, new subfoundation slab, April 2022. Photos by Frank Helmholz.



Figure 10. Removing the lintel block of the Taharqa Gate, January 2022. Photo by Frank Helmholz.



Figure 11. Dismantled Taharqa Gate blocks prepared for conservation, April 2022. Photo by Frank Helmholz.

4. *Taharqa Gate*. This Twenty-Fifth Dynasty sandstone gate, to the north of the Small Temple of Amun, was in danger of collapse from salt-induced erosion of its foundation courses. It has therefore proven necessary to dismantle the entire gate and rebuild it with a stronger foundation, including a damp-proofing layer and new stones in the first courses where needed (figs. 10 and 11). Documentation of the gate took place using photography, survey with a Leica Total Station, and photogrammetry. The images produced by this process not only documented the gate's condition but will also be used to create the necessary drawings for the future reconstruction of the gate after dismantling.

To start the dismantling process, the ground around the gate was stabilized so that it would be firm enough for a forklift. Gravel and road base were distributed and compacted. Two storage areas were created with eleven temporary storage platforms consisting of stone bases and wooden boards. Then the mortar between the blocks of the gate was carefully cleared away, and each block was raised with lifting slings and the forklift. Smaller stones were dislodged and lowered to the ground manually. Following treatment of the gate blocks and installation of a damp-coursed foundation layer, the Taharqa Gate will be rebuilt during the 2022–23 field season.

Conservation and Conservation Training Program at Medinet Habu

The Epigraphic Survey's conservation program in the Medinet Habu temple precinct continued this year in conjunction with our ongoing conservation training program. These activities were directed by Medinet Habu head conservator Mohamed Abo El Makarem. Areas of focus included conservation and restoration of the Ramesses III mudbrick walls to the north of the great mortuary temple, conservation of the blocks from the Claudius and Taharqa Gates, restoration of small objects, site management, and general cleaning of the temple, including bird mitigation.

1. *Conservation and restoration of Ramesses III mudbrick walls.* At the beginning of this season, we completed the restoration of the mudbrick walls of Ramesses III to the north of the main temple, including the reconstruction of the northeast part of the wall, which was a little more than 21 m long. This work was carried out by fifteen restorers, including eleven conservators and four new student trainees, in addition to the inspectors from the MoTA. Sixty-five temporary workers were hired for the project.

Careful cleaning of the area permitted observation of the mudbrick walls of Ramesses III, which were made of large bricks, along with later mudbrick walls made of smaller bricks located at the east end of this sector, as recorded on Hölscher's 1934 map.

New mudbricks were manufactured to complete the Ramesses III walls to the northeast of the main temple (fig. 12). About 150 m³ of soil were used to make approximately 18,500 bricks; 6,000 bricks were used in the wall restoration, and 12,500 blocks were stored for use at the beginning of the next season.

The reconstruction work was carried out after the tops of the original mudbrick walls were cleaned. The walls were strengthened if necessary, and then an insulation layer was made using fiberglass netting as a first layer and clay as a second layer before the new bricks were laid in the style of Ramesses III (fig. 13).



Figure 12. Manufacturing new mudbricks with molds, January 2022. Photo by Ray Johnson.



Figure 13. Finishing the restored mudbrick wall of Ramesses III. Photo by Ray Johnson.

2. *Condition study and conservation of Claudius Gate blocks.* A survey of the blocks of the Claudius Gate revealed many types of damage, including natural abrasion, intentional damage, and later reuse of the stones when the structure was incorporated into medieval buildings. Various types of decay were observed, including superficial decay, intentional damage, salt efflorescence, soiling, soot, surface deposits, previous intervention mortar (black cement), loss of stone, cracking of stone, detachment, scaling, powdering, discoloration, fragmentation, and deposits of mud or grass inside the joints. The types of decay for each stone were recorded, with the documentation carried out by the conservation assistants and students (fig. 14). Treatment techniques included preconsolidation, removal of previous intervention, mechanical cleaning, desalination, and consolidation, as well as treatment of detached fragments, filling of gaps and joints, final mortar application, and treatment of moisture.



Figure 14. Conservation assessment of Claudius Gate blocks, Medinet Habu. Photo by Mohamed Abo El Makarem.

3. *Conservation of the Taharqa Gate blocks.* The blocks of the Taharqa Gate have suffered from many different types of stone deterioration in addition to instability of the walls due to decaying lower courses and foundations. The decision was made to dismantle the gate so that the blocks and foundations could be consolidated, and during a survey of the blocks we found many types of both natural and intentional damage, which were all documented prior to dismantling. This documentation included suggested methods of treatment.
4. *Bird mitigation efforts in the Medinet Habu complex.* Past attempts by the MoTA to displace pigeons and prevent them from soiling the walls of various structures in the Medinet Habu temple complex have been unsuccessful. This year, at the request of MoTA personnel, we experimented with using mirrors to flash the sun's rays at the pigeons to drive them away from the buildings. Although this idea proved somewhat effective, it requires continuous work throughout the day, every day.

TT 107: THE TOMB OF NEFERSEKHERU

The Epigraphic Survey resumed fieldwork at TT 107, the tomb of Nefersekeru (fig. 15), from February 14 to April 6, 2022, focusing on epigraphic documentation of inscribed doorway fragments recovered during clearance in previous seasons and on collation of the in situ wall reliefs. The work was supervised by SCA/MoTA inspectors Ms. Shaimaa Mohammed Ahmed Shahat and Ms. Iman Abd el-Nasser Labib.

Senior artist Sue Osgood and assistant director/senior epigrapher Brett McClain checked the drawings of the wall scenes in the upper facade register, and Sue continued to pencil inscribed wall and portal fragments found during the 2019–20 season (fig. 16). Epigrapher Ariel Singer collated



Figure 15. Overview of the courtyard and portico of TT 107, the tomb of Nefersekeru, from the west. Photo by Ray Johnson.



Figure 16. Sue Osgood penciling a limestone fragment at TT 107. Photo by Ray Johnson.



Figure 17. Hiroko Kariya testing a fragment join at TT 107. Photo by Ray Johnson.



Figure 18. Inspector Iman Abd el-Nasser Labib, Gharib el-Wair Ghaba, and Yarko Kobylecky photographing fragments at TT 107. Photo by Sue Osgood.

fragment drawings from earlier seasons. Conservator Hiroko Kariya inventoried the inscribed fragments, rehoused them in protective storage boxes, and entered each fragment and joined group into the TT 107 fragment database (fig. 17), while Yarko Kobylecky, assisted by Gharib el-Wair Ghaba, photographed the last of the fragments recovered during the 2019–20 season (fig. 18). Because of COVID-19 travel restrictions, no excavation or clearance took place at TT 107 this season.

LUXOR TEMPLE

The Epigraphic Survey's documentation and conservation work at Luxor Temple this year focused on four main areas: the west Akhenaten *talatat* magazine, the blockyard, the divine king's chamber/Roman imperial cult chamber, and the chamber of offerings (second hypostyle hall). Our work was supervised by SCA/MoTA inspectors Ms. Mahasen Abdel Hamid Ahmed Mansour, Ms. Ebtahag Ahmed Ali Ahmed, Ms. Hala Ahmed Mohamed El Samman, Ms. Sabah Mahmoud Abdel Galil Mohamed, and Ms. Esraa Ahmed El-Taher Mohamed Ibrahim Awad.

In the divine king's chamber, Owen Murray completed the photogrammetric recording of a portion of the south wall east of the apse. Digital artist Krisztián Vértés continued penciling of the pharaonic reliefs on the south wall (fig. 19). His drawings of the Roman frescoes are now complete and will be published in a volume in our Luxor Temple series. A companion volume will be dedicated to the Amenhotep III reliefs partially covered by the frescoes.

In the adjacent hypostyle hall, site manager Jay Heidel continued penciling the reliefs on the east wall (fig. 20). This season he finished the penciling for the Mut and Amun bark processions, thus completing the second register and part of the third register, more than half of the 10.5 × 11.5 m wall. Ariel Singer and Brett McClain finished the first and second collations, respectively, of first-register scene LE 71 (fig. 21). Ariel also completed the first collation of LE 69 and began the first collation of LE 70, and Ray Johnson completed the second collation of LE 69.

This year, the work in the Luxor temple blockyard was focused on cleanup and reorganization, as well as on the expansion of the Luxor Temple fragment database. After the Sphinx Road inauguration in November, our workmen spent many weeks assisting Luxor Temple SCA director Ahmed Araby and his MoTA personnel in cleaning up (fig. 22). Chicago House workmen also repaired and replaced lights and chain stanchions in the blockyard open-air museum, and they spent more than a month spreading gravel between the mastaba rows to thwart the local dogs, whose holes have been undermining the platforms' structural integrity. This gravel was kindly made available to us by Director Araby and has greatly cut down on the dust in the blockyard storage area.

Our workmen also moved various granite statue pieces to a mastaba with related pieces located west of the Colonnade Hall. One of them, discovered by Luxor Temple project manager Gina Salama and identified by Ray as part of a colossal black granite foot, was reattached to the left foot



Figure 19. Krisztián Vértés drawing in the imperial cult chamber. Photo by Ray Johnson.



Figure 20. Jay Heidel drawing in the Hall of Offerings. Photo by Ray Johnson.



Figure 21. Ariel Singer collating in the Hall of Offerings. Photo by Ray Johnson.



Figure 22. Mohammed Selim and Mustafa Shimi cleaning in the blockyard open-air museum. Photo by Jay Heidel.

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of the eastern seated colossus at the south end of the Ramesses II court (fig. 23).

In January, digital photographer Mariusz Caban joined our blockyard documentation team (fig. 24). He continued to expand our corpus of fragmentary material that has been photographed for 3D modeling, archiving, and use as the basis for future drawings. He started with the fragment shelf storage units that run along the inside of the blockyard's east wall. After that, he began the documentation of the fragments stacked in a special area and found to originate from the Amenhotep III-era southern shrines of Luxor Temple itself. With thirty-seven storage shelves and four Amenhotep III mastabas, Mariusz photographed 1,175 fragments in total and set up a system for recording many more. He will process the data during the summer months, building a 3D model of each fragment. Part-time Chicago House employees Ms. Nadia Hassan and Dr. Shaimaa Mandour assist in processing and building the 3D models. This season, they built about 400 models of Akhenaten *talatat* from the west *talatat* magazine.



Figure 23. Luxor Temple director Ahmed Araby, inspector Ms. Sabah, and Chicago House workmen Ahmed and Mohammed joining the colossal statue's foot fragment. Photo by Ray Johnson.



Figure 24. Mariusz Caban photographing fragments in the Luxor Temple blockyard. Photo by Ray Johnson.

Figure 25. Hala Mohammed numbering fragments in the blockyard. Photo by Ray Johnson.



Gina Salama supervised the cleaning and restacking of material in the main blockyard and shelf storage units in preparation for photography, and she also supervised the work of Ms. Hala Mohammed and Mr. El Azab Hassan. Over the past several years, Hala has diligently glued thousands of numbered aluminum

tags on fragments in the main blockyard and elsewhere, and this season she helped verify fragment locations and ensured their tags were still sound and uniformly applied (fig. 25). Moreover, she verified the location of 2,366 fragments in the west *talatat* magazine, and together with El Azab, she numbered 1,080 fragments in preparation for photogrammetry and 3D modeling. El Azab worked behind Hala after the tagging, taking an iPad reference snapshot of each fragment (with a scale) and recording its location (the side, section, and mastaba where it may be found). This information, including the snapshot, is entered into the Luxor Temple fragment database ahead of the photogrammetric documentation, so that Mariusz can more easily keep track of what has been done and what he has yet to do. This season, El Azab worked through twenty-two mastabas and approximately 3,000 fragments and also glued tags on about 200 fragments.

Owen Murray returned to the Luxor Temple blockyard to carry out 3D modeling of the thirty-nine fragments that form the Bentresh corpus, containing part of a famous text also recorded on a stela in the Musée du Louvre. The digital models will help with virtual reassembly



Figure 26. Gina Salama and Chicago House workmen organizing the *talatat* magazine. Photo by Jay Heidel.

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of the fragments as we prepare the inscription to be included in our Luxor Temple publication program.

In the west *talatat* magazine, Gina Salama supervised the restacking of the southernmost row of *talatat*, which had been stored here during the 1970s by the Akhenaten Temple Project and had partially collapsed during the summer of 2021 (fig. 26). This involved moving and assessing each block and rebuilding the row atop a new “foundation” of unmortared sandstone blocks.

Conservator Hiroko Kariya reorganized fragments stored on shelves to create more space for fragments needing protection and did her annual condition survey of the blockyard and open-air museum holdings (fig. 27). In the west *talatat* magazine, she completed consolidation, mending, and loss compensation on about a dozen blocks. In the main blockyard, in consultation with Ray, she treated ten priority fragments.

Finally, Luke Hollis made more than 600 laser scans throughout the Luxor Temple precinct for a 3D model framework on which Owen Murray will locate our data-intensive photogrammetry of scenes and walls (fig. 28). This experimental collaboration has provided the opportunity to



Figure 27. Hiroko Kariya conserving fragments in the *talatat* magazine. Photo by Ray Johnson.



Figure 28. Luke Hollis making 3D scans in Luxor Temple. Photo by Ray Johnson.

test the combination of laser-scanning technology with photogrammetry and to evaluate its potential application for use in future documentation projects.

KHONSU TEMPLE, KARNAK

On March 17 and 19, 2022, Ray Johnson, accompanied by SCA/MoTA inspector Ms. Fatema Ahmed Mohamed, conducted a survey on the rooftop of Khonsu Temple of reused blocks used in the roof's construction (fig. 29). This survey was a continuation of the Epigraphic Survey's recording of the reused material in Khonsu Temple, starting with the foundations when the American Research Center in Egypt (ARCE) conducted pavement and foundation restoration work throughout the temple in 2008–13. Our team provided the epigraphic documentation component of that project, recording the inscribed faces on the reused blocks before they were paved over with new stone.

Ramesses III constructed Khonsu Temple out of stone taken from several earlier monuments that were dismantled for the purpose. The Epigraphic Survey had previously started to record the reused blocks on the north part of the roof, but not on the south section, over the hypostyle hall and court, or on the pylon exteriors (fig. 30). Mapping the positions of the inscribed fragments in this section was the focus of this season's work. These maps will be used as a guide for later documentation of the reused blocks.

Thirty-six additional reused blocks were noted and mapped. Fifteen were from the mortuary temple of Amenhotep III (fig. 31), eighteen were from the mortuary temple of Ay/Horemheb, and three were from an unidentified temple of Ramesses II. Special thanks are due to Nicholas Warner, project manager for the ARCE Khonsu Temple conservation program, and to project conservator Theo Gayer-Anderson for their kind assistance.



Figure 29. Inspector Fatema Ahmed Mohamed on Khonsu roof, east side. Photo by Ray Johnson.



Figure 30. View toward the south from the roof of Khonsu Temple. Photo by Ray Johnson.



Figure 31. Amenhotep III mortuary temple jubilee block on north side of Khonsu east pylon. Photo by Ray Johnson.

CHICAGO HOUSE AND THE MARJORIE M. FISHER CHICAGO HOUSE LIBRARY

On our return to Chicago House after eighteen months' hiatus, we found the Chicago House library cleaned, repainted, reorganized, relabeled, and completely relit by Tina Di Cerbo and our workmen, who had accomplished this refurbishment during this difficult period. We are grateful to them and to our administrative and finance team, Essam el-Sayed, Samir el-Guindy, and Samwell Maher, for taking such good care of Chicago House in our absence. While many precautionary measures were taken to prevent the spread of COVID-19 in the library this season, it was a joy to reopen the facility and to welcome our friends once again. According to head librarian Anait Helmholz and assistant librarian Martina Roshdy, approximately 400 professional colleagues used the facility, including numerous Egyptian graduate students working on advanced degrees, MoTA inspectors and colleagues, and members of foreign archaeological missions. We added 168 new titles to the library's collection, including thirty-four journal issues and twenty-nine monographs. Nineteen of the new titles were gifts. Moreover, this season we were able to provide our library patrons with a new digital catalog of all our holdings. A designated computer for the digital catalog is now located on the card catalog cabinet for use by library patrons and Epigraphic Survey staff.

THE TOM AND LINDA HEAGY CHICAGO HOUSE PHOTOGRAPHIC ARCHIVES

This season staff photographer Yarko Kobylecky, assisted by Gharib el-Wair Ghaba and Sue Lezon, produced one hundred seventy-five 8" × 10" film negatives in the chapel of the God's Wife of Amun Amenirdis. All of these film negatives were accessioned in the Chicago House photo archives and our large-format photo database, along with forty-two 4" × 5" negatives of blocks and fragments taken at the Western High Gate and fifty-eight negatives from TT 107. All new film negatives were scanned and contact proofed, with a duplicate set sent to the OI. Alain and Emmanuelle Arnaudès continued to enter digital data into the Chicago House archives database. This spring, 551 files were entered, making a total of 10,799 entries and counting. They are also working closely with Chicago House centennial historian Emily Teeter on archival material, including photographs and correspondence, which will form the basis of an upcoming Epigraphic Survey centennial publication, supported by a new purpose-built "Chicago House Papers" database.

digitalEPIGRAPHY WEBSITE

Editor-in-chief Krisztián Vértés, Julia Schmied, and many contributing colleagues, including other members of the Chicago House team, continue regularly to post new material on the digitalEPIGRAPHY website (www.digital-epigraphy.com), with articles, tutorials, reviews, and relevant contemporary studies of historic epigraphic documentation efforts related to ancient Egypt. These resources now include the Painted Hieroglyphs Database and the Visual Documentation Database, both of which are growing, as well as thoughtful reviews of the new digital drawing equipment and tools that are transforming our field with every passing year.

* * *



Figure 32. Ray Johnson's retirement party, Chicago House, March 12, 2022. Photo by Sue Lezon.

In conclusion, a final note from Ray. Many of you know that I retired as director of the Epigraphic Survey in August (fig. 32), so this is my last annual report. During the past four decades I have served Chicago House first as apprentice artist, then as artist, senior artist, assistant director, and finally, almost twenty-five years ago, Epigraphic Survey director. The time has flown by. Chicago House has been my classroom and my home for most of my life, and I feel tremendously privileged to have served this noble institution for so long with so many dedicated and talented people. While the projects of the Epigraphic Survey became my projects, it is now time for me to pass on the baton and pursue my own research and writing (Amenhotep III and the Amarna period, of course). I am pleased to tell you that Chicago House assistant director Dr. J. Brett McClain, well known to you all from his twenty-four years working for the Epigraphic Survey, will take on the duties of Chicago House interim director and will continue to uphold the highest standards of the Epigraphic Survey in Luxor. Chicago House is truly blessed.

The Epigraphic Survey professional staff during the 2021–22 field season consisted of W. Raymond Johnson, director; J. Brett McClain, assistant director/senior epigrapher; Jen Kimpton, epigrapher/Medinet Habu Western High Gate site manager; Christina Di Cerbo, Ariel Singer, Aleksandra Hallmann, and Julia Schmied, epigraphers; Gregory Marouard, project archaeologist; Boyo Ockinga and Susanne Binder, remote project archaeologists/epigraphers; Margaret De Jong, Susan Osgood, and Krisztián Vértes, senior artists; Keli Alberts and Dominique Navarro, artists; Jay Heidel, Luxor Temple site manager/architect/artist; Gina Salama, Luxor Temple project manager/digital data engineer; Yarko Kobylecky, chief staff photographer; Owen Murray, senior digital photographer; Mariusz Caban, digital photographer; Susan Lezon, photo archivist; Essam el-Sayed, finance manager; Samir Guindy, administrator; Samwell Maher, assistant administrator; Anait Helmholz, Chicago House head librarian/Medinet Habu Western High Gate assistant; Martina Roshdy Maher, assistant

librarian; Frank Helmholtz, master mason; Johannes Weninger, assistant stonemason; Mohamed Abo El Makarem, Medinet Habu head conservator; and Hiroko Kariya, project conservator for Luxor Temple and TT 107. Alain and Emmanuelle Arnaudès worked on the Chicago House digital archives database. As always, special thanks must go to our forty full-time Egyptian workmen, as well as to our seasonal workmen, who provide indispensable support of all aspects of our fieldwork.

Sincerest thanks are due to the Egyptian Ministry of Tourism and Antiquities and the Supreme Council of Antiquities (SCA), Minister of Tourism and Antiquities Dr. Khaled el-Enany, SCA Secretary General Dr. Mostafa Waziri, General Director of the Pharaonic Sector Dr. Ayman Ashmawy, General Director of Foreign Missions Dr. Nashwa Gaber, General Director of Antiquities in Luxor Dr. Fathy Yaseen, Gurna Inspectorate General Director Bahaa el-Din, Luxor Temple Director Ahmed Araby, and all of our friends and colleagues in Egypt for another fruitful collaboration this year.

We also extend special thanks to the many friends of the OI and Chicago House whose generous support has funded our preservation programs in Luxor. Thanks to USAID mission director Leslie Reed, former director Sherry Carlin, and USAID representatives Mohamed Abdel Rahman, Mustansir Barma, and Sylvia Atalla; Dr. Marjorie M. Fisher; Nicole Williams and Larry Becker; David and Carlotta Maher[†]; O. J. and Angie Sopranos; Misty and Lewis Gruber; Ward and Diane Zumsteg; Andrea Dudek; Nassef Sawiris; Kitty Picken; Ellen and Tom Granger; David and Allison Harley; Piers and Jenny Litherland; Tom Van Eynde; Jan Johnson and Donald Whitcomb; Marjorie B. Kiewit; Tom and Linda Heagy; Shafik Gabr, ARTOC Group, Cairo; Holly J. Mulvey; Judge and Mrs. Warren Siegel; Barbara Breasted Whitesides and George Whitesides; Miriam Reitz Baer; Beth Noujaim; James Lichtenstein; Priscilla (Peppy) Bath; Charlie Secchia; Emily Fine; Nan Ray; Anna White; Willard White; Janet and Karim Mostafa; Elisabeth R. French; Waheeb (Ricky) and Christine Kamil; Caroline Lynch; Polly Kelly; Louise Grunwald; Lowri Lee Sprung; Andrew Nourse and Patty Hardy; Kate Pitcairn; Dr. Lorna Straus; Dr. Ben Harer; Dr. Roxie Walker; Tony and Lawrie Dean; Mr. Charles L. Michod Jr.; Dr. Louise Bertini, Mary Sadek, and Nick Warner of the American Research Center in Egypt; and all our friends and colleagues at the OI.

We must express very special gratitude to USAID Egypt for the vital support of our documentation, conservation, restoration, and site management programs at Medinet Habu. These have been most challenging years, and this grant has enabled us to get through them.

GIZA PLATEAU MAPPING PROJECT

MARK LEHNER | ANCIENT EGYPT RESEARCH ASSOCIATES

From August 21, 2021, to April 4, 2022, Ancient Egypt Research Associates (AERA) carried out fieldwork, directed by Mark Lehner, at the Heit el-Ghurab (HeG) site and the Menkaure Valley Temple (MVT).

HEIT EL-GHURAB

At the HeG site, AERA worked on the derelict Abu Hol Sports Club with its soccer field. The Ministry of Tourism and Antiquities had reclaimed this land from the Ministry of Youth and Sports as of summer 2021.

September 2021 Sondages

From August 21 to September 9, 2021, we removed vegetation that had invaded the site and then finished documenting the modern features of the sports club.

Between September 25 and September 30, 2021, we excavated three sondages (fig. 1). We excavated Sondage 145 in the middle of the soccer field, where a 2003 electromagnetic conductivity survey seemed to show the southwest corner of the Royal Administrative Building (RAB) about a meter below the surface. But we found only clean sand down to groundwater at 14.38 m above sea level (asl) (fig. 2). We had to stop our excavations at this point, 3.29 m below the surface, because of the groundwater and safety precautions.

Finding no architectural remains here, we excavated Sondage 146, 22.50 m to the north, to pick up the RAB west wall. We again encountered clean sand and then groundwater, but at a depth of 3.54 m we found what appeared to be the extension of the wall. We confirmed that the RAB wall did indeed extend south under the soccer field when we opened Sondage 147 at the north perimeter of the sports club (fig. 3).

Clearing, Mapping, and Targeted Excavation

In the first week of January 2022, we demolished and removed all modern structures and foundations from the sports club. In February and March 2022, we cleared down to the Old Kingdom settlement ruins in the northwest and southwest corners of the soccer field, saving the RAB for a longer season of more intensive excavation.

In the northwest we removed clean sand 2.70 m deep, exposing the surface of the settlement ruins, which sloped markedly down to the south. At 14.74 m asl, groundwater prevented us from following the slope any farther. The ruins consisted of three magazines that extended south from four enclosures (E1–5) that we knew from prior seasons. We excavated two spaces in the newly revealed complex, both of them filled with fragmented mudbrick and pottery (fig. 4). In Space 10,853, we uncovered a clay sealing bearing the name of Khafre (fig. 5).

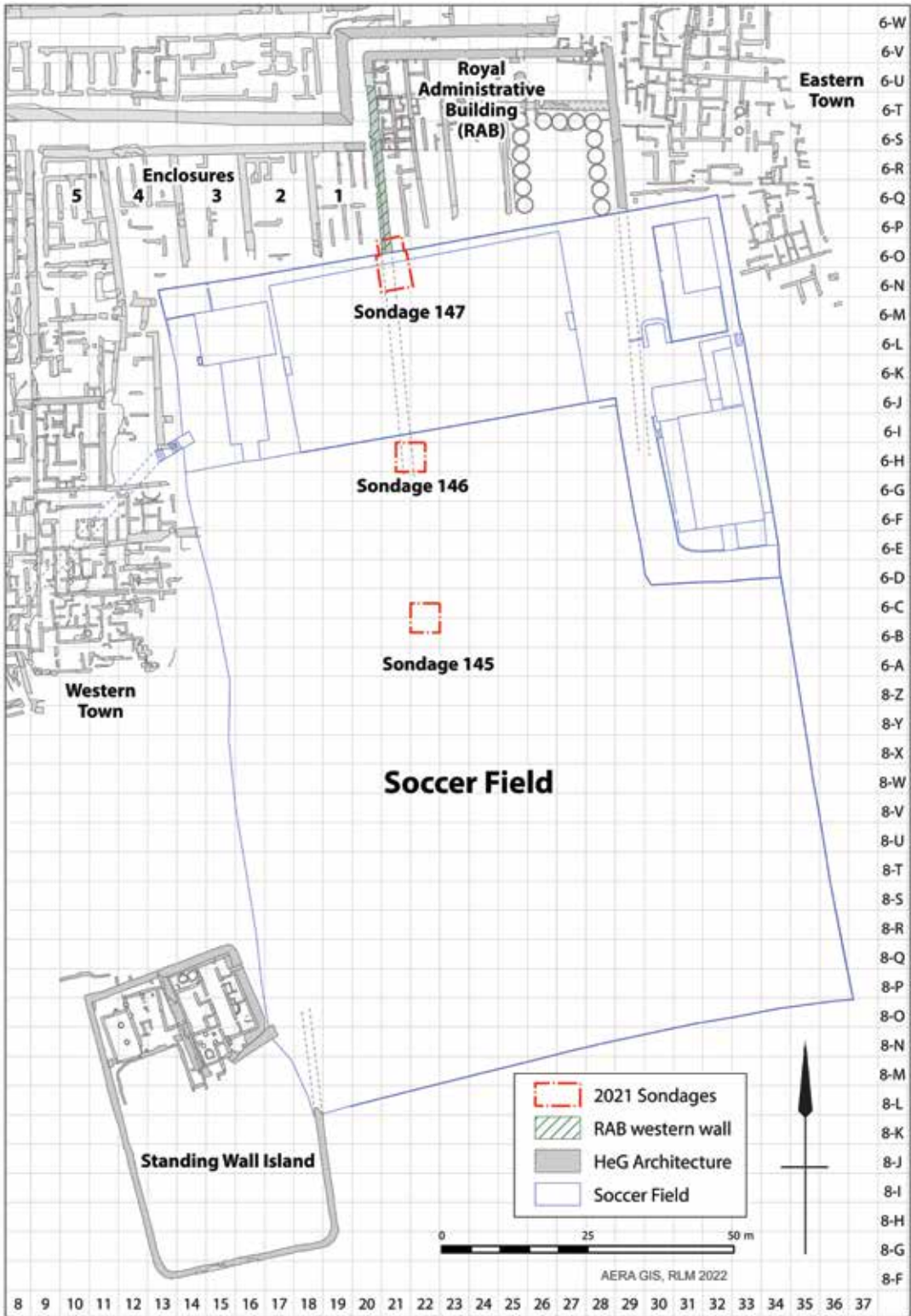


Figure 1. Map of the Abu Hol Sports Club showing the location of Sondages 145, 146, and 147, excavated between September 25 and September 30, 2021.



Figure 2. Post-excitation view of Sondage 145 showing the thick, dark-brown surface of the soccer field overlying clean sand down to groundwater.



Figure 3. The west RAB wall continuing below the Abu Hol Sports Club; view to the south.

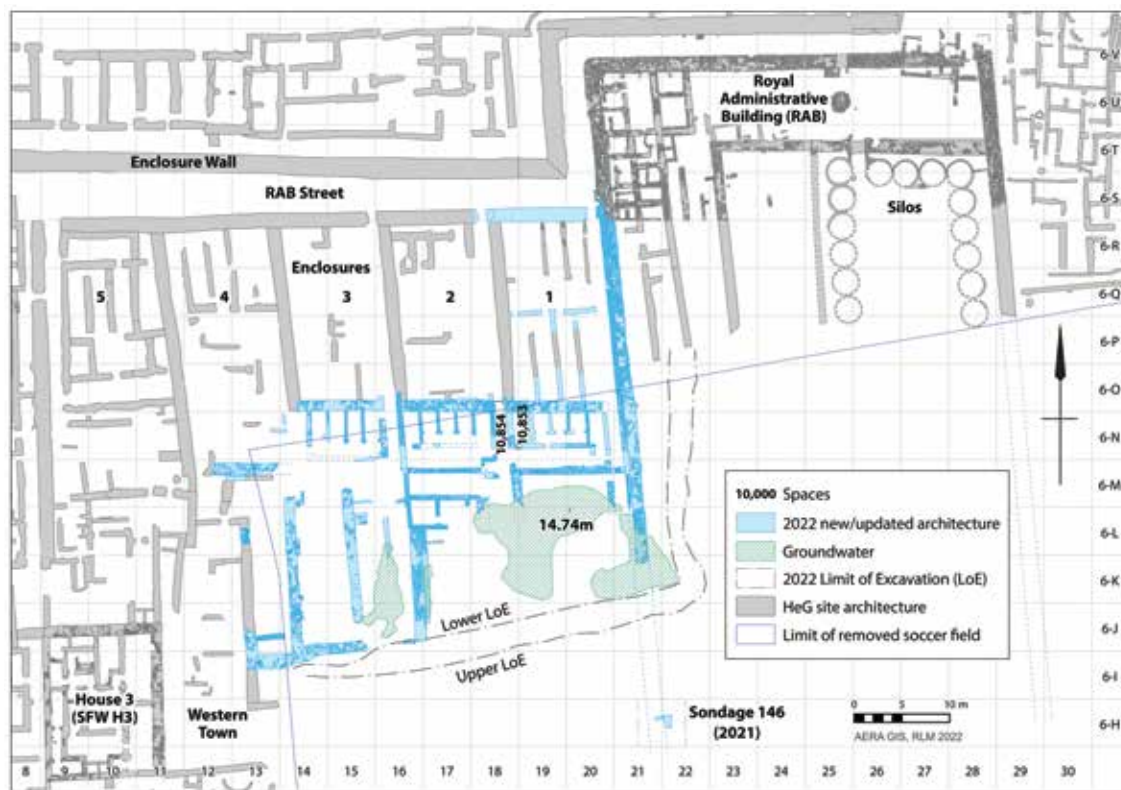


Figure 4. Map of the Fourth Dynasty settlement walls in the northwest corner of the Abu Hol Sports Club, with walls newly exposed or updated and mapped during the 2022 spring season highlighted in blue.

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In the southwest corner of the soccer field, we cleared a 4.17 m deep blanket of sand to expose an area along the east side of Standing Wall Island (SWI), named for the Old Kingdom fieldstone walls we found standing more than a meter high in 2004 (fig. 6). SWI is encircled by a large wall of broken stone that loops around to the south and east, with a return north. We dubbed the compound the OK (“Old Kingdom”) Corral after noting parallels with corrals in Egyptian sites, ancient



Figure 5. Sealing with the name of Khafre found in Space 10,853. *Left*, front. *Right*, back.



Figure 6. Area alongside SWI in the southwest corner of the former soccer field; view to the north.

depictions, and ethnographies. The north end of SWI consists of Enclosures ES1 and ES2. Earlier excavations revealed a house in ES2, up against the southwest corner of the soccer field. We hypothesized that a corridor ran between the east wall of ES2 and the SWI wall and that cattle may have been led through this corridor into the corral.

When we excavated this season, however, we found that the SWI wall turned west in a rounded corner and attached to the southeast corner of ES2 (fig. 7). We discovered a chamber inside the curve and a gate through the north end of the wall.

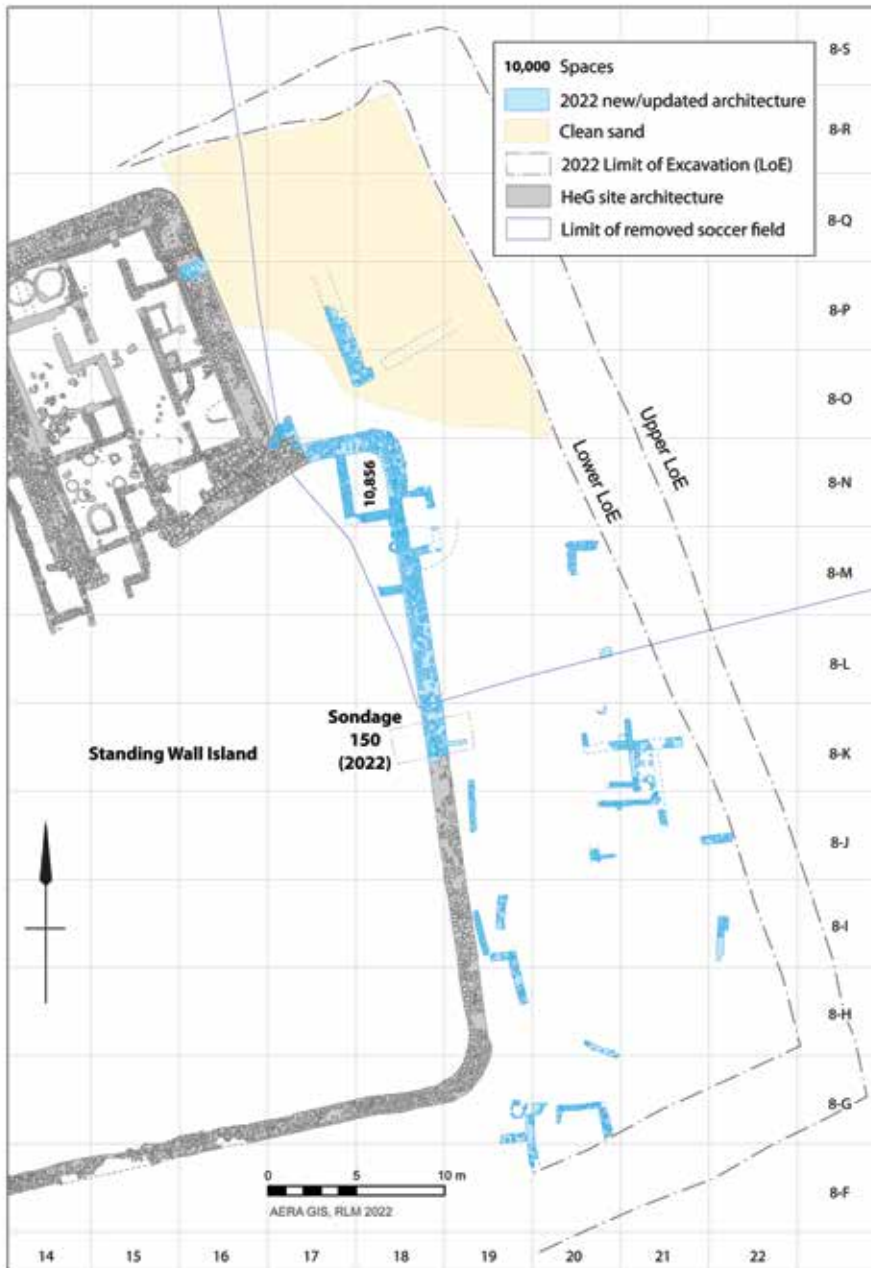


Figure 7. Map of Area SWI, extending from the southwest corner of the former soccer field, with newly mapped architecture highlighted in blue.

East of the OK Corral wall, we uncovered an ancient settlement deposit rising gradually to the south, with walls showing in the surface, including a possible bakery.

MENKAURE VALLEY TEMPLE

A principal aim in 2021 (September 11 to December 16), carried over from the prior two seasons, was to complete our work on the west side of the MVT to find the temple foundations and the subsequent building and occupation history (figs. 8 and 9). As part of this process, we partially cleared

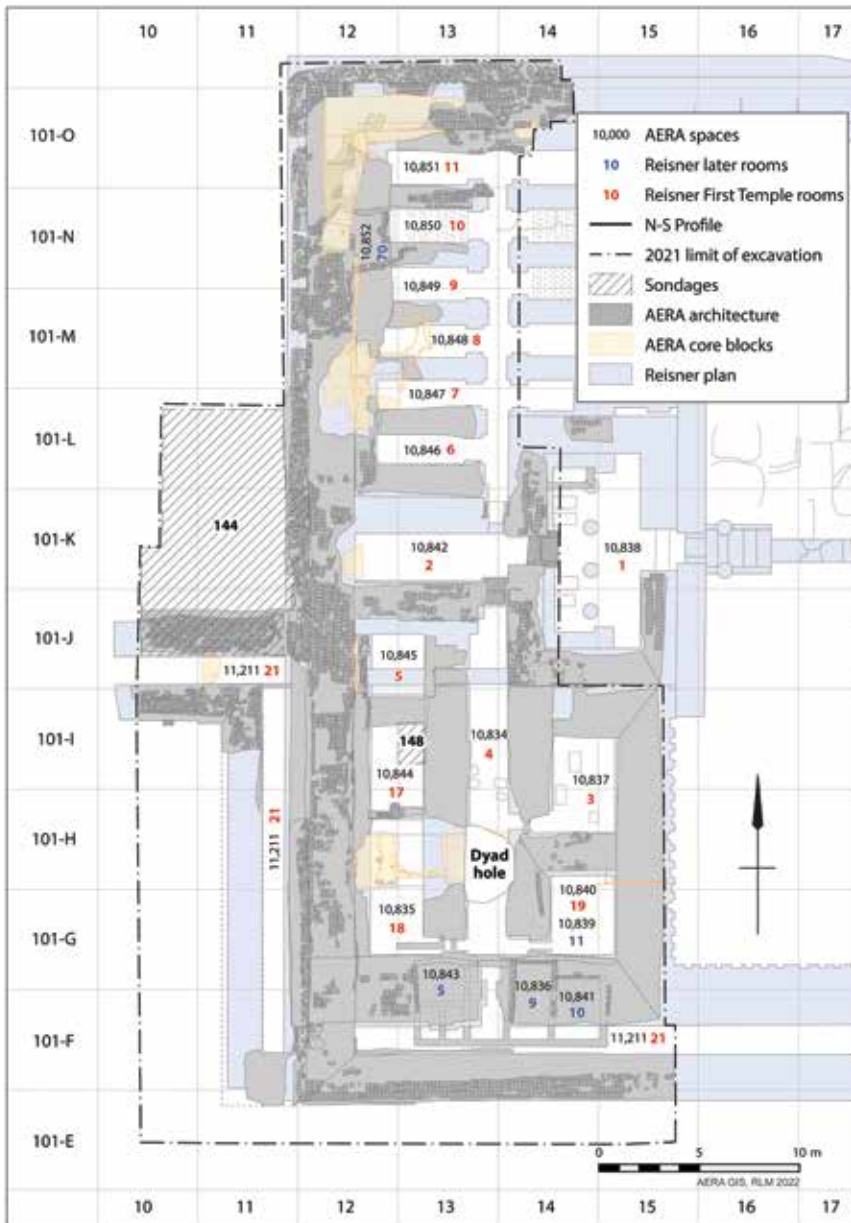


Figure 8. Map of the west part of the MVT showing the areas studied in AERA seasons 2019–21, including Sondages 144 and 148 and the Dyad Hole.



Figure 9. Area cleared and studied on the west side of the MVT in November 2021; view to the north.

the northwest magazines, Rooms 6–11, thereby completing our exposure of the east-facing elevation of the MVT west wall. Using photogrammetry, Dan Jones documented this elevation profile from more than 3,500 photos.

In Rooms 7 and 11, thanks to Reisner’s 1910 exploratory holes, we came upon the limestone bedrock foundation of Menkaure’s stone temple, which had eluded us for two seasons. The bedrock steps down from north to south, from 17.00 to 16.25 m asl, indicating that Menkaure’s builders based the temple on the steps, terraces, or slope of a quarry.

Sondage 144

We continued our excavation in Sondage 144, started in 2020, where the causeway north wall meets the back west wall of the temple, an area that had never been excavated. At some point, builders raised the floor level 1.10 m for a new paved surface. Above it we found very little cultural material, but we documented gravel deposits culminating in much larger limestone pieces deposited by the flash flood that broke through the west temple wall. Reisner saw evidence of this flood from inside the Offering Hall. When people rebuilt the temple (Reisner’s “Second Temple”), probably in the mid to late Sixth Dynasty, they first cleaned out the flood deposits and dumped them outside against the west wall, which they rebuilt. Later, a “water wall” of broken stones and clay was added as a barrier against further desert flash floods (fig. 10).



Figure 10. Ben Bazely explaining the deep probe in the corner of Sondage 144 where the north causeway wall meets the back of the MVT west wall; view to the southeast.

Hole to allow any future work to be undertaken safely. In March 2022, we tried again, unsuccessfully, to reach a lower level by pumping the groundwater.

ACKNOWLEDGMENTS

For a successful 2021–22 field season, we thank Dr. Khaled El-Enany, Minister of Tourism and Antiquities; Dr. Moustafa Waziri, General Director of the Supreme Council of Antiquities; Dr. Nashwa Gaber, Director of the Department of Foreign Missions; Ashraf Mohedein, Director of Giza; Ahmed Eizz, Supervisor of Inspectors; Hani Zaki, Inspector for the AERA field lab and storeroom; and site inspectors Ahmed Eizz, Shaimaa Abd el-Raouf, Shaimaa el-Khateb, Marwa Mohamed Mohamed, Amr Mohamed Fahmy, and Helmy Helmy Abdel Halem.

Our work at the HeG site was made possible by a generous grant from the National Geographic Society (NGS). I thank Dr. Fred Hiebert, NGS senior archaeologist. Our MVT work was supported by a generous grant from Dr. Walter Gilbert.

We thank Charles Simonyi and Microsoft, and Lee and Ramona Bass, for major support for our 2021–22 season. We also thank Cameron and Linda Myhrvold; Rebecca Sperber, director of the

Dyad Hole

In the hole where Reisner found the famous dyad statue of Menkaure and a queen, we tried three more times to pump the groundwater to reach the bottom and search for statue fragments (fig. 11).

Reisner built walls of broken stone and mud around the Dyad Hole to retain the debris from his backfilling as he excavated to the east, because he believed more statue fragments lay below the level at which he found the dyad in January 1910. He never returned to the hole, but he was right about the statue fragments. Our workers pulled up small fragments of exotic stone from under the water at the bottom of the hole to a level 3.71 m below the top of the core block against which the dyad stood, including fragments of graywacke, red granite, travertine (Egyptian alabaster), and larger fragments of limestone. Some of the graywacke and travertine pieces bore worked surfaces. One showed pleating, as on a royal skirt or headdress. The workers also pulled up pottery fragments, most of which were of Old Kingdom date. But two fragments appear to be from vessels dating to the Late Roman period.

At the end of the 2021 fall season, we built wooden shoring around the Dyad



Figure 11. Petrol generator being used to pump the water from the Dyad Hole; view to the east.

Glen Dash Foundation; Bruce Ludwig; Nick and Leslie Hanauer; Peter Norton and the Isambard Kingdom Brunel Society; Marjorie M. Fisher; Howard and Louise Phanstiel; Ed and Kathy Fries; William Frank; Janice Jerde and Peter Del Rosso; Kathy DeRue; William Frank; Jeffrey Lamia; Andrew Safir; Matt and Emily Kane; Richard Redding; and Matthew McCauley for their major contributions.

The AERA field team included Dr. Mark Lehner, project director; Dr. Mohsen Kamel, executive director of AERA Egypt and archaeologist; Dr. Richard Redding, chief research officer; Dr. Claire Malleson, archaeological science and AERA lab director; Dan Jones, senior archaeologist; Ben Bazely, archaeologist; Manami Yahata, archivist and archaeologist; Mathilde Prevost, archaeologist; Mohamed Helmi, surveyor; Rebekah Miracle, GIS director; and Sayed Salah Abd el-Hakim, overseer of the workers.

KITES IN CONTEXT

YORKE M. ROWAN AND AUSTIN “CHAD” HILL

The inaugural season of the Kites in Context project ran from June 17 to July 7, 2022. This new project, funded by a grant from the National Science Foundation to Austin “Chad” Hill, Kathleen Morrison, and Yorke Rowan, is designed to explore the phenomenon known as “kites” in the Black Desert of eastern Jordan. Termed *kites* by early pilots flying over the region in the 1920s because of their resemblance to a small boy’s kite when viewed from the air, these structures are animal traps for hunting gazelle. Often joined by additional wall networks, they form chains of traps extending across the rocky terrain from Syria to Saudi Arabia. Although well known from satellite imagery, little archaeological research has been conducted on kites until very recently due to the difficulty of field work in the region. This multiyear project is designed to learn more about the chronological development and function of these traps through multiple scales of investigation, including satellite imagery to examine the distribution of kites and associated structures, drone imagery to map and record the landscape in high resolution, and excavation and terrestrial survey to study individual kites at a much smaller scale.

For this first year of the Kites in Context project, our primary goals were to begin drone-based mapping of the landscape, with a focus on recording as many kites in the local area as possible, and initial excavations of selected features of one kite. We concentrated on the area around a site located along a wadi roughly 25 km southwest of er-Ruweished, Jordan. This site appears to be a focal point for human and animal use of the landscape, represented by many possible Neolithic structures, and sits right along one of the core “chains” of kites in the eastern desert. Excavation during the 2022 season focused on the kite immediately to the north of this wadi, which we have labeled “Kite 1-4.” The aerial survey concentrated on kites and associated features to the immediate north and south.

Our small team included Morag Kersel (DePaul University); students Blair Heidkamp (University of Texas at Austin), Rosemary Hanson, Quinn Comprosky (DePaul University), and Jen Feng (University of Illinois Urbana-Champaign); and Department of Antiquities representative Bilal Boreni. Additional assistance was provided by local visitors who provided information, suggestions, guidance, and sometimes cold drinks or fresh coffee and tea.

EXCAVATIONS

For the initial season of the Kites in Context project, the primary goal of the excavation was to start to understand the construction and function of the kite cells. Kite 1-4 was selected because it was intact and largely untouched by modern changes (e.g., road cuts, limestone mining). Nevertheless, accessibility was challenging because vehicles could come within only 2 km of the kite, so all equipment had to be carried in on foot, requiring a daily hike across the rocky terrain (fig. 1).

We selected three cells around the main enclosure of Kite 1-4 for excavation. Each was sectioned and half the cell was excavated, with the sediment sieved. Cells 1, 9, and 10 (fig. 2) were selected because they were intact. The interior configuration of each was not homogenous. Cell 9, for instance, is circular in shape, with walls that are 1.25–2.0 m thick, though the thickness is created in

PROJECT REPORTS | KITES IN CONTEXT

part by the tumble (fig. 3). The walls were apparently two to three courses high and constructed by loose stacking of smaller cobbles with larger stones placed on top. The interior of the cell measures 4 m across. Flat bedrock was exposed at 80 cm below the surface, covering more than half the exposure, and could have been used as a surface or floor for the cell. Few artifacts were recovered from the sieving.

Cell 10 had a similar sediment sequence to that of Cell 9, but many smaller cobbles were discovered toward the bottom (fig. 4). Removal of those cobbles exposed an interesting alignment of larger basalt cobbles, perhaps outlining the edge of a pit (figs. 5 and 6). No basaltic bedrock was discovered. Within this sediment at least one small drill was found, as well as fragments of Dabba marble (or possibly turquoise).



Figure 1. Landscape view from Kite 1-4 down to camp.

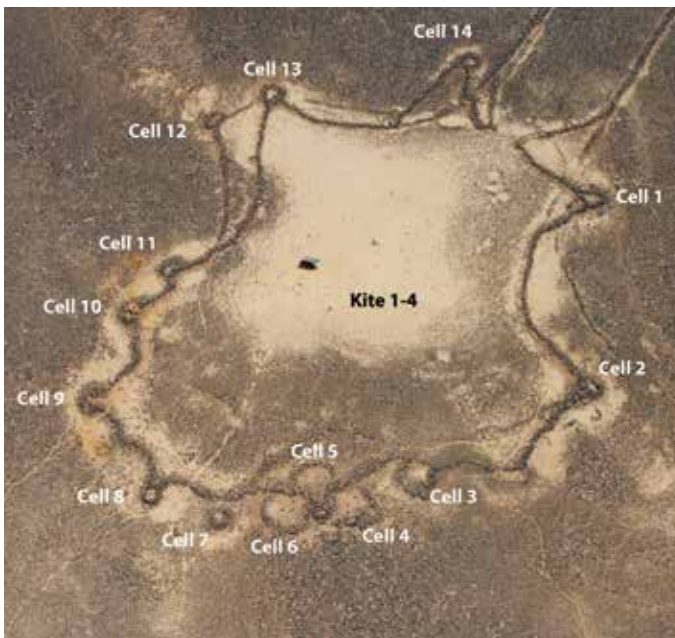


Figure 2. Kite 1-4, aerial view, with cell numbers marked (object in center is a shade).



Figure 3. Cell 9, basalt bedrock at bottom of excavation.



Figure 4. Cell 10, cobbles found near bottom of excavation.



Figure 5. Cell 10, bottom of cell.



Figure 6. Cell 10, stack of large basalt slabs.

Cell 1, larger than Cells 9 and 10, was bisected across the southwest–northeast axis to section the cell in half accurately. Although its loose, sandy fill was like that of the other cells, larger slabs 35 cm below the surface suggested a stack that had possibly fallen over. At 40–50 cm below the cell’s surface, a series of large, flat stones appeared to be bedrock.

These three cells demonstrate a diversity of construction styles for the kite cells, with varying shapes, depths, and floors. All three have walls facing the interior of the kite, suggesting that these cells probably represented blinds for hunters waiting for animals to enter the larger enclosure. An optically stimulated luminescence sample was collected from each of the cells in hopes of dating their construction.

AERIAL SURVEY

Previous Work

This new project builds on the aerial survey work that we conducted as part of the Eastern Badia Archaeological Project at Wisad Pools and Wadi Qattafi (Hill et al. 2020; Hill and Rowan 2017, 2022; Hill, Rowan, and Kersel 2014; Rowan et al. 2015, 2017). We previously demonstrated that high-resolution photogrammetry using drones can provide significantly greater recording of landscape data than satellite imagery alone. By surveying landscapes in the *badia* (desert areas) with drones, we can record human-made features at significantly higher resolution than is possible with satellite imagery, and we are able to produce elevation data (digital elevation models, or DEMs) that provide more information about how human-made structures were built to utilize landscape topography. Drone mapping allows us to record smaller and more difficult-to-see prehistoric features that may be challenging or impossible to document from satellite data. For instance, our drone survey at Wadi Qattafi allowed us to produce a database of thousands of ancient and modern structures (Hill and Rowan 2022).

2022 Aerial Survey Campaign

Our last drone-based survey with the Eastern Badia Archaeological Project was in 2016, when flying drones in Jordan was still permitted. We were happy to receive permission for the new project, with the help of the Royal Film Commission of Jordan and the Department of Antiquities, and with oversight by the military, to operate drones as part of the 2022 field season.

Our primary mapping equipment is an advanced drone—a DJI Phantom 4 RTK—and a smaller, much less powerful drone—a DJI Mini 2—as a backup. Based on an older drone model (the Phantom 4), the Phantom 4 RTK incorporates a real-time kinematic (RTK) GPS/GNSS receiver that makes it an ideal platform for archaeological



Figure 7. The Phantom 4 RTK taking off. Photo by Morag M. Kersel.

mapping (fig. 7). RTK positioning on board the drone is used to collect centimeter-accurate positioning data as “geotags” attached to every recorded image. These high-precision geotags can be used when post-processing sets of overlapping images with photogrammetry software to produce exceptionally accurate, high-resolution, and undistorted composite orthoimages of the landscape.

The Phantom 4 RTK is expensive, requires large batteries that take time to charge, and is slow and difficult to move around the landscape. The Mini 2 (fig. 8) makes an excellent backup in the event there are problems with the bigger drone, and it can also take quick, oblique photographs of the landscape. This drone worked perfectly for getting quick snapshots of the landscape showing the kites, related structures, and excavations. These images are not crucial for the analysis or mapping, but they are incredibly useful for illustrating the project.

2022 Aerial Survey Results

Fifteen individual kites were visited and approximately twenty-four different missions were flown, recording approximately 14,000 drone images of the kites and surrounding landscape. The vast majority are sets of mapping images that will need to be post-processed to produce the primary output of the survey: orthophotos and DEMs. In the field we are able to do only rough processing to check the data, and post-processing will take many weeks. But the result will be data such as the lower-resolution orthophoto and DEM shown in figure 9. A smaller fraction,



Figure 8. The Mini 2. Photo by Morag M. Kersel.

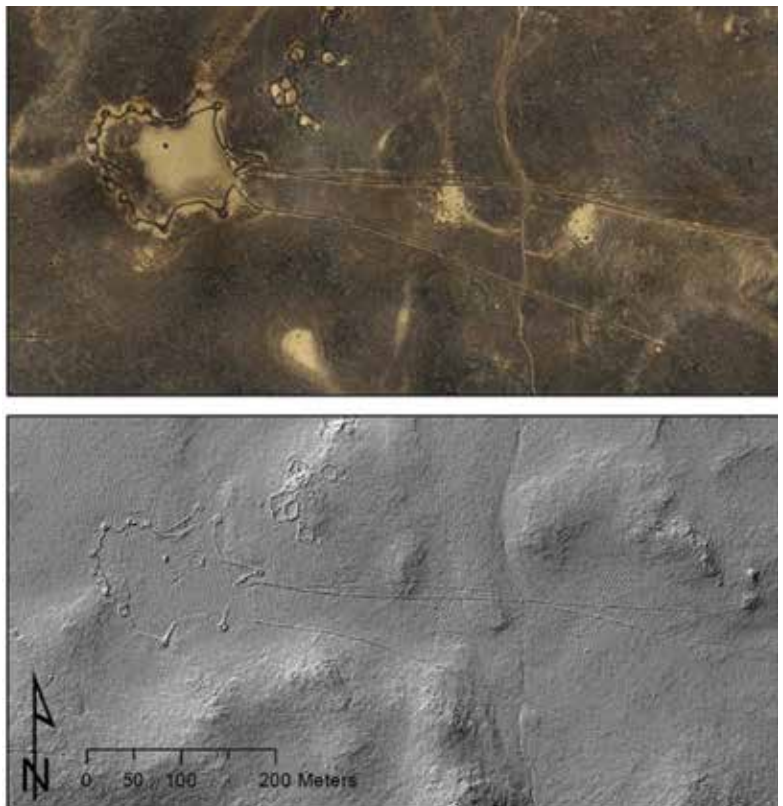


Figure 9. Low-resolution, quickly processed orthophoto (top) and DEM (bottom) of the area around Kite 1-4.



Figure 10. Oblique shot of kite with a “wheel” incorporated into the enclosure of the trap.

approximately 3,000 of the 14,000 images, are oblique shots meant primarily to serve as illustrations and basic recording of the kites and landscapes (fig. 10).

PETROGLYPH SURVEY

A high concentration of petroglyphs clustered around the potential water source of the area, which the local Bedouin refer to as the “Roman pool.” This clustering of petroglyphs seemed similar to one that we have previously written about at Wisad Pools, although less diversity of animals is represented (Hill et al. 2020). We undertook a small survey of the petroglyphs to see if we could get a glimpse into the past use of the landscape. We surveyed a 100 × 200 m area, recording more than 400 individual petroglyphs. Surprisingly, distinct patterning to the distribution is apparent. Petroglyphs concentrate at the highest elevations in the survey area, declining in density downslope except for vertical stones facing the pool area of the wadi. Surrounding the largest and highest tomb, presumably a burial from a later period, are dense clusters of camel depictions and Safaitic inscriptions. Immediately to the south, the camels and Safaitic inscriptions are replaced by petroglyphs that we associate with earlier prehistoric periods, as well as depictions of wild animals such as ibex (fig. 11).



Figure 11. Petroglyphs of ibex.

CONCLUSION

From the drone mapping to the excavations of kite cells and recording of rock art, this archaeological season was a successful one for the new Kites in Context project. Processing the 14,000 images into orthophoto maps and DEMs will take many months, but initial testing demonstrates that this data will produce maps of the greatest accuracy. Our excavations of the kite cells leave some questions unanswered—for example, how did they function? Did hunters use them as hunting blinds to wait for gazelle, or were they pits for the gazelle to fall into during their panic? We suspect that the former is the case, but confirmation will require further testing. Future seasons of research will focus on additional mapping of kites and excavation of structures that seem to be associated with the kites.

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ORIENTAL INSTITUTE NUBIAN EXPEDITION PUBLICATION PROJECT

SARAH ADCOCK, LISA HEIDORN, AND BRUCE WILLIAMS

AL-WIDAY I

A few hundred meters north and west of the village of al-Widay (fig. 1) is a close-packed cemetery that was found to contain 111 tombs. Dating to Old Kush II (contemporary with Middle Kerma, ca. 1800–1650 BCE) and Old Kush III (Classic Kerma, ca. 1650–1575 BCE), it offered an ordered series of contexts that could serve to calibrate the dating of the period in the Fourth Cataract region. The cemetery seriation started in the north, with tombs dating to Old Kush II, and extended to the south tombs, which belonged to Old Kush III. We have mentioned our work on the materials from this cemetery in past OI annual reports, and the text and images are now in place for publication. Only the remains of the animals found in the tombs needed study.

This year, we were fortunate to obtain the assistance of Sarah Adcock to study the animal remains from the tombs at al-Widay I (AW I). Sarah is currently a visiting assistant professor at New York University's Institute for the Study of the Ancient World and has worked on faunal analysis at

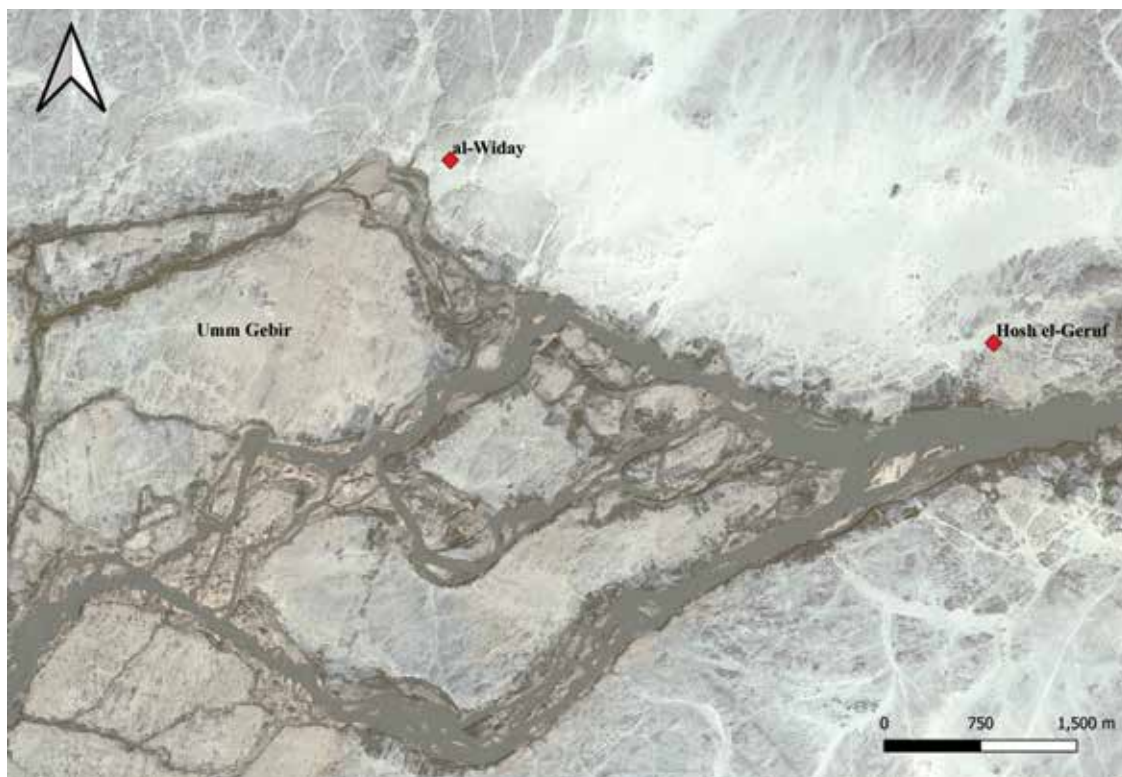


Figure 1. Fourth Cataract Nubian Expedition sites, 2007–8 campaigns.

sites throughout the Middle East. Similar animal sacrifices have been found in many burials in the Fourth Cataract region, but no analytical study has been published. Adcock's study, discussed below, will complete the work for the publication of al-Widay I as volume 19 of the Oriental Institute Nubian Expedition (OINE) series.

Preliminary Report on the Animal Remains from al-Widay I

Analysis of the animal remains from the OINE's 2007 and 2008 campaigns in the Fourth Cataract region began in June 2022. Currently, this work focuses on the animals included as funerary offerings at the large cemetery of AW I. The goal of the zooarchaeological analysis is to reconstruct the use of animals at the site and their role in local mortuary practices, with an emphasis on identifying possible diachronic changes from Old Kush II to Old Kush III. Synchronic comparison will also be made within phases to identify potential correlations between the age and species of the sacrificial animals and the characteristics of the human individuals with whom they were buried (e.g., age, sex, health, and social status as determined by other grave goods).

To date, approximately 700 diagnostic animal bone specimens have been recorded from six graves. (Unidentified fragments were weighed but not counted.) Due to a variety of taphonomic factors, including the dry environment, the young age of the animals (which tend to have fragile, unfused bones), and modern transport-related issues, the assemblage is extremely fragmented, with more than 85 percent of specimens having modern breaks and nearly 60 percent being less than half complete.

All these remains are caprines, and nearly all appear to have been young animals. In each instance, a single animal was included per grave, though in one case a horn core from a more mature caprine individual was also identified. Age categories were assigned using both epiphyseal fusion and patterns of mandibular wear. Preliminary results appear in the following table.

Tomb no.	Phase	Species	Age
4	Old Kush IIA	Ovis/capra	Young (ca. ≤12 months)
12	Old Kush IIA	Possible <i>Ovis</i> sp.	Juvenile–subadult (ca. 18–30 months)
16	Old Kush IIB	Ovis/capra	Young/juvenile–subadult (ca. 6–30 months)
21	Old Kush IIB	Ovis/capra	Perinate (ca. birth)
22	Old Kush IIB	<i>Ovis</i> sp.	Young (ca. ≤12 months)
105	Old Kush III	Ovis/capra	Young (ca. ≤12 months)

Data collection will continue in the OI's zooarchaeology laboratory in the fall, with the aim of recording all the animal remains excavated at AW I. Given the well-documented chronological sequence at the site, the analysis and publication of these data will significantly enhance our understanding of human–animal interactions in the Fourth Cataract region and shed light on the role played by animals in mortuary ritual at the site.

HOSH EL-GERUF

During the 2021–22 research period, attention focused on the remains from the site of Hosh el-Geruf (fig. 2). As discussed in articles (e.g., Emberling and Williams 2010) and OI annual reports, this site was a major processing center for gold in the Old Kush (Kerma/early second millennium BCE) and Napatan (ca. 750–656 BCE) periods. There are also significant deposits of pottery from the

Nubian Mesolithic and Neolithic periods of the eighth through fifth millennia.

The Mesolithic and Neolithic Components at Hosh el-Geruf

The mid to late Holocene saw substantial use of the Nile and Western Desert regions by hunter-and-gatherer groups. The remains from these periods are also found along the stretch of river that makes up the Fourth Cataract, indicating seasonal habitation and exploitation of

the area for wild grains and animals. Ceramics spanning the period between the later Mesolithic and early Neolithic have been found in the sherd bags so far. The date ranges are wide, since the beginning of the Nubian Neolithic varied from the beginning of the Neolithic in other regions, but some similarities in the pottery and its decoration crossed boundaries.

The earliest mid-Holocene vessels were made mostly of a mineral-tempered fabric, which is quite hard and was thus suitable for large sherds to be reused as digging and shoveling tools during the site's later periods of use (fig. 3). Nonetheless, nonworked sherds could sometimes be joined to form more complete vessel profiles, such as the late Mesolithic example reconstructed with sherds from HG-Q-2 and HG-Q-6 (2022.138) (fig. 4) and a bowl with incised horizontal bands below a rim with diagonal incisions on top from HG-G-11 (2022.002) (fig. 5). The dotted-wavy-line sherds show varieties that find parallels among the Khartoum Variant materials from Lower Nubia, as well as among sherds from Mogrart Island, upstream of Hosh el-Geruf, in addition to similar examples from



Figure 2. Hosh el-Geruf with areas of excavation.



Figure 3. Early sherd reused as tool from HG-Q-3 (2022.164).



Figure 4. Late Mesolithic vessel sherds from HG-Q-2 and H-Q-6 (2022.138).



Figure 5. Rocker-stamped bowl from HG-G-11 (2022.002).



Figure 6. Dotted-wavy-line sherds. A, chaff temper from HG-B-2 (2022.270). B, mineral temper from HG-T-3 (2022.385). C, mineral temper from HG-U-1 (2022.032).

along the Nile River farther south or in the deserts across the eastern Sahel (fig. 6). Work remains ongoing with the analysis of parallels and dating, but the Nubian Mesolithic is best positioned by the radiocarbon dates from early sites in the Dongola Reach.

The pottery remains from the Neolithic period include at least two instances of caliciform goblet rims, one with a fine, incised decoration of pendant triangles on its interior from HG-G-3 (2022.092). These fragments have not yet been drawn or photographed. These vessels are widespread across northeastern Africa and are dated by radiocarbon at the cemetery of R12, in the northern Dongola Reach, to the fifth millennium BCE.

The early examples of pottery are frequent in some areas of the site, probably washed down the rocky slopes where early occupation remains once stood.

The Industrial Site

The industrial site was a broad, sandy area on the north side of the Nile nestled among great clusters of granitic gneiss boulders and scattered with shattered rock fragments, pebbles, and the implements



Figure 7. Landscape views of Hosh el-Geruf.

of gold processing (fig. 7). The work done at the site seems to have consisted primarily in the smashing of pieces of quartz and grinding them to a powder to separate the gold. The gold appears to have been dendritic flitters located in quartz fragments that occur in veins in the granites of the Eastern Desert, the Bayuda, and along the Nile, including the islands of the Fourth Cataract.

The site had no obvious architectural features, a real challenge to exploration. The operations, all in 2007, were conducted in four stages. Preliminarily, we cataloged the grindstone bases clearly visible and surveyed their positions. Then, several surface collection points were established at roughly 5 m around a stake. Following collection, we excavated several squares, normally 5 × 5 m in size but extended where necessary. Finally, Carol Meyer carried out a detailed survey to catalog all the implements in three transects, while Jim Harrell did a geological survey of the area (fig. 8).

The processing implements consisted of granitic gneiss grindstone bases and hand-sized globular pounders, mostly of quartz (fig. 9). The site may have been selected in part because the boulders were often broken into shapes easily adapted to make the heavy bases. To carry one of them requires more than four strong men.



Figure 8. Carol Meyer with local residents.



Figure 9. *Left*, broken grindstones. *Right*, quartz pounders.

The Nile cataract flows in a single channel at Hosh el-Geruf, facilitating the transport of materials. Such transport was needed because there was no sign of mining at the site, and it appears that ore was brought to it by boat from elsewhere, possibly from several locations. Two types of mines are candidates for the gold's origin. First, the ancient hard-rock mines for gold currently known consist of narrow, trench-like shafts that follow quartz veins, sometimes for many tens of meters, and are sometimes quite deep. Although common in the Eastern Desert, no mines of this type were reported in the Fourth Cataract region (however, exploration of much of the area is incomplete). A second type of mine resulted from the deterioration of the granites, which over millions of years exposed the quartz veins and dropped fragments into the adjacent sand and other deposits, where wind and water spread them out into the wadis (fig. 10). Gangs of workers in the wadi washes could extract ore from pits dug to retrieve the fragments. Such pitted areas are known from the cataract region and upstream of Hosh el-Geruf, as clearly identified by Jim Harrell and Bruce Williams using aerial or satellite photography. Although not directly dated, one such area was flanked by cemeteries upstream at Sherari, dating to Old Kush times.

As mentioned above, no coherent remains of structures were found. The stratigraphy present in a few areas was often disturbed by pits, which were not systematically dug for collecting quartz but were desultory, irregular holes. A few areas with burned debris were probably used for cooking or processing of some sort. Gold-processing sites far to the north, in the Second Cataract area, had simple, irregular structures of fieldstone, and here similar structures must have existed before being dismantled later, possibly for raw material to build new structures.

After Old Kush times, no traceable activity was evident until the Napatan period, probably in the seventh century BCE, since the most distinct pottery types resemble those from the contemporary burials in the royal cemeteries around Gebel Barkal, at Meroë, and from Upper Egypt during the Twenty-Fifth Dynasty. While the remains are sizable, no architecture clearly relates to the pottery or objects from Napatan times.

At some time after these two main phases, almost all the grindstone bases were broken. The purpose and date of this destruction are matters of conjecture but may represent modern attempts by the authorities to stop the locals from mining gold illegally.

Gold was rarely found in the burials of the Fourth Cataract, but a few beads were recovered in two tombs at AW I,



Figure 10. Crumpling boulder with quartz vein.



Figure 11. *Left*, gold bead from al-Widay I tomb 5 (2007.023). *Right*, multiple gold beads from al-Widay I tomb 21 (2008.288).

tombs 5 and 21 (fig. 11). The examples seem to have been cut from thin, flattened rods and then bent into a bead shape. Their simplicity contrasts with the sophisticated work found in contemporary Egypt, Kerma, and Napata, but they fit well with the idea that this industry was local.

That the processing was performed by local inhabitants in the Old Kush II to III periods is strongly suggested by the absence of evidence for residents from either Egypt or northern Nubia in this region. Imported objects and some local imitations occur, but the manufacturing techniques, especially of the pottery, appear to be part of a well-defined local culture. There are, however, especially significant relationships with both the Pan Graves in the north and the culture of the Gash Delta area near the Red Sea coast in the first half of the second millennium BCE. On the other hand, the cemeteries, while certainly well organized, show none of the class differentiation found in Egypt or Kerma.

The processing center at Hosh el-Geruf thus offers two challenges, particularly for the evidence from the Old Kush II to III periods. First, the activities of extracting and processing gold could be separated by some distance and the raw materials transported. Second, the society of the Fourth Cataract was organized on a substantially regional basis and capable of coordinating and carrying out complex industrial operations without the involvement of the “big state.”

In May, Bruce Williams lectured on Hosh el-Geruf as a part of the DiverseNile Seminar Series 2022 at Ludwig-Maximilians-Universität in Munich. This lecture, and its major conclusions about the site and its evidence, intended to provide an updated picture of this remarkable place for analysis and review by a wide scholarly audience as a part of preparing the final report.

A SAD AND SOLEMN EVENT

We must note the passing of George Pagoulatos, who, with his brothers Athanasios and Gerasimos, managed the Acropole Hotel in Khartoum. As the archaeological community knows, the Acropole has been not only a hotel but also an indispensable resource for foreigners working in the Sudan. Presided over by George, it has been a place of kindness, friendship, and hospitality for many decades—since 1997 for Bruce Williams. George, his brothers, and the hotel’s staff have arranged travel documents and transportation and even helped with transactions between agencies. The entryway to the Acropole is covered by photographs of people from many of the archaeological missions

they have assisted over the years, including some who did not actually stay at the hotel. The OINE's work in the Fourth Cataract in 2007–8 would not have been possible without their aid. George will be deeply missed.

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PERSEPOLIS FORTIFICATION ARCHIVE PROJECT

MATTHEW W. STOLPER

Like other efforts in research and life, the Persepolis Fortification Archive (PFA) Project began to emerge from the caves of the plague years into uncertain present light. Trying to pick up the traces of familiar aims and procedures, we found that changed conditions still required us to adapt schedules, techniques, and equipment.

Graduate student worker Young Bok Kim (NELC), ever more effective under stressful circumstances, continued to clear the long-standing backlog of unprocessed polynomial texture mapping scans of Fortification tablets. He processed scans of about 1,350 surfaces of approximately 130 Elamite cuneiform tablets before pausing to complete his dissertation. He received his PhD—the tenth worker on high-resolution PFA images to do so—in June 2022. Then he returned to PFA Project work just as a resurvey of Project files relocated about 8,000 more scans awaiting processing.

Graduate student worker Teagan Wolter (NELC) imported, glossed, and parsed more than 80 new Elamite texts in the Online Cultural and Historical Research Environment (OCHRE). Most of the texts were first read by Chuck Jones under the tutelage of Richard Hallock before 1980, then collated and updated by PFA Project editor Wouter F. M. Henkelman (École des Hautes Études, Paris). Wolter's long experience and exact attention arouse frequent insightful questions about oddities of form and lexicon—a sort of editorial commentary that leads to unexpected improvements in other documents. Grace Clements (Center for Middle Eastern Studies), after compiling images of tablets being packed for return to Iran, shifted to importing Elamite texts during summer 2021. She processed about 40 others, most of them new documents recorded since 2006.

Henkelman returned to Chicago for a month in April–May 2022 to continue recollating the new Elamite texts recorded by the PFA Project since 2006. He made many improvements to my readings and identifications of about 200 texts. I collated or recollated about 200 others. Most of those texts are livestock accounts whose arithmetic needed to be rechecked in connection with an expanding study of their form, terminology, and accounting procedures. I added readings of about 35 such texts and a few texts of other kinds, for a running total of about 1,850 new Elamite texts and fragments recorded since the PFA Project began. The livestock accounts (figs. 1 and 2) are an example of the work's benefits: individually, they are repetitive, stupefying to read, and vexing to check, but increasing the published sample of them by about tenfold produces strong results regarding the form, accounting methods, and historical connections of the Fortification Archive as a whole.

Project editors Annalisa Azzoni (Vanderbilt University), Elspeth Dusinberre (University of Colorado, Boulder), and Mark B. Garrison (Trinity University, San Antonio) continued work on the catalog of seals impressed on the monolingual Aramaic Fortification tablets. They produced the first draft of an introduction by Dusinberre and Garrison; a general introduction to the Aramaic texts by Azzoni; commentaries on usage, style, and iconography by Garrison; and an iconographic index by Dusinberre.

With the help of the OI's museum archivist Anne Flannery, Azzoni confirmed that a group of 38 potsherds with inked inscriptions in Aramaic, relocated in 2014, were included in Fortification



Figure 1. Fort. 1271-101+1959-102, a 115-line account aggregating information on more than 17,000 sheep and goats. Photo by PFA Project.



Figure 2. PF-NN 2661, an 18-column tabulation breaking down information on 370 sheep and goats in 8 flocks. Photo by PFA Project.

material loaned to the OI in 1936. Azzoni and visiting student Mitchka Shahryari (Université de Lille and École Pratique des Hautes Études, Paris) resumed work on these ostraca in May–June 2021 (fig. 3). Like the other components of the PFA, the ostraca are administrative records, adding yet another information stream to the already polymorphous and polyglot system of the PFA.

Recording and analysis of the seals impressed on the Fortification tablets continued to expand and deepen under Garrison's oversight. Delphine Poinot (Collège de France) continued the work she began as an OI postdoctoral fellow on more than 400 stamp seals impressed on Fortification tablets—those seals that represent single animals. This large thematic subcorpus bears formal resemblances to seals from Sasanian Iran (224–651 CE). Poinot added 20 final collated drawings from seals on about 50 Fortification tablets (fig. 4). After Christina Chandler defended her Bryn Mawr dissertation on inscribed seals in the PFA in December 2021 (Chandler 2021), she received a postdoctoral fellowship at New York University's Institute for the Study of the Ancient World, where she will revise the dissertation for publication by the OI. In mid-summer 2022, Emma Petersen (Iranian Studies, University of California, Los Angeles) returned to her interrupted work on seals impressed on uninscribed Fortification tablets. At the time this report was submitted, she had reviewed 400 tablets and recorded impressions of more than 60 new seals.

Garrison himself began a new analysis of the more than 100 seals that bear the so-called “Late Babylonian worship scene” (fig. 5). This scene type abounds in impressions on Late Babylonian tablets and unprovenanced seals in museums and collections around the world, but no other published collection of them is as large, varied, and rich as the PFA's.

Notable among PFA-related items published or sent to press are contributions to the long-awaited *Companion to the Achaemenid Persian Empire* (Jacobs and Rollinger 2021) by Garrison (minor arts, seals and sealing), Henkelman (roads and communication, local administration, heartland



Figure 3. Persepolis Fortification Aramaic Ostracon 1, with terse administrative information: “Account, Šutkara [Iranian *Čutkāra-] . . . / year [2?]4.” Photo and drawing by Mitchka Shahryari.

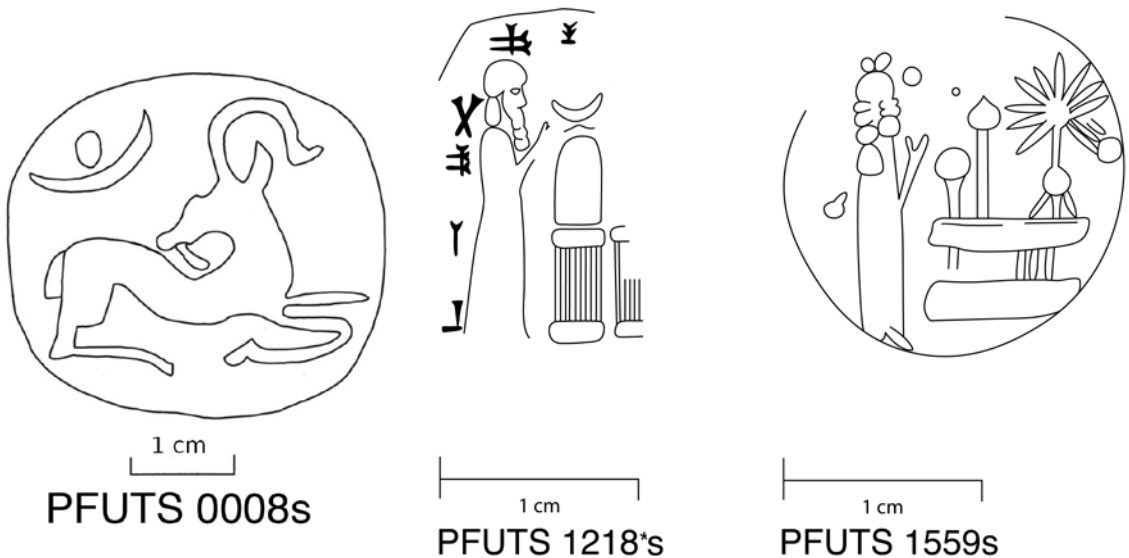


Figure 4. Stamp seal PFUTS 0008s, showing a horned animal posed to fit the seal’s oval surface and crouching with reversed head, as in later Sasanian seals. Collated drawing by Delphine Poinso.

Figure 5. Examples of the Late Babylonian worship scene. *Left*, PFUTS 1218*s, with an inscription invoking the Babylonian god Nabû. *Right*, PFUTS 1559s, with symbols of the gods Marduk and Nusku. Collated drawings by Mark B. Garrison.

pantheon), and me (Elamite sources); my treatment of new texts recording rations for specialized treasury workers supervised by one of the “treasurers” who bridged the Fortification and Treasury Archives (Stolper, forthcoming); and contributions by Garrison (forthcoming) and Henkelman (forthcoming) to the *Festschrift* they edited in honor of Bruno Jacobs. Henkelman’s article, as its subtitle promises, entails a radical correction of suppositions not only about the chronological relationship

of the Persepolis Fortification and Treasury Archives but also about their institutional relationship and the functional relationship between payments in commodities and payments in silver.

Especially poignant among PFA-related public presentations was Henkelman's "Beyond Datis: More Persians in Greek and Elamite," the 24th David Lewis Memorial Lecture at the Oxford Centre for the Study of Ancient Documents in May 2022. Forty-five years ago, the eminent Greek historian and epigrapher David Lewis gave another memorial lecture (Lewis 1977) that leaped across academic boundaries with some of the first deeply considered historical applications of PFA information, lighting a way beyond what Richard Hallock called "the picked-over bones of Achaemenid history" (Hallock 1985 [1971], 588).

The first stage of packing 3,500 Elamite and Aramaic tablets for return to the National Museum of Iran is nearly complete, thanks to the constant and mostly unassisted efforts of chief conservator Laura D'Alessandro. The exhibition of selected tablets returned in 2019 (see the 2018–19 and 2019–20 annual reports) traveled from the National Museum of Tehran to be remounted in the museum at Persepolis itself. Supplementing the exhibition are videos by Henkelman, Rhyne King (NELC PhD 2021), Hamaseh Golestaneh (University of Berlin), and me that explain the contents and significance of some of the items and reflect many of the improvements in comprehension that the PFA Project has achieved.

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TABLET COLLECTION AND NIPPUR TABLET PROJECT

SUSANNE PAULUS

I want to start this annual report with a heartfelt thank-you to our donors Al Liventals, Abhay Parekh, Terry Friedman, and Annette Youngberg, whose generous support made the work of the Tablet Collection possible. In addition, we received funding from the National Endowment for the Humanities and the University of Chicago's College Center for Research and Fellowships. Special thanks as well to the OI Museum team, especially Laura D'Alessandro and Alison Whyte in Conservation and Helen McDonald and Susan Allison in Registration, for their support of our work. None of the projects described below would have been possible without the dedicated work of the members of the Tablet Collection team—Colton Siegmund (assistant curator, research support, and portable X-ray fluorescence), Marta Diaz Herrera (cataloging, Nippur Tablet Project), C Mikhail (photography, reflectance transformation imaging, and post-processing), and Madeline Ouimet (digitization and archaeological research)—all of whom are also working on the upcoming exhibition (see below).

In 2020–21, we focused on acquiring and familiarizing ourselves with new technology and methods in studying and digitizing cuneiform tablets. This year, we used that technology and knowledge to start two new projects, the Nippur Tablet Project and the exhibition *Back to School in Babylonia*.

The goal of the Nippur Tablet Project is to digitize, catalog, study, and ultimately publish in collaboration with scholars worldwide the many tablets in the OI's collections from the ancient site of Nippur. The OI has been excavating at Nippur since 1948, and most seasons have yielded a few to several hundred tablets. The OI houses around a thousand tablets from Nippur, covering all periods and genres. Other tablets from the excavations are in the Iraq Museum in Baghdad and the Penn Museum in Philadelphia, but the OI has plaster casts and information about them.

While some of the tablets have been published, many are still awaiting publication. As a first step, we systematically digitize and catalog each tablet, adding information from the excavation records and identifying and describing the tablet's period, genre, and content. We also research any available publications on the tablet. All this information is added to the integrated database and is freely available online. In addition, we add high-resolution photographs from all angles (see fig. 1) and reflectance transformation imaging (RTI) to the database. For the tablets currently in the Iraq Museum, we are collaborating with the Electronic

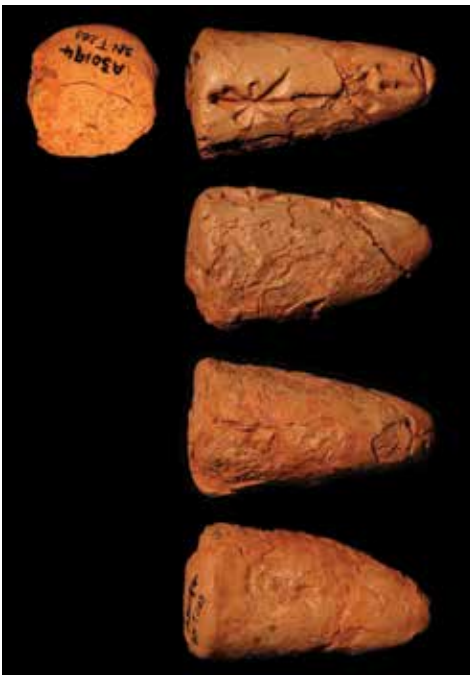


Figure 1. Image of an intriguing cone model found in Nippur (A30194).

Babylonian Literature Project led by Enrique Jiménez. During this first year, we completed all 197 objects from the third season at Nippur and made significant progress on the tablets from the second season. This work has already sparked new scholarly interest in our collections. It has also made the upcoming exhibition possible, as most of the tablets from the third season come from the scribal school(s) in Nippur.

The special exhibition *Back to School in Babylonia* is scheduled to open in fall 2023. It will be the OI's first significant show focusing on material from the Tablet Collection, specifically the tablets excavated in House F, a private school in Nippur. The goal is to introduce visitors to scribal education in ancient Mesopotamia, tracing school education from the earliest exercises to mastery. The show addresses who went to school, what and how students learned, and where they went afterward. It is accessible to different audiences through the topic of schoolchildren, and its design will cater to the demands of K–12 school groups and families, University of Chicago college students, and general OI Museum visitors.

The exhibition will present many tablets about Mesopotamian education for the first time, including student–teacher exercises illustrating how students learned to write, mathematical exercises, and famous literary texts taught in school (fig. 2). Visitors will be able to experience the archaeological remains of ancient schools and learn about Mesopotamian students' daily struggles. A catalog written by specialists, from the OI and around the world, will accompany the show. While the authors are writing their essays, we are busy selecting and researching objects for the exhibition and establishing the narrative that will guide its visitors.

In addition to our research projects, we supported research on the tablets in our collection with information, photos and RTI, and some in-person visits. Scholars working with our collection included Lara Bampfield (Oxford University), Paul Delnero (John Hopkins University), Craig Anthony Harris (University of Vienna, Austria), Enrique Jiménez (Ludwig Maximilian University of Munich, Germany), Ekatarina Markina (Higher School of Economics, Moscow), David Musgrave (Hebrew Union College), John Nielsen (Bradley University), Joachim Oelsner (University of Jena, Germany), Jim Ritter (Sorbonne University, Paris) and Klaus Wagensohnner (Yale University). We also supported a project by PBS/NOVA and assistant professor John Wee on cuneiform mathematics. As usual, professors requested tablets for classes, including a course on cuneiform epigraphy that trains our students to handle and copy cuneiform.



Figure 2. Detail of a student–teacher exercise. The student erased their portion to practice again.

TRANSMISSION OF MAGICAL KNOWLEDGE: MAGICAL HANDBOOKS ON PAPYRUS

CHRISTOPHER A. FARAONE AND SOFÍA TORALLAS TOVAR

The 2021–22 academic year saw significant progress in our research project. The central goal was a two-part edition and annotated translation of the Greco-Egyptian magical handbooks, and in April 2022 the first volume was published by California Classical Studies at the University of California, Berkeley: *Greek and Egyptian Magical Formularies: Text and Translation, Vol. 1*, running to more than 500 pages (fig. 1). Work on volume 2 proceeds apace. Our stand-alone volume of essays, *The Greco-Egyptian Magical Formularies: Libraries, Books, and Individual Recipes* (also more than 500 pages), generated by our editorial work on the handbooks, will be published by the University of Michigan Press in November 2022 (fig. 2). When we began the project, we did not anticipate such an ancillary volume, but these essays arose naturally from the conversations between and among our editors at various Neubauer Collegium–sponsored meetings and conferences, such as the “Incantatory Words: The Language of the Greek Magical Papyri” conference held at the University of Chicago Center in Paris in September 2021 (<https://centerinparis.uchicago.edu/events/incantatory-words-greek-and-egyptian-languages-magical-papyri>). We now expect that a second volume of essays will appear, one generated by our work on volume 2; preliminary versions of these essays made their appearance in May 2022 at the “Scribes and Readers of Magical Texts in Late Antique and Medieval Egypt” conference at the Wissenschaftskolleg zu Berlin, which was also cosponsored by the Neubauer Collegium (<https://www.wiko-berlin.de/veranstaltungen/workshops/2021/scribes-and-readers-of-magical-texts-in-late-antique-and-medieval-egypt>).

Crucial to the continued success of the project is the synergy and hard work of the editorial board, whose collegiality is manifest in the fact that nearly half the essays in the Michigan book were cowritten and could, in fact, never have been written outside the structure of the project. Editorial board members included Korshi Dosoo, Marina Escolano-Poveda, Richard Gordon, Edward Love, Franco Maltomini, Anastasia Maravela, Raquel Martín Hernández, Alberto Nodar Domínguez, Panagiota Sarischouli, and Michael Zellmann-Rohrer.

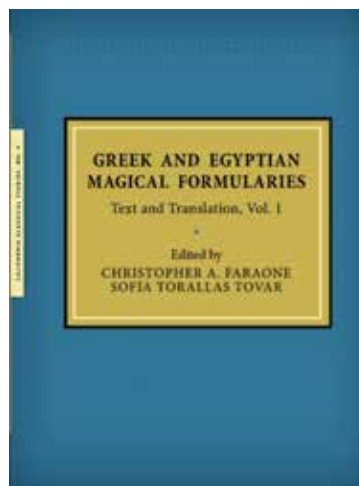


Figure 1. First volume of text and annotated translation of Greco-Egyptian magical handbooks.

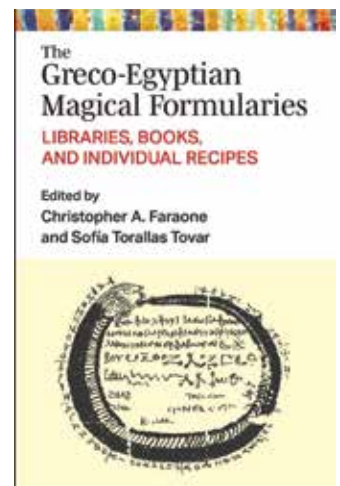


Figure 2. Stand-alone volume of essays on Greco-Egyptian magical formularies.

Two volumes have been completed:

- C. A. Faraone and S. Torallas Tovar, eds. *Greek and Egyptian Magical Formularies: Text and Translation, Vol. 1*. Berkeley: California Classical Studies, 2022.
- C. A. Faraone and S. Torallas Tovar, eds. *The Greco-Egyptian Magical Formularies: Libraries, Books, and Individual Recipes*. New Texts from Ancient Cultures. Ann Arbor: University of Michigan Press, 2022.



INDIVIDUAL RESEARCH

OVERLEAF: Landscape scene of the monumental terrace at Persepolis, Iran (detail). Joseph Lindon Smith, 1935. Oil on canvas. OIM G4.

INDIVIDUAL RESEARCH

RICHARD H. BEAL spent 2021–22 updating the manuscripts for the words in the T volume of the Chicago Hittite Dictionary (CHD). Many of these manuscripts were written more than two decades ago, and in the meantime many more tablets, much new research, and many more editions of texts have appeared. A few words with many attestations were never finished, and Beal had to finish them. A few dictionary entries either were never written or were lost in moving from one computer system to another, so drafts of these entries have now been written. While going through these dictionary entries, Beal also put them into proper CHD editorial style, which will save time later. Some 188 words had modifications, large or small, made over the course of the year.

This year Beal’s “Open Your Ears and Listen! The Role of the Senses among the Hittites” appeared as a chapter in the *Routledge Handbook of the Senses in the Ancient Near East*, edited by Allison Thomason and the OI’s own Kiersten Neumann. The chapter discusses the eyes, ears, mouth, and nose along with the sights, sounds, tastes, and smells that a Hittite would have encountered in the course of life, especially in the many festivals held for the gods throughout the year.

Appearing this year in the *Journal of Near Eastern Studies* was Beal’s review of Gary Beckman’s *The Hittite Gilgamesh*, an edition of the Akkadian, Hittite, and Hurrian pieces of the Gilgamesh story found at Boğazköy. These copies are important because they form a bridge between the Old Babylonian versions and the Neo-Assyrian version and also seem to be a little more interested in events closer to Anatolia.

Beal also worked on a review of Tayfun Bilgin’s *Officials and Administration in the Hittite World*.

In 2022, more than fifty years after the publication of his 1967 volume, *ŠĀ.ZI.GA: Ancient Mesopotamian Potency Incantations*, **ROBERT BIGGS** has followed up by addressing the interpretation of a group of these texts from the mid-second millennium BCE. The article has been accepted by a journal in France. Although he retired several years ago, Biggs remains actively engaged in the publication of cuneiform texts from OI excavations in Iraq.

For the use of the Electronic Babylonian Literature project in Munich (Ludwig-Maximilians-Universität), **JOHN BRINKMAN** has been preparing the eighth edition of his Mesopotamian chronology, first published in 1964, which is now appearing in sections as the revisions progress. The most difficult part of this work will be the recalibrating of the Middle Assyrian lunar calendar with the Middle Babylonian solar calendar in an attempt to approximate absolute dates for the Late Bronze Age. Brinkman has also been editing his catalog and notes on the more than 11,000 Kassite-period tablets from Nippur housed in the Istanbul Archaeological Museums and in the University of Pennsylvania Museum of Archaeology and Anthropology in conjunction with a shared project with the University of Cambridge (United Kingdom). A smaller item occupying his attention is

INDIVIDUAL RESEARCH

preparing a study of an unpublished legal text from the time of the Babylonian king Adad-šuma-ušur (1216–1187 BC), a reign from which few cuneiform sources are known.

FRED M. DONNER feels busier than ever despite having retired, as long planned, in September 2020 at the height of the coronavirus pandemic. He has no regular teaching duties but continues to advise several graduate students, including three who completed dissertations this year: Adam Flowers, Kyle Longworth, and Mohammad Sagha.

Donner spent considerable time over the past year editing the papers presented at a conference held at the University of Chicago in spring 2017. They were published, with Rebecca Hasselbach-Andee as coeditor, in June 2022 in the OI's Late Antique and Medieval Islamic Near East series as *Scripts and Scripture: Writing and Religion in Arabia circa 500–700 CE*.

He is now beginning the final editorial work on another set of conference papers, from the conference “Industry and Industrialism in the Late Antique and Early Islamic Near East” held under the auspices of the OI in October 2018. In May 2022, he and co-organizer Prof. Richard Payne convened another conference at the University of Chicago's Center in Paris, “Labor in the Late Antique and Medieval Islamic Near East,” originally planned to be held in Chicago in May 2020. COVID-19 had forced the repeated postponement of this event, and the venue was finally shifted to Paris because most participants were in Europe this spring. These two events are part of a series of conferences on the economic history of the late antique and medieval Islamic Near East made possible through the generous support of Prof. Guity Nashat.

Donner presented a lecture titled “The Changing Face of Early Islamic History” at Macalester College in Saint Paul, Minnesota, on April 4, 2022; at Princeton University (as a Faber Lecture) on April 14, 2022; and at the Austrian Academy of Sciences in Vienna on June 28, 2022. In fall 2021, Donner was elected president of the International Qur'anic Studies Association (IQSA) for a two-year term. He delivered his first presidential address at the IQSA annual meeting in Palermo, Sicily, in September 2022.

FRANÇOIS GAUDARD completed his twenty-eighth year as a member of the OI scholarly community. His second article in his series dedicated to the study of the OI Museum funerary shrouds from the Greco-Roman period, dealing with shroud OIM E4789, was published in a Festschrift in honor of Richard Jasnow (see below). From an iconographic point of view, this fragment provides us with an interesting depiction of Anubis as a falcon.

Gaudard was invited by Prof. Georgios K. Giannakis to prepare an updated version of his Rosetta Stone entry, originally published in the *Encyclopedia of Ancient Greek Language and Linguistics*, for a new and expanded encyclopedia titled *Encyclopedia of Greek Language and Linguistics*, which will also cover later stages of Greek (Postclassical, Medieval, and Modern Greek).

Gaudard has been working on various articles, including the following:



Shroud OIM E4789.

- “Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part II: Shroud OIM E4789.” In *One Who Loves Knowledge: Studies in Honor of Richard Jasnow*, edited by Betsy Bryan, Mark Smith, Christina Di Cerbo, Marina Escolano-Poveda, and Jill S. Waller, 187–96. Material and Visual Culture of Ancient Egypt 6. Atlanta: Lockwood Press, 2022.
- “Seth the Gleaming One.” To be published in a Festschrift in honor of Robert Ritner.
- “Rosetta Stone.” To be published in the *Encyclopedia of Greek Language and Linguistics*.
- “Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part III: Shroud OIM E4788 (= OIM E42046).” In preparation.
- “Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part IV: Shroud OIM E4787.” In preparation.

PETRA M. GOEDEGEBUURE spent much of the year teaching seven courses and serving on numerous committees. But for her, the return to campus also stimulated both new and old research. First addressing her new research, Goedegebuure presented virtually on Hittite literature in December 2021 at the 11th International Congress of Hittitology in Turkey; she argued for the presence of an elaborate ring composition in an Old Hittite myth through her paper “Hittite High-Literature: Ring-Compositions in the Myth ‘The Disappearance of Telipinu (CTH 324).’” At the other end of the spectrum, Goedegebuure was invited to the 41st East Coast Indo-European Conference at Harvard University, where she presented “Digging for Data: A Formal-Semantic and Propositional Logical Approach to Focus in Hittite” in June 2022. Detecting focus, the most important piece of information in a clause, is notoriously difficult to do in dead languages. Goedegebuure has found a way to circumvent the problem by creating a new focus equation using logic:

$$\begin{array}{l} \forall x(\mathbf{B}(x) \rightarrow x = \mathbf{F}) = \forall x(\neg(x = \mathbf{F}) \rightarrow \neg\mathbf{B}(x)) \\ \forall x(\neg\mathbf{B}(x)) = \neg\exists x(\mathbf{B}(x)) \\ \hline \forall x(\mathbf{B}(x) \rightarrow x = \mathbf{F}) = \forall x(\neg(x = \mathbf{F})) \rightarrow \neg\exists x(\mathbf{B}(x)) \end{array}$$

This equation does represent language, but it would take up too much space in this report to explain how.

For volume T of the Chicago Hittite Dictionary (CHD), Goedegebuure researched the Luwian word *tiššā(i)-* and established its meaning as “to match.” Queen Puduhepa used this Luwian word in her statement to Ramesses II—“The people of Hatti often speak about my match!”—even though she had just used the equivalent Hittite expression. Hittitologists believe that the population of the Hittite state spoke Luwian in the thirteenth century BCE, but without any direct evidence. Goedegebuure argued that Puduhepa now provides that direct evidence in her paper “‘The people of Hatti often speak about my match!’: The Luwian Verb *tiššā(i)-* ‘to shape; to ready; to arrange, align; to match,’” presented at the annual meeting of the American Oriental Society in March 2022 in Boston.

Goedegebuure continued her research on the Luwian inscription *Türkmen-Karahöyük 1*, found by her colleagues James Osborne and Michele Massa in 2019. On that topic she gave a virtual talk titled “The Luwian Inscription *Türkmen Karahöyük 1*” as the inaugural speaker for the Anatolian Seminar Series at Oxford University in November 2021 and presented “The State of Hieroglyphic

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Puduhepa: An Anatolian Superhero (2020)—a short film directed by Barış Özcan (<https://www.facebook.com/CorumFace/photos/a.10151836962922916/10157580470452916/>).

Writing in the Mid–Late 8th c. BCE: Resisting and Emulating Empire” at the “Phrygia Between the East and the West” conference in Pavia, Italy, in April 2022.

Goedegebuure very much enjoyed writing “Magic in Hittite Society: For Kings, Queens, and Commoners Alike” for the OI member magazine *News & Notes*, though she did so for a very sad occasion: the passing of her colleague Robert Ritner. For Goedegebuure’s work on the CHD, see the separate project report.

DOUGLAS INGLIS was thrilled to join the OI this year as a postdoctoral fellow. Inglis is a maritime archaeologist and received his PhD in 2020 from the Nautical Archaeology Program at Texas A&M University. He is currently preparing his dissertation, “The Abusir Boat-Burial,” for publication. The study describes the 2015 discovery and excavation of a third-millennium BCE funerary boat from Egypt and demonstrates previously overlooked patterns of social and technological transformation.

With the OI postdoctoral fellowship moving to a teaching-focused format, Inglis spent fall 2021 preparing classes. In addition to teaching “Ancient Empires III: The Egyptian Empire of the New Kingdom,” he also developed a new course, “Maritime Archaeology and Shipwrecks of the Ancient World.” The class explored the seafaring traditions that emerged in the Mediterranean, Aegean, Red Sea, Persian Gulf, and Indian Ocean during the Bronze Age, and it drew undergraduate and graduate students from a wide array of departments. Themes included underwater excavation, the interpretation of shipwrecks, ship construction, and the impact of seafaring on ancient society. Due to the success of the course, Inglis will be teaching “Maritime Archaeology and Shipwrecks II: The Iron and Classical Ages” next year. He has also proposed a course on “Digital Imaging and Modeling in Archaeology,” which will cover 3D recording, 3D printing, and digital illustration.

In addition to teaching, Inglis presented a paper, “The Endeavor of the Red Sea,” at the 2021 annual meeting of the American Society of Overseas Research. The paper explores the entangled web interactions that made seafaring in the Red Sea possible and investigates how these entanglements led to advances in technology and new expressions of power. He also gave public lectures on the discovery and excavation of the Abusir boat for the Breasted Society, the Chicago and Honolulu chapters of the Archaeological Institute of America, and the University of Chicago Ancient Societies Workshop.

Over the course of the year, Inglis finalized his article “Egyptian Boats, Shaped by the Nile.” It will appear later in 2022 in the peer-reviewed *Proceedings from the First Symposium of the Workgroup “Egyptian Riverine Harbours,”* published by the Institut français d’archéologie orientale. Inglis is devoting summer and fall 2022 to preparing several articles for publication, including the results of his 2019 “Boats and Coffins” project, which reexamined boat planks reused in Early Dynastic Egyptian coffins held in the British Museum and the Petrie Museum at University College London.

JAN JOHNSON was happy to be back in the classroom this year, even with the ongoing COVID-19 restrictions on group meetings. As usual, she enjoyed introducing a new set of students to the joys and challenges of ancient Egyptian grammar, complemented this year by the “Ancient Egyptian History” course (shared with Brian Muhs, who did the vast majority of the work). For the first time she taught an “Egyptian Mathematical Texts” course (everyone struggled to understand exactly what the ancient Egyptians were doing and how they were doing it in what were sometimes quite sophisticated mathematical problems, including a number working with aspects of measurements of pyramids). She also enjoyed teaching both some of the oldest Egyptian texts (so-called “Old Egyptian” from the Pyramid Age) and some of the most recent (so-called “Coptic,” the stage of the language used in the Coptic Christian Church).

She was delighted to work with a full range of students outside the classroom as well, reading BA papers, MA theses, and dissertation chapters on such varied topics as the so-called “demonization” of the god Seth, the ongoing interaction between the living and the deceased in Egyptian society, and New Kingdom diplomatics. She is especially delighted to congratulate three students on whose dissertation committees she served and who successfully defended their dissertations this year: Ella Karev (“Slavery in Late Period Egypt”) and Sunwoo Lee (“Exploring Pain in Ancient Egypt”), both in NELC, and Jordan Johansen (“Flooding Borders: Gender, Human Ecology, and Ideology in the Ptolemaic Border between Egypt and Nubia”) in Classics. She happily renewed her connections to the Divinity School by participating in the PhD examination committee for Justin Moses. She also thanks those students who assisted her as teaching assistants: Catie Witt and Caitlin Kropp each assisted with one quarter of the Introduction to Middle Egyptian (for beginning language students), and Caitlin also assisted in the Ancient Egyptian History survey. In all three courses, they were able to reach out to more students than Johnson could have done on her own, making a big difference in the value of the class for the students. Johnson would also like to thank Tanya Olson, another Egyptology graduate student, for her ongoing assistance, including undertaking reorganizing the books in her office.

Johnson was pleased to submit for publication this year her keynote address, “Women in Demotic Documentary Texts,” given at the conference “Women in Ancient Egypt: Current Research and Historical Trends,” organized in Cairo in 2019 by Mariam Ayad, as well as two papers: “Her (Eldest) Son,” for a Festschrift honoring a fellow student and longtime colleague, and “Some Egyptian-Greek Language/Script Interactions as Reflected in [the Demotic] Magical [Papyrus]” (written in conjunction with Ariel Singer), for a Festschrift honoring a former student and longtime colleague.

She was delighted to give the opening lecture of the year for the OI Museum docents, “The Interweaving of Gender, Class/Status, and Legal Standing in Ancient Egypt,” and enjoyed the interesting questions and discussions that followed the lecture, frequently days or weeks later as she ran into people in the OI. She was also pleased by the appearance of *Greek and Egyptian Magical Formularies: Text and Translation, Vol. 1*, edited by Christopher A. Faraone and Sofia Torallas Tovar in Classics, in which she had the privilege of including the texts and translations of several Demotic

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Egyptian and bilingual Demotic and Greek papyri. She was honored to be asked to speak at the memorial service for her former student and longtime friend and colleague Robert Ritner, whose contributions to the study of ancient Egypt will long remain crucial and whose commitment to the OI and its members and to NELC and its students is sorely missed.

This year **W. RAYMOND JOHNSON** completed his forty-third full year working for the Epigraphic Survey/Chicago House and his twenty-fifth—and last—season as Chicago House director. On August 2, 2022, his seventieth birthday, Johnson retired after a good, long run. He started working for the Epigraphic Survey as an apprentice artist while still an Egyptology graduate student at the University of Chicago in 1978, and he joined the Chicago House team full-time in 1979, splitting his time between Luxor and the United States. Johnson has the distinction of being the longest-serving staff member—and field director—in the history of the Epigraphic Survey. He will spend his retirement expanding his research and publication on Amenhotep III and the Amarna period.

This past year Johnson published “A Corpus of Amarna *Talatat* Blocks That Depict a Royal Daughter/Royal Wife” in *Up and Down the Nile: Ägyptologische Studien für Regine Schulz*, edited by Martina Ullmann, Gabriele Pieke, Friedhelm Hoffmann, and Christian Bayer. Several other articles are in press, including “An Enigmatic Karnak *Talatat* Block Found at Luxor Temple” in *A Master of Secrets in the Chamber of Darkness: Egyptological Studies in Honor of Robert K. Ritner Presented on the Occasion of His Sixty-Eighth Birthday*, edited by Foy Scalf and Brian Muhs, and “Amenhotep III–Period Deity Heads in Memphis, Tennessee, and Rome” in *From the Field of Offerings: Studies in Memory of Lanny D. Bell*, edited by Sue D’Auria and Peter Lacovara.

Two major museum exhibitions are being put together based on Amarna *talatat* joins that Johnson has made in recent years. The first, in Copenhagen at the Ny Carlsberg Glyptotek, will open in January 2023 and is centered on a join Johnson made between a *talatat* block in Copenhagen that features Akhenaten’s “greatly beloved” second wife, Kiya, and a block in the Metropolitan Museum of Art (MMA) in New York City that depicts Akhenaten throttling a duck under the rays of the Aten (it turns out Kiya is handing Akhenaten another duck to dispatch). The two blocks are being physically joined for the exhibition. In 2017 Johnson published a join of five other Amarna *talatat* blocks: one in the Brooklyn Museum, one in the MMA, and three in private collections in France, Germany, and Great Britain. The group is from a large pastoral scene that depicts trees, herdsmen, cattle, and goats outside a palace wall. In 2019 the Brooklyn Museum borrowed the MMA block for joining to its own block, purchased a third block from France, and physically joined the three, making it the largest group of Amarna *talatat* blocks anywhere in the world. This summer a fourth block from the group was kindly donated to the Brooklyn Museum by the German owner and is now being physically prepared for joining with the other three. Johnson sees the timing of both these exhibitions as an excellent portent of things to come and an inspiration for his further Amarna “retirement” research.

At the annual meeting of the American Society of Overseas Research in November 2021, OI associate **MORAG M. KERSEL** and colleagues Yorke M. Rowan, Austin Chad Hill, and Blair Heidkamp presented an overview of research from the Galilee Prehistory Project: “Chalcolithic Expansion in the Galilee: The GPP Project in Context.”

In the April 2022 issue of the *American Journal of Archaeology*, Kersel published a review essay: “The Gallery Enhancements Project at the Oriental Institute Museum of the University of Chicago: Everything Old Is New Again” (<https://www.ajaonline.org/museum-review/4476>). In assessing the transformation of the OI Museum, she concluded that “the new and improved OIM offers us the unique opportunity to experience an ancient collection, acquired in a colonial moment, through a contemporary lens, which could make all the difference in our understanding of the past and the present.”



The Er-Ram Mask in the Palestine Exploration Fund collection.

In June and July 2022, Kersel participated in the inaugural season of the OI/University of Pennsylvania–cosponsored, National Science Foundation–funded project *Kites in Context*. The structures being recorded, commonly referred to as “desert kites,” are thought to be large-scale animal traps dating possibly to the Neolithic period. Through aerial (drone) and pedestrian survey and excavation, this research is focused on resolving issues related to the dating and purpose of these structures. As an element of this project, Kersel photodocumented looting and site disturbances associated with the structures (see the *Kites in Context* project report).

During this research year, Kersel started a new project, *Hidden Histories: The Insecure Provenance of Levantine Neolithic Masks*, an “ethnography of circulation” of the eighteen known Neolithic masks from the Levant. She hopes that this research will contribute additional insights into problems with the documentation and original findspots of masks, addressing questions surrounding authenticity and provenance.

In April, Kersel spent two weeks at the Palestine Exploration Fund (PEF) in Greenwich, England, researching the history of the Er-Ram Mask in the PEF collection.

In addition to finishing the drawings of pottery and scarabs from the Fourth Cataract al-Widay cemetery and starting on the material from Hosh el-Geruf (see the Oriental Institute Nubian Expedition project report), **CAROL MEYER** revisited her chapter on gold processing at Hosh el-Geruf. It now seems that it was a site for gold *processing* rather than a mine for gold ore. It appears that chunks of gold-bearing quartz were hauled to Hosh el-Geruf, presumably from outcrops upstream or out in the desert, for centralized grinding and washing. James Harrell of the University of Toledo has in fact observed dendritic gold in a cast-off quartz chunk. The goal seems to have been to assemble enough workers for the labor-intensive grinding and washing, possibly in the agricultural off-season, and to control the product—gold dust.

Meyer also spent a great deal of time on the massive Aqaba glass corpus, mainly searching through all available publications, field reports and notebooks, and pottery lists in order to assign preliminary dates to glass-bearing loci. Dating the glass to the Umayyad, Abbasid, or Fatimid period is a major challenge for the publication project. Meyer also acted as juror for a dissertation from the

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Università degli Studi di Napoli “L’Orientale” on macrolithic artifacts from Kassala, Sudan; revised and updated a chapter on the Roman- and Byzantine-period glass from Tell Nebi Mend, Syria; and gave presentations on Bir Umm Fawakhir, on the glass from Serra East, Sudan, and on ancient gold mining for the Polish Centre of Mediterranean Archaeology, the Society for American Archaeology, and the Illinois Geographical Society, respectively.

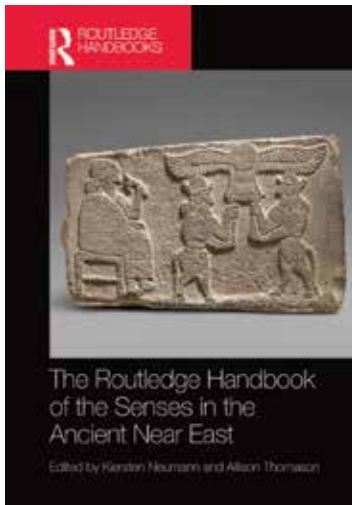
Several of **BRIAN MUHS**’s articles and a coauthored book appeared in 2021–22. They included the monograph *The Archive of Thotsutmis, Son of Panouphis: Early Ptolemaic Ostraca from Deir el Bahari* (O. Edgerton), with Foy Scalf and Jacqueline Jay (OIP 146, Chicago: Oriental Institute, 2021); the articles “Egyptian Scholars, Priests and Temples between Autonomy and State Authority,” *Journal of Ancient Near Eastern History* 8, nos. 1–2 (2021): 203–22; “Robert K. Ritner (1953–2021),” *Journal of the American Research Center in Egypt* 57 (2021): 9–10; “Rediscovering Kushite Dynasty 25 in the OI Museum” and “Shabtis and Dynasty 25: The Art of Meta Vaux Warwick Fuller,” both with Tasha Vorderstrasse, in the autumn 2021 issue of the OI member magazine *News & Notes*; “Making a Living Off the Dead: Body Brokers in Ptolemaic Egypt,” with Foy Scalf, in the winter/spring 2022 issue of *News & Notes*; and a review of Maria Cannata, *Three Hundred Years of Death: The Egyptian Funerary Industry in the Ptolemaic Period*, in *Orientalistische Literaturzeitung* 116 (2021): 446–48.

Muhs also submitted several articles and a coedited book for publication this year, including *A Master of Secrets in the Chamber of Darkness: Egyptological Studies in Honor of Robert K. Ritner Presented on the Occasion of His Sixty-Eighth Birthday*, a volume coedited with Foy Scalf that the OI publications committee has accepted for publication in the OI’s Studies in Ancient Oriental Civilization series, and the articles “A Pair of Wooden Stick Shabtis and Their Coffins,” about a set of objects in the OI Museum collection, for a forthcoming Festschrift; “A Diachronic Survey of Ancient Egyptian Sealing Practices from the Predynastic through the Ptolemaic Periods,” in *Sealing Practices and Theories in the Ancient Near East*, edited by Delphine Poinot (Oriental Institute Seminars 16, Chicago: Oriental Institute, forthcoming); and “Credit, Sureties, and Prisons in Ptolemaic Egypt” in *Iwnw* 1 (forthcoming).

Muhs presented two academic papers: “Credit, Sureties and Prisons in Ptolemaic Egypt” at the (virtual) international conference “Social Life and Economic Systems in Ptolemaic Egypt” hosted by Ain Shams University, Cairo, in October 2021, and “Micro-lending in the Ptolemaic Archive of Panas son of Espmetis” at the seventy-third (virtual) annual meeting of the American Research Center in Egypt in May 2022.

KIERSTEN NEUMANN continued research endeavors grounded in theoretical approaches to ancient art—with an emphasis on sensory experience of the material culture of the ancient Near East and its reception—and to museum collections and practice.

With OI/NELC alumna Allison Thomason, professor at Southern Illinois University Edwardsville, Neumann coedited and published *The Routledge Handbook of the Senses in the Ancient Near East* in September (www.routledge.com/9780367235284). The volume has received acclaim, and more than 80 hardcover and e-book copies were already in circulation within its first three months. With thirty-two chapters written by leading international contributors—including a chapter by Neumann herself (“To Touch Upon: A Tactile Exploration of the Apadana Reliefs at



Persepolis”)—the *Handbook* contains diverse approaches to sensory experience, bringing to life in an innovative, vivid, and visceral way the lives of past humans. Neumann thanks her colleagues at the OI, and at the University of Chicago broadly, for their support and encouragement throughout this ambitious project. Neumann also published an article, “Urbanisation Beyond the City Walls: Ritualised Practice and Sensory Experience at Sennacherib’s Khinis Canal Head” in de Gruyter’s open-access series *Religion and Urbanity* (<https://doi.org/10.1515/urbrel.16426157>) and short pieces in the *OI News & Notes* issues 250 and 251, on Roman sculpture from Ptolemais at the OI and on Assyrian lion-hunt reliefs, respectively.

Neumann submitted four chapters for publication in edited volumes: “Beyond Impressions: Cylinder Seals of the Neo-Assyrian Period as Experiential Object” for *The Routledge Companion to Seals and Seal Studies in Antiquity*; “Censers in Ancient Near East-

ern Cultures: Assyria and Beyond” for *Holy Smoke: Censers across Cultures* (tentative title); “Reassembling the Past: Assyrian and Achaemenid Glazed Bricks at the Oriental Institute Museum,” with an appendix by OI conservators Alison Whyte and Laura D’Alessandro, for the proceedings of the International Congress on the Archaeology of the Ancient Near East workshop on decorated bricks; and “An Artful Summation: Early Twentieth-Century Reconstructions of Assyrian and Achaemenid Monuments,” in connection with a conference on reconstructing the past hosted by the Institute for the Study of the Ancient World, where she presented a paper (<https://youtu.be/4a3nGKxC-Ik>).

With respect to presentations, Neumann delivered two papers at the annual meeting of the American Society for Overseas Research (ASOR): one titled “Connecting Collections through Inscribed Metal Tablets, Part II: The Oriental Institute and the Vorderasiatisches Museum, Berlin,” a collaborative paper based on a joint project between the OI Museum, Vorderasiatisches Museum, Yale Babylonian Collection, and Harvard Museum of the Ancient Near East; and a second in a workshop on “Best Practices in Digital Scholarship,” speaking on the OIM’s digital artifact and archives collections and accessibility. With Evans, Neumann presented “Shifting Realities at the OI Museum” at the Archaeological Institute of America annual meeting. She delivered the opening lecture, “Documenting Persepolis and the Paintings of Joseph Lindon Smith,” for the OIM special exhibition *Joseph Lindon Smith: The Persepolis Paintings*, which she curated (<https://youtu.be/dGiSN4yMyV0>) (see the Museum report). In May, she contributed a paper titled “Global, Colonial, Local: Deconstructing Perspectives of Persepolis in the Oriental Institute Museum Archives” to the “Unsilencing the Archives” virtual series, organized by the Archaeological Research Facility in Berkeley, the Badè Museum of Biblical Archaeology, and the Palestine Exploration Fund (<https://youtu.be/DNZqUIMX-gY>).

In the spring, Neumann taught an undergraduate/graduate course, “Visual Culture of the Ancient Near East,” through the University of Chicago’s Department of Art History, and advised Master of Arts Program in the Humanities (MAPH) student Sophia Coyne-Kosnak on her thesis, “The Humanity of Ancient Egyptian Mummified Persons: Addressing Current Curatorial Practice and Proposing a Person-Centered Approach,” which received a MAPH Intrepid Thesis Award. Lastly, Neumann continued as a member of the ASOR program committee and to serve as a consultant on international museum projects and exhibitions.

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Thanks to the return of viable fieldwork conditions in Turkey despite the ongoing pandemic, **JAMES OSBORNE** was able to resume field research at the site of Türkmen-Karahöyük, as part of the Konya Regional Archaeological Survey Project (KRASP), in 2021. Türkmen-Karahöyük is located in the heart of the Konya Plain, one of Turkey's most archaeologically rich regions and most famous for the site of Çatalhöyük, the region's most significant center during the Neolithic period. By the Bronze Age, however, Türkmen-Karahöyük had become the largest and most important settlement, and in 2019 our team discovered an inscription by "Great King Hartapu" that proved the site was the regional capital in the Iron Age.

The team was thus very excited to return to the site in 2021, this time to focus its efforts on geophysical remote sensing, or the use of methods that allow researchers to see what lies beneath the ground without doing any excavation. With the use of the OI Center for Ancient Middle Eastern Landscapes lab's Bartington Grad601 magnetometer, the team conducted magnetic gradiometry on the surface of the massive, 35 m tall mound, which revealed a warren of streets and buildings, some of which were more than 75 m in length. Since this method brings to light the architecture located immediately below the ground's surface, it is very likely that all of these identified features belong to the site's uppermost and final phase of occupation, the Hellenistic period. Future work will be devoted to exploring the presence or absence of archaeological features beyond the primary mound of the site.

This fieldwork, and the Hartapu inscription in particular, have already led to a heated debate among Anatolian scholars about the political history of the region at the end of the Bronze Age and start of the Iron Age. Although Hartapu was formerly thought to have ruled around 1200 BCE, the inscription from Türkmen-Karahöyük, edited by the OI's own Petra Goedegebuure and Theo van den Hout, almost certainly places his reign closer to the eighth century BCE. Such a drastic revision to the understanding of the region's history was sure to be challenged, and KRASP codirector Michele Massa and Osborne spent much of the year defending this position, both in an article published in *Altorientalische Forschungen* and at a conference devoted to Iron Age Anatolia held in Pavia, Italy. The interest that Türkmen-Karahöyük has generated among Anatolianists is strongly indicative of the importance of this enormous Bronze–Iron Age settlement.

For **SUSANNE PAULUS**, 2021–22 was dominated by several time-intensive service assignments, the most important being the search for a new professor of Sumerology to complement the Cuneiform Studies program.

As for her studies on the Middle Babylonian period, her overview of the history of Kassite Babylonia was published in *The Oxford History of the Ancient Near East*. A complementary article, "The Old Babylonian–Kassite Transition—Three Phases of Kassite Royal Policy," was accepted for publication in the journal *Jaarbericht "Ex Oriente Lux."* She continued her work on the Kassite texts from Babylon in the Vorderasiatisches Museum in Berlin, working primarily on the real estate sales from archive M1 and a selection of texts from M8 to shed new light on the economic and legal history of Babylonia. She presented some of the results in an invited presentation, "*pīhatu*: What Constitutes a Province during the Kassite Period?" at the annual meeting of the American Society of Overseas Research (ASOR) in Chicago. Furthermore, she wrote an essay titled "Hauskauf in Babylon im 13. Jahrhundert v. Chr." for the Deutsche Orient-Gesellschaft, the sponsor of the excavations in Babylon.

Beyond this, Paulus worked on three interdisciplinary research projects. She was the cuneiform specialist for the DeepScribe project, which uses artificial intelligence (AI) to decipher cuneiform tablets. This project is a collaboration between Sanjay Krishnan of the University of Chicago's Department of Computer Science and Eddie Williams, Sandra Schloen, and Miller Prosser of the

OCHRE Data Service, using the data of Matthew Stolper's Persepolis Fortification Archive Project. They presented the first results in a talk titled "The DeepScribe Research Project: Using Computer Vision to Read Elamite Cuneiform Tablets from the Persepolis Fortification Archive" and are finalizing their first article. In addition, she oversaw work on "Far from Home: Exploring the Application of Non-destructive pXRF Clay Analysis for the Provenance Study of Cuneiform Tablets," funded by the National Endowment for the Humanities. Lee Drake (AI, portable X-ray fluorescence), Colton Siegmund (experiments), and Paulus are currently working on publishing the results. A new international project initiated by Elizabeth Knott at Yale University analyzes the inscribed Assyrian metal tablets in museum collections worldwide. Together with her OI Museum colleagues Laura D'Alessandro, Kiersten Neumann, and Alison Whyte, Paulus presented preliminary results of their study of the gold tablet of Shalmaneser III in the OI Museum collection at the ASOR conference.

In addition, most of Paulus's research time was focused on the Nippur Tablet Project and the upcoming exhibition *Back to School in Babylonia* (see the Tablet Collection and Nippur Tablet Project report).

As in previous years, associate professor of Assyriology **HERVÉ RECULEAU** devoted most of academic year 2021–22 to teaching, mentoring, and academic service. He also oversaw the completion of his collaborative project, *Coping with Changing Climates in Early Antiquity: Comparative Approaches between Empiricism and Theory* (3CEA), sponsored by the Humanities Without Walls consortium (see Project Reports).

His ongoing collaborations included participating in the workshop "Akkadian Language Analysis and Tools for Research" (Collège de France, Paris, for the Franco-Russian project *Laying the Groundwork for a Corpus-Based Dictionary of Old Babylonian*) and coauthoring, for the Computational Research on the Ancient Near East project, a paper read by Lynn Welton (University of Toronto) at the annual meeting of the American Society of Overseas Research in Chicago, where he also gave a lecture at a workshop on the Amorites. His collaborations on campus included participation in the workshops "Ancient DNA (aDNA) and the Ancient Near East" (Neubauer Collegium for Culture and Society) and "Beyond Cities: A Comparative Approach to Ancient Urban Hinterlands" (Mansueto Institute for Urban Innovation). Reculeau gave lectures to the University of Chicago community for Humanities Day 2021 (with Catherine Kearns) and to the members and volunteers of the Society for Asian Art (Asian Art Museum of San Francisco) and of the OI. He also participated in the OI Book Club, discussing *The Sumerians* by Paul Collins (Reaktion, 2021) with the OI's docents and volunteers.

Articles published by Reculeau in 2021–22 include:

- "Esclaves domestiques, prisonniers de guerre et citoyens endettés: Mari et la haute Mésopotamie, XVIII^e siècle avant notre ère." In *Les mondes de l'esclavage: Une histoire comparée*, edited by P. Ismard, B. Rossi, and C. Vidal, 19–27. Paris: Seuil, 2021.
- "'Opener of Canals, Provider of Abundance and Plenty': Royal Investment in Large-Scale Irrigation in Second Millennium BCE Upper Mesopotamia." In *Irrigation in Early States: New Perspectives*, edited by S. Rost, 209–68. Oriental Institute Seminars 13. Chicago: Oriental Institute, 2022.
- "Assyria in the Late Bronze Age." In *The Oxford History of the Ancient Near East*, vol. 3, *From the Hyksos to the Late Second Millennium BC*, edited by N. Moeller, D. Potts, and K. Radner, 707–800. Oxford: Oxford University Press, 2022.

INDIVIDUAL RESEARCH

SETH RICHARDSON had another busy publication year: four articles, two book reviews, and two notes. A first article, “Partial Persons, Unsafe Spaces: The Babylonian Production of Class through Laws about Animals,” proposed two points. First, Old Babylonian laws about animals, all set in liminal, nonurban spaces, were really models for judicial reasoning about how law worked in places not regulated by the state. Second, proportional damages for injuries to animals show us how law was used to construct systems of social value: the valuation of an ox’s hoof relative to the whole animal was the basis for modeling the relative worth of slaves, women, subordinates, and freemen. In a society where concepts of class and status were still being worked out, these laws were used to build out ideal types of social relations.

A second article, “Old Babylonian Letters and Class Formation” in the *Journal of Ancient History*, also examined issues about class identity. Here, Richardson looked at how expressions of sympathy were used not only to simulate social proximity but also to police behavior. The contingency of class identity—anxieties about falling *out* of status—was at least as important for constructing ideas about class as positive expressions of membership ever were.

A third article on divine emblems, “Place and Portability,” argued that their unique use as legal instruments in nineteenth- to seventeenth-century BCE Babylonia was the result of community needs for witnesses and decision-makers who were not always beholden to the same institutions. The agency delegated to emblems and their range of functions related to decisions about land and households suggests that they were used to smooth over irregularities in the social terrain in legal contexts.

A fourth article, “Raiders, Neighbours, and Night-time,” looked at “high” and “low” standards in concepts of peace—a hybrid model. It argued that both official ideologies and local realities must meet benchmarks for security against violence to qualify as a workable peace; absent this, we have two “alters” to peace: not only war but also instability.

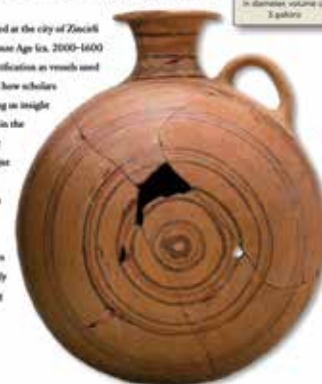
Richardson also published two book reviews, one on a new catalog of British Museum tablets (listing more than 171,000 of them!) and another on the proceedings of a conference, “Writing Neo-Assyrian History.” He also published two brief notes, one coauthored with Ella Karev on new trends in work on ancient slavery, and another solving a fragmentary Sumerian riddle by proposing that it was actually a joke about testicles (yes, you read that right). He also participated in several online workshops and a book panel, and he saw a nice bit of popular attention given to an article coauthored in 2020 with Kathryn R. Morgan about a kind of ancient wine jar: the November/December 2021 issue of *Archaeology* magazine featured the *aluārum*-jar in its once-an-issue “Artifact” feature.

ARTIFACT BY JARRETT A. LOBELL

Thousands of tablets in multiple languages spanning millennia confirm that ancient Near Eastern scribes were tickled *and* loquacious. But scribes were bound to happen.

Scholars have recently become aware of a type of vessel called an *aluārum* in texts from central Turkey dating to the nineteenth century B.C. More than 200 years later, inscribed tablets from cities far to the south near Babylon refer to a type of vessel called an “*alūfaraw*” jar, which was thought by modern scholars to hold a white dye known by that name. But according to historian Seth Richardson of the University of Chicago, the Babylonian scribes were actually misspelling *aluārum*, the name of the flasks, which sounded similar to their word for dye. “It evokes a picture of Babylonian scribes strung on the docks with loavesmen coming down the Euphrates River transporting hundreds of these jars,” says Richardson. “The scribes don’t know how to spell the word they’re saying, so they just use the spelling for a word they know.” The Babylonian vessels mistakenly thought by scholars to hold dye were in fact full of wine.

Aluārum flasks such as this pot unearthed at the city of Zincifli in modern Turkey are found at Middle Bronze Age (ca. 2000–1600 B.C.) sites across the Near East. Their identification as vessels used to transport and store petrel wine changes how scholars understand the region’s economy. “It’s giving us insight into the complexity of long-distance trade in the seventeenth century B.C., a time that is not well known in this region,” says archaeologist Kathryn Morgan of Duke University and assistant director of the Chicago/Tübingen Expedition to Zincifli. This network extended from modern Iraq to central Anatolia, a distance of more than 600 miles along which merchants transported not only wine, but also other commodities including scented and flavored oils.



With the easing of COVID-19 restrictions, **YORKE M. ROWAN** was able to accept the National Endowment for the Humanities award originally slated for 2020–21 to work on the Tel Yaquash publication project at the W.F. Albright Institute for Archaeological Research in Jerusalem. In addition, he began planning the inaugural stage of his new project with Austin “Chad” Hill and Kathleen Morrison (both University of Pennsylvania): the three-year, National Science Foundation–funded *Kites in Context: Infrastructure and Subsistence Strategies in the Context of Long-Term Land Use, Jordan*, an investigation into the animal traps known as “desert kites.” This project examines the chronological development and function of these traps through multiple scales of investigation, including satellite imagery to examine the distribution of kites and associated structures, drone imagery to map and record the landscape in high resolution, and excavation and terrestrial survey to study individual kites at a much smaller scale (see Project Reports). The project builds on the use of drones for high-resolution mapping in unexplored areas of the Black Desert in eastern Jordan, which was the basis for Rowan’s 2022 article (with A. C. Hill), “The Black Desert Drone Survey: New Perspectives on an Ancient Landscape” (*Remote Sensing* 14, no. 3: 702). Also based on research in the Black Desert, Rowan and colleagues submitted “The Multifaceted Site of Wisad Pools, Black Desert” to the Festschrift *In Honor of David Kennedy*, edited by M. Bishop and R. Repper. In addition, he and Hill submitted “Desert Kites: Neolithic Infrastructure in the Margins” for the Routledge volume *Framing Society in the Past: Infrastructure in Archaeological Discourse*, edited by G. Ellis and C. DeSanto; he and colleagues submitted “Eastern Badia Archaeological Project: Preliminary Report on the 2018 Excavation Season at Late Neolithic Structure W-80 Wisad Pools” for publication in the *Annual of the Department of Antiquities of Jordan*; and with D. Ilan, he contributed “Interpreting the Chalcolithic Steles of the Southern Levant” to the Festschrift “*And in Length of Days Understanding*” (*Job 12:12*): *Essays on Archaeology in the 21st Century in Honor of Thomas E. Levy*,” edited by E. Ben-Yosef and I. Jones. At the annual meeting of the American Society of Overseas Research in Chicago, he presented “Chalcolithic Expansion in the Galilee: The GPP Project in Context” with A. C. Hill, M. M. Kersel, and B. Heidkamp. Finally, he contributed the entry “Tools/Ground Stone” to the *Encyclopedia of the Material Culture in the Biblical World*, edited by A. Berlejung, P. M. M. Daviau, J. Kamlah, and G. Lehmann (Mohr Siebeck, 2022).

Submitting this annual report in July 2022 marked the one-year anniversary of the passing of Rowe Professor of Egyptology Robert K. Ritner. During the academic year, **FOY SCALF** helped arrange the donation of Ritner’s academic library to his alma mater Rice University with the help of collection development coordinator Scott Vieira and assistant professor Sophie Crawford-Brown. Scalf is currently working with archivist Anne Flannery to organize and catalog Ritner’s professional papers, correspondence, and born-digital files so they can be consulted by future scholars in the OI Museum Archives. Scalf is collaborating with Brian Muhs to usher Ritner’s Festschrift—*A Master of Secrets in the Chamber of Darkness: Egyptological Studies in Honor of Robert K. Ritner*—through to publication. Ritner was presented with a draft copy of the Festschrift on his sixty-eighth birthday, May 5, 2021. The final manuscript of the volume will be submitted to the OI publications office in fall 2022. Scalf also contributed an obituary memorial about Ritner for publication in the next volume of *Enchoria*, the journal in which some of Ritner’s earliest publications on Demotic appeared.

At long last and after a hiccup with the printer, Scalf’s book coauthored with Brian Muhs and Jackie Jay, *The Archive of Thotsutmis, Son of Panouphis*, appeared as Oriental Institute Publications

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146 in November 2021. Much more work remains in progress with the OI's Demotic ostraca collection, both through the Oriental Institute Demotic Ostraca Online database and in print. Scalf and Muhs wrote a profile of the Thotsutmis archive for the winter/spring 2022 issue of the OI member magazine *News & Notes*. Scalf's foreword for the Skyhorse Publishing reprint of *The Egyptian Book of the Dead* by E. A. Wallis Budge appeared in March 2022. In April, his article identifying the Abydos provenience for a relief of Sety I on display in the OI Museum appeared in the *Journal of Near Eastern Studies*, and his article titled "The Funerary Literature Related to the Book of the Dead" is scheduled to appear in 2023 in *The Oxford Handbook to the Ancient Egyptian Book of the Dead*. Scalf devoted much of this year to his forthcoming catalog of Book of the Dead manuscripts for the J. Paul Getty Museum with an anticipated publication date in 2023.

Scalf taught two classes for the University of Chicago's Department of Near Eastern Languages and Civilizations in the wake of Ritner's passing. For the first time in more than thirty years, "Introduction to Ancient Egyptian Religion and Magic" was taught by someone other than Ritner. He was justly "famous" for his exceptionally dynamic and entertaining lectures. While his shoes are impossible to fill, a packed class of more than thirty students was treated to Egyptian magic taught in Ritner's memory with visits to the OI Museum, detailed object studies, and analysis of how Egyptian religion has been portrayed in Western media. Scalf also taught "Introduction to Ptolemaic Hieroglyphs" for an intimate class of three advanced PhD students, who studied diligently to learn the script's complexities and the importance of the often-ignored texts written in the Ptolemaic and Roman periods. In the fall, more than seventy students joined Scalf's OI adult education class "Reading the Ancient Egyptian Book of the Dead" for an eight-week deep dive into a largely misunderstood corpus.

Finally, Scalf gave three Community Scholars lectures for Chicago senior living communities during the year: two for The Admiral at the Lake on timekeeping in ancient Egypt and on the Egyptian revival in the United States, and one for The Clare on the ancient Egyptian invention of the clock. He gave a guest lecture for Brendan Hainline's Center for Middle Eastern Studies class "Approaches to the Study of the Ancient Near East" on working with primary source material in Egyptology and papyrology.

In 2021–22, **GIL STEIN** presented four conference papers and invited lectures—two deriving from his excavations on behalf of the OI at the prehistoric site of Surezha in the Kurdistan region of Northeast Iraq, and two reporting on his cultural heritage preservation work in Afghanistan and Central Asia. As principal investigator of the OI's three US State Department–sponsored cultural heritage grants in Afghanistan, Stein worked remotely with the OI's international staff in Europe on the Hadda Sculptural Restoration Project and ongoing efforts to identify what objects have been looted from the National Museum of Afghanistan (see the Cultural Heritage Preservation Projects report). He also continued working remotely on the National Museum of Afghanistan Outreach–Mobile Museum Project and the Afghan Heritage Mapping Partnership, for which he was awarded a 2022 Faculty Grant from the University of Chicago's Franke Institute for the Humanities.

In addition to the Afghan cultural heritage projects, in 2021–22 Stein continued his work on the multiyear C5 Cultural Training Partnership for Artifact Conservation program—annual capacity workshops for conservators from the national museums of the five Central Asian republics. The workshops take place in the State Museum of History of Uzbekistan in Tashkent.

In tandem with his cultural heritage work, Stein completed five publications this year:

- “Cultural Heritage Preservation work in Afghanistan.” In *Oriental Institute Annual Report 2020–21*, 19–25. Chicago: Oriental Institute, 2021.
- *The National Museum of Afghanistan and Our Cultural Heritage* (with Alejandro Gallego-Lopez) (in Dari). Kabul: Afghanistan Centre at Kabul University, 2021.
- “Animal Production and Secondary Products in the Fifth Millennium BC in Northern Mesopotamia: New Data from Tell Surezha (Iraqi Kurdistan)” (with Max Price and Michael Fisher). *Paléorient* 47 (2021): 45–65.
- “Dalma Ceramics at Surezha in the Erbil Plain: Stylistic, Compositional, and Petrographic Evidence for Trans-Zagros Interaction during the Terminal Ubaid/Late Chalcolithic” (with John Alden, Leah Minc, and Savanna Buehlman-Barbeau). *Journal of Archaeological Science: Reports* 39 (2021): 103168.
- “Archaeobotanical and Dung Spherulite Evidence for Ubaid and Late Chalcolithic Fuel, Farming, and Feasting at Surezha, Iraqi Kurdistan” (with Lucas Proctor and Alexia Smith). *Journal of Archaeological Science: Reports* 43 (2022): 103449.

EMILY TEETER's major project continues to be researching and writing the history of the OI's Epigraphic Survey, and during the past year she spent many hours reading archival records of Chicago House (thanks to Emmanuelle and Alain Arnaudis) and the OI (thanks to Anne Flannery). In acknowledgment of her efforts, she was given the honorary title “Chicago House Centennial Historian.”

In a related project, Teeter is working with Anne Schumacher and Barbara Jillson to translate the four-volume *Tagebuch* (field diary) of Uvo Hölscher, who excavated Medinet Habu from 1926 to 1932. The project, which is nearing completion, will present a scan of the original handwritten and heavily illustrated German document alongside a transcription, and in another edition, an English translation. It is anticipated that the project will appear in the OI Digital Archive series in fall 2022. Teeter cannot thank Barbara and Anne enough for the many hours they have devoted to the project.

Teeter continues to serve as editor of the *Journal of the American Research Center in Egypt*. She also continues to consult on the Field Museum exhibit *Death: Life's Greatest Mystery*, opening October 21, 2022, and she contributed an essay to the show's catalog. Other publications include a catalog entry on OIM E14681, a relief of Desehebsed, for the Louvre's Nubian show and “A ‘New’ Stele of the Vizier To (Chicago OIM E14655),” which appeared in the *Festschrift* for Regine Schulz. She also submitted two additional *Festschrift* articles dealing with objects in the OI collection. She reviewed submissions for the *Bulletin de l'Institut français d'archéologie orientale*, the *Journal of Near Eastern Studies*, and the *Journal of the General Union of Arab Archaeologists*, and she evaluated book proposals for the American University in Cairo Press and Yale University Press. She recorded several audio segments for the Art Institute of Chicago's new Egyptian gallery, and she gave a lecture on James Henry Breasted for an Egyptology group in Bristol, England. Teeter also served as an outside evaluator for a PhD dissertation on heart scarabs for the University of Toronto, and she taught a six-week online class on Tutankhamun for the OI that had a (then) record-breaking enrollment of eighty-two.

Teeter continues to serve on the board of the Society of Biblical Literature's Writings from the Ancient World series, and she is active in the Chicago chapter of the American Research Center in Egypt. In early 2022, she led a Smithsonian Journeys tour to Egypt.

INDIVIDUAL RESEARCH

The past year was the first full year that **THEO VAN DEN HOUT** spent as the Oriental Institute's interim director. Although this position took most of his time, he also taught two classes. One chapter appeared in print: "Elites and the Social Stratification of the Ruling Class in the Hittite Kingdom," in *Handbook Hittite Empire: Power Structures* (Empires through the Ages in Global Perspective 1), edited by Stefano de Martino, 313–54 (Berlin: de Gruyter, 2022). Van den Hout presented at the University of Chicago's Parents Weekend in October 2021 and gave virtual lectures at Doshisha University in Kyoto, Japan, and in Göttingen, Germany. The latter was on his forthcoming biography of Hans Gustav Güterbock, *Hans Gustav Güterbock: Ein Leben für die Hethitologie, Berlin–Ankara–Uppsala–Chicago*, coauthored with Peter Raulwing. Finally, at the very end of the academic year, van den Hout led an OI tour through Turkey and Greece together with Seth Estrin, professor in the University of Chicago's Department of Art History. The Turkish part started with Gordion (famous for its king Midas), the Museum of Anatolian Civilizations in Ankara, Hattusa (the former Hittite capital), Ortaköy (excavations at ancient Sapinuwa), and Çorum in central Anatolia and proceeded to the west coast, where tour participants visited Izmir, Ephesus, Pergamon, Gelibolu/Gallipoli, and Troy (which needs no explanation). It was an intense but highly rewarding tour for which the directors of several excavations opened many doors that normally stay closed to tourists.

TASHA VORDERSTRASSE, university and continuing education program coordinator at the OI, facilitated multiple adult education courses and talks, taught several adult education classes and teacher workshops, gave a Community Scholar lecture and a talk about the education program, and also provided UChicago and Lab School tours (see the Adult Education and Youth and Family Programs report). In addition, she advised development associate Ali Mallett on the OI's social media in collaboration with membership and marketing program manager Matt Welton and curator Kiersten Neumann until Mallett left in November 2021, whereupon Vorderstrasse began writing most of the social media posts herself, working first with Welton and then also with youth and family program coordinator Kate Hodge when she arrived in February. Vorderstrasse selected the social media themes and all objects from the OI Museum and archives that were highlighted in the posts. The social media reach across platforms has shown a steady increase since she started writing the posts.

Vorderstrasse presented the following: "Studying and Teaching Nubian Queens" at the virtual symposium "Queen: Reimagining Antiquity to the Present," hosted by NYU Gallatin in September 2021; "Aqaba: A Port and Its Hinterland," an in-person and virtual talk at the annual meeting of the American Society of Overseas Research in November and December 2021; a response to Yassaman Ameri's "The Inheritance & the Artist," a virtual talk at the OI in December 2021; "Antoin Sevruguin: A 19th Century Armenian-Iranian Photographer," a virtual talk for the Glencoe Public Library in December 2021; "Changing Technologies and New Challenges," with Rebecca Wang, an OI Adult Education Program virtual talk for the University of Chicago Symposium for Teaching with Technology in April 2022; and "Drusilla Dunjee Houston's *Wonderful Ethiopians of the Ancient Cushite Empire* in Its Context," a virtual talk presented at the annual meeting of the American Research Center in Egypt in May 2022.

She published the following articles: "Syrien—Raubgrabungen. Modellierung von Gewinnen," with Fiona Greenland and Oya Topçuoğlu, in *Kulturraub—Fallbeispiele geraubter Kulturgüter in Syrien, Irak, Jemen, Ägypten und Libyen*, edited by Birthe Hemeier and Isber Sabrine, 107–13 (Berlin: Reimer, 2021); "Syrien—Dura Europos. Archäologische Detektivarbeit," in *Kulturraub—Fallbeispiele*

geraubter Kulturgüter in Syrien, Irak, Jemen, Ägypten und Libyen, edited by Birthe Hemeier and Isber Sabrine, 66–76 (Berlin: Reimer, 2021); and “Rediscovering Kushite Dynasty 25 in the OI Museum” and “Shabtis and Dynasty 25: The Art of Meta Vaux Warrick Fuller,” both with Brian Muhs, in the autumn 2021 issue of the OI member magazine *News & Notes*.

KAREN WILSON is currently working on the manuscript for *Nippur VI: The Inanna Temple*, which was accepted for publication by the OI publications committee and will appear in the Oriental Institute Publications (OIP) series. The book—authored by Richard L. Zettler, Karen L. Wilson, Jean M. Evans, and Robert D. Biggs, with contributions by R. C. Haines and Donald P. Hansen—will be the final publication of the OI’s excavation of the Inanna Temple at the site of Nippur during the late 1950s and early 1960s. The Nippur series editor is McGuire Gibson. The OI publications office is currently editing and formatting the volume(s).

This past year, Wilson also continued to serve as the Kish project coordinator and research associate at the Field Museum, preparing aspects of the publication of the work of the joint Field Museum–Oxford University expedition to Kish in 1923–32. The manuscript will be published as a volume in the OIP series and present the results of a November 2008 symposium that focused on current research and updated excavations at the site. Chapters cover studies of the human remains, textual evidence, lithics, animal figurines, seals, and stucco, as well as a catalog of the Field Museum’s holdings from Kish and Jamdat Nasr. Wilson is currently working with the publications office on the proofs.



RESEARCH SUPPORT

OVERLEAF: Members of the Scythian delegation from the reliefs of the eastern staircase of the Apadana (audience hall) at Persepolis, Iran (detail). Joseph Lindon Smith, 1935. Oil on canvas. OIM G3.

JOURNAL OF NEAR EASTERN STUDIES

SETH RICHARDSON

The *Journal of Near Eastern Studies* (*JNES*) rounded out its 138th year of publication with another complement of diverse and excellent research and writing: seventeen articles and thirty-five book reviews. *JNES* continues to attract and publish high-quality original research from around the globe. Authors from Qatar to Chicago, from Oklahoma to Israel sent us major articles on the role of public squares in ancient Ugarit, the concept of numeration in Sumer, Akhenaten and Nefertiti's morning toilette, the use of children as letter carriers in Late Antique Egypt, the function of bird song in the Gilgameš Epic, solutions to Middle Bronze Age chronology, the revenues generated by Ottoman law courts, and the use of magic in ancient Egyptian obstetrics. The *JNES* staff remained the same as during the previous year: James Osborne, editor and ancient book review editor; Fred Donner, modern book review editor; and Seth Richardson, managing editor. We also thank the production staff at the University of Chicago Press for helping get a handsome journal issue out every six months.

Bringing the quality of work that we insist on to our pages requires a long and exacting process of evaluation. Between July 1, 2021, and July 1, 2022, *JNES* received seventy-six manuscripts submitted as original studies, in addition to thirty-four invited book reviews. Of these seventy-six manuscripts, only five (6.6 percent) have to date been accepted for publication, though three remain under active review and another seven have been sent back to the authors for revision. Sixty-one manuscripts were rejected. Admittedly, our acceptance rate is usually about double this amount, so it seems to have been a particularly difficult year! We are, as always, grateful to the many reviewers from around the world who continue to make this evaluative process possible. Their (anonymous) work goes largely unrecognized, but we appreciate that they have contributed time and effort to the purpose of making the work we publish as good as it can be.

PUBLICATIONS

ANDREW BAUMANN

Even as the University of Chicago relaxed some COVID-19 restrictions in 2021–22, pandemic phenomena such as the Great Resignation continued to affect the OI and its publications office. Between the beginning of July and the first week of December 2021, all but one of the staff members in Publications resigned, for various reasons. Managing editor Charissa Johnson left her full-time position on July 9; part-time editorial assistant Emily Smith received a fellowship from the University of Chicago's Department of Near Eastern Languages and Civilizations and departed on September 18; Steven Townshend, who graciously served as interim managing editor until a new managing editor was hired, left his full-time role on November 30; and part-time editorial assistant Alex Cornacchia's last day was December 7. The OI is grateful for their contributions to the publications produced over the past several years.

Recruiting for a new managing editor began in late July 2021 with the posting of the position, and interviews took place in September and October. Andrew Baumann, who earned both his bachelor's and doctoral degrees in Egyptology at the OI and then spent twenty-five years working in scholarly and educational publishing, accepted the position and started on December 1. Part-time editorial assistant Rebecca Cain, who first joined the Publications team in February 2010, continued to provide valuable editorial and layout support this year.

Instead of immediately hiring new permanent staff to replace those who left, Baumann opted to try a different staffing model for getting the work done: freelancers. Freelancers, or independent contractors, offer a number of advantages. Many of them have expertise in a particular area acquired through decades of experience, so they work fast and their work product is of high quality. They also offer great flexibility in that one can draw on freelancers nationally or even globally, rather than rely on local labor, and multiple freelancers can work on many projects simultaneously when the workload becomes heavy. Finally, freelancers tend to be more cost-effective for organizations, not only because they work fast but also because they do not require fringe benefits. Independent contractors this year included Alexandra Witsell, who continued work on two titles until December 31; Connie Gundry Tappy, who copyedited several manuscripts; typesetters Kristin Goble and Susanne Wilhelm, who laid out four monographs; graphic designer James Slate, who produced several covers, including two for books published this year; and indexer Nancy Fulton.

Bringing a fresh perspective acquired in other publishing firms, Baumann introduced some changes this year to the interior design of OI publications and the processes for book production—changes that aim to make the OI's publications more reader- and author-friendly. Linux Libertine was selected as the new primary typeface for the OI's publications, replacing the Gentium typeface that had been used since 2011. Created by the Libertine Open Fonts Project and used by other publications and entities in Near Eastern studies, including the *Journal of Cuneiform Studies* and the Hittitology Portal of the University of Mainz, Germany, Linux Libertine was selected for its clarity and its spaciousness—in particular that of its italic font, which will benefit the transliterations that appear in many OI publications. Related to this change, the OI publications office no longer requires that authors place their manuscripts into Gentium-based Word templates, though they are welcome to do so; as long as a manuscript uses Unicode fonts, layout in Linux Libertine should not

pose problems. And following industry best practices in book production, all manuscripts are rigorously edited in Word before any layout commences, with all edits tracked and transparently shared with authors, all content-related questions answered, all in-text source citations checked carefully against the bibliography, and the numbering of figures and tables checked to ensure it matches the order in which these elements are discussed in the text. Typeset pages are proofread carefully by a professional editor, as well as shared with the authors, and a quality-control check at the end of the process ensures that all front matter, running heads, and other components receive the same attention as the rest of the book.

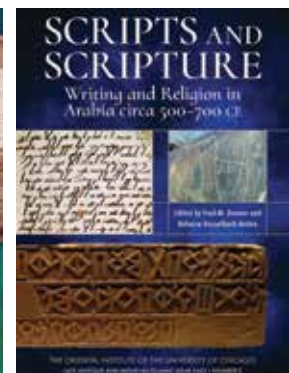
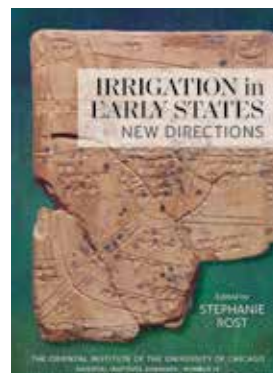
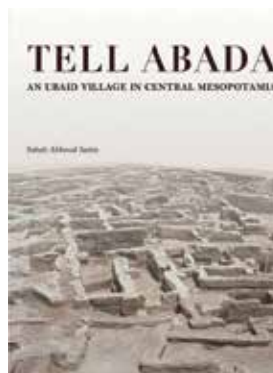
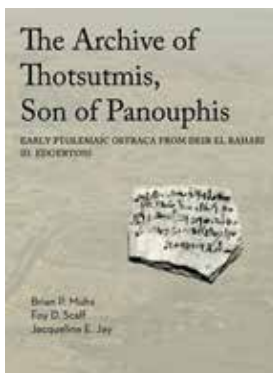
Despite the turnover in staff and vacant positions during part of the year, Publications produced four sizable monographs (listed below), as well as the annual report and three issues of the OI member magazine *News & Notes* (two of them double issues). In addition, another large monograph was finished and sent to the printer in June, with a scheduled publication date in August. Publications staff also continued to assist with typesetting the Chicago Demotic Dictionary and copyediting museum exhibit labels, brochures, eTablet e-mails, and other announcements.

Two new manuscripts were accepted for publication, both in May: *A Master of Secrets in the Chamber of Darkness: Egyptological Studies in Honor of Robert K. Ritner*, edited by Foy D. Scalf and Brian P. Muhs (Studies in Ancient Oriental Civilization), and *Pomp, Circumstance, and the Performance of Politics: Acting Politically Correct in the Ancient World*, edited by Kathryn R. Morgan (Oriental Institute Seminars 15). The editors of these volumes are working with the contributors to finalize the manuscripts for production.

MONOGRAPHS PUBLISHED (JULY 2021–JUNE 2022)

In print and online

1. *The Archive of Thotsutmis, Son of Panouphis: Early Ptolemaic Ostraca from Deir el Bahari (O. Edgerton)*. Brian P. Muhs, Foy D. Scalf, and Jacqueline E. Jay. Oriental Institute Publications 146. Published July 2021.
2. *Tell Abada: An Ubaid Village in Central Mesopotamia*. Sabah Aboud Jasim. Oriental Institute Publications 147. Published January 2022.
3. *Irrigation in Early States: New Directions*. Edited by Stephanie Rost. Oriental Institute Seminars 13. Published June 2022.
4. *Scripts and Scripture: Writing and Religion in Arabia circa 500–700 CE*. Edited by Fred M. Donner and Rebecca Hasselbach-Andee. Late Antique and Medieval Islamic Near East 3. Published June 2022.



MONOGRAPH AT PRESS

1. *“Like ‘Ilu Are You Wise”: Studies in Northwest Semitic Languages and Literatures in Honor of Dennis G. Pardee.* Edited by H. H. Hardy II, Joseph Lam, and Eric D. Reymond. *Studies in Ancient Oriental Civilization* 73. Sent to printer June 2022.

MONOGRAPHS IN PRODUCTION

1. *Where Kingship Descended from Heaven: New Light on Ancient Kish.* Karen L. Wilson and Deborah Bekken. Oriental Institute Publications.
2. *Beads from Excavations at Qustul, Adindan, Serra East, Dorginarti, Ballana, and Kalabsha: A-Group, Post-A-Group, C-Group, N-Type, P-Type, Pan Grave, Kerma, Middle Kingdom, and New Kingdom.* Joanna Then-Obluska. Oriental Institute Nubian Expedition 11.
3. *Kerkenes Final Reports 2: Excavations at the Palatial Complex.* Geoffrey D. Summers, with contributions by Susanne Berndt-Ersöz, Ahmet Çinici, Yılmaz Selim Erdal, Evangelia Ioannidou-Pişkin, Noël Siver, and Françoise Summers. Introduction by Nicholas D. Cahill and summary translated into Turkish by Güzin Eren. Oriental Institute Publications 148.
4. *The Second Cataract Fortress of Dorginarti.* Lisa Heidorn. Oriental Institute Nubian Expedition 12.
5. *Nippur VI: The Inanna Temple.* Richard L. Zettler and Karen L. Wilson, with contributions by Jean M. Evans, Robert D. Biggs, Richard C. Haines, Donald P. Hansen, McGuire Gibson, James Knudstad, and John C. Sanders. Oriental Institute Publications.
6. *Center and Periphery: The Archaeology of Politics at Ešnunna from the Ur III Period to the Old Babylonian Period.* Clemens Reichel. *Studies in Ancient Oriental Civilization* 74.
7. *Excavations at Serra East, Part 8.* Bruce Williams et al. Oriental Institute Nubian Expedition 13.
8. *Excavations at Serra East, Part 9.* Bruce Williams et al. Oriental Institute Nubian Expedition 14.
9. *Lowland Susiana in the Fourth Millennium.* Abbas Alizadeh. Oriental Institute Publications.
10. *Iraqi Excavations in the Diyala Region: New Excavations at Tell Asmar (Ancient Eshnunna), 2001–2002 and Excavations at Tell Muqaddiyah, 1980.* Hussein Ali Hamza and Salah Rmaydh. Translation and initial editing by Mark Altaweel, final editing and additional notes by McGuire Gibson, with contributions by Daniel Mahoney, Alexandra Witsel, and Hervé Reculeau. Oriental Institute Miscellaneous Publications.
11. *New Insights into Islamic Archaeology and Material Culture: A Conference in Jerusalem.* Edited by Katia Cytryn-Silverman, Kristoffer Damgaard, and Donald Whitcomb.
12. *Ancient Iran in the Oriental Institute Museum: From the Prehistoric to the Achaemenid Period.* Abbas Alizadeh. Oriental Institute Miscellaneous Publications.
13. *Mural Decoration in the Theban New Kingdom Necropolis.* Edited by Betsy M. Bryan and Peter F. Dorman. *Studies in Ancient Oriental Civilization*.
14. *The Materiality of Greek and Roman Curse Tablets: Technological Advances.* Edited by Sofia Torallas Tovar and Raquel Martín Hernández.
15. *Seen Not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts.* Edited by Ilona Zsolnay. Oriental Institute Seminars 14.
16. *A Master of Secrets in the Chamber of Darkness: Egyptological Studies in Honor of Robert K. Ritner.* Edited by Foy D. Scalf and Brian P. Muhs. *Studies in Ancient Oriental Civilization*.
17. *Pomp, Circumstance, and the Performance of Politics: Acting Politically Correct in the Ancient World.* Edited by Kathryn R. Morgan. Oriental Institute Seminars 15.

ELECTRONIC PUBLICATIONS

The OI publications office continues to make PDFs of new publications freely available online as soon as the print editions are released. To access the complete catalog of OI titles, which includes annual reports, *News & Notes*, and *Chicago House Bulletins*, please visit oi.uchicago.edu/research/catalog-publications.

SALES

ISD has been the exclusive distributor of OI publications since January 1, 2019. Between July 1, 2021, and June 30, 2022, ISD sold 1,239 print copies of OI publications (906 through its US warehouse and 333 through its agent in the United Kingdom), as well as 19 e-book copies to customers in the United States, United Kingdom, Canada, Israel, Egypt, and Germany. Robert K. Ritner's *The Mechanics of Ancient Egyptian Magical Practice* (Studies in Ancient Oriental Civilizations 54) remained the best-selling title, with 142 copies sold, but sales were also brisk for newly published titles and a few past exhibition catalogs.

For ordering information, please contact:

ISD

70 Enterprise Drive, Suite 2

Bristol, CT 06010

Tel. 860-584-6546

Email: orders@isdistribution.com

Website: www.isdistribution.com

Booksellers should contact ISD for all information on discounts. OI members receive a 20 percent discount on all titles; to receive the member discount, e-mail oi-membership@uchicago.edu and ask for the discount code. Select titles are also made available through the OI Museum gift shop, the Suq.

RESEARCH ARCHIVES

FOY SCALF

The priorities of the Research Archives during the 2021–22 academic year were to prepare for reopening to patrons, to process our accessions backlog, and to reorient our operating procedures to the new normal that is the ongoing COVID-19 pandemic. So much happened in those twelve months! Following all university protocols, on July 19, 2021, the Research Archives announced a research resumption plan that included access for personnel authorized to conduct on-site work at the OI. Authorized patrons could reserve windows of time to use the Research Archives, including the Elizabeth Morse Genius reading room. We acknowledge and thank the people across the OI who made this resumption possible through their many hours of work and collaboration. In particular, as the OI's COVID-19 lead, deputy director and chief curator Jean Evans helped tremendously to facilitate compliance with all university protocols, and visitor services and security manager Vick Cruz made all the necessary arrangements for security, access permissions, cleaning, and hand-sanitizing stations. Without their help, reopening would not have been possible.

As pandemic guidance shifted and various mandates were lifted, the Research Archives continued to expand its schedule and access. Beginning on August 9, 2021, we reopened to patrons on a slightly restricted schedule (9 a.m. to 5 p.m., Monday through Friday). The reservation requirement was lifted, and patrons had free access during operating hours without capacity restrictions. Those phased reopening steps paved the way for an official return to our traditional operating hours on September 27, 2021, in time for the return of students to campus for the autumn quarter. And return they did! Over the course of the year, 2,094 individual patrons swiped their ID cards 21,303 times to enter the Research Archives, producing an access report of nearly 600 pages. Under the umbrella of the University of Chicago, we may appear as a relatively humble library with 70,000 volumes, a single full-time librarian, and a small part-time staff, but by accommodating more than 2,000 visitors each year we provide an immense service to our community, both on campus and beyond. At a time when the student population is growing exponentially, we strive to offer an exceptional research environment with unparalleled access to resources. The increase in student population has had a ripple effect on accommodating infrastructure, and many students now visit the Research Archives' reading room for the quiet study space it offers.

In an effort to reach out to the many new faces we have seen over the past few years, welcome cards are now available and distributed to visitors (fig. 1). With the help of Josh Tulisak and Anne Flannery (and with inspiration from Anne's Cultural Heritage Experiment), our welcome message sought to inspire a sense of community participation and collective responsibility. After all, the collections of the Research Archives belong to the community that uses them; we staff are stewards, and it is our job to ensure that our patrons make the network connections they need—whether those networks are formed of information or people. For the former, we continued to provide subject expertise for access to digital resources throughout the year, fielding more than a thousand patron requests for help in finding off-site access to materials. For the latter, the reading room remains one of the primary communal hubs of our institute and university.

This year, patrons experienced a few changes in the library. The most impactful was the restriction on printing. For decades, printing in the Research Archives had been provided free of charge to patrons. This courtesy was intended as a convenient service for faculty, staff, and students associated



Figure 1. Front (left) and back (right) of welcome cards for Research Archives visitors.

with the OI, the Department of Near Eastern Languages and Civilizations (NELC), and the Center for Middle Eastern Studies (CMES). However, over the years, word spread—where else on a university campus could someone get free printing these days!—and the Research Archives began experiencing a flood of individuals whose primary reason for visiting was to take advantage of our printing service. At times, a line of ten or more people would be waiting at our two computer terminals to print to our single printer. To reduce consumption and the costs of subsidizing this massive increase in printing, we restricted printing to faculty, staff, and NELC/CMES students, using a privately distributed code that is monitored for activity. This policy ensures that our patrons have access to the resources they need without budgets, equipment, and staff being unduly stressed by subsidized campus-wide printing. In line with this new policy, we worked with the OI's information technology (IT) manager Knut Boehmer to replace our decade-old Xerox multifunction device. The replacement was delayed in December 2021 when Knut was promoted to another role in IT Services at the university. Although we congratulated him on his new endeavor, we knew we would miss his steadfast service and close collaboration with the Research Archives. Once Logan Conley joined the OI as IT analyst on April 11, 2022, we resumed the task, and scheduling for the delivery of the new Canon machines was completed by the end of the academic year.

There has long been a close collaboration between the Research Archives and the OI Museum Archives; the relationship goes beyond the confusing use of “archives” in both departments' names and has more to do with the intertwining of our collections and subject specialties. Picking up from our predecessors—John Larson and Chuck Jones—Anne Flannery and I continue to join forces on several projects. Our work on the OI Oral History project continued with an interview of Matt Stolper, emeritus professor of Assyriology, on July 7, 2021. The interview ran for well over two hours, and the edited version will be posted on the OI's YouTube channel. On a more somber note, the OI lost yet another pillar in the community with the death of Robert K. Ritner on July 25, 2021. Prior to his death, he had asked me to act as the literary executor of his scholarly library and papers. I am pleased to report that his scholarly library was donated to his alma mater Rice University in November 2021 with the help of Scott Vieira, Rice's collection development coordinator, and Sophie Crawford-Brown, assistant professor in Rice's Department of Art History. Over the next few years, we hope to see an online space develop where the contents of Ritner's extensive library can be explored. As for Ritner's papers—both analog and born-digital—we are still organizing, cataloging, and processing them for deposition into the OI Museum Archives. By the close of the 2021–22

academic year, we had rehoused more than 6,600 slides (with several thousand more to go), cataloged Ritner's notes from his graduate student years, organized his correspondence, and backed up all his digital files. There are still more than forty bankers boxes of material and hundreds of thousands of digital files to process. We expect to finish the analog materials during the 2022–23 academic year and to sort out the digital files by the end of the 2023–24 academic year. Progress on Ritner's papers can be monitored through the institutional repository database, where users can drill down from the collection-level record (<https://oi-idb.uchicago.edu/id/ca7375d2-0b07-4c09-9b74-cfe8faabfc3e>).

ACQUISITIONS

Acquisitions in 2021–22 were very strong (table 1), reflecting several factors. First, we spent much of the year processing the accessions backlog that had accumulated the previous year because of COVID-19 restrictions. This backlog resulted primarily from the suspension of our on-site volunteer program, as part of which volunteer Betty Bush had steadfastly helped me process new Research Archives acquisitions since 2013. With Betty's return this year, we were able to get back on track. I owe so many thanks to Betty; I do not know what I would do without all her hard work and assistance. Second, we received a number of major donations over the past few years, and their processing is reflected in our accession numbers. Our acquisitions this year were primarily through purchases (284 accessions), but a substantial number of volumes arrived as gifts (33 accessions). Our exchange program, mainly conducted through the University of Chicago Press with the help of *Journal of Near Eastern Studies* (JNES) managing editor Seth Richardson, continued to provide the library with fundamental publications (13 accessions). Over the course of the year, the Research Archives' expenditures included more than \$50,000 on new acquisitions purchases and over \$3,600 in shipping charges. To accommodate the needs of the premier library for the study of the ancient Middle East in the Western Hemisphere, we gratefully acknowledge the generous increase to the library's budget established by former OI director Christopher Woods and implemented by interim director Theo

Table 1. Research Archives acquisitions, July 2021–June 2022

Month	Number of accession lots	Volumes		
		Monographs, series, pamphlets	Journals	Total
July 2021	15	19	14	33
August 2021	52	70	58	128
September 2021	20	93	46	139
October 2021	41	76	24	100
November 2021	32	78	7	85
December 2021	50	81	38	119
January 2022	11	24	1	25
February 2022	21	53	21	74
March 2022	34	111	42	153
April 2022	14	75	8	83
May 2022	32	74	188	262
June 2022	8	65	2	67
Totals	330	819	449	1,268

van den Hout and associate director of administration and finance Brendan Bulger. Our entire community owes them a debt of gratitude for recognizing the Research Archives as the heart of the OI.

ONLINE CATALOG

Research Archives staff added approximately 7,500 new records to the library catalog in the EMu collection management system this year (table 2; numbers are rounded up to the nearest hundred). This number represents a 50 percent increase over last year, again reflecting the rebound effected by the resumption of our volunteer program and on-site staff schedules. Records are available online for searching, sorting, and downloading in a variety of formats (<https://oi-idb.uchicago.edu>).

Table 2. Catalog records

Year	No. of catalog records added	Total no. of catalog records
2021–22	7,500	577,500
2020–21	5,000	570,000
2019–20	10,000	565,000
2018–19	10,000	555,000
2017–18	10,000	545,000
2016–17	10,000	535,000

As predicted in last year's report, the Research Archives library collection now exceeds 70,000 volumes (table 3), nearly double the 40,000 volumes in the OI library in 1969 prior to the founding of the Research Archives.

Table 3. Research Archives analytics

Type	Total no. of records
Total volumes	70,543
Monographs	17,513
Monograph sections	74,000
Series	1,912
Series volumes	22,493
Series volume sections	102,388
Journals	1,037
Journal volumes	29,472
Journal volume articles	326,370
Theses	1,065
Pamphlets	3058
Reviews	123,291
Festschriften (volumes)	730
Digital invoice records	2,495
Digital cover art records	13,562
Adobe PDFs	41,793

Catalog records with links pointing to online content continued to grow, reaching 124,351 records. In addition to the labor required for entering these links, they need to be maintained because websites often change the structure of their URL addresses, requiring updates to their records in our catalog. When digital object identifiers (DOIs) are available, we include them in our metadata to help ensure the long-term viability of links in the catalog, and we encourage publishers of online content to employ a registered permalink or DOI system for sustainable access to these online materials. Many of our records include multiple links: one directly to publishers' online options and others directing users to aggregator databases such as JSTOR. A continuing desideratum is to incorporate links in the catalog to general online resources, such as online dictionaries, grammars, and text editions.

DONATIONS

The Research Archives continues to benefit greatly from generous donations of both funds and books. We would like to thank the following for their thoughtful gifts (in alphabetical order): Carolyn Allen, Pamela Allen, Warren Allen, and the estate of T. George Allen; Susan Allison and OI Image Permissions; Alex and Tigran Areshian; Dean Barthuly; Andrew Baumann; Bob Biggs and Clarence Anderson; Gretel Braidwood and Ray Tindel; Eric Cline; Steve Cole and Lisa Heidorn; Fred Donner; Andrea Dudek; Jean Evans; Anne Flannery; Kathryn Girten and the estate of Eugene Cruz-Uribe; Sue Geshwender; Gita Ghei; McGuire Gibson; James Holland; Charissa Johnson; Janet Johnson and Don Whitcomb; W. Raymond Johnson; Kathryn Lissak; Brett McClain; Malcolm Mosher Jr.; Dennis Pardee; Seth Richardson and *JNES*; Stephanie Rost and Elizabeth Stone; Martha Roth and the estate of Miguel Civil; Roberta Schaffner; Emily Teeter; Tasha Vorderstrasse; Linda Wheatley-Irving; Barbara Breasted Whitesides; Bruce Williams; Dianne Yurco; and Joan Žabkar. We would like to acknowledge and thank Polina Kasian, Wally Verdooren, Matt Perley, Brendan Bulger, and Theo van den Hout for all their help with these donations. We would also like to thank Denise Browning at the Suq for her gracious collaboration with the Research Archives in selling duplicate books to help raise funds.

ACKNOWLEDGMENTS

In last year's report, I mentioned the work of Rachel Madden, at the time a Loyola University graduate student in public history doing an internship with us in the Research Archives. After a long delay and some hiccups with our Google Arts & Culture collaboration, I am happy to report that her meticulous work has finally seen the light of day with the launch of the two-part OI online exhibition *Visible Language: Inventions of Writing in the Ancient Middle East and Beyond*:

- Part 1: <https://artsandculture.google.com/story/rwWhzTdob10nLA>
- Part 2: <https://artsandculture.google.com/story/4AXR09XM5lg0hw>

This online exhibition, launched in April 2022, was based closely on the 2010–11 exhibition and accompanying catalog publication by Christopher Woods. We would like to thank Rachel for the more than one hundred hours that she poured into this project, as well as Eric Aupperle for his initial forays into organizing the digital images and metadata. With these contributions, the OI now has eight online exhibitions available through Google Arts & Culture that reflect both the digital preservation of past on-site exhibitions and born-digital exhibitions.

The practicum work of Claire Mokrauer-Madden on the Directors Correspondence of former OI director John Wilson, mentioned in last year's report, was continued during a practicum by Hilarie Pozesky from Dominican University. We were incredibly lucky this year because Claire and Hilarie have now joined forces as Sepia Archival Management, through which they continued their work on the Wilson directorship. They examined the Directors Correspondence files from 1936, spending hundreds of hours digitizing, cataloging, and transcribing a large selection of material intended for a future publication in the OI Digital Archives series tentatively titled *The New Past: The Directorship of John Albert Wilson*, vol. 1, 1936. Their project is an extremely important one, as very little analysis has been made of this era in our institution's history. We look forward to collaborating further with them to reveal the aftermath of James Henry Breasted's death in 1935, when the OI was completely transformed in the wake of extreme financial hardships.

For many years we worked hand-in-hand with volunteer manager Sue Geshwender as part of establishing and extending the volunteer program in the Research Archives. Sue's retirement this year is yet another sign of the major changes taking place at the OI. We would like to thank Sue for all her help, leadership, and collaboration on building such a robust and successful volunteer corps. Although we have not yet brought all our volunteers back on-site, many of them continue to work remotely on a variety of projects. Many thanks to Betty Bush, Kym Crawford, Jane Clinkert-White, Roberta Schaffner, Gabriele Correa da Silva, and Eric Whitacre.

Last but certainly not least, I must thank the staff members of the Research Archives, who are absolutely essential to the flourishing and operation of the library. Without their punctuality, collegiality, flexibility, and hard work, our patrons could not perform their research and the library would not function. Once again, I express my deepest thanks to Marta Díaz Herrera, Sunwoo Lee, Tanya Olsen, Rebecca Wang, Catie Witt, and Amy Zillman.



MUSEUM

OVERLEAF: Landscape scene of the monumental terrace, including the Gate of All Lands, at Persepolis, Iran (detail). Joseph Lindon Smith, 1935. Oil on canvas. OIM G4.

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ROBERT BAIN, DENISE BROWNING, LAURA D'ALESSANDRO,
ANNE FLANNERY, HELEN MCDONALD, KIERSTEN NEUMANN,
AND JOSH TULISIAK

Despite ongoing challenges posed by COVID-19, the OI Museum saw continued growth in exhibitions, programming, research projects, researcher visits, and museum attendance throughout the year. With public health protocols in place and thanks to the efforts of our dedicated group of museum visitor attendants and guards, we successfully maintained consistent opening hours of Tuesday through Sunday, 10 a.m. to 4 p.m., from July 2021 through June 2022. In this time, 24,839 visitors passed through the OI Museum galleries, enjoying a space of engagement, curiosity, and calm separate from the trials and tribulations of the world at large that we continued collectively to navigate this past year.

By June 2022, our daily visitor numbers had notably increased compared to the previous year, with weekend days easily exceeding 150 visitors. Until April, we continued to monitor attendance using the Tock reservation system. First implemented in fall 2020, Tock gave visitors the option to make a reservation online in advance of their visit; it also allowed our museum visitor attendants to track walk-ins and groups. This information proved most valuable in understanding peak times and days for museum visitors. Thanks to an initiative spearheaded by Kate Hodge, youth and family program coordinator, we transitioned to a new attendance-tracking method to continue capturing this data in an efficient and accessible manner. As staff resources allow and visitor growth requires, we hope to expand our hours to include evenings once again and to continue striving toward our overall goal of not only reaching but surpassing prepandemic attendance numbers.

This year, we were particularly pleased to resume docent- and curator-led tours of the galleries, some of them including behind-the-scenes components, alongside our continued virtual offerings (on docent-led tours, see the Adult Education and Youth and Family Programs report). In October, Jean M. Evans and Kiersten Neumann offered a virtual curator-led tour of the museum for a docent group at the Los Angeles County Museum of Art, including highlights from the Assyrian and Egyptian collections, and over two days in March we offered similar (albeit in-person) tours to members of UChicago Medicine's alumni board that also included more focused presentations by Susanne Paulus, associate professor of Assyriology, and Hannah Moots, OI postdoctoral researcher. Early in 2022, we were honored to welcome University of Chicago President Paul Alivisatos for a museum-wide tour as part of a larger OI Immersion Day, which included visits to the museum's various departments as well as a tour of the current special exhibition, *Joseph Lindon Smith: The Persepolis Paintings* (see Special Exhibitions below). In like manner, we were pleased to host the Romanian ambassador to the United States, Dan-Andrei Muraru, and his delegation for a full museum tour in October 2021. Similarly, we welcomed to the museum the president of the senate of the parliament of the Czech Republic, Mr. Miloš Vystrčil, accompanied by several prominent senators, representatives of the government and ministries, a delegation of leading businessmen, and members of the Czech Academy of Sciences, who were in Chicago for the 10th Annual Conference of Czech Schools in North America in June 2022. Also in spring 2022, we welcomed for museum tours colleagues attending the Art Libraries Society of North America annual conference in Chicago; Alexandra Olsman, specialist

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in ancient sculpture and works of art at Sotheby's, accompanied by her Chicago-based colleague, Stephanie Loria; and the OI's Young Professionals, whose program included a tour of the special exhibition and a behind-the-scenes visit.

Of note is the star role that the museum galleries played in several media events this year. UChicago Presents filmed a segment with violinist John Macfarlane, visiting director of the Chamber Music Program and professional artist with the University of Chicago Department of Music, in the Yelda Khorsabad Court for the SOUND/SITES concert stream, which premiered in January in its Digital Concert Hall. The Khorsabad Court also served as the backdrop for an ABC 7 interview with Juliana Taimoorazy, founder and president of the Iraqi Christian Relief Council, in connection with her 2021 Nobel Peace Prize nomination. We hosted PBS/NOVA for an interview with John Wee, assistant professor of Assyriology, for a program on mathematics featuring tablets from the OI's Tablet Collection and other objects on display in the Edgar and Deborah Jannotta Mesopotamian Gallery, and BBC Persian Service for an interview and tour with Neumann of the special exhibition and Robert and Deborah Aliber Persian Gallery.

The museum continued to offer virtual programming, this year with a focus on behind-the-scenes aspects of the collection for our OI Museum Collections Talk series as well as exhibition-related programs (see Special Exhibitions below). Evans kicked off the Collections Talk series in October with a lecture titled "Fragmentary Pasts: Representing Early Dynastic Mesopotamia," which was followed by two equally engaging talks: "Ancient Pottery for Beginners: Why Archaeologists Study Ceramics," with James Osborne, and "From Wheat to Watermelon: Clues from Ancient DNA about Food and Diet in the Ancient World," with Moots. We also heard Fr. Dr. Iskandar Bcheiry, OI Museum Collections Research Grant recipient, in a talk titled "The Life and Homilies of Jacob of Serugh in a Manuscript in the OIM." On the OI's social media platforms, the OI Museum continued to participate actively in the Connecting Collections initiative (#ConnectingCollections), with monthly posts dedicated to a particular theme shared across all participants' platforms.

In spring and summer 2022, we excitedly welcomed new members to the OI Museum team: Kate Hodge, youth and family program coordinator, and Stanford Carpenter, manager of community engagement. On the flip side, we were sad to say farewell to Sue Geschwender, longtime OI volunteer manager, whom we wish all the best in her early retirement, and to Jean Evans, who departed from her position as OI deputy director and chief curator to assume the position of deputy director of the Ringling Museum. We wish Jean much success during this new adventure in Sarasota, Florida! At the close of the year covered by this report, a search was underway for the position of associate director and chief curator of the OI Museum. Neumann, as interim chief curator and in close coordination with OI interim director Theo van den Hout and associate director of administration and finance Brendan Bulger, was providing oversight of museum workflows and stewarding the coordination across and between museum departments in the interim period.

SPECIAL EXHIBITIONS

The OI Museum special exhibitions program successfully opened another major exhibition and a satellite exhibition this year. We closed the special exhibition *Antoin Sevruguin: Past and Present* on December 31, 2021, and installed *Joseph Lindon Smith: The Persepolis Paintings*, which opened on February 26 and runs through August 28, 2022 (oi100.uchicago.edu/jls) (fig. 1).

Joseph Lindon Smith (American, 1863–1950) was already an accomplished painter, celebrated for his ability to capture archaeological subjects with vivid realism, when he was invited to Persepolis in 1935 by James Henry Breasted, OI founder and then director, to join the OI Iranian (Persian) Expedition (1931–39). Smith's Persepolis paintings—ultimately three portraits and

three landscapes—complemented the work of the expedition, whose goal was to document rigorously and preserve the site for perpetuity. The special exhibition *Joseph Lindon Smith: The Persepolis Paintings*, curated by Kiersten Neumann, exhibits all six large-scale paintings—part of the OI Museum collection—to the public for the first time in more than 80 years (fig. 2). Seeing these canvases in their full magnitude on the gallery walls allows one to recognize the numerous artistic choices Smith made: he blurred figures at the borders of the portraits to emphasize certain features of the reliefs, and he carefully rendered far-off details in his landscape scenes, such as the mountains encircling Persepolis—which, as captured by Smith, remind Neumann of the snow-topped mountains surrounding her hometown of Vancouver, Canada.

Accompanying the paintings in the exhibition is a screen streaming nine minutes of footage of the site of Persepolis during the first years of the expedition (a monumental landscape much like what Smith would have experienced during his visit), excerpted from the OI’s 1934 promotional film *The Human Adventure*. The gallery also includes a display case showcasing archival documents that elaborate on the history of the six-piece collection. Featured are correspondence between Breasted and the team at Persepolis regarding Smith’s forthcoming visit; a 1935 issue of *The University of Chicago Magazine*, on loan from the Hannah Holborn Gray Special Collections Research Center of the University of Chicago Library, which published a letter from Smith’s wife, Corinna Lindon Smith, to Breasted detailing the couple’s experience at Persepolis; and Smith’s autobiography, printed posthumously, which includes an entire chapter devoted to the “The Majesty of Persia.”

We hosted a pair of virtual programs in connection with the exhibition, starting things off on February 8 with Neumann’s opening lecture, “Documenting Persepolis and the Paintings of Joseph Lindon Smith,” followed by a talk on April 26 by Talinn Grigor, of the University of California, Davis, titled “Persepolis after Lindon Smith: The Modernist Afterlife of the Ruins.” An exhibition promotional video was made available on the OI’s YouTube page. Printed exhibition materials included a simple gallery handout detailing all six paintings and a handsome postcard box set that contained, in addition to postcards of each of the six paintings, two postcards with archival photographs of Smith painting at Persepolis. The exhibition has received coverage in several media outlets, including the *Hyde Park Herald*, *Chicago* magazine, *Minerva* magazine, and *Artribune*.

Across the street in the lobby of the University of Chicago Booth School of Business, we deinstalled our previous exhibition, *The OI at 100*, which had opened for the OI centennial in spring 2019, and installed at the beginning of February a new satellite exhibition, *Sealing Practices in Ancient Mesopotamia*, which includes a case study of the administrative practices of the Inanna

JOSEPH LINDON SMITH

THE PERSEPOLIS PAINTINGS



A Special Exhibition

Figure 1. Cover of the gallery handout for the special exhibition *Joseph Lindon Smith: The Persepolis Paintings*.

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Figure 2. Installation photographs of *Joseph Lindon Smith: The Persepolis Paintings*.

Temple at Nippur as evidenced by administrative records and sealings excavated at the site by OI archaeologists in the 1950s.

EXHIBITION DESIGN AND PRODUCTION

The 2021–22 year, despite continued restrictions in place due to COVID-19, was one that saw a gradual return to a more normal workflow for the Exhibition Design and Production department. Our primary project was the design and production of the OI Museum’s special exhibition *Joseph Lindon Smith: The Persepolis Paintings* (see Special Exhibitions above). The presentation of this work was particularly challenging because the enormous scale of Smith’s six oil paintings made even moving them through the museum difficult—they are too large to fit through any of our internal doors, which were added to the museum after the 1930s, and uncrating the ones that were still crated was itself a major endeavor.

The design of the special exhibition was dictated mainly by the two largest paintings, the goal being for visitors to be able to step back and take in their full grandeur in our limited space while also incorporating other display elements to complement them and the other four paintings. Construction-wise, nothing was altered from the exhibition that previously occupied the space. The handling and installation of the paintings was a collaborative effort across museum departments. We upgraded the existing hanging hardware to something more secure. For the exhibition’s main wall color, we chose a deep purple both to complement the wood and gilt frames and to contrast with the various colors of the painted canvases, allowing them to stand out. The text and other didactic materials did not draw visitors’ attention away from the paintings but rather complemented them and also emulated the typography of the period in which the paintings were created. With this exhibition, we also expanded the elements of exhibition production that we are able to do in-house, including video production, vinyl wall texts, a wall-sized photo reproduction, and almost all the exhibition graphics and promotional materials. Lighting was done in a way that highlighted the paintings while preventing glare from the reflective gold-painted frames; lighting levels appropriate for the paintings were established in collaboration with Conservation.

Additionally, we continued work on the Robert F. Picken Family Nubian Gallery to bring its displays into line with the recent gallery renovations project. This work is ongoing and includes redesigning case layouts, deinstalling objects, rebuilding case furniture, remaking most mounts, redesigning and mounting graphics (all of which are printed in-house), and, finally, reinstalling objects (fig. 3).

A final noteworthy endeavor took place in connection with the temporary removal of the Nefermaat



Figure 3. Completed reinstallation of the display case “Nubia: C-Group, Kerma, and Pan-Grave Cultures” in the Nubian gallery.

stela from the Joseph and Mary Grimshaw Egyptian Gallery (see Conservation below): to communicate the design and size of the stela to visitors during its absence, we mounted a full-scale color print of the stela on the gallery wall.

CONSERVATION

As the world became accustomed to living with COVID-19 this year, life started to resume its prepandemic pace. There was a not-entirely-unforeseen aspect to this change, however: it triggered an avalanche of projects delayed by the pandemic, and our calendars quickly filled up. The sudden influx meant that projects such as loan requests and researcher visits, which should have been spaced over two years or more, suddenly filled the calendar back-to-back.

No one was immune to this phenomenon. The University of Chicago's Capital Project Delivery group, which underwrites building improvements on campus, had several delayed OI projects that all became active this spring. The OI found itself at the center of no fewer than seven projects taking place in and around the building, leading to the OI's new nickname, "Ground Zero." Several of the projects required the use of heavy machinery with the potential to generate harmful vibrations that might be damaging to our artifacts. To set up an early alert system, vibration monitors were installed in key locations throughout the building. Staff also periodically checked display cases and sculptures to ensure that localized vibrations were not noticeably affecting the collection.

One of the larger of these projects involved the extensive repair of the courtyard facade. The contractor for the project was concerned that one of the most intensive areas of work was directly above the Nefermaat stela (OIM E9002) in the Joseph and Mary Grimshaw Egyptian Gallery (fig. 4). Although the limestone stela was heavily restored, it still contains significant amounts of ancient pigment. At the request of the contractor, the stela was deinstalled from its permanent exhibit location (fig. 5) and temporarily moved to the storage area in the special exhibitions gallery. The stela will be returned to its permanent location in the Egyptian gallery by the end of the summer.

Fall and winter 2021 were particularly busy with the resumption of delayed research projects, both our own and those of external researchers. The following are just a few of the activities that took place. In October, Conservation participated in a workshop hosted by Yale University on an international collaborative study of Neo-Assyrian gold and silver tablets. The OI, represented by Susanne Paulus, Kiersten Neumann, Alison Whyte, and Laura D'Alessandro, presented a summary of our current research on our gold tablet (OIM A2529). Dr. Justin Jureller, manager of the Materials Research Science and Engineering Center (MRSEC) at the University of Chicago, kindly donated his time to the project by running some tests on the gold tablet in MRSEC's Merlin scanning electron microscope (SEM). Conservation was able to present some of the resulting preliminary elemental analysis and magnified surface imaging at the Yale workshop that supplemented our own handheld X-ray fluorescence elemental analysis and ultraviolet imaging. More research is in the works as time and funding allow us to continue our technological study of the tablet.

Conservation was able to resume the long-delayed study of the composition of the glazes on the OI Museum's Khorsabad bricks from the Sin Temple at Sargon II's palace. Building on Whyte's previous work from 2001, we were able to prepare new samples of glaze and received training to use the SEM at the University of Chicago's Department of Geophysical Sciences, a TESCAN LYRA3 field-emission SEM with advanced features. Working closely with Dr. Gerry Olack, the researcher in charge of the LYRA3, we were able to conduct extensive mapping of the samples, revealing new potential directions for research. Because of the pandemic's closure of the laboratories on campus, we had only two weeks to run our samples before putting together and submitting an appendix for the proceedings of the 12th International Congress on the Archaeology of the Ancient Near East,

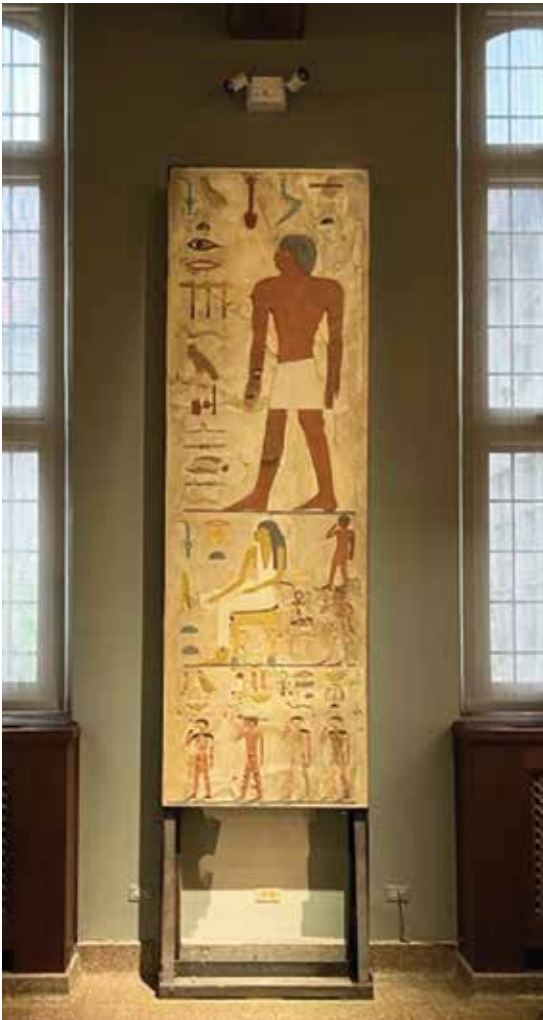


Figure 4. Nefermaat stela in preparation for its deinstallation as a safety precaution during construction work on the OI courtyard facade.



Figure 5. Nefermaat stela protected for its move across the galleries.

which took place in Bologna in April 2021. We look forward to future opportunities to collaborate with our colleagues as this study moves forward.

Also in the fall, the OI was finally able to take the next steps to finalize arrangements for acquiring the more than 500 objects donated by the Detroit Institute of Art (DIA). Conservation staff began planning for this donation more than two years ago. The dimensions and condition of the objects were studied, and the necessary packing materials were shipped to Detroit before the start of the pandemic. Once the pandemic restrictions were lifted, these plans resumed. In October, museum registrar Helen McDonald traveled with Whyte to the DIA to pack the objects for shipment to the OI. Ably assisted by DIA staff, they packed the entire donation in less than a week.

In addition to assisting researchers who needed access to fragile artifacts, Whyte created the condition reports required for objects going out on loan over the course of the year. The OI loaned objects to the Louvre Museum, the Getty Villa, and the Booth School of Business here at the University of Chicago, among other institutions. The work required of the OI Museum staff in

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handling these loans is significant. Whyte also performed conservation treatments on objects intended for special exhibitions, including those for *Joseph Lindon Smith: The Persepolis Paintings* and the upcoming exhibit of Roman sculpture, featuring objects excavated by the OI at Ptolemais, opening in September 2022. Analysis of the material composition and surface decoration was an important component of the treatment of the sculpture on which she worked (fig. 6). The upcoming exhibit will also present an opportunity for Conservation to carry out more “cosmetic surgery” than we normally perform on our collection. Several of the classical statues exhibit previous campaigns of repair and restoration that are unsightly by today’s standards. This exhibit will provide a useful opportunity for us not only to stabilize the objects but also to make much of the previous restoration less visible. The end goal of our treatments is to allow the sculptures to be appreciated for their original workmanship rather than the jarring modern intrusions currently visible on several of them.

In September, Whyte developed and taught classes on preventive conservation and material analysis at an international workshop held in Tashkent, Uzbekistan (fig. 7). The workshop was presented to cultural heritage professionals from Central Asia as part of Gil Stein’s Cultural Heritage Site Preservation and Economic Development in the Central Asian Republics grant (see the Cultural Heritage Preservation Projects report).

Over the course of the year, Conservation also spoke to various groups and visitors about art conservation. In November, Whyte was invited to give a lecture as part of the Humanities & Enrichment Series of the Nineteenth Century Charitable Association, where she presented an overview of conservation at the OI. The lecture was attended by more than a hundred people. In February, D’Alessandro was invited to speak to the University of Wisconsin–Madison’s department of anthropology. The title of her talk was “From Sargon’s Palace to Egyptian Mummy Portraits: Archaeological Conservation in the 21st Century.” The highly engaged audience contained a mix of undergraduate and graduate students and faculty.

After a nearly two-year delay, the OI resumed its participation in the Ancient Panel Painting: Examination, Analysis, and Research (APPEAR) project sponsored by the Getty. In February, the long-awaited visit by conservation scientists from the Art Institute of Chicago and Northwestern University took place. Led by Dr. Giovanni Verri, research scientist at the Art Institute, the team also included Dr. Marc Vermeulen and Dr. Alicia Christine McGeachy, research scientists from Northwestern University. The scientists unpacked a van full of equipment and set up temporary shop in the Conservation laboratory. Customized macro X-ray fluorescence equipment (for elemental analysis), Fourier-transform infrared spectroscopy (for molecular identification), and a variety of imaging equipment from infrared to visible-induced luminescence took over every surface in the lab (figs. 8 and 9).



Figure 6. Alison Whyte uses a digital microscope to examine surface decoration on OIM A30908, a statue of Venus with Cupid slated for display in the special exhibition of Roman sculpture.



Figure 7. Alison Whyte demonstrates how to set up an accelerated aging test for museum display and storage materials for students in the Cultural Training Partnership for Artifact Conservation at the State Museum of the History of Uzbekistan in Tashkent.



Figure 8. Scientists analyze the surface of a male funerary portrait (OIM E2053) using customized macro X-ray fluorescence equipment to obtain information on the painting's elemental composition.



Figure 9. Female funerary portrait undergoing Fourier-transform infrared spectroscopy to aid in identifying materials and pigments.

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It is important to note that all these methods of analysis are nondestructive in nature. The team spent an intense week analyzing and scientifically imaging our two funerary portraits (OIM E2053 and E9137). Verri will present the results of this first round of analyses at the second APPEAR conference, to be held in Amsterdam in October 2022, and they will be included in volume 2 of the publication *Mummy Portraits of Roman Egypt: Emerging Research from the APPEAR Project*.

The packing of the Persepolis Fortification tablets continued throughout the year for their return to the National Museum of Iran. The number of tablets increased substantially for this second shipment, with more than 3,500 tablets prepared for transport. To facilitate this task, the Persepolis packing project quarters were moved to a larger space to accommodate the multiple bins and packing crates, as well as the increased amount of packing materials required for the job. This larger space will also better accommodate student helpers working on the project when preparation for the third shipment begins in the fall.

REGISTRATION

Although COVID-19 continued to affect the work of Registration, it was less disruptive in 2021–22 than during the previous year. Loans delayed by the pandemic have happened, and some researcher visits have been possible. Work-study students have returned, making a much-valued contribution. The museum staff responded to more than eighty requests this year. Staff and student helpers carried out more than 10,000 object movements. Student helpers registered 140 modern impressions of stamp seals from Megiddo, Israel, and registered and photographed more than 500 sherds from Chogha Mish, Iran. As part of our ongoing improvements in storage, the manufacturer of our cabinets, Delta Designs, made a visit to service them.

Loans

The one new incoming loan was a volume of issues of the *University of Chicago Magazine* with an article on the Persepolis paintings from the Hannah Holborn Gray Special Collections Research Center of the University of Chicago's Regenstein Library for the special exhibition *Joseph Lindon Smith: The Persepolis Paintings*.

Two outgoing loans originally scheduled for 2020 finally went out in 2022. In March we lent some Persepolis objects to the J. Paul Getty Museum in California for its exhibit *Persia: Ancient Iran and the Classical World*. The loan objects included the lion-and-bull relief (OIM A73100), a stone lion head (OIM A24089), a gold roundel (OIM A28582), and the Xerxes tablet (OIM A24120), all from displays in the Robert and Deborah Aliber Persian Gallery. A copy of the substantial exhibit catalog edited by Jeffrey Spier, Timothy Potts, and Sara E. Cole can be found in the Research Archives. We lent two objects from the Robert F. Picken Family Nubian Gallery to an exhibit at the Louvre Museum in Paris relating to Pharaoh Taharqa (*Pharaon des Deux Terres: L'épopée africaine des rois de Napata*): the Pekartror stele fragment (OIM E6408) and the God's Wife Amenirdis I relief fragment (OIM E14681). It was also possible to change over our loan in the lobby of the University of Chicago's Booth School of Business; the loan for the centennial exhibit *The OI at 100* came back, and a new exhibit of tablets, seals, and seal impressions was installed in January.

An alabastron on loan to the Art Institute of Chicago (OIM E9408) was returned to us in July 2021. The rest of the objects in that loan, all on display at the Art Institute, are being renewed for two more years, including a censor from Medinet Habu (OIM E16785) and gold bracelets and rings (OIM A29786, A29787, A29788, A29789, and A29790).

Photo Permissions and Photography

More than 150 photo permission requests were processed this year, including requests for new external and internal photography. More than 600 images, new and existing, were added to the database. Around 35 objects were photographed for publications, and record shots were taken of approximately 500 objects in response to a variety of requests. We continued to make the most of any opportunities to take record shots of Nubian items off display. Conservation condition photography was done for an additional 20 loan objects. Installation photographs were taken of the special exhibitions *Antoin Sevruguin: Past and Present* and *Joseph Lindon Smith: The Persepolis Paintings*.

Acquisitions

In October, Helen McDonald and Alison Whyte made a trip to the Detroit Institute of Arts (DIA) to pack a donation of some 500 Egyptian objects that the DIA had deaccessioned. Some of the ostraca in this gift were published by the late Robert Ritner.

Classes

James Osborne taught his ceramic technology class in the autumn term. We provided a selection of sherds for the classes and a tour of the ceramic storage cabinets so that students could select a pot to write about in their final paper. Brian Muhs used a selection of scarabs for a class in November. Foy Scalf gave an evening class on manuscripts in February for Dominican University that included a viewing of several texts. In March, students from the Wisconsin Lutheran Seminary visited with Prof. Stephen Geiger to look at two *Oxyrhynchus papyri* that have New Testament texts: OIM E9351 (Rev. 16:17–18, 19–20) and OIM E2057 (Mark 10:11–12) (fig. 10). We worked with Conservation to provide objects for online talks given by Jean M. Evans (in October) and Hannah Moots (in February), as well as a selection of objects for an in-person talk by Tasha Vorderstrasse at the Fortnightly of Chicago club (in May).



Figure 10. Wisconsin Lutheran Seminary students with Prof. Stephen Geiger looking at *Oxyrhynchus papyri* with New Testament texts.

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Researchers, Requests, and Collections Research Grant Recipients

The museum staff responded to more than eighty requests this year. Rita Freed (curator, Museum of Fine Arts, Boston) visited in August to study a small selection of Nubian objects. One of our 2019 Collections Research Grant (CRG) recipients, Fr. Dr. Iskander Bcheiry, was able to make a few visits in October and November to study Syriac manuscripts. In November, Paige Paulsen (PhD student, Johns Hopkins University) came to study chlorite vessels, and Laura Battini (researcher, CNRS Paris; chief editor of *Ash Sharq* and of the Archaeopress Ancient Near Eastern Archaeology series) came to study a selection of Mesopotamian baked-clay plaques. We had a visit in January from Hüseyin Erpehlivan (assistant professor at Bilecik University, Turkey) to study Iron Age pottery from Alishar Höyük. Gilad Itach (Fulbright Fellow and OI postdoctoral researcher) came in January to study some of the Tayinat pottery. Lara Bampffield (PhD candidate, University of Oxford) came in April to study Old Babylonian cylinder seals. In May and June, Ben Greet (Stamp Seals of the Southern Levant Project, University of Zurich, Switzerland) came to study more than 370 stamp seals from Megiddo and approximately 190 modern impressions. Ling-Fei Lin and Prof. Steve Vinson (Indiana University at Bloomington) visited in February to study the Horus-with-crocodile cippus (OIM E16881). Prof. Frederic Bauden (University of Liège, Belgium) visited in May to examine two Arabic manuscripts (OIM A11982, A11983). Julie Unruh (conservator for the current Tayinat Archaeological Project) visited in June to study a variety of eye inlays from Tayinat.

Three of our 2019–20 CRG recipients (Moritz Jansen, Bart Vanthuyne, and Alice Williams) are now on the schedule for the next academic year. As mentioned in last year's report, we did our best to provide images and information to them remotely during the pandemic.

We would like to thank all our student helpers this year. Beth Wang and Jerry Kou registered and photographed Susiana culture sherds from Chogha Mish, Iran. Amarah Alghadban inventoried and labeled more than 1,500 Chogha Mish sherds. Sabrina Amrane documented a loan of sherds and flint from Yemen. Tom (Zhuohun) Wang joined us during the winter quarter to improve the records of the coin collection. Hannah Griffin joined us during the spring quarter to register modern impressions of our Megiddo stamp seal collection (in preparation for Ben Greet's research visit); she then moved on to registering Iron Age sherds from Alishar Höyük, Turkey.

MUSEUM ARCHIVES

This year was a new sort of normal for the Museum Archives. The hybrid format of in-person and digital research requests was in full swing, with more researchers coming back to the OI even as the traffic of online requests continued to increase. To adapt to this new research landscape, the Museum Archives continued to acquire new collections, brought in specialized interns, and started a project to link archival photographs to other parts of the OI collections to make them more readily accessible. Additionally, work was done to jump-start the Oriental Institute Digital Archives (OIDA) with the preparation of archival materials, some of which will become available online in the coming year.

New Acquisitions and Collection Processing

The Museum Archives acquired a large amount of material this year through donation and active solicitation. Examples include the Miguel Civil Papers and Robert K. Ritner Papers, which are large collections that will prove incredibly important to future researchers. These collections are still undergoing processing because of their size and scope.

Additionally, materials relating to the OI's Nippur Expedition under the care of McGuire Gibson continued to be documented, and some moved back into the archives. Prints of the images Ann

Hamilton made in connection with her project *aeon*, installed in the Grand Reading Room of the University of Chicago's Joe and Rika Mansueto Library in 2019 for the OI centennial, were also introduced into the archives. Two photograph albums donated by Jacky Shipton Gooder were added to the Megiddo collection thanks to the efforts of Eric Cline.

Research

The Museum Archives fielded research requests both online and in person, assisting researchers such as Will Caruthers, Eric Cline, Beth Derderian, Eva Rose Miller, Alexander Nagel, Yelena Rakic, Peter Raulwing, Emily Teeter, Ramazan Turgut, and Jeff Zorn. Requests came from institutions as varied as Cornell University, George Washington University, the Metropolitan Museum of Art, the Smithsonian, the Sorbonne, the University of Vienna, Wooster University in Ohio, University College London, and Van Yüzüncü Yil University, among others.

Collections that were accessed include, but are not limited to, the records of the Megiddo Excavation, the Persepolis Excavation, the Nippur Excavation, and the Ptolemais Excavation, as well as the Papers of James Henry Breasted, the Papers of Nabia Abbot, the Directors Correspondence, Records of the OI Negatives Collection, and the OI Audio Visual Collection.

Additionally, we prepared for University of Chicago President Paul Alivisatos's OI Immersion Day visit in February, during which he received a tour of the archives and joined the OI's Cultural Heritage Experiment with a loan of the May 1919 letter in which John D. Rockefeller Jr. agreed to fund the OI, thus making its existence possible.

Oriental Institute Digital Archives

Started by former OI archivist John Larson in 2010 with the inaugural publication *Letters from James Henry Breasted to His Family, August 1919–July 1920*, the OIDA is a digital series that strives to promote the Museum Archives collections by exploring the OI's history through archival documentation. The publication of this series went dormant until the past year, when we were able to cultivate several very interesting projects. Three digital publications are currently underway. The first is a collection of letters from John Wilson's first year as director of the OI in 1936. In consultation with Foy Scalf and Anne Flannery, archivists Claire Makrauer-Madden and Hilarie Pitman Pozesky have been selecting and transcribing letters from the Directors Correspondence to include in a volume highlighting the struggles faced by Wilson and the OI during this critical moment in the OI's history. Emily Teeter, with the expert linguistic work of Anne Schumacher and Barbara Jillson, is preparing German transcriptions and English translations of Uvo Hölscher's Medinet Habu excavation notebooks; this volume will also include scans of the original documents. Lastly, Anne Flannery is working on a collection of correspondence and notable documentation relating to Nabia Abbot, scholar of Islam and Arabic literary papyri and the first woman to become a professor at the OI.

Special Projects and Outreach

The Museum Archives continued its commitment to reaching out to the campus community and engaging with scholars beyond Chicago. This outreach included undergraduate engagement, graduate instruction, conferences, and exhibit support. This year, the Cultural Heritage Experiment took place in person for the first time since 2019. It was purposefully low-key to ease students back into campus life. Thirty-five undergraduates participated by borrowing an archival object to "live with" for the academic year. Students provided in situ photographs each quarter (fig. 11) and participated in OI tours and a lecture by Gil Stein.

OI archivist Anne Flannery supported graduate students who may want to enter the field of archives and special collections by teaching the UChicagoGRAD class "Managing the Past: Careers in

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Archives and Special Collections” in autumn 2021. This course was available to University of Chicago graduate students and covered a short history of archives while introducing students to archival and museum practices, concepts, and contemporary challenges. In addition to weekly classes, students toured the OI archives, participated in information interviews, and created portfolios that highlighted their new skills and resources.

In an attempt to make photographic material more accessible to the general public, a PhD student and Graduate Global Impact intern, Ling Chan, was hired to jump-start a data-linking project between the Museum Archives and the Research Archives. This process will make more digital photographs available online and provide references to works in which they are published. We presented our work at the LD4 2022 Linked Data Conference in July 2022 with a session called “Linking Data across Museum Archives and Special Collections.”

Additionally, the Museum Archives supported special exhibits by contributing original documents to the exhibit highlighting Joseph Lindon Smith’s paintings at Persepolis (curated by Kiersten Neumann).

Archives Staff

In an effort to source the technical skills and area expertise required to process the OI archival collections, the Museum Archives sought out master of library and information science practicum students and University of Chicago graduate students to work in the archives. This year Camille Banks (Long Island University), Ling Chan (University of Chicago), Apollo El-Khatib (University of Chicago), and Sofia Shelley (Dominican University) provided valuable assistance with cataloging, processing, and linking collections in the integrated database.

Acknowledgments

Many thanks to everyone who supported the Museum Archives this year, including all museum staff and especially Susan Allison, Vick Cruz, Kate Hodge, and Helen McDonald. Foy Scalf offered invaluable expertise to the archives this year through consultation and the processing of the Robert K. Ritner Papers. Thanks, as well, to Brendan Bulger, Tauresha Florence, Mariana Perlinac, and Theo van den Hout for their administrative support of the archives. And special thanks to Jean Evans for her support during her time as OI deputy director and chief curator from September 2016 to March 2022.



Figure 11. Examples of objects from the Cultural Heritage Experiment in the homes of students.

THE SUQ

When the year covered by this report began, the Suq was still closed to the public because of COVID-19 protocols. We did maintain the Suq website, filling mail orders and answering any questions sent to the OI email address. The Suq reopened on November 3, 2021, for three days a week (Wednesday, Saturday, and Sunday) during the reduced hours of 10 a.m.–4 p.m. It was great to connect with our customers and coworkers again! We carried these limited hours through the rest of the year without our volunteers being able to return. Thanks to Joan Fortune, Mary Shea, Emily Teeter, and the estate of Robert Ritner for donating wonderful merchandise to the Suq—the items from their travels kept the Suq full of varied and exciting merchandise. We look forward to the day when the Suq will again be open full-time and its beloved volunteers can return.



ADULT EDUCATION AND YOUTH
AND FAMILY PROGRAMS

OVERLEAF: Median guard from the reliefs of the eastern staircase of the Apadana (audience hall) at Persepolis, Iran. Joseph Lindon Smith, 1935. Oil on canvas. OIM G2.

ADULT EDUCATION AND YOUTH AND FAMILY PROGRAMS

TASHA VORDERSTRASSE, KATE HODGE, AND CATIE WITT

ADULT EDUCATION

The OI's adult education classes continued to have very strong attendance in 2021–22 and continued to take place online over Zoom. Three classes were attended by more than seventy people, and two others had more than eighty participants—the largest classes the Adult Education program has ever seen.

In summer 2021, Yorke Rowan, OI research associate professor; Bruce Williams, OI associate; Rachel George, University of Chicago PhD student in anthropology; Delphine Poinot, associate researcher at the Unité Mixte de Recherche, Archéologie et Philologie d'Orient et d'Occident, Centre National de la Recherche Scientifique; and Tasha Vorderstrasse, OI university and continuing education program coordinator, jointly taught “Rock Art in the Ancient Near East, North Africa, and Beyond”; in addition, Vorderstrasse taught “Red Sea and Indian Ocean Trade,” and Foy Scalf, head of the OI Research Archives, taught “Reading the Ancient Egyptian Book of the Dead.” Fall 2022 classes included “A View from the Conquered: Lower Nubia during the Egyptian New Kingdom,” taught by Lindsey Weglarz, assistant dean of students for admissions in the University of Chicago's Division of Social Sciences; “Photography in Focus: Exploring Local Photographers in the Ottoman, Qajar, and Russian Empires,” taught by Polina Kasian, former OI assistant director of development, and Vorderstrasse; and “Trade across Ancient and Medieval North Africa,” a free, OI members-only class also taught by Vorderstrasse. In winter 2022 the classes offered were “Tutankhamun: Celebrating the Centennial of the Discovery of His Tomb,” taught by Emily Teeter, OI associate; “Introduction to the Sumerian Language, Script, and Culture,” taught by Colton Siegmund, PhD student in Near Eastern Languages and Civilizations (NELC); and “Archaeology of Gandhara and Arachosia,” taught by Harrison Morin, lab assistant in the Center for Ancient Middle Eastern Landscapes and staff member of the Afghan Heritage Mapping Project, and Vorderstrasse. Spring classes were “Images from Late Antique Iranian World: Creation and Reception,” taught by Poinot, and “Queens and Princesses in the Ancient World,” taught by Vorderstrasse. Summer 2022 classes began in June with “Central Asia before the Achaemenids,” taught by Teagan Wolter, PhD student in NELC.

Another goal of the Adult Education program was to share with other members of the University of Chicago community the lessons learned through the transition to online-only programming. To that end, Vorderstrasse and NELC PhD student Rebecca Wang, who had previously taught in the program, gave a talk titled “OI Adult Education Program: Changing Technologies and New Challenges” at the 2022 Symposium for Teaching with Technology.

In addition to adult education classes, online teacher workshops were also offered. In fall 2021 Vorderstrasse led three workshops, titled “Studying Persons with Disabilities in the Ancient and Medieval Middle East and North Africa,” “Studying Enslavement,” and “Studying Trade in Antiquity.”

ADULT EDUCATION AND YOUTH AND FAMILY PROGRAMS

In winter 2022, teacher workshops included “Studying Queens and Royal Patronage,” led by Lex Ladge, PhD student in art history, and Vorderstrasse; “Studying Mobility in the Ancient World,” led by Hannah Moots, OI postdoctoral scholar, and Vorderstrasse; and “Studying Interpretation: Edmonia Lewis and Cleopatra,” led by Vorderstrasse.

The Community Scholars program continued online via Zoom. Vorderstrasse gave a virtual talk titled “Antoin Sevruguin: A 19th Century Armenian-Iranian Photographer” for the Glencoe Public Library. Foy Scalf gave three lectures for local senior living communities, two for The Admiral at the Lake and one for The Clare.

In-person University of Chicago student tours resumed at the OI Museum—the only guided tours available in the museum in fall 2021. Nearly 150 University of Chicago students attended these tours; although the OI postcolonial tour was the most popular, other tours covered Egypt and Nubia, nationalism in Iraq and Palestine, and the Islamic exhibit cases. In addition, activities were arranged for nearly 150 sixth-grade humanities students at the University of Chicago Laboratory Schools. Though fewer in number, winter and spring 2022 tours included those on medicine, highlights of the collection, two on ancient Mesopotamian and Egyptian law, and one that looked at ancient life and community. We also organized a tour of the Arts + Public Life special exhibition *Relic* for docents.

YOUTH AND FAMILY PROGRAMS

Charlie Kolodziej stepped down from his role as education facilitator lead but stayed on as a facilitator throughout the academic year. The programming was administered by Kirsten Forsberg, PhD student in anthropology, until Kate Hodge became the OI’s new Youth and Family Programs coordinator in February 2022. Samantha Suppes, PhD student in NELC; Chloe Brettman, undergraduate student in history; and Catie Witt, PhD student in NELC, served as additional education facilitators for the 2021–22 academic year.

Summer 2021 programs included several virtual events: “Wild Animals of the Nile,” presented by Sasha Rohret, PhD student in NELC; “Myths and Magic!”; and “Secret of the Mummies.” In fall 2021, virtual field trips for K–12 schools continued as they had during the 2020–21 school year with “Artifact Analysis,” “Myths and Magic!” and “Secret of the Mummies.” Showcasing the power of virtual platforms for reaching new audiences, these popular virtual events allowed the OI to connect with students across the United States whom we would never have been able to reach through traditional, in-person programming.

In March 2022 the OI Museum reopened in-person gallery, tour, and educational offerings. From March to the end of the academic year, the museum saw 1,082 people register and come for tours and educational programs. Of these visitors, 682 (63 percent) were students. The museum hosted 27 self-guided tour groups, 10 docent-led tour groups, and 8 educational programs. In addition, the museum hosted two annual events—the Persian Nowruz (New Year) Celebration and Ancient Game Day (see Annual Programs below)—as well as two weekend educational programs: Movie Night at the Museum and South Side Girls Astronomy Camp (see Other Programs below). These four programs brought an additional 497 visitors.

Finally, the Education department updated the OI’s visitor reservation system and information about programming on the OI website. These updates created a more streamlined and user-friendly experience for guests and staff members alike.

Field Trip Highlights

Even though we restarted in-person field trips without marketing them, eight educational programs were taught by the OI Museum between March and the end of the academic year. Facilitators Samantha Suppes and Catie Witt, with the help of Kate Hodge, taught these programs. Two of the programs were “Time Travelers,” a program for kindergarten through fourth-grade children that focuses on daily life and clothing in ancient times. One film-and-tour option was reserved, with students viewing the OI documentary *Breaking Ground* and going on a guided tour. For middle- and high-school students, facilitators taught two artifact analysis programs that focused on “backwards archaeology”—using observation of and inferences from artifacts to understand archaeological context. Finally, three “Ancient Innovators” programs focused on developing hypotheses about ancient inventions. A total of 220 students participated in these field trips. The OI Museum hosted an additional 464 students on self-guided and docent-led tours. The total number of students at the OI Museum during this time was 684, from self-guided tours, docent-led tours, and educational programs.

Annual Programs

In March and May, in-person events included the Persian Nowruz New Year Celebration, which coincides with the spring equinox and is celebrated by millions in Central and Western Asia, and Ancient Game Day. One hundred fifty people attended the Nowruz Celebration, which we hope to expand even further next year.



Nowruz
celebration

Saturday, March 12
1–3 P.M.

**In-person at the
OI Museum**

Celebrate the delight of the coming Persian New Year—Nowruz! Visit a Haft Seen table, explore the galleries, hear from OI scholars, enjoy a scavenger hunt, and take activities home to continue the celebration.

Free for members and children
\$5 suggested donation for adults

All ages. Registration recommended:
<https://bit.ly/34H3R0Z>

Street parking is available. Please check
Eventbrite for more information.

 oi.uchicago.edu/jfs   Sponsored by the Federation of Zoroastrian Association of North America and the Zoroastrian Association of Chicago.



**MOVIE NIGHT
AT THE MUSEUM**

SATURDAY, APRIL 23, 3-6:30 P.M.
FEATURING “NIGHT AT THE MUSEUM™”

EXPLORE THE OI AFTER HOURS!

SEARCH THE COLLECTIONS WITH SCAVENGER HUNTS, GAD CONNETT TO THE ANCIENT WORLD THROUGH ARTS AND CRAFTS, AS THE MUSEUM CLOSES. WE WILL HOST A PIZZA PARTY AND FAMILY-FRIENDLY SCREENING OF NIGHT IN THE MUSEUM IN BEASLEY HALL. BEFORE EMBARKING ON A NIGHT-TIME TOUR, SEE A PEER AT WHAT DOES OR WHEN THE ODDER GET LOCKED!

\$11 FOR MEMBERS
\$7 FOR ADX MEMBERS

ALL AGES. REGISTRATION REQUIRED!
<https://bit.ly/34H3R0Z>

 oi.uchicago.edu/jfs

Event posters designed by Josh Tulisiak, the OI’s manager of exhibition design and production.

ADULT EDUCATION AND YOUTH AND FAMILY PROGRAMS

Ancient Game Day took place during alumni weekend and saw approximately 130 people enter the OI Museum between noon and 2:30 p.m. while the event was happening. Ancient Game Day focuses on games from the ancient world, such as Egyptian *senet*, the Royal Game of Ur, mancala, and chess. Participants play ancient games and can make their own game in the OI's LaSalle Banks Education Center. Though the event is normally held outside, this year the rainy weather forced it into the galleries, where many people took part in the festivities.

Other Programming

With the reopening of the OI's galleries came two programs. Movie Night at the Museum, a collaboration with OI Membership, consisted of a viewing of the movie *Night at the Museum* and an after-hours gallery tour. The successful event attracted some 135 people, about 75 percent of whom paid \$7 per ticket because they were not members of the OI. Data from a post-event survey showed that attendees were interested in returning for a second movie night.

We also partnered with a South Side Girls Astronomy Camp to host a STEM-themed tour and program, including take-home bags for the students. While we expected twenty to twenty-five people to participate, about fifty attended. This program will serve as a foundation for a new partnership with Juliet Crowell, education and outreach manager for the University of Chicago's Department of Astronomy and Astrophysics.

Now that in-person programming and events are back in full swing, we have a packed schedule through fall 2022. We have new and exciting programming coming as well!



DEVELOPMENT AND MEMBERSHIP

OVERLEAF: Landscape scene of the columns of the Apadana (audience hall) at Persepolis, Iran. Joseph Lindon Smith, 1935. Oil on canvas. OIM G5.

DEVELOPMENT AND MEMBERSHIP

BILL COSPER AND MATTHEW WELTON

The Oriental Institute's development and membership team oversees and manages all activities related to philanthropic support, membership programming, communications, and special events. The effective integration of these activities is vital for recruiting, sustaining, and growing the OI's global network of friends, donors, and supporters to advance the OI's mission and goals.

At the close of the 2021–22 year, the development and membership team comprised the following:

- Bill Cospers, director of development
- Matt Welton, associate director of membership programming, marketing, and communications
- Assistant director of development (open position)
- Development and membership associate (open position)

In terms of staff, 2021–22 was a truly challenging year, which began with the sad loss of the OI's director of development, Wally Verdooren, in August 2021. Much beloved by our entire community, Wally left behind a wonderful legacy of dedication and accomplishments for the OI, which was built on during the course of 2021–22 and will continue in the years ahead.

Considering the many staff departures the OI faced during the COVID-19 pandemic as a result of the Great Resignation—a labor trend that many other units at the University of Chicago and beyond likewise experienced—we were especially fortunate to have had Polina Kasian, assistant director of development, here not only to keep things on track but also to expand our fundraising efforts and grow our membership. Polina left the OI in May to become assistant director of development at the Smart Museum; we remain hugely grateful for all her efforts and are glad she remains part of the University of Chicago community. We also bid farewell to Ali Mallett, with gratitude for all her many contributions to our work during her time at the OI.

FUNDRAISING

The OI finished fiscal year 2021–22 in strong financial condition, not only as a result of our careful stewardship of resources and control over expenditures but also because we were able to exceed our fundraising goals. We greatly appreciate the remarkable generosity of our donors and members, whose commitment quite literally makes our work possible. It is thanks to their support that the OI remains one of the world's most important and influential centers for the study, preservation, and appreciation of the history and archaeology of North Africa and West and Central Asia.

Contributions to both general operating support and project/program funds are essential for the OI to be able to give its faculty, staff, students, and programs the vital resources they need for their work. Whether they support the in-house work of the OI's tablet room and Center for Ancient Middle Eastern Landscapes lab or fund fieldwork in places ranging from Spain to Turkey and Egypt

DEVELOPMENT AND MEMBERSHIP

to Afghanistan, financial gifts to the OI have a truly global and significant impact, allowing us to advance our knowledge of the cultures and people we study and supporting an ever-expanding body of work.

The following chart summarizes our fundraising success in fiscal year 2021–22, which comprised 2,265 contributions of all sizes, with gifts ranging from \$5 to \$373,000. While we are incredibly thankful for big contributions, we are equally grateful for every gift or membership payment at any level.

Fundraising giving categories	FY 2020–21 \$ amounts	FY 2021–22 \$ amounts	% of FY 2021–22 goal
Fundraising progress*	\$1,506,263	\$2,048,425	117%
Expendable cash	\$1,349,249	\$1,824,285	104%
Realized bequests	\$209,931	\$1,162,140	
Payments on multiyear pledges	\$1,624,908	\$449,279	
New pledge commitments	\$155,685	\$197,185	
New deferred gifts and documented bequests	\$200,000	\$100,000	

**Fundraising progress is the total combined dollar amount of all new gifts, memberships, multiyear pledges, and documented estate commitments received during the fiscal year.*

Our fundraising performance in fiscal year 2021–22 was not only crucial for ensuring our ongoing work in the past year but also sets the OI up for even greater success in fiscal year 2022–23 and beyond. Here is just a sampling of the upcoming special initiatives that our donors will help make real:

- Celebrating the Chicago House centennial in 2024 and readying the Epigraphic Survey for its next hundred years
- A permanent fund to expand our work with youth and families both within and outside our walls
- Exciting new museum exhibits
- Ongoing and new field projects for our faculty and the Cultural Heritage Preservation team
- Publication of the Chicago Demotic Dictionary

ADVISORY COUNCIL

The OI is grateful for the ongoing leadership and generosity of the members of its Advisory Council, whose role is to serve as advisers, ambassadors, and major financial supporters of our work and programs. The Advisory Council's members sustained their vital support of the OI in 2021–22, helping invaluable to ensure our financial and programmatic success in the face of very challenging circumstances.

Members of the Advisory Council engage with the OI in many ways. From donating to OI initiatives and projects to serving as members of committees, sources of counsel, tour participants, and more, the Advisory Council's members are an essential component of the OI. We could not be more grateful for their service. We would especially like to extend our deepest appreciation to

Dr. Arthur Lee Herbst for his service in 2021–22 as the Advisory Council chair, which rotated to Anthony Diamandakis (AB 1997) at the end of the year.

In 2021–22, the members of the OI Advisory Council were:

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John D. Lawrence	Nicole S. Williams*

**Denotes Life Member*

(EC) identifies a member of the OI Advisory Council executive committee

MEMBERSHIP

During the pandemic, the OI saw a rise in the acquisition of new members, due largely to an increase in online programming and a broadening of our reach. As we returned to in-person events and reopened our galleries, 2021–22 continued this trend in new-member growth thanks to the efforts of the OI’s lobby desk staff and continued outreach online. We welcome these new members, and we remain thankful for our existing and returning members.

As the campus continues to reopen, 2022–23 will see an increase in in-person member activities, as well as a return to OI member travel. Thanks to the continued support of our members, our free monthly lecture series returned in a hybrid form with in-person attendees in Breasted Hall and live streaming and YouTube posting online. Both in-person attendance and online views were impressive as we welcomed the OI’s own Rebecca Hasselbach-Andee and Hervé Reculeau to present, respectively, on “Language and Cultural Contact: The Case of Ebla” and “How Did Ancient Mesopotamians Deal with Climate Change?” University of Chicago professor of classics and anthropology Eric Cline presented a lecture that explored historic OI fieldwork in Megiddo. Ruth Tringham (University of California, Berkeley) joined us for a talk titled “Old Europe: Fire, the Goddess, and Ambiguity,” and Marian Feldman (Johns Hopkins University) presented the final lecture of the season, “Charismatic Rulers and Spatial Voids in the Art of the Akkadian Empire.” Three lectures had to be rescheduled

DEVELOPMENT AND MEMBERSHIP

because of COVID-19 travel concerns: Filipe Rojas Silva (Brown University), Douglas Baird (University of Liverpool), and Peter der Manuelian (Harvard University); each of these lectures will be presented both in person and online in 2022–23.

The end of the year saw a return to OI international travel, with our postponed tour of Turkey and Greece finally setting out in June. Theo van den Hout, OI interim director, and Seth Estrin, University of Chicago professor of art history, led nineteen OI members through Bronze Age sites on a seventeen-day journey, beginning in Ankara and ending in Athens. “From Hittite Fortresses to Minoan Palaces” celebrated diverse cultures in a historically rich region at the very intersection where East meets West. We look forward to more OI travel in 2022–23 with tours that include an exploration of Phoenician migration in the Mediterranean, the wonders of Egypt, and several other domestic and international offerings soon to be unveiled.

Our member magazine, *News & Notes*, returned to print with a double installment celebrating our 250th issue. As we transitioned back to in-person work and print publication, we offered two print issues and two online-only issues in 2022–23.

As we return to in-person events, we intend to honor our members and donors who live outside the greater Chicago area with online versions of most of our member programs. We remain thankful for each and every one of our members and look forward to bringing the work and scholarship of the OI to you with enhanced programming in 2022–23. The continued advocacy of our member base allows us to further our research and share our scholarship with the public at large. Thank you for supporting us and for playing an integral part in bringing the OI to a global audience.

HONOR ROLL OF DONORS AND MEMBERS

The OI gratefully recognizes the many supporters who have furthered the mission and impact of the OI with a new gift, documented pledge, or documented estate commitment of \$100 or more during fiscal year 2021–22 (July 1, 2021, to June 30, 2022). The following pages list the many members, partners, and contributors whose support helps ensure and inspire excellence at the OI. We celebrate your commitment and are pleased to recognize publicly the impact of your generosity on the OI and our community. None of our ongoing research and discovery would be possible without these deeply appreciated investments in our work.

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OVERLEAF: Member of the Scythian delegation
from the reliefs of the eastern staircase of the
Apadana (audience hall) at Persepolis, Iran.
Joseph Lindon Smith, 1935. Oil on canvas. OIM G3.

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