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This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper) ON THE COVER: Lion and bull of Persepolis. This relief was originally given to the OI in 1936. After spending eighty years on loan at the Boston Museum of Fine Arts, it was returned to the OI Museum in 2019 in honor of the OI centennial.

Limestone relief (Iran, Persepolis, Palace H, west end of façade, probably reused from Palace G). Achaemenid period, probably reign of Artaxerxes III (358–338 BC), excavated in 1933–34 (A73100; Photo: Michael Tropea).



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INTRODUCTION

CHRISTOPHER WOODS

The 2019–20 academic year was the most singular year in the Oriental Institute's long, one-hundred-year history. We ushered in the year with a flood of enthusiasm to celebrate our centennial. May of 2019 marked the one-hundredth anniversary of the OI, commencing celebrations that continued throughout the year until the global health crisis instigated by the COVID-19 pandemic brought all in-person university activities and field projects to an immediate halt in March.

The OI Centennial Gala was held on September 14 on the University of Chicago campus. Attendees were treated to the first preview of the reinstalled OI Museum galleries during a cocktail reception, followed by dinner and dancing in tents on the Main Quadrangle. The reinstallation of the OI Museum galleries was made possible through the generosity of a donor who initially wished to remain anonymous. Affectionately referred to as "Gilgamesh," we were able to reveal the identity of the principal Gallery Enhancement Project donor at the Centennial Gala: Howard E. Hallengren, benefactor and life member of the OI Advisory Council, who was awarded the 2019 James Henry Breasted Medallion for his generosity and for more than four decades of philanthropic support and volunteer service. At the Centennial Gala, it was also my distinct honor to announce Professor Robert Ritner as the inaugural Rowe Professor of Egyptology. I congratulate Robert on this well-deserved distinction and recognition of his contribution to the OI, the university, and the field of Egyptology.

The OI Museum staff worked with its characteristic industriousness to complete the gallery reinstallation, a project that began in 2016. In addition to new display cases, lighting, and graphics, some five hundred additional artifacts from our collections that had never before been on permanent display were added to the galleries. Most notable is the return of our monumental relief of a lion and bull in combat from Persepolis—which was on long-term loan to Museum of Fine Arts, Boston, since the time of excavation in 1937, and is now installed in the Robert and Deborah Aliber Persian Gallery. New spaces included the Larissa Inga Liventals Islamic Collections Exhibit and the Robert Parrillo City of Babylon Exhibit. Finally, the new displays drew upon original documentation and photography to highlight one hundred years of OI research. The reinstallation was commemorated by the publication of 100 Highlights of the Collections of the Oriental Institute Museum. The OI at its centennial was also memorialized by the publication of Discovering New Pasts: The OI at 100, edited by Professor Theo van den Hout. Discovering New Pasts does not purport to be a comprehensive or definitive history of the OI. Rather, it is a snapshot of the OI today and a reflection on the past by those of us who had the privilege of being part of the OI at this special moment in its history.

The celebration of our centennial was complemented by a robust engagement with contemporary arts. The world-renowned artist Ann Hamilton spent a week in residency at the OI Museum, working with staff to make images of our artifacts using early generation scanners. The result was a stunning new installation titled aeon (September 18–December 15), in which Ann affixed her ethereal images to the elliptical glass dome of the Grand Reading Room in the Joe and Rika Mansueto Library. The project aeon also included a book and a limited edition portfolio of prints. The Iraqi-American artist Michael Rakowitz created a site-specific installation (September 13–present) in the Dr. Norman Solhkhah Family Assyrian Empire Gallery that included a fragmentary relief in our collection from the Northwest Palace at Nimrud depicting the head of the Assyrian ruler Ashurnasirpal. And the

INTRODUCTION

Syrian artist and architect Mohamad Hafez, who was our first ever interpreter-in-residence at the OI, exhibited *Lamentation* in the Edgar and Deborah Jannotta Mesopotamian Gallery (September 13–present) and developed public programming to connect our collections with contemporary issues in the Middle East. Finally, the OI partnered with Court Theatre for a site-specific performance in the OI Museum of *An Iliad by Lisa Peterson and Denis O'Hare and performed by Timothy Edward Kane. Opening with a promenade through the museum*, the play concluded with a seated portion performed in the Robert and Deborah Aliber Persian Gallery.

The year was also notable for its unprecedented marketing and rebranding campaign. The centennial presented us with a golden, once-in-a-lifetime opportunity to raise the visibility, profile, and reach of the OI nationally and internationally—and to promote engagement across campus, extend our outreach, and attract new audiences. The one-hundredth anniversary of the OI was an ideal time to accomplish these things, to reintroduce ourselves with more compelling and sophisticated messaging. We created a forward-looking and dynamic identity for the OI, which included new logos and evocative messaging that speak to the current relevance of our work, with a distinct aesthetic that captures the OI's illustrious past and the romance of archaeological discovery within the framework of a clean, contemporary design. This was the first time the OI engaged in print, digital, and social media marketing campaigns on this scale and included digital billboards on the Dan Ryan and bus kiosks strategically placed throughout downtown.

The outbreak of the COVID-19 pandemic presented all of us with unprecedented challenges, uncertainty, and disruptions. In March, most of us shifted to working remotely. Fieldwork was suspended, and the remaining Chicago House staff were evacuated by emergency charter. On March 13, the OI Museum closed on account of the pandemic and did not reopen until the 2020–21 academic year. However, the essential work of the OI Museum continued even though the building was closed, and a small team of OI Museum staff continued collections checks and maintenance alongside the OI security staff.

As of this writing, we are still working primarily from home, looking forward to a time when we can resume our regular schedules at the OI. Nevertheless, the OI remains committed to pursuing pioneering research and providing outreach and educational programs to the general public. While certainly none of us would have chosen to be in this situation, the pandemic has compelled us to be our most creative and innovative as we seek new ways to interact with the public. We are continuing to celebrate our centennial this year, recalibrating our efforts to the new online reality. We have found innovative ways of offering our content virtually to both established and emerging audiences—locally, nationally, and globally. We increased our social media efforts, offering new content on our website, Twitter and Instagram accounts, Facebook page, and YouTube channel. We are also offering new Encurate and Google Arts & Culture tours, which allow for remote theme-based explorations of our collections.

A bright moment this past spring was that, through Howard Hallengren's continuing generosity, we established the Howard E. Hallengren Professorship in Arabian Peninsula and Gulf States Archaeology. Never before in its history has the OI sustained long-term fieldwork in that region. With the Hallengren Professorship the OI will expand its research portfolio and enter an exciting and expanding field of scholarship that ties together a vast area from the Mediterranean Sea to the Indian Ocean.

Finally, we were deeply saddened by the loss of members of our OI community, including long-time volunteers Gabriella Cohen and Carole Yoshida. Each will be sorely missed.

I want to conclude with another new development at the OI as we look to our next century—namely, that we have committed to changing our name. As many of us have experienced firsthand, "Oriental" in "Oriental Institute" has become an unwelcome distraction, increasingly so in the wake of the social and racial reckoning the country has been experiencing since this spring. Naturally, we use the term "Oriental" in the geographical sense—a century ago, the Middle East was known as the Orient—the East—a meaning, however, that has largely fallen out of the vernacular. It is a term now freighted with baggage—of exotic, negative, and foreign racial stereotypes at worst, and regarded as quaint and old fashioned at best. Our centennial is an excellent time to revisit our name and the image we want to project for our next century. You can expect us to announce a new name by the next academic year.

With the distribution of a vaccine now on the horizon, we look forward to documenting our return to normalcy in the introduction to next year's Annual Report. In the meantime, I wish good health and safety for all members of our OI community. The contributions that follow detail the extraordinary scope of projects and programs supported by the OI. As you read our report, I hope you will share my appreciation and pride for these impressive efforts undertaken by our faculty, researchers, and staff, and for their steadfast commitment to advancing our mission during these most extraordinary times.





OVERLEAF: Image from the Giza Plateau Mapping Project report.

CHICAGO DEMOTIC DICTIONARY (CDD)

BRIAN MUHS AND JANET H. JOHNSON

During 2019–20, the staff of the Chicago Demotic Dictionary consisted of Jan Johnson, editor, Brian Muhs, associate editor, and Brendan Hainline, Ariel Singer, and Theresa Tiliakos, all senior graduate students in Egyptology working on conversion of files, as well as Thomas Urban (retired managing editor of the OI Publications Office) and Alex Cornacchia, from the OI Publications Office, also working on conversion of files; Charissa Johnson, managing editor of the OI Publications Office, has been generous with her time and knowledge, as well. We especially want to thank Tom Urban for coming back after retirement to help us finish this project, for which he has contributed so much time, effort, and logistical know-how over the many years it has been in progress. And a word of congratulations both to Tom, for his second retirement at the end of this fiscal year, and to Brendan for his successful defense of his PhD dissertation (he will graduate at the end of the summer).

The labor-intensive transfer of files from Microsoft Word, which no longer can display the thousands of scanned images correctly, to Adobe InDesign, which can, was the major focus of the CDD staff this year. All images (well over forty-five thousand) in the Microsoft Word documents were saved as individual images and are now being re-incorporated into the newly designed InDesign files. The final product will have a cleaner layout, avoiding large, empty spaces required by Microsoft Word's formatting system. But the transfer of all data means that once the new documents have been successfully re-created as InDesign files, they must be proofread (yet again!) for any errors that crept in during the transfer. This review/checking has begun (for the letters M and N), and we are pleased that there are, so far, rather minimal numbers of errors to correct, most of which would not harm the content (only the display) if left uncorrected.

Last year, in May 2019, there were forty-two files, of which twenty (48%) had been converted to InDesign, eight (19%) were in progress, and fourteen (33%) had not been started. This year, in June 2020, twenty-seven (64%) of those forty-two files have been converted, nine (22%) are in progress, and only six (14%) have not been started. The twenty-seven converted files have been reduced to seventeen, however, as multiple files belonging to the same letters have been merged. The seven new converted files are Ayin (one file), the first half of W (one file), the first half of third H3 (one file), S (three files), and the second half of SH (one file). It is worth noting that the size of a file, and the work involved to convert it, may vary drastically (from one hundred to three hundred pages among those we worked on this year). This leaves us with relatively minor formatting issues in several files, as well as converting the remaining portions of nine files to InDesign together with the six files that still have not yet been started (L, H, H4, days of the month, months and numbers, three relatively small letter files and three larger files that give samples of spellings of days of the month, months of the year, and numbers in general). Since the format of these last three files is quite simplified (although the average number of scans per page increases from ten to fifteen), we hope the conversions will go much faster.

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As noted in previous annual reports, when all the conversions are done and proofread, the files will be put online, replacing the old Microsoft Word files, and will form the basis, along with the PDFs of the introduction, explanation of dictionary organization (what we've called the "Prologue"), bibliography and abbreviations used, and text information (current location, date, place of origin, and publication data for all documents cited in the dictionary), for the print version of the Dictionary.

CHICAGO HITTITE DICTIONARY (CHD)

THEO VAN DEN HOUT

As promised in last year's Annual Report, we completed the Š-volume of the CHD this past fall with the publication of the fourth and final fascicle of this letter. We worked closely with, and are deeply grateful to, the OI's Publications Office on this momentous occasion. Also, as reported last year we have reviewed our modus operandi with the invaluable help of our graduate students Thalia Lysen, Robert Marineau, and Emily Smith. The start of the new T-volume gives us the opportunity to change a number of procedures that should help us make the production of new fascicles more efficient. Editors Richard Beal, Petra Goedegebuure, and Theo van den Hout have already started work on words starting in T and D (because the Hittite cuneiform writing system makes no systematic differentiation between the two sounds at the beginning of words, T and D are traditionally treated as one letter in our field). T/D will be a huge letter and the first installment will comprise at least three very large entries: the conjunction ta "and," as well as the verbs $d\bar{a}$ - "to take" and dai- "to put, place." As you can imagine, these everyday words are very common, and each therefore has hundreds, if not more, attestations.

Meanwhile, work on the proceedings of the 10th International Congress of Hittitology is underway. Manuscripts have been returned to the individual authors with editorial remarks and suggestions, and once they have been resubmitted we can finalize the entire manuscript and bring it to the Publications Office.

We are happy to report that Naomi Harris, according to last year's report assisting us as an MA graduate student, not only concluded her MA but also was accepted in our PhD program! So, we will hopefully enjoy her assistance on the dictionary for the next few years. Robert Marineau, our most senior graduate student and long-time assistant in our project, successfully defended his dissertation in June and was accepted as a Humanities Teaching Fellow for the coming two years: congratulations on both achievements, Robert!

During the months of October and November, Elena Martínez-Rodríguez from Barcelona visited us and worked though the CHD files for her dissertation on Anatolian kinship terms. On November 18 she gave a wonderful lecture in our Anatolian Circle on her "Research on Luwic Kinship Terms: The Potentialities of an Old Lexical Field." After her return to Barcelona she likewise successfully defended the dissertation and is now Dr. Martínez-Rodríguez!

Finally, we gratefully acknowledge the ongoing wonderful and loyal support of the Güterbock family, and Mr. and Mrs. Audrius and Sigita Plioplys.

COPING WITH CHANGING CLIMATES IN EARLY ANTIQUITY (3CEA)

Comparative Approaches between Empiricism and Theory
HERVÉ RECULEAU and NADINE MOELLER

Coping with Changing Climates in Early Antiquity: Comparative Approaches between Empiricism and Theory (3CEA) is a collaborative project sponsored by the Humanities Without Walls consortium (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 is based at the Illinois Program for Research in the Humanities (www.iprh.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 (franke.uchicago.edu/), the consortium's partner institution at the University of Chicago.

Project 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 (assistant professor of Assyriology, University of Michigan, project coordinator), Gary Beckman (George C. Cameron Professor of Ancient Near Eastern Languages and Cultures, University of Michigan), Catherine Kearns (assistant professor in classics, University of Chicago), Timothy Leonard (PhD candidate, University of Michigan), Thalia Lysen (PhD candidate, University of Chicago), Nadine Moeller (associate professor of Egyptian archaeology, University of Chicago), and Émilie Sarrazin (PhD candidate, University of Chicago). Katie Whitmore (PhD 2019, Purdue University) left the project after graduating early in order to take a position as a forensic anthropologist. While Katie plans to finish the work she has started for 3CEA, her position will be taken up until the end of the project by Jenail Marshall (PhD candidate, Purdue University).

3CEA investigates, in a comparative perspective, the social and cultural perceptions of, and experiences with, climate change in the Bronze and Early Iron Ages (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, Northern Africa, Anatolia, and Mesopotamia were affected by ancient episodes of climate change (see Annual Report 2017-18 for a detailed presentation of the working groups and research questions). Focusing on social perception of, and reaction to, changes in the local, regional, and global climate(s), the project members have chosen to primarily address one well-documented (and abundantly discussed) episode of rapid climate change (RCC): the "Late Bronze Age crisis" around 1200 BCE, which saw the demise of the Egyptian New Kingdom, Mycenaean Greece, the Hittite Empire, and several city-states in the Eastern Mediterranean. Contrary to most research conducted so far, which took this episode of devolution in social complexity as the endpoint of their analysis, 3CEA integrates this sequence of events within a longer chronological time frame that not only encompasses the three preceding centuries of the

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Late Bronze Age (fifteenth to twelfth centuries BCE), but also the two to three following ones that constitute the formative years of the Early Iron Age (twelfth to tenth or ninth centuries BCE, depending on areas). Additionally, the project offers a reassessment of the so-called 4.2ka event that allegedly brought an end to the Akkadian Empire in Mesopotamia and the Old Kingdom in Egypt around 2200 BCE. Research is being conducted within three subprojects on Egypt and Nubia (Buzon, Marshall, Moeller, Sarrazin, Whitmore), Anatolia and the Eastern Mediterranean (Beckman, Kearns, Leonard, and Lysen), and Mesopotamia (Crisostomo and Reculeau, assisted by University of Chicago undergraduate student Seth Markow with sponsoring of the David Hoeft Award for Newly Tenured Faculty from the College).

3CEA held its second annual workshop at Purdue University on September 23–24, 2019, to review and discuss the graduate seminar that was offered during the preceding semester/quarters (see Annual Report 2018–19), assess ongoing research, and prepare the Final Conference that was initially planned at the Oriental Institute and the Franke Institute for the Humanities (www.franke.uchicago. edu/) on September 28–29, 2020. Unfortunately, the unfurling of the coronavirus pandemic in spring 2020 negatively affected the planned collaborations among members from diverse institutions and made it impossible to reasonably expect holding an in-person conference in autumn 2020. The PI and the project coordinators are currently working on a grant extension with the HWW Consortium, with the anticipation that work will resume in academic year 2020–21 and that the conference can be held in September 2021 the way it was initially meant to be.

Michele Buzon (Purdue University), together with Dr. Antonio Simonetti (Notre Dame University), received a grant from the National Science Foundation for the project *Collaborative Research:* Assessing the Impact of Holocene Climate Change on Bioavailable Strontium Isotope Ratios (www.nsf.gov/awardsearch/showAward?AWD_ID=1916719). A logical follow-up to 3CEA, this grant will investigate the impact of climate change on the isotopic signature of bioavailable strontium during the last four thousand years within the Nile River Valley. Detailed investigation of faunal, plant, soil, and human samples will accurately trace any temporal change in the regional distribution of bioavailable strontium driven by a drying climate within the Nile River Valley.

EASTERN BADIA ARCHAEOLOGICAL PROJECT (EBAP): 2019 AT WISAD POOLS

YORKE ROWAN

The Eastern Badia Archaeological Project (EBAP) study area comprises a west-east transect across the southern part of the Jordanian "panhandle" that includes a variety of ecological zones. This area provides the opportunity to assess the evidence for links with the "Levantine corridor," northern Arabia, and Mesopotamia. Two primary locations, Wadi al-Qattafi and Wisad Pools, are the primary foci of our field surveys and excavations. The project began exploratory investigations at Wisad Pools in 2008 and 2009, when our small team (3–4 people) focused on surveying the area and recording the locations of chipped-stone concentrations, structural features, and petroglyphs.

In those early seasons at Wisad Pools, we concentrated on documenting the core of the site. Broadly, the general region with structures measures about 4 km north–south, and 3.5 km east–west (Rollefson, Wasse and Rowan 2011; 2014). Within the core of this area (ca. 1.5×1.0 km) that concentrates around the pools, we documented more than 500 structures with handwritten notes, GPS points, and photographs.

Our first excavations at Wisad began in 2011. Initially we assumed that we were investigating a necropolis, and that our first selected building was a collapsed small tower tomb. We soon realized that what we were excavating a corbeled building with a central standing stone, dated to the Late Neolithic period. The interior of the original house, W66, had a floor with gypsum plaster, and an alcove on the NW edge that was raised above the house floor with evidence of four individual plastering episodes. Later we received a 14C date of 6,530 +/- 70 calBc from charcoal taken from these plastered layers. The central standing stone presumably supported a low roof, and there was also a standing stone along the eastern wall that may have represented an anthropomorphic figure (Rollefson, Rowan and Perry 2011; Rollefson et al. 2012). Arrowheads and a Yarmoukian potsherd also supported a date to the earlier phases of the Late Neolithic.

We subsequently began excavations at W80 in 2013, with seasons in 2014, 2015, and 2018 (see OI Annual Reports—2018–19, 2014–15). Those excavations revealed a much larger structure than W66. W80 was a large mound of basalt blocks approximately 12 m in external diameter, standing about 2 m above ground level. Clearance revealed the remains of an Early Iron Age (or possibly Late Bronze Age) tomb on top of the Late Neolithic structure (Rowan et al. 2015b). Below this, the Late Neolithic has multiple occupations and rebuilding episodes. In the latest phases, large grinding slabs with cup marks were prevalent in the northern half of the building. The earlier Late Neolithic phase within W-80 deposits proved different from the later Late Neolithic deposits excavated in 2013 and 2014. Instead of the large grinding slabs and deep firepits associated with the latter, the former consisted of multiple short-lived hearths and associated pale ash deposits in the southeastern quadrant of the structure, with darker occupation and activity deposits (associated with heavily worked cores and small grinding stones) elsewhere. All this activity, likely the result of short-term seasonal visits, seems to have badly damaged a gypsum-rich surface laid within W-80 at the start of the earlier Late Neolithic phase. As a result, this surface was only preserved around the perimeter of W-80's interior and in isolated patches within the main activity areas. The earlier Late Neolithic phase

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within W-80 deposits seems different from the later Late Neolithic deposits excavated in 2013 and 2014 (Rowan et al. 2015a). Instead of the large grinding slabs and deep firepits associated with the latter, the former consisted of multiple, short-lived hearths and associated pale ash deposits in the southeastern quadrant of the structure, with darker occupation and activity deposits (associated with heavily worked cores and smaller grinding stones) elsewhere. Arrowheads have been found in the hundreds, with nearly 90 percent transverse forms of arrowheads. Several hundred flint cores indicate that chipped stone tool production was a major activity, with drills and borers prevalent, but also including endscrapers, sidescrapers, cortical scrapers and knives, and denticulates.

THE 2019 SEASON AT WISAD POOLS

Two structures were being excavated during the 2019 season at Wisad Pools: W80 and W400. Our primary goal was to finish excavation of W80 while excavating W400, a structure to the north of W80 that appeared quite different from W80 or W66.

W80

The main objectives of the 2019 excavations at W-80 were: (1) to complete excavation of the final ~10–15 cm of cultural deposit remaining in the northern half of the structure and (2) to determine the stratigraphic relationship of an early paved surface that appeared to run beneath the earliest walls of W-80. In addition, we sought (3) to complete excavation of the curvilinear so-called porch, the latest phase of which was exposed during the 2013 season, but which had not been investigated further since then.

In the northern half of the structure, the basic stratigraphic sequence established in 2018 seemed valid, viz. a later Late Neolithic "narrow entrance" phase associated with areas of paving and large grinding slabs with central mortars and an earlier Late Neolithic "wide entrance" phase associated with the remnants of a gypsum-rich surface (fig. 1). Several features, such as a paved bench [080]



and the northwestern counterpart of bench [020] at the south-eastern end of the interior, which was excavated in 2013, were associated with the later "narrow entrance" phase of the building. The bench [080] yielded evidence for the intentional deposition of unusual ob-

Figure 1. W-80 at the close of the 2019 season (view to southwest). Note earlier Late Neolithic wide entrance at bottom center, plus pavers exposed in southeast quadrant of the structure.

jects within its construction, including cortical knives placed at regular ~40 cm intervals around its external perimeter; an intact, apparently burned stone labret; a substantial polished stone "bracelet" fragment; and a large patch of gypsum (?) plaster that was unassociated with any installation. A similar cortical knife was found immediately under a paving slab situated somewhat above the base of W-80's central pillar. A number of spherical clay objects ("tokens"?), as well as a few polished stone examples that included quarter spheres among their number as well as whole spheres, (possibly broken gizzard stones) were associated with this phase.



Figure 2. W-80 at close of 2019 season (view to southeast): note west and south walls of W-80 running over "west porch" walls at center right.

As we had observed in earlier excavation seasons, the amount of cultural material associated with the earlier "wide-entrance" phase was much less, though clearly still of Late Neolithic date. This phase was notable for its large number of hearths, located both around the edge and in the central part of the structure. These yielded abundant and seemingly well-preserved charred plant remains; 100% soil samples were taken from these hearths for flotation back in Amman, water being a precious commodity. A key discovery in 2019 was the realization that the northern and eastern walls of W-80, plus a number of hearths in the north-eastern part of the structure, predate the gypsum-rich surface that, hitherto, had been taken as the marker of the early, "wide-entrance" phase. This constitutes clear evidence for sub-phasing within the earlier Late Neolithic sequence. It seems probable that in its earliest iteration, W-80 was open on its south-west side, with that part of the structure being enclosed at the time the early, "wide-entrance" phase gypsum-rich surface was installed.

We debated whether the curvilinear "west porch" area was a later addition for some years. This season demonstrated that rather than a late addition during the "narrow-entrance" phase, we now understand that the southern and western walls of W-80 may run over and thus postdate the "west-porch" walls. Thus, it seems possible that the "west porch" was an integral part of the structure in its earliest architectural phase. The discovery of a grinding slab with central mortar in the "west porch" matching those from the interior of the structure associated with the later "narrow-entrance" phase confirms the continued utilization of the "west porch" area through different phases of use and remodeling of the W80. Below this grinding slab, a shallow (~30 cm) stone-lined pit (~120 cm diameter) [126] appears to be associated with the earliest phase of W-80's use (fig. 2). Its function remains unknown, although a few flecks of charcoal and some fire-cracked rock were found in its upper part.

Despite our best efforts, the relationship of W-80 with the substantial paved surface [111] running beneath its walls remains uncertain. This surface, which seems to have been restricted to the eastern part of W-80, was laid on an extremely compact, sterile deposit around an exposure of higher bedrock. The pavers themselves, some up to 1 m in length, were covered by 10–15 cm of redeposited natural sediment, reddish in color. Although not sterile, this sediment yielded a sparse yet consistent presence of cultural material, only a few pieces of badly preserved bone, and very occasional chipped stone debitage. The fact that all excavated architectural elements of W-80 were constructed atop

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Figure 3. Basalt pavement on ground surface, possibly similar to that exposed at earliest phases of W80.

this redeposited natural sediment implies a stratigraphic discontinuity between the paved surface and the W-80 architecture. A similar paved surface on the ground surface was identified about 150 m northwest of W-80, similarly laid around an exposure of higher bedrock (fig. 3). Significantly, this surface was not associated with any stone architecture. This raises the possibility that W-80 was constructed over an earlier area of paving [111], which either was a focus of open-air activity or was perhaps associated with some sort of temporary organic superstructure. The disarticulated remains of at least one

juvenile sheep were discovered directly beneath one of the pavers, which could conceivably be a type of intentional foundation deposit.

With the 2019 season, large-scale in-field investigation of W-80 is near a satisfactory conclusion. With the refinement that the abundant 14C samples might yield, we anticipate a final short, small-scale season to examine a few points of detail while we complete excavations of W400.

W400

Two teams of equal size worked at Wisad during 2019. W400 was selected in 2018 because it was apparently an undamaged, smaller building that had not been looted; it was attached to an animal pen, a configuration we identified during our research along Wadi al-Qattafi. Our excavations this season support this assumption and provide a distinct contrast to the results of the much larger building, W80.

In 2018, after clearance of collapsed slabs, a section was drawn across the midpoint of the collapse, extending across the building and the enclosure. The circular building below this collapse was designated Structure 1, with the attached animal pen designated as Structure 2 (fig. 4).

A wall running east-west (L.006) extended approximately 2.60 m (fig. 4). In some places the wall is two courses, while in others a larger basalt block was used to attain a similar height. We were uncertain whether there are additional courses preserved below these. The breadth of the wall is also unclear, without distinct definition on the southern face.

During 2019, we excavated this later interior wall (L.006/013). The western end of this wall is built against the interior of the curving wall, and some standing uprights on the western aspect may be related to this exterior wall (L.008). On the opposite eastern end of wall 006, the juncture is unclear. The construction (L.013) is wider than the wall, with a jumble of basalt blocks surrounding a single upright stone. This section was excavated separately, and within the construction of L.013, an upright that clearly predates the wall was found within and set in deeper. This seems to be part of an earlier phase of the building and warrants future investigation.

Removal of wall 006 and the section of the wall L.013 (with the upright stone) make it clear that this wall was a later addition, dividing the interior space of the structure. This includes upright, standing stones that were incorporated into the later-built wall. A great deal of effort was spent on

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Figure 4. Overhead photo of W400, Structure 1 at the beginning of the 2019 season, looking east. Structure 2 is the attached animal pen.

delineating the exterior of the structure, particularly in relation to the walls of the attached animal pen. On the eastern side, L.016 delineated a second course of stones below the surface of wall L.008, but this did not seem to continue to the east, where wall L.008 meets the wall of the animal pen. This exterior area included burin spalls and small handstones. On the north-northwest side, L.015 also attempted to understand which stones are structural and which were collapsed. Both areas will require additional work to understand Structure 1 and its relationship to the walls of the animal pen.

We wonder whether there were two different entrances. One possible entrance is on the west (L.024), which may have been blocked in a later phase, creating a small alcove. On the east, an open-

ing remains difficult to understand. There are three closely spaced uprights that are set lower than surrounding wall stones, suggesting an earlier phase (fig. 5). Where exactly this entrance was located, and why it would be an entrance into the animal pen, remains to be understood. For the next season, we propose to open a larger area



Figure 5. Final overview of W400 at the end of 2019 season.

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LEFT: Figure 6. Arrowheads recovered in excavations of W400 during the 2019 season. RIGHT: Figure 7. Drills from W400 during the 2019 season. Photos: G. Rollefson.

around this juncture in the hopes of delineating the entrance, exposing the juncture between the pen wall and Structure 1.

In 2018, two Late Neolithic Badia points were found at W400, one in L.005, and the other in L.004, along the north side of wall 006. The 2019 season added four additional arrowheads to the corpus from W400, with a complete absence of the transverse arrowheads so commonly recovered at W80 (fig. 6). Taken together with the prominence of burin spalls and drills at W400 (fig. 7), the distinction between these two buildings is striking. Establishing the range of dates for each structure will be key to understanding whether they overlapped during the Late Neolithic.

Concluding Remarks

Research at Wisad Pools dramatically alters our initial assumptions about the area, and life in the Black Desert in general. The situation at Wisad Pools indicates that the development of pastoral-hunting exploitation of the desert/steppe area was far from tentative (Rollefson, Rowan and Wasse 2014). Combined with the Eastern Badia Archaeological Project's investigation of the settlements among the mesas along the Wadi al-Qattafi, a more exciting picture of what the badia was like eight thousand years ago is emerging with greater clarity, as well as the strategies that the new inhabitants were evolving to take advantage of this underutilized resource area during a time of socioeconomic and environmental uncertainty in the farming areas to the west.

Acknowledgments

In addition to the fundamental support of the Oriental Institute of the University of Chicago, the Eastern Badia Archaeological Project received funding from the Palestine Exploration Fund. Our thanks are extended to the Department of Antiquities of Jordan and to our departmental representative, Mr. Mohammad Bani Amer, for his considerable help. In addition, we would like to thank the American Center of Oriental Research and the director, Dr. Barbara Porter, as well as Dr. Katharina Schmidt, director of the German Protestant Institute of Archaeology in Amman, for their logistical assistance and research facilities. We are particularly grateful to our student volunteers Jordan

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Brown, Rosemary Hanson, Blair Heidkamp, Julian Hirsch, Kevin Livingston, and Thomas Röttger-Morgan, who worked with great persistence and patience despite the difficult desert conditions. The Badia Police are also thanked for their assistance.

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EPIGRAPHIC SURVEY

W. RAYMOND JOHNSON AND J. BRETT McCLAIN

This has been an unusual and challenging year for the world, the Epigraphic Survey included. The Chicago House team returned to Luxor, Egypt, on October 15 to resume our collaboration with the Egyptian Ministry of Tourism and Antiquities (MoTA) and the Supreme Council of Antiquities (SCA). The Chicago House Library opened about a week later, on October 21. Due to a delay in receiving Government of Egypt security clearance for site work, the period up to the third week of December was devoted to planning and preparations to resume fieldwork at our three major sites: Luxor Temple, Medinet Habu, and Theban Tomb 107. This included the development of educational signage for the Medinet Habu Temple and Luxor Temple precincts that will be produced in cooperation with the Egyptian Supreme Council of Antiquities, with permanent installation expected in 2021. Usually our season ends on April 15 each year, but this year we stopped work at the end of March 2020, at which time all antiquities sites in Egypt were closed and the foreign professional staff were obliged to evacuate Egypt due to the COVID-19 crisis. Despite the delayed start and unexpectedly early closure, we were able to accomplish all of our primary objectives for the field season, a testament to the extraordinary abilities of our team, including our workmen. We gratefully acknowledge here a grant from USAID Egypt that supported the bulk of the work at Medinet Habu this season.



Figure 1. Full Chicago House professional staff photo, February 2020. Photo by Sue Lezon.



Figure 2. digitalEPIGRAPHY web site cover page.

ONLINE ACCESS

As many of you know, in response to the COVID-19 crisis the Oriental Institute has adjusted to social distancing by making more and more resources available online—including lectures—and Chicago House is a major part of that effort. Our **digitalEPIGRAPHY** web site, masterminded by Epigraphic Survey senior artist for digital drawing Krisztián Vértes, assisted by epigrapher Juli Schmied, posts regular news and articles on current epigraphic work in Egypt (ours and others), on new digital technologies utilized in current epigraphic recording, on the history of epigraphy in Egypt, links to epigraphic publications, and many other online resources:

www.digital-epigraphy.com

I am very pleased to announce that the Harvard University Giza Project (Peter Der Manuelian) and KU Leuven University, Belgium (Marleen De Meyer), have recently joined forces with the Epigraphic Survey to make **digitalEPIGRAPHY** a truly collaborative effort. Both institutions have also brought funding to support the web site.

Also, digitalEPIGRAPHY features are regularly posted on Instagram and Facebook: www.instagram.com/digitalepigraphyofficial/www.facebook.com/digitalEPIGRAPHY/

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Additionally, every week the Oriental Institute posts articles and news items from the **digitalEPIGRAPHY** web page on the OI's Facebook, Instagram, and Twitter platforms, thanks to epigrapher Ariel Singer, who coordinates with Krisztián, and Matt Welton at the OI:

www.facebook.com/OrientalInstitute

twitter.com/orientalinst

www.instagram.com/theorientalinstitute

Oriental Institute lectures are also accessible online, including one of mine from June, and several of Brett's from August:

www.youtube.com/c/TheOrientalInstitute

We are proud to be such a visible and accessible face of the Oriental Institute online during this challenging time.

What follows are brief reports on our work during the 2019-20 field season, site by site.







CLOCKWISE: Figure 3. Luxor Temple blockyard team. Gina, Inspector Hala, conservator Hala, Shimaa, and Mohamed. Figure 4. Inspector Dalia and Chicago House workmen moving granite fragments. Figure 5. Krisztián showing the team his drawings of the Imperial Roman frescos. Photos by Ray Johnson.

LUXOR TEMPLE

EPIGRAPHY

Work in Luxor Temple coordinated by site manager Jay Heidel focused on the tracking, numbering, cataloging, and digital photography of the fifty thousand fragments in the Luxor Temple blockyards, including digital drawing and collation of selected fragment groups, and the facsimile copying of the inscribed walls of the temple proper. This part of our program includes the late Roman fresco paintings and pharaonic reliefs in the Imperial Roman Cult Chamber being digitally drawn by senior artist for digital drawing Krisztián Vértes, and the Amenhotep III reliefs in the adjoining Hall of Offerings, being digitally drawn by Jay. Photographer Owen Murray continued to create digital photogrammetric background imagery in both chambers, used as the basis for the drawings. Ministry of Tourism and Antiquities (MoTA) inspectors with whom we worked at Luxor Temple during the 2019–20 season were Wael Abdel Satar Ahmed, Hala Ahmed Mohamed El Samann, and Dalia Mohamed Bahaa El Din.

This season Krisztián focused on digitally penciling Amenhotep III reliefs in the Imperial Roman Cult Chamber, particularly on the southeastern wall, for inking this summer. In future seasons, he will continue digitally drawing the chamber's pharaonic reliefs for publication in a second volume additional to the—now finished—Roman murals that will appear in a separate volume, the final plates on which Krisztián is working now. Before Krisztián began, Owen used photogrammetry to create a high-resolution orthomosaic photo coverage of the entire wall, with each segment output as flat, rectified drawing enlargement TIFs for Krisztián's drawings.

Last season we began implementing our new end-to-end digital process by inaugurating our documentation of the back shrine area of Luxor Temple. The first room chosen was Amenhotep III's Great Offering Chamber, between the Imperial Cult Chamber and the Bark Sanctuary. The season before last, Owen completed photography for the room's east wall, and this past season, with assistant Azab Ahmed, he completed the photography for the chamber's west wall after a light brushing by Chicago House conservator Lotfi Hassan. During the summer Owen produced the drawing enlargements for the chamber's second register for Jay, who was able to finish the penciling of the first register and most of the second before the end of our season.

This year the work in the Luxor temple blockyard centered on continuing to develop the Luxor Temple Fragment Database. Since its creation six years ago, the database has moved beyond entering our "core group" of fragments that have been periodically studied over the last forty years, and we began photographing and entering new material. Photographer Hilary MacDonald, assisted by Digital Data Engineer Gina Salama and Conservator Hala Mohamed, continued to expand the number of fragments documented using photogrammetry, the database, and spreadsheets to record location data. This year we were joined by two new team members, Nadia Ahmed Abdul Latif and Al Shaimaa Mohamed Ahmed, who were able to help photograph the iPad reference shots for the database. They made reference shots for five mastabas that contain 909 blocks in total. Before the team could begin photography and tagging, most of the mastabas were dismantled by our men, and several large mastabas required restacking and reorganizing, all overseen by Gina. This season Hala glued 3,479 block number tags on twenty-eight mastabas.

Hilary and Owen have pioneered a technique whereby completely square, orthogonal, aspective (that is, without perspectival diminution) images of carved wall and fragment surfaces can be extracted from a digital 3-D model created using the software Metashape. Hilary used this technique this season to continue photographing the corpus of Akhenaten-period *talatat* blocks (originally from the Karnak Aten temples) stored in the "western *talatat* magazine" at Luxor temple that she began last season. Hilary began shooting on December 26, 2019, and in fifty-one days at the temple













TOP ROW: Figure 6. Jay penciling in the Hall of Offerings. Figure 7. Jay digitally penciling Amenhotep III relief. Figure 8. Azab and Owen photographing in the Imperial Cult Chamber. BOTTOM ROW: Figure 9. Azab photographing fragments for the blockyard database. Figure 10. Shimaa gathering data in the blockyard for the database. Figure 11. Brett collating the Bentresh block corpus. Photos by Ray Johnson.

photographed 750 *talatat* and also completed all reshoots from last season, around fifty fragments. With Owen's assistance, Hilary also shot master map 3-D models of all mastabas in the magazine. In the west *talatat* magazine there remain about one hundred blocks to be shot next season, after which our work in the magazine will be completed. The documentation from the first season of shooting 2016–17 has now been completely turned over to archivists Alain and Emmanuele Arnaudiès, and this summer (2020) all post-processing from the 2017–18 season will continue, and post-processing of the current season will begin. Altogether, since digital photogrammetry of fragments began, Hilary has photographed 7,278 blocks and fragments, with each requiring twenty-five to thirty photographs per decorated side for digital "stitching" into 3-D images. The next priority is the thousands of Amenhotep III fragments located at the south end of the main block yard that have been identified as belonging to the back shrines of Luxor temple.

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Chicago House assistant director Brett McClain continued collating the Ptolemy I fragment group of 163 blocks and fragments drawn by Jay, of which the Bentresh inscription is found on thirty-nine blocks. All of the core Bentresh text blocks have now been collated by Brett and epigrapher Ariel Singer, analyzed, and corrections transfered. Ariel has also been doing photogrammetric documentation of the core group for virtual 3-D model making.

CONSERVATION

Conservator Hiroko Kariya arrived this year on January 15 and alternated her work time between Luxor temple and Tomb of Nefersekheru (TT107). She worked in the Luxor temple block yard, focusing on treatment of broken inscribed blocks that were noted by Hala during the tag gluing process for the database. She also conducted a condition assessment of *talatat* blocks in the western magazine and consolidated about twenty pieces. In the block yard/open air museum, she conducted a condition survey and regular maintenance, including spotlight lamp repair and replacement of twenty canvas covers for the covered-shelf storage. Structural engineer Conor Power was not able to return to Luxor this winter to conduct his annual condition study of the Luxor Temple structure, but we hope to get him back for a review next winter.







CLOCKWISE: Figure 12. SCA west gate colossus reconstruction work. Figure 13. West Gate colossus reconstruction in progress. Figure 14. West gate colossus almost complete. Photos by Ray Johnson.

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WEST GATE STATUE RECONSTRUCTION

This season Chicago House was pleased to continue assisting our SCA and Tourism and Antiquities Ministry friends at Luxor Temple in the reas-

LEFT: Figure 15. Brick making for reconstruction work. Adding straw to mud. Photo by Lotfi Hassan. RIGHT: Figure 16. Aleksandra and Krisztian at the wall, small Amun temple. Photo by Dominique Navarro.

sembly and re-erection of the northernmost standing colossal granite statue of Ramesses II in front of the Luxor Temple first court exterior west gate. These two colossal statues, in the standing Osiride pose holding the crook and flail, faced the Nile and guarded the approach to the temple from the river but were destroyed in the Middle Ages. Luckily, quite a few granite fragments from the statues were recovered in excavations around that part of the temple, enough to allow restoration. While the focus was on the northern colossus this year, the plan is to restore the southern colossus next year. After consultation with the SCA and as part of this project, Gina oversaw the dismantling of a large mastaba full of granite fragments, and the SCA was able to find sixty pieces that will be used for future restoration work. Gina also was able take reference shots of all the fragments with the help of El Azab, who photographed all the fragments that have been recovered by the SCA for the statue project.

MEDINET HABU

Work resumed onsite at Medinet Habu on December 21, 2019, and extended until the last week of March 2020, at which time all antiquities sites in Egypt were closed and the foreign professional staff were obliged to evacuate Egypt. Despite the delayed start and unexpectedly early closure, we were able to accomplish all of our primary objectives for the field season, including the following: 1) cleaning, preliminary photographic and photogrammetric documentation, and conservation assessment of the Claudius Gate in preparation for dismantling and conservation of the sandstone blocks; 2) dismantling of the Claudius Gate down to its foundations; 3) removal of all blocks of the Claudius gate to the interior of the Medinet Habu precinct for conservation/stabilization; 4) continuation of the sandstone-paved walkway along the northwest and north exterior of the Ramesses III mortuary temple; 5) continued restoration of mud brick walls and ancillary structures along the north exterior of the Ramesses III temple; 6) preliminary photographic and epigraphic documentation of the Taharqa Gate in preparation for conservation assessment; 7) preliminary conservation assessment and temporary structural stabilization of the Taharqa Gate; 8) continued photographic, photogram-

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metric, and epigraphic documentation and analysis of the Western High Gate fragment corpus; 9) continued development of Western High Gate open-air museum, including completion of open-air museum fragment group display; and 10) continued development of USAID-funded program for local Egyptian conservation students, now in the fifth consecutive season of this program, with thirteen participants for 2019–20. In addition to our conservation training participants, our USAID grant-funded projects employed forty full-time workers and over 120 seasonal workers from the local workforce. Our work at Medinet Habu was supervised by SCA Inspectors Mahmoud Abd el-Rahim Salman Ahmed, Hassan el-Tawab Musa Asran, Mahmoud Abd el-Gawad Mahmoud Abu el-Hasan, Essaad Mahmoud Galal, Abd el-Baset Ahmed Soltan, and Do'aa Ali Fawzi el- Noubi, along with SCA Conservators Mohammed Mahmoud Mohammed Mahmoud, Gamal Mohammed Ahmed Hassan, and El-Tayib Abu el-Haggag Hussein Qandil.

EPIGRAPHY

Documentation continued this year at the Small Temple of Amun (MH.B) under the supervision of Brett and senior artists Margaret De Jong, Susan Osgood, and Krisztián Vértes. Epigraphers were Jen Kimpton, Ariel Singer, and Aleksandra Hallmann, and artists included Keli Alberts and Dominique Navarro. *Medinet Habu X*, wherein will be presented the façade, pillars, and architraves of the Thutmoside peripteros, is now being edited by the Oriental Institute Publications Office, and we expect the volume to be in print within the next year. We concentrated our fieldwork on the later additions and modifications to the temple exterior and the marginal inscriptions, to appear in *Medinet Habu XI*, as well as on the bark shrine, to be published in *Medinet Habu XII*. We also continued to work on drawings in the Late Period portico and the Kushite gate for *Medinet Habu XIII*. In addition, documentation of the graffiti and paintings in the north Ptolemaic annex and in adjacent exterior sections of the Small Temple by Tina Di Cerbo and Rich-





LEFT: Figure 17. Ariel collating Pinudjem inscription, small Amun temple. RIGHT: Figure 18. Margaret checking collations, small Amun temple. Photos by Ray Johnson.

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ard Jasnow was continued throughout the course of this season.

Survey and documentation of the sandstone blocks and block fragments of the destroyed Western High Gate of Ramesses III, supervised by Jen Kimpton and assisted by Anait Helmholz, Ariel Singer, and artist Keli Alberts, also continued this year, including cataloging, photography, 3-D modeling, drawing, and collation of the material. Photographer Yarko Kobylecky continued to take large-format film and digital photographs of the inscribed material that were also entered into the database.

Since the architecture and decoration of the Western High Gate, an integral part of Ramesses III's mortuary complex, has remained almost wholly unpublished since its discovery, it is intended that a future volume in our Medinet Habu series will be devoted exclusively to its presentation.

Comprehensive photographic documentation of the reliefs and inscriptions within the tomb-chapels of the God's Wives of Amun (MH.C) was successfully continued this year by Yarko, assisted by Photo Archives registrar Ellie Smith and assistant photographer Amanda Tetreault. All of the scenes and inscriptions in the east, west, and south corridors of the Amenirdis shrine have now been photographed in large format, and it is planned that the north corridor, along with the interior of the Amenirdis cella, will be recorded in 2020–21.

What follows is a tally of the drawing enlargements that passed through all stages of the Chicago House method during the course of the 2019–20 winter season:

Penciling completed: 30 drawing enlargements

Inking completed (including summer 2019): 89
Collation completed: 8
Transfer shock completed: 18

Transfer check completed: 18 Director check completed: 3

TOP TO BOTTOM: Figure 19. Conservators working on the reassembled block group, WHG. Figure 20. Keli and Jen with the WHG block group reconstruction. Figure 21. Jen briefing Chris on the West High gate work. Photos by Ray Johnson.







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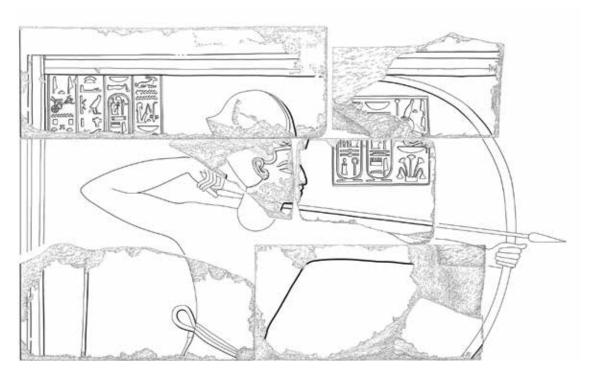
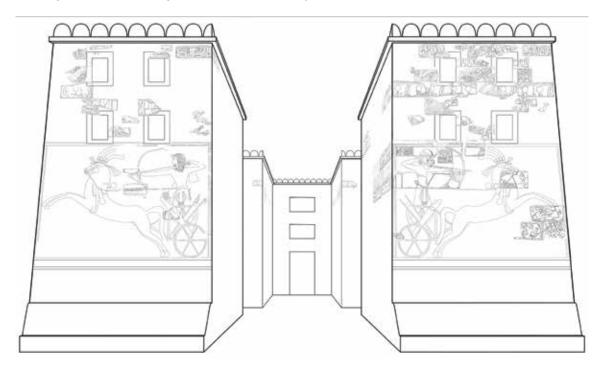


Figure 22. West High gate façade blocks, drawing detail, King in chariot. Drawing by Keli.





CONSERVATION AND RESTORATON

Medinet Habu senior conservator Lotfi Hassan, assisted by Assistant Conservators Doaa Mohamed el-Sadek and Al Azab Ahmed, continued to oversee all of the Medinet Habu conservation programs. These included the grant-funded conservation student-training program (three junior conservators and seven students this year); the cleaning, capping, and restoration of the mud-brick walls bordering the stone pavement around the Ramesses III mortuary temple on the northern side; the consolidation of three sandstone door thresholds from doors that pierced those walls; and the laying of a new mud-brick paved path along the outside. During our season Lotfi also organized and oversaw the 120 additional seasonal workmen who augmented our core team and made our expanded conservation and restoration work at Medinet Habu possible.

At the request of the Gurna Antiquities Inspectorate and the SCA, part of the conservation team was tasked with cleaning several pigeon-dropping-soiled sections of the Ramesses III mortuary temple exterior walls. The large, deeply cut hieroglyphs are perfect for nesting pigeons, and the battered walls catch all of the acidic droppings. So far, no techniques have been effective in keeping the pigeons away from the structure, so periodic cleaning becomes essential, and Chicago House has added that to our annual MH conservation-maintenance program, starting with the southern exterior wall.

RESTORATION

From December 23, 2019, through March 23, 2020, the Epigraphic Survey under the supervision of master mason Frank Helmholz, assisted by stone mason Johannes Weninger and the stone team, continued the restoration of the stone-paved walkway surrounding the Great Mortuary Temple of Ramesses III, a major component of our site management/development program funded by USAID. During this three-month period, good progress was made on the restoration of the pavement on the north side; 209 new paving stones were laid with a surface area of 151 sq m and over 40 m in length. In addition,

LEFT: Figure 24.
Conservation team
removing pigeon droppings
from the Ramesses III
mortuary Temple. RIGHT:
Figure 25. Cleaning of the
restored paving, southern
precinct. Photos by Ray
Johnson.













TOP: Figure 26. Western and southern areas of restoration work. LEFT: Figure 27. Claudius Gate before dismantling. RIGHT: Figure 28. Claudius Gate dismantling. BOTTOM: Figure 29. Transfer of Claudius Gate blocks to the treatment area. Photos by Ray Johnson.





the Claudius Gate outside the eastern wall of the MH precinct was dismantled to its foundations in preparation for restoration and rebuilding, which will take place in 2020–21. All of the blocks were carefully moved inside to the Medinet Habu blockyard holding area for consolidation by the conservation team before reassembly. The Taharqa Gate of the small Amun Temple complex, immediately to the north of the Kushite court, was surveyed and prepared for dismantling and restoration, which will also take place next season. Under Lotfi and Frank's joint supervision, a group of blocks from the great Western High Gate was reassembled for public view, the first increment of our projected open-air museum for the site. The five blocks, now joined, depict a seated Ramesses III drinking with a princess who is offering him a bouquet, and was originally from an upper story room high inside the gate. Ariel has created a 3-D model of the group and its mates using Metashape software, with the ultimate aim of integrating all of the gate blocks into the model. Jen and Keli continue to make astonishing joins, clarifying the decorative program of the gate inside and out.

We are happy to acknowledge here, with gratitude, a grant extension from USAID Egypt for the development and restoration of the western, northern, and eastern sectors of the Medinet Habu precinct, including the dismantling, consolidation, and development of the Claudius Gate and Taharqa Gate. The extension funded this season's work and will allow us to continue our site development and restoration work for another three years and make the site even safer and more accessible to its visitors.





LEFT: Figure 30. Taharqa gate, stabilized prior to dismantling. Photo by Frank Helmholz. RIGHT: Figure 31. Pavement restoration work on south side, west end. Photo by Ray Johnson.





LEFT: Figure 32. Finished restored pavement, northern walkway. RIGHT: Figure 33. Brickmaking for restoration work. Photos by Ray Johnson.





LEFT: Figure 34. Brendan, Chris, Jimmy, and Jean visit Medinet Habu. RIGHT: Figure 35. Lotfi showing the OI party the work at the House of Butehamun. Photos by Ray Johnson.



Figure 36. Panaroma of broad hall clearance, February 4, 2020. Photo by Ray Johnson.





LEFT: Figure 37. Epigraphic Survey archaeological team 2020 led by archaeologists Boyo Ockinga and Susanne Binder, and guests (Chris, Jimmy, Brendan, Jean). Photo by Boyo Ockinga. RIGHT: Figure 38. Hiroko, Sue, Inspector Heba, and conservator Mohamed. Photo by Ray Johnson.





LEFT: Figure 39. Hiroko organizing door fragments for photography and conservation. RIGHT: Figure 40. Brett joining door fragments. Photos by Ray Johnson.

THEBAN TOMB 107

ARCHAEOLOGY

During the period January 14-March 20, 2020, the Epigraphic Survey continued the excavation, conservation, and documentation of TT 107, tomb of the Steward of Amenhotep III's Malgata Palace, the noble Nefersekheru. The archaeological work, coordinated by Dr. Boyo Ockinga and Dr. Susanne Binder, extended over a period of approximately four weeks, and significant progress was made in clearing the upper strata of the central aisle of the broad hall within the tomb. This led to the confirmation of an inner doorway at the back of the broad hall on the north side—one of our main objectives for the season—as well as to the recovery of numerous inscribed limestone fragments. Now we know that at least one additional chamber exists beyond the broad hall, a major question now answered. We had hoped that the new doorway might be inscribed, but the top of the door and doorjambs that are now partly exposed show no sign of carving. The inscribed fragments, found just inside the main entryway, are mainly from the broken doorway itself and include outer doorjamb fragments inscribed with vertical text columns in sunk relief, as well as additional pieces of the exterior lintel scene above with back-to-back enshrined



relief drawings. Photo by Sue Osgood.

figures of Osiris and probably Re-Horakhty. New fragments found this season indicate that the inner thickness figure of Nefersekheru was accompanied by text above him, and that both his figure and text above were carved in the fine raised-relief style of the late Eighteenth Dynasty. There is still much to clear in the entryway, and many more fragments of the inscribed doorway await us next season.

CONSERVATION AND EPIGRAPHY

Conservation and documentation of these fragments continued throughout the remainder of the field season. Over sixty fragments were treated, consolidated, and partly reassembled by Epigraphic Survey conservator Hiroko Kariya and recorded by Epigraphic Survey photographer Yarko Kobylecky. Senior artist Susan Osgood and epigrapher Ariel Singer continued the facsimile drawing, collation, and analysis of the growing corpus of fragmentary material from this tomb. Additionally, five drawing enlargements comprising the scenes on the lower register of the tomb façade were completed by Susan and approved for publication by director Ray.

Our work at TT 107 this year was supervised by SCA Inspectors Hanan Hassan Ahmed Hussein, Heba el-Nadi Abu Zaid Ahmed, Wafaa Abu el-Hamd Mohammed, and Salwa Nur el-Din Ahmed Mohammed, along with SCA Conservator Mohammed Mahmoud el-Naggfar Fath el-Bab.





LEFT: Figure 42. Sue and Inspector Heba working in the TT 107 entryway. RIGHT: Figure 43. Sue drawing TT 107 door thickness relief. Photos by Ray Johnson.

CHICAGO HOUSE

Every year Tina Di Cerbo supervises our workmen in the closing up of the facility in April, coordinates the maintenance work with them, and cleans and opens the facility in advance of each season. This past season, because of the COVID-19 situation, the Chicago House staff was obliged to depart a month early. As the situation changed sometimes quite rapidly, half of our team was able to depart on normal air carriers, while half of us found ourselves without a means of returning home when the airlines cancelled flights and countries started closing their borders. In the end, thanks to the efforts of OI Director Chris Woods and the University of Chicago Risk Management Office, eleven of us were evacuated on March 28 and returned safely to Chicago on March 29. Epigrapher Aleksandra Hallmann, husband (and CH stone mason) Johannes Weninger, their baby Alek, and Aleksandra's parents Eugeniusz and Doris Hallmann were evacuated to Germany the following week by the Polish Embassy. But Tina stayed behind to oversee the closing of the house, to ensure that our workmen and administrators were safe and taking every precaution against the virus, and she was not able to return to Germany until June 24. She took full advantage of her extra time in Luxor to effect much-needed maintenance work at Chicago House, including replacing all of the hot-water heating pipes in the flooring of the Chicago House Library with engineer Nashet Sidhom and our workmen, all masked and kept at a safe distance from one another. Chicago House, the Oriental Institute, and the University of Chicago owe Tina a great debt and the highest regard for keeping our facility in Luxor safe, under even these extraordinary circumstances. Thank you, Tina!

The Chicago House Marjorie M. Fisher Library

The Chicago House Marjorie M. Fisher Library opened this season on October 21 under the supervision of Head Librarian Anait Helmholz and Assistant Librarian Martina Roshdi. Mira Salama assisted part-time with the library cataloging. Over a thousand patrons used the library between October 21 and March 19, including many Egyptian graduate students and Antiquities Ministry colleagues working on advanced degrees, and foreign mission members doing research. We added 172 new titles to the library collection, including 37 journals and 34 periodicals, and approximately 1,700 more titles were entered this season into the digital library catalog.

The Tom and Linda Heagy Chicago House Photo Archives

Ellie Smith, our Tom and Linda Heagy Chicago House Photo Archives registrar numbered and registered 105 new large-format film negatives generated and scanned by Yarko and Amanda from the God's Wives Chapels, 10 new negatives



Figure 44. Aleksandra, Aleks, and Johannes, Chicago House. Photo by Ray Johnson.

from the Western High Gate, 159 duplicate negatives from nitrate negatives, and 32 new negatives from the Claudius Gate (before dismantling), and entered them in the Chicago House large-format film database. She, Photo Archivist Sue Lezon, and Tina also continued to process and organize data from the Ted Brock Photographic Archives, donated to Chicago House by Lyla Brock after Ted's untimely death. This season we had the pleasure of acknowledging Ellie's thirtieth year working at Chicago House with a festive, surprise "jubilee" celebration in her honor. For three decades Ellie has tirelessly organized, numbered, and registered the image holdings of the Photo Archives as our photography team generated the negatives, and also organized the additional archives holdings donated to us, an enormous amount of work. I speak for us all when I extend my congratulations and sincerest thanks to Ellie for her devotion and extraordinary service over the years.

We are pleased to announce that this season Chicago House received an ARCE Antiquities Endowment Fund (AEF) grant entitled *The Scanning, Conservation, Image Identification, Database Design, Data Entry, and Archival Housing of the Photographic Archives of Edwin (Ted) Brock and Albert Raccah.* Ted worked for more than thirty years in Egypt, including on a number of projects for ARCE, and his photographic archives is encyclopedic and enormous. Albert Raccah's stunning black-and-white images cover his years of work in Egypt from the 1940s until 1958, including work he did with Jean Leclant in the 1950s. The funding is allowing the organizing, scanning, processing, and archiving of the material for access in the Tom and Linda Heagy Chicago House Photo Archives, as well as one-on-one meetings between Sue and the Raccah family. Many thanks to our ARCE friends for this much-appreciated help. In addition to working with Ellie and Tina on the Brock and Raccah archives in December and January, Sue worked with Ellie to reorganize the Labib Habachi and Jean and Helen Jacquet archives to create additional secure, accessible storage space. She also continued her condi-

tion survey of our large-format negative holdings, and selected a number of deteriorating nitrate negatives for Yarko and Amanda to duplicate and scan.

This season Alain and Emmanuelle Arnaudiès worked with us in the Photo Archives in November and March, where they entered digital image data into the new Chicago House Digital Photo Archive cataloging and storage system. This season they entered 2,154 digital images from the Luxor Temple Fragment catalogue (LTF), including orthomosaic photographs generated by Hilary and Gina, 1,503 images from the Medinet Habu Block catalogue (MH BL), and another 71 scanned large-format film negatives from the Large Format Collection (total Large Format negatives = 23,278). While Chicago House utilizes film photography as well as digital photography, with separate databases for each, everything gets scanned, duplicated, and archived digitally. The Arnaudies are also researching and organizing archival photographs from our early years for our own centennial celebration in 2024. This past March, while they were with us at Chicago House, we were very fortunate to be contacted by Mrs. Yoshi





TOP: Figure 45. Ellie's surprise thirtieth year celebration, January 10, 2020. BOTTOM: Figure 46. Ariel, Jen, Sue, Ellie, Keli, and Amanda. Photos by Yarko Kobylecky.

Funaki, who had found a photo album with images of early Epigraphic Survey staff members in Edinburgh, Scotland, and who very kindly scanned every page and sent them to us. After a little research, our archives sleuths determined that the album belonged to Epigraphic Survey staff member John Anthony Chubb, whose sister, Mary Chubb, worked at Amarna with John D. S. Pendlebury in 1930–32. John Anthony Chubb was a gifted photographer who worked with the University of Michigan at Karanis in that capacity from 1926 to 1927, but from 1927 to 1936 he worked with the ES as an artist, and his drawings are published in the Medinet Habu temple volumes. In 1929 he married Mabel Katharine Montgomery, who lived with him in Luxor, and who passed away in 1993 in Edinburgh, ten years after her husband. Our working hypothesis is that the album was put together—and very well labeled—by Mabel Chubb, who perhaps took most of the photographs, since she is not in any of them. Our investigations continue, and we are enormously grateful to Mrs. Yoshi Funaki for sharing this treasure trove of archival images with us.

Despite the truncated nature of our season this year, we enjoyed the visits of many colleagues and friends, especially before and after the International Congress of Egyptology (ICE) that was held in Cairo November 3–8. Margie Fisher was in Luxor for several months conducting a photographic documentation project in the Valley of the Queens starting in October, a real treat. OI Advisory Council member Anthony Diamandakis and his family stopped by for a visit that month, as well as former staff member Peter Piccione, and former epigrapher Jonathan Winnerman in December. We

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were very pleased to host the Oriental Institute tour to Egypt led by Matt Welton and Emily Teeter to a very festive Thanksgiving dinner at Chicago House. We were also pleased to welcome our Aswan colleague Dr. Adel Kelany, who consulted the Labib Habachi Archives for information concerning the position of certain granite quarries in Aswan, now lost under modern development. Dr. Adel also very kindly represented Chicago House and its archives collections at a symposium hosted by the German Archeological Institute in Cairo on January 18 on Egyptian Egyptologists and their archives, where he discussed the Habachi Archives. We were very happy to have Nadine Moeller and Gregory Marouard return with their team for a short Edfu season in January, and we look forward to seeing them in future seasons in Luxor and Edfu. From January 19 to 24, OI director Chris Woods, OI assistant director Jean Evans, OI director of administration and finance Jimmy Gurchek, and OI assistant director for administration and finance Brendan Bulger all came to Luxor for a firsthand look at the Chicago House facility, our work, and our project sites. It is always good to have visits from our folks back home, and the visit was a most successful and pleasant one.

The Epigraphic Survey professional staff during this past season consisted of Ray Johnson as director; J. Brett McClain as assistant director; Jen Kimpton, Christina Di Cerbo, Ariel Singer, and Aleksandra Hallmann as epigraphers; Boyo Ockinga and Susanne Binder as project archaeologist/epigraphers; Margaret De Jong, Susan Osgood, and Krisztián Vértes as senior artists, and Keli Alberts and Dominique Navarro as artists; Jay Heidel as Luxor Temple site manager/architect/artist; Gina Salama as Luxor Temple assistant/digital data engineer; and conservator Hala Mohammed Ahmed as Luxor Temple data

assistant; Yarko Kobylecky as chief staff photographer; Owen

Figure 47. Krisztian leading a digital drawing tutorial. Photo by Ray Johnson.



Murray, Hilary McDonald, and Amanda Tetreault as photographers; Susan Lezon as photo archivist and photographer; Elinor Smith as photo archives registrar and photography assistant; Carlotta Maher as assistant to the director *emerita*; Essam El Sayed as finance manager; Samir Guindy as administrator; Samwell Maher as assistant administrator; Anait Helmholz as CH head librarian and Medinet Habu Western High Gate assistant; Martina Roshdy Maher as assistant librarian; Mira Salama as temp assistant librarian; Frank Helmholz as master mason; Johannes Weninger as mason; Lotfi K. Hassan as Medinet Habu conservation supervisor; Doaa Mohamed el-Sadek and Al Azab Ahmed as Medinet Habu conservator assistants; and Hiroko Kariya as project conservator for Luxor Temple and TT 107. Alain and Emmanuelle Arnaudiès worked on the Chicago House Digital Archives database. Special thanks must go to Nadine Moeller and Gregory Marouard for overseeing our archaeological work at Medinet Habu, and special thanks as always must go to our forty full-time Egyptian workmen, without whom we could do very little.

Sincerest thanks to the Egyptian Ministry of Tourism and Antiquities (MoTA) and the Supreme Council of Antiquities (SCA), Minister of Antiquities Dr. Khaled el-Enany, SCA secretary general Dr. Mostafa Waziri, general dirtector of foreign missions Dr. Nashwa Gaber, general director of Luxor and southern Upper Egypt Dr. Mohamed Yahia, Gurna general director Dr. Fathi Yaseen, and all of our friends and colleagues in Egypt for a short but productive collaboration this year. Sincerest thanks must go to the many friends of the Oriental Institute, whose generous support allows Chicago House to conduct its documentation, conservation, and restoration programs in Luxor. Special thanks must go to USAID Egypt for the four-year grant extension that will support our restoration and site development efforts at Medinet Habu. Thanks to the former Charge d'Affaires of the US Embassy, the Honorable Thomas Goldberger; to former US Ambassador to Egypt R. Stephen Beecroft; to former US Ambassador to Egypt, the Honorable Anne Patterson; former US Ambassador to Egypt the Honorable Margaret Scobey; to Sherry Carlin, mission director of the United States Agency for International Development in Egypt; former USAID Egypt directors Mary Ott, Walter North, Jim Bever, Hilda (Bambi) Arellano, Ken Ellis, and Bill Pearson; to Sylvia Atalla and Mohamed Abdel Rahman, USAID Egypt; Curt Ferguson and Coca Cola Egypt (Atlantic Industries); to David Rockefeller, Sr.† and Marnie Pillsbury; to Dr. Marjorie M. Fisher; David and Carlotta Maher; O. J. and Angie Sopranos; Misty and Lewis Gruber; Ward and Diane Zumsteg; Andrea Dudek; Nassef Sawiris; Mark Rudkin; Kitty Picken; Daniel Lindley and Lucia Woods Lindley; David and Allison Harley; Eric and Andrea Colombel; Piers and Jenny Litherland; Dr. Fred Giles†; Tom Van Eynde; Marjorie B. Kiewit; Tom and Linda Heagy; Shafik Gabr, ARTOC Group, Cairo; Judge and Mrs. Warren Siegel; Barbara Breasted Whitesides and George Whitesides; Miriam Reitz Baer; Beth Noujaim; James Lichtenstein; Jack Josephson and Magda Saleh; Priscilla (Peppy) Bath; Charlie Secchia; Emily Fine; Nan Ray; Anna White; Janet and Karim Mostafa; Waheeb 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; Nancy N. Lassalle; Dr. Roxie Walker; Tony and Lawrie Dean; Mr. Charles L. Michod, Jr; Dr. Louise Bertini and Mary Sadek of the American Research Center in Egypt; and all of our friends and colleagues at the Oriental Institute. I must also express our special gratitude to British Petroleum, the Getty Grant Program of the J. Paul Getty Trust, LaSalle National Bank, Mobil Oil, Vodafone Egypt, the Rockefeller Brothers Fund (RBF) and the World Monuments Fund (WMF) for their past support of our work. Sincerest thanks and best wishes to you all for a safe and healthy year ahead.

ADDRESSES OF THE EPIGRAPHIC SURVEY

October through March:

Chicago House

Luxor

Arab Republic of Egypt tel. (011) (20) (95) 237-2525

fax. (011) (20) (95) 238-1620

April through September:

The Oriental Institute 1155 East 58th Street Chicago, IL 60637 tel. (773) 702-9524



Figure 48. Chicago House full staff photo, February 2020. Photo by Sue Lezon.

First Row:

Abdel-Wahab Aadly Ahmed, Sami Qomos Tawadrous,

Saad Bakry Hamid, Tayib Abdel Aziz Mohammed, Nashaat Seidhom Awad, Lotfi Hassan, Amanda Tetreault,

Sue Osgood, Ellie Smith, Yarko Kobylecky, Mohamed Selim Khalafallah, Saied Hussein Abou

Mostafa Mohamed Ibrahim, Saoud Kamal Khalafallah

Gamal Mohamed Hassan, Gharib El Wair Ghaba, Hegazi Mohamed Amin

Second Row:

Mary Greece, Zienb Mohie, Shiana Sayed, Martina Ezzat,

Hala Mohamed, Doaa El-Sadek, Essam El Sayed, Jay Heidel, Ray Johnson, Marjorie Fisher, Margaret De Jong,

Samir Guindy, Saber Ahmed Taye, Baha Mohammed Amin.

Abdel Nasser El Wair Ghaba, Sayed Ali Handaqa, Abdel Harris El Samman, Abdel Nabi Abdel Aziz

Third Row:

Ahmed Mohamed Mahmoud, Doaa Hussein, Ahmed Al-Azab.

Al-Taieb Mohmoud, Habiba Ahmed, Eman Mostafa.

Marwa Al-Nagar, Myra Salama, Gina Salama, Anait Helmholz.

Frank Helmholz, Martina Roishdi Tawadros, Samwell Maher Mofeed, Nadia Latif, Shimaa

Mohamed Ahmed Mohamed (Hamada). Badawi Mohamed Abdel-Rahman, Ahmed Abdel-

El-Tayib Hassan Ali Mohamed, Alaa Mohamed Amin,

El Raheem Samir Shafiq

Fourth Row:

Alazab Ahmed, Eid El-Shafei Ibrahim (Gamal), Nasser Rabiea Hassan Mohamed (Ramadan), Mohamed Saieed Salman (Adel), Zakaria Mohamed.

Owen Murray, Colleen Kinder, Ariel Singer, Dominique Navarro, Brett McClain, Jen Kimpton, Keli Alberts,

Johannes Weninger holding Aleks, Aleksandra Hallman,

Hilary McDonald, Krisztian Vertes, Mahmoud Abdel Harris

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GIZA PLATEAU MAPPING PROJECT MARK LEHNER | ANCIENT EGYPT RESEARCH ASSOCIATES

We returned to the Menkaure Valley Temple (MVT) in January 2020 to resume our work of 2019.¹ We study and document the temple remains, which George Reisner excavated in 1908 and 1910, with the systematic MoLA method² that we honed for all AERA archaeology at Giza. This season we worked in two areas: the western third of the temple (MVT-W, fig. 1), and at the northeastern corner of the temple in a large hole (NEH, figs. 2–3).

This season, we wanted to focus on the temple foundation, taking advantage of fact that both the NEH hole and "Thieves' Hole" at the rear, southwestern corner cut down through the entire temple. Reisner wrote that he found the famous dyad statue of Menkaure and a queen at the bottom of Thieves' Hole. We reached the find spot last season. Now we wanted to expand north into the temple sanctuary, the rooms that Reisner called the Portico (room 1) and Offering Hall (room 2, our space 10,842),³ where he saw evidence that a flash flood breached the western wall and ruined the temple, which probably happened during or after the late Fifth Dynasty. As this was a major event in his narrative and reconstruction of the sequence of occupation and building in the MVT, we wanted to see what he saw. We also were keen to continue to sieve the silty deposits that Reisner dumped into the western part of the temple when he cleared the apartments, bins, and granaries of people who occupied the court over the course of three hundred years. Last season, our dry sieving and wet sieving yielded an abundance of material culture these people left behind—plant remains, animal bone, sealings, and even statue fragments. We regard this discarded material as among the most important finds from our work in the MVT.

We opened the fieldwork on January 27 and ended on March 31. But the coronavirus crisis abruptly halted excavations in mid-March. Most of the non-Egyptian team members left for home between March 12 and 16. Egypt closed Cairo Airport on March 19. By the end of March, the last of the Egyptian team members, all of whom except Mohamed Helmi were working in the AERA field lab, left the AERA villa to go to their homes elsewhere in Egypt. After everyone else left, archaeologist Dan Jones, surveyor Mohamed Helmi, overseer Sayed Salah, inspector Ahmed Hosni, and the workers and I continued on site.

I directed the overall program of the 2020 season. Daniel Jones supervised excavation and recording on site. Sayed Salah Abd el-Hakem (AERA) served as archaeologist and foreman of sixty workers. Mohammed Helmi carried out all survey and coordinated remotely with AERA's GIS director, Rebekah Miracle, based in Austin, Texas. Greg Viessman (University of Memphis), Vicky Almansa-Villatoro (Brown University), Martina Bardonová (Charles University), and volunteer archaeologists Kathy DeRue and Sarah LaPidus worked on site. Rasha Safan represented the Ministry of Antiquities (MoA) as inspector during the first half of the season and Ahmed Hosni for the second half.

We opened the magazine that serves as AERA's field lab and storeroom on Sunday, February 9, and closed it on Thursday, March 19. Dr. Claire

Malleson directed the lab and storeroom. Mr. NEXT PAGE: Figure 1. Exposure of the southwestern

Hany Zaki represented the Ministry of Antiquities as inspector. Dr. Richard Redding (AERA director of research), Mohammad Hussein, and

NEXT PAGE: Figure 1. Exposure of the southwestern quarter of the Menkaure Valley Temple during Season 2020. View to the northwest with the Khufu and Khafre Pyramids in the background. Workers remove clean sand from the temple sanctuary at the north end of the exposure.





Shereen el-Morsi analyzed animal bone. Dr. Claire Malleson, Agata Bebel-Nowak, and Essam Ahmed analyzed plant remains. Emmy Malek processed and studied objects. Yasser Mahmoud, Alaa Talaat, and Rasha Mohamed worked as illustrators; Amel Aweida, Mohamed Hamed, and Nourhan Hassan worked as photographers. Samar Mahmoud studied lithics. Ali Witsell studied sealings. Manami Yahata documented and analyzed remains of roofing and plaster. Mohammad Hassan served as lab assistant. Other colleagues who had planned to study material culture could not join us because we had to close the lab early due to the COVID-19 crisis.

BEWARE THE IDES OF MARCH

It was that fateful third week of March when the looming COVID-19 crisis forced us to stop clearing and mapping the MVT and turn the workers to backfilling what we had just spent so much energy excavating. Whether the supermoon that appeared on March 9 and rose for the next three days had anything do to with what followed, I don't know. On March 12, a two-day rainstorm hit Egypt, shutting down Cairo just ahead of the COVID-19 shutdown. Named a "dragon storm" and a cyclone, the sustained rains threatened devastating effect on the 4,500-year-old mudbrick walls of the temple that we had exposed this season if they dried out too quickly. So, when we resumed after the storm on Saturday, March 14, we scrambled to buttress walls with sandbags and rebury them as the Egyptian authorities began to order everyone off the plateau. For two weeks, our site work was the only activity at the Giza Pyramids. To get the job done quickly, we hired eighty workers (up from sixty previously) and raced to sandbag and backfill what we had just exposed of the temple.

GOING DEEPER IN THE DYAD HOLE

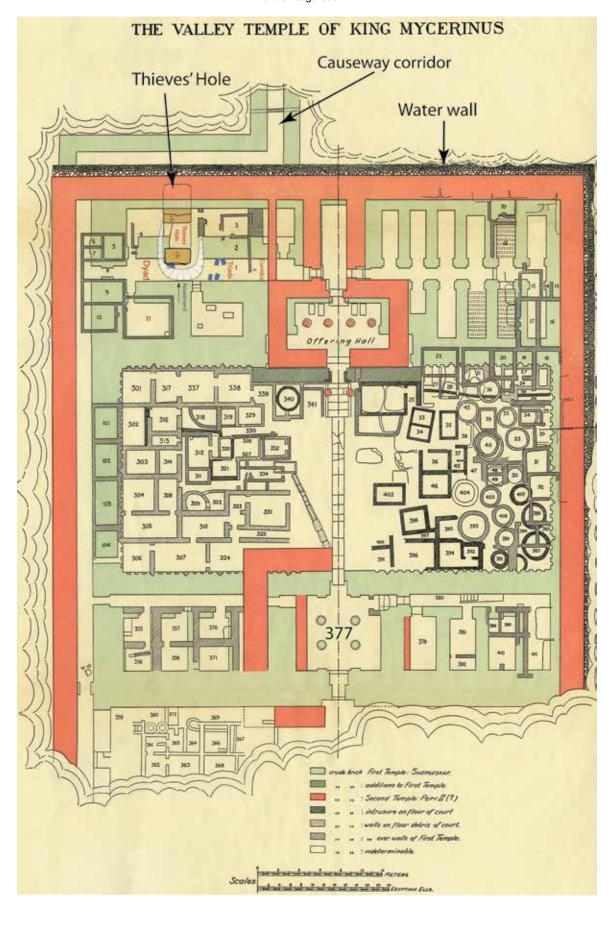
In 2019 we emptied what Reisner called Thieves' Hole. He wrote in 1931 that he found the famous dyad in this hole. In fact, Reisner did not find the dyad in Thieves' Hole, but in a deeper, older hole that someone dug a little father east, in ancient times. He realized this and wrote about the two holes in his diary shortly after he conjoined them into one oblong trench by excavating what separated them. But when he wrote for publication twenty-one years later, he conflated them as Thieves' Hole. 6

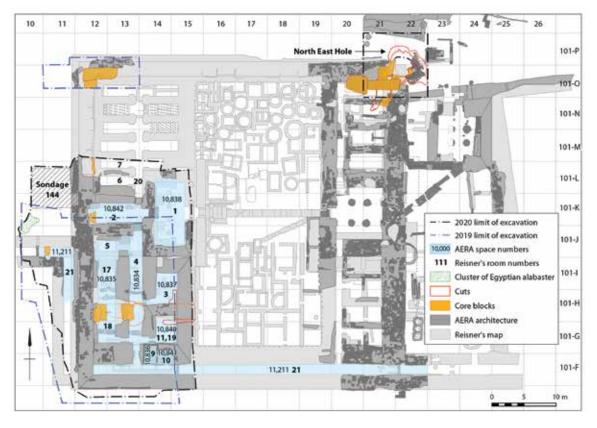
I call the lower hole the Dyad Hole (space 10,834, cut [35,618]). Long before someone dug Thieves' Hole, someone had already buried the dyad in the older hole. Someone dug the Dyad Hole into the crushed limestone foundation that builders had laid down before Menkaure's successor, Shepseskaf, finished the valley temple in mudbrick at the end of the Fourth Dynasty, what Reisner called the First Temple. They may have dug the Dyad Hole after the First Temple lay ruined and abandoned in the late Fifth Dynasty, and before, or when people rebuilt the temple in the Sixth Dynasty—the "Second Temple."

In the Dyad Hole, apparently at a deeper level than where he found the dyad, Reisner wrote

that he found "a number of fragments of a slate triad—different from all fragments found as yet. There may be more fragments, possibly statues, in this hole, but as the water runs in very fast, it will be better to leave the hole until May. I have ordered retaining walls built, which will keep the two holes free of debris." Reisner never came back to excavate deeper in the Dyad Hole. He

RIGHT: Figure 2. Reisner's (1931: plan VIII) multi-phase map of the MVT. Light green: "First (Fourth Dynasty) Temple." Orange: "Second (Sixth Dynasty) Temple." Hachured gray: an intermediate phase (Fifth Dynasty). Black: latest domestic structures. Reisner found the Menkaure triads in the southwest corner (upper left) of the temple, in corridor 4, and the dyad in an older hole under the revetment (white crescent) around the east end of "Thieves' Pit," which cut corridor 4. North is to the right.





filled the combined holes and the space between his retaining walls with clean sand.

In 2019, after we had removed this sand and arrived at the exact spot where Reisner found the dyad, we excavated Sondage 142 into a silty layer (35,730) that was about level with the bottom of the dyad when it stood upright against a large limestone core block (35,642). We could not be certain that Reisner's workers did not lay down this silty layer when they moved the dyad and built his retaining walls. The silty layer abutted a deeper core block (35,747).8

In 2020 we wanted to expand Sondage 142 and dig deeper to see, of course, if we could find more statue fragments, and to get to the bottom of the temple foundation. First, we removed material that had collapsed from the northern side of the sondage last year. Next, on March 10, Martina Bardonová excavated the southern side of Sondage 142 from the exact spot where the dyad had stood to 2 m closer to the south side of the hole, where she left the deposits as a step for workers (fig. 4). Martina first removed inter-

Figure 3. Multi-phase Reisner plan of the MVT georectified (corrected for position with respect to the Giza Plateau Mapping Project grid). Dash-dot lines indicate limits of excavation (LOE) in the 2020 season. Reisner's room numbers are in bold; AERA space numbers are in the 10,000s. Map by Rebekah Miracle from AERA GIS.

Figure 4. Martina Bardonová explains the layers she has just excavated at the bottom of the Dyad Hole, at the exact spot where in 1910 George Reisner found the dyad against the shoulder of the large core block showing at the right. March 10, 2020, view to the south



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layered sand and silt (35,634), which sloped down from the west to the east. Then she removed the thick silt deposit (35,730), which contained more of the irregular limestone pieces that we had found in the layer last year. In his diary entry of January 20, 1910, Reisner wrote that his workers began to move the dyad statue by tilting it from side to side and shoving stones underneath. His sketch shows stones next to the large "dyad core block" (35,642). We have to think that Reisner's workers left the stones and the sandy, silty layers from this operation. On the other hand, the silty layer also shows in the northern and eastern sections of the Dyad Hole itself, as we saw when we tried to dig deeper. Under the dense silt, Bardonová could only partially clear a greyish, sandy silt layer (35,733) because ground water flooded the newly excavated side of the sondage.

On March 15 we probed below the level of the ground water, which was 14.95 m above sea level (asl) in 2019 but had risen to 15.427 m asl this season. It probably did not help that we were attempting to go deeper two days after the "dragon storm" dumped so much rain upon the land. We tried to lower the ground water by using a gas-powered pump. As the pump chugged along, the water level slowly fell. Sayed Salah, Ramadan Hamed, Emad Shabaan, and Hani Hussein worked hard clearing the sloppy debris (fig. 5). But it was a race of Alice and the Red Queen. As they dug deeper, reaching down and scooping up mud in their hands, the water streamed in from the northwest and northeast, bringing a sandy slurry that filled the spot. From the slurry, the men brought up small, tantalizing pieces of pottery and worked pieces of several different types of stones: one each of red granite, Egyptian alabaster (travertine), and limestone, and two of greywacke—the stone of Menkaure's dyad and triads. Eventually, the flow outpaced the pump. At 14.76 m asl, we gave up, after 66 cm below the level of the 2020 water table but only 19 cm below the 2019 level. We did not reach the bottom of the lower course of limestone core blocks.

The water table has risen and fallen over recent years in this low part of the Giza Pla-

Figure 5. Sayed Salah (on ladder), Ramadan Hussein (left), and Emad Shabaan (center) work with the pump at the bottom of the Dyad Hole. View to the east.



teau. A de-watering system installed between 2008 and 2010 was designed with the potential to lower the ground water to 12 m asl in an area from the Sphinx to the Khentkawes Town and along the Heit el-Ghurab site. Unfortunately, in the last few years it has not been operating anywhere near that optimum, and the water is nearly as high as before the system was installed. We hold out hope that when it is working well again, we can get to the bottom of things in the Dyad Hole.

OFFERING HALL

As we began to backfill most of what we had cleared, three weeks sooner than planned, Dan and I decided to un-fill Reisner's clean sand from the portico (room 1, our space number 10,838) and the offering hall (room 2, space 10,842, see fig. 3). In the end, we had time only to clear the offering hall.

We especially wanted to look at the back, western wall of the offering hall. Here, Reisner saw evidence of a flash flood that caused people to abandon the First Temple (green in fig. 2), leaving a "surface of decay," on which people later built the walls of the Second Temple (orange in fig. 2). In the eastern vestibule (room 377), he found a limestone stela inscribed in the name of the Sixth Dynasty Pharaoh Pepi II in his biennial "counting year" 31, which would be around the last third of his ninety-four-year reign. This is probably when people partially rebuilt the temple, adding thick walls around the north, west, and south sides, around the portico and offering hall, and around the eastern entrance vestibule (Reisner's room 377). These walls are all coded orange in his map, reproduced here as figure 2. We wanted to see the evidence of the temple-killing punch through the western wall.

It turned out to be complicated, not only because of temple building and rebuilding over three centuries, but because Reisner tore out the floor of the Second Temple, removed most of its northern wall, and, as elsewhere, trenched the floor along the base of the walls to trace the lines of the First Temple.

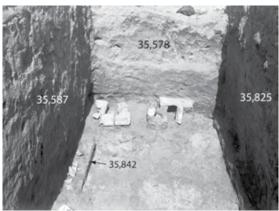
Reisner already knew from his first plunge into the western side of the temple between July 7 and 25, 1908, that the temple showed two major building phases. He then took sixteen months away from excavating the MVT to work in Nubia and Palestine. He resumed on December 3, 1909, and from this point we can follow his progress and thinking reading his diary, in which he sometimes goes into a little more detail than in his publication and offers clarifying sketches. From a thorough review of Reisner's diaries, photographs, and publications, Dan Jones has begun to sort out a more complicated history than the already-complex history that Reisner documented for the offering hall. I do not know how this would have been possible without the MoLAS method of assigning each and every structure and depositional feature its own numeric identification tag. I use photographs from the Reisner archive and from our work this season to show how we sort out the different "builds" and deposits, and their sequence.

In figure 6, a view to the west across the portico (room 1) into the offering hall (room 2) as Reisner found it when he resumed work in December1909, the massive Second Temple walls of the portico and offering hall remain mostly intact.

Sixteen months earlier, when he first excavated the offering hall down to its latest floor, Reisner found the remains of the last intentional act in the offering hall (fig. 6). At the back of the room, which measured 2.40 m wide and 7.50 m long, a tiny offering "bench" remained where someone had placed it, probably in the late Sixth Dynasty. It consisted of a worn alabaster slab resting on a mudbrick pedestal (?) and a crude limestone trough (which Reisner left behind for us to find). This seems a diminutive arrangement for the inner sanctuary of a cult that featured a massive temple and, at least in the First Temple phase, magnificent statues of Menkaure. Reisner thought such

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an offering bench would had been placed in the original offering room.¹³ Two unfinished small statues, two pieces of a third small unfinished statue, and the base of a fourth sprawled on the floor to the south.¹⁴ Did someone put these here intentionally? It appears so, but it is hard to say, because Reisner found statue pieces scattered throughout the temple.

In figure 7, a view of the objects at the west end of the offering hall, note how the interior

TOP LEFT: Figure 6. View to the west of the portico (foreground, room 1) and offering hall (room 2), December 1909. Part of the south-facing elevation of the north wall (35,825) of room 2 had collapsed during Reisner's sixteen-month break between 1908 and 1909. Note the fissure in the north (right) wall of the portico. Photo HUMFA_A268_NS, courtesy of Museum of Fine Arts, Boston.

TOP RIGHT: Figure 7. View to the west of the objects at the west end of the offering hall (room 2, space 10842), dated July 18, 1908. Photo HUMFA_A254_NS, courtesy of Museum of Fine Arts, Boston.

faces of the north wall (35,825), south wall (35,587), and back, west wall (35,578) of the hall remain intact. An edge of an older south wall (35,842) protrudes above the floor.

Knowing that an older phase of the temple lay below, Reisner next ordered his workers to take out the floor and excavate below. He must have also suspected that the walls masked older walls, because he asked his workers to scrape off the face of the western wall (35, 578) and hack a vertical trench into it. Figure 8 shows the offering hall at this stage.

By taking out the floor (fig. 8), Reisner exposed more of what he understood as the earlier ("First Temple") southern wall (35,842) and perhaps a part of an earlier wall projecting on the north (right). However, this would not be the First Temple north wall, because it was positioned farther north, framing a wider offering hall. At least the lower, southern projecting wall fits with what Reisner wrote: "The southern wall [of the Second Temple offering hall, 35,587] rested on the older southern wall [35,842] with its interior face about 10–15 cm south of the old face. The interior face of the new northern wall, however, was about 70 cm south of the old face, and the northern wall on the inside was founded in a trench cut in the old floor . . ."15

By taking out the Second Temple floor, Reisner also exposed a limestone core block (35,829) that shows under the back, western wall. This conflicts with his statement that Menkaure's builders left a gap in the core blocks across the back of the offering hall, 16 but perhaps he meant they left the gap in the higher courses. He did write of a "foundation wall" across the western end:

The western end of the room had been *washed out* previous to the building of the second crude-brick temple, and overbuilt by the later wall. Its examination was, therefore, a matter of considerable difficulty, but we managed to expose the greater part of the foundation wall, which crossed the end of the room in a straight line with no indication of niche or stela.¹⁷

He might have had in mind the core block, and the layer (35,841) that runs several centimeters thick over it (figs. 8–9 below). When they stripped the east face of the back wall and excavated a vertical trench deeper into it, Reisner's workers exposed the "washing out" of this wall. Tumbled mudbrick fragments, crushed limestone quarry debris, desert clay, and sand (35,830) fill a U-shaped cut through the older, underlying walls. I will delineate that debris in the following photographs.

Next, Reisner had his workers shave off the upper part of the northern wall (35,825) of the Second Temple offering hall (fig. 9). At the spot where the northern wall had attached to the rear, western wall, they dug another vertical trench. Later, he wrote about these operations: "It was thus easy to follow the lines of the old walls under the later ones, although it was necessary in places to cut away the later wall to make sure of the details." He gives a thumbnail view of the offering hall after his trenching, which I enlarged as figure 9 here, adding our feature numbers. Figure 10 shows the offering hall as we found it this season. The following paragraphs reference these figures.

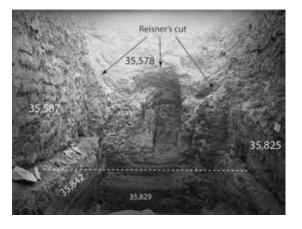
Reisner saw the Second Temple walls of the offering hall as founded on a single earlier "build"—the "First Temple." We see evidence of two earlier "builds." The Second Temple south wall (35,587) is based upon the truncation of the earlier wall (35,842), which projects 15 cm or more. But this wall is based on a previous build, wall (35,681), which is at about the same level as the limestone core block (35,841) that Reisner exposed at the base of the rear, western side of the room. Just above this core block, a thin residue of the earliest wall (35, 841) remains, and so does a thinner remnant of the next oldest wall (35,843). The walls of the true "First Temple" would be the lowest remnants on the south and west (35,681 and 35,841, respectively). A "build" intervenes between Reisner's "first" and "second" temples.

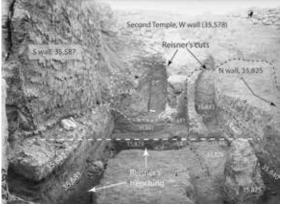
The flash flood cut through the second, middle phase (35,843) of the western wall, filling the chan-

BOTTOM LEFT: Figure 8. View to the west showing the offering hall (room 2, space 10,842) after Reisner's workers removed the Second Temple floor and the face of the west wall (35,578), dug a vertical trench into it, and took away of part of the north wall (35,825). Compare with figure 7 above. Dated February 6, 1910. Photo HUMFA_C2265_NS, courtesy of Museum of Fine Arts, Boston. The dashed line shows the Second Temple floor level.

BOTTOM RIGHT: Figure 9. View to the west showing the offering hall (room 2, space 10,842) after the removal of part of the Second Temple north wall. Compare with figure 7 above. Dated February 6, 1910. Photo HUMFA_C2265_NS, courtesy of Museum of Fine Arts, Boston. Horizontal dashed line shows Second Temple floor level.

nel-like breach with sand, clay, and brick debris (35,830). It is possible a similar event destroyed the earliest walls, but the debris-filled channel that appeared when Reisner scraped off the face of the Second Temple west wall was made by a flash flood that took out the middle-phase wall, leaving a remnant (35, 843) at the bottom of the channel. When builders came to remake the offering hall for the Second Temple, probably in the Sixth Dynasty, they left the flood debris (35,830) filling the channel under the western side, but they cut the debris vertically to install





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TOP TO BOTTOM: Figure 10. View to the west of the offering hall (room 2, space 10,842) as exposed in AERA's Season 2020. Photo by Dan Jones.

Figure 11. Dan Jones examines where the builders of the Second Temple cut through the debris (35,830) deposited by a flash flood that broke through the western wall of the offering hall (room 2, space 10,842). They built the new southern wall (35,587) of the offering hall over the cut they made in the debris. Jones later cut a section from the plaster at the base of the wall to confirm two earlier "builds" (35,681 and 35,842) of the southern wall. View to the south.

Figure 12. Fine sand with wavy striations from flowing water adheres to the face of the northern, middle phase wall (35,839) of the offering hall (room 2, space 10,842).

View to the north.

the southern wall (35,587, fig. 11). They made the Second Temple western wall (35, 578) and southern wall (35,587) as one seamless "build" or building event over what remained of the middle phase of the western (35,843) and southern walls (35,842), the way a dentist will fit a crown onto the contours of what remains of the original tooth, although in this case the "dentists" did not remove the "decay," that is, the flood debris (35,830).

On the west, the Second Temple builders brought the face of their new west wall (35, 578) forward 50 cm to the east beyond the face of the older, middle-phase wall (35,843). Dan writes, "...I do believe Reisner got it wrong when he said that the Second Temple west wall (35,578) was built 0.25 m west of the First Temple wall. It is actually the other way around...with a 0.50 cm difference between limits. I think what he is showing on his color-coded, multi-phase map of the MVT for the west limit of the First Temple in room 2 is the east edge of the core block (35, 829)."

When Reisner removed the face of the west wall (35,578) of the offering hall, the debris showed like the contents of an over-stuffed closet (figs. 8–10). A powerful stream, from just the kind of sustained rain we experienced on March 12–13, cut the middle phase wall (35,843) and filled the

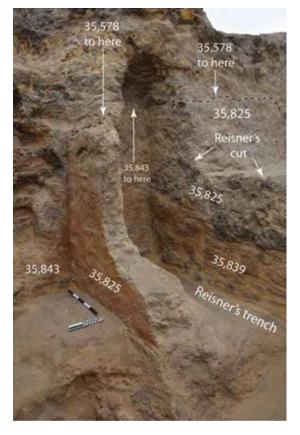
35.578 35.578 35.873 35.873 35.873





channel with coarse material (35,830). "Room 2 effectively functioned as a gully funneling the flood material into the court, where it pooled." 20

On the north side of the hall, the face of the middle-phase wall (35,839), sandwiched between what remains of the earlier (35,840) and later (35,825) walls (see figs. 8–9), shows the effects of water flowing through the hall (fig. 12). The faces of the bricks are rough and pocketed from long exposure. The hall remained unroofed for a long time. Fine sand with wavy striations still adheres to





the face of the wall and fills the seams between bricks. Rain water in shallow flows through the hall brought this finer sediment before a more powerful gush carried the coarse debris (35,820) that shows in the western wall breach. This thin accretion of fine sand was preserved because builders capped and cased the south face of the middle phase wall (35,839) with the latest northern wall (35,825), narrowing the offering hall from 3.10 m to 2.15 m. We see the middle- and early-phase walls thanks to the trench (figs. 8–9) that Reisner cut into the latest-phase northern wall (35,825).

Dan Jones documented evidence that the northern wall (35,825) of the offering hall was built after the middle-phase walls but before the Second Temple. The Second Temple builders simply incorporated it. Unlike its mate (35,587) to the south, the latest northern wall (35,825) is not a seamless build with the western wall (35,578) of the Second Temple. The northern wall abuts to the western wall of the middle phase (35,843) as shown in figures 9–10 and 13. Here, the middle-phase western wall (35,843) was preserved to some height along the northern side of the flood breach.

MAJOR MVT MIDDLE PHASE

We have to recognize a major intermediate phase between Reisner's First Temple, allegedly finished in mudbrick by Shepseskaf at the end of the Fourth Dynasty, and his Second Temple, built in the mid to late Sixth Dynasty. We have seen this significant phase, most probably dating to the Fifth Dynasty and possibly the reign of Niuserre, in the eastern third of the MVT. It was probably then that people repaired the southeastern magazines and added a screen wall across the portico (room 1), a limestone ramp and pathway across the court and across the eastern temple annex, and two sets of alabaster column bases in the vestibule of the MVT proper and in the Annex.²¹ The three main building phases in the offering hall match three phases of occupation in the temple court, as Reisner recognized.²²

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From the offering hall we have to conclude that the major flood event Reisner saw breached the west wall of the temple and ended the second phase of the offering hall (walls 35,839, 35,843, and 35,842). This phase might be that of the best-preserved "occupation 2" (Reisner phase b),²³ consisting of five apartments in the southern court. But a similar event could have interrupted the temple in its earliest phase, the true First Temple. The walls of this oldest offering hall survive to only a few centimeters high at the bottom of the sequence. Builders of the middle phase probably leveled what remained of the oldest walls for rebuilding. When the flood ended that middle phase,

the hall stood open and abandoned long enough for the bricks of the northern wall (35,839) to develop a crackled crust, and for streaming water to leave fine sand in the seams, before a powerful flood that brought the coarser material. We don't see the same weathering in the middle-phase southern wall (35, 842), because plaster still covers much of what survived of it (fig. 10). It is possible that people who served in the temple during the middle phase added the northern wall (35,825) that functioned later with the Second Temple west wall (35,587) and south wall (35,578). Including the northern wall (35,825), we see three re-builds and, with the first mudbrick temple, four building phases. This contrasts with the eastern end of the offering hall, where the three entrances with

OPPOSITE TOP: Figure 13. View to the northwest showing the abutment of the north wall of the offering hall (35,8250 to the middle phase west wall (35,843), with the Second Temple west wall (35,578) built over both walls (35,843 and 35,825).

OPPOSITE BOTTOM: Figure 14. Sondage 144 at the back wall of the MVT. View to the southeast with Gebel el-Qibli in the background. The "water wall" revetmvent shows against the Second Temple western, which the team cut to obtain a stratigraphic profile. Photo by Dan Jones.

BELOW: Figure 15. NEH (Northeastern Hole) at the northeastern corner of the Menkaure Valley Temple. View to the south in 2011. The hole cut through the eastern and northern mudbrick casings of the First Temple. Like Thieves' Hole inside the southwestern corner of the temple, NEH features a revetment of loose irregular stones on the eastern side where the hole cut through the top of the broad Ramp and exposed four tiers of Menkaure's limestone blocks for the foundation and core of the walls.



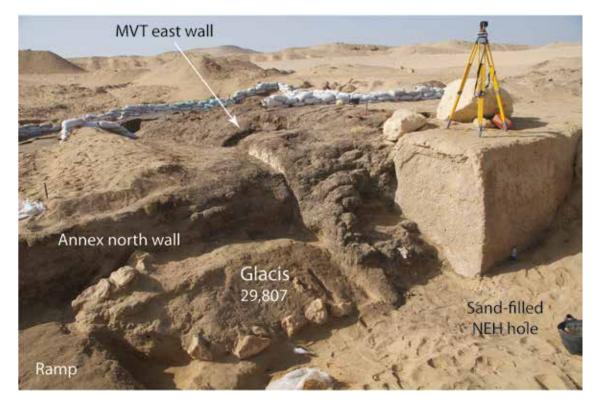


Figure 16. The small glacis fitted into the upper south side of the NEH hole, against the northern wall of the eastern Annex and fitted in between the eastern rim of the hole and the eastern plastered wall of the "First Temple." View to the southeast in 2008.

limestone threshold show only the base of the original First Temple walls and one rebuilding.²⁴ We save details for discussion elsewhere.

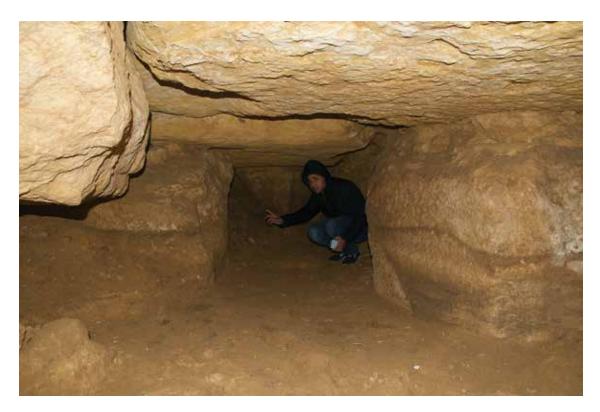
GETTING BEHIND THE BREACH—SONDAGE 144

In order to get behind the breach in the west wall of the offering hall, we started Sondage 144 (figs. 3, 14). We did not want to locate this excavation immediately west of the breach because we wanted to preserve a mounded sequence of ancient deposits, consisting mostly of mudbrick collapsed from the Second Temple wall against the north wall of the causeway corridor and west wall of the temple. When Reisner cut through this mound to expose the causeway, he left an important south-facing section perpendicular to the back of the temple, which we want to keep as a stratigraphic reference.²⁵ Also, we wanted to move north of a pit someone cut into the top of the mound and against the west wall of the temple, possibly Reisner's workers in their 1908 probes to find the back wall.

Last season (2019), in sand covering the mound, we found a cluster of broken Egyptian alabaster (travertine) fragments, including parts of statues and vessels, mixed with pottery, flint knives, charcoal, and corroded metal.²⁶ Between 2019 and 2020 we removed 247 kg of alabaster from this area. It is probable that Reisner's team members left this concentration of material from their on-site sorting of material culture. A photograph in the Reisner archive shows the material in the process of being sorted, along with a basket and trays, in the same location.²⁷

As Reisner did not excavate north of the causeway, our Sondage 144 is the first look at this zone and takes us one step toward our goal of obtaining a better picture of the extramural context

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ABOVE: Figure 17. Survey assistant Abass Eid Shabaan points to (ancient?) debris at the far end of the "tunnel" into the foundation of monolithic limestone blocks at the northeast corner of the MVT. The tunnel departs from the bottom of the NEH hole. View to the south.

RIGHT: Figure 18. The NEH hole, view to the southwest, showing feature numbers assigned to the limestone core blocks and the robbercut into the temple foundation to the south.

of the MVT. Our excavations exposed the west face of Reisner's "water wall," a glacis of broken stone with a sloped, clay-plastered face. Reisner thought that people of late Second Temple time built the "rubble embankment," as he called it, as protection against the flooding that wreaked such havoc in the offering hall.28 Our excavators (Viessman, Almansa-Villatoro, DeRue, and LaPidus) took out a short section of the water wall (35,566) and found that builders had set it down into a channel cut into sand that had banked against the temple west wall. As our team removed this sand across the whole square of Sondage 144,



they exposed a concentration of large limestone pieces, possibly tumbled from a structure like the fieldstone houses we exposed to the north of the MVT in 2008 and 2009.²⁹ Unfortunately, COVID-19 brought excavation to a halt at this point.

NORTHEAST HOLE (NEH)

In 1932, twenty-two years after Reisner stopped his excavations of the MVT, Selim Hassan excavated from the eastern leg of the Khentkawes Town (KKT) to the eastern end of the MVT. He found the broad Ramp³⁰ between the KKT and the MVT and then excavated the MVT eastern Annex and decided it was the "valley temple of Khentkawes." At the top of the Ramp, he found a huge hole dug through the northeastern corner of the MVT. While Reisner implied that he saw other thieves' holes, he did not see the NEH because he stopped his excavations just before he reached the northeast corner. On April 8, 1910, in one of his last diary entries for his MVT work, Reisner noted, "Northeast corner of temple washed away." Reisner saw the "wash out" of the corner, but he did not excavate enough to know that a gaping hole, very much like his Thieves' Hole, lay below. The multi-phase map that Reisner's assistant, Clarence Fisher, produced shows big, billowy lines of debris pressed hard over this corner of the temple (fig. 2 here, lower right corner). When Selim Hassan cleared out this hole, he understood it as "the temple well," constructed by Menkaure "and utilized by Khentkawes." In 2008, 2009, and 2011–2012, AERA teams partially emptied the NEH from sand (figs. 15–16). It was very clear that this huge hole had not been made in the time of Menkaure.

The NEH hole cuts through the top of the broad mud-paved Ramp and through the mudbrick casing on the northeast corner of the MVT, thereby exposing huge limestone blocks of the stone temple that Menkaure had started. Measuring 5.60–5.80 m across, the NEH hole is comparable in size to Thieves' Hole. Like Thieves' Hole, NEH descends along the massive limestone core blocks of the temple foundation down to the water table, which was at 15.40 m above sea level in 2008. Like Thieves' Hole, NEH features a curved revetment of irregular stones against the sloping, eastern side. These, and other similarities suggest the two holes were made at the same time, probably when wind-blown sand encumbered the Second Temple on all sides.

Above the southern rim of the hole, against the northern mudbrick wall of the eastern extension that we call the Annex of the MVT, we found a small glacis (29,807) of broken stone, plastered with clay very much like the "water wall" that we exposed along the outside of the western Second Temple wall in Sondage 114 (fig. 13). The "glacis" fitted in between the eastern rim of the hole and the eastern wall of the main part of the MVT (figs. 15–16). There can be no doubt that this little glacis was built after the NEH hole had been made.

If this little segment of a glacis in NEH is part of the same work as the glacis-like revetment, the "water wall," against the base of the western and northern walls of the Second Temple, then people must have dug the NEH hole already late in the time of the Second Temple.³⁵ Why would people of Second Temple times, perhaps late in the Sixth Dynasty (sometime after 2153 BC,³⁶ more than 294 years after Menkaure), have dug such huge holes, one right inside the southwestern corner of the temple, the other right through its exterior northeastern corner? As Reisner wrote, the Second Temple became little more than a scruffy village, "a sort of hollow filled with houses,"³⁷ inside a thick enclosure wall on the south, west, and north, with other thick walls (colored orange in fig. 2) enclosing the sanctuary (portico and offering hall) and entrance vestibule. Conditions had become hotter and drier. The harbor basins that fronted the MVT and Khentkawes Town and once connected them to Nile water had sanded up long before.³⁸ The stone-built stepped rectangular basin just north of the Annex entrance had also sanded up.³⁹ The royal house of Pepi II that commanded the MVT

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renewal in the early to the middle part of his long reign may have seen its own resources increasingly diminish. So, locals may have felt no qualms about digging deep for ground water, close at hand, right through the old temple walls, to create village wells. The limestone core blocks provided steps up and down. The water-well hypothesis might explain the odd "tethering hole" in the upper edge of the core block (35,642) against which Reisner found the dyad. ⁴⁰ People could have tethered a rope to a skin bag or vessel to raise water.

This season, as we cleared the NEH deeper than where we stopped in 2008, we exposed the opening to a horizontal cavity, a "robber's hole" that someone cut south for 6 m between seven large limestone foundation blocks (figs. 17–18). It must have been at least partially open just prior to AERA's first work at the MVT because Dan Jones noted 2005 expiration dates on chocolate and potato chip packets. Mounds of crushed limestone and *tafla* on the south and west sides of the tunnel may suggest that the builders filled the space before they raised the First Temple in mudbrick. On the massive blocks we could see lever sockets, chisel marks, and dabs of red paint such as work gangs used to mark stones.

The limestone blocks that Menkaure's workers placed for the core of his temple are huge. Block numbers 35,759 and 35,760 step out as a kind of platform, the latter measuring 2.90×2.50 m (fig. 18). These may belong to the lowest foundation course put down by Menkaure's builders. Menkaure's builders seem not to have placed a block at the very corner of this course, or else a block was removed here. The missing block leaves a space with a 90-degree angle between the two blocks. Block 35,754 extends 4.93 m north to south, bridging the "robber's tunnel." Blocks 35,754 and 35,755 still belong to the sub-floor foundation, because the floor level of the MVT on the east, and of the eastern Annex, is about level with the tops of these blocks (see fig. 14). The builders intended the uppermost blocks, 29,804 and 35,753, to be part of the first course of the temple wall. As with the foundation, we do not know if Menkaure's builders set corner blocks. More probably, they left all the corners of all courses undone when they stopped work on the stone temple. 41

Why was it necessary for Menkaure to build such a deep and massive foundation? He clearly wanted to build a big stone valley temple like Khafre's to the northeast. But his predecessors' use and exploitation of the plateau constrained Menkaure to position his pyramid complex at the southwestern limit of the Moqqatam Formation. Khufu and Khafre had vastly quarried away the good, layered bedrock to the east to obtain core stone for their pyramids. Menkaure was out of options for good bedrock to carry his causeway to a valley temple near the level of the floodplain and harbor basins. Although we cannot see it, the MVT must be situated deep within a crater-like quarry. The edges remain buried under sand and quarry waste. (And this is why we want to see a wider, extramural context for the temple, and why it is so difficult to do so.) Bedrock once rose in this area as high as the top of the bedrock pedestal for the Khentkawes Monument, which towers 10 m above its floor. We have traced the bedrock slope down to the east to an elevation of about 20 m asl at the northeast corner of the Khentkawes Town. The upper, east edge of NEH, farther downslope to the south, is around 18 m asl at the upper end of the large Ramp, which is built upon quarry debris. We still haven't reached the bottom of the massive core blocks, more than 3 m lower. So, Menkaure's builders must have founded his valley temple in a deep quarry. This and the high water table are why we have yet to get to the bottom of it.

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Endnotes

- ¹ OI 2018-19 Annual Report, 59-75 Aeragram 20-1, 2-10.
- ² Museum of London Archaeology Service (MoLAS) 1994.
- ³ Reisner was not entirely consistent in designating rooms. Note that in his map reproduced as figure 2 here, he labels the portico as "offering hall."
- ⁴ For the March 2020 Supermoon, see NASA's Science Site on Solar System Exploration: solarsystem.nasa.gov/news/1189/march-2020-the-next-full-moon-is-a-supermoon-crow-moon/.
- ⁵ As I reported last year, OI 2018-19 Annual Report, 67-72.
- ⁶ OI 2018-19 Annual Report, n. 26.
- ⁷ Reisner Diary, February 8, 1910.
- ⁸ OI 2018-19 Annual Report, 70-71, figs. 13, 15-16
- 9 Reisner's diary entry for January 20, 1910 (giza.fas.harvard.edu/diarypages/3406/full/); see Manuelian 1996, 63–66.
- ¹⁰ Reisner 1931, 41.
- ¹¹ Reisner 1931, 54, phase II.9.
- ¹² Goedicke 1967, 148–54; Strudwick 2005, no. 23, 106–107.
- 13 Reisner 1931, 41.
- ¹⁴ Reisner 1931, 36.
- ¹⁵ Reisner 1931, 41.
- ¹⁶ Reisner 1931, 44.
- ¹⁷ Reisner 1931, 41.
- ¹⁸ Reisner 1931, 41, pl. 30e.
- ¹⁹ Jones 2020, 88 referring to Reisner 1931, 46.
- ²⁰ Jones 2020, 83.
- ²¹ Lehner 2015a, 251-62.
- ²² Lehner 2015b, 233-39.
- ²³ Reisner 1931, 51–52.
- ²⁴ Jones 2020, 85-89.
- ²⁵ OI 2018-19 Annual Report, 64, fig. 7 (right) shows this section.
- ²⁶ OI 2018-19 Annual Report, 64, fig. 6.
- ²⁷ HUMFA_C2320_NS, a view to the east dated February 13, 1910; Jones 2019, 49–50; Jones 2020, 95, fig. 122.

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- ²⁸ Reisner 1931, 35, 36, 44, 48.
- ²⁹ OI 2009-10 Annual Report, 58-59, fig. 20.
- ³⁰ OI 2008-2009 Annual Report, 66-67, fig. 6; 2009-10 Annual Report, 56-62, fig. 18020.
- Hassan 1943, 54. Against the idea that the Annex is the valley temple of Khentkawes, see Lehner 2015a.
- Reisner 1931, 18 referred to holes, "like those dug by Arab treasure seekers elsewhere \dots ".
- ³³ Reisner 1910 Diary, vol. 2, 41.
- ³⁴ OI 2008-2009 Annual Report, 68-69, fig. 8.
- This season, Dan Jones removed this segment (29,807) to get a better look at the relationships between the original eastern wall of the MVT and the northern wall of the MVT Annex.
- The approximate date of the Pepi II decree from the MVT; see n. 13.
- 37 Reisner 1931, 48.
- ³⁸ Lehner et al. 2011, 188, 192.
- Lehner 2011, 55–63. This stepped basin, the bottom of which lies higher than the bottom of NEH, features its own rubble revetment similar to those of NEH and Thieves' Hole, around the upper perimeter.
- ⁴⁰ See OI 2018-19 Annual Report, 68-70, figs. 13-14, and 16.
- ⁴¹ Yet, this would go against the practice of finishing an entire course of core blocks and bringing all the stones of the courses above ground level into place on the embankments level with the course under construction, indicated by the "construction platforms" that Reisner (1931, 76) found and documented in the unfinished southwest corner of Menkaure's upper pyramid temple.

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KERKENES PROJECT

SCOTT BRANTING | kerkenesproject.org

Sometimes things don't go as planned. The 2019 season of the Kerkenes Project was planned to run from April 27 to July 17. However, delays in issuing all of the archaeological permits in Yozgat province, connected to a change in the local governor, led to a shorter season being undertaken from June 11 to July 17. This delay did mean that the ongoing electrical re-

sistance surveys, which we undertake every year in May and early June to reveal more of the buried late-seventh to mid-sixth century BC city, had to be cancelled for the 2019 season. There was just not enough moisture in the soil when we arrived on June 11 for the electrical resistance meter to yield useful readings, despite our best attempts. However, the shortened season and the lack of the resistance survey did not stop us from continuing excavations in the northern portion of the city or from undertaking other forms of geophysical survey.

GEOPHYSICAL SURVEY

While the electrical resistance survey has been the primary form of geophysical survey at Kerkenes over the past seventeen years, the first large-scale geophysical exploration of the plan of the city was undertaken using geomagnetic survey. For an eight-year period from 1995 to 2002, almost the entirety of the 271 ha area of the site was surveyed using magnetometry, measuring the direction and intensity of the magnetic fields across the site to re-

Figure 1. Map of the locations of work in 2019: (1) Urban Block 8, (2) the Castle, (3) the Cappadocia Gate. veal buried structures and activity areas.

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LEFT: Figure 2. Aerial Photograph of the Excavation Areas of Trenches 45, 41, 43, 33, 40, 29, and 31 in Urban Block 8.
BELOW: Figure 3. Aerial Photograph of Trench 45.





ABOVE: Figure 4. Excavated area of TR45 just inside the threshold between TR45 and TR41. The stone staircase that leads up to the raised area is to the left and the black patch of burning just above it is the remains of the wooden door that once stood in the threshold.

Particularly in areas of the city that burned heavily in its final destruction by fire, this work produced spectacular maps of the city's buried buildings, streets, and infrastructure. However, in areas where there was less burning on that fateful day in the 540s BC, little of the plan of the buried structures could be discerned in the resulting imagery. The two reasons why the Kerkenes Project spent the first eight years focused on magnetometry data collection is that it can be collected more rapidly than the electrical resistance survey and, because it does not rely on soil moisture to work, it can be collected throughout the spring and summer. It was this later property that drew us back to the use of magnetometry survey during the 2019 season.

During two days in June, the 24th and the 25th, we were able to undertake magnetometry survey in collaboration with colleagues from Koç University in Istanbul, who generously provided the equipment. This extended the use of the magnetometer from the Iron Age town up to the Byzantine Kale, the one area of the site that had not been surveyed in 1995–2002. The survey focused on a 1,200 m² test area on the castle and revealed a wall and the edge of the water cistern. The geomagnetic data complements data collected with Electrical Resistance Tomography (ERT) reported on in last year's report. It also provided an excellent opportunity to train students

and colleagues from Koç University in the use of the equipment for a subsequent survey in the Hatay province of Turkey, much like how the earlier magnetometry survey at Kerkenes helped train numerous students in the use of the equipment at sites across Turkey throughout the 1990s and 2000s.

EXCAVATION

Excavations continued during the 2019 season within Urban Block 8, a large urban block in the northern portion of the city. We had also planned to further investigate Urban Block 7, where preliminary excavations in 2018 had revealed a room containing the first stone seal from Kerkenes, but the delay in the issuance of the permit precluded that additional work this year. Urban Block 8 is an estimated 6,000 m² sized urban block, and excavations by the end of the 2019 season have uncovered a large contiguous area of just over 1,800 m². Work in Urban Block 8 took place within a single trench, Trench 45 (TR45) in the northeastern corner of the urban block.

Previous geophysical survey had revealed that the area within TR45 possessed two freestanding structures, the northeastern extent of the urban block wall, and several open areas. The two freestanding structures appear to be architecturally and contextually unique and are set apart by walls from the areas of the urban block that we had previously excavated. Understanding the range of activities that took place within these unique structures could prove of significant value. In addition, previous geophysical surveys indicated that the north–south section of the Urban Block 8 wall runs directly toward the city wall. However, the stone collapse of the massive city wall obscured

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whether the two walls actually touched or if an open area was left between the urban block and the city wall. Following the urban block wall all the way to the city wall in the northeastern corner of the urban block would allow us to answer a major city planning question of whether there was a ring road just inside the entire 7 km length of the city wall.

Excavations within the southern end of TR45 began in areas adjacent to the previous areas of excavation in Trench 29 (TR29), Trench 31 (TR31), and Trench 41 (TR41). An 8.6 m x 2.8 m exterior space extending from the edges of the prior excavation areas were exposed all the way up to the two free-standing buildings. A small section of

an original stone paved surface was found running up to the northern-

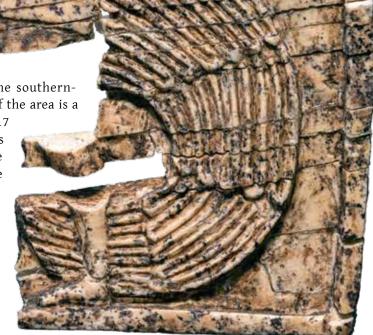
Figure 5. One of the fragmentary ivory plaques recovered from TR45.

most building, though no significant finds were discovered on this surface.

Meanwhile, a range of exterior spaces was excavated

around two other sides of the southernmost building. To the south of the area is a

wall that we excavated in 2017 within TR41. A threshold was found in this wall, which is the only known entrance into the area within TR45. In 2019, we excavated the area just to the north of the doorway and discovered a long, granite stone staircase that led up to a raised area just to the south of the southernmost freestanding building. Laying on top of the stair, we discovered the heavy burnt and poorly preserved remains of the wooden door that had once stood in the doorway of the wall between TR41 and TR45. On a raised



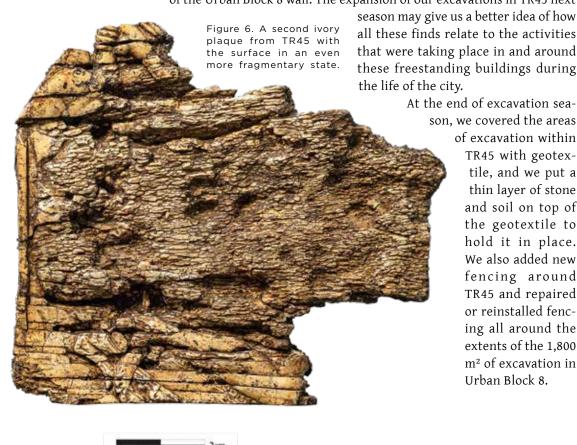
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area measuring $10.8 \text{ m} \times 3.1 \text{ m}$ at the top of the stair, we found three fragmentary ivory plaques, two of which retained some preservation of a carved surface. Other finds from this area include a metal tack, a copper alloy arrowhead, and some pieces of sandstone. The shortened excavation season did not leave us enough time to excavate within either of the freestanding structures, so uncovering more information about the relationship of these finds to activities inside and outside of the buildings will have to wait for our next excavation season.

The final area of TR45 that we excavated during 2019 was a 29.5 m x 3.5 m long area across the top of and just inside the eastern urban block wall. The circa 1 m wide urban block wall runs for 31 m north to south from TR41 to the city wall. With the rubble removed from the top of its northern extent, we discovered that the urban block wall abuts against the city wall, leaving no room for a

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ring road to run inside the city wall. This changes our understanding of the city plan as a whole in significant ways. This stretch of urban block wall also abuts against the stretch of urban block wall along the north of TR41, perhaps indicating that this urban block wall was constructed in segments. From south to north the wall is in an increasingly collapsed state, spilling down into the area of the urban block. At a point just beyond the northern wall of the southernmost freestanding building, we found a significant area of smashed in situ pots along this collapsed wall, representing several vessels. Soil samples that we collected from this area may give us a better idea of what these vessels contained. In addition, we found several ivory and antler inlays in this general area at the midpoint of the Urban Block 8 wall. The expansion of our excavations in TR45 next



CONSERVATION AND LABORATORY ANALYSIS

Accompanying the excavations, we continued our program of collecting soil samples from the excavation areas and using flotation to reveal carbonized plant material, animal bones, and microartifacts. In 2019, we systematically and opportunistically sampled 571 liters of soil within the TR45 excavation areas. Our team was able to float and move ahead with processing 967.5 liters of soil, including catching up on samples from earlier years. This work is proving very useful in allowing us to interpret distributions of artifacts and to identify activity areas. Combined with our ongoing work developing the ceramic typology and investigating ceramic and metal production practices, the enhanced collaboration among all our specialists allows us to make better use of the artifactual and

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Figure 7. The Urban Block 8 wall abutting against the city wall and demonstrating the absence of a complete ring road within the city.

ecofactual data to interpret the use of space in Urban Block 8 and across the ancient city. Conservation work also continued on new finds discovered within TR45 and those recovered during flotation. Our conservator, Soran Avcıl, undertook significant work in the shortened 2019 season on the cleaning and consolidation of the fragmentary ivory plaques from TR45. We coupled this conservation work with a comprehensive program of recording, including both photography and, in some cases, 3-D scans of material recovered in the excavations. We are also continuing the reorganization of the depot and laboratory workspaces, integrating earlier

material that was off limits to us for five years following the beginning of the renewed project in 2015.

On the site, annual maintenance activities were delayed into June by the delays in the issuance of the excavation permits. Unfortunately, six days into the shortened season, several very heavy rainstorms took place onsite. During these storms a portion of the face of one of the freestanding walls in the Cappadocia Gate chamber fell into the chamber. When discovered, immediate efforts were undertaken to record the collapse and to assess the impact upon the structure in consultation with the project's restoration architects. It was determined from the initial analysis that the collapse of this section had created a more stable buttress for the glacis and other portions of the gate, which will aid in preventing further collapse. On July 5, a meeting was held at Abdullah Gül University in

Figure 8. The 1,800 sq m excavation area within Urban Block 8, fenced and covered with geotextile at the end of the 2019 season.

Kayseri with a team of restoration architects, and we decided to bring in a team from Rekare Mimarlık in Istanbul to scan the entire Cappadocia Gate with a Leica





ABOVE:Figure 9. Working with Rekare Mimarlık of Istanbul to scan the entire Cappadocia Gate with a Leica 3-D RTC360 scanner.

BELOW: Figure 10. Schoolteachers from Sorgun and the Sorgun mayor visiting Kerkenes to discuss future collaborations.



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3-D RTC360 scanner on July 6. We are using these data, along with data collected in previous seasons, to assess further the collapse and the overall gate structure, and to augment ongoing monitoring efforts. A revised plan, incorporating this latest information and the collapse, will be developed as the basis for future work to further stabilize this area, and funding will be sought from interested donors to implement this plan and preserve this ancient structure.

In addition to these efforts, we continued our annual cleaning of the area of the Palatial Complex, the Cappadocia Gate area, and along the wall near the entrance to the upper area of the site. Plants were removed from the stone glacis in all three areas, and both the area in front of the glacis and the stone-paved areas were cleaned and the plants cut back. We also repaired the surrounding fencing in all three areas.

FACILITIES AND INFRASTRUCTURE IMPROVEMENTS

During the 2019 season, we undertook the maintenance and repair of various buildings within the excavation house compound. This includes roofing repairs, repairs to walls, and the connection of several buildings to the new water and sewer system within the village. Our thanks once again go to the Sorgun Kaymakam Dr. Mustafa Altınpınar, whose program of village improvement created the new water and sewer system in the village in 2018. It not only benefits us during the field season, but also is a major long-term improvement for everyone in the village throughout the entire year. In addition, the plan for a new dormitory building, to replace a dilapidated old prefabricated structure, was completed by project architects from Abdullah Gül University. The plans have been submitted to the authorities in Yozgat for approvals, and we hope to break ground on this needed accommodation for our team prior to the 2020 season. Ongoing support from donors is being sought for this major infrastructural improvement to our facilities.

OUTREACH

While outreach is a priority of the Kerkenes Project, several planned outreach activities were unable to be completed in 2019 because of the late issuance of the permit. For instance, we had to cancel visits to local elementary and secondary schools when the team's arrival was delayed until the final week of their school year. However, we did host a large group of local teachers from Sorgun in a tour of the site and discussions of future collaborations. This took place after the end of the school year and was sponsored by İŞGEM: Sorgun İş Geliştirme Merkezi (Avrupa Birliği finansmanlı) and the Sorgun mayor. We also gave a site tour for a group from Araplı Imam Hatip Middle School in Sorgun and members of the Swiss Embassy. Students and teachers from the school attached to the Yozgat Social Service Department also came and greatly enjoyed a tour of Kerkenes, an event that was written about in the local press.

Other outreach efforts included printing the latest edition of the bilingual Kerkenes News in Sorgun and hosting several visits to the site by the Sorgun mayor. He is very interested in filming a movie that includes Kerkenes for promoting tourism in Sorgun and Yozgat. We also continued to provide site tours for visitors who come while we are in the field. If any Oriental Institute members find themselves in Sorgun between May and July each year, we will happily show them around this impressive and important Iron Age site.



Figure 11. Visit to Kerkenes by teachers from the Araplı Imam Hatip Middle School in Sorgun and members of the Swiss Embassy.

ACKNOWLEDGMENTS

We are very grateful for the support of the Ministry of Tourism and Culture during the 2019 season. In particular, we are deeply indebted to Ertan Yılmaz from the Karaman Museum, who for a second time in twenty-seven years served as our ministry representative. We received excellent advice from Hasan K. Şenyurt, the former director of the Yozgat Museum, who is now serving as the Yozgat director of culture and tourism; Ömer Yılmaz, now serving as the director of the Yozgat Museum; and the entire museum's staff, which help greatly to make all of this work possible. We also were very grateful for the outreach opportunities coordinated by the Sorgun mayor, Mustafa Ekinci. In addition, we received support from the Yozgat governor, Kadir Çakır; the Sorgun district governor, Dr. Mustafa Altınpınar; the Şahmuratlı mayor, Turan Baştürk; and the Sorgun administrative director, Metin Kayhan. Financial support for this work was received from the National Science Foundation (NSF) Grant Award #1624105, National Endowment for the Humanities (NEH) Digital Humanities Advancement Grant HAA-256218, the Merops Foundation, and the University of Central Florida. Our team included collaborators and students from Istanbul Technical University, Abdullah Gül University, FORTH Institute of Mediterranean Studies, Koç University, University of Central Florida, Netherlands Institute in Turkey, Arizona State University, Simon Fraser University, University of Toronto, University of Connecticut, Johns Hopkins University, University of Liverpool, University of Virginia, Kocaeli University, and Middle East Technical University.

2019-20 ANNUAL REPORT

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MUMMY LABEL DATABASE (MLD)¹

FRANÇOIS GAUDARD

The highlight of the 2019–20 academic year was the commemoration of the Oriental Institute centennial. The celebration of this major milestone consisted of a formal gala, a series of various events and lectures, the publication of a companion book entitled *Discovering New Pasts: The OI at 100*, and an exhibition introducing some of the various OI archaeological and philological projects.

On that occasion, the team of the Mummy Label Database not only had the pleasure to contribute an article, available online in Adobe Portable Document Format (www.academia.edu/40513993/_The_Mummy_Label_Database_MLD_in_Discovering_New_Pasts_The_OI_at_100_edited_by_Theo_van_den_Hout_pp._213-19._Chicago_The_Oriental_Institute_2019), but was also honored to have its project selected for the exhibition as a representative example of the many OI language projects. Since the MLD deals, among other things, with texts composed in Demotic, it was presented together with the Chicago Demotic Dictionary (see fig. 1).

A selection of three labels from the OI Museum collection (see fig. 2) illustrating some of the shapes (stela shape, rectangular, tabula ansata), materials (wood, stone), and languages (Demotic, Greek) that can be used for mummy labels accompanied the explanatory text (see fig. 3).

From December 10 to 13, 2019, our team member Alba de Frutos García (Universidad Complutense, Madrid) attended the VIII Congreso Nacional del Centro de Estudios Figure 1. Display of the Chicago Demotic Dictionary and the Mummy Label Database (third column from the left) in the OI centennial exhibition.







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del Próximo Oriente: EX ORIENTE AD LIMINA, hosted by the Universidade da Coruña (Campus de Esteiro, Ferrol), where she

ABOVE: Figure 2. Mummy labels OIM E25289, OIM E19387, and LI-368:34.

RIGHT: Figure 3. Explanatory text.

presented a paper entitled "Lengua e identidad en el Egipto ptolemaico: el caso de los profesionales funerarios." Alba is also revising her dissertation on the mortuary workers in Ptolemaic Egypt, which will appear in the Monografías de Oriente Antiguo (MOA) series published by the Universidad de Alcalá Press.

The Mummy Label Database (MLD)

In addition to dictionary projects, the Oi pursues a variety of other language projects, such as the Mummy Label Database, established in 2007, which is focused on making the approx mately 3,100 known and edited mummy labels access ble online to scholars. The project also alms to publish as many of the unpublished labels as possible, to republish all those that have been defectively or incompletely edited, and to locate missing ones. This fully searchable database will be a useful tool for subsequent studies on mummy labels and will contribute to a better understanding of the life of the multicultural population of Graeco-Roman Egypt. The MLD is a joint project of the Oriental institute, the Universitat Pompeu Fabra (Barcelona), and the Universidad Complutense (Madrid).

Mummy labels were used in ancient Egypt as a means of identifying corpses of the deceased. Made of wood and more rarely of stone, falence, or even ivory, they were attached to the mummy with a piece of cord and most often inscribed in Demotic and/or Greek. These inscriptions usually consist of short texts giving important information, such as the name, fillation, age, and place of residence of the deceased. In addition, especially in the Demotic texts, mummy labels often include a short formula for the welfare of the deceased in the hereafter, which testifies to their religious function. These small monuments could also serve as cheap substitutes for funerary stelae.

RELATED PUBLICATIONS BY TEAM MEMBERS

The following articles have been submitted or are in preparation:

- François Gaudard, "Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part II: Shroud OIM E4789," to be published in a Festschrift honoring a colleague (submitted).
- François Gaudard, "Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part III: Shroud OIM E4788 (= OIM E42046)" (in preparation).
- François Gaudard, "Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part IV: Shroud OIM E4787" (in preparation).

Endnotes

- ¹ For further information on the MLD and Death on the Nile, joint projects of the Universitat Pompeu Fabra (Barcelona), the Universidad Complutense (Madrid), and the Oriental Institute of the University of Chicago, readers can consult previous annual reports, available online in Adobe Portable Document Format (PDF): oi.uchicago.edu/research/projects/mummy-label-database-mld.
- ² François Gaudard, Raquel Martín Hernández, and Sofía Torallas Tovar, "The Mummy Label Database (MLD)," in *Discovering New Pasts: The OI at 100*, ed. Theo van den Hout (Chicago: Oriental Institute, 2019), 213–19.

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NIPPUR EXPEDITION

ABBAS ALIZADEH

After many years of hiatus from Iraq and after great efforts by Mac Gibson and Chris Woods, we were finally able to resume excavations at Nippur in 2019. The 2019 season was an experimental one with a small staff to test the waters in the post-Saddam Iraq with changed regulations and new administration. We also had the opportunity to complete the repair of the dig house and furnish it for a much larger staff. At the end of the season, we followed the decades-old tradition by re-plastering the walls and sealing the windows of the dig house (fig. 1).

We left Nippur in April 2019 with great hopes. Back in Chicago, we recruited more than twenty

specialists in archaeobotany, zooarchaeology, phytolith analysis, and geomagnetic survey from the United States, England, Germany, Poland, Austria, and Iran. Through the insightful and good offices of Dr. Abdulamir Hamdani, the minister of culture and directorate general of the Iraqi Board of Antiquity, we were granted permission to excavate the two major Sumerian centers of Drehem (ancient Puzriš-Dagān) and Dlehim (ancient Tummal), respectively 10 and 20 km south of Nippur (fig. 2). These two sites were the two most important satellites of Nippur, and like Nippur were located on and near the Euphrates. This unprecedented tripartite Sumerian urban cluster embodied a unique ideological and administrative center in the Ur III dynasty.



Figure 1. Nippur dig house and pottery kiln.

Drehem was surveyed by Robert McAdams (1981), who designated the northern mound as no. 1000 (380 x 240 x 4 m) and the southern mound as 1001 ($560 \times 275 \times 8.5$ m), 10 and 15 ha in area, respectively. Much of the site is less than 2 m in elevation. The topography of the southern mound indicates that this mound has two distinct northern and southern sectors. A rectangular high mound, circa $60 \times 40 \times 8$ m high mound in the southern mound may well contain a ziggurat (fig. 3). Traces of large buildings, some more than 100 m long, are still clearly visible on both northern and southern mounds. The regular checkered pattern observed on the surface of the mound indicates that much of the architecture was planned and built simultaneously (fig. 4). According to Buccellati's observation of the site in the early 1960s, the illicit diggers recognized the surrounding walls of rooms and simply dug inside the rooms without bothering with the walls (quoted in Tsouparopoulou 2017).

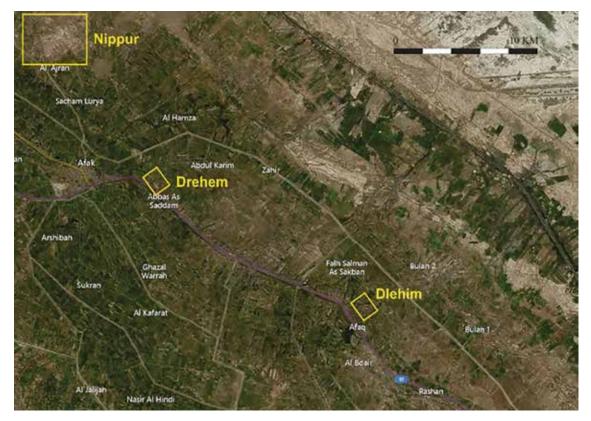


Figure 2. Google satellite image of the Nippur area.

We do not know the early history of Puzriš-Dagān, but according to the year formula for Šulgi's thirty-ninth regnal year (The year Šulgi, king of Ur, . . ., built E-Puzriš-Dagān . . .) (Sallaberger 1990; Sharlach 2004; Sigrist 1992), it was founded in the late third millennium BC. This important management and distribution center for supply and livestock flourished during the reigns of Šulgi, Amar-Suen, and Šu-Sîn. It ceased to function during Ibbi-Sîn, the last Ur III king. However, a forerunner of Puzriš-Dagān was É-Saĝdana, built by Šulgi, and was much closer to Nippur (Wilke 1992). However, based on our 2019 preliminary survey of the southern part of the site, we notice the presence of some doubtful fourth-millennium BC sherds, but the entire occupation dates to Ur III time and possibly the Isin-Larsa period.

Except for two small trenches in the southern mound that were excavated by Iraqi archaeologists in 2007 (unpublished), no other formal excavations have been conducted at the site (fig. 3). But illegal excavations in the early 1900s that made the northern parts of the mound look like a beehive produced thousands of cuneiform tablets (fig. 4). The tablets appeared on the market around 1909–10. The estimated 10,000–12,000 tablets that reportedly came from Puzriš-Dagān indicate that the site was an important administrative center for the *bala* tax system during the Ur III dynasty—of 2,700 tablets of the Ur III dynasty at the Oriental Institute tablet collection, 1,104 are attributed to Puzriš-Dagān and were published by Hilbert in 1998 and 2003. *Bala*, a Sumerian word meaning "ration or transfer," is a rational system of payments made by the provinces to the crown. Excavations at this site will not only produce further textual evidence but also provide a woefully needed context for the available tablets.

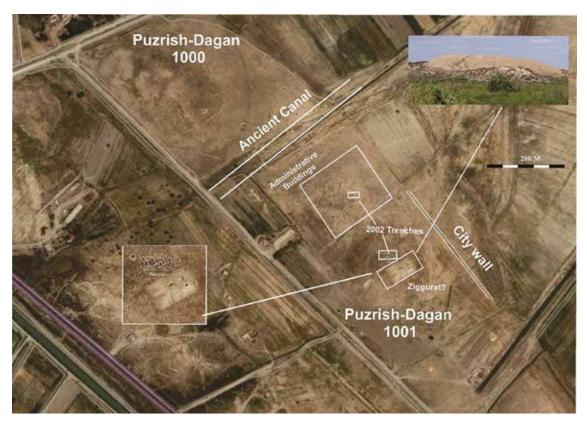


Figure 3. Bing Maps image of Puzriš-Dagān.

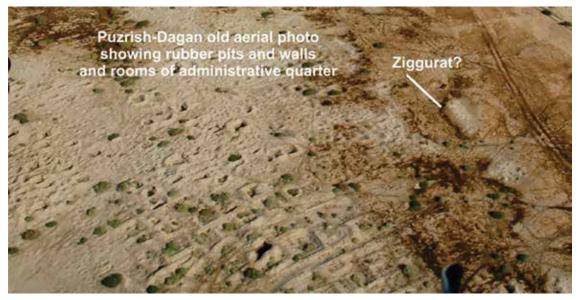


Figure 4. Old aerial photograph of Puzriš-Dagān (modern Drehem) with traces of large buildings and robber trenches still visible.

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Dlehim is identified as ancient Tummal (Sallaberger 1993; Steinkeller 2001; Yoshikawa 1989). The site was first surveyed and reported by Robert McAdams (1981, no. 1237). Tummal is located some 10 km south of Puzriš-Dagān and may have been connected to it and to Nippur through a major canal. The sprawling circa 40 ha low mound (between 1.5 to 2.5 m in elevation) surrounds a prominent high mound in the southwest (fig. 5). An ancient canal, clearly visible in the aerial image, divides the site into east and west sections. The eastern section is also divided by what appears to be a major street. Traces of buildings with alleys are clearly visible here and in the south of the high mound. Parts of the city wall are also visible in the south and western sectors of the mound (fig. 5).

Tummal, the site of the funerary chapel/libation place (ki-a-nag) of Ur-Namma and the temple of Ninlil (Sallaberger 1993; Sigris 1992; Steinkeller 2001), is situated 5 km east of the ancient bed of the Euphrates and was linked to that river by a major canal (Stienkeller 2001). Based on the surface sherds, the site was first occupied during the Early Uruk period. Adams reports of the widespread presence of Jemdet Nasr sherds on the site, but we did not find any. The site was reoccupied in Akkadian times, but its major occupation was during the Ur III dynasty. While we did not find any later sherds, Adams reported some Parthian sherds from the base of the high mound (Adams 1981: 278).

We have long-term plans to excavate these three sites, especially Tummal and Puzriš-Dagān, which are archaeologically almost completely unknown. Thanks to Dr. Hamdani, we received our visa authorization numbers in November and were preparing to go in January. Alas, COVID-19 interfered, and we had to postpone our plans until an effective vaccine is available or the pandemic is over.

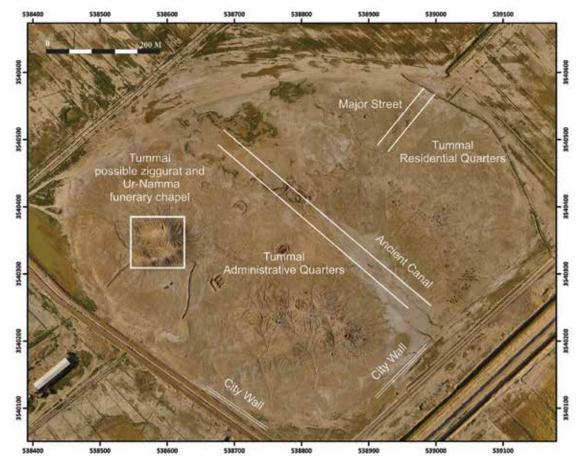


Figure 5. 2019 drone image of Dlehim (ancient Tummal). Photo by Andrew Wright.

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BRUCE WILLIAMS AND LISA HEIDORN

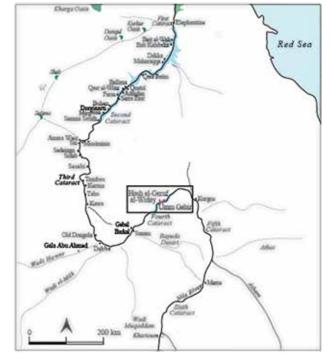
The OINE publication project embarked on a three-year program to publish excavations in the Fourth Cataract of the Nile in 2007 and 2008 (fig. 1). The fieldwork was supported by Packard Humanities Institute and the National Geographic Society. In particular, the team worked in the concession of the Gdansk Archaeological Museum Expedition led by Henryk Paner, who offered sites, support, and kind-

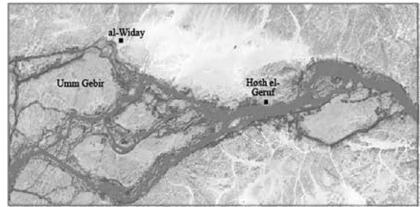
ness at every turn. Preliminary reports of this work have been published.1 Three major parts for the publications are projected. The sites at al-Widay I-III will be published as volume 19 of the Oriental Institute Nubian Expedition series. The gold processing site of Hosh el-Geruf and the survey and excavations on the island of Umm Gebir will subsequently be published.

An almost complete set of data-bases for al-Widay I-III, Hosh el-Geruf, and the 117 sites on the island of Umm Gebir were created by early 2020. The database files cover registered objects and locus records from all three areas. The objects, photographs, and digitized field records for each site and locus have been collated, although sherd recording and drawing are still in

progress. The work of the codirectors, Heidorn and Williams, is augmented by the help of Adrian Chłebowski, who is creating the plans of our sites; Steve Cole, who is transcribing the written field records; and Carol Meyer, our artist and goldmining expert.

Figure 1. Map of locations: Hosh el Geruf, al Widay, and Umm Gebir.





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All contacts between the staff are presently via emails and online servers due to the unfortunate arrival of the COVID-19 virus, which has affected the entire world. We are presently unable to access our archaeology lab with its shelves of sherds and objects, as active lab work stopped mid-March. Also unfortunate were the cancellations of scheduled study periods at the Oriental Institute for our lithics expert, Jacek Kabacinski; animal bone specialist, Sasha Rohret; and the bioarchaeologist Michele Buzon. These activities will most likely occur in year two of our publication process. Our work on the project, as some of you may know, has been funded by the three-year-long NEH Collaborative Grant and the White-Levy Archaeological Publication Grant.

Since the records have been digitized, we were able to proceed with the analysis of archaeological materials and the preparation of portions of the manuscript concerning the cemetery of al-Widay and its associated sites. Progress has also been made on the dating of the photographed and drawn sherds from Hosh el-Geruf and the Island of Umm Gebir, whose excavations and survey will be published later.

AL-WIDAY

The most important of the sites is a cemetery at al-Widay I dating roughly contemporary with part of the Kerma culture downstream to about 1800–1600 BCE (fig. 2).

The archaeologists were impressed by the amount, or even the dominance of, Kerma-style pottery of the Classic Kerma (KC) phase when they encountered the archaeological remains in the region in the early 2000s—pottery that was identified at that time simply as Kerman in nature. However, as the salvage projects



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developed, it became clear that there were many types of objects well known from Kerma that did not occur at the Fourth Cataract, and vice versa. Also, burial customs at Kerma and its provincial sites differed considerably from those found in the Fourth Cataract. A new term, Old Kush (OK), was devised to indicate its close relation with Kerma, a range of time that was then divided into OK I, II, and III. Al-Widay I began during OK II (Middle Kerma), and ended late in OK III, roughly coeval with the late Classic Kerma culture farther downstream.

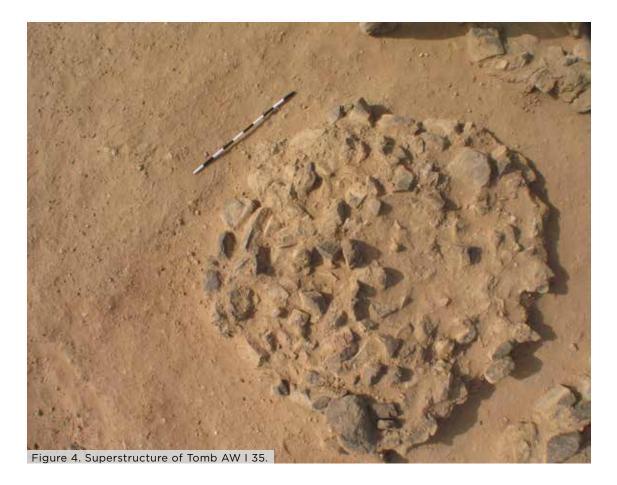
With 112 tombs and deposits, al-Widay I was located a few hundred meters north of Umm Gebir and is large by the standards of the Fourth Cataract Old Kush sites, although provincial cemeteries downstream are sometimes very much larger. A comparable site, Ukma, near the Second Cataract, had well over two hundred burials. Kerma itself had about forty thousand! Interest in burials has revived considerably in recent years, because the study of osteology and bioarchaeology has increased our ability to study populations: their age, health, trauma, and diet, and even where they were raised.

After surveying and excavating at the gold-mining site of Hosh el-Geruf for some weeks in 2007, the OINE moved its main operation to al-Widay I, where the cemetery was sampled by excavating selected tombs. At the beginning of the 2008 season, we reviewed the site, estimating its potential, and with the encouragement of Mahmoud Suleiman el-Beshir, the NCAM inspector, decided to excavate it all. As it turns out, it was the only OK cemetery of this size excavated completely in the Fourth Cataract region, and the resulting complete sample will provide a clear framework for OK chronology and the foreign relations evident from pottery styles and manufacturing techniques, development of burial customs, and nature of the population.

Al-Widay I was situated on a low eminence a few hundred meters north and west of the hamlet of that name, which was so called after its location beside a wadi (fig. 3). Arranged north to south, the



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tombs covered the summit some three or four across for a time. At a point, the number of tombs expanded to eight or so, and the cemetery roughly split in half, part to the east and part to the west, ending in OK III (Classic Kerma) times at the south. Much later, in the Napatan Period, a large stone circle was erected at the north end (AW I-1), while a tomb of normal type was built in the southwest extension (AW I-51) and is apparently of a date contemporary with Egypt's New Kingdom.²

AW I did not have closely built superstructures, but enough stone was used for them that the plundering largely filled in the spaces between superstructures with displaced stones. The base of the superstructure was composed of larger stones, while smaller stones were placed above these, sloping inward to make a convex flattened tumulus (fig. 4). We had one team work to remove loose stones between the circular superstructures to define the tombs. Thereafter another team would clean the superstructure, record it, and remove half to make a section. They would they then remove it to excavate the shaft, which was circular or oval and only 50 cm maximum depth (fig. 5). Arranged around the edge of the burial pit was a row of stones, apparently to support the stones of the superstructure. The team would clean to the bottom and only define the burial lightly, recording and removing objects and pottery. Finally, the osteology team of Megan Ingvoldstadt and Christina Riojas would clean, record, and remove the remains.

The typical tombs in the cemetery were quite shallow, as mentioned above, with the supporting stone ring just inside the shaft's bottom, often with pots deposited among the stones. The burial was placed in the center, with other objects around the neck and head or in front of the face. The substrate at al-Widay was mostly ochreous, and this hard, red, sandy soil was returned to the tomb during burial. Most of the burials were plundered in antiquity, which resulted in the stones from the center of the tu-

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mulus being removed and the area of the head exposed to reveal valuable jewelry. For the most part, the rest of the tomb was left unlooted and intact.

Imported pottery from Kerma became more common in OK III, although some local types continued. In addition, superstructures could be looser, and some shafts were sub-rectangular. In a few cases, there was a frame that indicated a bed burial. Despite these features, major parts of the Kerma culture were absent from these tombs, especially large amounts of wealth.

The cemetery AW I did not display great disparities in wealth. The tombs themselves were of modest size, measuring roughly 2.5–3.5 m in diameter in the north to approximately 2.0–3.0 m or less in the south, with smaller oval or circular burial pits. There were nine oblong burial shafts at the south end of the cemetery, about 1.20 to 2.30 m in length and a bit over 1.0 m wide. Rarely were there many objects. One or two bowls with one or two jars were a normal complement. Beads, even some of gold, were fairly common, and simple, small objects like bone awls and palettes occurred. There were only a few scarabs, two found in the burial of a young girl.

The archaeologies of Egypt and Kush are well known, as are the important Nubian group known as C-Group, and another, Pan-Grave, whose associations are under discussion. The Fourth Cataract culture, on the other hand, displays some features of both Pan Grave and the Kushite Kerma culture, as well as many of its own, thus the culture is referred to as "Old Kush." There seem to be some differences within the region as well, indicating a cultural fluidity not as obvious farther downstream. A major focus of the project is sorting out the Kushite imports from locally made objects and identifying features that appeared later in the Pan-Grave culture. Almost all of this, as one might expect, is identified by pottery. Im-

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Figure 6. Small Egyptian jar from AW I 30.

ports from Egypt are easy to identify, as they are wheelmade and often of the fine white clay from Upper Egypt. The imported Egyptian jars tend to be small in this area, because it is remote and transport is a challenge (fig. 6). From the early part of the cemetery came bowls covered with deep, incised decoration (fig. 7a-b). This is not a type found at Kerma, but it did occur at the Middle Kingdom Egyptian Fortress at Serra East (after ca. 1800 BCE) north of the Second Cataract, in quarry dumps where it is the only Nubian pottery (fig. 7c)3. From the middle part of the cemetery came bowls that were broad at the base and tapered or curved to a rib or line at the rim (fig. 8a-b). These are related to the Pan-Grave culture, although they do not belong to it, having slightly different shapes and the distinct pinkish color of locally made pottery. Last, in the latest part of the cemetery to the south, there are imports from Kerma, fine flared beakers, and small jars even one with a spout—all black-topped with the distinct greyish bands below the black rim (fig. 9a-c). A few were made as local imitations, but most were brought from the

Kerma region downstream. It is probably not a coincidence that rock drawings on Umm Gebir showed large river boats of this period. Both the Serra East and the Kerma parallels indicate a date about 1800 BCE for the beginning and circa 1600 for the end of the cemetery, dates confirmed by scarabs. An early example relates to scarabs of the late Middle Kingdom (fig. 10a); one from the middle of the cemetery names an official who should date to the late Thirteenth Dynasty (1700–1650 BCE), "Captain of the First Batallion, Nebsumenu," (fig. 10b); a Thirteenth Dynasty scarab bearing the name Nefer-ra' (fig. 10c); and one in the late part of the cemetery showing a man holding a crocodile of the Second Intermediate Period (fig. 10d).

CEMETERY POPULATION

In ideal circumstances, the chronological and social phases of the cemetery would be apparent; that is, there would be clear social groupings of tombs within each of the chronological phases. Archaeological materials almost never lend themselves to such straightforward analysis. The settled population represented by the people buried at al-Widay represents perhaps six to seven generations, with the construction of tombs around those of previous generations more spontaneous than planned. There is no clear evidence for a deliberate separation of the graves by social status or ethnic background of the deceased, although—despite the prevalence of looted graves—there are clearly tombs with more grave goods. With the chronology noted above, the cemetery could have had about one burial every two years. This might have come from a settlement not much different in population from modern al-Widay, about —twenty to thirty people, assuming that many infants were not buried in the cemetery.

The analysis of the skeletal remains of 114 individuals was conducted by Megan Ingvoldstad and provided us with sex and age data, as well as health indicators for each skeleton. A majority of the tombs were looted, sometimes very badly, and skeletal elements were missing, so the sex and age of 43.9 percent of the skeletons was indeterminate. Taken as a whole, and disregarding the chronological phases, the cemetery contains more male individuals (31.6 percent) than females (24.6 percent),

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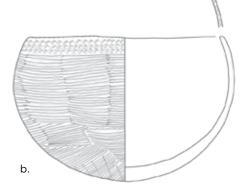
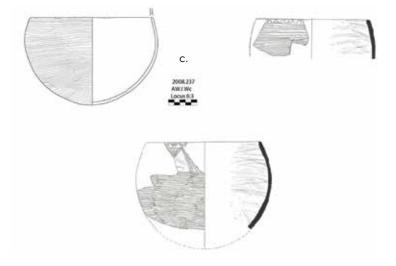




Figure 7. Overall deeply-incised bowls.

- a. from AW I 10 burial chamber (photo).
- b. from AW I-10 burial chamber (drawing).
- c. from Serra East quarry dumps.





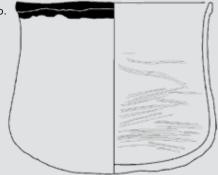




Figure 8. Pan-Grave related bowls.

- a. from AW I 88 (photo).
- b. from AW I 88 (drawing).

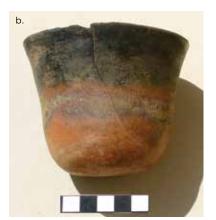
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and as Ingvoldstad notes, about a third of the skeletons—not including fetuses or neonates buried with adults—belonged to individuals under the age of twenty years old.⁵ This high percentage of young deaths is typical for ancient populations that have high fertility rates and are growing.

According to Ingvoldstad, the population at the cemetery showed developmental issues and conditions related to stress due to malnutrition and disease. There are only seven incidents of trauma, and the types of skeletal occurrences are more likely attributed to accidents, hard labor, or developmental defects than interpersonal violence.

To explore any probable family or clan groupings, the twenty-six graves of infants and children buried alone were considered. Each of the four clusters that were identified perhaps represents the young of between one and two generations of the settled population. Adult single or double graves found near







each cluster of infant/child burials were then identified. This step is not yet clear enough for publication, since the later stages of the cemetery contain closely spaced tombs that might belong to one or another infant/child cluster. This work will be further clarified when all the pottery from the tombs is classified according to chronological phase.

Al-Widay I gives us a portrait of a small village through two centuries. More than that, it defines an interesting phase of a local culture in a little-known region of the Nile Valley. This was the age when the kingdom of Kush expanded south to the Fourth Cataract—and perhaps farther to the southeast—and north to the First. At some time during the late phase of the cemetery, the Kerman Kushites assembled an army and hurled it against Egypt. Drawing soldiers from its own population, but also from populations in Wawat (Lower Nubia), Khenthennefer, Medja-land (the Eastern Desert), and perhaps the Fourth Cataract and Punt, located on the Red Sea near Ethiopia. Recorded after its departure by a graffito in a tomb at el-Kab in Egypt, it was apparently part of the events that led to so many valuable Egyptian objects being deposited in the royal tombs at Kerma.

As noted above, the al-Widay I cemetery did not contain great wealth. Nevertheless, it was rich enough to import much of the pottery found there, and the local products were often quite good. Clearly, they had enough to trade, and they may actually have been part of the work force processing gold at Hosh el-Geruf, which was active at this time. Kerma was the great center in Nubia, so it is hardly surprising that its culture would be influential here, but it is clear that this was not an outpost.

Figure 9. Pottery imported from Kerma.

- a. Carinated bowl with bulged base of Middle Kerma date from AW I 27.
- Kerma beaker of middle Classic Kerma date from AW I 97.
- c. Black-topped jar of middle Classic Kerma date from AW I 97.

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a.





d.

Figure 10. Scarabs from al-Widay I.

- a. Early scarab from AW I 10.
- b. Scarab of Nebsumenu, Captain of the First Batallion from AW I 37.
- c. Scarab of the Thirteenth Dynasty, oval with Nefer-Ra', from AW I 37.
- d. Second Intermediate Period scarab from AW I 77, showing a human holding a crocodile.

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Endnotes

- $^{1}\,$ Emberling and Williams 2007; Emberling and Williams 2008; Emberling, Williams, Meyer, Shonkwiler, and Harrell 2010.
- 2 See Williams 1992, fig. 17bb for a large NK Wedjat Eye (R 35-45) and fig. 17f for a segmented bead (R 35-31c). The superstructure and shaft are otherwise like AW I-51.
- ³ Williams 1986, 63-65, 85 fig. 34, 384 fig. 188d-i, and pls. 15-16.
- ⁴ Ingvoldstad 2009.
- ⁵ Ingvoldstad 2009, 7-8.
- ⁶ Ingvoldstad 2009, 8-12.

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ORIENTAL INSTITUTE SEMINAR (OIS) Sealing Theories and Practices in the Ancient Near East DELPHINE POINSOT

The 16th Oriental Institute Annual Seminar on Sealing Theories and Practices in the Ancient Near East was held on March 5–6, 2020, at the Oriental Institute. Through its many facets, sealing touches several aspects of ancient societies: political, administrative, sociological, cultural, and artistic. To understand this critical source of knowledge, a multi-disciplinary and multi-documentary approach is necessary. Thanks to the generous support of Arthur and Lee Herbst, this conference therefore brought together fifteen international scholars from different disciplines (history, art history, archaeology, epigraphy, etc.) and from different areas of study, covering the ancient Near East from

Anatolia to China, and from ancient Mesopotamia to the first centuries of Islam. This spatial, temporal, and disciplinary breadth gave a deep picture of the sources and methods of analysis available in understanding the socioadministrative practices, systems of thought, and beliefs surrounding seals and sealings.

The purpose of the first session ("Examining Uses of Seal"), chaired by McGuire Gibson, was to examine the object used to seal: the seal itself. During this session, we could see that a single seal is not strictly attached to a single individual, contrary to the signature, to which the seal has often been compared. Thus, a single individual could use several seals (Oya Topçuoğlu, "One Seal, Two Seal, Red Seal, Blue Seal: Multiple Ownership in Mesopotamia in the Early Second Millennium"). The seal was also a precious object: for its artistic value it could be collected (Agnete Wisti Lassen, "Seal Collection and Reuse in the Ancient Near East"), and for its administrative value it could be copied (Theo van den Hout, "Preventing Fraud and Forgery of Seals in the Hittite Kingdom"). Finally, seals are objects whose forms







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have varied according to times and places (Brian Muhs, "A Diachronic Survey of Ancient Egyptian Sealing Practices from the Predynastic through the Graeco-Roman Periods" and Deniz Kaptan, "Sealing Practices in Anatolia under Achaemenid Rule").

The second session ("Examining Administrative Archives"), chaired by Alain Bresson, focused on examining the traces left by the seal—

traces that are a valuable source for understanding the bureaucratic functioning of ancient societies (Torben Schreiber, "Only Lumps of Clay? Seal impressions and Their Contribution to the Reconstruction of Hellenistic and Roman Bureaucracy"). This session also made it possible to shed light on the well-known corpus at the Oriental Institute of the Persepolis tablets. This very rich corpus, composed of thousands of administrative tablets, a very large number of which bear at least one seal imprint, is an extremely valuable source for understanding how documents and seals respond to each other (Mark B. Garrison, "Seals and Document Types in the Persepolis Fortification Archive"). It is also an archive that allows a better understanding of sealing practices through the testimony it offers of the users behind the seals (Wouter Henkelmann, "Irdabama and Her Seals: the Roots of the Achaemenids and the Fortification Archive"), for example, or as a manifestation of sealing practices in longue-durée (Delphine Poinsot, "Sealing with Animals in Iranian Glyptic, from the Achaemenid to the Sasanian Dynasty").

Finally, the third and last session ("Examining beyond Administration"), chaired by Tasha Vorderstrasse, made it possible to show that the seals and the sealings are not only witnesses of the administrative life. Sealing practices can be applied to a variety of objects as part of religious (Béatrice Caseau, "Stamping Material as Seals in Roman and Byzantine Culture) and magical practices (Karl Shaefer, "Administering Magic in Medieval Islam). Sealing itself can be used as a metaphor (Paul Copp, "Seals in Chinese Religious Practice: Metaphor and Materiality"), which shows the importance of this practice for ancient societies.

To allow these discussions to take shape, the conference participants were able to take a closer look at the Persepolis tablets, some of which are kept at the Oriental Institute. I would like to thank Matthew Stolper, John A. Wilson Professor Emeritus of Assyriology at the Oriental Institute and director of the Persepolis Fortification Archive Project, and Mark Garrison, Alice P. Brown Distinguished Professor of art and art history at Trinity University, for taking the time to present the work done within the PFA. In a second step, the participants were invited to take part in a workshop, open to the public (about a dozen people were present). I would like to thank Rhyne King (PhD candidate at the University of Chicago), Susanne Paulus (associate professor of Assyriology, Tablet Collection curator), and Tasha Vorderstrasse (university and continuing education program coordinator), who built and made this workshop possible. After a brief introduction on the use of seals, the participants were able to admire the superb seals' showcase of the Oriental

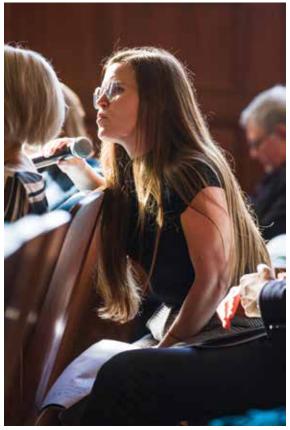
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Institute Museum and to look at objects bearing the seal mark, the tablets from the Oriental Institute's collection. Finally, participants were invited to create their own seals by engraving a candle with a bamboo stick and then to produce a sealing by rolling the seal on a clay tablet. The issues raised at the conference, and the discussions that followed, showed that seals and sealings are complex objects that go far beyond the administrative purpose and signature. Sealing practices are both an administrative and symbolic act at the heart of the practices of ancient societies. When examining the images of these seals and sealings, it is necessary not to examine

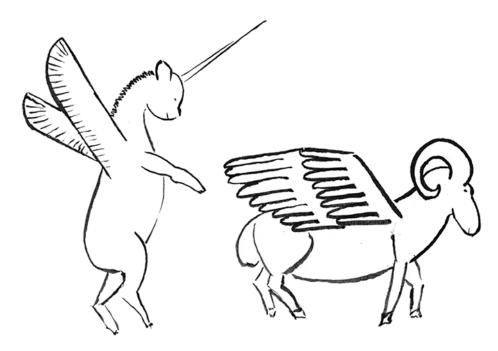
them outside the object on which they appear. The question of the seal, the sealing, and their multiple facets is necessary to apprehend the symbolic charge of these images. These multiple facets will be the subject of the publication of the conference's proceedings in the Oriental Institute Seminar series, which will hopefully provide researchers and students with access to a nuanced and rich (if not exhaustive) picture of what sealing practices in the ancient Near East are.

The success of this conference owes much to the members of the Oriental Institute. I would like to thank Christopher Woods, director of the Oriental Institute, who opened the conference and welcomed the participants with great generosity and warmth; Petra Goedegebuure, head of the postdoctoral fellowship committee, for her mentoring throughout the year; Kathryn Morgan, postdoctoral scholar, for her support and advice; Mariana Perlinac, assistant to the director; Polina Kasian, assistant director of development and events; Ali Mallett, digital marketing and member engagement manager; and Vick Cruz, manager of visitor services and security, for their invaluable logistical support; as well as Knut Boehmer, IT manager, who, among many other tasks, made it possible for some participants to be remotely with us; Charissa Johnson, managing editor, and Steve Townshend, editor, for their magnificent work on the visual communication tools—let them be thanked in advance for their work on the book that will come out of this conference; finally, thanks again to Steve Townshend, who documented this moment, and whose photographs illustrate this report. And a final thanks to Eric Poinsot for the cartoons that illustrate the brochure.





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ABOVE: Illustration by Eric Poinsot

OPPOSITE: (left to right)

First row: Theo van den Hout, Delphine Poinsot, Oya Topçuoğlu, Karl Schaefer, MacGuire Gibson

Second row: Rhyne King, Deniz Kaptan, Torben Schreiber

Third row: Christopher Woods, Petra Goedegebuure, Alain Bresson, Mark B. Garrison, Brian Muhs

All photos: Steven Townshend.

List of participants

**Respondents

Alain Bresson** (Classics, University of Chicago)

Béatrice Caseau (Faculté des Lettres UFR d'Histoire, Sorbonne Université)

Paul Copp (East Asian Languages and Civilizations, University of Chicago)

Mark B. Garrison (Art and Art History, Trinity University)

McGuire Gibson** (Oriental Institute, University of Chicago)

Wouter Henkelman (Section des Sciences Historiques et Philologiques,

Ecole Pratique des Hautes Etudes)

Deniz Kaptan (Department of Anthropology, University of Neveda Reno)

Agnete Wisti Lassen (Near Eastern Languages and Civilizations, Yale University)

Brian Muhs (Oriental Institute, University of Chicago)

Theo van den Hout (Oriental Institute, University of Chicago)

Delphine Poinsot (Oriental Institute, University of Chicago)

Karl R. Schaefer (Cowles Library, Drake University)

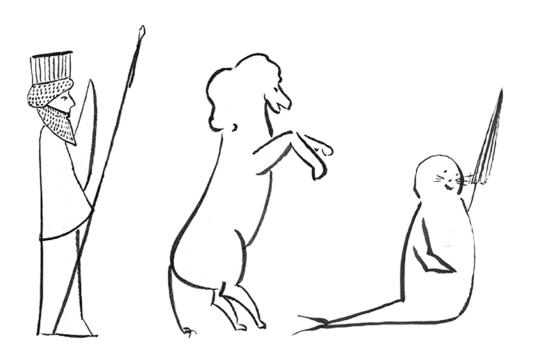
Torben Schreiber (Institute for Classical and Early Christian Archaeology, University of Münster)

Oya Topçuoğlu (Middle East and North African Studies, Northwestern University)

Tasha Vorderstrasse (Oriental Institute, University of Chicago)

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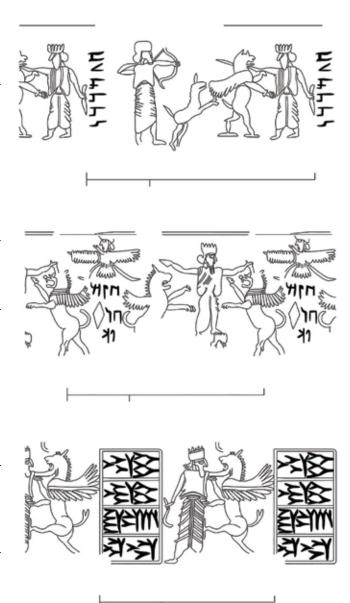
MATTHEW W. STOLPER, WOUTER F. M. HENKELMAN, AND MARK B. GARRISON

Tucked away near the end of last year's Annual Report on the Persepolis Fortification Archive Project was the news that in October 2019 about 1,800 Persepolis Fortification tablets returned to the National Museum of Iran in Tehran. A press conference at the museum and a brochure accompanying an exhibition of representative tablets showcased some of the new knowledge about the Achaemenid Empire that has come from the OI's long custody of the tablets and from the work of the PFA Project in particular.

Immediately after completing this delivery, the OI applied to the US Office of Foreign Assets Control for another export license and began to prepare a second batch of about 3,500 more Fortification tablets for return. This effort continues in the face of the disruptions brought on by the pandemic. So do the various efforts of the PFA Project team. We beat on against limited access and straitened resources to build, investigate, and present a record of the archive, borne back ceaselessly into the past.

After almost fifteen years of labor, PFA Project editor Annalisa Azzoni (Vanderbilt University) has established readings of about 840 monolingual Aramaic tablets and fragments. She has begun to organize and interpret their terse contents with the help of the seal information compiled by project editors Elspeth Dusinberre (University of

Figure 1. Christina's World: new collated drawings of seals with Aramaic and Elamite inscriptions, impressed on uninscribed tablets. From top: PFUTS 0114.* PFUTS 0264.* PFUTS 0787.*



Colorado) and Mark Garrison (Trinity University, San Antonio) and reviewed by Erin Daly (University of Iowa). Daly finished drawings of the remaining 158 seals impressed on the monolingual Aramaic tablets. A catalogue of all 708 such seals is currently being edited for publication.

During four visits to Chicago before the lockdown in early March, Garrison reviewed the progress Emma Petersen (UCLA) made on the sealed, uninscribed tablets through the summer of 2019 (highlighted in last year's Annual Report). Petersen processed about 500 previously uncatalogued items. She identified 142 new seals and made many additions and corrections to drawings of previously recorded seals. Most of the circa 1,300 uninscribed tablets that remain to be studied have poorly preserved seal impressions, so the existing fiches recording almost 2,200 uninscribed tablets cover most of the legible seal imagery in this subcorpus. The overall tally of distinct and legible seals represented by impressions on all categories of PFA tablets (Elamite, Aramaic, uninscribed, miscellaneous) now stands at a stunning 4,059—one of the largest and best contextualized collections of imagery from anywhere in the ancient world.

Another veteran of PFA Project seal work, Christina Chandler (Bryn Mawr College), working with Azzoni and Garrison, has completed a catalogue of 175 inscribed PFA seals for the doctoral dissertation she hopes to defend in 2021. Inscribed seals were often used by individuals of high administrative or social rank, so her study will open a window on the imagery associated with the upper strata of Achaemenid Persian society (fig. 1).

Project editor Wouter Henkelman (École Pratique des Hautes Études, Paris) finished editing about 180 texts previously identified by Charles E. Jones, bringing the total of Elamite texts he has prepared for (re-)publication up to 5,034. Project director Stolper divided his effort among reviewing

information on the tablets being packed for return to Iran, correcting his first readings of Elamite texts recorded since the beginning of the PFA Project, and adding readings of texts on more tablets and frag-

Figure 2. Harvesting the fragments: two examples of a newly identified category of documents, interim lists of fruit produced at various locales, prepared for tabulation in final accounts at Persepolis.



Fort, 1480-101 Obverse



Fort. 1362-101 Obverse



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ments. He added 67 new Elamite texts, mostly longer journals and accounts (fig. 2), for a running total approaching 1,800 items.

Henkelman began to review Stolper's draft editions of these new Elamite texts during his research stay in Chicago in September–October 2019, paying heed to the counsel of one of the pioneers of work on the Persepolis Elamite texts, George Cameron, that "two minds are mutually invigorating and will usually secure an answer, if one can be found, to a problem that in itself and to one mind seems at times insolvable" (Cameron 1948: vii). Several hundred more unprocessed Elamite tablets and fragments have analytically meaningful text, and they may have fresh surprises. Still, it is likely that the edited sample, now exceeding 6,800 documents, is broadly representative of the relative weight of various text categories in the Elamite component of the PFA in a way that the original published sample was not. Then again, as Cameron might counsel, we could be wrong about that, and future generations of researchers may laugh at this estimate.

That those future generations will exist is no longer in doubt, thanks to the interest and research opportunities that the PFA Project has generated internationally. Two of Henkelman's students defended doctoral dissertations that rely on PFA evidence: Zohreh Zehbari of Tehran University ("A Study on the Specializations of the Non-Persian Artists in the Art of the Achaemenid Empire, Based on Archaeological and Written Evidence," 2019) and Soheil Delshad of the Freie Universität Berlin ("Studies in Achaemenid Royal Inscriptions: Classifications, Royal Scribes, Literacy, and Audiences," 2020), and other doctoral projects related to the PFA are under way.

Previous Annual Reports mentioned Stolper's article on chronological boundaries of the PFA, forthcoming in the *Festschrift* for Theo van den Hout. Henkelman's review of newly edited texts added another dimension to these results. It established that a few documents in the Persepolis Treasury Archive—hitherto considered to have nothing older than 492 BCE—were written in 507/506 or 506/505 BCE. This confirms what some project members had conjectured, that the Treasury Archive was partly contemporary with the PFA, not entirely consecutive to it. That puts the PFA and the institution that produced it in a significantly wider and deeper context of administration and information handling.

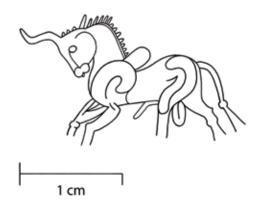
Regular readers of these reports have been able to observe the growth of ever-closer collaboration among PFA Project participants, going beyond ordinary co-authorship and sometimes shaping research agendas. The PFA itself necessitates such cooperation. The Elamite and Aramaic texts, the seals that accompany them, and the uninscribed, sealed tablets all belonged to a single system. As we have often said, understanding how these components functioned together is one of the biggest problems posed by the PFA. The ongoing work of the seal team has established that 10 percent of legible seals occurring on the Aramaic tablets and 10 percent of the legible seals occurring on the uninscribed tablets also occur on the Elamite tablets, implying that single seal users were involved in operations that were recorded in all of the three main media of the PFA.

The contribution by Garrison and Henkelman to the *Festschrift* for Margaret Root (Garrison and Henkelman 2020) comes to grips with this matter of individual and local information handling with a detailed study of four way-stations and granaries. With the help of Azzoni, they could show cogently that at one of these way-stations, a place called Pirdatkaš, *sealed* uninscribed tablets, *sealed* Aramaic tablets, and *unsealed* Elamite tablets were produced together—perhaps even literally tied together—to record issues of travel provisions (fig. 3a–d). This is surely not the whole story, but it is the first substantial advance in understanding connections and complementarity among the Persepolis media.

A skeleton crew of veteran PFA Project workers continues to enter, edit, and correct data in the Online Cultural and Historical Environment (OCHRE). When access to the OI building was cut off in March 2020, they adjusted their equipment, their homes, and their family lives to keep the work go-

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ing remotely. Teagan Wolter (NELC) uploaded about 100 new texts to OCHRE, glossing, parsing, and linking them to cross-references and images. Most of these were drawn from Henkelman's editions of large-format registers originally recorded by Richard T. Hallock. Wolter also corrected previously entered editions of about 75 other Elamite texts on the basis of Stolper's collations, and she began to revise, consolidate, and correct glossary entries.

Young Bok Kim (NELC) made Polynomial Texture Mapping (PTM) scans of about 110 tablets and high-resolution scans of 8 others before lack of funds and equipment problems suspended work in the project's High-Resolution Imaging Lab in late January. In February, Kim, Monica Phillips (NELC), and Ashley Clark (History) resumed post-processing of

the PTM scans. Phillips is completing a detailed instruction manual that will allow future workers to learn the steps of this work and the ad hoc solutions that have emerged from experience. Kim and Clark processed scans of about 1.340 surfaces of about 220 tablets, cutting the backlog of unprocessed images from three years TOP TO BOTTOM (A-D): Figure 3. Sealing and not-sealing: PFS 0048 (a), used by the staff of a granary at the waystation Pirdatkaš, appears on almost 120 documents, including uninscribed tablets (b), Aramaic tablets (c), recording an issue of travel rations), and Elamite tablets. Suppliers at Pirdatkaš also recorded outlays of travel rations in Elamite on unsealed tablets (d), perhaps meant to be tied to sealed, uninscribed tablets.



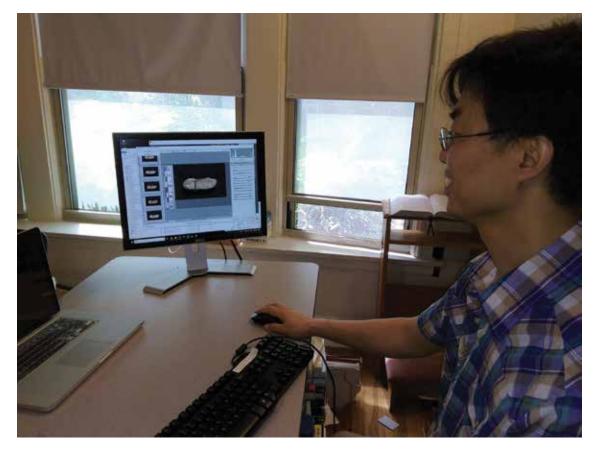
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PF 1350

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to two (fig. 4). These numbers understate their efforts. Under ordinary circumstances, processed scans and their component images are uploaded to OCHRE overnight, in large batches. The

Figure 4. Working from home: Young Bok Kim processes PTM scans by day, uploads them by night.

glacial upload speeds and occasional service interruptions that are usual for home internet connections make this step of the process particularly vexing. Clark also had to contend with cramped workspace and the needs of an infant child, before moving away from Chicago and, alas, from the project in midsummer 2020.

New to the PFA Project this year is Peter Snell (CMES). After training with Ami Huang (the eighth to complete a PhD in NELC while working for the PFA Project), Snell dug into the backlog of unprocessed conventional digital images. He edited about 1,100 images of about 60 tablets. Undaunted by home internet limitations, he uploaded 930 images (representing about 50 tablets) to OCHRE.

All of this processing, correcting, uploading, and linking of images, texts, and seals moves slowly, and its repetitive steps may seem dull, but it assumes greater-than-ever importance now that we have to rely entirely on remote access to edit and publish the documents. A new OCHRE capability will help. OCHRE research data specialists Sandra Schoen and Miller Prosser developed a reconstruction tool for paleographic study of Hebrew manuscripts by the CEDAR project and then implemented it for the PFA Project. It allows comparison of damaged signs with complete signs from selected tablets to help interpret problematic traces (fig. 5).

The PFA Project's large library of tagged images that this new tool draws on was built up a few years ago by workers Dennis Campbell (PhD, NELC; now on the faculty of the University of California—San Francisco), Douglas Graebner (BA, College), and others. Our idea was that such images

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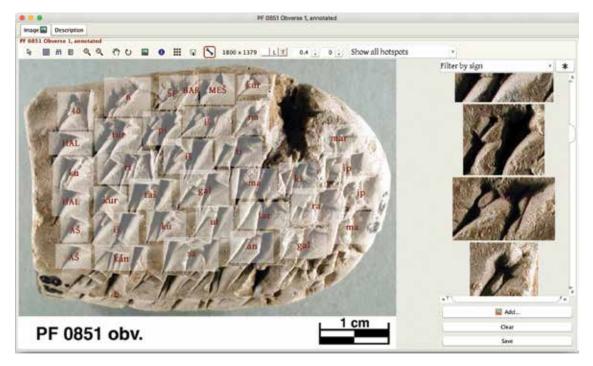


Figure 5. OCHRE reconstruction tool display of a tagged image with gallery of signs.

would allow viewers to see marks in the clay, transliteration, translation, glossary, and grammatical parse all together—not in the way we generally encounter them in classrooms, as distinct levels of abstraction, but as a continuum (fig. 6). We were thinking then of human users, but now these tagged images are also a training set for the machine-learning artificial-intelligence program of the DeepScribe Project described elsewhere in this Annual Report (cdac.uchicago.edu/research/deciphering-cuneiform-with-artificial-intelligence/). That the machines are learning first from this script may amuse students of Babylonian and Assyrian cuneiform, to whom the signs of Achaemenid Elamite are apt to seem highly idiosyncratic, verging on unrecognizable.

Recent conference presentations and public lectures arising from PFA Project work include Azzoni's paper on the Aramaic evidence on women at Persepolis, at the annual meeting of the Society for Biblical Literature in San Diego in November 2019; Garrison's lecture on the visual program of Darius I, at the Leiden Institute for Area Studies in October 2019; a joint presentation by Garrison and Petersen on representations of the divine and the numinous in Persepolis seal images, at the Fourteenth Melammu Conference in Los Angeles, in February 2020—and Henkelman's lectures at Harvard on Achaemenid imperial bureaucracy, administration, and institutional networks, in July 2019; at the University of Leiden on the status of contemporary Achaemenid studies in the light of the PFA results, in November 2019; at the Société Linguistique de Paris on the use of Elamite by Persians, in January 2020; at the Maison de l'Orient in Lyon on territorial organization in Achaemenid Persis, in February; and at the Sapienza Università, Rome, on Herodotus and the evidence of the PFA, in June. The Oriental Institute Post-Doctoral Fellow Conference in March 2020, organized by Delphine Poinsot (an alumna of the PFA Project), included Garrison's in-person presentation on seals and document types in the PFA and Henkelman's remote presentation on the royal woman Irdabama and her seals. Henkelman continued his seminar at the École Pratique des Hautes Études, Paris, on the principal results of the first thirteen years of the PFA Project, from academic year 2018-19

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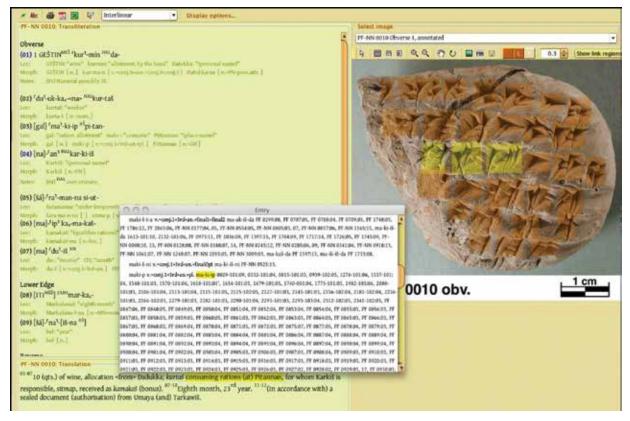


Figure 6. A continuum of views: the tablet, the signs, the lexicon, the grammatical analysis.

through academic year 2019–20, complemented with a reading course in Achaemenid Elamite using the project's PTM images.

Outstanding among PFA-related publications, although not a product of the PFA Project itself, is the long-awaited *Festschrift* for Margaret Root edited by Dusinberre, Garrison, and Henkelman (Dusinberre et al. 2020). In addition to discussion and bibliography of Root's own prolific contributions to the publication and study of PFA seals, its contents include many essays that draw on the evidence of the seals.

Another Festschrift, commemorating the Achemenet project (www.achemenet.com/en/) and its creator Pierre Briant, co-edited by Stolper (Agut-Labordère et al., 2020), includes an article by Azzoni (2020) on a terse Aramaic text that borrows Iranian words to link fruit and a "tax agent"; an article by Garrison (2020) on an heirloom PFA seal; an article by D. T. Potts and Henkelman (2020) on the PFA evidence on hides and tanning; and an article by Henkelman and Stolper (2020) on arboriculture and fruit production around Persepolis, including full edition of the extraordinary tablet first announced in the Oriental Institute 2015-2016 Annual Report (p. 144, fig. 2). Henkelman immediately prepared a supplementary article (Forthcoming a), marshaling palynological evidence and philological analysis of many of the words for kinds of fruit in the Elamite texts (more than forty such words, so far). A third Festschrift, for Bruno Jacobs, co-edited by Garrison and Henkelman (with R. Rollinger and K. Ruffing), will have Garrison's article on an unusual scene type, involving the winged symbol, in Persepolis glyptic (Forthcoming), and Henkelman's article (Forthcoming b) on references to boatmen in PFA texts.

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Reflective readers will see the stream of commemorative volumes in the bibliographies of this and recent reports as the sign of a generational change in work on the PFA. A retrospective historical view locating the PFA and the PFA Project in the longer history of Oriental Institute research in and on Iran appeared in a volume commemorating the centennial of the OI (Alizadeh and Stolper 2019). A look forward, contemplating the future of PFA research in Iran, is in the exhibition brochure conceived and compiled by the PFA Project editorial team with Persian translations and able assistance from Henkelman's doctoral students at the Free University of Berlin, Soheil Delshad and Hamaseh Golestaneh (Nokandeh and Woods 2019).

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SUREZHA EXCAVATIONS 2019

Erbil Plain, Kurdistan Region, Iraq

GIL J. STEIN AND MICHAEL T. FISHER

The University of Chicago Oriental Institute excavations at Surezha on the Erbil plain in Iraqi Kurdistan investigate the origins of towns and later cities in northern Mesopotamia during the Chalcolithic period from roughly 5500 to 3500 BC. Surezha is an ideal site to define the Chalcolithic chronology and developmental sequence of the Erbil plain because the high mound at Surezha is largely prehistoric, with only limited later occupation from the Middle Assyrian period and the Iron Age.

Tell Surezha is a mounded settlement of ca. 22 ha, located adjacent to the modern village of Surezha, approximately 20 km south of the modern city of Erbil in the heartland of ancient Assyria, east of the Tigris River and Nineveh (fig. 1). The Erbil plain has sufficient rainfall to support rich agricultural production of cereals, supporting a large population in the city of Erbil—ancient Arbela—and its hinterland. Surveys and excavations across the Erbil plain show that this region

historically maintained strong cultural links north into Anatolia, east into the highlands of Iran, and with Mesopotamia to the west and south.

Located at the southwest edge of the modern village of Gund-i Surezha, the ancient site of Surezha has three parts: a) the high mound, b) the terrace, and c) the lower town. The conical-shaped high mound and terrace measure approximately 188 m from NW to SE and 150 m from SW to NE, with an area of approximately 2.8 ha (fig. 2). The high mound rises to a height of 16 m above the terrace. The terrace surrounding the base of the high mound is about 2 m high and slopes gradually down over a distance of approximately 70 m to the lower town, which extends out from the terrace in all directions.

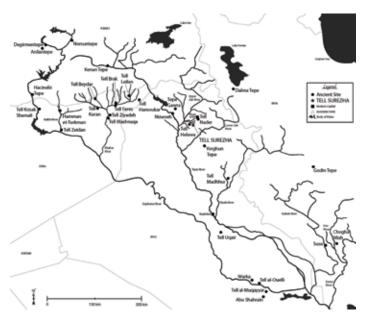


Figure 1. Surezha and main Chalcolithic sites of the Mesopotamian

Our work on the high mound has recovered evidence for almost two millennia of continuous occupation in the Chalcolithic period (5300–3400 BC), starting with its foundation on sterile deposits in the Halaf period, and continuing through the Ubaid (the period when the first town-sized settlements developed in Mesopotamia) and Late Chalcolithic 1 (LC1), LC2, LC3, and LC4 periods. The LC4 period at Surezha is contemporaneous with the Middle Uruk period in southern Mesopotamia. The Chalcolithic period is difficult to investigate because these occupation levels are almost always

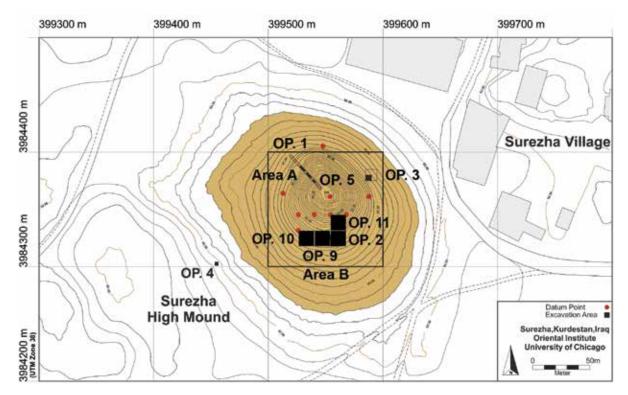


Figure 2. Surezha high mound and terrace, showing location of ops. 2, 9, 10, and newly opened op. 11 in Area B.

deeply buried beneath anywhere from 5 to 30 m of later deposits. However, the abandonment of the Surezha high mound in 3400 BC, and the absence of later occupations there, afford us the rare opportunity to easily reach the building levels of an early town settlement dating back more than seven thousand years.

The 2019 field season took place from September 15 to October 15, 2019, co-directed by Gil Stein and Michael Fisher along with project staff members John Alden, Maria Antoniou, Savanna Buehlman-Barbeau, Sam Harris, Lucas Proctor, Ramin Yashmy and Karol Zajdowski. Our government representatives were Rozhgar Rashid and Nader Babakr. Site excavations were carried out by sixteen workers from the Erbil Department of Antiquities and the village of Surezha. We are grateful to the general director of Antiquities, Mr. Kayfi Ali, and Mr. Nader Babakr, director of Antiquities for Erbil Governate for permission to excavate at Surezha, and for the numerous ways in which they have facilitated our work.

For the last three years, we have focused our excavations on area B—ops. (10×10 m trenches) 2, 9, and 10 at the southern base of the high mound (figs. 3, 4, 5). In this area, Late Chalcolithic 1 (LC1) deposits are accessible immediately beneath the present-day ground surface. The LC1 period forms the transition between the first emergence of towns in the preceding Ubaid period and the emergence of the first cities in the LC2 period (corresponding to the Early Uruk period in southern Mesopotamia—ca. 3900 BC). However, for all its potential importance, the LC1 remains poorly understood because it is usually so difficult to reach the



deeply buried deposits from this period, and because its material culture can be difficult to distinguish from the preceding (Ubaid) and succeeding (LC2) periods. Fortunately, at Surezha, the very early deposits of the LC1 can be reached immediately beneath the surface in area B, allowing us to make a broad contiguous horizontal exposure of 300 sq m of architecture, open-air spaces, and streets dating to the LC1 period.

Our excavations have exposed what appears to be a major architectural and functional difference between the eastern and western parts of area B during the LC1 phase. Op. 2 at the east end of area B seems to be entirely composed of domestic architecture—houses, courtyards, and open-air work surfaces. By contrast, the architecture of op. 9 in the center of area B, and op. 10 at the west end, together compose a large, mudbrick-walled enclosure that appears to have been non-domestic in function (figs. 3 and 4).

OPERATION 2

Op. 2 is a 10×10 m trench at the eastern end of Area B, with the 2019 excavations supervised by Michael Fisher and Ramin Yashmy. Op. 2 is a domestic area with a long, continuous occupation that spans the vast majority of the LC1 period (op. 2 phases F through C) and extends back in time into the Ubaid period (op. 2 phases H and G). The houses of the LC1 period phases closely follow the wall alignments, NE–SW orientation, and function of the earlier Ubaid domestic architecture, which had been exposed in the southwest 5×5 m of the trench in 2013 and 2016. The LC1 house exposed in op. 2 comprises a series of small rooms oriented around the south, east, and north sides of a central room or courtyard measuring 3.5 m (NW–SE) by 6 m (NE–SW). There appears to be great continuity in stratigraphy and architecture between the Ubaid and subsequent LC1 occupation in op. 2.

The 2019 excavations reached phase F across the remainder of the trench, in many cases to the bases of the phases F and E walls, representing the

Figure 3. Area B LC1 architecture. Op. 2 (on right) exposed domestic architecture, while contemporaneous deposits in ops. 9 and 10 (center and left) composed a large, non-domestic mudbrick enclosure with rooms along its eastern wall, and a small freestanding structure along the north baulk (at top).



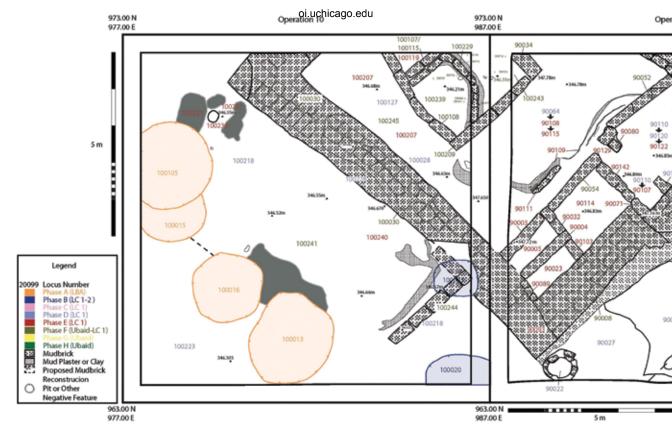


Figure 4. Area B LC1 top plan showing domestic architecture in op. 2 (right) and non-domestic mudbrick enclosure in ops. 9 (center) and 10 (left).

transition between the Ubaid and LC 1 periods. The western wall (locus 153) of this courtyard was constructed in the earliest stages of the

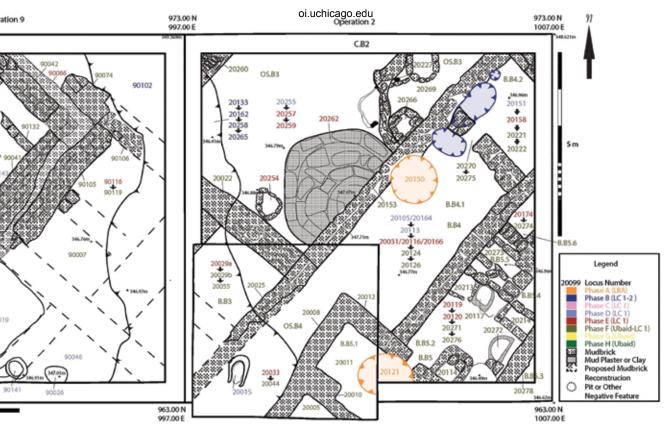
LC1, in phases E and F immediately on top of the earlier Ubaid houses (phases G and H). To the northwest of the courtyard and wall, 153 was a series of outdoor surfaces, with features such as a large mud platform built up against the exterior of the house compound's northwest wall, flanked on either side by tannurs (ovens) and a small basin with a drain hole (fig. 4).

In phase E, the earliest LC1 deposit, the finds from within and on top of surface 20259, and from the overlying ash layer 20257, include a large number of impressed clay sealings as well as hand-squeezed, pre-formed lumps of cleaned sealing clay, figurines, jar stoppers, worked bone, and worked sherds. A notable diagnostic that appeared twice (20259; 20262) was the wide-line-incised pattern on body sherds. Incised sherds of this type seem to be a good local diagnostic for the earliest LC1 deposits on the Erbil plain. Overall for op. 2 phase E, the (very) approximate percentage of painted ware per context seems to range between 10 percent and 20 percent.

The house was in use for an extended period in the LC1 (op. 2 phases F through C), during which its rooms and their features underwent periodic small modifications as doors were bricked up and new interior walls or floor features were built. In the Southeast Room of the LC1 house, excavations reached the floor level on which Hearth 20114 was built, Floor 20276. This floor, comprising multiple, thin laminar surfaces, indicating regular, periodic water accumulation, provided the foundation or earliest use level for the various domestic features, including Basin 20213 and Bin 20214. This evidence suggests that the room served as a kitchen area throughout the LC1 use-life of the house.

With the conclusion of excavations in the LC1 deposits of op. 2, in the final days of the 2019 field season, we started clearing a new 10×10 m trench—op. 11, immediately to the north (upslope) of op. 2. This marks the first stage of the planned east-west line of three operations. (11, 12, 13), designed to double the size of area B in the next field season from the current 300 sq m of exposure to 600 sq m.

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OPERATION 9

Op. 9 is a 10 × 10 m trench at the central part of Area B, between op. 2 to the east and op. 10 to the west. The 2018 excavations in this trench were supervised by Sam Harris and Karol Zajdowski. Ops. 9 and 10 are distinctive in having a large mudbrick enclosure wall, with associated rooms, and a freestanding structure with at least three rooms, made of packed mud (terre pisé), rather than standard mud brick, inside the enclosure. All of these architectural features are non-domestic in character. This architecture differs significantly from the contemporaneous LC1 houses and outdoor work surfaces in op. 2 to the east (see figs. 4 and 5). At the same time, regardless of the differences in function, all the buildings in ops. 2, 9, and 10 share a common orientation for their walls and rooms so that the corners of all structures are aligned to the cardinal points of the compass.

The mudbrick enclosure in ops. 9 and 10 measures 11 m (NW-SE) by 9 m (SW-NE). It is composed of a series of walls approximately 1.5 m wide, constructed of 4–5 rows of rectangular bricks, and preserved to a height of at least 50 cm. The SW wall (op. 10 wall 30) and the SE walls (op. 9 walls 8 and 41) have been completely exposed, along with 4 m of the NE wall 42. The remainder of the NE wall and the entire NW wall are in the as-yet-unexcavated area to the north of area B. The walls of the enclosure were not built as a unit, but were instead constructed separately, and possibly at different times. The enclosure and its associated rooms remained in use for a long time over the course of the LC1 period, and the entire complex seems to have undergone at least two main phases of architectural modification over this timespan.

The 2019 season in op. 9 focused mainly on clarifying the late phase (D1 and D2) of the enclosure and its rooms, to define the surfaces associated with this architecture. Our goal was to remove phase D architecture in order to expose and define the underlying phase E architecture, which we currently associate with the earliest local Late Chalcolithic 1. Another goal of the season was establishing connections among op. 9 and op. 10 to the west and op. 2 to the east, both through a partial tear down of the baulks between these operations, and continued excavation in op. 9.

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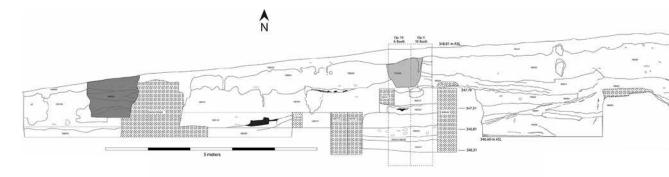


Figure 5. Area B Composite North baulk section of domestic architecture in op. 2 (right) and non-domestic mudbrick enclosure in ops. 9 (center) and 10 (left). Note 5 m wide and 3 m deep wedge-shaped infilled erosional gully running through the baulk between op. 2 (right) and op. 9 (center).

In the first stage, we removed the 1 m wide baulks that separated op. 9 from op. 2 to the east, and op. 10 to the west. This removal confirmed that a later fluvial "gully" running down the mound cut any architecture between ops. 2 and 9 throughout phase D and at least the tops of phase E (fig. 5), and, crucially, the clear establishment of architectural connections between the architectural complexes in ops. 9 and 10.

In the center of the mudbrick enclosure, the opening of the structure west of 90033/90034 began with the removal of intrusive pit 90087 (=10208/10045); this pit was notable for the inclusion of over 300 unbaked clay pegs or cones (SR 8160), which had also been found in 10003. These pegs were very fragile, and many did not retain their original shapes after excavation. We tentatively assign this pit to phase C, the period when the LC1 architecture had been abandoned but before the thick accumulations of phase B. Interpretation of the deposit is difficult, but the unbaked clay pegs may have had an administrative or counting function, perhaps related to feasting.

Inside the enclosure, five rooms were constructed against the interior of SE walls 90008/90041.

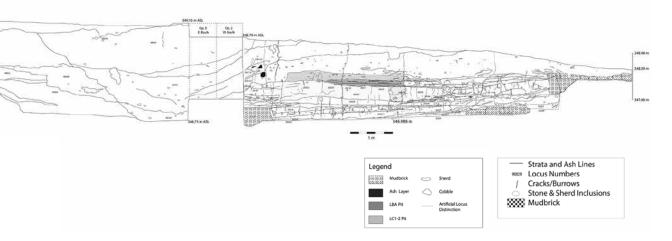
Figure 6. Area B Enclosure: Overlying Later LC1 phase D room walls partially removed to reveal the top of the Earlier LC1 phase E architecture with buttressed and plastered walls.

The mudbrick walls were one course wide and in some places were preserved to a height of at least 60 cm. The northeast room (room 1) was significantly different from the other three rooms along the interior of the SE wall of the enclosure (fig. 4). The room interior had been burned in an intense fire



that partially vitrified the mud plaster along the northeast corner. Afterward, the room was cleaned, mudbrick bench 90079 was constructed along its NW wall (Wall 52), and the room continued in use, with large amounts of small finds in floor and trash deposits, including two stamp seals and seal-impressed clay container sealings. At a

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certain point, the room was abandoned. A large amount of clay, ceramic, and stone objects were found in related abandonment deposit loci 90069 and 90072—far more than in any other room in op. 9.

The block of five rooms enclosed by the monumental walls 9008, 90041, 90042, and (probably) 90093 formed part of what we consider to be a public building complex used in some form through all of later LC1 phase D and at least part of earlier LC1 phase E. The thickness of the outer walls (perhaps some 1.7 m), the long use-life and preservation of the building (as represented by the repeated plastering of the walls, including after an intense burning event that burned and baked

the plaster and bricks of walls 90041 and 90042), and the artifacts from this area (including the lenticular vessel [SR 7171], stamp seal [SR 6806], and clay sealings from Room 1), all point to the probable non-domestic, special purpose of this building complex. The finds from the northeast room in op. 10 reinforce this impression. Excavations this year showed that the construction and orientation of at least some rooms changed between phases E and D, while the complex itself and the monumental exterior walls 90041 and 90042 remained in use, even as they apparently eroded on their exterior faces.

We were able to excavate and remove the southern half of the later LC1 phase D five-room block, exposing the tops of the earlier LC1 phase E enclosure wall and associated rooms (fig. 6). In excavating down to the top of the underlying phase E, one of the most interesting discoveries was that, in this earlier stage of the enclosure, the western face of the walls of the room block (i.e., facing the enclosure courtyard) had brick buttresses, and that the face of the wall and its buttresses had been repeatedly re-plastered (figs. 6 and fig. 7 for detail). In the Ubaid and

Figure 7. Close-up of Area B earlier LC1 phase E enclosure room wall exterior with brick buttress and multiple replasterings.



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LC1, niched and buttressed walls often characterized ritual and other public buildings at northern Mesopotamian sites such as Tepe Gawra in Iraq and Hammam et Turkman in Syria.

To the east and southeast of the enclosure was a series of outdoor surfaces sloping gently down to the east and partially covered by wash deposits from the erosion/decay of the exterior (southeast) face of walls 90008 and 90041. These wash layers and outdoor work surfaces had been cut through by the bottom of the north-south gully that cut through the east edge of op. 9 and the west edge of op. 2 (see stratigraphic section—fig. 5).

OPERATION 10

Op. 10 is a 10×10 m trench at the western end of area B. In 2018 excavations were supervised by Lucas Proctor and Maria Antoniou. Excavations focused on the northern half of the trench in order to explore the large mudbrick-walled enclosure and its interior. Three aspects of the enclosure were investigated: (a) the SW wall 28/30 of the enclosure, (b) a street or passageway running along the north face of the wall inside the enclosure, and (c) a freestanding multi-roomed structure that bounded the street on its north side, and extended into the northeast corner of the trench (figs. 3 and 4).

The 11-meter-long south wall 100028/30 of the enclosure extends from the north baulk in the NW corner of op. 10, running southeast until it enters the east baulk, and apparently forms a corner on the other side of the baulk in op. 9 with wall 8, the southwestern wall of the enclosure in adjacent op. 9. Wall 30 was at least 3–4 courses wide, and preserved to a width of 1.40–1.50 m. The height of the wall is uncertain, since excavations did not reach its base. The red clay matrix of the wall bricks was badly eroded on its south face. Wall 100028 is a narrow construction, built from longer, narrower brownish-gray bricks that run along the north face of earlier wall 100030 and was apparently designed to reinforce it. Two small buttresses, one brick wide, abutted the north face of wall 100028. The area outside of the enclosure to the southwest of wall 30 appears to have been an open-air work surface with a pebble pavement, sloping down gradually to the south (figs. 3 and 4).

Inside the enclosure, a narrow passageway or street ran between the north face of wall 28/30 and the freestanding structure to the north, on the inside of the enclosure. The structure, located at the juncture of ops. 9 and 10 along the north baulk, had at least two rooms (the "west room" and the "east room") divided by double walls 100106 and 100107 that abutted the north face of walls 100108/120. Walls 100108/120 are made of long narrow bricks laid one course wide. Only a small corner of the west room was exposed inside op. 10; the remaining parts of the structure lie in the as-yet-unexcavated area to the north of area B ops. 9 and 10. A larger area of the east room was exposed through the excavation of room deposit locus 100109. A later LC1 pit locus 100111 cut down into room deposit 109. Wall 108 continued into the east baulk that forms the boundary between ops. 9 and 10. The northeast corner of this structure was exposed in op. 10, where the east wall 100033 formed a corner with the north wall 100034, exposing portions of three out of the four walls of the structure (see figures 4 and 5).

The freestanding structure in ops 9/10 yielded a range of unusual artifacts (fig. 8)—notably two complete rounded-base polished stone bowls (SR9490 and 9491), a ground and polished stone ax (SR9718), and a complete baked clay muller (SR9707). Although the baked clay mullers with rounded mushroom-shaped heads and a curved, pointed distal end are typical of the Ubaid period, there is increasing evidence (e.g., from Tell Zeidan in Syria) that the use of mullers continued into the LC1 period. Fauna from the structure had different proportions of domesticated animals from those found in the op. 2 domestic area, along with wild gazelle and a surprising number of dog bones—several with signs of butchery, indicating that they had been consumed by humans.



The latest deposits excavated in op. 10 are a series of eight circular grain storage pits whose ceramics, such as button bases, date them to the later second millennium BC Middle Assyrian period. Heavy erosion had washed away the original ground surface from which these pits were dug, so that only the shallow pit bottoms were preserved.

Figure 8. LC1 objects from the rooms inside the mud brick enclosure. Objects, faunal remains, and micro-artifacts from these rooms and the free-standing structure in ops 9 and 10 differ markedly from the domestic assemblage found in op. 2.

MICROARCHAEOLOGY

In 2019, Sam Harris (University of Chicago) continued to collect micro-archaeological samples from rooms, courtyards, and open-air work surfaces in ops. 2, 9, and 10. Microarchaeology involves the collection and analysis of very small fragments (under 1 cm) of ceramics, bone, chipped stone, and shell that had been dropped and then incorporated into the floor surfaces. This micro-debris is valuable because it reflects the actual locations where ancient economic activities took place. The contexts selected for sampling were divided into a 50 cm grid, and samples of sediment were collected from the top 2–3 cm of the floor matrix in each grid square. The analyzed samples of the different types of materials can then be used to map the distribution of the materials across the floors and surfaces to reconstruct the patterning of ancient economic activities at the site.

From 2017 to 2019, 151 microarchaeology samples were collected from 30 individual contexts in Area B ops. 2, 9, and 10. These included rooms of domestic houses, courtyards of domestic houses, outdoor surfaces, a mudbrick platform, a cobbled outdoor workspace, and the rooms inside the large non-domestic mudbrick enclosure in ops. 9 and 10. Nearly all of the contexts sampled are presumed to date to the earlier and later phases of the LC1 occupation of Area B.

Although analyses are ongoing, the initial results show clear differences between the overall micro-artifact densities of different types of archaeological contexts such as indoor surfaces, outdoor surfaces, trash deposits, platforms, and courtyards (fig.10).

The most striking result of the micro-archaeological data collection was the stark difference in debris profiles between domestic contexts and those from the large, nondomestic building complex

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in op. 9. A comparison of the "cleanliness index," representing the density of the common classes of microdebris per liter in a sample, shows how dramatically more dense domestic spaces were than the rooms of the large nondomestic building. This indicates that the use of the nondomestic building was limited to specific activities and, probably, to specific people and specific times. Not all activity produces substantial micro-debris, but many common activities, from craft manufacture to tool use to food preparation and consumption, along with storage, can be expected to produce observable debris, and the substantially cleaner micro-debris profile argues strongly for limited and/or less frequent activity inside the nondomestic mudbrick enclosure.

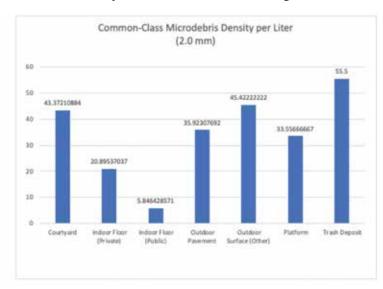
Overall, the micro-archaeological sampling at Surezha to date has provided us with some of the finest-grained data on activity area, domestic



Figure 9. Complete and fragmentary baked clay "mullers" from the 2019 field season at Surezha. Mullers seem to have been used as pestles to grind soft materials. Although generally considered as diagnostics for the Ubaid period, the use of mullers apparently continued in the LC1 period as well in northern Mesopotamia at sites such as Surezha in Iraq and Tell Zeidan in Syria.

production, and the use of space in Late Chalcolithic northern Iraq, and indeed in the Late Chalcolithic of greater Mesopotamia as a whole. The data illuminate the important differences among three kinds of spaces: "private" domestic spaces, "open public spaces" of work and activity, and "restricted public spaces" to which access was limited (such as the large non-domestic mud brick enclosure in ops. 9 and 10).

The currently available data do not show good evidence for the specialization of production



or the differentiation of activity across domestic spaces. This suggests that major shifts in the organization of production evident by the fourth millennium had not yet taken place at Surezha in the fifth-millennium Late Chalcolith-

Figure 10. Density of microarchaeological debris in different types of LC1 contexts. The clear contrast in densities between in indoor floors of rooms inside the op. 9-10 mud brick enclosure versus the indoor floors of the house rooms in op. 2 suggest clear differences in activities between the domestic and non-domestic parts of the LC1 settlement at Surezha.

ic 1, although further exposures may change this picture. Outdoor workspaces were probably shared by community members and multiple households. Some food preparation was centered in the home kitchen, while some took place outside the home, lending support to the suggestion that the Late Chalcolithic 1 societies of northern Iraq were composed of nuclear families with interdependency and communal labor between households.

ZOOARCHAEOLOGY

Analysis of the Surezha animal bone remains is being conducted by Max Price (Massachusetts Institute of Technology). The 2018 and 2019 season produced 4,074 animal remains from ops. 2, 9, and 10. These three 10×10 m exposures lie adjacent to one another along an E–W axis on the southern base of the mound. Recovery techniques were primarily hand picking, with dry sieving in primary and secondary contexts. Almost all fauna derived from LC 1 contexts.

Surezha's extensive Ubaid, LC 1, LC 2, and LC 3 deposits permit a glimpse at an evolving economy. The LC 1 deposits, including domestic and non-domestic, are especially well represented. Faunal remains from five seasons at Tell Surezha (2013, 2016, 2017, 2018, 2019) were analyzed with two main research questions in mind: How did animal exploitation change during the development of complex societies on the Erbil plain? Is there evidence for a shift toward a more specialized, woolfocused pastoral economy?

Several patterns are noteworthy. First, sheep and goats are the main taxa, but by no means dominant. Sheep outnumber goats 1.6:1. Moreover, sheep bones were more common than goats. Second, pigs were well represented at 26%, but somewhat less than in the Ubaid and LC 3 phases (see table 1). However, sample sizes for these other phases were small. Third, there is a higher-than-expected number of dog and wolf remains in the assemblage. Several canine bones display cut marks, indicating that the animals were likely butchered and eaten.

Identified Taxa	Ubaid	Ubaid %	LC 1	LC 1 %	LC 2	LC 3	LC 3%
Ovis/Capra	50	50%	500	44%	17	83	48%
Ovis	(4)	_	(69)	_	(2)	(9A)	_
Capra	(1)	_	(56)	_	(8B)	(2)	_
Sus	32	32%	327	29%	0	67	39%
Bos	15	15%	158	14%	0	22	13%
Gazella	3	3%	28	1%	3	1	<1%
Canis	1	1%	95	9%	0	1	<1%
Equus			1				
Vulpes			1				
Cervidae			3				_
Total	101	100%	1113	100%	20	174	100%

Table 1. Surezha Chalcolithic fauna identified to the genus/species level.

Payne Wear Stage	Ubaid	LC1	LC 1-2	LC 2, LC 2-3, LC3
Α				
В				
С	5	4	6	
D	2	11	2	3
E	0	2		.5
F	1	1		. 5
G	1 . 5	2	1.5	
H	1 . 5	2	. 5	
I		1		
Total	11	23	10	4

Table 2. Kill-off profiles, using Payne's (1973) wear stages. Only mandibles with dP4 or M3 counted. The ".5" in cells indicates mandibles between wear stages (e.g., G-H would give a count of .5 to G and H).

Adding the 2019 data to those of other seasons, the picture of an evolving animal economy comes into clearer focus (table 2), especially for the LC 1. With the addition of the 2018–19 fauna we have sufficient material to analyze sheep and goat culling patterns in the LC 1 using mandibular tooth eruption and wear. The data show a heavy focus on prime-aged caprine (six months to two years), indicative of a herding strategy mainly focused on meat production for local consumption. There is little evidence for a preponderance of the older animals (three years and above) that one would expect in a specialized wool-producing economy, at least as far as the kill-off profiles are concerned. The caprine age data are consistent with a subsistence-oriented, generalized herding economy, rather than a specialized surplus-producing system in the LC1 phase at Surezha.

The excavation of ops. 2, 9, and 10 indicates functional differentiation between the domestic architecture in op. 2 and a large mud brick enclosure—apparently non-domestic (public or ritual?) architecture—in ops. 9 and 10. The fauna from these contexts can, in conjunction with other artifactual analyses, shed light on the significance of these areas in the LC 1 period. On a very basic level, comparison of the fauna between the different trenches shows some variation, especially in the amount of canine remains, which were more frequent in op.10 (table 3).

Comparison of the deposits found within the op. 10/9 mudbrick enclosure with the contexts within the domestic architecture in op. 2 showed some interesting spatial-functional contrasts. First, the number of dogs/wolves was much higher (22%) in op. 9/10 intramural contexts. The proportion of cattle (20%) was also somewhat higher than expected, while pigs, sheep, and goats were somewhat lower. Among the wild animals identified, gazelle were much more common in and around the op. 9/10 mudbrick enclosure (n=25) than they were in the op.2 domestic contexts (n=3). On a preliminary basis, the available data suggest that special foods (gazelles, dogs, and perhaps a higher amount of beef) were consumed in and around the large mudbrick enclosure of ops. 9/10. By contrast, slightly larger amounts of pigs, sheep, and goats were consumed in the domestic area of op. 2.

ARCHAEOBOTANY

Analysis of the archaeobotanical remains from Surezha is being conducted by Lucas Proctor (University of Connecticut). Archaeobotanical remains were processed with water-based flotation, and the light fractions examined for charred remains of wood charcoal, seeds, and other plant fragments. Identification of botanical remains from the eighty samples analyzed to date suggests that the inhabitants of Surezha practiced rain-fed agriculture focusing primarily on drought-tolerant pulses and cereal crops, such as barley and emmer wheat.

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Identified Taxa	Op. 10 LC 1	Op. 9 LC 1	Op. 2 LC 1
Ovis/Capra	138 [37%]	137 [45%]	178 [50%]
Ovis	(20)	(2)	(34)
Capra	(13)	(13)	(10)
Sus	114 [30%]	76 [25%]	116 [33%]
Bos	50 [13%]	65 [24%]	38 [11%]
Canis	62 [16%]	13 [4%]	20 [6%]
Gazella	10	15	3
Cervid	1		1
Vulpes	1		
Equid	1		
Total WILD	[4%]	[5%]	[7%]
Total	377	306	356

Table 3. Taxonomic comparison of 2018-19 operations from LC 1 period only.

Dung spherulite, wood charcoal, and macrobotanical analysis confirms that dung fuel was abundantly used throughout the Ubaid and Late Chalcolithic periods at the site, while wood charcoal was rarely encountered. Samples examined from primary fuel-related deposits, such as hearths and ovens, and secondary/tertiary refuse deposits, including pits and middens, had the greatest concentrations of dung spherulites, suggesting that particularly in these samples, charred botanical remains are most probably derived largely from dung fuel burning.

Based on the composition of the macrobotanical assemblage, we can infer that animal herds were pastured on steppe areas away from the site, but do not appear to have been grazed on the stubble of agricultural fields given the lack of cereal culm or barley chaff from the Late Chalcolithic assemblage. Agricultural production and grazing practices appear to have been largely stable during the Ubaid, LC1, and LC 2–3 periods. The primary cultivars produced at Surezha in the Chalcolithic were hulled wheats and barley, with free-threshing wheats, several varieties of pulses, and flax as important secondary crops. These results broadly agree with the few available archaeobotanical data from Ubaid/LC1 sites across northern Mesopotamia, suggesting that regional specialization in agricultural production was limited. The identification of flax seeds, combined with artifactual evidence for spinning and weaving equipment, hints at a possible domestic craft production of textiles. Several samples from a probable feasting pit present unique information on the consumption of other food resources during the LC1-2, thanks to the preservation of a large cache of fig, caper, purslane, and turnsole seeds via mineralization. Plant-based information on feasting is rarely encountered in the archaeobotanical record due to preservation bias.

A preliminary assessment was conducted for the most recent batch of exported samples from the 2019 season, focusing on the mudbrick enclosure and the free-standing structure inside it (ops. 9 and 10). Five samples from these rooms were examined. Four of the samples contained relatively little in the way of preserved carbonized remains. In op. 10, however, sample HN 100220—from a laminar ash dump in the freestanding structure inside the mudbrick enclosure—was the richest of the five examined samples, containing 27 identifiable taxa and a total of 289 identifiable specimens (table 4). This sample is dominated by cereal grains and chaff, with a particular emphasis on barley

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SR #	8204	8206	8214	9816	9810
Ор	9	9	10	10	10
Locus	83	87	220	237	243
Lot	287	286	361	393	396
Flotation by	LSP	LSP	LSP	LSP	LSP
Phasing	LC1	LC 1-2	LC1 C	LC1 C	LC1 C
Deposit Class	Tertiary	Secondary	Secondary	Feature	Tertiary
Deposit type	General room buildup	Trash pit	Ash scatter/ dumping	Floor/ indoor surface	General room buildup
Date collected	22-Sep-19	22-Sep-19	30-Sep-19	7-0ct-19	7-0ct-19
Date floated	1-Oct-19	1-0ct-19	2-Oct-19	7-0ct-19	7-0ct-19
Flotation Volume (L)	4	5	5	5	5
Light Fraction Vol (mL)	<1	1	11	1	<1
> 4 mm weight (g)	0	0	0.096	0.072	0
4–2 mm weight (g)	0.078	0.033	1.002	0.091	n/a
2–1mm weight (g)	0.109	0.151	1.126	0.045	n/a
< 1 mm weight (g)	0.124	0.152	0.723	0.047	n/a
Total weight (g)	0.311	0.336	2.947	0.255	0.154
sorted by:	LSP	LSP	LSP	LSP	LSP
Triticum monococcum			1		
Triticum monococcum spikelet fork			1		
Triticum dicoccum glume base			1		
Triticum sp.			11		1
Triticum sp. sprouted			1		
Triticum sp. rachis			2		
Hordeum sp.		2	51		
Hordeum sp. "sprouted"			3		
Hordeum sp. tail grain			4		
cereal grain indet. (whole)			40		
cereal grain indet. (frags)	4	10	37		7
Triticum spikelet forks			1		
Triticum glume bases	2				2
cereal embryo			3		
Awn fragments			1		
Vicia ervilia (ct. by cotly.)			12		
cf. Lens sp. (ct. by cotly.)			2		
Pisum sp (ct. by cotly.)			4		
Large Legume indet.		1	13		
POACEAE indet.		4	21	2	1
Aegilops sp.			1		
Aegilops sp. glume base (frags)			1		

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SR#	8204	8206	8214	9816	9810
Avena sp. (wild)			3		
Bromus ssp.			13		
Stipa sp.			1		
Lolium cf. rigidum		5	48		
Hordeum spontaneum			4		
Arnebia cf. decumbens			1		
Astragalus sp.		2			
Trigonella sp.		1			
Trigonella astroites			6		
Malva ssp.			1		
Asperula sp.			1		
bread/dung etc.		3	18		
Indet. seed (> 1 mm)			17		
Indet. seed (< 1 mm)		2			
Indet. material > 1 mm	2				
GASTROPODA	2	1			1
OSTRACODA	2				
Animal bone	1	2	1		
1–2 mm frags. indet.	38	0	XX		X
wood > 4 mm weight (g)	0	0	0.049	0.072	0
wood 4–2 mm weight (g)	0	0	0.171	0.081	0.013
wood 1–2 mm	0.007	0.001	0.08	0.022	X

x = present but not counted.

Table 4. Archaeobotanical remains from five samples recovered in 2019 from the free-standing structure inside the large mudbrick enclosure of ops. 9/10.

(Hordeum sp.). Both einkorn (Tr. monococcum) and emmer (Tr. dicoccum) chaff were identified. Sprouted examples of both wheat and barley were identified, which point to either spoilage of stored crops or malting for beer making. Given the low number of sprouted grains, the fact that both wheat and barley were sprouted, and the lack of any other supporting evidence from this context, spoilage would seem the most likely cause.

This sample also featured an unusually high number of economic legumes, including bitter vetch (Vicia ervilia), probable lentil (cf. Lens), and common pea (Pisum sp.). Greater abundances of pulses have been noted at some contemporaneous Ubaid/Late Chalcolithic 1 sites in the upland Sharizor Plain to the southwest of Surezha. The wild/weedy composition of the sample strongly favors grasses, and in particular brome grass (Bromus ssp.) and stiff ryegrass (Lolium cf. rigidum). Stiff ryegrass has been commonly encountered in the Surezha assemblage, but, while brome grass is present in other samples, its relative abundance here is unusual. Finally, this sample also contained a greater quantity of large, identifiable wood fragments than has been the case for the Surezha assemblage to date, which holds promise for further exploration of fuel use and the local vegetation of the Erbil plain.

CERAMICS AND INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS (INAA) OF DALMA WARES

The 2019 analyses of the Surezha ceramics were conducted by John Alden (University of Michigan) and Gil Stein (University of Chicago), while archaeometric analyses using Instrumental Neutron Activation Analysis (INAA) and thin-section petrography were conducted by Leah Minc (Oregon State University) assisted by Savanna Buehlman-Barbeau (Oregon State University). In all, 293 excavated pottery lots were processed, totaling 10,567 sherds, of which 3,105 were diagnostic forms such as rims, bases, or sherds with surface treatment such as painting, incision, or impressed decoration (table 5).

At Surezha, painting as a form of ceramic decoration persisted throughout the LC1 period, continuing a tradition of surface treatment and motifs that continued and evolved from its origins in the earlier Ubaid period. The 2019 excavated ceramics from area B ops. 2, 9, and 10 show that painting was common in both the early and middle LC1 phases at Surezha, and it persisted through to the end of the LC1. Painted sherds form 55.6% of all diagnostics. (n=3105). Even when the comparison is limited to rim sherds as a way to standardize comparison, painted rims still form 42.6% of all rim sherds (n=1522). This is noteworthy because in other regions of northern Mesopotamia, such as the Euphrates and Balikh valleys and the Khabur headwaters region around Tell Brak, painted decoration disappeared rapidly in the early stages of the LC1 period. The continuing presence of painting in the LC1 at Surezha suggests that the Erbil plain maintained its own highly localized traditions of ceramic production that differed in significant ways from neighboring, contemporaneous regions. The Erbil plain also differed from neighboring regions through the absence of "sprig ware," internally cross-hatch-incised bowls, flint scraping as a manufacturing technique, Coba bowls, and "wide mouthed flower pot" bowls, even though these forms are common diagnostics of the LC1 period elsewhere in northern Mesopotamia.

An additional distinctive characteristic of the LC1 ceramics at Surezha was the presence of small amounts of chaff-tempered handmade Dalma wares as a foreign ceramic style characteristic of the Zagros Mountains in northwestern Iran just south of Lake Urmia and adjacent to the present-day border between Iraqi Kurdistan and the Iranian provinces of Azerbaijan, Kurdistan, Hamadan, and Kermanshah. Both Dalma impressed wares (also called "Dalma surface manipulated wares") and Dalma painted wares have been identified in the uppermost LC1 deposits at Surezha (fig. 11). Recent Iranian excavations show that the strata containing Dalma wares at the sites in northwestern Iran have Accelerator Mass Spectrometry (AMS) radiocarbon dates between 5000 and 4500 BC. This is consistent with the AMS C14 dates for the LC1 period at Surezha. In our excavations to date, we have identified only 97 Dalma diagnostic ceramics (mostly impressed/surface manipulated wares), less than 1% of total sherds in the late LC1 deposits where they were present.

Despite their small numbers, the Dalma wares are significant because they provide some of the earliest evidence for Late Chalcolithic inter-regional interaction between the Erbil plain and the

Table 5: Summary of LC1 ceramic counts and weights from the 2019 field season.

Operation	Total sherds	Total diagnostics	Total rims	Total bases	Total painted rims	Total painted body
2	2235	667	255	24	93	272
9	2730	856	323	47	129	323
10	5602	1582	489	154	233	675
TOTAL	10567	3105	1067	225	455	1270

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Figure 11. LEFT: Dalma-style impressed and painted chaff tempered ceramics from Surezha (Erbil province, Kurdistan region, Iraq) RIGHT: Dalma-style impressed and painted chaff tempered ceramics from the type site of Dalma tepe (south of Lake Urmia in Azerbaijan province, Iran). Dalma tepe sherd photos courtesy of Penn Museum, University of Pennsylvania.

highlands of northwestern Iran. To investigate the nature of this interaction, in 2018 we began a program of Instrumental Neutron Activation Analysis (INAA) and petrographic thin sectioning, conducted by Leah Minc, assisted by Savanna Buehlman-Barbeau at the Oregon State University Radiation Laboratory Archaeometry Center. In 2018 and 2019, their INAA analyses examined thirty-four sherds of Dalma impressed and painted wares from Surezha, along with the local Erbil plain style yellow buff wares, eight kiln wasters and five unfired clay objects as proxy measures for local clays at Surezha. In addition, the Penn Museum loaned our INAA project forty-two painted and impressed wares from the University of Pennsylvania excavations at the type site of Dalma Tepe in the Lake Urmia Basin of northwestern Iran. This allows us to compare Dalma-style ceramics from Surezha with material from the Dalma heartland in Iran.

Principal components analysis of the Surezha ceramics (Dalma wares and local buff wares), based on twenty-seven elements, suggests that there were two main paste groups—one with higher aluminum (Al) concentrations indicating greater percentages of clay (Surezha-1), and one with lower Al and correspondingly greater percentages of mineral inclusions (Surezha-2). The parallel profiles of these two groups suggest a classic "dilution pattern," in which the increased concentration of some major element (usually introduced as temper) reduces the concentrations of other minor and trace elements. In this case, the diluting factor is probably quartz (silica) sand, an element not measured by INAA. In other words, both compositional groups were produced at Surezha, but the small contrasts between them reflected differences in the use of the sand temper that was added by

Total incised	Total other diagnostics	Painted rims to total rims ratio	Diagnostics to total sherds ratio	Total painted to total diagnostics ratio	Total ceramic weights	Mean ceramic weights
4	19	0.365	0.298	0.547	73.1	0.0327
2	32	0.399	0.314	0.528	93.6	0.0343
12	19	0.476	0.282	0.574	139.3	0.0249
18	70	0.426	0.294	0.556	306	

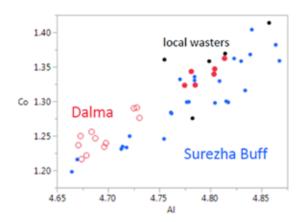
PROJECT REPORTS | SUREZHA EXCAVATIONS 2019

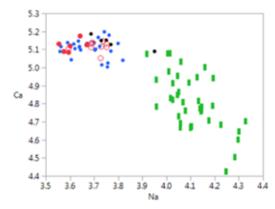
potters to some vessels in the course of manufacture, rather than actual variation in the constituent clays. Comparison of the geochemical composition of the Dalma-style sherds from Surezha with the predominant local yellowish buff ware ceramics from Surezha and with overfired kiln wasters from the site showed clearly that all three sets of ceramics were manufactured from the same constituent clays characteristic of the Erbil plain (fig. 12, left).

All but one of the thirty-four Dalma ware sherds found at Surezha appear to fall well within the compositional profile of the two local Surezha clay paste groups. The remaining example appears to be an outlier of Surezha-1. This fit suggests that these Dalma-style ceramics were produced locally on the Erbil plain, rather than imported over long distances from western Iran.

The most important outcome of the INAA analysis is that the chemical composition of the ceramics from Dalma Tepe is clearly distinct from that of the Dalma-style material found at Surezha (fig. 12, right). As a group, Dalma Tepe sherds are higher in sodium content and generally lower in calcium content than Surezha. On this basis we can be reasonably confident that there was little or no actual exchange of ceramics between the two sites, and the Dalma-style wares at Surezha were manufactured locally on the Erbil plain. Eliminating the possibility that the Dalma-style pots had been transported from highland Iran raises the as yet unanswered question of how and why small amounts of this foreign style of ceramics were being manufactured and used on the Erbil plain in the early fifth millennium BC.

INAA analyses of <u>Dalma</u> style Painted and Impressed wares from <u>Dalma Tepe</u> (Iran, n=42) and <u>Surezha</u> (Erbil, n=34)





<u>Dalma</u>-style (red) & local <u>Surezha</u> – Style (blue) – at <u>Surezha</u>

Site of <u>Surezha</u> (red and blue) compared with site of <u>Dalma</u> tepe (green)

Figure 12. INAA compositional analyses of ceramics from Surezha and Dalma Tepe (Iran).

LEFT: Ca-Al plot shows that the Dalma-style ceramics from Surezha have clays that match local styles of pottery and kiln wasters from Surezha, indicating that all were locally manufactured on the Erbil plain. RIGHT: Ca-Na plot shows that the Dalma-style ceramics from Surezha (red and blue dots at upper left portion of the plot) are compositionally different from the Dalma-style ceramics excavated at Dalma Tepe in Iran (green dots at right side of plot). Data from: Minc 2019 preliminary INAA report; Minc and Buehlman Barbeau 2020 INAA report.

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CONCLUSIONS

In the 2019 field season at Surezha, our focus on ops. 2, 9, and 10 in area B at the south end of the high mound allowed us to expose a contiguous area of 300 sqare meters of the LC1 settlement. We have recovered architectural, artifactual, micro-archaeological, and zooarchaeological evidence for functional differentiation between the eastern and western parts of Area B. Op. 2 consisted of an area of domestic houses, while ops. 9 and 10 comprised a non-domestic area consisting of a large mudbrick enclosure whose rooms, free-standing building, and courtyard area were used for some as-yet-unidentified purpose—possibly ritual. Ceramic evidence suggests some form of contacts across the mountain passes into northwestern Iran, but INAA comparisons of Dalma-style wares from Surezha with those from the type site of Dalma Tepe itself show that these contacts were most likely cultural influences or possibly the seasonal presence of highland migratory pastoral groups rather than actual ceramic exchange. Taken together, the LC1 levels at Surezha suggest the development of an increasingly differentiated complex society that was developing new cultural connections with the neighboring area of highland Iran in the fifth millennium BC.

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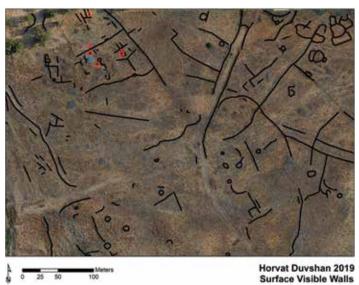
Excavations at Horvat Duvshan

YORKE M. ROWAN, MORAG M. KERSEL, AND AUSTIN CHAD HILL

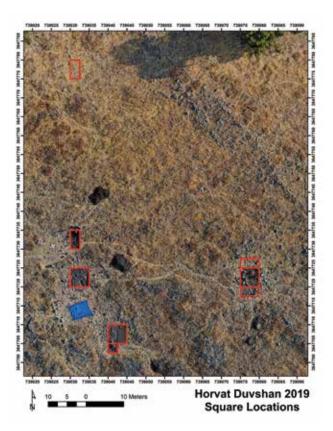
With the goal of achieving a broader understanding of the fifth millennium in the Galilee, the Galilee Prehistory Project (GPP) undertook investigations at Horvat Duvshan (H. Duvshan) during the summer of 2019. Identified as a Chalcolithic site by Stepansky (2012) during his pedestrian survey for the Rosh Pina map (18), H. Duvshan lies near the center of the Korazim Plateau. The Korazim Plateau is a volcanic plateau directly north of the Sea of Galilee, to the east of Mount Canaan and west of the Jordan River. Excavations at Horvat Duvshan were initiated to gain some perspective on cultural and economic variability in the eastern Galilee during the Chalcolithic period relative to other regions. The eastern Galilee is poorly documented for the period, despite surveys that have identified Chalcolithic settlements across the region. New excavations at H. Duvshan complement previous GPP research at the western Galilee site of Har ha-Sha'avi (Marj Rabba), providing a roughly contemporaneous site in eastern Galilee. Prehistoric sites in the western Galilee are typically poorly preserved, presumably due to the wet environment and the acidic, basaltic soils. Tel Nes, the subject of GPP research in 2017, is less than 2 km directly north of H. Duvshan, providing an additional nearby site for comparative analysis of the Chalcolithic in the Galilee.

TOP: Figure 1. Looking north up the Korazim Plateau over Horvat Duvshan. Note walls and structures visible on surface. BOTTOM: Figure 2. Orthophotograph of Horvat Duvshan with visible surface features (black) and GPP excavation squares (red) marked. The blue square is the excavation shade cloth.





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Stepansky's survey (2012) recognized visible structures on the surface, using scatters of sherds and lithics to date the site as potentially Chalcolithic. The complex palimpsest of structures, probably both historic and prehistoric, were evident in our initial aerial (drone) survey of the area (figs. 1 and 2). Smithline (2013), who conducted limited salvage excavations for the IAA in advance of new road construction, supported the existence of Chalcolithic occupation in the immediate area.

A grid was established using a prototype Reach RS2 multi-band RTK GNSS receiver manufactured by Emlid. GPP acted as a beta tester for Emlid for this hardware during the 2019 season using a preproduction model for staking out excavation squares, creating benchmark reference points, placing Ground Control Points (GCPs) for aerial survey georeferencing, and collecting point provenience data. Unit squares of 5.0×5.0 m were laid in on a grid, though in some cases only one-half or one-quarter of the square was opened. Our initial squares, AL22 and AJ19, were 5.0×5.0 m squares placed where surface density of Chalcolithic material seemed high, with an additional 2.5



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 \times 2.5 subsquare, AL23, opened subsequently. Additional squares opened were AS18 (5 \times 6 m), AS 19 and AS20 (2.5 \times 5 m), AJ17 (2.5 \times 5.0 m) and AJ8 (2.5 \times 5.0 m) for a total opened area of 131.25 sq m (fig. 3). These were excavated to variable depths, of course, from extremely shallow to nearly 1 m.

Excavations were conducted from July 11 to August 8, 2019, with a small crew of students, volunteers, and staff. Staff members included Yorke Rowan and Morag Kersel (directors), Austin Chad Hill (field director, surveyor), Max Price (faunal specialist, area supervisor), Blair Heidkamp (area supervisor), and six students, two from the University of Chicago (Julian Thibeaux, Jennifer Feng) and four from M.I.T. (Ruth Tweedy, Mollie Kaplan, Mollie Wilkinson, Lucas Arthur).

AJ19

Our first square was AJ19, selected based on a concentration of Chalcolithic sherds on the ground surface (fig. 4). Our procedure for each square was similar to that of AJ19: initial clearance of vegetation and roots followed by more aggressive excavation with picks and hoes to remove topsoil in some of the toughest hard-packed soil we have encountered thus far in the Galilee. Excavation across the square continued until a thick layer of rocks, apparently following the slope from north to south, was exposed across the square. These rocks were left in situ, and the southern half of the square was excavated further. Excavation was eventually abandoned in this square because no intact features were identified, but additional excavation removing some of the rocks may be necessary in the future to establish with certainty that there are no walls or features below the rubble. Most artifacts recovered were Chalcolithic vessel sherds, the majority worn and eroded. Although flint artifacts were also recovered, few tools were recognized in the field (analysis is currently underway).

OPPOSITE: Figure 3. Orthophotographic map showing location of squares and grid established at Horvat Duvshan.

TOP: Figure 4. Looking south over the Korazim Plateau, Sea of Galilee in the background. Initial opening 5×5 m squares, AJ19 is in the foreground and AL22 in background.

BOTTOM: Figure 5. Chipped stone tool and Chalcolithic vessel handle directly below W101.

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Figure 6. Large Chalcolithic sherds in deeper section of cobbles, square AJ17.

AL22, AL23

To the southeast of AJ19, square AL22 was a 5 × 5 m square, the furthest south and downslope of those opened at Horvat Duvshan (fig. 4). From the surface, an alignment of large cobbles was visible, indicating a possible wall. Upon clearing the brush and roots of AL22, we began excavating the topsoil across the entire 5 × 5 m square. We soon realized that we had hit bedrock at the northern end of the square after less than 10 cm of topsoil removal. We then decided to split the square in half along the north-south axis and focused our efforts on the western half (2.5 × 5 m) of the square, which contained the stone alignment determined to be a section of wall (W101). The wall is a single course sitting on bedrock, with some chinking stones in place to support the larger stones. In order to follow the wall a quarter square, AL23 (2.5×2.5 m) was opened to the south. Topsoil removal in AL23 also continued to come down directly onto bedrock after a few centimeters. The line of the wall ends in this sub-square with no indication that it continues or turns a corner. On the west side of the wall is a dip in the bedrock, and the topsoil deposit is approximately 20 cm deeper than on the east side of the wall in AL23. There is a possibility that the bedrock was cut to form a trench for the wall to be constructed. A consistent amount of lithic debitage and Chalcolithic ceramic sherds were found throughout the context. Under one of the larger wall stones was a retouched blade and Chalcolithic ceramic handle fragment (fig. 5), indicating that the wall fragment is also Chalcolithic. Due to the limited depth of deposit and discontinuation of the wall fragment, we decided to move to another square within area AA after coming down to bedrock throughout AL22 and AL23.



Figure 7. Wall 177 in square AJ8, looking north. Note line of rocks on west face of wall, possible additional feature or interior wall.

AJ17

The square location is on the flat terrace north of AJ19 with no visible alignments or features on the surface. A concentration of larger Chalcolithic sherds found on the surface, and the likelihood of deeper soil depth in the terrace, were the reasons for the placement of this square. The edge of the terrace is 1.5 m south of the southern baulk of AJ17. After removal of brush and roots, we removed topsoil with large tools in 5-10 cm spits across the square. We came down upon small- and mediumsized cobbles in the south half of the square about 40 cm down. At that point, we split the contexts between the continuing topsoil in the northern part of the square and the stone layer in the southern part of the square. We focused first on the removal of the topsoil in the northern section with the understanding that the topsoil would have been filled in after the rocks were in place. Continuing to take the topsoil down in 5-10 cm spits, more of the stone layer appeared, and the end of the topsoil was 1 m down in the very north end of the square. The undulating stone layer was then worked on by taking the highest layers of rocks out. An alignment of stones started to emerge—of two rows of medium to large cobbles that were interpreted as a wall (W153). We continued to work on either side of the wall, finding many Chalcolithic sherds and lithic tools and debitage within the stone layer (fig. 6). In order to focus on the wall, we split the square in half and focused on the south 2.5m \times 2.5 m section of the square. On the north side of the wall, we excavate beneath the course of stones interpreted as a wall and did not see another course below. With limited remaining time, and no clear continuity of Chalcolithic features, we closed the square to investigate another part of the site.

AJ8

This square was the northernmost and farthest uphill of the squares excavated in 2019. From the surface (and aerial imagery), a roughly rectilinear alignment of walls was apparent and prompted the selection of this square for excavation. The square was placed to follow one of the long walls of what seems like a structure or room. After the initial brush and root removal, the line of the wall was even clearer (fig. 7). The square was then divided into three loci. West of the wall line, the likely interior of the rectangular structure was designated L. 176. The wall was identified as W177, and east of the wall was identified as L. 178. Removal of topsoil to the west of the wall revealed another stone alignment comprising medium/large cobbles positioned in a curved line (L. 179). The alignment looks as though it could connect with some other visible stones outside of the square. The alignment was determined to be left in place in anticipation of opening the adjacent square in a future season and investigating the feature as a whole. Additionally, in the southern end of L. 176, the end of a small wall made of two rows of small and medium cobbles emerged (W180). The wall seems to continue to the west outside of the square and may be an interior dividing wall within the larger rectangular building/room. To the east of the W177, the topsoil was removed in 5-10 cm spits and eventually came down on a layer of small cobbles approximately 30 cm beneath the surface. Three medium-sized boulders were also located east of W177 with no apparent alignment. The boulders are likely tumble from uphill. Wall W177 comprises a line of small boulders forming the east face and medium/large cobbles forming the west, likely interior, face. Due to the season's end, we were not able to investigate fully below the top course of the wall. In a future season, we would expect to reopen this square, along with adjacent squares, to gain a better understanding of the architecture and related features.



Figure. 8. Initial opening of square after clearance of vegetation around Chalcolithic building.

AS18, AS19, AS20

The excavation of trenches AS18, AS19, and AS20 at Horvat Duvshan was conducted between July 16 and August 7, 2019. The squares were laid out on a N–S grid guided by architectural features that were visible from the surface and in the aerial images (fig. 8). Excavations revealed these features to be walls, likely domestic in nature, of a fairly sizable building (ca. 10×5 m) that was broadly comparable to a single segment of a "chain building" typical of the Golan Chalcolithic (Epstein 1998). Virtually all of the ceramics were Chalcolithic. However, the lack of any organic finds despite careful excavation and sieving with 5 mm mesh of all non-surface loci prevents a more precise chronological determination.

Excavation began with plant clearance and removal of a thin layer of topsoil, first in the 5×5 m AS19, and later expanded to the 5×2.5 m AS20 to the south of AS19 and to the 5×2.5 m AS18 to the north. Time constraints limited the amount of excavation in these subsquares, with only 1–2 cm removed at most. However, a single red bead was found in this initial clearance.

WALLS AND THE CHALCOLITHIC BUILDING

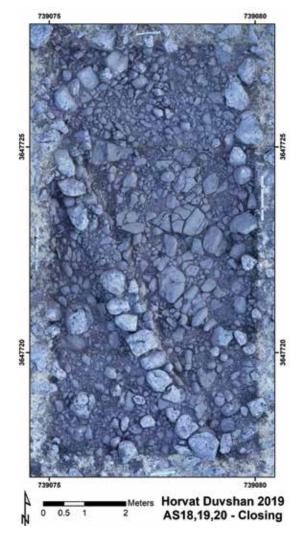
Visible from the surface of trenches AS19 and AS20 was a long wall circa 10 m in length running SE-NW. This was labeled W052 and was made of very large cobbles (sometimes almost 1 m in length) as well as medium-sized cobbles, which appear to have been placed on the interior edges of the wall to flatten its face. Still, the face of the wall was not very flat and in places was quite uneven. None of the stones appeared faced or chipped. The walls measured around 70 cm thick, and each had only one preserved course.

Joining the main wall W052 at ninety-degree angles and running eastward were two walls to its north and south: in AS20 was W203 and in AS18 was W228. Both had the same basic structure as W052—large cobbles with medium-sized cobbles toward the interior surface. Each ran for about 5 m. W228 appeared to have been disturbed; a large cobble appeared to be missing (or perhaps a doorway, similar to 060 (see below). Although we did not expose their eastern ends, their termination was clear from the surface.

We were also able to expose a small portion of W229, which ran parallel to W052 and was found just in the northeast corner of AS18—but we only exposed about 1 m of this wall (although

it was visible from the surface). Thus, the walls defined a building about 10×5 m in

Figure 9. L.060, a gap in W052, probably the entrance to the building interior.



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dimension and allowed us to excavate intramural and extramural contexts. There were no immediate differences apparent between these groups of loci—and sherds mostly appeared to be heavily rounded and thus tertiary in deposition—but specialist research might want to consider this spatial division.

In some places, the walls appeared to be only one (massive) stone in thickness. In other places, the wall was two stones thick. Again, medium cobbles appear to have been placed only on the interior of the wall. Both walls were only preserved to one or two courses in height, and they were built directly on large layers of basalt boulders and pumice. In some places, fill may have been used to level the ground for the construction of the wall. The clearest example of this was as a pack of small cobbles (thumb- to fist-sized) running underneath W203.

Wall W052 may have had an entrance at roughly the midpoint in trench AS19 (fig. 9). The bottom of this entrance, if indeed it was one, was labeled, but not excavated, as Locus 060, and consisted of medium-sized cobbles blocking up the entrance. Alternatively, the wall simply may have been disturbed post-abandonment. If this were the entrance, the building would have been entered from its western side.

POSSIBLE WALL FEATURES

Several features (or possible features) were associated with W052. The highest one, stratigraphically and absolutely, was a rectangular arrangement of stones lying close to the surface. There were very few artifacts from this feature, and it may well have been an ephemeral arrangement of stones. However, the stones were rectilinear, and the arrangement was up against W052, as one would expect from a bin or storage feature. Visible in section within AS18, but not excavated in 2019, was a large circa 30×5 cm rectangular stone that may have been culturally modified. Also found up against the wall at around this elevation was a Chalcolithic basalt stand fragment.

Below L.057 was another feature, somewhat more convincing, although still potentially non-cultural in origin: L.058, a circular arrangement of medium-sized cobbles roughly 40–50 cm in diameter. It may have been built into the wall just above the bedrock and near the hypothesized entrance. However, L.058 might also be a natural feature, as there were several occasions when the excavators encountered circular arrangements of medium cobbles (they might be related to tree growth, or they may be random). A similar circular arrangement of medium-sized cobbles was found just to the south of the doorway. Nothing was found in this feature except for some pottery sherds and chipped stone in roughly the same density as seen elsewhere up on the bedrock. The same was true for the other circular "feature" to its south.

The most convincing feature in proximity/association with W052 were three flat stones articulated together and lying near the entrance in the middle of W052 in square AS20. Also near the wall were a good number of small and medium-sized sherds, some lying flat and directly on the bedrock and clustered near the edge of the wall throughout AS19 and AS20.

Beneath the topsoil, in both the intra- and extramural contexts, all of the deposits were characterized by dark brown clay with basalt pebble inclusions—quite compact and difficult to excavate— and a high proportion of medium and large cobbles, which consisted of either wall fall, slope wash, or (most likely) a mixture of the two. Thus, these deposits were stratigraphically later than the walls, although it is important to note that the relationship was not always clear, especially since the rocky rubble continued below the bottoms of the walls in some places. Additionally, excavators identified sizable rodent disturbances in many places across the units, especially near and within the walls.

Square AS20, which was opened on July 25, was divided into L. 202, west of W052, and L. 201, east of it. Both loci consisted of compact clay and many small, medium, and large cobbles. W203 ran along the SE edge of the trench, and we did not excavate south of it.

Finally, in AS18, L. 226 (intramural) was south of W228 and 227 (extramural) was north of it. AS18 had a steep slope running north to south, but nevertheless these were basically the same deposits as described above—rocky rubble and dark brown clay. In fact, there was no detectable difference in soil composition, inclusions, or cobble density between the extra- and intramural deposits. Locus 227, however, was higher up and was close to an extant terrace wall. We excavated through what was likely collapse from this terrace wall, stopping and closing 227 once we'd exposed a few centimeters of the northern face of W228.

Finds in these deposits in AS18 included basalt ground stone fragments and increased quantities of pottery sherds and lithics. Finds density, though, remained generally low, although this increased as we got closer to the bedrock. Fill in this area was apparently a mixture of collapse off the walls as well as wash and stones deposited from upslope. Many sherds were significantly rounded, and lithic artifacts were mostly broken into small pieces, suggesting re-deposition. Other larger lithic artifacts suggested secondary deposition. The high volume of stones in the fill of all contexts could suggest that the architecture was made entirely of stone as opposed to mudbrick, although we cannot determine that with any accuracy.

As we excavated into this rocky rubble layer, the sediment became redder in places, especially in the intramural areas. This transition usually occurred gradually, with pockets of the more friable reddish clay mixed into the natural dark brown/black basaltic sediment. Locus 056 was an area around 1×2 m of friable reddish clay on top of bedrock that persisted to a depth of around 10 cm. This reddish clay is almost certainly anthropogenic in nature and lay near the floor of the interior of the structure enclosed on its west by W052 and sandwiched between a layer of natural bedrock and cobble rubble below and another layer of cobble rubble fill above. This may have been part of a prepared surface for the floor of the building, but at the moment we remain uncertain about this hypothesis.

In general, material culture was low in AS18–20, as it was at Horvat Duvshan in general. However, we did find a red bead near the surface in L. 051 and a fragment of a basalt fenestrated stand (B. 1123, L. 053) in situ near wall W052 (fig. 10).



Figure 10. Fragment of basalt fenestrated stand between stones at interior of wall entrance.

CONCLUSION

A season of excavation at H. Duvshan provided an important window into the site, giving us a glimpse of what is and is not preserved from the Chalcolithic. While the density of material culture remained low across all excavation units, within the 50 sq m exposed by AS18–20, we have at least a few important pieces of information. First, the positive: Virtually all of the pottery appeared to be Chalcolithic in date, and similar to Golan ware, which is unsurprising given the relative proximity of the Golan sites. Second, we exposed a building and defined its architectural features. The construction of this structure was crude, but the building was built upon bedrock, perhaps leveled in places with rocky fill (204), and a floor surface may have been prepared (056). However, within this building, heavily rolled sherds and broken, chipped stone artifacts hint at tertiary deposition, with the notable exception of the in situ sherds near the bedrock. The total lack of organic remains (seeds or animal bones) is not too surprising given the limited soil depth, the tertiary nature of most of the deposits, and the acidity of the basaltic soil.

FUTURE RESEARCH

Despite the poor preservation of artifacts and biological remains, in the excavated areas, the site of Horvat Duvshan is intriguing for its size and the clearly Chalcolithic nature of the remains on the surface. An additional season is planned to investigate the spatial layout of what appears to be a large village. In addition, we would like to explore the possibility that the substantial terrace walls may also date to the Chalcolithic, an assumption that we might normally discount in favor of more recent terracing activity. Yet the lack of artifacts dating to other periods along with the substantial preservation of Chalcolithic architecture lead us to wonder whether perhaps the agricultural Chalcolithic inhabitants of the region were already building substantial terraces on these well-watered and fertile slopes.

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INDIVIDUAL RESEARCH



OVERLEAF: OI centennial gala festivities. Photo: John Zich.

ABBAS ALIZADEH'S OIP manuscript—Lowland Susiana in the Fourth Millennium BC: Excavations at KS-04, KS-59, and KS-108—on the excavations at three urban settlements of Abu Fanduweh, Chogha Do Sar, and Beladiyeh in lowland Susiana, southwestern Iran, is being processed at the Publications office. These excavations were conducted from 2004 to 2005 as part of the Oriental Institute Iranian Prehistoric Project. They provide a complete sequence of the major types of the fourth millennium BCE ceramics for the three important stages of socioeconomic and political development of the early state and urbanism in the region. At Abu Fanduweh we uncovered a well-preserved major monumental building of Late Susa II (Late Uruk) period. A large mudbrick platform, much like the famous Susa platform, but smaller, was discovered at Chogha Do Sar. Just like the one from Susa, this platform was also subjected to conflagration. Many 1 × 1 m test trenches around the periphery of these sites helped to correct size estimates of these sites that were reported by Gregory Johnson.

The preparation of my other OIP manuscript on the excavations of five prehistoric settlements (Tall-e Bakun A and B, Tall-e Jari A and B, and Tall-e Mushki) in the plain of Persepolis was proceeding well, but the coronavirus crisis and inaccessibility to the archives and my own office has substantially slowed the process. When completed, the results of this 2004 fieldwork will provide the hitherto unavailable absolute radiocarbon dates for these key settlements in the region, as well as stratified sequences of the local pottery and evidence of subsistence economy from circa 6800 to 4000 BCE.

In addition to these works, my manuscript for the Persian Gallery was submitted in 2018 and is still waiting in the queue for its turn. Because of the same crisis, I had to abandon my new project, "The Archaeology of Apprenticeship," until there is again access to archaeological materials in our collections and the Iran Bastan Museum, as well as the possibility of ethnoarchaeological research of modern Iranian potters.

RICHARD H. BEAL, having seen at the end of the last report the *Chicago Hittite Dictionary*'s fourth and final Š fascicle, has now begun updating the manuscripts for the CHD T volume. Many of these were written over a decade ago by Professor Hoffner, Oğuz Soysal, Alice Mouton, and Beal himself. However, much new research and many more editions of texts have come out since then. So each article needs to be updated. On March 10 he decided to do as much work from home as possible to minimize risk of the COVID-19 virus. For the past forty-five years, he has been buying, Xeroxing, and scanning books and articles, which he has kept at home, since the CHD office houses the late professor Hoffner's library and just downstairs is the Research Archives. He assumed that he would still come in as needed. He did not at that moment realize that a lockdown of the building was about to happen. However, shortly after lockdown, his aged home computer decided to start crashing. So with permission from Knut and Vick, he arranged for museum guard Steve Weingartner to bring his office computer to his home. Since the condo association just recently got all apartments internet connections, he has been able to access the *Hethitische Konkordanz* of the Universität Würzburg. Anything not immediately available is noted in blue and can then be easily fixed whenever normality returns.

This period has also seen the appearance of his "Hittite and Anatolian Studies at the OI" in the Discovering News Pasts, the OI at 100. Professor of Assyriology D. D. Luckenbill was reading texts from

Hittite Boğazköy in classes in the first years of the OI, soon after the texts were published. In 1929 Breasted hired a professor of Hittitology, Emil Forrer, who unfortunately came up with three years of excuses not to fulfill his teaching duties in Chicago. Fed up, Breasted replaced him with Arnold Walther. Since Walther's early death, Hittite has been taught by I. J. Gelb, Hans Gustav Güterbock, Harry Hoffner, Theo van den Hout, and Petra Goedegebuure. And, of course, there's the *Chicago Hittite Dictionary*, which Beal has worked on since its inception in January 1976. Anatolian archaeology flourished from 1926 to 1932, with a broad survey of Anatolia by Hans Henning von der Osten accompanied by excavations at Alişar Höyük, as a result of which co-director Erich Schmidt established the first pottery chronology of Anatolia. Anatolian archaeology only really returned to Chicago in 1993 with the hiring of Aslıhan Yener, and subsequently James Osborne.

Beal also wrote "Open Your Ears and Listen! The Role of the Senses Among the Hittites," which will be a chapter for Routledge Handbook of the Senses in the Ancient Near East.

The eyes, ears, mouth, and nose are discussed, as well as 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 in the course of the year.

He has also been working on a review of Gary Beckman's *The Hittite Gilgamesh*, an edition of the Akkadian, Hittite, and Hurrian pieces of the Gilgamesh story that were found at Boğazköy. These 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 and his wife, JoAnn Scurlock, saw the appearance of the papers of a one-day Midwest American Oriental Society conference at St. Mary's University in Notre-Dame, Indiana, which they edited. The book is entitled What Difference Does Time Make? Ancient, Biblical and Islamic Middle Eastern and Chinese Studies Celebrating 100 Years of the Midwest Branch of the American Oriental Society. It is published by Archaeopress of Oxford, England. OI alumna Scurlock published two papers, one on time and the gods at Nippur, and one linking Mesopotamian festivals with the Judean site of Ramat Rahel and Rosh Hashannah and Yom Kippur.

Beal and Scurlock also spent a month in August and September travelling for the fourth time to Iran, adding to their collection of photographs of Iranian architecture and museum collections from Elamite through Sassanian through Qajar and early Pahlavi, and on to interesting modern buildings and sights. The scaffolding was finally off the Darius relief at Bisitun—the Darius relief that was the key to deciphering cuneiform. We also found the Assyrian Golgol relief and visited the newly excavated, stunning reliefs in the Sassanian Bandin Fire Temple in Dargaz. We made a second visit to Izeh (ancient Ayapir) to photograph more Elamite reliefs. At the not-yet-open Izeh museum, we were allowed to photograph some newly found carvings. We put the museum director in touch with Elamitologist Katrien de Graef, and they will publish an inscribed macehead. Perhaps most excitingly, we were permitted to view and photograph the Ashura (mourning for Shiite founder Hussein) ceremonies and stage play in the best-preserved traditional city of Yazd.

ROBERT D. BIGGS spent some of the year updating his contribution to the publication of the Oriental Institute's excavation of the Inanna Temple at Nippur. He continued his role on the editorial board of the series Die Babylonisch-Assyrische Medizin in Texten und Untersuchungen, published in Berlin.

For **ALAIN BRESSON** this year has been very fruitful in terms of publications. He published one article and five chapters. Two of them, "Pidasa, Miletos, and the Karian revolt" (in *Karia Arkhaia*, Istanbul 2019) and "The Choice for Electrum Monometallism: When and Why" (in the *White Gold* volume 2020) deal directly with the history of archaic and classical Asia Minor, and are, so to speak, in the sphere of interest of the Oriental Institute. The first paper is devoted to one aspect of the Achaemenid reconquest of Caria between 498 and 494 BCE. The second one investigates the form taken by the switch to coinage, in the form of electrum coinage, in western Asia Minor in the second half of the seventh and early sixth century BCE. It is based among others on a new investigation of the Artemision lead tablet found by Hogarth during the excavation of this sanctuary. It concludes that the tablet aimed at preparing electrum by alloying gold and silver.

On Friday, April 17, 2020, Alain was supposed to organize, together with Elizabeth Fagan, a workshop on Armenia: Ancient Armenia: Center and Peripheries. One month before the event, because of the COVID-19 crisis, they had to postpone the workshop to April 2021. Alain wishes to thank the OI and its director Chris Woods for their continued support under the circumstance.

Alain has in preparation a long article on Herodotus and the Achaemenid tribute, which should be published at Oxford in the Arshama volume edited by Christopher Tuplin and John Ma. The third part of the chapter presented at the OI in fall 2019 with the title: "Achaemenid Tribute: a Greek Phantasm?" The chapter is fundamentally: 1) a new reading of the famous pages of Herodotus on the Achaemenid tribute; 2) a new approach on the question of the tribute, based on a macro-economic investigation that suggests the integration of the history of the Mediterranean world and that of the Eastern empires, especially the Achaemenid Empire.

JOHN BRINKMAN's research on the Ahlamu (early Arameans) and their Amorite kin in the Middle Babylonian period continued, with fifty-four named individuals now identified, belonging to five clan groups. Progress was also made on the Khorsabad text publication, with Simo Parpola (University of Helsinki) updating his contribution and Grant Frame (University of Pennsylvania) completing his basic text edition of the royal inscriptions of Sargon II. Mr. Brinkman also worked on editing one of the two known legal documents, both unpublished, from the reign of the Babylonian king Marduk-balassu-iqbi (ca. 815 BC). This text, unearthed in our Nippur excavations, deals with the monarch's conferral of a temple benefice (prebend) during a time marked by his dynasty's massive restoration and reorganization of temple rituals and finances in the aftermath of a century of Babylonian political and economic collapse. Momentum on these projects has inevitably been slowed over the last few months of the academic year because of lack of access to the texts themselves and to libraries and offices occasioned by the university's lockdown in response to the COVID-19 pandemic.

FRED M. DONNER continued his work on Arabic papyri during the year, but progress on all research was dramatically slowed by the need to do teaching entirely online during the spring. This required the preparation of a series of PowerPoint presentations to accompany pre-recorded lectures so that students, scattered all over the globe because of the coronavirus, could view lectures at a time that was practical for them. His short article "Who's Afraid of Shari'a Law?" appeared in Whose Middle Ages? Teachable Moments for an Ill-Used Past, edited by A. Albin et al. (Fordham University Press). He also spent considerable time editing the papers for the volume Scripts and Scripture: Writing and Religion in Arabia, ca. 500-700 CE, to appear in the institute's publication series LAMINE (Late Antique

and Medieval Islamic Near East). He presented a paper on "The Qur'an and the State" at the third international meeting of the International Qur'anic Studies Association (IQSA) in Tangier, Morocco, on July 26, 2019. After thirty-eight wonderful years at the Oriental Institute and the University of Chicago, he will be retiring in September, but plans to stay in Chicago and hopes to continue working with the institute's collections—once the strictures of the pandemic are relaxed, whenever that may be.

FRANÇOIS GAUDARD completed his twenty-sixth year as member of the Oriental Institute scholarly community. During the past academic year, he kept working on various text edition projects and the Mummy Label Database (MLD) (see separate report).

His first article in a series dedicated to the study of the Oriental Institute Museum funerary shrouds from the Greco-Roman period was published in 2019 and deals with Shroud OIM E4786 (see fig. 1). The second article in this series, about Shroud OIM E4789, was submitted for publication, and two other articles are in preparation. Interestingly, in shrouds OIM E4786,



Figure 1. Shroud OIM E4786.

OIM E4788, and OIM E4789, the toponym T?-rr "Ta-rer," a designation of Dendera, occurs always as $\overline{\mathbb{S}}$ 0, with the sign \longrightarrow (N17) written twice instead of once. This writing can be read as T?-T?-rr, a variant of $\overline{\mathbb{S}}$ 0 T?-rr "Land of Ta-rer," itself being a less common form of $\overline{\mathbb{S}}$ 0 T?-rr "Ta-rer." Alternatively, we could also consider that in the writing $\overline{\mathbb{S}}$ 0, the group \mathbf{m} \mathbf{m} 2. \mathbf{m} 3 \mathbf{m} 4 is used inaccurately for \mathbf{m} 5 (see \mathbf{m} 6) \mathbf{m} 6. V, 219) and read this toponym \mathbf{m} 7:- \mathbf{m} 7.

As part of his series of articles regarding some little-known aspects of the god Seth, François is currently writing a third one. He has also been working on the following papers:

- "Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part II: Shroud OIM E4789," to be published in a Festschrift honoring a colleague (submitted).
- "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).
- "A Demotic Accounting Text from the Ptolemaic Period" (in preparation).

François would also like to pay tribute to Lanny Bell, one his former professors, whose passing, on August 26, 2019, saddened him greatly. Among other things, Lanny served as field director of the Epigraphic Survey and professor of Egyptology at the University of Chicago. His knowledge of ancient Egypt was as deep as his passion for teaching. Above all, he was profoundly kind, humane, and generous. Like a new John Keating, Lanny encouraged his students to "make their lives extraor-

dinary," and each time François thinks of him, it is Walt Whitman's famous apostrophe that comes first to his mind: "O Captain! My Captain!"

¹ François Gaudard, "Funerary Shrouds from Dendera in the Oriental Institute Museum of the University of Chicago. Part I: Shroud OIM E4786," in *Sur les pistes du désert: Mélanges offerts à Michel Valloggia*, ed. Sandrine Vuilleumier and Pierre Meyrat (Gollion: Infolio, 2019), 63–70.

Together with the CHD team, **PETRA M. GOEDEGEBUURE** published *The Chicago Hittite Dictionary* volume Š/4, -šma/i- to šuu (Oriental Institute 2019; see further Project Reports).

Many activities this year were geared toward Petra's project on the Anatolian core cases Expressing Agency and Point of View. The insights that the coding of Hittite nouns with nominative, accusative, ergative, or absolutive evolved from a system where nouns were classified as count nouns or mass nouns and collectives led to the (in her view surprising) outcome that the use of the genitive was likewise sensitive to the countability of a noun. For example, the genitive plural ending -an can be used with singular neuter nouns. That does not mean that -an is singular. Instead, it is used to denote the sum of all individual, hence countable, members of a singular neuter collective ("The Old Hittite Plural Genitive -an," in QAZZU warrai: Anatolian and Indo-European Studies in Honor of Kazuhiko Yoshida, ed. Ronald Kim, , 59-72, Ann Arbor and New York: Beech Stave Press 2019). Work on the genitive continued in an invited presentation on whether certain forms were singular genitives on -as or individuated forms on -a+s (i.e., mass nouns that receive a marker -a- that turns them into count nouns, followed by the nominative singular ending -s) (Hittite Individuating -a-: Thematization or Freestanding Genitive? June 14, 2020. Virtual East Coast Indo-European Conference XXXIX). Continuing the study of the nominative, Petra stumbled upon an interesting case of wordplay in Hittite. She corrected the meaning of a short sentence n=as warkesta, "he became fat," to "he became angry." The root wark- still means fat, and therefore Petra could show that the Hittites used the typologically common "swell" metaphor to express anger (The Fat and the Furious: Word Play in Hittite. November 9, 2019, 31st West Coast Indo-European Conference, UCLA). Another presentation that was part of the project was canceled by COVID-19 (Keynote lecture: The Rise of Hittite Split-Ergativity, Contact-Induced or Independent Language Drift? February 26, 2020. University of Verona, Italy). Many more meetings were cancelled, but we will not dwell on that.

Together with OI colleagues Theo van den Hout and James Osborne, Petra published a first edition of a Hieroglyphic Luwian inscription from Turkey, discovered by Osborne's team. This inscription revises our understanding of the development of the states of Iron Age Anatolia ("TÜRKMEN-KARAHÖYÜK 1: A New Hieroglyphic Luwian Inscription from Great King Hartapu, Son of Mursili, Conqueror of Phrygia," with Theo van den Hout, James Osborne, Michele Massa, Christoph Bachhuber, Fatma Ṣahin, *Anatolian Studies* 70 [2020]: 29–43). Another Luwian article proposed values for symbols that could not be read until now, resulting in the identification of several new lexemes. ("The Hieroglyphic Luwian Signs *128 (AVIS 'bird') = wa and *30 = HAPA," in Aygül Süel (ed.), IXTH ULUSLARARASI HİTİTOLOJİ KONGRESİ

BİLDİRİLERİ, Çorum 08-14 Eylül 2014. Çorum 2019, 295-316).

Petra was deeply honored to be invited to deliver the 2nd Marija Gimbutas Memorial Lecture (Anatolians on the Move: From Kurgans to Kaneš, February 5, 2020).

GENE GRAGG's "Paradigm Survival and Innovation in Cushitic: Grammaticalization / Niche Construction" from the June 2019 Paris NACAL conference will appear in proceedings to be published by the Institut natonal des langues et civilisations orientales in Les Publications du LACITO. The paper explores some of the interesting consequences of niche modification (flow of information, modification of selection pressures) in the context of developments in the verbal morphology of Beja (North Cushitic). Otherwise a period of reflection on the methods and goals of the AAMA project, reinforced in part by COVID-19-isolation, have led to a broadening of the synchronic and diachronic scope of the morphological queries, and a hopefully more generally accessible computational environment. Stay tuned to aama.github.io for developments.

This academic year, **REBECCA HASSELBACH-ANDEE** worked on several research projects. She finished the final editing of her volume A Companion to Ancient Near Eastern Languages (Wiley Blackwell) in the fall. The volume contains twenty-eight chapters on various aspects concerning ancient Near Eastern languages, including chapters on their writing systems and decipherment, language descriptions of the major ANE languages and language families, and chapters on topics such as language contact, the development of literary and standard languages, and the use of certain languages as diplomatic languages or linguae francae. Hasselbach-Andee wrote two articles for this volume herself: first, the chapter on Akkadian, and second, a chapter on multilingualism and diglossia in the ancient Near East. The volume was published in early spring 2020. She also finished her translation and revision of Josef Tropper's grammar of Classical Ethiopic (Ge^cez), which has been accepted for publication by Eisenbrauns. In addition, Hasselbach-Andee worked on several smaller projects. She almost finished an article on ergativity in Neo-Aramaic. Certain Neo-Aramaic dialects are traditionally claimed to have split-ergative alignment, that is, a different configuration in how they mark certain syntactic functions such as the subjects of transitive and intransitive verbs and patients than found in accusatively aligned languages such as English and other Semitic languages. Hasselbach-Andee argues that these Neo-Aramaic dialects are not in fact ergatively, but rather semantically aligned, since they have a split in how intransitive subjects are marked that is based on semantic rather than syntactic factors. This article requires a few minor revisions that will be completed over the summer. The project was presented at an invited lecture at the University of Heidelberg in the fall, where it received positive feedback. In addition, Hasselbach-Andee is continuing to work on her project on Eblaite and Akkadian. The first stage of this project focused on comparing Akkadian and Eblaite phonology and morphology in order to determine where the two differ and in what way. The second stage, which is on its way now, deals with sociolinguistic theories of language contact and what kind of general contact we can trace between Mesopotamia and (northern) Syria during the third millennium BCE in general.

Besides these research activities, which were greatly impacted by the current crisis, Hasselbach-Andee continued to serve on the Oriental Institute's publication committee.

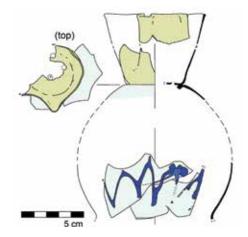
JANET H. JOHNSON was on leave this year working on the manuscript of her forthcoming volume *Women in Ancient Egypt, a Sourcebook*, which will be published in the series Writings from the Ancient World published by the Society for Biblical Literature. She is preparing translations, (short) commentaries, and brief introductory material on a wide range of texts involving women, ranging from the Old Kingdom through the Ptolemaic Period. It will include texts illustrating such topics

as women and the family, women and the economy, women and religion, women and the law, and women's health. She spent the fall quarter working on Ptolemaic Period texts involving women in preparation for giving a keynote talk on "Women in Demotic (Documentary) Texts" for the conference Women in Ancient Egypt: Current Research and Historical Trends, organized by Mariam Ayad at the American University in Cairo (the Proceedings will be published through the AUC Press). For her work on the Demotic Dictionary, see that report.

This year **W. RAYMOND JOHNSON** completed his forty-second year working in Egypt, his forty-first year working full time for the Epigraphic Survey, and his twenty-third season as Chicago House field director. On November 22, Ray presented a lecture entitled "Art and the Arrested Moment: New Talatat Joins and Assemblages from Amarna," at What Was Art in Ancient Egypt? Inquiries in Honorem Marianne Eaton-Krauss, Berlin Academy of Sciences and Humanities, Berlin, Germany. On June 10, Ray presented an Oriental Institute Online Members' Lecture entitled "Medinet Habu and Tel el-Amarna: Tales of Blocks and Towers" that can be accessed on YouTube for eternity. In addition, Ray submitted three secret FS articles, about which we can say nothing until they have been presented to the recipients. This summer Ray has participated in regular Zoom meetings of the Minya Akhenaten Museum Steering Committee, where he serves as Amarna art consultant and helps coordinate the museum's Amarna *talatat* block displays.

During the 2019–20 academic year, **MORAG M. KERSEL** was an Oriental Institute affiliate with the Galilee Prehistory Project (GPP). In order to expand inquiry into the understudied Chalcolithic period, the GPP moved to the eastern side of the Galilee of Israel and began new investigations. In the summer of 2019, Morag (with Yorke Rowan) carried out excavations at the Chalcolithic (ca. 4500–3600 BCE) site of Horvat Duvshan in the eastern Galilee. She continued to work on material from the earlier archaeological investigations at Marj Rabba. In a 2020 issue of Archaeological and Anthropological Sciences, Kersel was a co-author of "Fodder, Pasture, and the Development of Complex Society in the Chalcolithic: Isotopic Perspectives on Animal Husbandry at Marj Rabba." Kersel and OI affiliate Austin (Chad) Hill published two articles on the Landscapes of the Dead Project documenting landscape change at the Early Bronze Age site of Fifa, Jordan, due to anthropogenic forces (looting and illegal digging): "Databases, Drones, Diggers, and Diplomacy: The Jordanian Request for a US Cultural Property Bilateral Agreement" in the Journal of Field Archaeology (issue no. 45) and "The (W)Hole Picture: Responses to a Looted Landscape" in the International Journal of Cultural Property (issue no 26 #3). Kersel has a strong record of professional service in national and international scholarly organizations. She is an elected Academic Trustee of Governing Board of the Archaeological Institute of America (AIA), the nation's largest archaeological organization. She is an Academic Trustee of the American Center of Oriental Research, Amman, Jordan. She gave a number of public lectures, including the June 2020 Breasted Society Salon on "The Museum of the Bible, Hobby Lobby, and the Acquisition of Artifacts." In the fall of 2019, she delivered keynote addresses at the Smithsonian Institution ("Buying and Selling Mesopotamia: Possible Journeys of 'Approximately 450 Ancient Cuneiform Tablets'"), and at Miami University ("The (W)Hole Story: Looting, Loss, and Landscape at an Early Bronze Age Site in Jordan"), OH, as part of International Archaeology Day.

CAROL MEYER's research on the massive Islamic glass corpus from Aqaba, Jordan, continued with analysis of all the 1993 material, a great deal of work tracking down comparisons from other sites, and reorganizing the corpus, first by period (Umayyad, Abbasid, Abbasid-Fatimid, Fatimid and later) and then by shape. This is more useful than giving the entire corpus a five-hundred-year date range, from circa 630 to 1125, as was too often done for Islamic corpora in the past. Much of the 1993 glass came from the mosque area. The expectation of a large number of lamps was met, but the one for windowpanes was not, though windowpanes are not universal in this hot part of the world. What was not expected was so many tesserae, presumably from a now decayed mosaic, or so much very fancy glass, such as the elaborate filter jar illustrated here. Ceramic filter jars are a hallmark of Medieval Islamic pottery, but glass filter jars are



Glass filter jar (93-00021-23) from Aqaba mosque area.

as yet unattested at any other site. The database has been made more user friendly by combining the University of Copenhagen and the Oriental Institute material on the main database table, and by elaborating the page layouts so that a user can click through to the references on the comparanda table. When COVID-19 permits, work will resume on the last season, 1995, and ultimately the final typology and preparation for publication.

Meyer also continued work on the publication of the material from the Fourth Cataract sites at Al-Widay and Hosh el-Geruf, Sudan. Part of this is a study of gold processing at Hosh el-Geruf in the Middle and Classic Kerma periods, roughly 2050 to 1500 BC or the Middle Kingdom through the Second Intermediate Period. Gold from the Fourth Cataract region came primarily from alluvial sources, very different from the hard-rock mining operations at Bir Umm Fawakhir in the Eastern Desert of Egypt, and was processed by fine grinding and painstaking washing to recover the maximum amount of gold. Where did the gold go? Probably to the most complex site in the region, Kerma, at the Third Cataract, but the relationship between the Fourth and Third Cataract settlements deserves investigation. Meyer is also preparing pottery drawings from the Al-Widay cemeteries for publication. After so many sherds, it is nice to draw intact vessels!

Finally, the long-delayed article on the Islamic and pre-Islamic glass from Area WG at Nippur, Iraq, was finished and has been accepted for publication by the Bulletin of the American Schools of Oriental Research.

Writing this report is bittersweet for outgoing postdoctoral fellow **KATHRYN MORGAN**, who has relocated from Chicago to Durham, North Carolina, to take up a position as assistant professor of classical studies at Duke University. She can only hope her new colleagues will prove as knowledgeable and supportive as those she found at the OI!

The past year again found Kate tacking between her two major research areas, Middle Bronze Age Zincirli and Iron Age Gordion. A presentation she delivered in early 2019 on the Zincirli excavations led to an exciting collaboration with Seth Richardson, combining their respective strengths in text and archaeology to produce a new article on the north Syrian wine trade, "Wine from Mamma: alluharum-pots in Seventeenth-Century BC Trade Networks" (Iraq 2020). She also presented on recent work at Zincirli at the Cotsen Institute of Archaeology (UCLA) and co-authored a report on

Middle Bronze Age animal economies at the site with faunal remains specialist Laurel Poolman, a PhD student at Johns Hopkins University (Proceedings of the XIVth ASWA). Kathryn's longer interim report, on architecture, ceramics, and small finds from Zincirli's newly discovered Middle Bronze Age monumental complex, is in press at BASOR and will soon be available online, alongside a companion article on the historical context of the discovery by Zincirli project directors Virginia Herrmann and David Schloen. Finally, a small study season at Zincirli in October 2019, partially funded by a Seger Grant from the American Schools of Oriental Research, allowed her to reconnect with Turkish and international colleagues and continue studying the finds from this prolific new archaeological context. She looks forward to resuming fieldwork at Zincirli as soon as possible, hopefully in 2021.

Like most of her colleagues, Kate's spring plans for conference and research travel were derailed by COVID-19. She has instead spent much of 2020 focused on shepherding the proceedings of her 2019 Oriental Institute seminar, Pomp, Circumstance, and the Performance of Politics: Acting Politically Correct in the Ancient World, to publication. The events surrounding George Floyd's death have lent the thematic questions posed by the conference—around political subjectivity, agency, and expression—even greater resonance. She presented her ongoing research at Gordion and on Iron Age monumental practices locally, in the university's Ancient Societies Workshop; online, for the OI's Facebook Live! series; and over Zoom throughout spring quarter, teaching her seminar, "'Asia Minor' Between Myth and History: Towards a Postcolonial Archaeology of Anatolia," where she experienced firsthand the incisive wit of University of Chicago students. The class culminated with the students' production of a series of stunning, interactive ArcGIS Story Maps, probing issues of fact, fiction, continuity, and change in Anatolian history.

Kate leaves the OI profoundly enriched and full of gratitude for the colleagues and conversations that made her time there so rewarding: her fellow Anatolianists Petra Goedegebuure, Theo van den Hout, and James Osborne; her fellow archaeologists David Schloen, Gil Stein, and Yorke Rowan; her officemates and neighbors Aleksandra Hallmann, Kiersten Neumann, Delphine Poinsot, and Tasha Vorderstrasse; senior colleagues Hervé Reculeau, Seth Richardson, Jean Evans, and Chris Woods; and the wonderful Publications and Development staff, Charissa Johnson, Steve Townshend, Polina Kasian, and Ali Mallett. It has been Kate's great pride and pleasure to be part of the OI.

BRIAN MUHS submitted two manuscripts for publication in 2019–20. In September he submitted the article "Wearing Wealth: Cloth and Clothing as Currency in Ancient Egypt," to be published in Aleksandra Hallmann-Weninger's (ed.) *Outward Appearance vs. Inward Significance: Addressing Identities through Attire in the Ancient World* (Oriental Institute Seminar 14. Chicago: Oriental Institute). In May he also submitted a book manuscript written with Foy Scalf and Jacqueline Jay, *The Archive of Thotsutmis, Son of Panouphis: Early Ptolemaic Ostraca from Deir el Bahari (O. Edgerton)*, (Oriental Institute Publications. Chicago: Oriental Institute), which was accepted for publication in June.

Brian gave several academic lectures in 2019–20. He gave a paper, "The Transition to Coinage in Egypt: Evolution Rather than Revolution," and co-presented with Tasha Vorderstrasse another paper, "Two American Collectors in the Near East in 1847–1848," both at the American Schools of Oriental Research 2019 Annual Meeting, San Diego, November 20–23. Brian also gave a paper, "A Diachronic Survey of Ancient Egyptian Sealing Practices from the Predynastic through the Graeco-Roman Periods," at the 16th Annual Oriental Institute Seminar, "Sealing Theories and Practices in the Ancient Near East," Chicago, March 5–6.

Brian also participated in community outreach on several occasions in 2019–20. He gave a lecture on "Raiders of the Lost Ark and Tanis" at the Indiana Jones film festival at the Oriental Institute

on October 12, and a lecture on "Ancient African Empires of Nubia" at Blackstone Public Library, Chicago, on November 13. He taught an Oriental Institute adult education course on "Dinosaurs and Other Fossils of Egypt" on February 13 and 20, and he gave a lecture on "Daily Life in Pharaonic and Graeco-Roman Egypt" at Barrington's White House on March 8. He also gave an online lecture on "Meroitic Language, Scripts and Texts of Ancient Nubia" for session 2 of the Oriental Institute Ancient Language Seminar on May 17.

During the 2019–20 academic year, **KIERSTEN NEUMANN** continued to devote her research endeavors to explorations of sensory experience and material production with respect to Assyrian and Achaemenid art and architecture. Her book project exploring the degrees of ritualization and socially valued multisensorial phenomena of the Neo-Assyrian temple is still in the works, and concurrently she is moving forward with a co-edited volume for which she is under contract with Routledge/Taylor & Francis Group, entitled *A Handbook of the Senses in the Ancient Near East*, for which she and her co-editor, Dr. Allison Thomason, professor at Southern Illinois University Edwardsville, have received over thirty contributions. In addition to co-authoring the introduction to the volume, Kiersten is contributing a chapter, entitled "To Touch Upon: A Tactile Exploration of the Apadana Reliefs at Persepolis." The volume is expected to be published in 2021.

Kiersten had two articles appear this year in edited volumes, both of which were the product of her participation in prior international conferences. One chapter, "Sensing the Sacred in the Neo-Assyrian Temple: The Presentation of Offerings to the Gods," appeared in the volume In Distant Impressions: The Senses in the Ancient Near East, edited by A. Hawthorn and A-C. R. Loisel (Winona Lake, IN: Eisenbrauns). The second chapter, "Laying the Foundations for Eternity: Timing Temple Construction in Assyria," was included in the volume Sounding Sensory Profiles in Antiquity: On the Role of the Senses in the World of Ancient Israel and the Ancient Near East, edited by T. Krüger and A. Schellenberg (Atlanta: SBL Press). She has also submitted for publication a chapter entitled "From Raw to Ritualized: Following the Trail of Incense of the Assyrian Temple," to appear in the forthcoming volume Sensing Divinity: Incense, Religion and the Ancient Sensorium, edited by A. Grand-Clément, A. Vincent, M. Bradly, and A-C Rendu Loisel (Cambridge University Press). Kiersten also contributed to OI publications, including a co-authored article with Abbas Alizadeh on Robert J. and Linda Braidwood for the OI centennial volume, Discovering New Pasts. For News & Notes spring 2020, she wrote an article entitled "Tracking the Lion & Bull of Persepolis," on the relief of the lion and bull in combat that was given to the OI in 1936 by the Iranian authorities in recognition of the work that went into uncovering and preserving the ancient site. The relief was previously displayed for eighty years at the Boston Museum of Fine Arts, where it was on long-term loan, and returned to Chicago in 2019 in honor of the OI centennial, joining some of its monumental Persepolitan sculpture companions in the Robert and Deborah Aliber Persian Gallery of the OI Museum.

Kiersten continues to present papers at academic meetings and international conferences. She was invited to present in a session on the Assyrian capital city of Dur-Sharrukin (modern Khorsabad) in Iraq—a session she also co-chaired—at the 65th Rencontre Assyriologique Internationale in Paris in July 2019; her paper was entitled "From Khorsabad to Chicago: (Re)telling the Story of the Assyrian Reliefs at the Oriental Institute Museum." She later presented a variation of this paper, entitled "A Dialogue with the Past and Present: Curating the Assyrian Collection at the Oriental Institute Museum," in San Diego in November 2019 at the American Schools of Oriental Research Annual Meeting in a session she co-organized and co-chaired with Dr. Lissette Jimenez of San Francisco State University. This marked the first year of the three-year run of the session "The Secret Lives of

Objects." In November 2019, Kiersten also joined the Program Committee for the American Schools of Oriental Research, to which she will bring her expertise as a museum curator and art historian for the next five years. Shortly thereafter she was invited to serve on the Ad Hoc Committee on ASOR's Name, owing to her experience serving as the principal coordinator of the OI's centennial rebranding and marketing strategy in 2018–20. The Ad Hoc Committee's charge is to consider whether ASOR's name is still appropriate for the organization and, if not, to recommend to the ASOR Board of Trustees a new name, or a modified name, or some selection of new or modified names that ASOR might adopt instead.

Back on campus in Chicago, Kiersten participated both in the Chicago Architecture Biennial in 2019, offering a talk in the OI Museum called "The Social Imaginary of an Assyrian Imperial City," and in the UChicago Interdisciplinary Archaeology Workshop series in 2020, with a talk entitled "From Raw to Ritualized: Following the Trail of Incense of the Assyrian Temple," a variation of the aforementioned chapter. Kiersten was invited to participate in two academic meetings in 2020—the 12th International Congress on the Archaeology of the Ancient Near East, Bologna, to present in a session on glazed-brick technology in the first millennium BCE, and a symposium at the Institute for the Study of the Ancient world in New York City to be held in connection with the institute's exhibition, A Wonder to Behold: Craftsmanship and the Creation of the Ishtar Gate at Babylon. Both of these meetings were postponed due to the impacts of COVID-19. As she composes this report, Kiersten looks forward to a time in which she can once again gather with colleagues to discuss new research endeavors and projects in conference sessions and over cocktails, yet at the same time she finds herself reflecting on the real challenges and changes facing academia that the global pandemic and social movements of 2020 have brought to the surface, not just in America but on a global scale.

In his submission to the OI Annual Report last year **JAMES OSBORNE** announced how June 2019 had seen the beginning of his new field project in Turkey: the Türkmen-Karahöyük Intensive Survey Project, or TISP. I started this project at the invitation of colleagues Michele Massa (British Institute at Ankara) and Christoph Bachhuber (Oxford University), who co-direct a large regional survey in the Konya plain of south-central Anatolia called the Konya Regional Archaeological Survey Project (KRASP). Visiting their survey area two summers ago, I was incredibly impressed by the archaeological landscape present in the Konya Plain. Although the region has long been famous for its prehistoric archaeological sites—especially the World Heritage Site of Çatalhöyük, one of the largest and most spectacular Neolithic settlements in Turkey—the plain is littered with tells of all periods, barely any of which have been excavated to date. I was astonished when I realized, as KRASP co-directors Massa and Bachhuber already recognized, that the Konya Plain was one of the richest Bronze and Iron Age regions of Anatolia despite its almost complete neglect by archaeologists.

One site in particular stood out, and that was the massive multi-period site of Türkmen-Karahöyük, which led me to propose to the KRASP team a rigorous survey of that site alone for several weeks. With the help of several graduate students from the OI and universities in Turkey, the Türkmen-Karahöyük Intensive Survey Project completed a highly successful season. Two significant findings stand out. The first is that Türkmen-Karahöyük likely expanded to a size of 125 hectares or more during the Late Bronze Age and Iron Age, making it one of the very largest sites in Anatolia at the time. The second was the chance discovery of a stele inscribed in Hieroglyphic Luwian composed by "Great King Hartapu." Hartapu has been known for over a century from two mysterious groups of inscriptions, one on a nearby hillside and one on a volcano summit overlooking the plain. Where and when he lived has never been known, and this inscription answers both questions: the paleog-

raphy of the script belongs to the eighth century BCE, dating Hartapu's reign, and the presence of the inscription at such a massive settlement almost certainly means that Türkmen-Karahöyük was his royal seat. Equally dramatic was the content of the inscription itself, which has been deciphered by Oriental Institute Hittitologists Petra Goedegebuure and Theo van den Hout, and which describes Hartapu's conquest of Muška, the ancient name of Phrygia. Since the eighth century is when the kingdom of Phrygia was at its height, it is possible that Hartapu was among the most powerful figures of Iron Age Anatolia.

All of these exciting new findings were rushed to publication in the scholarly journal *Anatolian Studies*, whose 2020 volume features three multi-authored articles based on KRASP and TISP's work: one led by TISP that introduces Türkmen-Karahöyük as the massive Bronze and Iron Age city that it was, one led by Goedgebuure and van den Hout that presents the Hartapu inscription, and one led by KRASP that situates Türkmen-Karahöyük in its regional context—even making the plausible argument that if it were the Iron Age capital of Hartapu, then Türkmen-Karahöyük may even have been the long-lost Hittite capital city of Tarhuntašša during the Late Bronze Age. Together this bundle of articles promises to make a deep splash in Anatolian archaeology.

Like everyone else, the COVID crisis changed **SUSANNE PAULUS**'s plans for this academic year severely. While many exciting opportunities were not possible—especially the excavations in Nippur and my trip to Iraq—I had more time for research and to explore the possibilities of online outreach.

My main research focus remained on the social and legal history of Babylonia in the Late Bronze Age (second millennium BCE). I continued my work on the editions of the Kassite texts from Babylon in the Vorderasiatische Museum, Berlin. Travel restrictions prohibited another research stay in Berlin, so I devoted but more time to studying and reading the photos of the tablets, which change our understanding of trade, real estate transactions, and loans. Information gleaned intersects nicely with my book project on *Approaching Economic Life in Kassite Babylonia*.

Early in the year, I gave two invited talks in Germany and at Harvard University on barley and its importance for the Babylonian economy. Furthermore, I completed two lengthy articles, the first of which, a history of Kassite Babylonia for the *Oxford History of the Ancient Near East*, is an essay focusing on the contribution of primary and secondary sources to our knowledge of this period. I wrote a second article on "Taxation and Management of Resources in Kassite Babylonia: Remarks on šibšu and miksu." Beyond a comprehensive introduction to the topic of taxation, the article presents a more in-depth look into two types of taxes, arguing that one is due to the provincial and the other to the royal administration. Besides, I finally completed the edited volume on *Babylonia and Kassite Dynasties* together with Tim Clayden (Oxford). Finally, I edited with Elena Devecchi (Torino) a series of articles on Kassite administration and sealing practices to be published in the journal *Mesopotamia*.

Beyond my core research, I worked on two interdisciplinary research projects: I was the cuneiform specialist for the Deep Scribe Projects, which uses artificial intelligence to decipher cuneiform tablets. The project is a cooperation between Sanjay Krishnan (Computer Science), Eddie Williams, Sandra Schloen, and Miller Prosser (OCHRE Data Service) using the data of Matthew Stolper's Fortification Project (see OCHRE section). A CDAC Discovery grant currently funds the project. I also continued as PI for the project "Far From Home: Exploring the Application of Non-Destructive pXRF Clay Analysis for the Provenance Study of Cuneiform Tablets." This research is currently funded by the National Endowment for the Humanities. See Tablet Collection Section for a more detailed report of the progress on this project.

As always, I devoted much time to teaching and outreach. I gave a talk on "Fake? Discovering Ancient and Modern Forgeries in Cuneiform Manuscripts" for the members of the Breasted Society and the Library Society of the Regenstein Library. Another speaking engagement brought me to Barrington's White House, where I spoke about "Beer and Bread: Eating and Drinking like a Babylonian." I had the pleasure of leading the first remote session of the OI book club, discussing Scott's Gilgamesh: The Life of a Poem. Finally, I taught a six-week adult education class on Old Babylonian: Introduction to Akkadian. This online course, which covered the basics of Akkadian grammar, had forty-five students, many of them international. It was a pleasure to see how they deciphered easy sentences in Akkadian at the end of the class.

DELPHINE POINSOT focused this first year of postdoctoral studies on the organization of the sixteenth annual seminar of the Oriental Institute, Sealing Theories and Practices in the Ancient Near East, which was held at the Oriental Institute on March 5 and 6. This conference was an opportunity to deepen her research on the representation of animals in ancient Iranian glyptics. She was thus able to work on the question of images from ancient Iran by studying seals' images from the Achaemenid to the Sasanian period. On the other hand, she was able to deepen the question of the context of the images' appearance by working on the sigillographic corpus's specificities. This conference was an opportunity to establish contacts with colleagues whose methodological questions are related to her problematics, and she was thus able to enrich her understanding of the sigillographic corpus.

This year was also an opportunity for Delphine to publish two articles from her PhD thesis, one in the field of animal studies, the second in the field of iconographic studies.

"Création, hiérarchisation, énumération. L'ordonnancement du monde animal dans le chapitre 13 du *Bundahišn, Anthropozoologica,* Museum National d'Histoire Naturelle de Paris (2020).

"How to Create Administrativ Iconographies? The Bestiary of the Sasanian Glyptic," in *Papers from the Institute of Archaeology Journal*, University College London (accepted, forthcoming 2021).

In the field of iconographic studies, Delphine was able to develop her research on the art of ancient Iran by participating in two study days.

Au service du roi: du cavalier au chevalier, évolution de la cavalerie en Iran ancien (559 avt n-è - 651), September 29, 2019, Journée d'étude Armes et guerriers, Institut d'Art et d'Archéologie, Paris.

Dis moi comment est ton pied, je te dirais qui tu es; Les pieds de trône en Iran Antiquité Classique et Tardive, December 18, 2019, Journée d'étude L'objet zoomorphe entre Orient et Occident au Moyen-Âge, Université Bordeaux Montaigne.

Finally, Delphine will continue the development of an iconographic study of the art of ancient Iran during her second year of postdoctoral studies at the Oriental Institute, through the work carried out within the Persepolis Archive Project. Delphine will work on the Persepolis seals bearing the iconography of a single animal, with the aim of publishing the catalog. And of course, this second year will be occupied by the publication of the proceedings of the sixteenth annual seminar of the Oriental Institute.

On July 1, 2019, **HERVÉ RECULEAU** was promoted to the rank of associate professor of Assyriology with tenure in the Oriental Institute, the Department of Near Eastern Languages and Civilizations, and the College. During academic year 2019–20, Hervé furthered his collaborations inside

and outside the university, first with the 3CEA project for which he is the primary investigator (see the project's report) and as a collaborator in the interdisciplinary project *Computational Research on the Ancient Near East* (CRANE; see Annual Report 2018–19). He also started a new international collaboration as a collaborator on the project Laying the Groundwork for a Corpus-Based Dictionary of Old Babylonian, sponsored for three years by the Fondation Maison des Sciences de l'Homme (Paris, France) and the Russian Foundation for Basic Research (Moscow, Russia). This project, directed by Dr. Nele Ziegler (CNRS, Paris) and Dr Ilya Arkhipov (HSE University, Moscow), will use the lemmatized material from the database of Old Babylonian cuneiform texts ArchiBab (www.archibab.fr) to develop guiding principles and methods toward the elaboration of a corpus-based, electronic, and continuously updated dictionary of the Old Babylonian dialect of Akkadian (ca. 2000–1600 BCE). This collaborative project will serve as the stepping stone for a renewal of Akkadian lexicography at the Oriental Institute, which for decades was home to one of the major dictionaries of the Akkadian language, the *Chicago Assyrian Dictionary* (CAD).

The year 2019 saw the publication of the celebratory volume for Dominique Charpin (Collège de France, Paris) on the occasion of his sixty-fifth birthday, for which Hervé wrote in collaboration with Antoine Jacquet (Collège de France, Paris) an article that presents the edition of Old Babylonian cuneiform tablets from the collection of Robert Francis Harper, now part of the OI's tablet collection: A. Jacquet and H. Reculeau, "Tablettes paléobabyloniennes de la collection R. F. Harper conservées à l'Oriental Institute de l'Université de Chicago," in *De l'argile au numérique: Mélanges assyriologiques en l'honneur de Dominique Charpin*, eds. G. Chambon, M. Guichard, and A.-I. Langlois (Publications de l'Institut du Proche-Orient Ancien du Collège de France 3; Leuven: Peeters, 2019), 469–90 (see Annual Report 2018–19 for details). In addition, Hervé organized a series of academic events celebrating Charpin's achievements at the Annual Conference of the American Oriental Society and on our Hyde Park campus (in collaboration with the French Chicago Center: fcc.uchicago.edu/). Both events, which were initially scheduled for spring 2020, had to be postponed due to the coronavirus pandemic. We hope to be able to hold them in 2021.

Hervé presented a paper titled "A Scribal Education in the Palace? The Educational Background of the *Šandabakkum* of Mari (18th c. BCE)" at the Workshop *L'enseignement technique en Mésopotamie*, organized by Marine Béranger (Collège de France, Paris) and Paul Delnero (Johns Hopkins University) at the 65th Rencontre Assyriologique Internationale in Paris (July 2019). Conference participations planned for spring and summer 2020 were canceled due to the coronavirus outbreak.

It was a busy and exciting year—and then suddenly it wasn't—for **SETH RICHARDSON**. He was giving a keynote lecture at a Harvard-Brown-Yale-NYU graduate student conference on March 6 when word came down that all university functions were to be suspended. The lecture and conference went forward, but it would prove to be the last in-person academic event of the year. Seth had given talks at Columbia University in November and the University of Minnesota in February (both on displacement in antiquity: for everyone from refugees to those thrown out of the house), but a much-anticipated pair of talks in Bologna and Prague (on poor women and slaves, respectively, in Babylonia) slated for April now of course have to wait for better days.

Instead, Seth stayed busy by teaching his beloved "Babylonian Knowledge" class online in the spring; the course introduces students to the "core curriculum" of ancient scribes, asking them to ask both historical-Assyriological questions as well as epistemological ones about how knowledge is formed and transmitted. He also continued his editing of the Journal of Near Eastern Studies throughout the year (see the Journal of Near Eastern Studies report in this volume).

Seth had five articles published this year. Of these, he is particularly happy with his essay on narrativity in royal literature, entitled "Down with 'Legitimacy," and hopes that colleagues in many allied disciplines will find some useful ideas there. A close second favorite was Seth's more specialized study of a Babylonian oracle from circa 650 BC ("The Oracle BOQ 1 . . ."). In the article, he determines that this composition contains genuine historical information, and that the text thus describes (in an ex-eventu prophetic voice) the political and military chaos surrounding the fall of Babylon a thousand years earlier, in 1595 BC. In the proceedings from earlier conferences in South Africa, Germany, and Prague, he also had published: "By the Hand of a Robber," on social banditry in Mesopotamia; "Aliens and Alienation," on social difference-making in Babylonian thought; and "Because Empire Means Forever," on the terms by which different Babylonian states explained their historical visions of permanence (mostly to themselves).

Along with everyone else, he will wait and see what the next year allows; in addition to the Bologna and Prague talks, he will host a nine-speaker panel on the topic of ancient propaganda in a series of closed workshops from November 2020 to January 2021, and that a regional graduate student conference for premodern historical studies he has made a proposal for will be funded—and possible. In the meantime, as of July 2020, he has nine articles in press, seven in development, and a few draft chapters written for a book (as long as one is stuck inside, one might as well write a book!). At least the view out of his living room window is a beautiful one . . .

At the Oriental Institute's centennial anniversary celebration on September 14, **ROBERT K. RITNER** was named the inaugural recipient of the Rowe Chair in Egyptology in recognition of his career of scholarship. The new Rowe Chair in Egyptology, endowed by John Rowe, is the first full professorial university chair dedicated explicitly to Egyptology in the Western Hemisphere, although a chair in Egyptian art and archaeology exists at Johns Hopkins. Ritner is both proud and humbled to have been granted this unique award in one of core fields of the Oriental Institute's research, at the foundational home of Egyptology in the Americas on the one hundredth anniversary of its origin. Ritner's guest for the occasion was Jennifer Hauser-Wegner, keeper of the Egyptian collection of the University of Pennsylvania museum, one of his first PhD students at Yale University, where he held the inaugural Marilyn M. Simpson Assistant Professorship of Egyptology. In conjunction with the new chair, an overview of Ritner's career was provided by Director Christopher Woods in *News & Notes* 244, winter 2020, p. 3. Ritner's celebration was tempered the following month by a diagnosis of impending kidney failure, and he is now on the transplant list of Northwestern Memorial Hospital in Chicago.

On December 9, he spoke to the docents on "The Restless Western Front: Libya from the Predynastic to Ramesside Periods," after which Director Woods introduced Harvey Mysel, founder of Living Kidney Donor Network, who provided an appeal on Robert's behalf. Despite health problems, Ritner has continued to be productive. After multiple press issues, his pivotal article on the chronology of Alalakh has been published in Turkey: "Egyptian New Kingdom Evidence for the Chronology of Alalakh," with a correct online version accessible at: oi.uchicago.edu/research/individual-scholarship/individual-scholarship-robert-ritner.

With colleague Foy Scalf, Ritner published "Anubis, Archer Figures, and Demotic Magic," in *Göttinger Miszellen* vol. 259, pp. 185–212. This preliminary study of a love compulsion papyrus in the University of Michigan collection garnered international attention and multiple interviews and press releases, leading Ritner and Scalf to record two video podcasts for the institute, "Awakening the Dead for Love" (4/30/20): www.youtube.com/watch?v=VadMR0RW4CY and "Demotic Erotic, Part 2" (6/9/202): www.youtube.com/watch?v=c_tgomCPDcg.

At its delayed convention held on Zoom, Ritner was elected to another three-year term on the Board of Governors of the American Research Center in Egypt (ARCE). When not lecturing, recording, or publishing, Ritner taught courses on Egyptian history, Middle Egyptian, Late Egyptian, and Demotic grammar and texts.

After successful seasons at the prehistoric sites of Wisad Pools in Jordan (see Eastern Badia Archaeological Project [EBAP]) and Horvat Duvshan in Israel (see Galilee Prehistory Project), **YORKE ROWAN** spent time in Jerusalem completing reports on those projects for the respective oversight authorities. In addition, samples were selected for the different specialists, including those for botanical identification and radiocarbon dating, supported by a grant from the Palestine Exploration Fund. Yorke submitted two co-authored chapters, "Populating the Black Desert: The Late Neolithic Presence," and "Flamingos in the Desert" to the volume edited by Peter Akkermans, titled *Landscapes of Survival: The Archaeology and Epigraphy of Jordan's North-Eastern Desert and Beyond*, which stems from the *Landscapes of Survival* conference held in Leiden in 2017. Also related to the EBAP project, Yorke co-authored with Chad Hill, Wasse, and Rollefson "Inscribed Landscapes in the Black Desert: Petroglyphs and Kites at Wisad Pools, Jordan" in the journal *Arabian Archaeology and Epigraphy* (2020). That article was the basis for Yorke's OI presentation "Petroglyphs and Kites in the Black Desert, Jordan: Connecting Art and Landscape" in May 2020.

At the Annual Meetings of the American Schools of Oriental Research in San Diego, Yorke presented a paper with Chad Hill and Morag Kersel on the GPP investigations, "New Excavations at Horvat Duvshan, Israel," in the Prehistoric Archaeology session, which he chaired. During the Annual ASOR meetings, the G. Ernest Wright Book Award (for "the most substantial volume(s) dealing with archaeological material, excavation reports, and material culture from the ancient Near East and Eastern Mediterranean") was presented to Yorke, Eric Cline, and Assaf Yasur-Landau, editors of The Social Archaeology of the Levant: From Prehistory to the Present (Cambridge University Press, 2019).

With Max Price, Morag Kersel, and Cheryl Makarewicz, Yorke published "Fodder, Pasture, and the Development of Complex Society in the Chalcolithic: Isotopic Perspectives on Animal Husbandry at Marj Rabba" in the journal Archaeological and Anthropological Sciences (2020, 12). That article posits that isotopic values indicate that some cattle at Marj Rabba spent time in the Jordan Valley as part of mobile cattle husbandry. In addition, pig herders at Marj Rabba may have been feeding them grains, achieving a slaughter weight more quickly. Also related to changes in the Chalcolithic, Yorke's paper with David Ilan, "Expediting Reincarnation in the Fifth Millennium BCE: Interpreting the Chalcolithic Ossuaries of the Southern Levant," appeared in the journal Oxford Journal of Archaeology (2019, 38.3). Yorke's review of the volume Stone Tools in the Ancient Near East and Egypt: Ground Stone Tools, Rock-cut Installations and Stone Vessels from Prehistory to Late Antiquity (Oxford: Archaeopress), edited by Andrea Squitieri and David Eitam, appeared in the Journal of Near Eastern Studies (2020, 79.1).

After much delay, **FOY SCALF**, Brian Muhs, and Jackie Jay submitted their book manuscript on a Demotic archive in the OI collection to the Publications Committee. *The Archive of Thotsutmis: An Early Ptolemaic Demotic Archive from Deir el-Bahari (O. Edgerton)* was approved for publication and should appear in the not too distant future in the Oriental Institute Publications series. The book presents editions of forty-two Demotic ostraca and contextualizes them within the community of workers

within the funerary industry in the city of Thebes. This publication culminates many years of work and collaboration among the authors and institutions involved.

Foy contributed to the OI centennial publication with an article covering the history and culture of the Research Archives library, using a romantic quote by Jorge Luis Borges comparing libraries to paradise in order to frame the academic relationship between researchers and libraries at the OI over the last one hundred years. Embedded into this history is the important role played by library and information science well beyond the narrow confines of the card catalog. In the article, Foy explored how library card catalogs represented cutting-edge methods for data storage and retrieval that were borrowed into scientific work, such as the Oxford English Dictionary and the Chicago Assyrian Dictionary.

In the fall of 2019, Foy collaborated with Robert Ritner to publish an article with a preliminary assessment of an unedited Demotic text inscribed on a papyrus now in the collection of the University of Michigan Library. The article "Anubis, Archer Figures, and Demotic Magic" offered a general overview of the papyrus and a detailed discussion of its illustration showing Anubis shooting an arrow into the target of the spell. In the magic spell, a woman roused a ghost to infect a man with lovesickness for her. The article spawned numerous online news reports and led to two OI podcasts now available online with over twenty-two thousand views, as well as an article for *News & Notes*.

Foy submitted a hefty article on "The First Book of Breathing: A New Assessment Based on an Edition of Papyrus FMNH 31324" to the *Journal of Near Eastern Studies*, which was accepted for publication and is due to appear in 2020. The article publishes a papyrus from the Field Museum for the first time and reexamines the origins of the First Book of Breathing by showing that it was created through a process of exegesis on authoritative sacred texts from the Book of the Dead. This research stemmed from reconnaissance work carried out in preparation for the Book of the Dead exhibit at the OI in 2017.

Foy taught his book history course "History of the Text: Early Books and Manuscripts Up to the Age of the Printing Press" for Dominican University in the spring semester, which was forced to go entirely online in March due to the coronavirus pandemic. In the previous summer, he taught an eight-week course for residents of the Clare on Late Period Egypt called "Twilight of Empire." Foy was happy to be invited as the primary external examiner for a BA honors thesis at Knox College on the Egyptian origins of the so-called hermetica and served as second reader on four MA theses for UChicago NELC and CMES.

Foy gave nearly a dozen public lectures over the course of the academic year, including an invited lecture for the centennial celebration of the Mabee-Gerrer Museum covering human remains in their collection referred to as the mummy of Tutu, as well as an invited lecture on "The Future of the Ancient Middle East" for members of the Friday Club meeting held at the Chicago Club downtown.

In summer 2019, **GIL J. STEIN** co-directed the Oriental Institute's fifth field season of excavations at the sixth-fourth millennium BC early town site of Surezha on the Erbil Plain in the Kurdistan region of Northeastern Iraq.

As principal investigator of the Oriental Institute's three cultural heritage grants in Afghanistan, Gil worked with our partners at the National Museum of Afghanistan (NMA) and the Afghan Institute of Archaeology (AIA). This included work at the NMA on the Hadda Sculptural Restoration Project, and ongoing efforts to identify what objects have been looted from the National Museum. Gil is also PI for two additional grants—the "National Museum of Afghanistan Outreach-Mobile Museum" Project (MMP) and the "Afghan Heritage Mapping Project" (AHMP). Unfortunately, due to

the COVID-19 coronavirus pandemic, we were unable to travel to Afghanistan after December 2019, and had to conduct project work remotely.

In addition to the work in Afghanistan, in 2019–20, Gil continued his work on a second cultural heritage preservation project focused on the five post-Soviet republics of Central Asia (also known as the "C5"). The "C5 Cultural Training Partnership for Artifact Conservation" (C5 CTPAC) brings Museum conservators from the five Central Asian Republics to Uzbekistan for a three-year integrated program of annual two-week intensive training workshops held at the State Museum for the History of Uzbekistan in Tashkent. The workshops, coordinated by Mr. Fabio Colombo (who also acts as our head conservator in Kabul), teach best practices in the conservation of the key raw materials for the artifact types in the national museums of these countries. From September 10 to 22, 2019, we carried out the second two-week workshop at the State Museum, with conservators from the national museums of all five republics. Workshop coordinator Fabio Colombo co-taught the workshop with Susanne Gaensike, head conservator of antiquities at the Getty Museum. The second workshop focused on conservation of wall paintings and also on metals.

In 2019–20 Gil's proposal to the provost to establish the Chicago Center for Cultural Heritage Preservation was approved for implementation. Gil was appointed as founding director for the center. In tandem with his excavations at Surezha and his cultural heritage work, Gil published four articles and book chapters in the past academic year:

- Minc, L., J. R. Alden, and G. Stein. 2019. "A Preliminary Assessment of Ceramic Style and Chemical Composition During the Chalcolithic Era at Surezha, Iraqi Kurdistan." *Paléorient* 45, no. 2: 121–36.
- Stein, Gil. 2019. "Cultural Heritage Preservation Work in Afghanistan and Central Asia." Oriental Institute Annual Report 2017-2018: 27-36.
- Stein, Gil, and Michael Fisher. 2019. "Surezha Excavations 2018: Erbil Plain, Kurdistan Region, Iraq." Oriental Institute Annual Report 2017–2018: 125–38.
- Stein, Gil. 2020. "Alternative Pathways to Incipient Social Complexity in Mesopotamia and Iran in the 6th–5th Millennia BCE." Proceedings of the 5th International Congress of Young Archaeologists, Tehran University, Oct. 11–14, 2015: 19–43.

EMILY TEETER continues to serve as the editor of the *Journal of the American Research Center in Egypt*. The first volume that appeared under her editorship at the end of 2019 marked the transition to all-color printing.

She continues to pursue her own research. Publications that appeared in the last year include: "The Breasted Family in Hyde Park" (OI News & Notes 224, winter 2000), "Curious Collectors of Gilded Age Chicago" (KMT 31/1, spring 2000), a review of The Great Hypostyle Hall at Karnak (OIP 142) in JNES 79.1 (April 2020), and an essay, "A History of the OI Museum," that appeared in the OI centennial volume.

In press are articles dealing with seals and sealings from Naga ed-Deir; female figurines from Medinet Habu, an unusual version of Book of the Dead 30B on a heart amulet in the Art Institute, Egypt at the Century of Progress Exposition of 1933–34, studies of OIM E14681 (relief of the God's Wife Amunirdis), and stela OIM E14644 belonging to the vizier To in the reign of Ramesses III. She is presently preparing articles on other stelae associated with workmen from Deir el Medina but excavated by the Oriental Institute at Medinet Habu and a new edition of her monograph *Religion and Ritual in Ancient Egypt* for Cambridge University Press.

Other activities include reviewing a manuscript for *JNES* and advising Homeland Security about the local trade in Egyptian antiquities.

Emily attended the ICOM meeting in Kyoto in September 2019, continuing on to the CIPEG meeting in Tokyo. She also was invited to participate in a conference "Modeling Ancient Egypt," held in Luxor in November 2019, where she spoke on female figurines excavated at Medinet Habu, and possible reasons for significant changes in their style in the Third Intermediate Period.

She led tours to Egypt for the Oriental Institute in December 2019 (that included four people who travelled with the OI to Egypt the previous year!), and for the Smithsonian in February 2020. Other departures were cancelled due to the pandemic.

In April, Emily stepped down from the Board of the America Research Center in Egypt after having served for many years. She continues to serve on their Finance Committee, and she is very involved with the local chapter. She also continues to serve on the editorial board of the series "Writings from the Ancient World" of the Society of Biblical Literature, Atlanta.

In some ways, THEO VAN DEN HOUT's past year was one of transitions. The S-volume of the Chicago Hittite Dictionary (see separate report on the CHD) was completed with the publication of its fourth fascicle, and the OI centennial book *Discovering New Pasts: The OI at 100* appeared in September. Theo also submitted the manuscript for his book A History of Hittite Literacy: Writing and Reading in Late Bronze Age Anatolia to Cambridge University Press. Transitioning also means the beginning of new things. Besides embarking on the new letter T for the CHD, he started up a new focus on Hittite visual culture, often referred to as art and iconography. Theo taught a class on Hittite art in the winter and successfully applied for grants to organize a three-day workshop at our university's center in Paris, ideally in the spring of 2021. The goal of that gathering is to find new ways of looking at Hittite monuments and other works of visual expression, an area neglected for quite some time. With the support of the Franke Institute, the Paris Center, the France Chicago Center, and of course our own OI, Theo hopes to invite a number of scholars to draw renewed attention to this important part of Hittite culture and thanks the institutions for helping to make this happen. Obviously, much is unpredictable right now, and we will have to see what shape this workshop will take. Besides his regular teaching, Theo taught a members' Hittite language class in the fall and early winter in the OI, but remotely in the spring. While going through the grammar, the students read the Ten-Year Annals of King Mursili II (ca. 1318-1295 BC), and we ended very timely with the so-called Plague Prayer by that same king because of an epidemic his kingdom went through during his reign.

In the fall, Theo gave a talk in Pavia in northern Italy, he spoke at our college's Parents Weekend, held a so-called Harper's Lecture for UChicago's alumni in Boston, and in the winter contributed a paper to this year's OI postdoc conference organized by Delphine Poinsot on "Preventing Fraud and Forgery of Seals in the Hittite Kingdom."

Together with his colleague Petra Goedegebuure, Theo submitted a manuscript with the edition of the Türkmen Karahöyük hieroglyphic Luwian inscription found by our own James Osborne (see his report for more detail) and his colleagues. This article will appear in the journal *Anatolian Studies*. Theo also submitted a review.

Apart from the books mentioned above, the following articles appeared in print since last year's Annual Report:

• "Did He Come or Go? Hittite arḥa uwe/a-," in N. Bolatti Guzzo/P. Taracha (eds.), "And I Knew Twelve Languages": A Tribute to Massimo Poetto on the Occasion of His 70th Birthday (Warsaw: Agade Bis), 703–14.

- "Lydian qeśi-, qelλk and Lycian tihe," in U. Bläsing, J. Dum-Tragut, T.M. van Lint (eds.), Armenian, Hittite, and Indo-European Studies. A Commemoration Volume for Jos J.S. Weitenberg (Leuven-Paris-Bristol: Peeters), 395–402.
- "Hittite Society, Economy, and Ritual," Orient 55: 3-11.

In 2019, **TASHA VORDERSTRASSE** continued with her position at the Oriental Institute as university and continuing education program coordinator. She facilitated multiple adult education courses and gallery talks and taught several adult education classes: Imagining Central Asia with Polina Kasian (summer 2019), Art and Archaeology of Ancient Persia from its Beginnings to the Present Day with Shannon Martino (fall 2019), Epics at the Oriental Institute with Susanne Paulus (winter 2020), and Discovering Dura Europos: From Breasted to the Present Day (spring 2020). She also provided post-colonial tours of the OI Museum for University of Chicago core classes on request, and other special tours. She also selected objects and wrote labels and panels for the Istakhr case at the OI Museum. She worked on the future exhibition of Antoin Sevruguin's photographs at the OI, as well as its publication, for which she obtained three grants.

Tasha gave the following lectures: "Depicting Textiles in Armenian Manuscripts," lecture for Armenian Circle, University of Chicago, February 2020: "Two American Collectors in the Near East in 1847–1848" with Brian Muhs, lecture for ASOR annual meeting, San Diego, November 2019: "Frank Lloyd Wright's Vision for Greater Baghdad," lecture for *Chicago Architectural Biennial*, Oriental Institute, Chicago, November 2019: "New Cases in the OI Museum: Islamic Objects on Display," Lunchtime Gallery Talk, Oriental Institute, Chicago, November 2019: "From the Ark to the Grail: An Exploration of the Depiction of the Ark of the Covenant and the Holy Grail," lecture at Oriental Institute, Chicago, October 2019. She gave a response, "Beyond Administration," to a session at the at the Sixteenth Annual Oriental institute Seminar, "Sealing Theories and Practices in the Ancient Near East," Chicago, March 2020. She also participated in an interactive adult seals workshop with Delphine Poinsot, PhD and post-doctoral fellow, and Rhyne King, NELC PhD candidate.

The following articles were published this year:

- "The Art of Manuscript Illumination in Medieval Nubia," in *Nubia Christiana II*, edited by M. Łaptas and S. Jakobielski, 81–118. Warsaw: University of Cardinal Stefan Wyszyński, 2020.
- "Coins and Papyri in 6th/7th Century Egypt," in *Coinage and History in the Seventh Century Near East 6*, edited by T. Goodwin, 181–90. London: Archetype, 2020.
- "Chinese Ceramics from Ashkelon: Investigating Mediterranean Trade in the Fatimid and Crusader Periods," in *Ashkelon 8: The Islamic period and Crusader Periods*, edited by T. Hoffman, 506–22. Winona Lake: Eisenbrauns and Ashkelon, 2019.
- "Written in Stone: Cecil B. DeMille and the OI's Hollywood Legacy." *Oriental Institute News & Notes* 243 (2019): 16–17.
- "The Iliad Papyrus at the Oriental Institute." Oriental Institute News & Notes 243 (2019): 12–13.
- "OI Projects from the Islamic Period: Texts and Archaeology," in *Discovering New Pasts: The OI at* 100, edited by T. van den Hout, 402–21. Chicago: Oriental Institute Press, 2019.
- O. Topçuoğlu, and T. Vorderstrasse. "Small Finds, Big Values: Cylinder Seals and Coins from Iraq and Syria on the Online Market." *International Journal of Cultural Property* 26 (2019): 239–63.
- "Script as Art | Art as Script." Oriental Institute News & Notes 242 (2019): 4–5;
- "A Trilingual Inscription of Xerxes I." Oriental Institute News & Notes 242 (2019): 16–17.

During the 2019-20 academic year, **JOHN WEE** was on research leave in his home country of Singapore. December 2019 saw the publication of his two volumes by Brill Academic Press: Knowledge and Rhetoric in Medical Commentary: Ancient Mesopotamian Commentaries on a Handbook of Medical Diagnosis (Sa-qiq) (Cuneiform Monographs 49/1), and Mesopotamian Commentaries on the Diagnostic Handbook Sa-gig: Edition and Notes on Medical Lexicography (Cuneiform Monographs 49/2). Anticipated at the end of 2020 is his essay on "A Systemic Etiology of Sicknesses from Ancient Iraq: Organ Systems and the Functional Holism of the Babylonian Body," in Holism in Ancient Medicine and Its Reception, edited by C. Thumiger (Leiden: Brill). Also accepted for publication and in press are John's entries on "Medicine and Healing, Ancient Near East" in Encyclopedia of the Bible and its Reception (de Gruyter), and "Mesopotamian Medicine" in Oxford Classical Dictionary, Digital Edition (Oxford: Oxford University Press). John is currently working on the chapter "Ghosts In and Outside the Machine: A Phenomenology of Consciousness, Psychic Possession, and Prophetic Ecstasy in Ancient Mesopotamia" in the volume Ecstatic Experience in the Ancient World, edited by S. Costello, K. Foster, and D. Stein (Abingdon: Routledge); the chapter on "Astronomy and Medicine" in the Oxford Handbook of Ancient Astronomy, edited by J. Steele; a journal article on "The Hippocratic Oath and Professional Family Guilds in Antiquity"; as well as an invited contribution to the journal Ancient Near Eastern Studies (special 2022 issue on plagues and medicine in antiquity). He was interviewed and contributed to D. Kolitz's online article, "Which Ancient Medicines Turned Out to Be Real," in Gizmodo (April 13, 2020: gizmodo.com/which-ancientmedicines-turned-out-to-be-real-1842612048).

John is preparing to present papers at the following academic lectures and conferences: "The Babylonian Right Triangle and Its Meanings by Pythagoras, Plato, and Proclus," at the conference on Anchoring Technology in Greco-Roman Antiquity at Radboud Universiteit Nijmegen (The Netherlands, December 9–11, 2020); a topic concerning bodies, technologies, objects, and environments as loci of social and cultural production, at a conference on science as cultural context, at the University of Cincinnati (April 9–11, 2021); "Medicinal Plant as Actor—Therapeutic Ingredients and Medical Astrology in Ancient Mesopotamia" at the Institute for the Study of the Ancient World (ISAW), New York University (September 2021); and "Meanings of the Right Triangle in Ancient Geometry" at the Annual Meeting of the History of Science Society (New Orleans, November 2021).

KAREN L. WILSON is pleased that *Nippur VI: The Inanna Temple* has been accepted by the Oriental Institute press and will appear in the Oriental Institute Publications series. *Nippur VI* will be the final publication of the Oriental Institute excavation of the Inanna Temple at the site of Nippur during the late 1950s and early 1960s. The authors of the volume are Richard L. Zettler, Karen L. Wilson, Jean M. Evans, and Robert D. Biggs, with contributions by R. C. Haines and Donald P. Hansen. The series editor is McGuire Gibson. The Oriental Institute Publications Office is currently editing and formatting the volume(s), and Karen is working on proofs of various chapters as they become available.

This past year, Karen also continued to serve as Kish Project coordinator and research associate at the Field Museum, preparing aspects of the publication of the work of the Joint Field Museum and Oxford University Expedition to Kish in 1923–32. She is extremely pleased that the Oriental Institute Publications Committee has agreed to publish the manuscript as a volume in the Oriental Institute Publications series. The volume presents the results of a symposium conducted in November 2008 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 holdings from Kish and Jamdat Nasr. Karen is currently working on the proofs for the manuscript that she received from the Publications Office.





OVERLEAF: OI centennial gala festivities. Photo: John Zich.

COMPUTER LABORATORY

KNUT BOEHMER

The usual introduction to the Computer Lab annual report points out how the previous year has seen major changes for the OI in terms of IT—however, I would dare to claim that especially the first half of 2020 saw changes that dwarf anything prior, due to a major shift in everyone's life brought on by the COVID-19 pandemic. But even before then, we saw bigger changes in the way the OI has begun to present itself online, with livestreaming and in-house video productions becoming a new normality, allowing us to expand the OI's reach to a wider audience.

COVID-19

As much as I would like to put any other update on the "big first headline," COVID-19 and its changes were the major event for IT (alongside every other area of life) in 2020. When it became clear that everyone was going to be sent home eventually, in mid-March I speedily prepared for any situation or question I could come up with to work from home. The highest priority was, of course, to ensure everyone's continued access to any programs or files they needed to continue working, alongside with making sure everyone received training in areas they may not have been too familiar with at the time, like online video conferencing. A number of training videos for all aspects of the daily work-at-home process were created, and a lot of communication with all our users happened over a short period of time. After the first huge wave started to ebb, the "new reality" settled into a strange rhythm—slow days with few requests would be followed by a week without a chance to catch my breath, followed by slow days without warning, but overall I managed to stay on top of requests (or at least I'd like to think so).

Breasted Hall's AV System

The new AV system in Breasted Hall, completed in spring 2019, took some training to get used to, but once we had started to explain the potential to staff and word got around on campus, Breasted Hall became one of the most requested auditoriums on campus. With the capacity to display video from up to five devices, eight wireless microphones, and full livestreaming capabilities, we saw many conferences rent the space.

Our Members' Lectures, previously pre-recorded and manually edited by an outside contractor, are now being livestreamed and are available on demand immediately after the talk concludes, where previously those who could not make it to the OI in person had to wait for weeks until we received the footage back. We also hosted the president several times, as well as a public discussion with a US senator.

Unfortunately, all this of course came to quite an abrupt stop when campus closed in spring 2020, but we tried our best to transition this new experience to our online platforms, predominantly YouTube. Also, once the building is safe to be used again, likely in 2021 at this point, we will go back and pick up where we left off, striving to make Breasted Hall one of the most attractive places on campus to hold talks and interviews.

Zoom Transition

When the WebEx agreement with campus ran out in November 2019, the decision was made to transition to Zoom as new meeting platform—of course, no one knew at that point what importance it would gain in 2020. While initially used very little, and with access only unlocked for a few staff at the OI, once the stay-at-home order came down in March 2020, the user base grew a lot overnight. After several purchases of license bundles, the university eventually decided on a campus agreement, giving every member of the community full access to Zoom. Obviously, that meant many individual training sessions, as well as some experimentation on what formats worked best for what kind of events—we have had "standard" individual meetings, group meetings, online classes, job interviews, prerecorded talks, and live Members' Lectures, to name only a few, with every type having slightly different best practices in terms of audience size, interaction, and presentation. Adding to that, Zoom as a company had to rapidly grow: since they were under an unprecedented amount of public attention and scrutiny, the playing field was constantly shifting, and training and supporting faculty and staff was a challenging, yet interesting, task.

Postdoc Conference

Organized by Delphine Poinsot, the 2020 postdoc conference held (still largely in-person) in early March was the first fully livestreamed conference the OI has ever done, offering people who were not able to travel to the United States due to restrictions to and from their home countries the opportunity to still participate. It also marked the first time talks were given by participants not physically in Chicago, via web conferencing software.

Mesopotamian Professorship Search

One of the biggest challenges in the early days of work-at-home was the ongoing search for a professor for Mesopotamian archaeology. While the first shortlisted candidate was able to travel to campus, giving talks and in-person interviews, the other candidates were unable to come. So, in order to not delay the interviews, the entire process had to be transferred online. Over the course of two weeks, a total of three lectures, three workshops, and almost seventy individual half-hour interviews were facilitated, avoiding any larger technical problems.

Microsoft SCCM / JAMF / Cloud Backup Rollout

Starting in spring 2020, the university's IT Services finalized campus agreements with several service providers to allow a more centralized management of on-campus computers. For Windows PCs the decision was to go with Microsoft SCCM, while the decision for Macs was to go with JAMF. Since the OI does not have an active Active Directory implementation in place, this is a major first step for all Windows machines as well. Once fully implemented, these monitoring programs allow for a much better overview to ensure crucial updates, that security patches are installed, and that digital security measures like encryption or safe passwords are set up correctly. Since I am overseeing over one hundred computers on my own, being able to direct my attention and resources more efficiently will be a big help.

Going Forward

The "work-at-home reality" is still in full swing by the time I am wrapping up this report, with no end in immediate sight. While it's strange to know it will be a while before I see most of my colleagues in person again, I am still determined to ensure everyone has the best IT support possible, even if it's only remotely. Our communications may have shifted, but I see several different paths

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that have opened, allowing more efficient, quick ways to help one another and to present the interesting topics we deal with on an everyday basis to the general public. We are striving to improve our online multimedia and social-media content, as well as come up with new ideas that hopefully will allow the OI to stand out in the online landscape.

In any case, I must express than I am extremely proud to assist and contribute to the hard work that many of my colleagues put in every day, despite the ever-intimidating, tumultuous, and daily shifting circumstances that are the spring and summer of 2020.

oi.uchicago.edu

INTEGRATED DATABASE PROJECT

FOY SCALF

With remote work becoming the norm since March 2019, the OI's IDB project has taken on even greater importance, with remote access to our collections through the EMu software platform. Faculty, staff, students, and volunteers have continued to work, cataloging, assessing, and improving the management of these collections and the data necessary for such work. This report will provide an overview for the general progress of the project. Details of specific department achievements, as well as individual achievements, will be found under their respective entries elsewhere in this annual report.

At over one million records and growing, the OI's integrated database serves as the digital repository for the data related to the primary departmental divisions of the institute. The EMu client software powering the IDB serves as a hub linking together the OI's collections data; such data is exported to a Solr database for public access through the web portal (oi-idb.uchicago.edu). The breakdown of the records can be found in Table 1. Major contributions over the last year include the transcribing of registration cards for photographic negatives from the Museum Archives as well as the transcribing of registration cards for objects from the OI Museum collection. Over fifty thousand such cards have been transcribed and are now searchable within the database, providing an extremely useful addition and the foundation of a complete digital archive of our collections and their provenance.

Department	Records in EMu	Records on Website
Research Archives	565,540	560,591
Photo Archives	323,392	170,683
Museum Registration	278,279	235,731
Museum Archives	84,106	84,106
Epigraphic Survey	22,026	21,502
CAMEL	20,889	8,869
Museum Conservation	11,720	

Table 1. Approximate Total Records in the Integrated Database

At the recommendation of University of Chicago IT Services and our server administrator Scott Wilson, we began the process this academic year of upgrading the server hardware for the Integrated Database Project. This involves moving all application and data files from four VMs (virtual machines) to four new VM spaces. VM spaces can be thought of as "the cloud"—a single physical server is divided up into multiple "virtual" servers that then can host various kinds of content, applications, and websites (see fig. 1). For the internal EMu client, there are two dedicated VMs: one for testing and development and one for live, ongoing use. Likewise, there are similarly two VMs for the public website: one for testing and development and one for live, ongoing use. As of June 2020, the server



Figure 1. The design of VM cloud hosting (by atlantic.net).

upgrades for the public collections search website have been completed. We have also finished the upgrade for the testing and development environment for the EMu client. We are looking to finish the upgrade for the ongoing live EMu server by the beginning of the academic year in September 2020. These upgrades will ensure the functionality and security of the IDB system moving forward.

In November 2019, a grant application was submitted to IMLS (Institute for Museum and Library Services) for the development and integration of an educational portal into the OI's online collections search (oi-idb.uchicago.edu). The grant was written through the collaboration and teamwork of Foy Scalf, Tasha Vorderstrasse, Calgary Haines-Trautman, Susan Alison, Rose Pezzuti Dyer, Alan Takaoka, Brenda Janish, Tony Lauricella, Chris Woods, Brendan Bulger, and Nate Francia. We will learn about the outcome of this grant in September 2020. Grant funds would go toward expanding functionality of the online collections search to better serve non-academic audiences by incorporating a more public-friendly entry portal designed to lead educators, students, lifelong learners, and the general public through basic information about the ancient Middle East, linked ultimately to the OI collections. Preliminary interface mock-ups were designed around STEAM-related topics (fig. 2), a map (fig. 3), and a timeline (fig. 4) for users to explore the content of the database. If the grant application is successful, graduate students from the OI would be employed to write and organize educational information about introductory topics, providing users with a structured pathway they could follow as they researched a topic. At each step in the process, these overviews would be linked (fig. 5) to over one million records in the database from the museum object collection, Research Archives library, Museum Archives, CAMEL, and the Epigraphic Survey. These web tools would allow the OI to support a global audience only limited by access to the internet.

Page views for the online collections search (oi-idb.uchicago.edu) were up nearly 20 percent to 253,631 from July 1, 2019, to June 30, 2020 (up from 218,000 over the same period in the previ-

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CLOCKWISE FROM TOP LEFT:

Figure 2. Mock-up for educational portal topics tab.
Figure 3. Mock-up for educational portal map tab.
Figure 4. Mock-up for educational portal timeline tab.
Figure 5. Mock-up for educational portal showing links between topics, further reading, and museum objects.

ous year). While there was a slight increase in April and May of 2020, potentially as a result of the move to remote work, largely this increase was spread throughout the year (fig. 6). These views represent the collective activity of 18,364 users (up from 14,460 last year) in 36,742 sessions on the internet. Average session duration was over six minutes. Our user base continues to be over 73 percent English speakers, with Spanish, French, Italian, and German speakers each contributing roughly 2 to 3 percent each. Over 55 percent of visitors were from the United States, followed by the United Kingdom, Germany, Spain, France, Canada, Egypt, Italy, Iran, and Australia, to round out the top ten countries of origin.

Over the course of the year, 42,743 new searches were conducted. From those searches, 29,006 individual detail records were viewed, 13,341 searches were revised, 1,022 users searched within their initial results, and 1,021 records were accessed via a direct link. The lamassu (OIM A7369) continued to be the most popular record, with 2,284 views (oi-idb. uchicago.edu/id/10443a90-e395-4a2f-a81f-75a3b2312c1c). The second most popular record was for volume one of A New Concordance of the Pyramid Texts by Jim Allen (oi-idb.uchicago.edu/id/b154b937-6036-43f4-a28d-3c92adc04aab), with 558 views. Next most popular was the re-







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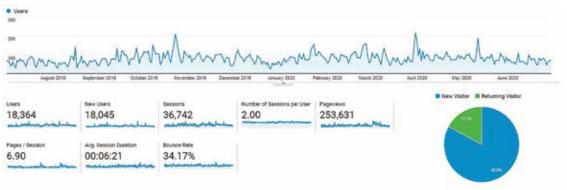


Figure 6. Google analytics for online collections search usage.

cord for *Creativity and Innovation in the Reign of Hatshepsut*, a publication of the OI, with 361 views (oi-idb.uchicago.edu/id/60617d97-8a21-4d38-9850-983603caf09d). A general search for the "Mesopotamian Gallery" was conducted 342 times, of which 255 searches were limited only to records with accompanying images.

The analytics demonstrate that users of the online collections search are very active. Nearly three thousand sessions included at least six events. An event is recorded any time a user continues in the database by either clicking links or conducting further searches. For example, it is clear that the highlights slideshow on the homepage results in many events from users clicking on the images and then further interacting with various records. The lamassu (OIM A7369), for instance, is the first highlight in the slideshow, and the detail record for the lamassu (oi-idb.uchicago.edu/id/10443a90-e395-4a2f-a81f-75a3b2312c1c) was the most popular first event for many users. From there, one of the most popular second events for a user who initially clicked on the lamassu highlight was the notebook of James Henry Breasted from the archives (oi-idb.uchicago.edu/id/c945dbe1-a68d-43f8-b60d-109900332602). Tracking this activity demonstrates the power of the landing page in shaping user interaction with this web resource. It further supports the need for an educational portal like the one described above, to help visitors with less expertise navigate to information that interests them. We hope that future financial support will allow us to further develop these tools, thereby increasing the reach and accessibility of the OI collections.

ACKNOWLEDGMENTS

Funding from the Oriental Institute, the University of Chicago, the Institute for Museum and Library Services, and Aimee Drolet Rossi has been absolutely critical to the IDB's existence and future, and we would like to thank our funders for their ongoing support. OI faculty, staff, and volunteers continue to make daily additions and improvements to data in the database (see separate annual reports for named individuals). With the rise in online engagement during the pandemic, this work has taken on a new dimension of relevance and importance. We would like to thank all those who have been involved in the project, working diligently, submitting feedback, correcting errors, gathering data, tracking objects, issuing permissions, and all the other tasks that go into a major collective initiative. Without your continued perseverance, none of this would be possible, and we are extremely grateful for your sustained participation and commitment.

JOURNAL OF NEAR EASTERN STUDIES SETH RICHARDSON

This year marked a major transition at the journal: after more than a decade at the helm, Christopher Woods handed the editorship over to James Osborne, assistant professor of Anatolian Archaeology. As James wrote in the introduction to the April 2020 issue:

"Besides marking a decade since my first foray into the world of academic publishing, this same decade from 2009–2019 represents almost exactly the period in which JNES was under the editorial leadership of Christopher Woods, now the John A. Wilson Professor of Sumerian and the Director of the University of Chicago's Oriental Institute. The present issue will be the final one produced under his editorship. Taking the helm in March of 2009, Professor Woods was responsible for transforming the journal into the format we enjoy today, including an updated and expanded layout, color images, and a revamped cover design, all while maintaining the journal's intellectual rigor and its role as the world's leading 'big tent' venue for peer-reviewed scholarship in Near Eastern studies. On behalf of the entire faculty in the University of Chicago's Department of Near Eastern Languages and Civilizations and the Oriental Institute, I thank Professor Woods for his remarkable dedication and service to the Journal of Near Eastern Studies."

In addition to the editorship, James continues his role as book review editor for the ancient side of the journal; Fred Donner signed on as book review editor for the "modern" side; and Seth Richardson continues as managing editor.

The academic year 2019–20 (issues 78/2 and 79/1) continued the journal's tradition of excellence. In eighteen articles of original research, JNES authors covered everything from the Early Bronze Age Iran to Umayyad Syria-Palestine; the culture of the Near East seen through its literature, science, archaeology, art, and historical texts. Among others, the journal published works on a newly discovered inscription of the Akkadian king Naram-Sin (twenty-third century BC) about his fabled war against Armanum and Ebla, an analysis of tax practices and symbolism in the Persian Empire; the "anthropology of science" in the cuneiform world, a new list of Sumerian demons, evidence for a second-millennium frontier wall in the Zagros Mountains, women warriors in early Islam, a Babylonian historical omen describing the fall of Babylon in 1595 BC; the ritual "mutilation" of Egyptian gods, and much more. Alongside these appeared twenty-one reviews of books on cyber research and archaeological data, the historical geography of the Hittite heartland, ancient Egyptian pseudo-scripts, child custody in Islamic law, Levantine cookware, and concepts of time in the Seleucid Empire. The journal's authors, as usual, hail from all corners of the world: Cairo, Ankara, Würzburg, Leiden, Jerusalem, Moscow, Kufa, Bologna, Kermanshah, Cambridge (UK), Belgrade, Tehran, Helsinki, Strasbourg, Kiel, and Lyon.

It is worth pausing to explain the work that goes on behind the doors that allows the journal to get the good results it does: the largely unrecognized work of the anonymous external reviewers to whom we turn to not only evaluate manuscripts and recommend action on them but also provide copious and detailed advice for authors. Our authors thus receive the benefit of a substantial double-blind peer-review process, which helps make their work better, whether it is ultimately accepted for publication or not. In the year running from July 1, 2019, to June 30, 2020, we sent out fifty-nine manuscripts for a full and formal review process to 127 external readers. Our belief that

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JNES speaks to a global audience of scholars is reflected in the origins not only of our authors, but of our manuscript evaluators as well: seventy-two of the 127 readers this year work at institutions not in the United States. We would like to extend our most heartfelt thanks to all the colleagues who offered their time and knowledge to advance the quality of what we all read.

While we do not claim the credit of doing much of this formal review work ourselves, we can claim credit for expeditiousness. The speed with which we coordinate the completion of the review process magnifies its benefits, because timely review is crucial in order to get important new work to press and to get advice for revision to authors while their work is still in a formative stage. In the year running from July 1, 2019, to June 30, 2020, the journal received exactly one hundred manuscripts. Of those, forty-one manuscripts were not advanced to the review process after consideration by the editors; the average time-to-decision (TTD, i.e., from date of submission to date of decision) for those manuscripts was seven days. These authors may not have received the answer they wanted, but we make it a point not to keep them waiting unduly.

Of the fifty-nine manuscripts, then, which were sent out the 127 external reviewers, the following results and turnaround time pertain to the same 2019–20 period:

Result	No. of Manuscripts	Average TTD
Accept	14	43 days
Revise & Resubmit	15	69 days
Reject	23	61 days
Currently under Review	7	no decision yet

Thus, for the fifty-nine manuscripts submitted, reviewed, and brought to decision within this year, authors received news of the process in an average of fifty-nine days (eight-and-a-half weeks). In tandem with the fact that accepted manuscripts are moved to publication in under one year from the date of decision, JNES authors get a full peer-review process, a timely decision, and quick publication of their work. We think the advantages for all are clear enough!

OCHRE DATA SERVICE

MILLER PROSSER

COLLABORATING FROM A DISTANCE

One of the peculiarities about working in an online, collaborative environment like OCHRE is that when other types of research are put on hold, digital research shifts into overdrive. Our archaeology field projects had amazing, productive seasons excavating in 2019. Looking ahead to the summer of 2020 would require a different strategy. Many of our colleagues have taken this unfortunate moment in history as an opportunity to concentrate efforts on their data. Despite being separated by physical distance and all the attendant risks and challenges of this moment, this past year—and especially the 2020 quarantine period—has been a time of great productivity.

In our previous report, we mentioned the new CEDAR project (funded by the Neubauer Collegium for Culture and Society), which involves researchers in various domain areas (ancient Near East, Divinity School, English) implementing OCHRE as a common text-analysis platform. Over the last year, this project has blossomed to include new partnerships between researchers here in the United States, in the United Kingdom, and in Finland. At the annual Society of Biblical Literature meeting in November 2019, a group of nearly two dozen international researchers agreed to join efforts to work toward the common goal of pursuing digital textual criticism of the Hebrew Bible. Since then, plans have continued to expand. At our annual workshop at the Neubauer Collegium in February 2020, various CEDAR team members presented progress updates and inspiring visions for the future of the project. One prospective expansion involves the inclusion of the Melville Electronic Library in the CEDAR family of projects. Working with Chicago alumnus John L. Bryant, professor emeritus of English at Hofstra University, the CEDAR project hopes to implement for Melville studies the same digital tools as are being used to record and analyze the content of *Gilgamesh*, Shakespeare's *Taming of the Shrew*, and the Hebrew Bible.

Related to our work on text criticism and the CEDAR project, the ODS developed a new visual

reconstruction tool to help researchers propose readings where the tablet or manuscript preserves only traces. This new tool uses real examples from the scribe's own handwriting and allows the user to overlay signs on an image to determine possible reconstructions. In the figure below, we compare forms of the Hebrew letter *mem* against an image of a Dead Sea Scroll fragment. By layering real examples from elsewhere in the fragment, the researcher can make a stronger argument for or against a certain reconstruction.¹

Back when such things were possible, a casual conversation over dinner after a workshop led to a new collaboration between the

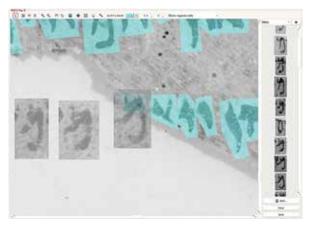


Figure 1. OCHRE text reconstruction tool.

RESEARCH SUPPORT | OCHRE DATA SERVICE

OCHRE Data Service and the Computer Science Department at the University of Chicago. When Sandra Schloen and Dr. Sanjay Krishnan struck up this conversation, the OCHRE Data Service had already been collaborating with a highly skilled machine-learning researcher (Eddie Williams) on the first steps toward applying computer vision to reading cuneiform. Together, the newly formed team of Schloen, Krishnan, Prosser, and Susanne Paulus decided to attempt to use machine learning strategies to decipher cuneiform. From these early discussions would emerge the DeepScribe project, an experimental research effort funded by the Center for Data and Computing and the University of Chicago. DeepScribe uses the richly tagged Persepolis Fortification Archive project² images as a training set for the machine-learning artificial-intelligence program. The early results are showing great potential for creating a computer program that can read ancient cuneiform. Computers can be trained to recognize modern scripts and even modern handwriting. Can a computer be taught to recognize ancient cuneiform handwriting? And if so, what are the approaches that might make this possible?

The OCHRE database is tailor-made for handling data characterized by features of time and space. As we learned this year, "time" is not limited to the ancient horizon, and "space" is not limited to the Near East. This year we began collaborating with professor Bonnie Clark from the University of Denver on a project investigating the archaeological remains of the World War II internment camp in Amache, Colorado. While we are used to thinking about ceramic vessels and mudbrick walls built by people who speak now-dead languages written in cuneiform, the Amache project has shown that OCHRE is just as useful for reconstructing barracks built of concrete and lumber, and just as helpful for recording data about the spatial distribution of Coca-Cola bottles and Ponds Beauty Cream jars. So far, we have migrated various databases, spreadsheets, photographs, and spatial data files from a variety of sources into the single, unified, and integrated Amache project in OCHRE. We look forward to working with Bonnie, her co-field director April Kamp-Whittaker, and the entire Amache team, once they are able to return to the field for continued research!

This year also found us expanding on the use of OCHRE as a research publication platform. For many years now, OCHRE has been employed as a database for collecting and curating data. It is now time to progress through the data lifecycle to the publication phase. With some recently enhanced features, any research project may now quickly and easily publish all or any part of their data from OCHRE directly to a standard website viewable on a computer or mobile device. With a single click, an entire appendix of data becomes available as a navigable HTML page. This expansion has proven useful for researchers who need a means to publish legacy data or digital projects that are no longer supported on their current platform. Because the OCHRE Data Service works closely

Do computer vision models trained on other scripts help?

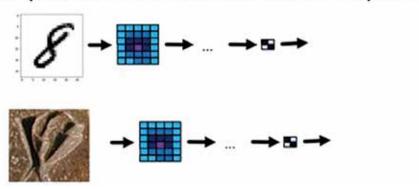


Figure 2. DeepScribe computer vision for cuneiform.

with the Digital Library Development Center at the Regenstein Library, we can offer a long-term home for digital projects. UChicago professor Alan L. Kolata (Bernard E. and Ellen C. Sunny Distinguished Service Professor of Anthropology and of Social Sciences in the College) has published his extensive research on Tiwanaku and Its Hinterland through his OCHRE project. UChicago professor John Lucy (William Benton Professor Emeritus) turned to OCHRE to support his language training website on Mayan Yucatec.³ Sometimes legacy data is trapped on old media formats like DVD or CD-ROM discs. We discovered this year that the companion disc provided with the printed edition of

OIP volume 127 (Megiddo 3: Final Report on the Stratum VI Excavations, edited by Timothy P. Harrison) was password protected and that the password had been long forgotten! As an aside, our apologies to those who were unable to access the data on this disc. However, we rescued the data, imported it into the OCHRE database, and published it to the web, now unlocking it for all to access as the Megiddo III Digital Archive. Included in this online presentation are various plates, raw data, and an interactive GIS map.

We would be remiss if we failed to mention the continued work of many of our other OCHRE projects. The Persepolis Fortifica-



Figure 3. Megiddo III digital archive, GIS app.

tion Archive project continues its work creating text editions, producing digital photographs, and generating an English-Elamite glossary of the archive. The Ras Shamra Tablet Inventory continues adding and curating data on the texts from Ras Shamra-Ugarit. NELC PhD candidate Rhyne King continues editing and analyzing the economics of Late Babylonian Archives. The Chicago-Tübingen Archaeological Project in Sam'al—while not able to excavate as expected this year at the site of Zincirli, Turkey—has launched a many-pronged approach to adding, curating, analyzing, and publishing data already collected.

Looking ahead to the coming year, we can already spy a number of exciting opportunities on the horizon. We are looking forward to working with UChicago linguistics professor Alan C. Yu on his research on the Washo language and UChicago Art History professor Niall Atkinson on his study of the Florentine Catasto of 1427.

The OCHRE Data Service is managed by Sandra R. Schloen and consists of Dr. Miller C. Prosser (database consultant), Dr. David Schloen (professor of Near Eastern archaeology), and Charles Blair (University of Chicago, DLDC).

Visit us at ochre.uchicago.edu.

Endnotes

- ¹ See more on the reconstruction tool on the OCHRE Wiki: sites.google.com/view/ochrewiki/projects/cedar/reconstruction-tool.
- ² See the Annual Report on the Persepolis Fortification Archive project by professor Matthew Stolper.
- ³ We wish to acknowledge the work of John Jung in the DLDC for the development of the LUCY website using OCHRE data.

2019-20 ANNUAL REPORT

oi.uchicago.edu

PUBLICATIONS OFFICE

CHARISSA JOHNSON

The last 2019–20 academic year has been a full one for Publications. On top of business as usual (which is already enough to keep us busy past our graves), Publications was tasked with two centennial publications and two grant-funded publications, also making new efforts to employ means of reducing the time manuscripts spend in the queue.

The two centennial publications, as initially described in last year's annual report, took up most of the 2018–19 academic year but also a good



chunk of the 2019–20 academic year. The first is a hardcover redesign of the OI's museum guide, now with a new layout and updated images: 100

Highlights of the Collections of the Oriental Institute Museum (Jean M. Evans, Jack Green, and

Emily Teeter, eds.). The second, more demanding of the two, is a history and celebration of the OI's last hundred years and has sixty-two contributors, over four hundred pages, nearly six hundred images, and is the first OI publication of this nature: *Discovering New Pasts: The OI at 100* (Theo van den Hout, ed.).

Two grant-funded publications got bumped to the front of the queue due to grant deadlines and are very nearly done, one already at press: Afghanistan's Heritage: Restoring Spirit and Stone (Photographs by Robert Nickelsberg; Tim McGirk, ed.), Pashto translation; and Antoin Sevruguin: Past &



Upcoming Sevruguin publication.

Present (Tasha Vorderstrasse, ed. OIMP 40). The latter, which will be accompanied by a forthcoming exhibition, publishes for the first time the OI Museum's complete collection of nineteenth-century Iranian photographs, most of which were created by Sevruguin.

Despite the extra work involved to complete last year's special projects above, Publications still published fourteen titles, has an additional three titles at press, and reprinted three publications. Included was the publication of the *Annual Report*, four issues of *News & Notes*, and the *Chicago House Bulletin*. Copy editing continues with museum labels, brochures, lecture series fliers, eTablet emails, and other notices. Publi-



The 2020 postdoctoral seminar poster.

cations also manages the printed material for the postdoctoral seminar, which includes copy editing and designing the program and poster and producing the name badges, informational packets, and miscellanea. The seminar for this last year was titled Sealing Theories and Practices in the Ancient Near East, organized by Delphine Poinsot (program, schedule, speaker abstracts and bios, and other information available here: oi.uchicago.edu/research/symposia/2020. html). Additionally, book proceedings from the seminar will be published. A good amount of time continues to be spent assisting the Chicago Demotic Dictionary (CDD) and the Chicago Hittite Dictionary (CHD) as well.

REDUCING THE QUEUE

While centennial and grant publications took up significant time over the last two academic years, Publications is looking forward to getting back to business as usual and working through the queue. Publications continually looks for ways to reduce the time manuscripts spend in the queue and has made several new efforts this last year.

All manuscripts, post review and publication approval,

are copy edited by two people and then formatted in InDesign before being sent to press. After author proofing, images are also formatted and laid out. With only two full-time staff, it can take some time for a manuscript to go through this process. However, in the last year Publications has looked into the possibility of hiring contract copy editors to help with the editing process, contingent on authors providing subventions. Several authors have taken advantage of this, and it has already proven successful.

Word and InDesign templates continue to be utilized, but authors are now being asked to put manuscripts into the Word templates themselves, which reduces publication time significantly. The Word templates are available online for authors to download: oi.uchicago.edu/research/oriental-institute-publications-office. Additionally, authors are responsible for making sure that their manuscript adheres to *Chicago Manual of Style* and that their images are formatted for press. Authors can consult our submission guidelines for more information: oi.uchicago.edu/sites/oi.uchicago.edu/files/uploads/shared/docs/Publications/Guidelines/OI%20Manuscript%20Submission%20Guidelines.pdf.

We are hopeful that the above measures can help to reduce the queue in addition to: template improvements, Publications cutting back on projects that are not directly related to the publication of manuscripts, and a reduction of manuscripts accepted for publication.

STAFF

Full-time staff includes Charissa Johnson (fourth year), managing editor, and Steven Townshend (second year). Part-time staff includes assistant editors Rebecca Cain (eleventh year), Emily Smith (sixth year), and Alexandra Cornacchia (fourth year). Alexandra Witsell (fourth year) continues contracted work on Nippur VI: The Inanna Temple (OIP 145). Mike Ramberg, a volunteer last year, has

PUBLICATIONS OFFICE | RESEARCH SUPPORT

taken a work-study position in Publications and is helping to put our manuscripts into Word templates to expedite publication.

While Thomas Urban retired in 2018, he agreed to continue working part-time on the Chicago Assyrian, Hittite, and Demotic Dictionaries. On his birthday this last July, he officially retired from this work as well. Over the course of thirty-three years, Tom has edited 481 books, prepared 76 dictionary (CAD, CHD, CDD) volumes, printed 210 News & Notes, and overseen 27 Annual Reports. Publications will miss his presence, wit, and kindness!

With COVID-19, all have transitioned to working from home, and due to the nature of publications and the hard work of each person involved, this has gone smoothly. I am constantly grateful for their efforts, expertise, support, and good humor. Thank you all for your hard work. I really couldn't ask for a better team!

SALES

The bulk of OI book distribution is handled by ISD Book Distribution. UK and Europe sales are handled by University of Exeter Press. A limited number of titles are also available for in-house sales through the Suq museum gift shop.

For book order information, please contact:

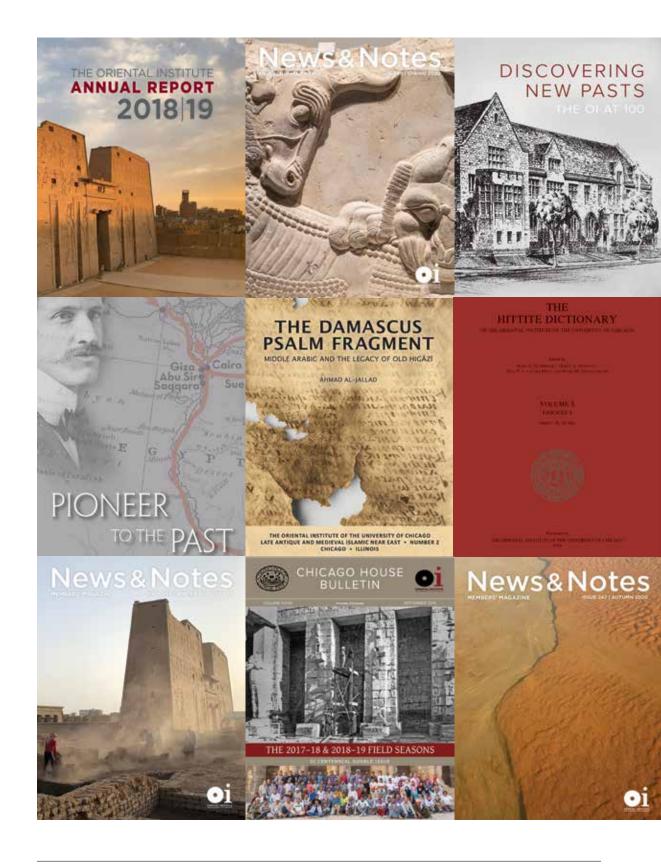
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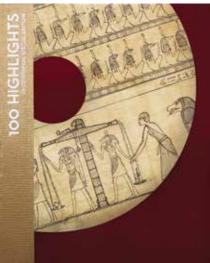
Booksellers should contact ISD for all discount information.

Members of the OI receive a 20% discount on all titles. To receive the member discount, send an email to oi-membership@uchicago.edu for the discount code.

ELECTRONIC PUBLICATIONS

The Publications Office continues to upload PDFs of new publications simultaneously with the release of corresponding printed titles. Downloads of printed materials remain complimentary. 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.









TITLES PUBLISHED (JULY 2019—PRESENT)

In print and/or online

- 100 Highlights of the Collections of the Oriental Institute Museum. Edited by Jean M. Evans, Jack Green, and Emily Teeter. Miscellaneous.
- 2. Discovering New Pasts: The OI at 100. Edited by Theo van den Hout. Miscellaneous.
- 3. The Hittite Dictionary of the Oriental Institute of the University of Chicago, Volume Š, fascicle 4. Edited by Theo van den Hout. CHD.
- 4. The Hittite Dictionary of the Oriental Institute of the University of Chicago, Volume Š, fascicles 1–4. Edited by Theo van den Hout. CHD.
- 5. *Chicago House Bulletin 29: The 2017–18 & 2018–19 Field Seasons*. OI Centennial Double Issue. Edited by W. Raymond Johnson.
- 6. *Oriental Institute Annual Report 2018–19*. Edited by Christopher Woods.
- 7. The Damascus Psalm Fragment: Middle Arabic and the Legacy of Old Ḥigāzī. Ahmad Al-Jallad, with a contribution by Ronny Vollandt. LAMINE 2.
- 8. Persepolis, Chicago, Tehran: The World of the Persepolis Fortification Tablets. Edited by Jebrael Nokandeh and Christopher Woods.
- 9. Pioneer to the Past: The Story of James Henry Breasted, Archaeologist, Told by His Son Charles Breasted. Charles Breasted. Paperback edition. 2020.
- 10–13. *Oriental Institute News & Notes*. Edited by Matthew Welton, Charissa Johnson, Rebecca Cain, Steven Townshend, and Tasha Vorderstrasse. NN 244–247. Quarterly.
 - 14. 2020 Volunteer Directory. Annually.

Reprinted

- 15. Embroidering Identities: A Century of Palestinian Clothing. Iman Saca, in collaboration with Maha Saca. 2006. OIMP 25.
- 16. Visible Language: Inventions of Writing in the Ancient Middle East and Beyond. Edited by Christopher Woods, with Emily Teeter and Geoff Emberling. OIMP 32.
- 17. Afghanistan's Heritage: Restoring Spirit and Stone. Photographs by Robert Nickelsberg. Design and layout by Sharon Okamoto. Edited by Tim McGirk. Dari translation. Miscellaneous (not for purchase).

LEFT: A handful of the titles produced during the 2019–20 year.

At press

- 18. Antoin Sevruguin: Past & Present. Edited by Tasha Vorderstrasse. OIMP 40.
- 19. *Afghanistan's Heritage: Restoring Spirit and Stone*. Photographs by Robert Nickelsberg. Design and layout by Sharon Okamoto. Edited by Tim McGirk. Pashto translation. Miscellaneous (not for purchase).
- 20. The Sheik's House at Quseir al-Qadim: Documenting a Thirteenth-Century Red Sea Port. Katherine Strange Burke. OIP 144.

Additional projects

21. Conference assistance: Sealing Theories and Practices in the Ancient Near East. Organized by Delphine Poinsot. Postdoctoral Seminar 16.

VOLUMES IN PREPARATION

- 1. Where Kingship Descended from Heaven: New Light on Ancient Kish. Karen L. Wilson and Deborah Bekken. OIP 145.
- 2. 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. OIP 146.
- 3. From Sherds to Landscapes: Studies on the Ancient Near East in Honor of McGuire Gibson. Edited by Mark Altaweel and Carrie Hritz. SAOC 71.
- 4. Tell Abada: An Ubaid Village in Central Mesopotamia. Sabah Aboud Jasim. OIP 147.
- 5. Like 'Ilu Are You Wise: Studies in Northwest Semitic Languages and Literature in Honor of Dennis G. Pardee. Edited by H. H. Hardy II, Joseph Lam, and Eric D. Reymond. SAOC 73.
- 6. The Second Cataract Fortress of Dorginati. Lisa Heidorn. OINE 14.
- 7. Center and Periphery: Archaeology of Politics at Ešnunna. Clemens Reichel. SAOC 74.
- 8. Kerkenes Final Reports 1. Excavations at the Cappadotia Gate. Geoffrey D. Summers, with contributions by Yılmaz Selim Erdal, Susanne Berndt, Evangelia Pişkin, Yasemin Özarslan, Noël Siver, Françoise Summers, Robert Tate, and Nilüfer Baturayoğlu Yöney. Introduction by David Stronach and summary translated into Turkish by Güzin Eren. OIP 148.
- 9. Excavations at Serra East, Part 8. Bruce Williams et al. OINE 12.
- 10. Excavations at Serra East, Part 9. Bruce Williams et al. OINE 13.
- 11. Beads from Excavations at Q, B, A, SE, and D. Joanna Then-Obluska. OINE 16.
- 12. Lowland Susiana in the Fourth Millennium. Abbas Alizadeh.
- 13. Kerkenes Final Reports 2. Excavations at the Palatial Complex. Geoffrey D. Summers, with contributions by Susanne Berndt-Ersöz, Ahmet Çinici, Yılmaz Selım Erdal, Evangelia Ioannidou-Pişkin, Noël Siver, and Françoise Summers. Introduction by Nicholas D. Cahill and summary translated into Turkish by Güzin Eren. OIP 149.
- 14. Iraqi Excavations in the Diyala: New Excavations at Tell Asmar, Ancient Eshnunna 2001–2002 and Excavations at Tell Muqdadiya 1980. Hussein Ali Hamza and Salah Rmaiydh. 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.
- 15. *Irrigation in Early States: New Directions.* Edited by Stephanie Rost. OIS 13.
- 16. New Insights into Islamic Archaeology and Material Culture: A Conference in Jerusalem. Edited by Katia Cytryn-Silverman, Kristoffer Damgaard, and Donald Whitcomb.
- 17. Ancient Iran: Highlights from the Collections of the Oriental Institute. Abbas Alizadeh.

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PUBLICATIONS OFFICE | RESEARCH SUPPORT

- 18. Mural Decoration in the Theban New Kingdom Necropolis. Betsy M. Bryan and Peter F. Dorman.
- 19. Scripts and Scripture: Writing and Religion in Arabia, ca. 500–700 CE. Edited by Fred M. Donner and Rebecca Hasselbach-Andee. LAMINE 3.
- 20. The Archive of Thotsutmis, son of Panouphis: Early Ptolemaic Ostraca from Deir el Bahari (O. Edgerton). Brian P. Muhs, Foy D. Scalf, Jacqueline E. Jay.
- 21. *Technological Advances: Materiality of Greek and Roman Curse Tablets.* Edited by Sofia Torallas Tovar and Raquel Martin Hernandez.

In review

22. Seen Not Heard: Composition, Iconicity, and the Classifier Systems of Logosyllabic Scripts. Edited by Ilona Zsolnay. OIS 14.

Backlog

23. Medinet Habu X. Epigraphic Survey.

Ongoing

- 24. The Demotic Dictionary of the Oriental Institute of the University of Chicago. Edited by Janet H. Johnson. CDD.
- 25. The Hittite Dictionary of the Oriental Institute of the University of Chicago. Edited by Theo van den Hout. CHD.

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RESEARCH ARCHIVES

FOY SCALF

Building upon the changes described in the Annual Report for 2018–19, the Research Archives library continued to undergo major improvements this academic year (2019–20). Most visible to visitors will be the new sliding glass window allowing library staff to greet visitors upon entering the library (figs. 1–2). The window enhances our ability to welcome patrons and provides an intuitive place for newcomers to find library staff for help with their research needs. Construction began in October 2019 and was completed in January 2020 with the installation of a custom bookshelf installed below the window (fig. 3). This shelf acts as a display case for recent acquisitions to the library where patrons can easily and quickly browse the latest scholarship in ancient Near East studies. We would like to thank Chris Woods and Jimmy Gurchek for approving and supporting the project through to completion; Mark Meyers and Roxand King for helping plan, draft, and oversee the project; and the University of Chicago facilities crews who built, installed, and stained these new features. They represent another great improvement to our library facilities.

The construction work on the window and shelf installation was originally scheduled for August–September 2019, but it had to be postponed so that the library could accommodate several events for the OI's centennial celebration. A cocktail hour was hosted on September 14 in the Research Archives for the centennial gala celebration, and on September 27 the library hosted a meeting of the university advisory councils. In preparation for these events, the reading room had to be cleared of its tables, the first time these tables have been completely moved out of the reading room in the last fifteen to twenty years, and perhaps since the Elizabeth Morse Genius trust renovations of the late 1990s. Figures 4–5 show the room as it was being prepared for the centennial cocktail hour, while figure 6 shows the library set up for the advisory council's meeting. The success of these undertakings is owed to the professional work of Hogan Movers and the meticulous planning of Wally Verdooren, Matt Welton, Polina Kasian, and Ali Mallett.

Throughout the reading room are extensive woodwork and paneling. Over the years, this woodwork has suffered from the elements, particularly from fluctuations in humidity. We would like to thank Rob Bain for taking the time and effort to restore this woodwork by polishing and oiling the entire reading room of the Research Archives.

The Research Archives was a recipient of a generous grant from the University of Chicago Arts to fund the hosting of two workshops on early historic bookbinding and structure. Julia Miller, conservator emeritus from the University of Michigan, was invited to give a half-day workshop on "Early Codex Binding Structures: Interpreting the Evidence through Modeling" that included a hands-on examination of models. Catarina Figueirinhas was scheduled to follow with a workshop on Nag Hammadi Codex VIII, during which participants would construct their own models of this early papyrus codex with leather cover. This event was originally scheduled to take place in April 2020, but had to be postponed indefinitely due to the global COVID-19 pandemic. We still hope to be able to host this workshop in the future, perhaps in the spring of 2021.



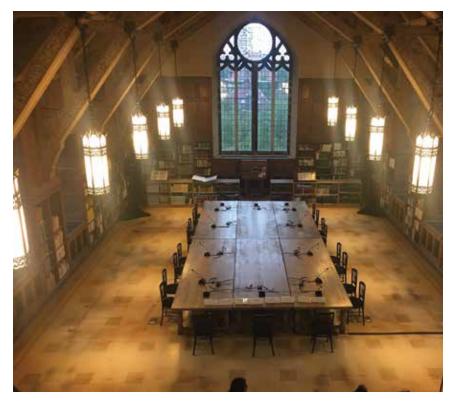








INTEGRATED DATABASE PROJECT | RESEARCH SUPPORT



OPPOSITE TOP (left to right): Figure 1. New window installed in the Research Archives staff office across from the hieroglyphic printing font discussed in last year's report.

Figure 2. Library staff are now able to greet visitors to the Research Archives from the office window.

OPPOSITE CENTER (left to right):

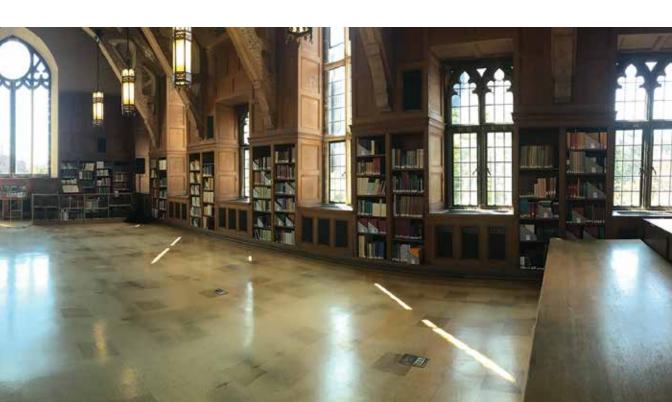
Figure 3. New acquisitions shelf during installation and staining below the new office window.

Figure 4. The reading room set up for the OI centennial gala cocktail hour.

воттом:

Figure 5. The reading room without tables for the first time in recent memory.

LEFT: Figure 6. The reading room set up for the advisory council meeting.



RESEARCH SUPPORT | RESEARCH ARCHIVES

Acquisitions

Despite the disruption of the pandemic and the closing of the Research Archives in March 2020, the Research Archives acquired 1,058 volumes in 293 accession lots of printed materials during the 2019–20 academic year (see Table 1). These accessions conform to our historical average of 900–1,000 volumes per year, although a suspension of cataloging in March, April, and May artificially deflated these numbers. We continue to work to get caught up on new accessions processing. Of these accessions, 215 came in via purchase, 74 through gifts, and 4 through exchanges. Of these volumes, 439 were series volumes, 450 were monographs, and 178 were journals. Prior to the shutdown of March 2020, over \$37,000 has been spent on book purchasing and over \$2,200 in shipping charges.

Month	Number of Accession Lots	Monographs, Series, Pamphlets	Journals	Total Volumes
July 2019	19	143	4	147
August 2019	49	101	32	133
September 2019	29	110	16	126
October 2019	28	110	26	136
November 2019	49	105	24	129
December 2019	31	76	15	91
January 2020	32	130	20	150
February 2020	40	90	29	119
March 2020	10	15	6	21
April 2020				
May 2020				
June 2020	6	4	2	6
Totals	293	884	174	
			Total Volumes	1,058

Table 1. Research Archives Acquisitions July 2019-June 2020

Online Catalog

In 2019–20, the library staff and volunteers added approximately 10,000 new records in the library's catalog within the EMu database platform that powers the Oriental Institute's Integrated Database. Over the last four years, we have averaged 10,000 new records each year covering every volume and individually authored chapter, article, or review. Records are available online for searching, sorting, and download in a variety of formats (oi-idb.uchicago.edu).

The library collection is nearing 70,000 total volumes, with 565,000 total catalog records covering the individually analyzed contents. With remote work becoming the norm in March 2020, we shifted our focus to adding and updating links in our catalog to material available online. Such work makes research far more convenient for remote users, who can then access research materials through the links provided. Nearly one-third of all database records has a link to online content (over 120,000

records). Of those links, roughly 26,000 are to open-access materials, while the remainder require some form of subscription. Nearly 70,000 of those subscription links point to resources available on JSTOR. The online catalog remains the primary resource for the distribution of information about content related to the study of the ancient Near East, whether in print or online. Further information and limited resources related directly to the Research Archives can be found on our webpage (oi.uchicago.edu/research/research-archives-library).

Table 2. Catalog Records

Year	No. of Catalog Records Added	Total No. of Catalog Records
2019–20	10,000	565,000
2018–19	10,000	555,000
2017–18	10,000	545,000
2016–17	10,000	535,000
2015–16	15,000	525,000
2014–15	20,000	510,000
2013-14	30,000	490,000
2012-13	40,000	460,000
2011–12	30,000	420,000
2010-11	30,000	390,000
2009–10	40,000	360,000
2008-09	63,000	320,000
2007-08	62,000	257,000
2006-07	28,000	195,000

DONATIONS

Donation remained an important part of accessions in 2019–20 for the Research Archives, with gifts from Sohair Ahmed, Steven Cole, Andy Dolan, Karl Eckner, Marcella Frangipane, Lisa Heidorn, Janet Johnson, Heidi Poser, Martha Roth, Joseph Rulli, Margaret Schmid, Emily Teeter, Susan Waugh, Don Whitcomb, and Dobrochna Zielińska. Several of these donations must be singled out as exceptional. Janet Johnson and Don Whitcomb donated several thousand volumes from their personal libraries to the Research Archives. We have only just begun sorting and cataloging this generous donation. Likewise, Martha Roth has donated her entire scientific library—over 2,000 volumes covering every aspect of Assyriology—to the Research Archives. This remarkable donation will help to ensure our coverage of cuneiform studies for many generations to come. For the time being, these books will remain in the office of Martha Roth for her continued scholarly work. At a point in time in the future, these materials will be transferred to the Research Archives for sorting, cataloging, and preservation. We would like to thank all of our generous donors, without whom it would not be possible to fulfill our mission.

RESEARCH SUPPORT | RESEARCH ARCHIVES

Table 3. Research Archives Analytics

Туре	Total # of Records
Total Volumes	68,803
Monographs	17,216
Monograph Sections	71,015
Series	1,705
Series Volumes	21,667
Series Volume Sections	96,691
Journals	1,026
Journal Volumes	28,860
Journal Volume Articles	321,248
Thesis	1,060
Pamphlets	2600
Reviews	122,074
Festschriften (Volumes)	669
Digital Invoice Records	1967
Digital Cover Art Records	10,886
Adobe PDF	41,226

VISITORS

With the closing of the university and OI due to the global pandemic in March 2020, our community has not been able to gather in the Research Archives. Since that time, we have been fulfilling research requests remotely, relying heavily on digital scholarship. Prior to the pandemic, a report of the visitors to the library from July 1, 2019, to March 17, 2020, ran to over 800 pages, with over 29,500 scans of ID cards representing 2,169 individual patrons who came through our doors. This is nearly the same total in three quarters as the entirety of last year. Many visiting researchers, members, and friends of the Research Archives visited over the course of academic year. These include (in alphabetical order): Ashley Arico, Ashely Demma, Sara Grose, Joe Smolik, and Michael Watson. We had group visits from the Admiral, which included an extensive discussion of the hieroglyphic printing font; a group from the Lithuanian Research Center; prospective students for the University of Chicago; and students from Elmhurst College's Great Libraries class led by Jacob Hill and Jennifer Paliatka. In addition to these visits, a number of filming and photography requests took place in the Research Archives throughout the year, including ABC News, Voyage Pictures, the office of the provost, the office of the dean of students, and UChicago Arts.

ACKNOWLEDGMENTS

The volunteer program has been absolutely crucial to the success of the Research Archives as well as the integrated database project (see separate report). Sue Geshwender has continued to help us

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recruit and retain our volunteers by building a vibrant and tight-knit community. We would like to thank the following for all their hard work, dedication, and friendliness in the Research Archives: Betty Bush, Chloe Brettman, Gabriella Cigarroa, Gaby Cohen, Kim Crawford, Irene Glasner, Dannica Hannah, Kat Jarboe, Aiko Johnston, Jane Clinkert-White, Jacqueline Mendoza, Cliff Peterson, Lu Reed, Stephanie Reitzig, Roberta Schaffner, Gabriele Correa da Silva, George T. Thomson, Julian Thibeau, Theresa Tiliakos, Jeremy Walker, Kayleigh Watson, and Annie Zhu. Gaby Cohen's presence will be greatly missed by her many friends in the Research Archives.

I cannot run the Research Archives alone. In addition to our large team of volunteers, I rely on the staff of library assistants and interns to keep the library functioning and help our many patrons. For all their hard work, collegiality, and support, my gratitude goes to Clay Catlin, Sunwoo Lee, Fatou Ndoye, Tanya Olson, Rosemary Ott, Emilie Sarrazin, Rebecca Wang, and Amy Zillman. It has been a pleasure to have such a reliable and dedicated team.

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TABLET COLLECTION

SUSANNE PAULUS

This year's report is much different from those of previous years, due to the significant impact of COVID-19 on the object-based research done in the Tablet Collection. Direct consequences were that researchers cancelled visits but asked for photos; professors did not need objects for online classes, but rather needed pictures; and scientific study of tablets became no longer possible. On the positive side, this situation also showed the central importance of the digitization of cuneiform tablets for the future, which will be the red thread of this report.

From fall until winter 2020, it was business as usual in the Tablet Collection. Colton Siegmund, the assistant curator, and I supported research by hosting or providing photos for many outstanding colleagues worldwide including Franco D'Agostino (Rome), Dominique Charpin (Paris), Grant Frame (Philadelphia), Nedal Haj Darwich (London), Mark Garrison (San Antonio), and Jana Matuszak (London). Visitors and colleagues at UChicago studied more than two hundred tablets. Noteworthy is the crucial publication of over thirty-eight Sargonic (Old Akkadian) tablets from Umma by Benjamin Foster (Yale).

Already during normal operations, we saw a trend toward requesting high-quality digital images rather than planning research visits. Now digitization is more crucial than ever, and we were able to bring it up to a new level, thanks to a generous donation by Abhay Parekh. This donation allowed us not only to ramp up our efforts but to purchase crucial equipment. Our volunteers Terry Friedman, Janet Helman, and Toni Smith scanned an additional 682 tablets. Nicole Brandt, a CMES student, supported their work as she located and moved tablets and did quality checks on the scans. Madeline Ouimet, a UChicago undergraduate student, joined the team and focused on image post-production. She transformed tablet scans into composite images showing all six sides of the tablets. She was able to continue this work. In spring, Clara Mikhail, another UChicago undergraduate, joined the efforts after first revamping the Tablet Collection's homepage. Together they added over five hundred new composite images to the Integrated Database, which are already proving to be very valuable for my curatorial work, research on the tablets, teaching, and outreach.

While scanning tablets is a cost-effective and straightforward method, the results do only give an overview with inadequate lighting, and fixed contrast often prevents reading all signs. Therefore, we were looking for better approaches to augment readability. Abhay Parkeh's donation funded the purchase of a dome for Reflectance Transformation Imaging (RTI). RTI is coupled with high-resolution photography, currently the most effective way to digitize cuneiform tablets. The RTI dome photographs tablets with lighting from a significant number of different angles. After post-processing, viewers can change the lighting on the image, allowing them to read the tablet in almost the same way we do by holding it in their hands. We ordered the dome from Custom Imaging, of the University of Southampton, who also build the domes currently used by the Louvre and Yale Babylonian Collection. Sadly, delivery was delayed due to COVID-19.

While digitalization progresses nicely, the importance of better cataloging became apparent: attaching meta information like genre, period, and provenance to our tablet files helps scholars and students to find the tablets that are relevant for their research and that they are interested in publishing. However, only specialists in cuneiform languages can complete those tasks. Foy Scalf and

RESEARCH SUPPORT | TABLET COLLECTION

Susan Allison provided our team with training for best practices tailored to the needs of the Tablet Collection. Currently, Colton Siegmund has started to catalog the tablets excavated by the Oriental Institute in Nippur. Those tablets are fascinating, as they span a wide range of topics, including Sumerian literature, school texts, private legal archives, and administrative documents. Colton is also attaching records from the excavation file cards (scans provided by Karen Wilson) to augment the available information. During the summer, I trained Madeline Ouimet and Clara Mikhail to research and add metadata when uploading new tablet photos. They are often able to make significant updates and are also adding transcriptions and translations wherever available.

Volunteer Susan Padula continued the storage evaluation of our tablets, checking another 852 objects. Currently, 40 percent of our tablets are housed in acidic paper-glass boxes, which are not suitable for the long-term storage of museum objects of this nature and value. Based on visual inspection, only 16 percent of our tablets are in good condition, while 20 percent are in urgent need of conservation. Furthermore, Laura D'Alessandro, head of conservation, assessed the storage cabinets housing the tablet collection, which are now over seventy years old. She noted that those are in an overall state of disrepair and dysfunction and are not fulfilling modern museum standards. It is especially dangerous that those cabinets do not protect the tablets against water damage, for example, in case of a burst pipe or a sprinkler event. Laura kindly developed a proposal for new storage and housing.

Finally, "Far From Home: Exploring the Application of Non-destructive pXRF Clay Analysis for the Provenance Study of Cuneiform Tablets" was heavily impacted by two significant setbacks. First, the Bruker Titan 800 we used for our study broke and was deemed irreparable. As an interim solution, we were assigned time on the tracer in the Conservation Laboratory. However, this tracer was damaged during fieldwork and was irreparable. Laura D'Alessandro and I went through a lengthy replacement process before object-based analysis became impossible due to COVID-19. Thanks to

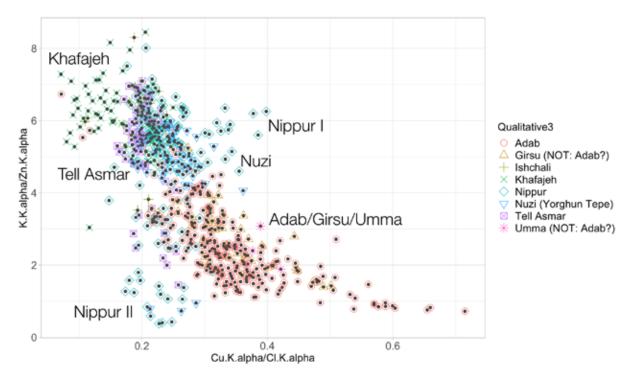


Figure 1. Ratio plot of copper to chlorine and potassium to zinc.

TABLET COLLECTION | RESEARCH SUPPORT

a generous donation by Al Liventals, the Tablet Collection will have its own portable XRF tracer in the future.

Before those events, we got encouraging results. The team, including Lee B. Drake (XRF analysis and AI, University of New Mexico), Colton Siegmund (metadata and data collection), and Suay Erkusoz (data collection), analyzed tablets from different sites, including Adab, Nippur, Nuzi, Khafajeh, Ischchali, and Tell Asmar. We obtained proof that pXRF is a viable and up-and-coming method for the provenance study of cuneiform tablets. Scatter plots indicate distinct groupings of tablets, with elements such as chlorine (Cl) and copper (Cu) being particularly essential.

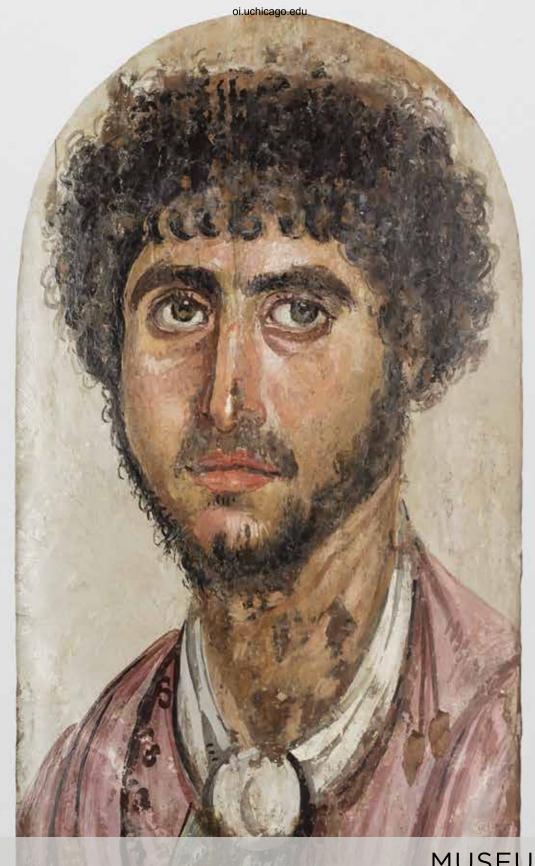
Nearby sites like Adab and Nippur (fig. 1), and Khafajeh and Tell Asmar, are distinguishable in the clustering. More significant sites like Nippur (168 ha) can have multiple clay signatures (Nippur I, II fig. 1). An analysis of the metadata showed that various clay signatures could correspond to individual findspots on the site and ancient archives/antique text clusters. Furthermore, a small group of results showed promise to solve contradictions between proposed find circumstance (Adab) and textually assigned provenance (Girsu/Umma), supporting that the tablets were likely produced at Adab.

While scattered plots indicated grouping, overlaps between different groups occurred (fig. 1). The application of machine learning approaches by Lee Drake had better success reaching 90–96 percent accuracy in identifying the provenance of clay tablets by chemical analysis. We presented preliminary results to experts in conservation, scholars, diplomats, and members of law enforcement during a conference at the Smithsonian Institution on Cuneiform Tablets: Origins, Trafficking, and Best Practices for the Future. Katharyn Hanson, our consultant, organized this successful conference after a stimulating brain-storming session in Washington, DC, in early 2019. Our work was also highlighted for a broader audience in a feature article by Mary A. Agner for *Humanities: The Magazine of the National Endowment for the Humanities* 41:1 (2020).

I am eager to reassume work on the tablets, answering research requests that accumulated during the last months, and advancing our digitalization further as soon as it is possible and safe. It is my great pleasure to thank everyone involved in the Tablet Collection last year: our donors, volunteers, staff, and our many colleagues, especially the staff of the OI and my colleagues in Cuneiform Studies.

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OVERLEAF: The Fayum mummy portrait of a male figure (E2053) from Hawara, Egypt, in the OI collection. Dating to the Roman period, it is one of two portraits in the collection that will be studied as part of the APPEAR project.

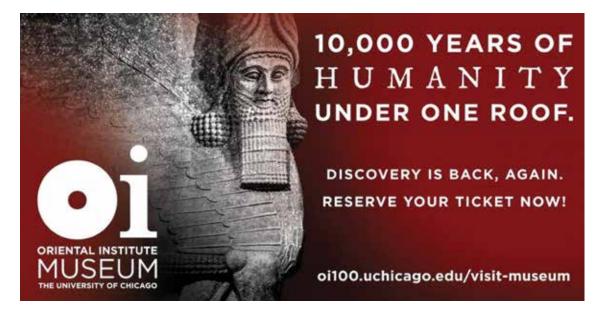
MUSEUM

ROBERT BAIN, DENISE BROWNING, LAURA D'ALESSANDRO, JEAN M. EVANS, ANNE FLANNERY, AND HELEN MCDONALD

The newly installed galleries of the OI Museum were previewed at our gala on September 14, 2019, and unveiled to the public on September 28—marking the beginning of our yearlong Centennial celebration commemorating one hundred years of pioneering research at the OI (fig. 1). The OI Museum staff worked hard to complete the galleries, a project (the "GEP") that had been five hundred years in the making. In addition to new display cases, lighting, and graphics, we installed some additional artifacts from the collection that had never before been on permanent display. Most notable is our monumental relief of a lion and bull in combat from Persepolis, now installed in the Robert and Deborah Aliber Persian Gallery after having been on loan to the Boston Museum of Fine Arts for over years. New spaces, including those devoted to the Islamic period (the Larissa Inga Liventals Islamic Collections Exhibit) and to Babylon (the Robert Parrillo City of Babylon Exhibit) were created. Finally, we presented many of our artifacts in new ways, drawing upon original documentation and photography to highlight OI excavations and the unparalleled value of our museum archives.

The OI Museum typically receives around fifty-five thousand visitors annually. Our visitor numbers had been slightly lower these past couple of years, probably due to our periodic closure of certain galleries for the GEP, which also caused us to halt our special-exhibitions schedule. During the first six months of our newly installed galleries, from September to February, we were on track to have our highest number of visitors in decades. However, we announced on March 13 that the OI Museum would close due to the COVID-19 pandemic, and we did not reopen until September 29,







TOP: Figure 2. OIM reopening, September 29. BOTTOM: Figure 3. Ann Hamilton. Photo: JM Evans.

2020 (fig. 2). While the OI Museum was closed, a number of essential museum staff continued their on-site work along with our security staff, checking the galleries and collections and addressing maintenance issues throughout the building.

I am so thankful to the OI Museum staff for all their hard work this past year. The challenges we faced at the beginning of the year with the conclusion of the GEP were very different from those we faced at the end of the year with the COVID-19 pandemic. However, it is a credit to such a talented staff that we were able to continue our work. In the process of doing so, not only did we safeguard the collections, but we found innovative ways to reach new audiences through our virtual programming and social media.

I would like to highlight just a few of our special OI Centennial projects this past year; a more comprehensive accounting of them is available in subsequent entries of this Museum section as well as in the Communications section, which also highlights our virtual programming during the ongoing COVID-19 pandemic.

Most notably, we celebrated the OI Centennial in our galleries and beyond by collaborating with internationally recognized contemporary artists to present new installations inspired by our collections. In the fall of 2018, Ann Hamilton, recipient of the National Medal of Arts and a MacArthur "Genius" Fellowship, spent a week in residency working with OI Museum staff to make images of our artifacts using early generation scanners (fig. 3). The images, enlarged to gigantic scale, were affixed



to the elliptical glass dome of the Grand Reading Room in the Joe and Rika Mansueto Library to create Hamilton's new installation, titled *aeon* (September 18–December 15). Her project also included a book and a limited edition portfolio of prints.

The Iraqi-American artist Michael Rakowitz created a site-specific installation (September 13-present) in the Dr. Norman Solhkhah Family Assyrian Empire Gallery that included a fragmentary relief in our collection from the Northwest Palace at Nimrud depicting the head of the Assyrian ruler Ashurnasirpal (figs. 4–5). This collaboration was an extension of Rakowitz's series entitled *The invisible enemy should not exist*, which uses contemporary Middle Eastern newspapers and Iraqi food packaging to make "reappearances" of the thousands of Iraqi artifacts destroyed by armed conflict and invasion—reminding us that, ultimately, the most devastating casualties of war are human loss and suffering.



TOP: Figure 4. Rakowitz. Photo: Michael Tropea. BOTTOM: Figure 5. Rakowitz. Photo: Michael Tropea.

The Syrian artist and architect Mohamad Hafez, who was our first ever interpreter-in-residence at the OI, exhibited Lamentation in the Edgar and Deborah Jannotta Mesopotamian Gallery (September 13-present) and developed public programming to connect our collections with contemporary issues in the Middle East (figs. 6–7). Responding to the Syrian civil war, Hafez's installation captured the magnitude of devastation and the fragilities of human life, particularly those caused by compulsory departure and the ongoing Syrian refugee crisis.

The special exhibition, We Start Here: The OI at 100 (the Marshall and Doris Holleb Family Gallery for Special Exhibits, September 13-present), displayed the history of the OI with digitized archival film never or

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rarely before seen and new comprehensive timelines for the history of our archaeological fieldwork and language projects.

For the Special Collection Research Center at the Regenstein Library, Anne Flannery, head of Museum Archives, curated *Discovery, Collection, Memory: The Oriental Institute at 100* (September 16–December 13), chronicling the origins of the OI alongside the founding of the university.

Kiersten Neumann, curator, reinstalled our display case in the lobby of the Booth School of Business with *The OI at 100: The First Expedition.*

Finally, the OI partnered with Court Theatre for a site-specific performance in the OI Museum of An Iliad by Lisa Peterson and Denis O'Hare. Opening with a promenade through the museum, the play concluded with a seated portion performed in the Robert and Deborah Aliber Persian Gallery. Due to the COVID-19 pandemic, performances of An Iliad ended prematurely on March 11.

TOP: Figure 6. Hafez. Photo: Michael Tropea.
BOTTOM: Figure 7. Hafez. Photo: Michael
Tropea



CONSERVATION

The year began in much the same fashion as the previous year, with no hint of the changing world that was in our future. Conservation's efforts focused on the last few critical months of activities of the Gallery Enhancement Project (GEP) and the exhibition that would mark the celebration of the Oriental Institute's centennial. Conservation staff continued to assess the conservation needs of objects going out on display, as well as those objects requested by researchers for their projects or professors for use in their classes. Conservation staff also continued with the ongoing material identifications of objects within the collection, a critical component of our work that corrects many old designations that were assigned on the basis of a visual examination. The correct identification of the composition of an object not only impacts the understanding of its historical context in antiquity but also contributes to the choice of conservation treatment that may be used on the object. While our abilities are limited by the equipment at our disposal, the lab's acquisition of its first hand-held x-ray fluorescent analyzer in 2013 opened the door to its use on thousands of objects in the collection, due to its non-destructive nature. The pXRF analyzer allows us to identify the elemental composition of inorganic materials in the collection without requiring the removal of a sample from the object.

The condition of several thousand objects was assessed by conservation staff over the course of the year, but only a relatively small number were approved for display. The quick turnaround that the reinstallation timetable required meant that only a few hundred objects would be able to receive conservation in the time allowed, and most of the artifacts approved for treatment needed only minor conservation to be able to be safely displayed. The majority of objects that required intensive stabilization were returned to storage until a suitable time could be found that would allow for their proper conservation. The list of high-priority objects that require treatment continues to grow.

In the fall, Conservation worked with Registration and Preparation on several small loans on campus. The thirty-one objects that were on loan to the Booth School were de-installed and packed for the return trip. Although the artifacts only traveled a short distance, the loan included delicate objects such as the Coptic bronze scales (E14458A-C). One of the pieces of the scale, a 1 mm thick beam of corroded copper alloy, had to be specially packed in custom foam cut-outs for even such a short trip. The exhibit Doing Business in the Ancient World was replaced by the OI Centennial Exhibit. Alison Whyte, associate conservator, took the lead on the Booth School loans. Similarly, a few objects were loaned to the Regenstein Library Special Collections gallery to commemorate the OI's centennial. Stephanie Black, assistant conservator, took the lead in the installation and de-installation of the exhibit at the Regenstein.

While the majority of our efforts during the first half of the year were focused on the GEP, time was made in the schedule to assist with other ongoing projects. From cleaning and stabilizing the glass housing of our Greek papyrus collection for a delayed scanning project to assisting with object handling and answering conservation-related questions during a class on ceramic technology, conservators were kept busy. Conservation also assisted with the 3-D scanning of skulls from Alishar that would be sampled for the faculty-driven ancient DNA project by UC geneticists. The University's MRSEC (Materials Preparation & Measurement) Laboratory generously offered to provide a high-resolution 3-D print of the more complete skull so that we would have a copy of the pre-sampled skull for future research purposes.

By the fall, with the OI Centennial Gala behind us, we resumed our more usual activities. In September, Alison Whyte, associate conservator, traveled to the site of Zincirli, Turkey, to carry out analysis of finds from the OI-sponsored excavation. It turned out to be the last trip for our portable x-ray fluorescence analyzer (pXRF). The rigors of travel contributed to the demise of our elderly

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LEFT: Figure 1. Stephanie Black, assistant conservator (left), and Alison Whyte, associate conservator, begin the painstaking process of opening one of the thirty-five crates of bricks from the excavations at the Sin Temple, Khorsabad, Iraq (2020). RIGHT: Figure 2. A detail of the first exposed glazed brick from Crate 25 from the façade of the Sin Temple, Khorsabad (2020).

machine. Very fortunately, Director Chris Woods, appreciating the importance of the pXRF to conservation and research projects in general, authorized the replacement of the analyzer. The new Bruker Tracer 5g, a top-of-the-line pXRF, arrived in mid-March just days before the pandemic caused the shutdown of Chicago and the state of Illinois. It sits in the conservation office, still in its origin packing materials, awaiting the official opening of the boxes and certification of the equipment. The Tracer 5g's higher sensitivity will allow us to identify lighter elements than the older Tracer III model and increase our research capabilities.

In October, a small group led by Director Chris Woods returned another batch of Persepolis Fortification tablets to the National Museum of Iran. The 1,783 tablets, which had been so carefully and patiently packed within their individual boxes by our wonderful volunteers (Sue Padula, Rita Lieber, Steven Scott, and Jeremy Walker), were received with much fanfare by our Iranian colleagues. The opening of the crates, with their many layers of special packing materials, was conducted under the watchful eyes of both our museum colleagues and government representatives. It was with great relief that the tablets were seen to have traveled halfway around the world without damage, proof that the packing protocol was a success. The remainder of the trip was without incident, and the graciousness and helpfulness of our Iranian colleagues contributed to the wonderful experiences that followed. Immediately upon our return, the packing of the next shipment began with the assistance of two University of Chicago students, Camille Gardenas and John Sweeney. In addition to their packing responsibilities, they also selected digital images of the packed tablets that would accompany the next shipment.

In November, the conservation lab hosted a visit from the Education Department of the Museum of Science and Industry, organized by former OI Education staff member Leila Makdisi. After the tour of the lab and presentations by Conservation staff, Whyte provided a special presentation of the conservation of the coffin of Ipi Ha Ishutef to the group. Over the course of the year, Whyte continued her work with public outreach and education by providing a series of talks and classes. She started the year off in July when she presented an OI adult education course: Caring for the Collection. In December, Whyte also presented an OI lunchtime gallery talk titled Bastiani and Beyond, which was very well received. And in March of the following year, Whyte presented a lecture, "Museum Art Conservation," to Morag Kersel's class on material culture and museums at DePaul University.

After an eighteen-year hiatus, we were able to resume the conservation of the glazed bricks from the Sin Temple at Khorsabad (figs. 1, 2). Excavated during the 1932–33 season of the Iraq expedition and shipped to Chicago at the conclusion of the season, the thirty-five crates of glazed brick from the Sin Temple façade at Khorsabad formed part of the legal apportionment of finds by the Iraqi government. One of the reasons the conservation of these bricks is so important is that they are the only extant glazed bricks from the Sin Temple façade. The opposite (mirror-image) façade of the Sin Temple, which was shipped to Baghdad in the 1930s, has never been recovered. The OI crates remained unopened until the 1990s, when preliminary work began on the bricks, testing the use of modern stabilizing chemicals and their potential interactions with chemicals that had been applied in the field sixty years earlier. Work resumed on the bricks for the 2002 re-installation of the Mesopotamian Gallery, but limited display space only allowed for the re-creation of the head of a bull, a grand total of nine bricks. The hope is to someday complete the conservation and analysis of the approximately 282 bricks and reconstruct the decorated façade of the Sin Temple in our galleries. With the far-reaching effects of the pandemic, this project has had to be put back on hold for the immediate future.

Later in the year, the Oriental Institute Museum was invited to join the APPEAR (Ancient Panel Painting: Examination, Analysis and Research) project. Sponsored by the Getty, the APPEAR project is an international collaboration of museums that focuses on the study of Romano-Egyptian funerary paintings with the stated goal of expanding the understanding of these ancient materials and technology. We will be collaborating with conservation scientists from the Art Institute, another member of the project, as we examine and study our own two examples from the Fayum in Egypt, depicting portraits of a male and a female. The male portrait (E2053) is shown here (fig. 3). Interrupted by the pandemic, plans are underway to resume work on the project as soon as circumstances allow.

The Sevruguin exhibit, originally scheduled for the fall of 2020, brought the condition of the Sevruguin collection of albumen prints to our attention. Beyond storing them appropriately in archival housing, no conservation efforts had been applied to them since their acquisition. The albumen prints are adhered to cardboard backing that dates to the origin of the prints. Due to the delicate

nature of the albumen print, they cannot be safely removed from the cardboard. There is no

Figure 3. The first reconstruction of the glazed bricks from the Sin Temple façade revealing the head of the bull figure in the OI conservation lab in 2002.



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Figure 4. The framed Fayum mummy portrait of a male figure (E2053) from Hawara, Egypt, in the OI collection. Dating to the Roman period, it is one of two portraits in the collection that will be studied as part of the APPEAR project.

information on their condition when first acquired, but currently the print and cardboard backings are brittle and generally dirty. Museum director Jean Evans recognized that the exhibition would present an opportunity to promote the long-term preservation of this important collection. To that end, photograph and paper conservator Carol Turchan was brought in to assess the collection and make treatment recommendations. At this time, the collection of 152 prints is undergoing conservation treatment by Turchan who is cleaning and stabilizing the prints and their backing.

By mid-March, the pandemic had reached Chicago, and the stay-at-home order was issued by the governor of Illinois. Conservation staff had only a few hours to figure out how to transfer some of our responsibilities to a remote work situation. Whyte took on the task of updating the materials fields in our integrated database (IDB), replacing incorrect material identifications with scientifically based identifications as a result of our work during the GE project. Stephanie Black, assistant conservator, took on the momentous task of beginning the digitizing of the conservation lab's first twenty years of paper records, color slides, and photographs dating back to the 1970s. She was able to scan 4,433 items (prints, slides, negatives, and written reports) by the end of June, and she developed a protocol for digitization

of the different types of records. There is still a significant portion of the collection to be scanned, but Black made a heroic effort and put a major dent in the task.

As the stay-at-home order was extended indefinitely, we realized that we would not be returning to work in the building in two or three weeks, as originally believed. To deal with this new reality, the core senior collections staff—the heads of each unit, led by Museum director Jean Evans, began conducting weekly collection checks that supplemented the daily building inspections carried out by the OI security team. Additionally, the University's Building Automation Department wrote a short program for their HVAC-monitoring system, software that normally runs on a PC, which allowed D'Alessandro to check on our climate-control remotely with a Mac-based computer. Their quick response was much appreciated, and the ability to conduct these daily checks on our system was very reassuring as the stay-at-home order continued.

Stephanie Black's contract ended in June, and we were saddened to have to say goodbye. She was with us for three years, working as an integral member of the Conservation team, and will be missed by the museum as a whole. Her work on many of the projects over the course of the three years, most notably the GEP and Sin Temple bricks, was integral to their success. But there is a happy ending—Black accepted a position with the Field Museum as assistant conservator for the Native North American Hall project and starts there this summer.

As this report goes to press, the pandemic is still very much a reality of life. We hope that next year's annual report will have a more positive story to tell.

REGISTRATION

Once again, most of Museum Registration's time has been taken up by Gallery Enhancement Project activities (GEP). Some five thousand object movements took place in relation to the GEP this year. As the year progressed and the Edgar and Deborah Jannotta Mesopotamian Gallery was reinstalled, we began returning to storage those objects that were no longer on display or that came out for exhibit consideration but were ultimately rejected.

Requests

In total, the Registration Department has responded to eighty-two different requests this year, generating over 14,800 object movements. Apart from the requests relating to the GEP already mentioned, other requests included research and analysis (1,325 object moves), class use (620 object moves), and photography by both staff and researchers (1,650 object moves). Just over 3,100 object moves involved objects being returned to storage after all uses (including the GEP).

Visiting Researchers

Kyra Kaercher (University of Cambridge) visited to study a selection of Islamic sherds and submitted a sampling and analysis request for a selection. Sophie Kroft visited to study a few pre-dynastic objects for her PhD. Professor Anastasia Maravela (University of Oslo) took the opportunity to examine a selection of Greek and Coptic ostraca from Medinet Habu (while a visiting professor in the Department of Classics). Jennifer Thum (Harvard University) inspected a few wooden objects in the Egyptian collection. Lorenz Rahmstorf and Nicola Ialongo of the Weight and Value project visited to study and weigh the weights and coil money from the Diyala sites (and gave a lecture on their ERC project that is based at the University of Göttingen, Germany). Luckily, they were able to complete their visit just before the COVID-19 restrictions came into force.

Collections Research Grant Recipients

Father Sharbel Iskandar Bcheiry made numerous visits to study folios from a Syriac manuscript (OIM A12000 to A12006). Mudit Trivedi came to study Islamic glass bracelets and made a selection for LA-ICP-MS analysis. Artur Stephanski examined a few Khafajah objects while consulting Diyala excavation records. Due to COVID-19, visits by the following CRG recipients are currently on hold: Moritz Jansen (LA-ICP-MS analysis of gold objects), Alice Williams (study of the Amarna house model), Bart Vanthuyne (Ballas and Naqada pottery, excavated by Petrie), and a second visit by Mudit Trivedi. Hopefully all these visits will happen in the 2020–21 academic year.

Oriental Institute Faculty, Staff, Researchers, and Students

Postdoctoral researcher Delphine Ponsoit studied the Sassanian stamp seals in the collection. Michael Johnson continued to photograph sherds and objects from Tell al-Judaidah (Amuq, Turkey) for the Judaidah database in OCHRE. Foy Scalf photographed some five hundred Medinet Habu ostraca. James Osborne, together with Maanasa Raghavan of the new human genetics lab on campus, began to look at the possibility of taking DNA samples from some of the human skulls from Alishar Höyük (Turkey). This interest led to the registration of several Alishar skulls and 3-D scanning of two that are to be sampled to see if DNA can be retrieved (see image IMG_5655 or 5657). NELC student Theresa Tiliakos studied hieratic ostraca for her PhD. Tynan Kelly came in to study a Druze manuscript (A16385). Emily Teeter examined some Medinet Habu figurines. Kathryn Bandy has continued to work on digitizing drawings of some Semna South sealings for the volume in preparation by Joan Zabkar. Emilie Sarrazin photographed a few pots from Mendes (Egypt) for her PhD. Professor Sofia

Torallas-Tovar requested a selection of Greek papyri for possible scanning.

Classes and Special Events

James Osborne taught his ceramic technology class in the Winter Quarter. Over three hundred sherds and pots were used in the classes. The registrar gave the students a backstage tour of the ceramics collection to help them select a ceramic vessel for an end-of-term paper. Foy Scalf used a selection of manuscripts and tablet casts for a class for Dominican University in February. A selection of ostraca was used by Theresa Tiliakos for a Hieratic class. Tasha Vorderstrasse used some Indo-Greek coins for part of Professor Gil Stein's Archaeology of Afghanistan class.

Photo Permissions

Over 150 photo permission requests were processed this year, including new external photography and internal photography (nineteen requests). Over twelve hundred images (new and existing) have been registered and added to the database. Around 155 objects were photographed, including both new photography and study photos (but not including the five hundred ostraca photographed by Foy Scalf).

As well as working with the exhibit preparation department on the GEP, Kathleen (Kate) Cescon was also Photo Archives assistant from December 2019 through June 2020. She assisted Susan Allison with photography and photo permission requests and added images from the museum server to the database. The server holds all professional digital photography from the past ten years. When processing new photography, the images need to be assigned a digital number and added to the database. There are thousands of folders on the server containing images that were never assigned a number or added to the database. This is a huge project that will take years to complete. Kate created a systematic process of locating images that only exist on the server, processing them, and adding them to the IDB. Since mid-December, Kate added roughly nineteen folders of images into EMu, eleven of which were completed while working remotely during the pandemic. The folders range in size and number of images, but also in how many new images need to be created per folder. Some images only need to be added to the "Supplementary" tab in EMu, while others must be registered with new digital numbers and added to the server as well as the database. Since December, Kate created around 364 images for input into EMu, (339 of them during the pandemic). In total this year, four hundred images were added from the sever to EMu.

After more than ten years at the OI, Bryce Lowry left as museum photographer in October and successfully defended his PhD. With no photographer on staff, associate registrar Susan Allison has taken over the role.

Inventory and Rehousing

Over 1,330 objects were inventoried, rehoused in archival materials, and relabeled in four cabinets. These cabinets had been moved for the construction of the support in the storage area below the gallery floor for the Persepolis lion and bull relief returned from a loan to the MFA Boston (OIM A73000). Kate Cescon reconfigured one of the cabinets to insert drawers for the housing of the stone mace heads from the Diyala (Iraq). Kate also carried out an extensive inventory of ten Chogha Mish storage cabinets in order to ascertain how much material was unregistered. (This involved some forty-six shelves of complete or partial vessels and some 230 boxes). This will be very useful when we move back to registering material, and it was prompted by a research request for Susiana culture sherds. An inventory of the Khorsabad glazed bricks was carried out by the registrar. While some of these Neo-Assyrian bricks from the Sin Temple have been treated by Conservation and are

on display, others are still in their original packing crates. These crates are marked with the brick numbers used in the excavation photos. In OI Museum terms, all the bricks are registered as OIM A11810, with the individual brick numbers used in the field being re-used as suffixes to the main A11810 registration number. All the bricks now have records in the integrated database (IDB) indicating which crate they are in. We hope this will help Conservation as more of the bricks are unpacked and treated. Upon his retirement, McGuire Gibson handed over around some twenty boxes of Nippur sherds to the OI Museum. These have been rehoused, given temporary storage box (TSB) numbers, and entered into the IDB.

Loans

The loan to the Louvre's Forgotten Realms exhibit, including two large column bases from Tayinat (Turkey), returned in August. In September, a loan of OI archival material and a small selection of objects went over to the Regenstein Library on campus for an exhibit marking the OI centennial (it returned in December). In October, a small loan of objects and archival material also commemorating the OI centennial was installed in a case in the lobby of the Booth School of Business lobby. For the Centennial exhibit in the OI's own Marshall and Doris Holleb Family Special Exhibits Gallery, we borrowed some Japanese bronze flowers that were once in the old Haskell Museum collection (now housed at the Smart Museum of Art on campus). Works by living artists Mohamad Hafez and Michael Rakowitz are presently in the Edgar and Deborah Jannotta Mesopotamian Gallery and the Dr. Norman Solhkhah Family Assyrian Empire Gallery, respectively.

The Effects of COVID-19

As already mentioned above, several research visits and analysis requests have been postponed (for both CRG recipients and others). A project to scan a selection of OIM objects so that the resulting 3-D scans and prints could be used in artworks by Mohamad Hafez is currently on hold; likewise, a project to scan some Greek papyri in our collection. The process of finding new permanent locations for the material no longer on display in the Robert and Deborah Aliber Persian Gallery was interrupted. Kate Cescon was in the process of taking photos of the new display cases labeled with object registration numbers. However, there have also been opportunities. An enormous amount of sorting and registering the digital images backlog has been carried out by Susan Allison and Kate Cescon. This could not have happened on such a scale if it had not been for the time spent working from home. The registrar took a quantity of printouts and other paper records from her office home and shredded, recycled, or filed it. With regular loan meetings on Zoom, progress continued to be made on contracts and other documents needed for forthcoming loans. We have been able to answer queries of all sorts due to remote access to the IDB.

From September until the COVID-19 closedown, we had the capable assistance of work-study student John Shannon. He continued to take digital images of objects while they were off display during the GEP and added them to the IDB (920 images added, record shots rather than publication quality photos). He also registered and photographed Alishar human skulls and used the Artec spider (borrowed from the Department of Art History on campus) to scan two of the skulls in 3-D. We wish him all the best with his PhD at Johns Hopkins University.

We will greatly miss the assistance of Kate Cescon, as her GEP contract has come to an end, and would like to thank her for all her help. The registrars would also like to thank Knut Boehmer and Foy Scalf for assistance and advice with Zoom, VPNs, and virtual desktops, all of which have made it possible for us to work from home productively. Thank you both.

EXHIBITION DESIGN AND PRODUCTION

The 2019–20 season was certainly noteworthy for the Department of Exhibition Design and Production, formerly the Preparation Shop. The OI Museum redesign was completed. This was a multi-year project that saw the reinstallation of nearly every object in the entire museum into brand new display cases and completely redesigned graphics, labels, and didactics. The redesign coincided with the installation of the newly returned large Persepolis relief depicting a lion attacking a bull, which had been on loan to the Museum of Fine Arts



Work-study student John Shannon working on the scans of a human skull from Alishar Höyük (Turkey).

in Boston for eighty years. We also designed and installed the OI Centennial Exhibition "Discovery, Collection, Memory: The Oriental Institute at 100." Both projects culminated with the museum grand reopening and the Centennial Gala at the end of September.

This was followed immediately by the Exhibition Design and Production staff working closely with both the Oriental Institute and the Court Theater to arrange the Court's amazing production of the play An Iliad by Lisa Peterson and Denis O'Hare. The work involved developing a plan to have the actor present the play as he and the audience moved through the museum to the Robert and Deborah Aliber Persian Gallery, which had to have much of its newly reinstalled contents removed again to accommodate the play and its set and production equipment.

This production, like so much else, was sadly cut short as the campus shut down in response to the COVID-19 pandemic. The Exhibition Design and Production staff, comprising manager Josh Tulisiak and Robert Bain, continued to work remotely on the design and production of upcoming exhibitions and regular inspections of the museum building during the COVID lockdown—a task brightened by the discovery of a nesting mallard duck in our courtyard whose ducklings, once hatched, were saved by a rescue organization.

MUSEUM ARCHIVES

There was no lack of activity for the Archives team over this past year. The archives, with its extensive collection of photographs and correspondence, played an active role in preparations for the OI's centennial, and it was wonderful to see the celebrations finally kick off in September 2019. Not only was the centennial volume brimming with archival photographs, but head of Museum Archives, Anne Flannery, designed an exhibit with the Special Collection Research Center at the University of Chicago Library, which opened at the Regenstein on September 16, 2019. *Discovery, Collection, Memory: The Oriental Institute at 100* depicted the origins of the OI alongside the founding of the present-day University of Chicago. It gave an overview of the institute as it went from idea to established research institute and museum. Using not only archival documents, photographs, and ephemera, the exhibit also employed artifacts usually left in storage, as well as creative graphics created by the SCRC team to depict the space and mission of the OI across campus. In support of the exhibit and the centennial, Flannery gave tours for Humanities Day and the Chicago Archives Association, as well as

delivering presentations to the University of Chicago Service League and the Provenance Research and Exchange Program at the Smithsonian.

Additionally, another successful launch of the Cultural Heritage Experiment (CHE) took place in October of 2019 with fifty archival items being loaned out to University of Chicago undergraduates. This program is popular not just at the University of Chicago: over the course of 2019–20, Anne Flannery started working with staff and faculty at the Johns Hopkins University's Sheridan Library to pilot this program and more extensively study its beneficial effects on undergraduate populations as part of an Academic Research Library (ARL) Pilot Project.

On November 1, 2019, a significant change took place in the Museum Archives. Anne Flannery went on a seven-month leave to Germany, during which time Jeff Cumonow, MA, took over as interim archivist. Jeff did a fantastic job facilitating research requests, working with volunteers, and organizing archival programming and tours, as well as cataloging the collections. He also assisted with the preparation of photographs and contributed to the catalog for the OI's next special exhibit, which centers around nineteenth-century photographer Antoin Sevruguin.

New Acquisitions

In addition to making great progress cataloging the Directors Correspondence, new materials were acquired by the Museum Archives this year. Some of these materials came from external sources and are important pieces of the research collections of Professor Tony Wilkinson and former director Bob Adams, while others came from within the OI from the still-active collections of Professors Janet Johnson and Mac Gibson.

Researchers

The Museum Archives hosted a variety of researchers from around the globe during 2019–20 from institutions including, but not limited to, the University of Dayton, University College London, the Louvre, the University of Nebraska, the University of Toronto, and Wesleyan University. These researchers delved into popular collections such as Diyala, Khafajeh, Faculty Papers, Directors Correspondence, and the James Henry Breasted Papers.

The Pandemic

Like all archives, we were affected by the COVID-19 pandemic when the OI, along with the rest of Illinois, went into lockdown in March 2020. In addition to inhibiting its ability to facilitate in-person research, the archives ended the CHE program early and put a series of programming, including a workshop by OI artist-in-residence Mohammad Hafez, on hold. June 2020 has brought a return to activity with the cataloging of the pandemic-related documentation that the archives collected from OI and University of Chicago communities. The archives also created a mail-in form on the archives website in order to record COVID-19 stories. Additionally, this time is proving valuable for beginning to catalog the extensive digital museum archive that exists and to tackle larger issues like born-digital materials as we move forward with a more robust digital presence and service model.

Acknowledgments

Many thanks to Jeff Cumonow for his work as interim archivist from November 2019 through May 2020. Special thanks to Susan Allison, Jean Evans, Fan Ge, Helen MacDonald, Noelle Norona, Mike Ramberg, Foy Scalf, and Josh Tulisiak for keeping the archives running smoothly this year. Thank you to the Special Collections Research Center Exhibit Staff at the University Library—Dan Meyer, Patti Gibbons, and Chelsea Kaufman—for everything that they did to realize the special exhibit, and

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to Stephanie Black for making sure the museum objects were installed and de-installed with care. And a general thank you to the staff of the OI for making sure the building, including the archives, remained safe and secure during the pandemic.

The 2018–19 year was filled with a variety of projects, researchers, and events for the Museum Archives. Great strides were made in the way of access and research, as well as contributions to the OI centennial. The Museum Archives contributed images to variety of projects, curated an exhibit for the Special Collections and Research Center at the Regenstein Library, and continued to catalog the archive in order to make it more accessible to researchers at home and abroad.

Thank you to Jean Evans for her support of archival projects at home and abroad. And last, but never least, thank you to students and volunteers who do so much on a daily basis, especially Jeff Cumonow, Fan Ge, Olivia Perozo, and Mike Ramberg.

SUQ

This year was a very busy year for the Suq until COVID-19 shut us down March 15, the last day the Suq was open to the public.

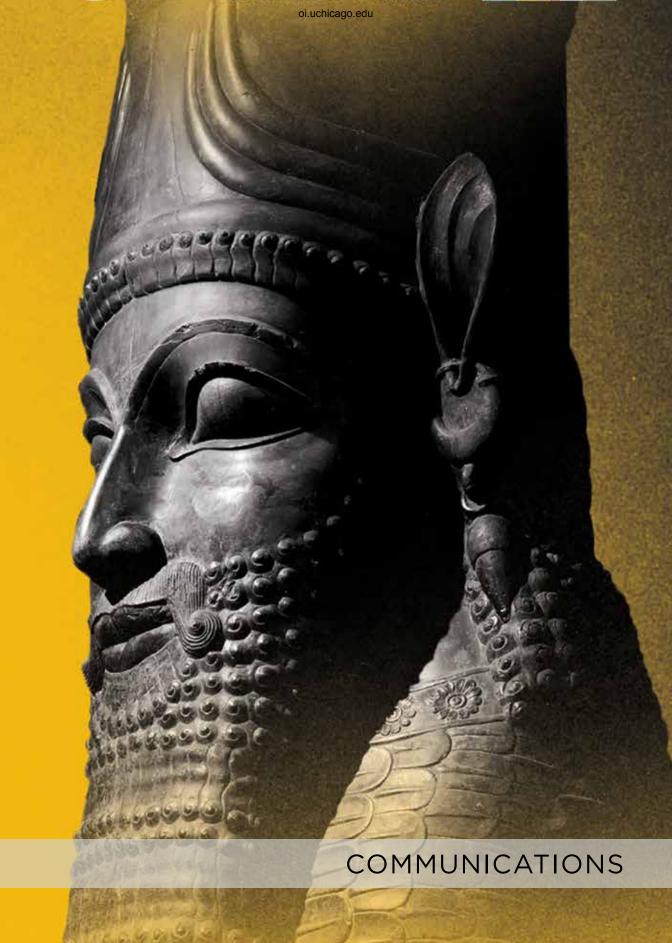
We started the year off with a book signing of Jode Magness's new book, Masada: From Jewish Revolt to Modern Myth.

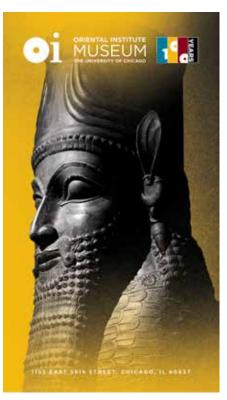
September began with the opening of the newly designed galleries and all of the celebrations of the Oriental Institute's centennial. As part of the celebration, we received a newly designed visitor's service desk, part of the Lobby Redesign Project, plus merchandise with the new OI logo designed and developed for the Suq by UChicago Creative, assisted by Kiersten Neumann and Jean Evans. It was a diverse selection of merchandise, from magnets to postcards, bookmarks, pens, pencils, spiral notebooks, mugs, T-shirts, tote bags, and Christmas ornaments.

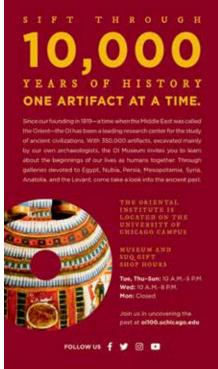
Unfortunately, we had to say goodbye to one of our special docents, Louise DesPres, as she and her husband retired to Virginia. We will greatly miss her charm and intelligence. Great conversations!

A big thank you to our unbelievable docents. They continue to educate and give impeccable service to our customers. Thank you, Ray Broms, Alice Mulberry, Ann Schumacher, Merle Cherney, and Amber Patania. Plus, thank you to the amazing Norma van der Meulen, who creates such beautiful jewelry for us.

A special thank you to Jennifer Castellanos, who kept the Suq looking beautiful and stocked. She is known for her patience and charm with our customers.







OVERLEAF: OI Museum rack card with centennial branding (front and back).

OPPOSITE: OI bookmark (front) featuring foundation slab of the Achaemenid king Xerxes, inscribed with a Babylonian text (A24120).

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KIERSTEN NEUMANN AND MATTHEW WELTON

CENTENNIAL COMMUNICATIONS

KIERSTEN NEUMANN

The OI has been an epicenter for the study of ancient Middle Eastern civilizations since 1919. Despite its impressive achievements, the OI has remained a hidden gem, with many in Chicago and beyond unaware of its vast collection of artifacts and pioneering research and fieldwork. The occasion of the OI's one hundredth birthday presented the perfect opportunity to reinvigorate our iconic institution's image while simultaneously attracting new visitors, donors, volunteers, knowledge seekers, and history enthusiasts alike. To this end, in the 2019-20 academic year we devoted our communications efforts towards the OI's centennial communications campaign. Following the launch of the new OI logo and centennial mark and the centennial website (oi100.uchicago.edu) in April 2019 (see Annual Report 2018–19: Communications), for summer and fall 2019 we concentrated our efforts on: 1) fully realizing our stationery, marketing materials, merchandise, and brand guidelines in partnership with UChicago Creative; 2) completing the design print and digital creative for our centennial marketing campaign, working in partnership with Tom, Dick & Harry Creative Co., in tandem with The Well Advertising, Inc., and Jam-tik social media marketing and consulting and; 3) finalizing our media and public-relations strategy, working in partnership with The Silverman Group. The University of Chicago Communications and Creative teams continued to assist us through all of these efforts. Guided by such well-curated and strong partnerships, we successfully kicked off our campaign in August 2019.

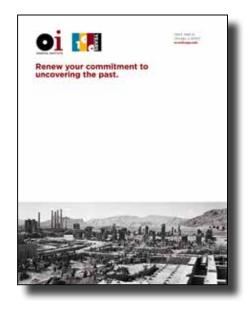
Stationery, Marketing Materials, Merchandise, and Brand Guidelines

Utilizing the new OI logo and centennial mark, in combination with our overarching desire to effectively and artfully capture the history and romance of the OI, we designed a range of basic stationery—including letterhead, envelopes, and business cards—for both general use and the OI director, all of which employ the Gotham font. Materials for the development and membership departments, including membership cards, renewal



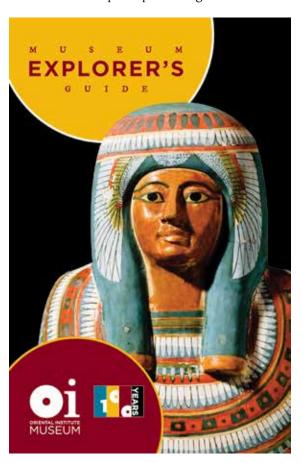
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letters, remit envelopes, and a member guide, expanded on these design concepts with additional creative elements including large archival images to create an immersive feel, the textural "O" graphic element featuring details from artifacts in the OI Museum collection, and the bold OI color scheme (black, maroon, blue, yellow)—and new messaging developed earlier in the year in partnership with consulting firm Lipman Hearne. A dynamic OI Museum rack card, visitor guide, and explorer guide provide the museum companions to this collection, all of which make adventurous use of these same creative elements and messaging to promote the recently renovated permanent galleries. Event posters and Emma email marketing templates were provided to be used by all departments, and pop-up banners and a podium plaque were installed in Breasted Hall. Additional digital components include email signatures and PowerPoint templates. Last, we created an assortment of OI promotional



materials to sell through the OI Museum gift shop and to hand out as gifts, ranging from small-scale items such as pens, bookmarks, postcards, and magnets to tote bags, mugs, and T-shirts. An assortment in each type provides a choice among centennial, excavation, and object-themed swag.

The creative principles that governed the look and tone of all of these materials were codified



in the OI Brand Guidelines, an expansive document that brings together the OI's nomenclature and messaging, common brand elements for both the OI and OI Museum, and sample applications. This document ensures consistency in tone and appearance across all of the OI's communication efforts. For one hundred years, the OI has been a leading research center for the study of ancient Middle Eastern civilizations, and through these communication materials, we invite people to join us in uncovering the past and to learn about the beginnings of our lives as humans together.

Centennial Marketing Campaign

Building on the above creative work and messaging, we turned our attention to the OI's centennial marketing campaign. This brandawareness campaign was the focus of one of the University of Chicago Communications' quarterly 360 campaigns, which brought all of the tools and talents of the Communications and Creative teams to create an unwavering impact in helping to build understanding of the OI and its eminence.



We began by partnering with the Chicago-based marketing agency Tom, Dick & Harry Creative Co., in order to leverage the OI centennial to establish a brand idea that drives awareness of the OI's full spectrum of offerings and activities. From the outset we knew that we wanted both the OI's history of archaeological excavation and rigorous research as well as the OI Museum's object collection to feature prominently in the campaign. Before we began the creative process, however, we assembled the OI centennial and new-brand-launch integrated brief, laying out our master brand story, background, objectives, challenge, target, current belief, desired belief, and SMIT ("Single Most Important Thing"); the latter reads as follows: "Humans, together: only through the exploration and experience of our shared past can we understand our present and future." The brief in its entirety paved the way forward for the campaign, entitled "Uncovering the Past, Together." With the goal of raising awareness of the OI's century-long history, the campaign sought to highlight the thrill of discovering long-lost civilizations and preserving the cultural heritage of the Middle East.

OI research has uncovered new ways of seeing what connects humans and why. The creative work for the campaign leans into the OI's unique ability to provide insights into the ancient world and relate them to the challenges we still face today, from environmental change and immigration to disruptive technologies. The creative team devised a sand-inspired graphic device that evokes revelation to elevate images of artifacts in the museum's collection and the OI's archival photography from one hundred years of excavation. "As the OI celebrates its centennial, we're pleased to help tell the story of the OI's field-defining research for the curious-minded through an integrated brand campaign," said Paul M. Rand, vice president of Communications at University of Chicago. "The OI's comprehensive collection of artifacts from the ancient Middle East, as well as its archeological fieldwork, educational programs and events, are a 'must-see' for those looking to understand the world we live in today."

Our target audience for the campaign were knowledge seekers, deep thinkers, and need-to-knowers who are curious in general about ancient civilizations—individuals who engage broadly in the cultural life of Chicago, as well as members of the university community. In working toward being noticed, engaging, and provocative, as well as creating interest in learning more in the short term, our long-term





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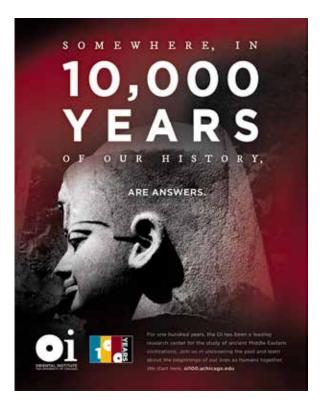






objectives were to change the way people engage with the OI on campus, elevate the OI among Chicago's cultural centers, and support ongoing fundraising efforts.

The "Uncovering the Past, Together" campaign resulted in the production of signage for the OI building-including lobby banners, a museum information board, exterior banners, and kiosk posters—and for the UChicago campus; in August we installed a series of banners across the quadrangle, featuring imagery of both excavations and objects, for which we received very positive feedback from across the campus community. Paid advertisement, which helped drive awareness and understanding about the OI on campus, in Chicago, and around the world, included out-of-house ads (bus shelters and highway billboards), digital display ads, radio spots, social media content, and a print ad for National Geographic History (featured in the November/December 2019 issue; pictured right). The paid campaign was seen



5.2 million times, generating sixty-seven thousand clicks, forty thousand promo video views, and nineteen thousand website visits across Google, YouTube, Facebook, and Instagram. Campaign-driven traffic to the centennial website also saw an upswing.

The success of the brand-awareness campaign's design, visual identity, art direction, and copywriting not only played a key role in driving awareness and engagement, but also created a jumping-off point for many of the supporting elements and activities during the centennial year, including event materials, video content, social content, podcast content, media outreach, news features, member and donor outreach, internal communications, and community engagement.

Centennial Public Programming and Promotional Outreach

Media and public-relations efforts were also at the core of the OI's centennial campaign. To assist in these efforts, we partnered with The Silverman Group, a Chicago-centric public-relations boutique specializing in arts, leisure, and civic fields, to complement our ongoing work with University Communications. The primary goals of the OI centennial PR campaign were to promote overall awareness and understanding of the OI and the OI Museum; introduce the OI's new brand identity and celebrate the OI centennial; drive attendance to, and engagement with, the OI centennial celebration, including public kickoff and future events; cultivate the next generation of OI visitors, members, and donors; and enhance the reputation of the OI and the University of Chicago overall. Key audiences that were targeted included informed consumers and families with a desire to understand complex topics, such as patrons of Chicago's cultural centers; residents of Hyde Park and surrounding neighborhood communities; local, regional, and national visitors, with a focus on the museum-going demographic; and prospective and existing UChicago alumni, donors, and the campus community.

Leveraging the completion of the OI's multi-million-dollar gallery renovation in September 2019, we hosted a number of events in the museum itself leading up to the public opening. First, we

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ushered in the OI's centennial year with a formal gala (pictured opposite top) held on September 14 on the University of Chicago campus, part of which took place inside the OI Museum galleries themselves. This event hosted the OI's most prominent donors, senior executives and board members of the University of Chicago, world-renowned archaeologists and researchers of the ancient Middle East, local and national political leaders, and other longtime and new supporters. Viewed by the attendees for the first time were contemporary works by internationally acclaimed Syrian artist and architect Mohamad Hafez (pictured opposite bottom) and Iraqi-American artist Michael Rakowitz (pictured above). Hafez's mixed-media sculptural compilations, entitled Hiraeth, Collateral Damage, and Baggage #5, and Rakowitz's reappearance of panel G-13 from the Northwest Palace at Nimrud as part of his series The invisible enemy should not exist uniquely illuminate and engage with the OI collection. Also on view was the special exhibition We Start Here: The OI at 100, as well as the stone relief of a lion and bull in combat from Persepolis, recently returned to the OI Museum after eighty years on loan to the Boston Museum of Fine Arts, and up to five hundred additional artifacts on display for the first time in the renovated permanent galleries. On September 17, the OI Museum opened its doors to participants of EXPO Chicago South Side Openings, joining up with nearby DuSable Museum of African American History, Logan Center Exhibitions, Neubauer Collegium for Culture and Society, Renaissance Society, and Smart Museum of Art. In addition to the works of Hafez and Rakowitz exhibited at the OI Museum, the OI showcased Ann Hamilton's project aeon, which featured a series of translucent images of OI artifacts that Hamilton produced using a small flatbed desktop scanner and a handheld wand scanner affixed to the massive glass dome of UChicago's Joe and Rika Mansueto Library. Also highlighted was the OI exhibition Discovery, Collection, Memory: The Oriental Institute at 100, at the Special Collections Research Center, Regenstein Library. On September 25 we invited the campus community to a special reception held in the museum to commemorate the OI's century of discovery and research, offering an opportunity for a private viewing of the renovated galleries



and centennial exhibitions. At long last, September 28 was the big kickoff event to our centennial celebrations, unveiling to the public for the first time the recently completed galleries and centennial displays. The event drew well over five hundred attendees throughout the day, with much excitement and talk of the forthcoming year of events and experiences to be offered to the public as part of the centennial year.

Throughout September and October, we also hosted events off campus, both in Chicago and in the digital world. On September 18 we moved slightly outside of our comfort zone in order to join the world of Reddit, hosting a "Reddit AMA" (Ask Me Anything) on r/Archaeology, entitled "I'm the director of a world-renowned museum & research center focused on the ancient Middle East. AMA!" Christopher Woods—with sup-



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port from UChicago's social media experts Brian Battle and Kevin Castro as well as Jean M. Evans and me-responded to a host of questions posed by Reddit users on diverse topics related to archaeology, and more specifically, Sumerology. Chris also joined UChicago Communications' Paul Rand on his podcast Big Brains on September 20 for a show entitled "How Politics and Archaeology Intersect in Iraq, with Christopher Woods." On October 18, the OI shifted north to the Arts Club of Chicago, where we hosted a joint lunchtime program—a talk by Michael Rakowitz on the site-specific installation of the Northwest Palace relief at the OI Museum: this most interesting and well-attended program included a dialogue with OI director Christopher Woods and OI deputy director and chief curator Jean M. Evans.

Back at the OI Museum we hosted an OI Indiana Jones Film Festival in Breasted Hall on October 11–12, followed by the first iteration of

Mummies & Martinis on October 24, drawing a new audience to the OI with craft cocktails, music, and gallery talks on all things "mummies." The OI also offered two gallery talks as part of the 2019 Chicago Architecture Biennial—I presented one entitled "The Social Imaginary of an Assyrian Imperial City" in the Khorsabad Court on October 19, and another entitled "Frank Lloyd Wright's Vision for Greater Baghdad" was given by Tasha Vorderstrasse on November 16 in Breasted Hall. Stepping yet again off campus and gearing up for the holiday season, the OI team participated as a table partner in *Key Magazine*'s Holiday Showcase, a concierge event held at the Lyric Opera House on November 25 that connected us with over 950 concierge, guest-service, and tourism VIPs (pictured above). At the outset of the new year, the OI partnered with University of Chicago's Court Theatre to host a groundbreaking site-specific performance of *An Iliad* in the OI Museum. Combining promenade-style elements throughout the museum, as well as a seated portion performed in the OI's Robert and Deborah Alibert Persian Gallery, this explosive combination of theatre and history brought the epic poem to life in a thrilling new way, with performances kicking off on February 26 and scheduled through March 11. Due to COVID-19, performances of *An Iliad* ended on March 11, and the OI Museum temporarily closed its doors to the public on March 17.

This assortment of exceptional programming took place in addition to our regular OI offerings, including members' lectures, youth and family classes, podcasts, lunchtime gallery talks, continu-

ing-education courses, travel programs, and beyond. Noteworthy annual events include Mummies Night: 100 years of Mummies! on October 26 and the Persian Nowruz Celebration on March 7. Our social media platforms (Facebook, Instagram, Twitter, You-







Tube), digital communications (*eTablet*, volunteer newsletters), and quarterly members' magazine, *News & Notes*, were rich with centennial content, promoting events past and present, highlights of the collections and renovated galleries, fieldwork, research projects, and ground-breaking publications.

The centennial celebrations and completed gallery renovations also drove our media-relations efforts with pitches to local, national, and international outlets from the beginning of fall 2019 through the first months of 2020. The OI Museum frequently served as the location for media interviews conducted with Christopher Woods and Jean M. Evans, as well as with Gil Stein for an Al Jazeera feature on the OI's cultural-heritage work in Afghanistan. We also organized press events in the galleries and at the Joe and Rika Mansueto Library to highlight the contemporary art installations by Hafez, Rakowitz, and Hamilton. All of these media-relations efforts, in combination with our centennial brand-awareness campaign, helped us in gaining local, national, and international media coverage, exceeding our goals of five to ten million impressions with a final number of sixty-five million total impressions. Some of the most noteworthy placements included the Associated Press,

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Reuters, Conde Nast Traveler, USA Today, the Washington Post, BBC, Al Jazeera, Forbes, CS Magazine, ABC7 Chicago "190 North," KEY Magazine, and Choose Chicago. Select features include the following:

- UChicago Magazine, "The OI at 100," Summer 2019
- Harper's Bazaar, "A Passage Through Time," May 2019
- The Art Newspaper, "For Its Centennial, Oriental Institute Weds Ancient Artefacts with Contemporary Art," July 31, 2019
- The Washington Post, "In Afghanistan, Experts Work to Restore a Trove of Buddha Figurines Smashed by the Taliban," July 3, 2019
- UChicago News, "OI Marks 100 Years of Discovery in the Ancient Middle East," August 6, 2019
- CBS News, "Afghans Restore Art Destroyed by Taliban as Peace Deal Nears," August 20, 2019
- Associated Press, "Afghans Restore Art Shattered by Taliban as Peace Deal Nears," August 20, 2020
- UChicago News, "Burned Buildings Reveal Sacking of Ancient Turkish City 3,500 Years Ago," August 29, 2019
- UChicago News, "Ancient Persian Artifact Nearly 2,500 Years Old Returns to Oriental Institute," September 12, 2019
- Hyde Park Herald, "U. of C.'s Oriental Institute Celebrates Centennial," September 17, 2019
- Chicago Tribune, "The Oriental Institute Has a 100th Birthday Makeover Wish To No Longer Be Chicago's 'Hidden Gem'," September 19, 2019
- Chicago Sun-Times, "Chicago's Oriental Institute A Hidden Hem Celebrates 100th Anniversary in a Very Public Way," September 26, 2019
- WBEZ, "New Oriental Institute Art Exhibits Range from Giant Images Overhead to Scenes in a Suitcase," September 27, 2019
- Hyde Park Herald, "Renovated Oriental Institute Brings Contemporary Middle Eastern Art into Galleries," September 27
- Iran Front Page, "Ancient Persian Artifacts Held in US for Decades Return to Iran," September 30, 2019
- UChicago News, "Artist Reimagines Ancient Middle Eastern Artifact in Vivid Color," October 2,
- WTTW TV "Chicago Tonight," "Oriental Institute Unveils Multimillion-Dollar Makeover for Centennial," October 3, 2019
- WGN TV, "'A Hidden Gem': A Look inside the Oriental Institute," October 4, 2019
- Tehran Times, "We Revealed How Achaemenids Ruled Persia: Oriental Institute Expert," October 5, 2019
- Reuters, "Afghan Museum Restores Buddhist History, One Broken Piece at a Time," October 12, 2019
- NWI Times, "Dig into History: Oriental Institute Celebrates 100th Anniversary with Renovated Galleries, Special Programming," October 17, 2019
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- The Chicago Maroon, "After Eight Decades at OI, Ancient Tablets Return to Iran," November 18, 2019
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A MUSEUM'S

As the Oriental Institute turns 100, curators hope a new makeover will mean it'll no longer be known as Chicago's 'hidden gem'





Preserving Buddhist treasures in Afghanistan

Historians at the University of Chicago and teachers in Afghanistan are working to save artefacts.





- UChicago News, "OI Archaeologists Discover Lost City That May Have Conquered the Kingdom of Midas," February 20, 2020
- Daily Mail, "Archaeologists Discover 'Lost' Ancient Civilisation in Turkey That 'May Have Defeated the Kingdom of Midas in Battle'," February 21, 2020
- The Independent, "Ancient 'Lost' Civilisation Uncovered by Archaeologists in Turkey," February 25, 2020
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- The National, "Turkey's Lost Kingdom Discovered in New Archaeological Find," February 26, 2020
- Digital Trends, "How Tech Has Impacted Archaeologists' Hunt for Long-Lost Civilizations," March
- UChicago Arts Blog, "100 Years of Discovery: The OI Museum Staffs' Favorite Objects," March 11,
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EXPLORING THE OI FROM HOME DURING COVID-19

MATTHEW WELTON

In March of 2020, the COVID-19 pandemic and social-distancing orders required the University of Chicago to shut down, closing the OI to the general public, students, faculty, and staff. During the time of closure, OI Centennial Year programming was in full swing. The Court Theatre's *An Iliad*, along with the OI's in-person Members' Lectures, planned Breasted Society and Young Professional events, gallery talks, film series, and other public programs were cancelled, many restructured in the coming weeks as online offerings.

During these months of museum closure and social distancing, OI Communications restructured social media and enhanced digital content on YouTube and Zoom in order to bring the OI to a global audience sheltering at home. Starting on March 16, when the order to work at home and closure of the OI were announced, we began offering weekly thematic at-home explorations across all of our social media platforms (Facebook, Twitter, and Instagram). Each Monday we announced the theme, and through Friday we offered daily links and suggestions designed to inspire our followers to investigate a century of OI scholarship. Daily, we used our online resources to inspire our patrons to interface with historical and current OI research on the ancient Middle East using both our existing databases and newly created content. Examples of our free, at-home material include: reading lists highlighting a century of OI publications, scavenger hunts using OI online collection searches, online workbooks, virtual tours on our OI app, live chats and discussions, and new and archived videos of workshops and lectures. Over the past few months, our themes have included: food in the ancient Middle East; the ancient history of wine, art, and artisans in the ancient Middle East; landscape archaeology; essential workers in the ancient world; ancient languages; epics; games; household goods; and more. Each week allowed an intersection with the contemporary and the ancient world, offering multiple avenues designed to foster a sense of community and occupy some time during this period of social isolation. If you missed any of our weekly material, we have created a dedicated online portal for quick access. Log on to oi.uchicago.edu/visit/join-us-online-and-explore-oi and explore from home!

Focusing our Communications efforts online, we were able to continue to offer our regularly scheduled OI events in at-home formats while ramping up content with new offerings. Our monthly Members' Lectures were recorded by our faculty in their living rooms and home offices and premiered on YouTube. Our monthly gallery talks turned into Facebook lunchtime live chats, youth and family classes were offered on Zoom, we engaged with our Breasted Society members through online live Zoom salons, and we offered free weekly ancient language seminars, an online book club, and even OI tour reunion happy hours. Transitioning our online programming and content allowed us to build on our recent practice of livestreaming events and lectures from Breasted Hall. Our original pre-shelter-at-home goal was to reach out past Chicago to engage with our patrons on the coasts, and all points in between; the reality of COVID-19 allowed us to use digital programing to reach not just a national audience, but a global base. The growth of our video offerings provided a forum where our faculty and grad students reach the world at large. We learned that we have OI fans everywhere. Our online chats, seminars, and lectures are regularly viewed live by patrons from the UK, Egypt, Serbia, Turkey, the Philippines, Hong Kong, Amsterdam, Iran, Germany, South Africa, Switzerland, and Australia, to name a few examples. By using social media to highlight new content on our YouTube channel, the OI's reach has become global overnight.

YouTube provided the OI with a successful outlet as we continue our mission to share our scholarship on the ancient Middle East with the general public. Engagement on YouTube has shown a massive increase as we offer more content during the pandemic. Between March and May of 2020,



News & Notes 244-47 from the 2019-20 academic year.

our YouTube subscriptions increased 284 percent, with views increasing 459 percent. After the first phase of online creation, we continue to use YouTube to reach an international audience to bring the work of our faculty, staff, and graduate students to the world with new, regular, original video content and live premieres. We invite you to visit our OI YouTube channel and subscribe at the following link: www.youtube.com/c/TheOrientalInstitute. Our YouTube channel is filled with new and archived Members' Lectures, youth and family classes, recent podcasts, talks about the collections, and more.

Through the pandemic our patrons and members have kept up to date with OI news, events, and opportunities through monthly and supplemental E-Tablet emails, regular social media posts, volunteer newsletters, and our quarterly members' magazine, *News & Notes*. It is our plan to continue to highlight and honor the OI centennial into the 2020–21 academic year and to invite our patrons and members back into the OI for in-person celebrations once social-distancing rules abate.

oi.uchicago.edu





OVERLEAF: Storyteller Jasmin Cardenas leads an interactive story about mummies around the world during Mummies Night. Photo: Steven Townshend.

ADULT EDUCATION

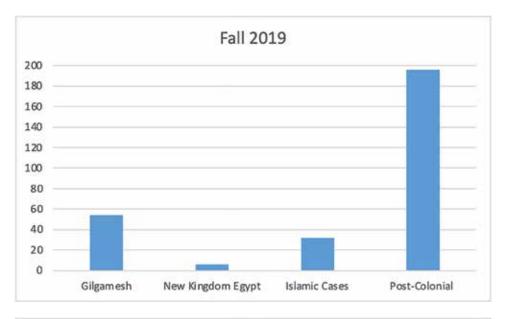
TASHA VORDERSTRASSE

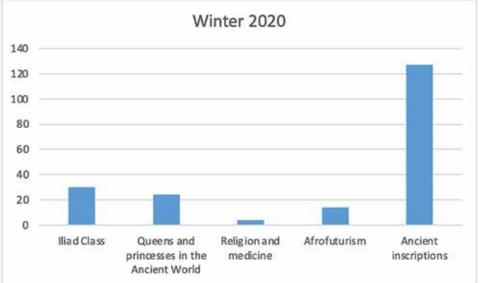
In 2019-20, the Adult Education program maintained an offering of continuing education classes that were initially livestreamed and in person, and then in spring 2020 pivoted to being online-only after the outbreak of COVID-19. In the summer of 2019, the classes taught were Caring for the Collection, by Alison Whyte, OI conservator; The Game of Power and Prestige: New Kingdom Egypt in the Ancient Near East International Arena, by Rebecca Wang, NELC PhD candidate; and Imagining Central Asia, with Polina Kasian, associate director of development, and Tasha Vorderstrasse. In fall 2019 the classes were Goddesses, Queens, Whores & Wives: Women in Ancient World, by Malayna Evans, PhD; Cleopatra's Egypt: Navigating the Greco-Roman Period, by Ella Karev, PhD candidate; Art and Archaeology of Ancient Persia, from Its Beginnings to the Present Day, with Shannon Martino, PhD, and Tasha Vorderstrasse, and an onsite-only class; Elementary Hittite, with Theo van den Hout, professor of Hittitology. In the winter of 2019, the following classes and workshops were taught: Epics at the Oriental Institute, with Susanne Paulus, associate professor of Assyriology, and Tasha Vorderstrasse; Dinosaurs and Other Fossils of Egypt, by Brian Muhs, associate professor of Egyptology; and an interactive workshop—Storytelling and Adaptation, with Andrea Welton. There was also an interactive adult seals workshop with Delphine Poinsot, PhD, post-doctoral fellow; Rhyne King, NELC PhD candidate; and Tasha Vorderstrasse. All three also participated in the Nowruz festival by giving tours on stamp seals and helping with a stamp seal exercise for children. In the spring, classes became entirely virtual, and the following classes were taught: Continuing Hittite, by Theo van den Hout; Discovering Dura Europos: From Breasted to the Present Day, by Tasha Vorderstrasse; and The Megiddo Gallery: History through OI Objects, by Joey Cross, NELC PhD candidate. Technological support continued to be provided throughout by Knut Boehmer, IT manager at the Oriental Institute.

The gallery talks included discussion on a variety of subjects such as "Exhibition Design and Production," "Greco-Roman Egypt at the OI," "Engaging Kids with the Past: Developing Nubia: Land of the Bow," "Bastiani and Beyond: Restoration at the Oriental Institute 1930–1970," "New Cases in the OI Museum Galleries: Islamic Objects on Display," "A Scribe Excellent of His Fingers: Ancient Egyptian Scribal Education," "The Social Imaginary of the an Assyrian Imperial City," "Artifacts meets Fantasy: Writing Ancient Egypt into Middle Grade Fiction," "The Cat, the Mouse, and the Boy: A Topsy-Turvy World?" A special gallery talk was given by Jodi Magness, PhD, Kenan Distinguished Professor for Teaching Excellence, University of North Carolina, Chapel Hill, entitled "Masada: Last Stronghold of the Jewish Revolt against Rome." Prior to the talk, Tasha Vorderstrasse gave a short tour of the Megiddo Gallery. After the onset of COVID-19, the gallery talks became virtual and appeared on Facebook Live with "An Introduction to Hittite," "Discovering Katamuwa: Recent Excavations in Zincirli, Turkey," and "'Do Not Look Down on Me: Mudbrick and Its Significance in Ancient Egypt."

In addition, Community Scholars lectures continued with a variety of events, including two lectures at the Barrington White House with Brian Muhs and Susanne Paulus. Thanks to backing from the Office of the Provost, several Community Scholars talks were also given at the Blackstone Public Library, the first time that Community Scholars talks have taken place in the local community. Foy Scalf gave several talks at libraries, including "Mystery Cults in Ancient Egypt," "Measuring Time:

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The Ancient Egyptian Invention of the Clock," and "Brick by Brick: Building the Pyramids of Giza." He also taught a Community Scholars class on Ancient Egypt for the Clare Chicago.

This year, tours for UChicago and other university groups became an important part of the OI Adult Education program. In the fall of 2019, a total of 288 students participated in OI tours, primarily given by Tasha Vorderstrasse, but Susanne Paulus also gave Gilgamesh tours. The majority of the tours were post-colonial tours for UChicago core classes. In the winter of 2020, a variety of tours were given, including a tour on ancient inscriptions, one of Afrofuturism, and a class on the Iliad. These were all given by Tasha Vorderstrasse. Additionally, a tour on the history of early American engagement with ancient Egypt and Nubia through the OI collection was given for the Chicago Humanities Festival.

YOUTH AND FAMILY PROGRAMS

CALGARY HAINES-TRAUTMAN

This was a year of successful experimentation and adaptation for OI Youth and Family Programs. We began the 2019–20 fiscal year with the goal of expanding our programs and experimenting with new approaches in celebration of the OI's centennial. When the coronavirus pandemic forced the closure of the physical museum space in March, we were determined to continue engaging with our audiences through high-quality programming, this time in a virtual realm. Throughout both the centennial and the coronavirus, Youth and Family Programs have continued to serve our audiences in exciting and engaging ways. As we look to this summer and the coming academic year, we are excited to continue this new work, adapting our approaches to ensure that we remain an accessible resource for local families and schools.

FIELD TRIP HIGHLIGHTS

The OI hosted 2,490 K-12 students across seventy-five field trips this year, engaging students in the exploration of archaeology and the ancient Near East, despite several challenges. The 2019-20 school year was one of historic disruptions—a two-week-long Chicago Teachers' Union Strike in the fall of 2019 impacted several weeks of field trips, and the closure of the museum and all Illinois schools in March due to the coronavirus pandemic resulted in numerous field trip cancellations for

the spring. Of this year's seventy-five field trips, thirty-seven visits serving 1,291 students were hosted in part or entirely by University of Chicago student facilitators. These field trips included the Junior Archaeologist program, which makes use of the Kipper Archaeological Discovery Center, Artifact Analvsis, Ancient Innovators, and Time Travelers. Junior Archaeologist was once again the most popular visit type, with nineteen programs serving 555 students-over 25 percent of our K-12 visits and over 22 percent of K-12 students. In order to expand access to our field trip program offerings, we continued to offer the Field Trip Funding Application for schools to apply for free or reduced-cost programs. This year, six schools serving 243 students made use of this program.

Figure 1. Part of the Amplify Arts Learning Toolkit, the "Virtual Tours of the Oriental Institute Museum" packet contains information on OI resources and numerous lesson plans and extension activities for

VIRTUAL TOURS OF THE ORIENTAL INSTITUTE MUSEUM

Visit the Oriental Institute (OI) from home on your computer or mobile device! You can view online exhibitions, go on a self-guided tour, and even do a virtual walk-through of the galleries. Then, use the included worksheets to take a closer look at some of the artifacts you've seen and explore life in the ancient world.

OI ENCURATE TOUR APP

Explore the OI from home with interactive maps and customizable selfguided tours on themes like architecture. fashion in the ancient world, and highlights of the collections.

Learn more and download the free app for iOS or Android at ol.uchicago.edu/encurate.



THE OI ON GOOGLE ARTS & CULTURE



See online exhibits on topics like the Book of the Dead, hierophyphs, and the ancient city of Persepolis; plus, you can browne collections from the OL You can also take a virtual tour through the galleries.

Explore at artsandculture.google.com/partner/the-oriental-institute.

Adipted from the Criental Institute Field Trip Planning & Exhibition Guide | ocuchicago adu/visit/educators



We continued to partner with the Amplify Collective for multi-site field trip experiences on campus. Working in coalition with the Smart Museum of Art, Arts + Public Life, Court Theater, and Logan Center for the Arts, we planned and ran field trip experiences for students and professional-development opportunities for teachers. Due to the Chicago Teachers Union strike and the coronavirus pandemic, several planned multi-site field trips between the OI and the Smart Museum were canceled, but we were still able to host 173 students from three schools for these engaging, expanded visits. The OI also partnered with the Logan Center for the first time for a multi-site field trip; students enjoyed a matinee performance and pizza lunch at the Logan Center, then traveled to the OI

ABOVE: Figure 2. Public Programs
Volunteer Joshua Beirich helps a young
Mummies Night attendee remove the
brain from our dummy mummy during a
Mummy Simulation.

OPPOSITE TOP: Figure 3. Friends and families compete to wrap their "mummy" in toilet paper the fastest during a Mummy Wrap Race at Mummies Night.

OPPOSITE BOTTOM: Figure 4. OI docent Rachel Mustafa shows a group of Mummies Night visitors the mummy of Meresamun during a Mummy Tour.

Photos: Steven Townshend.

for an afternoon tour. After the coronavirus shutdown, the OI partnered with Amplify to create an Arts Learning Resource Packet for teachers to access online. Through this packet, teachers can find several lesson plans and activities that incorporate OI resources like the IDB, Google Arts and Culture page, and Encurate mobile app (fig. 1).

Our field trip programs would not be possible without our University of Chicago student facilitators, who lead a variety of K-12 field trips as well as weekend family programs. This year, Catie Witt worked as the Education Program facilitator lead. Working with her were Education Program facilitators Andres Cruz LeLand, Kirsten Forsberg, Melaina Leung, Sophia Lubarr, Sarah Mason, and Stephanie Reitzig. Facilitators also contributed to an important project in summer 2019, re-

YOUTH AND FAMILY PROGRAMS | PUBLIC EDUCATION





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vising the Ancient Innovators field trip program. As our newest program, we recognized areas for improvement and sought to enhance the learning experience for students. Sophia Lubarr, assisted by Catie Witt, led the revisions and testing of the new program format, which was debuted in fall 2019.

ABOVE: Figure 5. Storyteller Jasmin Cardenas leads an interactive story about mummies around the world during Mummies Night. Photo: Steven Townshend.

This year, the OI also began a partnership with Chicago Communities in Schools (CIS), a drop-out-prevention organization that connects at-risk students with opportunities for community engagement. Through CIS, the OI is able to offer free field trip programs to schools across the city, many of which have never before engaged with the OI. We look forward to continuing our partnership with CIS and expanding access to the OI for Chicago Public Schools students.

Several changes were also made to our online tour booking process. The software we previously used to process field trip and tour requests was retired in December 2019, and we transitioned to a new system that offers an improved customer experience and increased flexibility when booking. We also added a page on our Tours and Group Visits website for the University of Chicago Laboratory Schools, in order to clarify their special position as a University-of-Chicago-affiliated K-12 group.

OPPOSITE LEFT: Figure 6. Museum Curator Kiersten Neumann answers a young visitor's question after leading a tour of the Persian Gallery during the Nowruz Celebration.

OPPOSITE RIGHT: Figure 7. A member of the Zoroastrian Association of Chicago, Houshmand Sharyari, explains the objects and symbolism of the *Haft-seen* table to a family at the Nowruz Celebration.

Photos: Steven Townshend.

PROGRAM HIGHLIGHTS

Beginning the year of centennial celebrations, we sought to improve, expand, and experiment with our program offerings. Youth and Family's largest annual program, Mummies Night, was one of our first programs created with the centennial celebration in mind. Billed as "Mummies Night: 100 Years of Mummies!" we sought to bring the centennial theme into our annual celebration of mummies through an expanded program and centennial-themed activities. Despite a cold, rainy, and windy night, 482 attendees came to the event. With funding from the Office of the Provost through the Diversity and Inclusion RFP, we were able to achieve our goal of significantly expanding our program offerings while maintaining free entry. We continued our ever-popular features, including mummy tours (fig. 2), mummy simulations (fig. 3), a DJ, crafts, a photo-booth, games (fig. 4), and scavenger hunts. New this year was the "Cartouche Café," a free café with snacks on the OI's second-floor landing, created so that families could relax and grab something to eat during the event. We were also able to hire a children's storyteller, Jasmine Cardenas, who performed an original story about mummies in South America, created just for the event (fig. 5). These new features were a huge success, and we hope to be able to continue to offer these types of expansions in future Mummies Nights.





PUBLIC EDUCATION | YOUTH AND FAMILY PROGRAMS



Figure 8. A parent and child enjoy a taste of Persian tea and sweets on traditional Persian tea house seating at the Nowruz Celebration. Photo: Steven Townshend



Figure 9. Dancers from the Chicago Persian School perform on the stage of Breasted Hall during the Nowruz Celebration. Photo: Steven Townshend.

YOUTH AND FAMILY PROGRAMS | PUBLIC EDUCATION

Our second-largest program of the year, the Nowruz Celebration, was used as another opportunity to expand programming and experiment with new ideas as part of the centennial. We again worked with the Zoroastrian Association of Chicago and the Federation of Zoroastrian Associations of North America to plan the event, and these organizations provided greatly appreciated funding as well. While attendance was somewhat dampened compared to last year due to concerns about the coronavirus, around 200 people came to enjoy tours (fig. 6), crafts, games, food, performances, and a traditional *Haft-seen* table display (fig. 7). In the spirit of the centennial, we expanded the usual Persian Tea House sampling station into a larger area on the second floor with more space for people to sit and relax (fig. 8). Adding to the festivities was a performance by the dance class of the Chicago Persian School and a screening of the film *The Spirit of Nowruz* (fig. 9). We also collaborated with the Middle Eastern Music Ensemble; eight musicians performed at the event and entertained guests with a forty-five-minute concert of beautiful Persian music (fig. 14). We are excited to continue to deepen partnerships with community organizations and build new connections with other groups through this new annual tradition.

We continued to offer low-cost family workshops throughout July through February, hosting 9 workshops for 167 participants (figs. 10, 11). Free drop-in programs ran from July through March, and then transitioned into online workshops in the month of May (figs. 12, 13). We offered a total of fourteen programs with an audience of 1,150 attendees. While plans for a special centennial edition of Junior

CLOCKWISE FROM LEFT: Figure 10. Junior archaeologists dig into our simulated dig site in the Kipper Archaeological Discovery Center during a family workshop. Figure 11. Catie Witt leads visitors through translating a name on the Min and Riya stela during an Intro to Hieroglyphs family workshop. Figure 12. Children work together to translate the hieroglyphs on the back of the statue of King Tutankhamun during a What's Up, King Tut? family program. Figure 13. Families collaborate to recreate a life-sized Egyptian mural using a grid drawing technique at a One. Big. Egyptian. Mural. family program.















Archaeologist in May—focusing on the newer digital aspects of archaeology—were canceled due to the coronavirus closures, we had the opportunity to experiment with bringing our interactive, hands-on programs to people in their homes through Zoom. These programs were successful and well attended and will set the stage for more virtual programs in summer 2020 and onward.

Youth and Family Education also worked to reach our audiences in new ways and with new types of programming this year. In July 2019, we partnered with local author Malayna Evans for a special edition of the Secret of the Mummies program, featuring her new mid-grade chapter book, Jagger Jones and the Mummy's Ankh (fig. 15). In January 2020, Calgary Haines-Trautman hosted a Lunchtime Gallery Talk on the development of the latest youth program, Nubia: Land of the Bow, illustrating the theory and planning that goes into creating programming for youth audiences (fig. 16). To create more ways for visitors to interact in the galleries, we also planned to restart the Discovery Cart interactive in the galleries, which would allow visitors to touch real ancient pottery sherds and work with a volunteer facilitator to use archaeological thinking to learn about the artifacts. Over twenty volunteers signed up to complete a training scheduled for late March, 2020. Due to the coronavirus, these plans were put on hold, though the training resources are ready and the volunteers are eager to learn this new way to engage our visitors. We hope to be able to offer these resources again when it is safe to do so. In an effort to better serve one of our



TOP: Figure 14. Musicians from the Middle East Music Ensemble perform Persian music in Breasted Hall during the Nowruz Celebration.

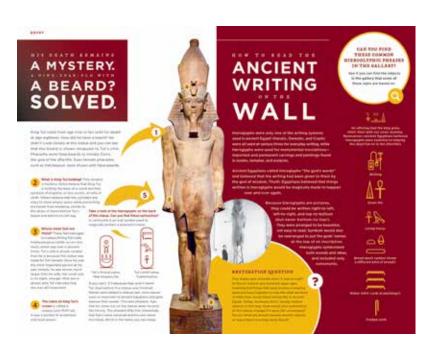
Photo: Steven Townshend

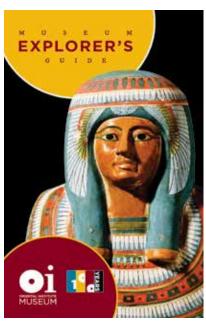
OPPOSITE LEFT: Figure 15. Author Malayna Evans reads to a group of families from her newly released book, *Jagger Jones and the Mummy's Ankh* at a special centennial edition of Secret of the Mummies.

OPPOSITE RIGHT: Figure 16. Catie Witt shows a group of visitors replicas of Nubian artifacts during the second run of the Nubia: Land of the Bow family program.

BOTTOM LEFT: Figure 17. The cover of the new Museum Explorers Guide, a booklet that guides visitors through the museum with activities and interesting information about each gallery, presented in a fun, kid-friendly format.

BOTTOM RIGHT: Figure 18. A two-page spread from the Museum Explorers Guide, featuring information about the statue of King Tutankhamun and an activity about Egyptian hieroglyphs.





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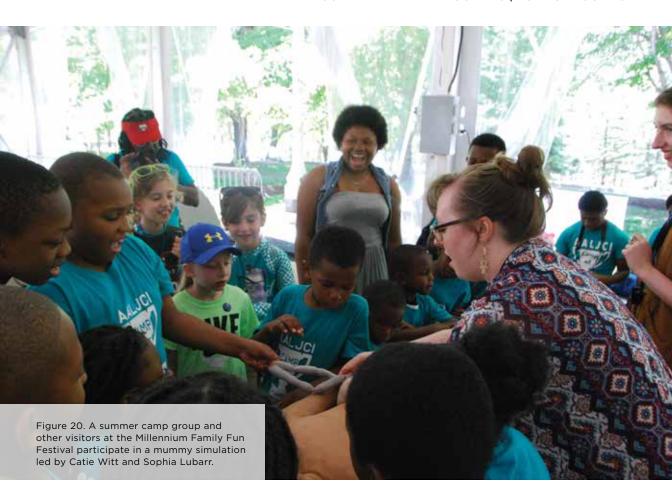
Figure 19. Children at the Millennium Park Family Fun Festival try their hand at making clay pots based on images of clay vessels from the OI's collections.

key audiences, we also created a special section of our website devoted to Girl Scout programs and patches, simplifying the process for Girl Scout troops to book private workshops and earn badges in our public programs.

As part of the centennial, we were also thrilled to publish and offer a new in-gallery resource for families, the *Museum Explorer's Guide*, which took the place of the previously offered Family Activity Cards. The guide aligns with the updates made in the Gallery Enhancements Project, and includes interactive activities and interesting information on each gallery, presented in an engaging, kidfriendly format (figs. 17, 18).

Our public programs would not be possible without our dedicated and talented Public Program volunteers. In 2019–20, we had four new Public Program volunteers join the Education Team: Joshua Beirich, José Hernandez, Samantha Suppes, and Theresa Tiliakos. Volunteers assisted with thirteen programs and served over 210 hours. We are excited to have Samantha Suppes continue her work with OI Education in a new role next year, as an Education Program facilitator.

YOUTH AND FAMILY PROGRAMS | PUBLIC EDUCATION



OUTREACH

Outreach continues to be an important goal for Youth and Family Programs, and this year provided ample opportunity for the OI to share our resources and museum with new audiences.

We began the year with the Millennium Park Family Fun Festival in July 2019, where the OI hosted a week of programming for families visiting Millennium Park. Each day, we offered a different activity, ranging from making clay pots, to weaving recycled "T-shirt yarn," to constructing funerary models out of recycled materials (fig. 19). We also offered multiple mummy simulations each day, alternately delighting and grossing out the tourists brave enough to reach into our dummy mummy to pull out a plush organ (fig. 20). Three thousand people came to the Fun Festival that week and engaged with our programming and materials. That summer, we also hosted pre-movie activities for thirty participants at a Movies on the Midway event, and we advertised our programs at Hyde Park's Silver Room Block Party.

We published more virtual content than ever before, beginning during the shutdown of the galleries in March 2020. Working closely with Membership and Adult and Continuing Education, we created activities to align with a weekly theme, published as a workbook each week on the OI's social media and website. These scavenger hunts, coloring sheets, crafts, and other activities bring the OI into people's homes and promote engagement with our collections and the museum even

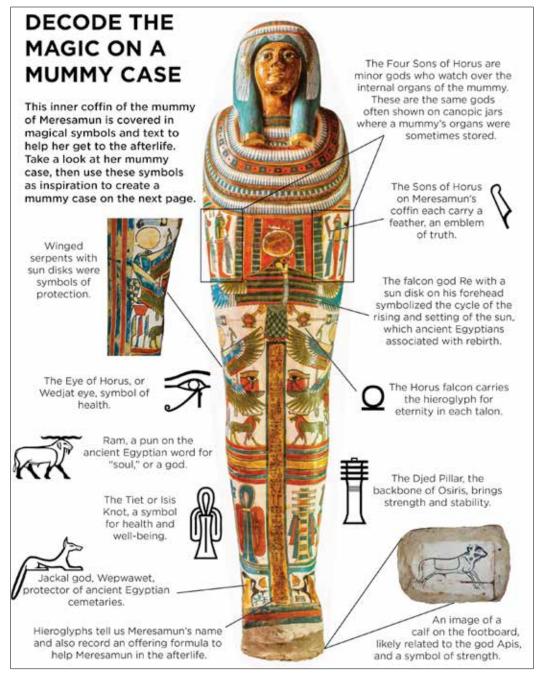


Figure 21. An example online family activity, "Decode the Magic on a Mummy Case," from the Magic Workbook, created as part of our themed weekly series of online activities, lectures, and readings that help our patrons stay connected even when the physical OI Museum is closed.

while we are closed (fig. 21). We look forward to continuing to offer expanded online resources while coronavirus limits our in-person engagement, and when we are able to reopen, we hope to continue some of these offerings in order to reach people who live outside of the Chicago area.



























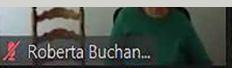


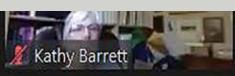


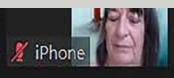




VOLUNTEER PROGRAM









OVERLEAF: OI book club via Zoom with author Eric H. Cline.

VOLUNTEER PROGRAM

SUE GESHWENDER

A YEAR LIKE NO OTHER . . .

We started off in the summer of 2019 by completing another successful docent training. By fall all the 2019 docent trainees had been certified and were busily giving tours. The summer and fall were a time of immense pride for the OI community as we celebrated the milestone of our one-hundred-year anniversary. The museum Gallery Enhancements Project was completed, and there was a tremendous amount of publicity for the OI's centennial. Volunteers reported that many of their friends were contacting them to comment on an article they read or something they saw on the news, asking, "Isn't that where you are involved?" The Education Department bulletin boards were filled with newspaper and magazine clippings of the OI in the news. There was a new logo, and we all got new nametags proudly identifying us as part of the OI community.

March started on a high note. Professor Fred Donner spoke at the Volunteer Day. By the following week there was growing alarm about the spread of the coronavirus. A few tour groups cancelled their upcoming visits, a few volunteers asked to be removed from the schedule . . . Then CPS schools closed, the stay-at-home order was issued, and the OI Museum closed.

Figure 1. Docent Class of 2019.
Jonathan Teram, William Lewis,
Blandine Nothhelfer, Geneieve Costello,
Le Trieu Phung, Kay Holz, Rachel
Mustafa, Jim Houston, Jennifer Fiedler,
Barbara Jillson, Erica Granchalek,
Diane Gottlieb, Jennifer Castellanos,
Beverley Walter, Philip Dittman.
Photo by Broken Chains Photography.











Every single tour and group visit was cancelled and removed from the schedule for the remainder of the academic year.

By May we were back, but only online. Volunteers quickly learned how to Zoom, and our first post-pandemic volunteer event was a Zoom book club discussing the book Gilgamesh: The Life of a Poem with OI faculty member Susanne Paulus. Our first Zoom Volunteer Day was held in June with Brett McClain giving an update on Chicago House. We ended the academic year on a high note with a book club discussion of the book Digging Up Armageddon: The Search for the Lost City of Solomon. For the first time ever, we were joined by the book's author, Eric H. Cline, who joined us in the book discussion. Eric Cline holds a special place in the OI Volunteers' hearts, as his book 1177 B.C.: The Year Civilization Collapsed is the reason we started the OI book club back in 2015!

Finally, we suffered the devastating loss of two of our most dedicated and loved volunteers:

- Gabriella Cohen, a volunteer of the OI for fourteen years since 2005. Gaby was recruited as an OI docent by the late great Mari Terman. She started as a museum docent and later she became an active volunteer in the Research Archives, assisting with transcribing museum registration cards. Gaby especially loved giving tours to very young children. Gaby cared deeply for others and made many good friends across all ages at the OI.
- Carole Yoshida, a dedicated volunteer of the OI for thirty-seven years since 1983. First, as a
 museum docent, maintaining the tour program's excellence and enriching the educational
 experience for visitors. Second, as an active volunteer in collections registration and museum archives, assisting with preparing over ten thousand glass slides to be scanned and

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VOLUNTEER PROGRAM







FIRST ROW:

Figure 2. Education Department Reunion at the Gala. Carol Ng-He, Sue Geshwender, Moriah Grooms-Garcia, Terry Friedman, Carole Krucoff.

Figure 3. Foy Scalf brings objects to look at for his Volunteer Day presentation.

Figure 4. Holiday Potluck Luncheon enjoyed by Rachel Mustafa, Philip Dittman, George Thomson, Geneieve Costello, William Lewis, and Merle Cherney. (Photo by Craig Tews.)

The OI book club continued to discuss a wide-ranging set of topics, including the book Archaeology From Space: How the Future Shapes Our Past, which we discussed with DePaul faculty member Morag Kersel, and Who We Are and How We Got Here: Ancient DNA and the New Science of the Human Past, discussed with our own faculty members David Schloen and James Osborne.

SECOND ROW:

Figure 5 Cheers to the OI! Semra Prescott, Gabriele DaSilva, Dee Spiech. Monthly Volunteer Days resumed in October and continued through March, with speakers Foy Scalf, Gil Stein, Robert Ritner, James Osborne and Fred Donner. The December Holiday Party Potluck Luncheon set a record with over one hundred volunteers, OI faculty, and staff attending and bringing their favorite dishes to share in a massive feast!

Figure 6. OI Bookclub liked by author Sarah Parcak on Twitter.

Figure 7. January book club discussing Ancient DNA.

THIRD ROW:

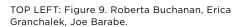
Figure 8. OI book club via Zoom with author Eric H. Cline.

VOLUNTEER PROGRAM





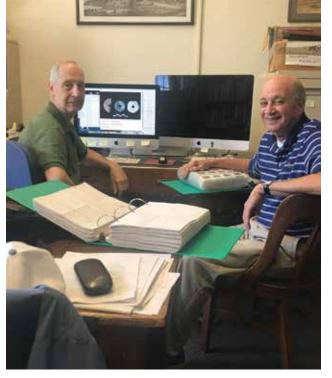




TOP RIGHT: Figure 10. Philip Dittman, Marilyn Murray, Erica Granchalek, Diane Gottlieb, Jim Houston.

BOTTOM LEFT: Figure 11. Sue Geswender, Barbara Jillson, Jean Nye.

BOTTOM RIGHT: Figure 12. Fred Eskra & Steve Scott.



packed for archival storage. Carole was such an institution at the OI as she was a part of many things for so many years. She also had the most beautiful melodious voice, and people loved hearing her give a tour of the OI.

Gaby Cohen and Carole Yoshida have left gaping holes in the fabric of our volunteer community. We are so lucky to have had the time we did with them; however, it was not long enough.

The Volunteer Program continues to adapt and evolve, as we continue to find ways to support the mission of the OI, share our love of the OI with the public, and provide intellectual stimulation and engagement with members of our community as we embark on the next hundred years with the OI.

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DEVELOPMENT



OVERLEAF: Young Professionals "Star Wars and Religion" lecturer Russell Johnson, PhD, at the OI's Mummies and Martinis event. Photo: Charissa Johnson Photography.

DEVELOPMENT

WALLY VERDOOREN, MATTHEW WELTON, POLINA KASIAN, AND ALI MALLETT

The Oriental Institute's Development program team oversees and manages all activities related to philanthropic support, membership programming, and special events. These three interrelated and collaborative areas of activities work together to build and integrate a more strategic and effective approach to attracting, sustaining, expanding, and strengthening a base of partners and supporters committed to advancing the OI's mission and goals. The Development program's efforts were particularly important in the previous fiscal year, since it also marked the OI's centennial, which was celebrated and commemorated with a yearlong series of enhanced fundraising appeals, special events, and heightened promotions.

In addition, it is extremely important to note that the final four months of fiscal year 2020 (spanning July 1, 2019, through June 30, 2020) were adversely affected by the ongoing COVID-19 pandemic, which resulted in severe health and economic challenges on local and worldwide levels. This crisis created great financial stress for almost every business corporation, educational institution, and nonprofit organization, which certainly includes the OI. The work of OI scholars, staff, and students was impacted profoundly, as were the efforts of the Development team. While this section of the OI Annual Report will once again conclude with the honor roll of donors and members, we want to recognize and thank our many partners and supporters at the start of this report as well, for providing, renewing, and often increasing their annual philanthropic contributions during this very difficult year. Now more than ever, the OI's research pursuits and educational programs would not be possible without your steadfast financial commitment to our mission.

The OI Development team comprises:

- Wally Verdooren, director of development
- Matt Welton, associate director of membership programming, marketing, and communications
- Polina Kasian, assistant director of development and events
- Ali Mallett, digital marketing and member engagement manager

Of note, Matt Welton and Ali Mallett received well-deserved promotions and title changes during the previous fiscal year, which recognized their expanded roles overseeing the OI's communications efforts in both the print and the digital realms. The OI Development team works across the organization with senior administrative leaders, faculty, researchers, program staff, Advisory Council members, and other volunteers, as well as with colleagues in the University of Chicago's Alumni Relations and Development Office to advance the important philanthropic, membership, and community-engagement efforts of the OI.

PHILANTHROPIC SUPPORT

Throughout the preceding fiscal year, the OI's many members and partners generously supported our mission to heighten the scholarly understanding of the ancient Middle East through research initiatives, cultural preservation efforts, educational programming, and the OI Museum and its collections. Contributions from the Advisory Council, annual members, volunteers, and other donors continue to maintain and strengthen the OI's standing as the world's leading center for scholarship on the ancient Middle East. Significant philanthropic achievements during the previously completed program year include the following:

* FRP is the total combined dollar amount of all new gifts, memberships, multi-year pledges, and documented estate commitments received during the fiscal year.

• The OI had a \$38 million goal as part of The University of Chicago Campaign: Inquiry & Impact. This university-wide and multi-year fundraising drive ended on December 31, 2019, and the OI surpassed its overall \$38 million goal by securing a total of \$40,402,259 in new gifts, multi-year pledges, and documented estate commitments over the campaign period. Of note, the OI began its participation in the University of Chicago campaign with an initial overall goal of securing \$20 million in new gifts, multi-year pledges, and documented estate commitments, and thus ended the campaign by securing more than double its original goal.

While surpassing its University of Chicago campaign goal is noteworthy, the OI's fundraising work remains a top priority and continues to move forward at an accelerated pace. At the start of the 2018–19 fiscal year, the OI's leadership decided to extend its campaign period through the end of calendar year 2020, embarking on its special Centennial Campaign, which sought to leverage the many commemorative activities and heightened institutional visibility of the OI during its one hundredth anniversary year. The campaign set an increased goal of securing at least \$10 million in new gifts, memberships, multi-year pledges, and documented estate commitments between July 2018 and December 2020. In the first year of the Centennial Campaign (Fiscal Year 2019 spanning July 1, 2018 through June 30, 2019), the OI received a total \$4,424,904 in new gifts, pledges, and estate commitments toward the \$10 million goal. In the second year of the campaign that also encompassed the OI centennial year celebration (fiscal year 2020 spanning July 1, 2019 through June 30, 2020), the OI secured an additional \$6,609,596 in new gifts, pledges, and estate commitments, bringing the Centennial Campaign fundraising total to \$11,034,500 as of June 30, 2020. The initial total goal was

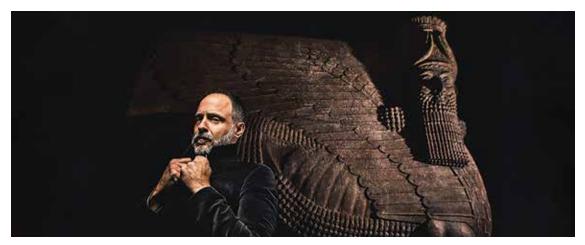


Photo: Joe Mazza.

surpassed with six months still remaining in the campaign period, and the OI's Development team remains hard at work and committed to exceeding its campaign goal even further. For anyone interested in learning more about the OI Centennial Campaign and its giving priorities and opportunities, please contact oi-development@uchicago.edu or 773-702-5062.

• The chart below provides a comparison summary of fundraising results in key giving categories over the last two fiscal years, and all the categories of philanthropic revenue represented in these figures are making the OI's important work possible.

Fundraising Giving Categories	FY 2018-19 \$ Amounts	FY 2019-20 \$ Amounts
Fund Raising Progress (FRP)*	\$4,424,904	\$6,609,596
Expendable Cash	\$2,272,000	\$2,061,327
Realized Bequests	\$406,685	\$291,173
Payments on Multi-Year Pledges	\$1,348,838	\$1,392,960
New Pledge Commitments	\$1,839,160	\$4,006,170
New Deferred Gifts and Documented Bequests	\$1,600,000	\$1,297,000

^{*}All these philanthropic achievements during the 2019–20 program year provided the OI with essential resources for continued scholarly and programmatic growth, and this growth is only possible through the ongoing commitment and support of the OI's many members and partners.

MEMBERSHIP PROGRAMMING

Our OI members continue to be a highly engaged group of individuals, dedicated to exploring the scholarship of the ancient Middle East. While the COVID-19 pandemic resulted in a small dip in both renewals and new member acquisitions during April and May, June saw membership numbers rise to heightened levels, even showing an increase in new memberships. Before COVID-19, member retention remained strong. Fiscal year 2019–20 saw an increase in membership levels, with a great number of patrons moving up from the individual and family levels to the higher Supporting Associates level and James Henry Breasted Society. The OI Centennial Campaign and recent expanded online programming have resulted in a far broader member reach that extends beyond the greater Chicago area, allowing us to engage with patrons globally. The OI is excited to welcome each of our new members into this diverse community of dedicated individuals and inquisitive supporters intent on furthering our mission to advance and communicate the research and discovery of the ancient Middle East.

Thanks to the support of our members, we were able to continue with the tradition of providing free daily museum admission, as well as free monthly lectures presented by world-renowned scholars that are open to the public at large, both in person and online. Membership support has enabled us to effortlessly transition OI programming online when first the museum galleries and then the entire building closed due to social distancing orders caused by the pandemic.

The centennial year saw the implementation of our new Members' Film Series. During the 2019–20 academic year, we explored one hundred years of mainstream Technicolor epics, celebrating the myth of discovery and Hollywood's fascination with the ancient Middle East. We kicked our series off with a very successful festival celebrating the OI's most famous fictional alumnus, Indiana Jones. Sponsored by the Randi Rubovitz-Seitz Foundation, this weekend-long festival included a 35

DEVELOPMENT | EVENTS AND LECTURES

mm screening of *Raiders of the Lost Ark* in partnership with DOC Films, screenings of *Indiana Jones and Temple of Doom* and *Indiana Jones and the Last Crusade* in Breasted Hall, conversations and presentations by contemporary archaeologists and scholars, docent-led tours, a trivia contest, and a celebratory pizza party. Other films in our 2019–20 series included the 1959 Hammer film *The Mummy*; the 1959 epic *Ben-Hur*, introduced by OI professor Theo van den Hout; the documentary film *Afro Iranian Lives*; and the Black Speculative Arts Film Festival, featuring new works inspired by ancient traditions. The films *The Adventures of Prince Achmed* and *Lawrence of Arabia* were scheduled as part of this new Members' Film Series, but these screenings had to be cancelled due to the COVID-19 campus closures.

To celebrate our centennial year Members' Lecture series, we began livestreaming all of our OI Members' Lectures, giving all of our members, regardless of geographical location, the chance to experience and enjoy every lecture in real time as they happened. Livestreaming continued on after museum galleries and Breasted Hall closed in March due to the pandemic, with our at-home Members' Lectures premiering on the OI YouTube channel, allowing us to reach a global audience. We will continue livestreaming each Members' Lecture in the 2020–21 academic year, and each lecture will remain up on YouTube for members to enjoy at their leisure.

Membership support has also allowed us an opportunity to enhance our podcast offerings. In 2020 we purchased new microphones and recording equipment for our OI podcast series. While the University of Chicago's campus closure put a pause on many of our planned member activities, we transitioned our podcast recording to an at-home production, using Zoom to record, which allows us to combine audio and video, resulting in our successful Awakening the Dead for Love series on OI YouTube. The OI's Robert Ritner, Rowe Professor of Egyptology, and Foy Scalf, head of the OI Research Archives, joined OI podcast host Steven Townshend for an at-home YouTube discussion surrounding an ancient Egyptian love spell recently translated and published by Ritner and Scalf. Of note, the first recorded podcast of this series had more than twenty thousand views by the end of June 2020. We have a continuing series of OI podcasts planned for the coming fiscal year, in a series that allows us to explore the ongoing research of OI faculty and staff during and despite the pandemic campus closure.

The OI is immensely thankful for the new and renewed support of our members. The continued investment and advocacy of our members allows us to continue on with our scholarship and research in these uncertain times, helping us to share OI discoveries with the world. Necessity has dictated that we transition from in-person to online programming and engagement and, in doing so, we find that we are now able to reach audiences in virtually every country, truly bringing the work of the OI to a global audience. We have seen an increase in international memberships during this period of online engagement, and we are excited to see how this expanded international reach will positively impact our member community and programming. Additional OI membership highlights over the past year included the following:

MEMBERS' LECTURES

We presented our Centennial Year Members' Lecture series during the 2019–20 academic school year. In-person lecture attendance continued with strong numbers as we offered each lecture for live streaming online. Our centennial year series focused on our own world-renowned OI scholars and the OI's global research over the past one hundred years. While the COVID-19 crisis caused us to cease in-person lectures in Breasted Hall by April, we were able to pick up once again in May with at-home Members' Lectures presented on YouTube. Due to the COVID-19 campus closure, David Schloen's scheduled lecture in April 2020 will be rescheduled during the 2020–21 academic year.

Member support is directly responsible for funding lecture honorariums, speaker travel costs, food and drink for receptions, logistical expenses, and now, at-home recording equipment. Without member support, we would not be able to provide free lectures to the general public, both in person and online. We thank each member for their ongoing generosity and commitment toward these OI public learning and education opportunities.

Our Members' Lectures for the 2019-20 academic year included:

- Ayelet Gilboa, "The Rise of Ancient Israel and Other Problematic Entities: An Archaeological Perspective" (October 2, 2019)
- McGuire Gibson, "The OI in Iraq" (November 6, 2019)
- Martha Roth, "On Judicial Violence in Mesopotamia: The Problem of an Eye for an Eye" (March 4, 2020)
- Yorke Rowan, "Petroglyphs and Kites in the Black Desert, Jordan: Connecting Art and Landscape" (at-home lecture premiered on OI YouTube, May 20, 2020)
- W. Raymond Johnson, "Medinet Habu and Tel el-Amarna: Tales of Blocks and Towers" (athome lecture premiered on OI YouTube, June 10, 2020)

Each lecture from our 2019–20 season, as well as a variety of archived lectures, are available to view at your leisure on the OI YouTube channel and are easily found by typing "Oriental Institute Lectures" at the YouTube site.

In addition to our Members' Lectures, members were also invited to attend a number of named lectures and special event lectures that took place during the past year; and each of these special lectures is described in the Special Events section of this Annual Report.

We would like to extend a very special word of thanks to each of our lecturers over this past year. While we are not certain whether in-person lectures will take place at the OI during the 2020–21 academic year due to the ongoing pandemic's social distancing measures still in place throughout the



DEVELOPMENT | YOUNG PROFESSIONALS



autumn quarter of 2020, we are planning live at-home YouTube lectures each month, continuing the tradition of bringing a varied selection of the most recent and pioneering work and scholarship on the ancient Middle East to our members and our community. Each future lecture will be announced online, in emails, and in *News & Notes*.

YOUNG PROFESSIONALS

The OI's Young Professionals (YP) group continues to be a vibrant community of young adults engaged with the discovery and exploration of the ancient Middle East. YP members are valuable ambassadors who support the overall mission and programs of the OI. This special membership category is designed to give emerging business and civic leaders a meaningful way to engage with the OI. YP membership is intended for anyone between the ages of twenty-one and forty-five who would like to learn more and engage with scholarship on the ancient Middle East while participating in exclusive social and volunteer activities with some of the world's foremost academics in their fields.

Unfortunately, the Young Professionals season was cut short, with several event cancelations caused by the COVID-19 pandemic. We did sponsor Mummies and Martinis on October 24, 2019, a very successful pre-Halloween happening that brought a great number of new patrons into the museum galleries. The evening included Halloween-themed beverages and appetizers, costumes, a DJ set, and small-group tours of the Egyptian Galleries. The YP also sponsored the lecture and discussion, "Star Wars and Religion," presented by the University of Chicago Divinity School's Russell Johnson on December 17, 2020 (which is available to view on the OI YouTube Channel).



MEMBERS' PUBLICATIONS

News & Notes, the OI members' quarterly magazine, continued publication throughout the 2019–20 fiscal year. The principal intention of recent issues of *News & Notes* is to retain a scholarly tone while making the publication attractive and accessible to a broader audience.

News & Notes is designed and produced by the OI Publications staff. We are especially grateful to Charissa Johnson and Rebecca Cain for their hard work, dedication, and creativity as we produced the most recent issue at home. In addition to the OI Publications team, we would like to thank each of the faculty, staff, graduate students, and research associates who contributed to articles and thereby provided engaging and educational content for every issue.

MEMBER TRAVEL

The COVID-19 pandemic caused the postponement of all planned member tours and travel after February 2020. Our scheduled Turkey and Greece tour to be led by Theo van Den Hout of the OI and Seth Estrin from the University of Chicago's renowned Art History Department has been postponed until spring 2021. Scheduled members' trips to the Nefertari Exhibit at the Nelson-Atkins Museum of Art in Kansas City with Foy Scalf and The Met in New York City with David Schloen have both been postponed to future dates. Future OI tours to Egypt, the Mediterranean, and Israel have been postponed until travel is once again safe to resume.

We were fortunate to embark on our members' tour to Egypt in November of 2019, prior to the cessation of travel due to the global pandemic. Emily Teeter led a sold-out tour of Egypt that included an extensive exploration of Amarna and Middle Egypt, as well as a post-tour excursion to Alexandria. A highlight of the trip included a very special Thanksgiving dinner at Chicago House in

DEVELOPMENT | SPECIAL EVENTS



Luxor, Egypt, hosted by W. Raymond Johnson, director of the Epigraphic Survey, and his staff. Travelers cruised the surreal landscape of Lake Nasser, explored sites of ancient Nubia, and wondered at the vast expanse of a desert landscape that once held Akhenaten's grand city; they were able to get up close to one of the world's most legendary monuments, with exclusive access to the base of the Sphinx enclosure; they approached Abu Simbel from the water; and they relaxed in style at the world-famous Old Cataract Hotel in Aswan. Tour participants received once-in-a-lifetime access to closed-off areas not available to the general public and to special on-site guided tours by scholarly luminaries in the field of Egyptology and archaeology. A pre-tour visit included an in-depth look at Islamic Cairo and ancient Saqaara, while a post-tour excursion brought travelers face to face with the Roman era and the modern stylings of coastal Alexandria. Our OI tour members bonded over their journey and were able to get together virtually over Zoom for tour-group reunions during the pandemic period, recounting their adventures in the ancient lands of the pharaohs.

OI travel programs are unique in that our tour participants experience exclusive site visits and on-site learning privileges unavailable to other institutions or travel groups. Our members learn directly from some of the most eminent scholars in the world associated with the OI, and they visit sites the OI has been excavating and researching for decades (and sometimes for almost a century). While our travels are currently on hold due to the global pandemic, do keep an eye out for some of our most ambitious tours yet, including an in-depth examination of Phoenician sites and culture that will take us from Beirut to Spain. OI tours often sell out quickly. To be placed on our early tour notification list, please email oi-membership@uchicago.edu. We look forward to traveling with you in the future!



SPECIAL EVENTS

The 2019–20 fiscal and program year saw us celebrating our OI Centennial, with a variety of special events offered for members, supporters, and the general public. Our Centennial Gala kicked off the year-long celebration in style, with our OI community coming together to commemorate the immense one-hundred-year impact that the OI has had on the scholarship of the ancient Middle East. In addition, and with the generous assistance of OI faculty and staff, the OI organized several centennial year events, some of which were unfortunately postponed or moved online due to the COVID-19 campus closure beginning in March of 2020. Please check our website, *News & Notes*, and various emails and digital notices for events and programs online and, eventually in the future, onsite at the OI. The previous 2019–20 program year included the following notable OI special events:

OI Centennial Gala

On September 14, 2019, the OI launched its centennial year with a formal gala on the University of Chicago campus. This became the largest gala event in the OI's history, with more than four hundred guests in attendance and more than \$375,000 secured in sponsorships and ticket sales. Both the number of guests and the amount of dollars raised were more than double those of the previous OI gala in 2017. All event proceeds benefitted the OI's ongoing research pursuits, archaeological expeditions, museum collections, and educational programs.

The event hosted the OI's most important and prominent donors, senior executives and Board members of the University of Chicago, world-renowned archaeologists and researchers of the ancient Middle East, and other longtime and new supporters. Distinguished guests included: co-chairs John and Jeanne Rowe and Norman and Virginia Bobins; honorary chairs Ned and Miki Jannotta; University of Chicago leaders including President Robert J. Zimmer, Provost Daniel Diermeier, Vice President

























DEVELOPMENT | SPECIAL EVENTS

for Alumni Relations and Development Sharon Marine, and Vice President for Communications Paul M. Rand. The James Henry Breasted Medallion was awarded to Howard E. Hallengren, and he was joined at the gala by former Breasted Medallion recipients Lewis and Misty Gruber (2017), Thomas C. Heagy (2015), Jeanne M. and John W. Rowe (2013), O. J. Sopranos (2011), Janet Helman (2000), and Jill Carlotta Maher (1997, the first recipient of the Breasted Medallion).

The evening began with a lavish reception featuring cocktails and hors d'oeuvres in the historic and newly renovated OI museum. A dinner with full beverage service took place in a large tent enclosure on the main campus quadrangle directly across the street from the OI. Director Christopher Woods welcomed guests and spoke about the OI's history, founder James Henry Breasted's legacy, the OI's past one hundred years of research and fieldwork, and its vision for the next century. Following the remarks, Woods presented the 2019 James Henry Breasted Medallion to Howard E. Hallengren, the principal benefactor for the OI Museum's Gallery Enhancements Project and a Life Member of the OI's Advisory Council. Named in honor of the OI's visionary founder, the Breasted Medallion recognizes longstanding and distinguished volunteer service and philanthropic commitment to the OI. Woods also announced the inaugural Rowe Professor in Egyptology, which was awarded to OI professor Robert K. Ritner. The evening concluded with a sumptuous dessert and cocktail reception and dancing beneath the stars.

Public Celebration of the OI Centennial

On September 28, 2020, the OI continued its centennial programming with a free public celebration. Our faculty, curators, and staff greeted visitors in the newly renovated museum galleries and talked about artifacts from the collection, exhibition displays, current research projects, and past and current excavations conducted by

PREVIOUS PAGE:

Top Row: Photos by Anne Ryan. Middle Row: Photos by John Zich. Bottom Row: Left photo by John Zich; center and right photos by Anne Ryan.

BELOW:

Photo by Anne Ryan.



OI archaeologists in the Middle East. In addition to tours, family activities were also offered to intergenerational groups of attendees.

Special Tour and Reception for the Friends of Louvre

On September 26, 2019, we welcomed the Friends of the Louvre—a group of American supporters of the Louvre museum—to the OI's museum galleries. OI Curator Kiersten Neumann led a special tour, during which she explored the OI's connections with the Musée du Louvre. Of particular note, she featured the excavations carried out by the French and the OI at the site of Khorsabad (ancient Dur-Sharrukin) in Iraq, with several OI museum exhibits showcasing major artifacts from this archaeological work. She also spoke of collaborative projects between the curatorial and conservation teams at the OI and the Louvre, which also focused on the history and materials of Khorsabad. Following the tour, guests enjoyed a reception in the Edgar and Deborah Jannotta Mesopotamian Gallery.

Special Programming for Chicago Architectural Biennial

In the fall of 2019, the OI partnered with the Chicago Architectural Biennial to create special programming that featured the OI and attracted new audiences. On October 19, 2019, OI curator Kiersten Neumann led a public tour about the social imagery of an Assyrian imperial city. On November 16, University and Continuing Education Program coordinator Tasha Vorderstrasse gave a public lecture about Frank Lloyd Wright's unrealized plans for Baghdad.

The OI at 100: A Special Event for Members of Breasted Society and Library Society

On October 15, 2019, members of the Breasted Society and the Library Society gathered at Regenstein Library for a special event co-sponsored by the OI and the University of Chicago Libraries. A special lecture was presented by OI professor Susanne Paulus that examined cuneiform tablet forgeries in both ancient and more modern periods and featured a reception celebrating the Library's special exhibition, *Discovery, Collection, Memory: The Oriental Institute at 100.* The exhibition, curated by the OI's head archivist Anne Flannery, was on view at the Special Collection Research Center of the Regenstein Library from September 13 through December 13, 2019.

Special Lecture with James Osborne, OI, and Michel Massa, British Institute at Ankara

The Ol's own James Osborne and the British Institute at Ankara's Michel Massa joined us in Breasted Hall to present a lecture about exciting new archeological discoveries in Turkey. This special lecture presented new evidence for a hitherto unknown Iron Age kingdom in south-central Anatolia and provided an introduction to its mythic leader.

Special Programming for the Chicago Humanities Festival

The city-wide Chicago Humanities Festival chose the OI's Breasted Hall as one of its venues on November 3, 2019. Following the lecture programming, University and Continuing Education Program coordinator Tasha Vorderstrasse led a special tour of the OI for attendees of the festival, where she talked about the history of early American engagement with ancient Egypt and Nubia through artifact examples from the OI's collection.



Braidwood Visiting Scholar Lecture

Ian Hodder, professor at Stanford University and director of the Catalhöyük Archaeological Project, presented the annual Braidwood Visiting Scholar Lecture in Breasted Hall that looked at twenty-five years of research in Catalhöyük, the legendary site in modernday Turkey. This lecture is currently available to watch on the OI YouTube channel. Ian also led several graduate-student workshops at the OI that explored his recent research.

Special Art Installation Event with Ann Hamilton

On December 11, 2019, world-renowned visual artist Ann Hamilton visited Chicago to give an exclusive presentation of *aeon*, her art installation in the Joe and Rika Mansueto Library at the University of Chicago. The installation was created in commemoration of the OI's centennial and featured large-scale translucent images of OI artifacts that were mounted on the Mansueto Library's domed glass ceiling. This special event included the artist's personal remarks before she led a tour of the installation, which was followed



by a cocktail and hors d'oeuvres reception at the Edgar and Deborah Jannotta Mesopotamian Gallery of the OI Museum.

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SPECIAL EVENTS | DEVELOPMENT





The Marija Gimbutas Memorial Lecture

For the second Marija Gimbutas Memorial Lecture, Petra Goedegebuure of the OI presented "Anatolians on the Move: From Kurgans to Kanesh" in Breasted Hall. This lecture—sponsored by Dr. Audrius Plioplys, a noted medical practitioner, neuroscience researcher, visual artist, and OI supporter—is currently available to watch on the OI YouTube channel.

Dinner and Performance Event of An Iliad

In commemoration of our Centennial Celebration, the OI planned an exciting collaboration with the Court Theatre—a limited run of its critically acclaimed and award-winning production of *An Iliad*, the one-man theatrical adaptation based on Homer's *Iliad*. The distinctive feature of this show was that it was staged among the ancient artifacts and historic museum galleries of the OI rather than at the Court Theatre. Unfortunately, the COVID-19 campus closure and resulting restrictions for onsite programming resulted in the cancellation of most performances of *An Iliad*. Before this happened, a group of the OI's supporters attended a special dinner and performance of *An Iliad* on March 7, 2020. This exclusive benefit event featured remarks made by Christopher Woods, director of the OI, and Charlie Newell, artistic director of the Court Theatre and director of the show. Following the performance in the OI Museum galleries, a cocktail and dessert reception was held for audience members to meet Timothy Edward Kane, the play's exceptionally talented and award-winning actor.

Breasted Society Salons

OI Breasted Society Members were invited to attend a series of salons exploring current OI research in the ancient Middle East. Intended to take place in the director's office, with dinner followed by a salon-style discussion, the events were moved online in the spring due to the COVID-19 campus closure. David Schloen's inaugural salon was presented onsite at the OI on January 16, 2020, and featured his archaeological work in the Mediterranean concerning ancient Phoenician cultures. James Osborne presented the first at-home salon via Zoom on April 30, 2020, which focused on his recent archaeological discoveries in Turkey. Morag Kersel presented another at-home Zoom salon on June 24, 2020, discussing issues surrounding the Museum of the Bible and the related Hobby Lobby court cases. These salons are open exclusively to our Breasted Society Members.





You are invited

to an exclusive benefit event of the critically-acclaimed and award-winning production of

AN ILIAD

the one-man adaptation of Homer's Iliad

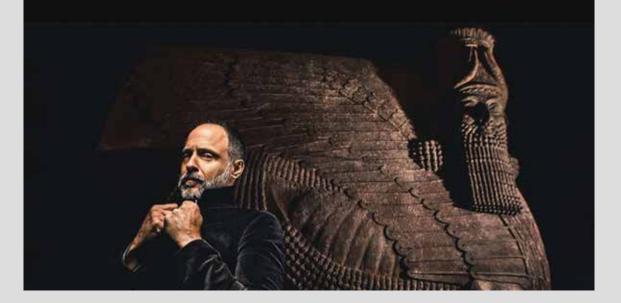
SATURDAY, MARCH 7, 2020

5:30 pm dinner
The Edgar and Deborah Jannotta
Mesopotamian Gallery

7:30 pm performance The Robert and Deborah Aliber Persian Gallery

Cocktail reception with actor Timothy Edward Kane immediately following the performance

Only 34 seats will be available for this event Email oi-centennial@uchicago.edu or call (773) 834-9775 to reserve your tickets today



OI ADVISORY COUNCIL 2019-20

— John W. Rowe, Council Chair* (EC) —

Guity Nashat Becker Gretel Braidwood* Catherine A. Novotny Brehm Andrea Dudek (EC) Marjorie M. Fisher* Margaret E. Foorman* Isak V. Gerson* (deceased) Byron Gregory Lewis Gruber* Misty Gruber* Howard Hallengren* Deborah Halpern Rex Haydon Thomas C. Heagy* (EC) Janet W. Helman* Arthur Lee Herbst* (EC) Roger David Isaacs Barbara Schubeler Jillson Neil J. King John D. Lawrence Aldis V. Liventals Carlotta Maher* (EC)

John W. McCarter Jr. Susan Padula John Otto Peters III Kitty Picken* Crennan M. Ray Aimee Drolet Rossi Roberta Schaffner Robert G. Schloerb* (deceased) Lois M. Schwartz* Charles N. Secchia Coleman Seskind, M.D. O. J. Sopranos* (EC) Rebecca Wilson Stein Walter Vandaele Anna M. White Nicole S. Williams*

* Denotes Life Member (EC) identifies a member of the OI Advisory Council's Executive Committee

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IN MEMORIAM

The Oriental Institute lost two distinguished life members of the Advisory Council during the 2019–20 academic year, and all of us at the OI gratefully honor and admire their many years of exceptional service and support.

ROBERT G. SCHLOERB, a life member of the Advisory Council and a long-time supporter and volunteer of the Oriental Institute, died peacefully at home on December 18, 2019, at the age of ninety-five. Bob was a University of Chicago trustee emeritus and held several other volunteer leadership positions at the university. Born in Naperville, Illinois, in 1924, he was a longtime resident of Hyde Park and a devoted supporter of the university. After earning a bachelor's degree from Oberlin College in 1948, Bob went on to serve as editor of *The Law Review* at the University of Chicago Law School, where he received his JD in 1951. Bob had a distinguished law career, serving as a senior partner at the firm Peterson, Ross, Schloerb & Seidel, and later of counsel for Peterson & Ross. Bob was elected to the University of Chicago Board of Trustees in 1983, becaming a life trustee in 1994 and a trustee emeritus in 2007. He first became a member of the OI's Visit-

ing Committee (now Advisory Council) in 1994. Bob also served on the Medical Center Board from 1986 to 1999, becoming a life member in 1999. Like his father before him, Bob was a trustee of the Baptist Theological Union (BTU) Board at the Divinity School, serving from 1966 to 2019. He was named honorary trustee of the BTU Board in spring 2019. In addition to Bob's board service, he was a member of the Law School Council from 1983 to 1986 and also was a life member of the Divinity School Council and the Library Council.

ISAK GERSON, a life member of the Advisory Council and a longtime supporter of and volunteer at the Oriental Institute, passed away on April 19, 2020, at the age of ninety. Isak initially became interested in the OI when his late wife, Nancy, became a docent. The Gersons first joined the Visiting Committee (now Advisory Council) in the 1970s, when Dr. Gustavus Swift was director of the museum, and they were actively involved at the OI and the museum for the remainder of their lives. Isak was a designer of welding systems, some used in the Apollo Mission, and was a great supporter of the arts in Chicago. He was born in Athens, Greece, in 1929. As a teenager, he survived the Holocaust by escaping with his family from Nazicontrolled Greece to Turkey. After the war, he came to the United States to attend Union College, where he graduated with his bachelor's degree and then

went on to earn a master's degree in engineering from Princeton University. He began his career in Chicago, where he came to work as an electrical engineer for Sciaky Brothers. In 1964, he met Nancy at a Chicago Symphony Orchestra concert. They married and built a fulfilling life together, supporting the arts, traveling the world, and raising their children. They also continued to go to weekly CSO concerts for the rest of their marriage. In addition to the OI and the CSO, Isak was also a major supporter of The Art Institute of Chicago.

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The Oriental Institute 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 2019–2020 (spanning July 1, 2019 to June 30, 2020). The following pages list the many members, partners, and contributors whose support helps to 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. The OI's ongoing research and discovery would not be possible without your financial investment in our work.

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OVERLEAF: OI centennial gala festivities. Photo: John Zich.

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- NOTES -

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Twitter: @orientalinst

YouTube: www.youtube.com/JamesHenryBreasted

Snapchat: @oichicago

Museum & Suq Gift Shop Hours*:

Tue, Thu-Sun: 10am-5pm

Wed: 10am-8pm Mon: Closed

*Due to COVID-19 precautions, hours may vary and be by reservation only. Please contact the museum for current hours.

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